

**EAA Warbirds of America ACE Manual**

EAA Warbirds of America  
Aerobatic Competency Evaluation Program  
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### EAA WARBIRDS OF AMERICA ACE PROGRAM SAFETY CREED

The Experimental Aircraft Association Warbirds of America (EAA WoA) represents our Aerobatic Competency Evaluators organization. The founding members set standards that have contributed to an enviable spectator safety record. These standards are dynamic and continuously honed through years of preparation and experience. EAA WoA membership carries the responsibility of maintaining these safety standards.

As an EAA WoA member:

- I shall remember first and foremost that spectators place their trust and well-being in my mature judgment and professional actions. I shall continuously strive to be deserving of this trust.
- I shall not knowingly violate or stand idly by if others violate the spirit of the rules and standards set forth by EAA WoA or regulatory authorities.
- I shall work to create an environment that does not invite or promote unsafe actions and do my best to instill these values in my fellow EAA WoA Members.
- I shall not think in terms of my event or my performance. Any adverse safety circumstances at one event may bring irrevocable consequences to the entire membership. It is our organization and our responsibility.

## **CHAPTER 1**

### **EAA WoA ACE PROGRAM OVERVIEW**

#### **1.1 Introduction**

The Aerobatic Competency Evaluation (ACE) Program represents the establishment of a program within the air show industry to qualify civilian air show pilots to fly Warbird aerobatics at public events in the United States and Canada.

Flight within the air show environment is unique, and professional standards must be set forth by the industry to maintain public trust. The industry itself is the best source of personnel with the experience necessary to evaluate the competency/safety of performers who wish to operate within the air show environment. Membership in EAA WoA is required to participate in the evaluation process.

This manual and its appendices contain the standards and procedures to be used by the EAA WoA Aerobatic Competency Evaluators (ACEs) in conducting evaluations. It also establishes the process for making recommendations regarding aerobatic competency/safety to the Federal Aviation Administration (FAA) and/or Transport Canada (TC).

A valid airmen's certificate/pilot license or pilot permit, as well as current and valid medical certificate is required when operating an aircraft for each person intending to participate in a public exhibition of certain flight maneuvers at aviation events, such as air shows. For Part 103 operations, or a sport pilot, a valid airman/medical certificate is not required. A student pilot is not authorized to apply for the issuance of aerobatic competency credentials. The EAA WoA ACE Manual and the accompanying Practical Ground Evaluation Standards (Appendix C) and Practical Flight Evaluation Standards (Appendix D) set forth the procedures and standards which an applicant shall meet in order to qualify for a recommendation to the FAA or TC for issuance of aerobatic competency credentials.

By FAA guidance and TC policy, a pilot who wishes to perform aerobatics or other non-aerobatic flight demonstrations at a public aviation event must possess a valid FAA Form 8710 -7, or TC Form 26 0307, Statement of Aerobatic Competency or an FAA Form 8710-8, Statement of Non-Aerobatic Competency, for non-aerobatic flight demonstrations.

All EAA WoA ACEs shall thoroughly familiarize themselves with the contents of this document, read all sections carefully, review them frequently, and have all appropriate documents, including this manual, on hand when conducting an evaluation.

#### **1.2 Program Objectives**

The EAA WoA ACE Program represents the acknowledgment by the industry for the need of an effective method of safeguarding the public at air shows. The EAA WoA ACE Program standards are a basis by which the competency and safety of air show pilots are evaluated and recommendations made to the FAA and TC for the issuance of the appropriate aerobatic competency/safety credentials.

The main objective of the EAA WoA ACE manual is to establish the EAA WoA Aerobatic Competency Evaluator's procedures to assist the FAA and TC with aerobatic competency evaluations of an applicant. Completion of the evaluation will result in recommending whether the FAA or TC should issue, deny or in some cases rescind a Statement of Aerobatic Competency (SAC).

#### **1.3 Program Structure**

The EAA WoA ACE Committee is a permanent Committee of EAA WoA, established to monitor, administer and direct the day-to-day operation of the EAA WoA ACE Program. This includes discussing and recommending changes to policies and procedures of the program. The EAA WoA ACE Committee recommends potential members for approval by the EAA WoA Board of Directors in accordance with the EAA WoA Bylaws,

With concurrence of the EAA WoA Board of Directors, the EAA WoA ACE Chairman will be designated to lead and represent the EAA WoA ACE Committee. The committee members will be comprised of the EAA WoA President in addition to the ACE Committee members. The preferred size of the committee is (5) members, with a minimum of (3) members.

#### **1.4 Authority**

Unless otherwise specified in this manual, authority for the EAA WoA ACE Manual lies with the EAA WoA Board of Directors. Its scope shall not exceed the bounds set by regulatory guidance from the FAA or TC (FAA Order 8900.1 or CAR 623). The EAA WoA ACE Committee is tasked with reviewing and addressing any pertinent issues for governing regulation compliance.

## 1.5 Waivers and Exemptions

Unless otherwise specified in this manual, recommendation for waivers, exemptions, deviations and/or exemption approval from the EAA WoA ACE Manual will be submitted by the applicant or his/her EAA WoA ACE and approved or disapproved by the EAA WoA ACE Committee. All waivers and exemptions to the EAA WoA ACE Manual provisions and policies shall be ratified by the EAA WoA ACE Committee. (See Chapter 9 of this manual for information on the process used for requesting an exemption.)

## 1.6 History of ACE Program

The aerobatic competency evaluation program has been in use for many years. In the past, most pilots found it advantageous to simply go to the local FAA district office for an annual evaluation or renewal instead of using an industry evaluator for peer review and recommendations. The FAA found it necessary to appoint inspectors in each office to conduct these evaluations. However, the FAA was not always able to designate an adequately trained inspector who had related experience. Consequently, flight evaluations were sometimes inequitable. Efforts to correct these inadequacies revealed that it was not cost-effective to attempt a nationwide training program for inspectors in this specific task, because of the relatively low demand for the evaluation. Other safeguards built into the airshow environment have prevented the public from being placed at any undue risk. However, 12 performing pilots suffered fatal accidents within 1 year (1991). Although the number of accidents was generally no greater than in previous years, and many of the accidents did not take place at an airshow, the accidents did appear to be related to aerobatic competency. These accidents served as a catalyst toward more aggressive evaluation of the aerobatic competency of airshow pilots.

It is generally agreed that the level of safety of any segment of the industry is critically dependent upon that industry's assuming responsibility for itself and its safety programs. In this instance, the airshow industry was very proactive in its steps to alleviate future events that would reflect negatively on general aviation. Within a very short time, two industry groups proposed a revamping of the evaluator program to include new techniques and procedures. The most encouraging part of the proposed program was that, for the first time, there would be a well-orchestrated program that would directly affect virtually all active airshow pilots in the United States and Canada.

Moreover, the industry is providing a database of information on airshow pilots and their competency checks. Such a fund of information is unprecedented, and the program far exceeds the FAA's and TC's capabilities for action in light of other priorities. This action will significantly advance airshow safety with little cost to the public. The FAA and TC are convinced that industry evaluators are people who are credible and dedicated to fulfilling their duties to conduct peer review, counsel, and make appropriate recommendations to the FAA or TC. Today a pilot obtains an FAA Form 8710-7 or TC Form 26-0307 by successfully completing an aerobatic competency evaluation in accordance with the provisions of an FAA-accepted or TC-approved industry aerobatic competency evaluation program and given by an industry-approved aerobatic competency evaluator.

## CHAPTER 2

## ADMINISTRATION

### 2.1 Records and Information

EAA WoA will be the primary source of data and information on the EAA WoA ACE Program. EAA WoA is responsible for answering all inquiries related to the EAA WoA ACE Program, its charter, structure, activities and day-to-day operations. EAA WoA will maintain its records on an internal database located at the address provided on page 1 of this manual for a period of no less than five years. Upon request from either FAA or TC, EAA WoA will make any of its records available for inspection. EAA WoA is responsible for maintaining all records pertinent to the program, including, but not limited to, the following:

- A. Applicant files, including contact and application information on each applicant and pilot with a SAC.
- B. Pilot and ACE report and/or grievances.
- C. ACE listing.
- D. ACE address and contact information.
- E. ACE expiration dates.
- F. ACE Committee proceedings and meetings.
- G. Recommendations on the issuance/suspension/revocation of a SAC to the FAA/TC.
- H. Any other data pertinent to the administration of the ACE Program deemed necessary.

### 2.2 Fees

- A. EAA WoA Fees: The ACE Committee shall set and may adjust processing fees for a SAC. Currently, there is a fee of \$180.00 per evaluation, payable to EAA WoA. This fee helps offset the cost of ACE insurance.
  - 1. Applicant must call the WOA Headquarters office to pay for their fee before their evaluation is taken.
  - 2. Once the fee has been paid, WOA Headquarters office will send the applicant an application along with their receipt via email so the evaluator knows that the EAA WoA fee has been paid.
- B. ACE Fees: ACEs are authorized to charge a fee for performing an evaluation above and beyond the processing fee. The amount of this fee must be agreed upon prior to scheduling an evaluation.

### 2.3 Funding

The EAA WoA Board of Directors is responsible for establishing and providing necessary funds to support the ACE Program. As a minimum, funding will include, but not be limited to, the following:

- A. Records maintenance.
- B. ACE Committee teleconferences.
- C. Administrative items such as mailing, documents, forms, supplies, etc.
- D. ACE insurance policy.

### 2.4 EAA WoA ACE Manual Changes/Updates

The EAA WoA ACE Committee chairman is responsible for maintaining and updating the EAA WoA ACE Program Manual. Proposed amendments will be filed to the EAA WoA ACE Committee.

- A. Amendments criteria:
  - 1. Proposals may be submitted to the ACE Committee by anyone.
  - 2. Proposals may be submitted at any time for consideration.
  - 3. Proposals must include a summation, objective of the change, and justification.
  - 4. Proposals must have the written endorsement of at least one current ACE.
  - 5. Proposals from government agencies do not require ACE endorsement.
- B. Amendment consideration:

1. Proposed amendments shall be reviewed by the entire EAA WoA ACE Committee within 30 days.
  - a. Receipt of proposed amendments will be acknowledged in writing within ten (10) business days of receipt at EAA WoA Headquarters.
  - b. Within twenty (20) days of a final decision on the proposed amendment, the individual/organization who/that submitted the proposed amendment will be informed in writing about the final disposition of the proposed amendment.
2. The ACE Committee shall consult with all appropriate government agencies that accept the ACE Manual.
3. The ACE Committee shall direct WoA and EAA staff to consult with all appropriate government agencies that accept the ACE Manual.
4. Recorded majority vote is required to place any proposal into proposed amendment status.
5. Proposed amendments will be made available for ACE review within 10 days of status.
6. Proposed amendments will have a 30-day comment period once posted for review. This comment period may be waived by the EAA WoA ACE Committee for the purpose of immediate action items, administrative issues, and/or other simple, required corrective actions. EAA WoA staff will be charged with assuring that proposed amendments are communicated to the ACE membership.
7. Upon the end of the 30-day comment period, the EAA WoA ACE Committee will review and incorporate justified comments into the "Proposed Amendment" for final consideration. This will include any necessary editing and modification for clarity, format and compliance purposes.
8. The EAA WoA ACE Committee will submit a final draft of the proposed amendment to the EAA WoA Board of Directors within 60 days of the initial proposed amendment status for approval or disapproval. If approved, the EAA WoA ACE Committee will then submit the recommended proposed amendment to the FAA/TC for their acceptance and recognition. If disapproved, the party which proposed the amendment shall be given written notification and be given an additional 30 days to reconsider and modify its proposal. It is the responsibility of the EAA WoA ACE Committee to communicate the acknowledgement of governmental actions to the appropriate committees.
9. Exceptions to these timelines may be approved by the EAA WoA Board of Directors or the Executive Committee of the Board of Directors.

C. Amendment implementation:

1. Upon concurrence of the EAA WoA Board of Directors, all other affected committees and acceptance by the FAA/TC, the proposed amendment will be given an implementation date by the EAA WoA ACE Committee.
2. The implementation date will account for an adequate distribution through appropriate communications from, and appropriate incorporation of the amendment into the EAA WoA ACE Manual.
3. Once implemented, the amendment is to be considered "effective" in accordance with the implementation date.

2.5 Maintaining the validity of a Statement of Aerobatic Competency

Upon successful completion of an initial an aerobatic competency evaluation, a performer will be issued a Statement of Aerobatic Competency (SAC) with a validity date of December 31st of the year following the year in which the evaluation was completed.

- A. If a performer had an initial evaluation completed June 1, 2018, the performer will be issued a SAC valid until December 31, 2020.



- B. Subsequent renewals accomplished while the card is still valid and initial SAC's will expire on December 31 of the following year.
- C. If a performer holds a SAC valid until December 31, 2018 and undergoes a re-evaluation in 2018 prior to December 31, 2018, the performer will be issued a SAC valid until December 31, 2019. To maximize the validity time of a SAC, a performer must undergo an evaluation once each calendar year.
- D. If a performer who holds a SAC valid until December 31, 2018 does not complete a re-evaluation until January of 2019, the performer will be issued a SAC valid until December 31, 2019.
- E. If the performer in the example above, undergoes a subsequent evaluation in 2019, the performer will be issued a SAC valid until December 31, 2020.
- F. If the performer in the example above, elects to postpone his or her re-evaluation until 2020, he or she will be issued a SAC valid until December 31, 2020.

Note: Initial evaluations meet the qualification requirements of Chapter 5.2 of this manual. Subsequent renewals meet the qualification and proficiency requirements of Chapter 5.2 and 5.3 of this manual.

### **CHAPTER 3**

#### **EAA WoA ACE COMMITTEE**

##### 3.1 EAA WoA ACE Committee Mission

The EAA WoA ACE Committee is a permanent committee established by the EAA WoA Board of Directors to monitor, administer and direct the operation of the EAA WoA ACE Program. The EAA WoA ACE Committee is collectively charged with the oversight, leadership and management of aerobatic and non-aerobatic competency and the evaluation thereof. The EAA WoA ACE Committee will place air show industry safety above all other considerations. The EAA WoA ACE Committee is responsible for the directing and administering of the EAA WoA ACE Program as outlined in the EAA WoA ACE Manual.

##### 3.2 EAA WoA ACE Committee Chairman

With concurrence by the EAA WoA Board of Directors, an EAA WoA ACE Committee Chairman will be designated to lead and represent the EAA WoA ACE Committee. A committee chairman will be selected based on experience and a willingness to serve. The EAA WoA ACE Committee Chairman is responsible for guiding the EAA WoA ACE Committee to fulfill its charter and responsibilities. He/she shall also assist in the selection of EAA WoA ACE Committee members. The EAA WoA ACE Committee Chairman should be a current or former member of the EAA WoA ACE Committee and meet all the qualifications listed in Section 3.3A of the EAA WoA ACE Manual.

##### 3.3 EAA WoA ACE Committee Members

###### A. Qualifications for ACE Committee

The EAA WoA ACE Committee will oversee the operation of the Warbird Ace Program. The EAA WoA ACE Committee will include a preferred five members, with a minimum of three members. The current WoA President will serve as one of those members with the others selected drawing from the most qualified individuals, knowledgeable, and experienced in this field. Selection to the committee will be based on the following qualifications with the ability to waive any two requirements.

1. Current or previously qualified ACE.
2. Minimum five (5) years of air show performance experience ten (10) performances per year.
3. Able to attend the EAA WoA Board of Directors annual meeting at the EAA Convention.
4. Must hold a current 250-foot level SAC. If the ACE does not renew his/her SAC, he/she may continue as a member of the EAA WoA ACE Committee for up to two calendar years with the approval of the ACE Committee.
5. Must be member of EAA Warbirds of America.

B. Disqualifiers:

EAA WoA ACE Committee members may be disqualified if in the past seven years the ACE has:

1. Been convicted of a violation of any local, state or Federal law pertaining to drugs or alcohol.
2. Been convicted of any misdemeanor or felony offenses.
3. Been imprisoned.
4. Been discharged from the military with anything other than "Honorable."
5. Had an airman certificate (other than medical), rating or authorization (or foreign equivalent) suspended, revoked or paid a civil penalty as a result of a violation of any FAA, TC or other Civil Aviation Authority regulations (foreign or domestic).
6. Been involved in any investigations, charged indictments, or pending actions in any local, state, Federal, military or foreign court.

C. Member Experience:

In hopes of maintaining a representative cross-section of the air show industry, the EAA WoA ACE Committee membership should make a good-faith effort to include at least one individual with experience in each of the prevailing performance categories. Examples of these categories are listed below. (NOTE: These categories may change over time)

1. High performance, high wing-loaded,  $\geq 600\text{hp}$
2. Solo Aerobatics
3. Turbine powered

D. Selection and Tenure:

The EAA WoA ACE Committee will recommend members for a three (3) year term. No more than two (2) terms may be served consecutively. Final approval lies with the EAA WoA Board of Directors. Ideally, each year, approximately one-third of the EAA WoA ACE Committee should be renewed or replaced. Committee members may be removed by a majority vote from the EAA WoA ACE Committee itself and ratified by a majority vote of the EAA WoA Board of Directors.

### 3.4 EAA WoA ACE Committee Responsibilities

The EAA WoA ACE Committee's formal responsibilities include, but are not limited to, the following:

- A. Recommend members for the EAA WoA ACE Committee.
- B. Review initial ACE applications and biennial ACE renewals.
- C. Review ACE performances.
- D. Review grievances for action.
- E. Review exemption requests.
- F. Investigate allegations of non-compliance of the EAA WoA ACE Manual.
- G. Maintain and update EAA WoA ACE Program documents, to include this manual.
- H. As appropriate, review and investigate any SAC incidents/accidents.

### 3.5 EAA WoA ACE Committee Authority

- A. Recommend the removal of EAA WoA ACE Committee members.
- B. Recommend approval/renewal or revocation of ACE status.
- C. Submit recommendation of issuance for Statement of Aerobatic Competency to FAA and TC.
- D. Submit recommendation of “revoke” or “re-evaluation” for Statement of Aerobatic Competency to FAA and TC.
  
- E. The committee may direct re-evaluation of any performer, SAC card holder, or ACE for the purpose of ensuring an acceptable level of safety, flying proficiency, and compliance of the ACE Manual directives. At the conclusion of a re-evaluation, a written report must be submitted to the Director of Operations for documentation and validation.
- F. Recommend exemption approval and/or disapproval.
- G. Implement any immediate action items, administrative issues, and/or other simple, required corrective actions to the EAA WoA ACE Manual.

### 3.6 EAA WoA ACE Committee Incident Procedures

The EAA WoA ACE Committee shall follow the protocol and procedures outlined within the EAA WoA Safety Incident Procedures, specifically, but not exclusive to, Appendix 1 of the EAA Safety Incident Procedures. The EAA WoA Safety Incident Procedures may be obtained at [www.eaa.org](http://www.eaa.org)

## **CHAPTER 4 AEROBATIC COMPETENCY EVALUATOR (ACE)**

### 4.1 ACE Standards and Code of Ethics

All ACEs will be held to the highest level of professionalism with respect to integrity, flight discipline, and safety. As a minimum, every ACE will comply with the following:

- A. Shall abide by all terms and conditions of the EAA WoA ACE Program.
- B. Shall only conduct evaluations within their approved categories.
- C. Shall conduct all evaluations in a professional, fair, reasonable, and equitable manner.
- D. Shall conduct all evaluations at a predetermined date, time, and location.
- E. Shall conduct all evaluations without any, or any perceived, “conflict of interest.”
- F. Shall conduct all evaluations in accordance with the standards and guidelines set forth in this manual.
- G. Shall conduct all evaluations in a manner that reflects great credit upon the air show industry.
- H. Shall maintain the respect and confidence of their peers, the FAA and TC.
- I. Shall bring any unsafe act or practice to the attention of the individual/individuals involved, the Director of Operations, the EAA WoA ACE Committee, and any other appropriate official.

Any violation of the above will be brought to the attention of the EAA WoA ACE Committee that will, in turn, review the situation. If determined appropriate, an ACE qualification may be revoked.

### 4.2 ACE Responsibilities

- A. Abide by the Standards and Code of Ethics outlined in section 4.1 of the EAA WoA ACE Manual.
- B. Remain familiar with the contents of this manual and all EAA WoA ACE Program documents.
- C. Conduct evaluations only in the categories that he/she is approved to evaluate.
- D. Conduct evaluations in accordance with the EAA WoA ACE Manual Practical Ground and Flight Evaluation Standards.
- E. Take the following actions when observing a “questionable” event:
  1. First, discreetly approach the individual and/or individuals involved with the event. If more than one ACE is present, the ACEs should confer to determine which one of the ACEs is in the best position to approach the pilot.

2. Provide a verbal or written account of the event in question to the Director of Operations, who shall initiate the Safety Incident Response Procedures, to include pertinent time, date, location and description of the event and the response of the performer in question.
3. If an ACE feels that talking to the individual has not resolved the matter, the ACE will address the “questionable” event with the air boss and/or air show director.

F. An ACE shall be considered current if he/she has met and complies with all requirements of this chapter and has three (3) observations within the previous twenty-four (24) months.

#### 4.3 ACE Authority

- A. Recommend re-evaluation of a current SAC to the EAA WoA ACE Committee.
- B. Recommend to the EAA WoA ACE Committee that restrictions be placed on a current SAC.
- C. Recommend revocation of ACE status to the EAA WoA ACE Committee.
- D. Recommend follow-on actions, with respect to observing a “questionable event,” to the EAA WoA ACE Committee.
- E. An ACE may recommend the following:
  1. The issuance of a Statement of Aerobatic Competency.
  2. A change to a performer’s Statement of Aerobatic Competency.
  3. These recommendations may include initial issuance, altitude adjustments, deletion or addition of aircraft and/or type of act.

#### 4.4 ACE Applications and Requirements

Before applying to become an ACE, a pilot should review and be familiar with the entire contents of the EAA WoA ACE Manual. Each applicant should understand and be prepared to abide by the EAA WoA ACE Standards and Code of Ethics provided in this manual. The applicant is also responsible for knowing and complying with the ACE application process outlined in this section.

- A. Qualifications:
  1. Written recommendation from a current ACE.
  2. Written acknowledgement from the FAA (local FSDO) or TC.
  3. Meet geographical need as determined by the EAA WoA ACE Committee.
  4. Possess at least 250-foot SAC.
  5. Performed aerobatic flight at three (3) waived/authorized air show events for eight (8) out of the last ten (10) years.
  6. Minimum fifty (50) performances at the 250-foot Level.
  7. Minimum twenty-five (25) performances at different waived/authorized event locations.
- B. Exceptions:
  1. Any of the qualification criteria may be waived by the EAA WoA ACE Committee.
- C. Applicants:
  1. Provide written letter of intent/desire for ACE selection.
  2. Provide documentation for satisfying all qualifications outlined in 4.4A of this manual.
  3. Provide synopsis of aviation background (total time, aerobatic time, military time, etc...).
  4. Provide any additional information requested by the EAA WoA ACE Committee.

D. Selection:

1. ACE applications may be submitted once each calendar year.
2. ACE applications will be reviewed by the EAA WoA ACE Committee at each meeting.
3. The EAA WoA ACE Committee will approve, disapprove, or request additional information.
4. Upon request, the ACE applicant will provide additional information within 30 days.
5. Upon approval, initial ACE designation will expire at the end of the second calendar year.
6. Upon disapproval, the ACE applicant may re-apply the next calendar year if desired.

#### 4.5 ACE Renewal

Every ACE is required to have his/her ACE designation reviewed and renewed every two (2) years. The initial ACE designation will expire on December 31st of the second calendar year. All subsequent designations will expire every other year. The EAA WoA ACE Committee is responsible for conducting the review for renewal or decline prior to December 1<sup>st</sup> of the appropriate year.

A. The EAA WoA ACE Committee will use the following criteria when recommending re-designation of ACEs:

1. ACE written request for re-designation.
2. Conduct at least three (3) evaluations for every twenty-four (24) month period.
3. Quality and thoroughness of evaluation reports submitted by the ACE.
4. Safety record of performers to whom the ACE granted recommendations.
5. Any grievances concerning the ACE.
6. Geographic need as determined by the EAA WoA ACE Committee.
7. Participation in annual on-line EAA WoA training/review/education, or attend ICAS annual training session. If ICAS Attendee, submit a copy of ICAS sign in sheet to EAA WoA Office and receive training on the differences between the ICAS program and WoA program.

B. Individuals will be notified by the end of the calendar year, if they are not selected for ACE status, and that notification will terminate their evaluation privileges.

#### 4.6 ACE Revocation

The EAA WoA ACE Committee may recommend revocation of an individual's ACE evaluator status. Any ACE may also recommend an ACE revocation in writing to the EAA WoA ACE Committee. The EAA WoA ACE Committee is responsible for conducting a review for revocation.

A. The EAA WoA ACE Committee will use the following criteria when considering ACE revocation:

1. ACE self-initiated request for revocation.
2. Lack of required accomplished evaluations for every two (2) year period.
3. Poor quality and/or thoroughness of evaluation reports submitted by the ACE.
4. Safety record of performers to whom the ACE granted recommendations.
5. Any grievances concerning the ACE.
6. Lack of completed continuation training as required.
7. Lack of participation in annual on-line EAA WoA training/review/education.
8. Failure to abide by the EAA WoA ACE Standards and Code of Ethics in the ACE Manual.

B. Once initiated, the EAA WoA ACE Committee has thirty (30) days to complete the review.

1. The ACE will be notified of the review.
2. The ACE may submit a written statement.
3. The ACE will not conduct any ACE responsibilities or activities during the review.
4. A two-thirds (2/3) majority vote by the full EAA WoA ACE Committee is required to recommend the revocation of an ACE status.

C. At the conclusion of the review, the EAA WoA ACE Committee will provide a written statement to the ACE in question outlining the status of the ACE.

#### 4.7 ACE Observations

A. At the request of the NAES (National Aviation Events Specialist) or TC (Transport Canada) liaison, a request for observation of an evaluation will be coordinated through EAA WoA ACE Committee on a case-by-case basis.

## **CHAPTER 5 QUALIFICATION, PROFICIENCY, CURRENCY AND REINSTATEMENT**

### 5.1 General

In order to exercise the privileges of a Statement of Aerobatic Competency, a pilot must be qualified, proficient and current in the aircraft and endorsements being flown. The aircraft category, level and endorsements in which a performer is qualified and proficient may be found on the performer's SAC card authorization.

### 5.2 Qualification

A. Upon successful completion of an evaluation in an aircraft, a pilot is considered qualified to fly that aircraft category for a period of thirty-six (36) months. A performer maintains this qualification by completing a valid renewal evaluation in the aircraft being flown or an aircraft of the same category.

1. A renewal or addition of aircraft will further the qualification period for thirty-six (36) calendar months from the date of renewal or addition of aircraft.
2. A renewal for performers that are not currently qualified for the aircraft may not take place in airspace waived for an air show. In this case, renewals must be performed in an aerobatic practice area or in airspace authorized as a practice waiver.
3. Aircraft that a pilot has been qualified in will not be removed from their authorization if the pilot is no longer qualified.
4. It is recommended that pilots with multiple aircraft in one category rotate the aircraft type evaluated to maximize familiarity with the category of aircraft in which the pilot is qualified.

B. Upon successful completion of an evaluation at a specific level, a pilot is considered qualified to fly at that level for a period of thirty-six (36) months. A performer maintains this qualification by completing a valid renewal evaluation at that level.

1. A renewal or change in level will further the qualification period for thirty-six (36) calendar months from the date of renewal or change in level.
2. A renewal for performers that are not currently qualified for the level may not take place in airspace waived for an air show. In this case, renewals must be performed in an aerobatic practice area or in airspace authorized as a practice waiver.

C. Upon successful completion of an evaluation for an endorsement, a pilot is considered qualified to execute that Endorsement.

1. A renewal for performers that are not currently qualified for the endorsement may not take place in airspace waived for an air show. In this case, renewals must be performed in an aerobatic practice area or in airspace authorized as a practice waiver.

- D. An initial evaluation or a renewal evaluation for a Statement of Aerobatic Competency meets the requirements of Chapter 2.5 of this manual

### 5.3 Proficiency

A pilot is considered proficient if the pilot has a current and valid SAC for the aircraft category, level and endorsements being flown in accordance with Chapter 2.5 of this manual.

### 5.4 Currency

A pilot is considered current if the pilot has flown either a practice performance or an air show performance within the previous forty-five (45) days.

### 5.5 Reinstatement

When a pilot is no longer qualified in an aircraft category, level or endorsement, the pilot will be required to complete a reinstatement evaluation. A reinstatement evaluation must be conducted at an aerobatic practice area outside of the air show environment. A reinstatement evaluation accomplishes the requirements of both proficiency and qualification for the aircraft category, level and endorsement(s) evaluated.

## **CHAPTER 6 APPLICANT PROCEDURES**

### 6.1 Preparation

The applicant should be familiar with the entire EAA WoA ACE Manual, including: Practical Ground Evaluation Standards, Practical Flight Evaluation Standards, endorsements and currency requirements, prior to the actual evaluation. The applicant is responsible for the following items:

- A. Identifying a qualified ACE.
- B. Identifying and securing appropriate authorized/waivered airspace.

- C. Identifying proposed date and location of evaluation.
- D. Providing pilot credentials and other relevant paperwork and documentation.
- E. Providing aircraft credentials.

## 6.2 Initial Applicant

An applicant applying for an initial SAC shall provide:

- A. The name and contact information of the applicant's trainer or mentor.
- B. A description of the applicant's practical experience as an aerobatic pilot (which may include competition experience, aerobatic instruction, relative military experience, etc.)
- C. A description of the applicant's preparation for the evaluation for which he/she is applying.

## 6.3 Identify ACE

The applicant may select any ACE from the list provided by EAA WoA as an acceptable ACE to perform the required evaluation. Upon request, applicants may obtain the name, address, and point of contact information for the nearest ACEs from a list provided by EAA WoA. This list will also be available on the EAA WoA website: [www.warbirdsafety.co](http://www.warbirdsafety.co) The selected ACE will be approved to evaluate both the type of endorsement and type of aircraft the applicant will be flying. The ACE shall ensure that he/she is not the ACE of record for greater than three (3) consecutive renewal evaluations.

## 6.4 Evaluation Application

After identifying and contacting a qualified ACE, the applicant and ACE should agree upon the proposed date and location of the evaluation. Upon meeting the ACE, the applicant will review following:

- A. Name and contact information of the person(s) who mentored the applicant during the applicant's preparation for the evaluation.
- B. A description of the applicant's relative aerobatic experience.
- C. How the applicant has prepared for the evaluation.
- D. Acknowledgement of understanding and agreement with all applicable guidelines outlined within the EAA WoA ACE Manual.

## 6.5 Evaluation Airspace

Both the applicant and the ACE will ensure that the following airspace criteria are met:

- A. Evaluation is conducted in the appropriate authorized/waivered airspace.
- B. Authorized/waivered airspace includes appropriate altitudes for evaluation.
- C. Accessible location and unrestricted view from the ground for ACE observation.
- D. Safe and suitable for type of act and type of aircraft flown for the evaluation.

## 6.6 Evaluation Requirements

- A. Upon request, the applicant will provide the ACE with the following:
  - 1. Pilot credentials
  - 2.
    - a. Pilot certificate with appropriate ratings;
    - b. Current medical;
    - c. Previous Statement of Aerobatic Competency, if any;
    - d. Current flight review (14 CFR 61.56 for U.S. pilots);



- e. Applicant's performance sequence/profile;
- f. Proof of satisfying endorsement requirements outlined in Appendix E.

3. Aircraft credentials

- a. Registration;
- b. Airworthiness certificate;
- c. Supplement type certificates and field approvals (if appropriate);
- d. Evidence of aircraft capabilities for conducting proposed maneuvers (if applicable);
- e. Operating limitations (if appropriate).

3. Airspace credentials

- a. Appropriate airspace Certificate of Waiver (APA) for date, time and location.

4. Planned "sequence of events" for the evaluation and subsequent air show performances.

- A. In advance of the face-to-face meeting with the ACE, the applicant will already have contacted EAA WoA and paid their application fee. The applicant has received and completed Part 1 of the Statement of Aerobatic Competency application. Payment of EAA WoA fee, completion and submission of Part 1 must be finished before the rest of the evaluation may take place.
- B. Upon completion of Part 1 and having previously arranged a mutually convenient time and location that accommodates all the requirements in paragraph 6.6 of this document, the applicant and ACE will meet in person to complete the ground evaluation, flight evaluation and evaluation de-brief portions of the application/evaluation process.
- C. Applicant should ensure that the ACE completes and submits the application to EAA WoA.
- D. The application must be submitted to the ACE prior to the flight evaluation. Evaluations submitted to the ACE more than 72 hours after the evaluation will not be accepted.
- E. The applicant must be recommended for his/her initial evaluation by an ACE other than the evaluating ACE or by a current SAC holder for evaluations of Solo Aerobatics.

## **CHAPTER 7 EVALUATOR PROCEDURES**

### 7.1 Evaluator Qualifications

On initial contact from an applicant regarding the availability of conducting an evaluation, the ACE will first and foremost confirm that he/she is current and qualified, as per the definitions in Chapter 4 of this manual, to administer the evaluation with respect to background, endorsement type, aircraft type, and specific expertise. If not, the ACE should decline, notify the EAA WoA staff, and possibly recommend a more appropriate ACE. The ACE should also take special note if the evaluation is for an Initial Application and review Chapter 6.2 of the EAA WoA ACE Manual.

- A. An ACE must meet the following conditions in order to conduct an evaluation:

1. Current and qualified ACE as per the definitions in Chapter 4 of this manual.
2. EAA WoA recognized competence and expertise for endorsement type and aircraft type.
3. Ensure that no conflict of interest, or any perception thereof, exists.
  - a. Confirm that the applicant is not a family member, team member, employee, aerobatic student, an individual being mentored by and/or who may have a financial involvement with, the ACE who has been asked to conduct the evaluation. Although ACEs are authorized to make these determinations themselves, EAA WoA urges evaluators to err on the side of not conducting the evaluation if there may be even an appearance of a conflict of interest. If an ACE believes that he/she requires some independent assessment on this issue, he/she is urged to contact EAA WoA headquarters. The headquarters staff will be directed to also err on the side of avoiding even the perception of a possible conflict of interest when making these determinations.

(Note: a pilot receiving more than three (3) hours of instruction from an ACE for the requested evaluation is considered to be a student of that ACE.)

4. The ACE shall ensure that he/she is not the ACE of record for greater than three (3) consecutive renewal evaluations.

## 7.2 Required Materials

The ACE shall have the following materials in his/her possession when conducting an evaluation:

- A. Aerobatic Competency Evaluation Program application.
- B. Copy of Practical Ground Evaluation Standards.
- C. Copy of Practical Flight Evaluation Standards.
- D. Copy of ACE Manual.
- E. Copy of applicant's historical file.

These items may be obtained by the applicant or the ACE at: [www.warbirdsafety.com](http://www.warbirdsafety.com).

## 7.3 Requirements for Completing an Evaluation

- A. Qualified ACE.
- B. Qualified applicant.
- C. Qualified aircraft.
- D. Observation conducted within authorized/waivered airspace.
- E. Ground Evaluation Standards administered as per the EAA WoA ACE Manual (Appendix C).
- F. Flight Evaluation Standards administered as per the EAA WoA ACE Manual (Appendix D).
- G. Ground and Flight evaluations must be accomplished within thirty (30) days of each other.
- H. Completed SAC application submitted to EAA WoA headquarters not more than thirty (30) days after the completion of the evaluation.

## 7.4 ACE Recommendations

EAA WoA staff will submit an annual report by December 1 of each year to the FAA with ACE metrics including number of applicants passed, number of applicants declined and number of applicants denied through pre-screening by each ACE. ACEs must report to the EAA WoA office the number of applicants declined and number of applicants denied through pre-screening by October 1 of each year. After accomplishing or attempting to accomplish a scheduled evaluation, the ACE is responsible for submitting an evaluation status. All evaluations must be assigned one of the following:

- A. Evaluation Complete: all requirements satisfied.
  1. The ACE will provide a list of any restrictions if applicable.
  2. The ACE will complete and submit all required supporting documentation.

- B. Evaluation Incomplete: all requirements not satisfied and follow-on actions required.
  1. The ACE will provide a brief narrative of incomplete items.
  2. The ACE will provide a recommended sequence of events to complete evaluation.
- C. Re-evaluation Required: applicant did not satisfy or display baseline ability or knowledge necessary for maintaining a Statement of Aerobatic Competency or Statement of Non-Aerobatic Competency at the evaluated level.
  1. The ACE will provide a brief narrative of non-satisfactory items.
  2. The ACE will provide a suggested course of action to possibly include a training program, mentor opportunities, recommended maneuvers, etc.

#### 7.5 Requirements for completing Aerobatic Competency Evaluation application

- A. The ACE will ensure that the applicant has completed Part 1 of the application.
- B. The ACE will complete the evaluation information portion of the application:
  1. Date of the ground evaluation.
  2. Time it took for ground evaluation.
  3. Whether or not the applicant's performance on the ground evaluation was satisfactory.
  4. Date of the practical flight evaluation.
  5. Time it took for flight evaluation.
  6. Whether or not the applicant's performance on the flight evaluation was satisfactory.
  7. Whether or not the applicant was changing altitude, adding an aircraft or adding an endorsement type.
  8. Whether or not the applicant was requesting a renewal without change.
  9. Airport at which the flight evaluation was conducted.
  10. Aircraft Type flown by the applicant for the practical flight evaluation.
  11. Endorsement Type evaluated by the ACE during the practical flight evaluation.
  12. Altitude level at which the evaluation was conducted.
  13. Number of performances evaluated.
  14. Comply with Appendix E for minimum requirements.
- C. The ACE will complete the altitude portion of the application:
  1. Include clear direction to EAA WoA and the FAA/TC of notations, provisions, and/or restrictions.
  2. Recommended altitude level: Level 4, Level 3, Level 2.
  3. Specify altitude level for each aircraft type and each endorsement type, if appropriate.
- D. The ACE will complete the aircraft type portion of the application:
  1. Recommended aircraft and applicable variants.
  2. Unless otherwise restricted by the ACE, a recommendation for a 'Stearman' where appropriate is a recommendation for that aircraft and all its variants.
  3. A recommendation for a new type of aircraft and variants may be considered by the EAA WoA ACE Committee.
  4. The notations in this section will include not just the aircraft in which the applicant performed his/her evaluation, but all aircraft listed on the applicant's previous card.
- E. The ACE will complete the endorsement type portion of the application:
  1. Recommended endorsement type (listed in Appendix F)
  2. The notations in this section will include not just the endorsement type in which the applicant performed his/her evaluation, but all endorsement types listed on applicant's previous card. Endorsements that have not been evaluated within the qualification period listed in Appendix E shall require reinstatement in accordance with Chapter 5.5.

F. The ACE will complete the final portion of the application:

1. ACE name
2. ACE signature
3. Date of evaluation (enter last day of events if evaluation required more than one (1) day).

(NOTE: The application will not be processed without the above final portion being completed.)

F. The ACE will submit the application to EAA WoA within fifteen (15) calendar days of the evaluation via online.

1. Although recommended, it is not required that the ground evaluation be conducted prior to the flight evaluation for renewals without change.
2. Whether or not the applicant is recommended for a SAC, the ACE will submit the completed application to EAA WoA.
3. Copies of all documents as required by Section 6.2 or 7.5 shall be reviewed and verified by the ACE.

G. After reviewing the application for accuracy and to ensure that it is completed properly, EAA WoA shall forward electronic copies of the application recommending issuance of a SAC card to the appropriate FAA Flight Standards District Office (FSDO) or Transport Canada Headquarters for issuance of the Statement of Aerobatic Competency (FAA Form 8710.7 or TC Form 26-0307). EAA WoA will also forward a copy of the completed application to the ACE for his/her files.

## **CHAPTER 8 EVALUATION PROCEDURES**

### **8.1 Initial Qualifications**

All initial evaluations must include both the ground and flight portions of an evaluation in accordance with the provisions outlined in Appendix C and Appendix D. In addition:

- A. An initial applicant who has not previously held a SAC from the FAA or TC will be initially issued a Level 4 (800 feet) SAC.

- B. An initial applicant, who has previously held a SAC or has other experience that makes him/her believe they might qualify for a SAC other than Level 4, may petition the EAA WoA ACE Committee for an exemption to 8.1(A) of this section.

## 8.2 Renewal of Qualifications

An existing SAC holder desiring *no changes* in status (aircraft type, endorsement type, altitude, etc...) must still complete an annual ground evaluation and flight evaluation. Although there is no requirement during an annual renewal for the ground and flight evaluation to be conducted on the same day or in any particular order, the applicant must be in compliance with the following procedures:

- A. Conduct ground evaluation in accordance with the Practical Ground Evaluation Standards as outlined in Appendix C.
- B. Conduct flight evaluation in accordance with the Practical Flight Evaluation Standards as outlined in Appendix D. In addition:
  - 1. The evaluation must be preplanned.
  - 2. The evaluation must be flown in the presence of the selected ACE as an evaluation flight.
  - 3. No portion of the evaluation may be based on the “recollection” of a previous flight.
- C. Annual renewals with ‘no changes’ may be accomplished within the following provisions:
  - 1. The evaluation must be flown in the air show environment or in a duly authorized aerobatic practice area.
  - 2. At a minimum, the applicant will perform either his/her entire standard air show flight sequence or fly each one of the maneuvers specified in the Practical Flight Evaluation Standards or a combination of both to ensure all required components are met.
  - 3. At the discretion of the ACE, the applicant may be required to perform particular maneuvers from the Practical Flight Evaluation Standards.

## 8.3 Renewal of Qualifications with Changes

A. **Altitude Change:** An existing SAC holder desiring a *change in status* for altitude must complete and provide written documentation that the following prerequisites have been accomplished within twenty-four (24) months of the required subsequent ground and flight evaluation:

- 1. For a pilot to change his/her SAC altitude restriction from Level 4 to Level 3, he/she must perform an aerobatic sequence at no fewer than eight (8) public air shows (for purposes of this segment of the SAC requirements, a practice or rehearsal show that includes spectators may be counted toward the minimum eight (8) required performances) at no fewer than five (5) different air show sites at 800 feet in the same category of aircraft for which a change of status is requested.
- 2. For a pilot to change his/her SAC altitude restriction from Level 3 to Level 2, he/she must perform an aerobatic sequence at no fewer than twelve (12) public air shows (for purposes of this segment of the SAC requirements, a practice or rehearsal show that includes spectators may be counted toward the minimum twelve (12) required performances) at no fewer than six (6) different air show sites at 500 ft. in the same category of aircraft for which a change of status is requested.

NOTE 1: Prior to accomplishing an evaluation with a *change in status* for altitude, the selected ACE is required to review the documentation of the qualifying events. Copies of logbooks, contracts, newspaper articles, programs, performer briefings, event waivers or similar documentation are acceptable support evidence of participation.

- B. Aircraft Type and/or Endorsement Type Change: An existing SAC holder desiring a *change in status* for aircraft type and/or endorsement type must complete the required ground and flight evaluation for that particular aircraft type and/or endorsement type.
- C. In addition to the above, the following restrictions apply to all qualifications:
  - 1. Multiple performances in a single day in the same aircraft may not be used to meet the performer sequence requirements to move from one altitude restriction to a lower altitude restriction.
  - 2. Air show performances used to qualify for one *change in status* may not be used again for a subsequent change. For example, a performance at air show X on June 30<sup>th</sup>, 2018 may be used to move from level 4 to level 3, but that same performance may not be used to move from level 3 to level 2.
  - 3. Flight evaluations use to qualify for a *change in status* may not be conducted at a public air show. For example, an evaluation from level 3 to level 2 may not take place at a public air show.

#### 8.4 Reinstatement of Qualifications

- A. In the event an ACE is asked to evaluate an applicant who had a previous but expired SAC, he/she may be approved at their most recent altitude restriction if the SAC has expired within the last twelve (12) months. If the pilot's SAC has been expired for more than twelve (12) months, the ACE must move the applicant up at least one altitude level (for example, from Level 2 to Level 3). No renewing pilot will be moved higher than Level 3. Through recurrent training approved by the EAA WoA ACE Committee, a pilot may be eligible for an exemption to this requirement.
- B. In the event that an applicant has had his/her SAC suspended or revoked by the FAA or TC or had other enforcement actions that impacted that pilot's flying status, it will be the duty of the applicant to inform EAA WoA staff of these developments as part of the application and/or renewal status. Under these circumstances, the EAA WoA ACE Committee may, at its discretion, opt to designate a particular ACE to conduct the subsequent evaluation. In the event that an ACE is asked to evaluate an applicant who has had his/her SAC suspended or revoked by the FAA/TC, the ACE must evaluate the applicant in the category of aircraft, level and endorsement flown by the applicant that gave cause of suspension/revocation. In all cases, the ACE Committee will insure that the designated ACE is not the ACE that had previously evaluated the applicant. Should circumstances dictate, the ACE Committee may require reevaluation of other aircraft categories, levels or endorsements held by the applicant.
- C. Failure by the pilot to notify EAA WoA of a SAC suspension or revocation or any other FAA or TC enforcement action may be cause for EAA WoA to recommend to the FAA that the pilot's SAC be suspended or revoked. This may be considered a falsification of application and should be communicated with the FAA or TC.
- D. When the FAA, TC, or EAA WoA request/recommends a reevaluation of the performer's competency to continue holding their current authorizations, an ACE other than the one who conducted the evaluation for the current SAC will be assigned the task.

## **CHAPTER 9 EXEMPTIONS**

### 9.1 Exemption Application

Anyone may request an exemption from specific provisions of the EAA WoA ACE Manual if an equivalent level of safety is obtained through alternate means. Applicants requesting an exemption should allow for approximately sixty (60) days processing. Exemption requests will be directly submitted to EAA WoA for distribution to the EAA WoA ACE Committee within the following guidelines:

- A. Typed format (i.e. faxes, word processing documents, e-mails).
- B. Includes a summation, objective, and justification of the request for exemption.
- C. Includes an explanation of the unique situation requiring the request for exemption.

- D. Attached endorsement of at least one ACE.
- E. Requests from government agencies do not require ACE endorsement.
- F. Explanation of how exemption request ensures an equivalent level of safety.

## 9.2 Exemption Consideration

### A. EAA WoA ACE Committee Actions:

1. Review all duly proposed exemptions within fifteen (15) days.
2. Recorded majority vote required to place into “Proposed Exemption” status.
3. Notify applicant of status of exemption.

### B. Denied exemptions – EAA WoA ACE Committee Actions:

1. Upon receipt of a denied exemption from the ACE Committee, applicant may petition the EAA WoA ACE Committee for additional review.
2. The EAA WoA ACE Committee shall consider all petitions within thirty (30) days.
3. A recorded majority vote of the ACE Committee will conclude the review.

## 9.3 Conditions and Terms of Granted Exemptions

The EAA WoA ACE Committee will provide and establish the conditions and terms allowed within the granted exemption. As a minimum, these conditions and terms will specify the individual, the exemption, possible restrictions, the effective date, the expiration date, the renewal process, and any other associated requirements.

## 9.4 Notifications of Granted Exemptions

- A. The EAA WoA ACE Committee will notify each applicant in writing of the terms and conditions for a granted exemption.
- B. The EAA WoA ACE Committee Chairman will notify the FAA via e-mail of the terms and conditions for a proposed granted exemption and receive concurrence or non-concurrence within fifteen (15) days.
- C. EAA WoA will maintain a copy of the granted exemption in the individual’s historical file and release copies as appropriate for publication in EAA WoA documents. EAA WoA will email a copy of the granted exemption to the FAA and TC.
- D. Should the applicant be denied exemption, he/she shall receive a written explanation of the ruling from the EAA WoA ACE Committee stating the reason for denial and, if applicable, any changes necessary to process the requested exemption.

## **CHAPTER 10 OBSERVATIONS, GRIEVANCES, and VIOLATIONS PROCEDURES**

### 10.1 ACE Observation Procedures

All performers should operate in a manner that complies with the spirit of both regulatory policy and the EAA WoA ACE Manual. If the ACE Committee believes an individual is operating outside the spirit of the rules, they are obligated to identify the issue and take whatever action is required to ensure the individual ceases operating outside of the spirit of the rules. An activity will be determined to be outside of the spirit of the rules as determined by a unanimous vote of the EAA WoA ACE Committee.

An ACE should submit a written report (typed format) at any time to the EAA WoA ACE Committee detailing a personal observation/grievance of a “questionable” and/or “unsafe” event or incident by a holder of a SAC or potential applicant. In the same manner, the FAA or TC may also request (typed format) that the ACE Committee Director of Operations conduct an inquiry. The original report will be retained by EAA WoA, and the performer may request a copy. The EAA WoA ACE Chairman will initiate Safety Incident Procedures as outlined in Chapter 3.6. When required, EAA WoA will recommend to the FAA/TC:

- A. Revocation of SAC to be completed prior to further aerobatic displays at an aviation event.
- B. Re-evaluation of aerobatic competency credentials.
- C. Suspension of aerobatic competency credentials.
- D. Implementation of restrictions (i.e. altitude, maneuvers, type aircraft, type act, etc.).
- E. Other actions that may be appropriate to ensure proper safety compliance.

## 10.2 Performer Observation Procedures

A performer may submit a verbal or written report (typed format) at any time to the EAA WoA ACE Committee Chairman detailing a personal observation/grievance of a “questionable” and/or “inappropriate” event or incident by an ACE. A copy will be sent to the ACE and the original report will be retained by EAA WoA. Upon review, the EAA WoA ACE Committee Chairman will initiate the Safety Incident Procedures. When required, the results of the Safety Incident Procedures shall be communicated to the FAA or TC.

## 10.3 Notification and Appeal Process

- A. All ACE observations and performer grievances will be maintained on file at EAA WoA for a minimum of two (2) years. The pilot or ACE who is the object of an observation or grievance will be notified by the Chairman of the ACE Committee within five (5) working days of the original complaint being filed with the EAA WoA ACE Committee. This written notification will include a copy of the Observation and/or Grievance, and is the first step of the notification and appeal process. Upon official notification, the following actions/steps will be taken as required:
  - B. The Pilot or ACE has fifteen (15) days to respond, after which the EAA WoA ACE Committee may schedule a meeting to determine what action, if any, should be taken. Concerns of the EAA WoA ACE Committee shall be presented to the Pilot or ACE, who in return shall have a reasonable opportunity to respond. After which the EAA WoA ACE Committee may, by at least a two-thirds (2/3) majority vote, take or recommend appropriate action to remedy the situation.
  - C. If the Pilot or ACE has an objection to any member of the EAA WoA ACE Committee participating in the process, the reasons for the objection shall be submitted at the same time as the response to the notice of complaint by the EAA WoA ACE Committee Chairman. The members of the EAA WoA ACE Committee shall decide by a majority vote if any member of the committee should not participate in the proceedings. The EAA WoA ACE Committee retains the right but not the obligation to appoint an alternate member for the purpose of considering the actions before the committee, if one of its members is asked to step down for the matter. All committees may invite outside participation in a deliberation for the purpose of gaining expertise.
  - D. The EAA WoA ACE Committee may consider any information provided from any source. The EAA WoA ACE Committee shall determine to what degree such material will be considered. This material shall be available to all parties.
  - E. If a Pilot or ACE desires to appeal the decision of the EAA WoA ACE Committee, he/she may appeal to the Chairman of the EAA WoA ACE Committee. The Chairman will convene an Ad Hoc Appeals Subcommittee of not less than four (4) appropriate people to hear the appeal. The appeal can be conducted via mail, phone or other mutually acceptable means.
  - F. In the event that concerned Pilot or ACE desires an appeal in person to the Appeals Subcommittee at a time other than the convention, he/she must first agree to pay all expenses for the meeting and deposit funds with EAA WoA to pay the estimated costs of the appeal. These funds will be used to pay for the appeal process regardless of the outcome of the appeal.
  - G. The appeal hearing will be scheduled at a time and place agreed upon by all parties.
  - H. The decision of the Appeals Subcommittee may be appealed. The decision of the Appeals Subcommittee shall be overturned only with overwhelming evidence provided by the applicant. Under extreme circumstances, the decision of the EAA WoA ACE Committee may be appealed to the EAA WoA Board of Directors.



- I. In cases where the EAA WoA ACE Committee believes a clear and present danger to life exists, action may be taken immediately. In this situation, the Pilot or ACE shall be notified promptly of the EAA WoA ACE Committee's decision and action to be taken. Any appeal shall first be made to the EAA WoA ACE Committee. The EAA WoA Staff must be notified in all instances in which the EAA WoA ACE Committee believes a clear and present danger to life exists.

#### 10.4 Non-Compliance Process

Allegations of non-compliance of the specific provisions and overall intent of the EAA WoA ACE Manual will be investigated by the EAA WoA ACE Committee Chairman. Penalties may be assessed based on the severity of the violation. Such penalties may include, but are not limited to, the following:

- A. Formal recommendation to the FAA or TC that the individual's SAC be suspended or revoked.
- B. Formal documentation maintained in the individual's EAA WoA historical records of the violation and the actions taken by the EAA WoA Ace Committee, EAA WoA Board of Directors, and/or the FAA or TC.

#### 10.5 Falsifications Process

Evidence of falsification by either an applicant or an evaluating ACE shall be cause for immediate formal recommendation to the FAA or TC that the individual's SAC be revoked. Falsification incidences will be investigated by the EAA WoA ACE Committee Chairman and treated as possible Violations per Section 10.4.

### **Appendix A Terms/Definitions**

#### **Aerobatic Maneuvering. Requires Statement of Aerobatic Competency (SAC) with an aerobatic maneuvering endorsement**

*In a solo flight, aerobatic maneuvering is when the pitch attitude of the aircraft is greater than 60 degrees above or below the horizon and/or the angle of bank is greater than 75 degrees in reference to the horizon.*

*In a formation flight, aerobatic maneuvering is when the pitch attitude of an aircraft is greater than 60 degrees above or below the horizon and/or the bank angle is greater than 75 degrees to the horizon.*

1. All Variants: The summation of aircraft so close in-flight characteristics that they warrant inclusion on any authorization given in any one of the aircraft.
2. Applicant: A pilot seeking a SAC evaluation.
3. Category: As it pertains to chapter 7.3(A) of the EAA WoA ACE Manual, a generic classification of aircraft with similar performance capabilities.
  - Category A: Sport Aerobatics [ not applicable ]
  - Category B: Jet Warbird Aerobatics
  - Category C: Piston Warbird Aerobatics
  - Category D: Glider Aerobatics [ not applicable ]
  - Category E: Rotorcraft [ not applicable ]
4. Civil Twilight: Civil twilight in the evening is the time between sunset and when the center of the sun is less than six (6) degrees below the horizon.
5. Dog fighting: Two (2) or more aircraft operating simultaneously in the box in reference to each other for the simulation of air combat maneuvering. Not formation in nature.

6. **Fly by:** A non-aerobatic pass or a series of non-aerobatic passes performed by one or more aircraft at an aviation event while the waiver is in effect.
7. **Formation flying:** When an aircraft is flown solely with reference to another aircraft and within 500 feet of the referenced aircraft. Air racing and simulated dog fighting are not considered formation flying.
8. **Practice Session:** Flying a dedicated event with a planned series of maneuvers... no more than three (3) practice sessions may be accomplished in one (1) flight. The series of maneuvers may be or may include part of a performer's actual sequence. Actual performances may qualify as a practice session for currency purposes.
9. **Initial applicant:** A pilot who has never held a SAC or has had their SAC revoked.
10. **Level:** Minimum altitude AGL authorized to start and complete aerobatic maneuvers.
  - Level 4: 800 feet
  - Level 3: 500 feet
  - Level 2: 250 feet
  - Level 1: Unrestricted [not applicable]
11. **Night Performance:** Night performance means a performance between the end of evening civil twilight and the beginning of morning civil twilight, as published in the American Air Almanac, converted to local time.
12. **Spot Evaluation:** An evaluation initiated by the EAA WoA ACE Committee to ensure compliance with the Standards and Code of Ethics established within the EAA WoA ACE Manual.
13. **Squirrel Cage:** Two or more aircraft operating in the aerobatic box coordinating with each other. Not formation in nature.

## **Appendix B Acronyms**

|         |   |
|---------|---|
| ACE     | Aerobatic Competency Evaluator                        |
| AGL     | Above Ground Level                                    |
| CT      | Continuation Training                                 |
| EAA WoA | Experimental Aircraft Association Warbirds of America |
| FAA     | Federal Aviation Administration                       |
| ICAS    | International Council of Air Shows                    |
| MSL     | Mean Sea Level  |
| SAC     | Statement of Aerobatic Competency                     |
| TC      | Transport Canada                                      |

## **Appendix C**

### **Practical Ground Evaluation Standards**

During the Ground Evaluation phase, the ACE must keep in mind that this portion of the evaluation presents an opportunity to review all of the areas of knowledge unique to air show flying. For some pilots, this session may be the only formal review of air show aerodynamics, density altitude effects, physiology, energy, and other specific issues that affect air show professionals that the pilot may have during the year. The ACE must allow sufficient time and attach sufficient importance to this phase so that each applicant will remember the concepts and principles discussed.

### **I. Air Show Safety Concepts**

This first part of the ground checklist concentrates on aerodynamics, density altitude, and physiology. The applicant should have a working knowledge of the relationship of turn and pull-out radius to true airspeed and radial "G." The applicant must know the indicated airspeed for his/her aircraft at which the tightest turn and highest pull out can be made. The applicant must understand the relationship between kinetic energy and potential energy in air show flying. The applicant must know how to determine if a particular maneuver is energy gaining or energy losing under various conditions of density altitude.

The applicant must understand the effect of density altitude upon true airspeed in relation to indicated airspeed, on the performance of aircraft engines, and on the ability to gain and/or maintain energy. The relationship between pull- out distances (altitude) and true airspeed should be discussed.

The main point in discussing physiology with each applicant is to impress upon him/her the need to take a good personal physiological inventory before each flight. The inclusion of this step in every pre-flight and the use of this personal physiological inventory in planning the flight is critical to safe flying. The ACE should also review the effects of stress, hydration, fatigue, and other human factors.

### **II. Review of Applicant's Proposed Performance Sequence**

The goal in reviewing the entire sequence is to review the sequence design in relationship to the aircraft's capabilities, preservation of energy, adaptability to changes in density altitude and weather, demand on the pilot both physically and mentally, and the flow of the program.

The ACE should proceed through the applicant's written sequence and pause at each maneuver to examine it; then discuss it by covering the topics above. The applicant must know the minimum energy state (airspeed and altitude) for various density altitudes that he/she must have as entry parameters for every maneuver in the sequence. The ACE must cover this item for every maneuver in the sequence.

The applicant for a Level 3 or Level 4 waiver will be required to adhere to the maneuver sequence flown during the flight evaluation -- as recorded in the information sent to the EAA WoA office -- with the completed flight evaluation, in subsequent air show performances. However, variances in the sequence that increase the safety of the performance by compensating for factors such as density altitude, wind and terrain considerations shall be allowed, providing that no new maneuvers that have not been demonstrated are included in such modifications. Maneuvers may be deleted from the sequence.

### **III. Special Considerations**

The ACE should refer to the appropriate checklist item if the applicant is flying a specialty act. A thorough discussion of each item is required. In certain situations, the ACE may have related, though not personal, experience in a specialty or new act. This is a good chance to ask the applicant to explain the unique facets and safety requirements of his/her specialty or plans for a new air show act. The ACE may also find it helpful to contact another ACE who specializes in a related aircraft. In these situations, the Chairman of the EAA WoA ACE Committee will be advised before recommendations are forwarded to the FAA and TC.

### **IV. Emergency Procedures**

An important issue for the ACE to bear in mind when reviewing emergencies is the decreasing number of options the pilot has in any given emergency as the total energy level (airspeed and altitude) of the aircraft decreases. Special care should be taken by the ACE to include specialty act circumstances into the discussion of each emergency. Examples include such emergencies as engine failure during a formation maneuver or during inverted flight. Once again, the idea here is to take the time to think about these possible emergencies so that the pilot can recall his/her plan when and if those circumstances arise.

## V. Practical Ground Standards Evaluation Checklist

- A. Review of applicant's experience
1.  Certificate check (Certificate Level/Ratings, medical, Flight Review, and LOA)
  2.  Air show documentation
  3.  Total flying time and time in type
  4.  Aerobatic time
    - a.  total
    - b.  in type
- B. The applicant will exhibit appropriate knowledge of the following: personal motivation, philosophy, and reasons for obtaining a SAC.
- C.  Understanding of history of air show accidents and common causes.
- D.  Aerodynamics as it relates to the applicant's sequence (turn performance and energy management).
1.  Relationship between true airspeed and; lift, drag, turn rate, and turn radius
  2.  Relationship between indicated and true airspeed
  3.  Technique for minimum altitude vertical recovery
  4.  Limitations of pilot's aircraft ( $V_N$  or  $V_G$  diagram)
  5.  Understanding of control of induced drag and how it can be controlled from the cockpit
  6.  Capabilities of pilot's specific aircraft
    - a.  wing loading
    - b.  power to weight
    - c.  G limits
    - d.   $V_{ne}$ ,  $V_{so}$
    - e.  special modifications
    - f.  structural integrity, fatigue
    - g.  use of ground pyro (ground/shooter-n-charge briefing)
  7.  Review of applicant's specific sequence
    - a.  logic of sequence/energy management
    - b.  energy losing maneuvers
    - c.  special adjustments for high density altitude
    - d.  blown maneuver or sequence interruption
    - e.  figure by figure margin analysis
      1. Energy vs. altitude
      2. Minimum energy state to start a maneuver
      3. Discussion of energy gates throughout the maneuver
      4. Expected energy gain/loss from the maneuver
      5. Padding added for reasonable margins

- 8.  Out of control flight (planned or unplanned)
- 9.  Night time considerations
  
- E.  Operation at high density altitude
  - 1.  Use of density altitude chart
  - 2.  Increased true airspeed and pull-out performance (turn radius increases with square of TAS)
  - 3.  Engine performance degradation
  - 4.  Relationship between indicated and true airspeed
  - 5.  Ability to maintain energy
  - 6.  Sequence modifications necessary to maintain energy
  
- F.  Physiological effects/human factors in the air show environment
  - 1.  Temperature effects (high and low)
  - 2.  Hydration
  - 3.  Stress
  - 4.  G tolerance
    - a.  insidious characteristics of loss of G tolerance
    - b.  affected greatly by physical condition
  - 5.  Density altitude effects on the body
  
- G.  Weather considerations
  - 1.  Wind velocity and direction
  - 2.  Ceiling and visibility
  - 3.  Rain on laminar wings (gliders, Long EZ, etc.)
  - 4.  Prepared and practiced low show
  
- H.  Air show responsibilities
  - 1.  Responsibilities at air show briefing
  - 2.  Federal Aviation Regulations and policy/Canadian Aviation Regulations and standards that apply to aerobatics and air shows, IIC responsibilities, air boss duties and assignments, air show standard operation procedures, air show safety briefing requirements, pertinent paperwork reviewed by the FAA and the air show ground plan.
  - 3.  Required certification for air shows
  - 4.  Show line vs. crowd line
    - a.  artificial show lines
    - b.  water shows
    - c.  obstacles
  - 5.  Ground operations (start & taxi)
  
- I.  Emergencies
  - 1.  Structural failure and aircraft control
  - 2.  Engine failure
  - 3.  Fire
  - 4.  Communications failure
  - 5.  Disorientation
  - 6.  Bail out and parachute considerations

**VI. Special Act Considerations**

(Must be reviewed for notation on SAC)

- Use of radio and backup
  
- Dog fight act
  - 1.  Aircraft dissimilarities
  - 2.  Energy conservation
  - 3.  Special effects: plan ahead for safety
  - 4.  Emergency procedures
  - 5.  Risks of "unplanned" sequence

**Appendix D  
Practical Flight Evaluation Standards**

A. General

1. If an applicant believes that he/she may have difficulty executing one or more of the flight maneuvers mandated, it is strongly recommended that the applicant postpone or cancel the evaluation until he/she has complete mastery of the required maneuvers.
2. The final decision on whether or not an applicant is capable of performing any particular maneuver is the applicant's.
3. Certain maneuvers may not be appropriate for certain aircraft. The ACE and the applicant will jointly decide if specific maneuvers should be adjusted or eliminated from the evaluation process if the applicant is flying a plane that cannot or should not be used to fly those maneuvers. For example, it is understood that only planes with inverted fuel and oil systems will fly the two 180-degree inverted turns. Note: Under no circumstances should an aircraft be used to perform maneuvers not approved for that aircraft.
4. At a minimum, the maneuvers explained in this document are to be successfully demonstrated prior to the applicant demonstrating his/her air show sequence. They are to be performed at a safe altitude, may be flown separately or in a sequence, and may be completed in the same flight, or in a separate flight from the air show sequence, at the discretion of the applicant and evaluator. These maneuvers are used to demonstrate the applicant's ability to perform basic aerobatic maneuvering safely before demonstrating his/her ability to perform a sequence of maneuvers at low altitude in a designated area.

5. Reverse half Cuban eights and split S-type maneuvers can be dangerous maneuvers. Though any maneuver specified in these standards can also be dangerous, the EAA WoA ACE Committee recommends particular caution and, if necessary, a bit more altitude than normal when a new pilot or a pilot unknown to the ACE is performing these particular maneuvers.
6. In order to provide the ACE with a basis for evaluating a maneuver from the ground, EAA WoA ACE Committee has given altitude and heading guidelines to assist the ACE in the evaluation process. The altitude and heading guidelines are provided for reference only. These values are accepted by the International Aerobatic Club (IAC) as the minimum deviation visible by a judge evaluating from the ground. Please use these values as a guide only. (Reference IAC Rule Book) EAA WoA expects the ACE to use his/her best judgment in evaluating a performance. If there is any question as to the safety of any maneuver or sequence presented by an applicant, the pilot should fail the evaluation.
7. The ACE should select the category and performance class that covers the maneuvers the aircraft is capable of and then, if necessary, disregard any maneuvers deemed unsafe or beyond the capabilities of the aircraft. The ACE may ask to see any maneuver that might not be listed if it is deemed necessary for conducting a thorough evaluation and the maneuver is considered safe and appropriate.

**Category B: Jet Warbird Aerobatics**  
**Category C: Piston Warbird Aerobatics**

- Level 4 - (800 feet AGL minimum)**  
**Level 3 - (500 feet AGL minimum)**  
**Level 2 - (250 feet AGL minimum)**  
**Level 1 - (surface - Not applicable for EAA WoA program)**

(Aircraft in this category include, but are not limited to, military and ex-military aircraft with reciprocating and turbine engines that have 600 horsepower or more and retractable gear.)

- I. Area of Operation: Flight Evaluation Maneuvers
  - A. Task: Flat Pass

To determine that the applicant can define and track the appropriate show line (1000 feet or 1500 feet, depending on the aircraft), and establish a reference to the appropriate baseline altitude.

1. Show knowledge of show line orientation and baseline altitude minimums.
2. Consider wind conditions, obstructions and emergency procedures.
3. Establish a straight flight path parallel with the demonstration area and correct for wind conditions if required.
4. Fly a smooth and level pass at the baseline altitude +/- 50 feet.

- B. Task: 180-degree repositioning turn

To determine that the applicant can execute a 180-degree repositioning turn.

1. Show knowledge of the dynamics of repositioning turns.
2. Demonstrate the flight path and judgment required to reposition the aircraft from a maneuvering pass and realign on the reciprocal show line for the next pass.
3. Direct the flight path so as not to direct energy toward the crowd line.
4. Be able to abort the maneuver at any time needed or as instructed by the ACE.

- C. Task: Half rolls

To determine that the applicant can execute a half roll from upright to inverted, pause, and then roll back upright in the opposite direction of the original roll. Requires applicant to exhibit orientation and recognition of inverted flight, hold inverted flight, and

demonstrate the ability to roll in the opposite direction to reestablish flight in the upright position. This maneuver may be accomplished at a level altitude or a parabolic arc depending on the inverted flight limitations of the aircraft being utilized.

1. Exhibit knowledge of the elements of rolling maneuvers.
2. Consider wind conditions, obstructions and emergency procedures.
3. Establish necessary wind corrections to maintain a constant flight path before rolling to the inverted.
4. Roll to inverted smoothly and in a controlled fashion, stopping at wings level +/- 10 degrees.
5. Maintains flight path +/- 10 degrees while inverted.
6. Roll back to upright flight in a smooth and controlled fashion, maintaining flight path +/- 10 degrees.
7. Stop roll upright, wings level +/- 10 degrees and at an altitude at or above the baseline altitude.
8. Be able to abort the maneuver at any time needed or as instructed by the ACE.

D. Task: Aileron roll (left)

To determine that the applicant can roll the aircraft without losing altitude and maintain a constant heading while executing a 360-degree aileron roll.

1. Exhibit knowledge of aileron rolls.
2. Consider wind conditions, obstructions and emergency procedures.
3. Establish a straight flight path parallel with the demonstration area.
4. Roll smoothly and in a controlled fashion to the left.
5. Maintain a constant rate of roll throughout the roll.
6. Maintain heading during the roll +/- 10 degrees.
7. Complete the roll at an altitude at or above the baseline altitude.
8. Finish roll in a wings level attitude +/- 10 degrees.
9. Finish roll on same heading as entry +/-10 degrees.
10. Be able to abort this figure at any time if needed or instructed by ACE.

E. Task: Aileron Roll (right)

To determine that the applicant can roll the aircraft equally well in both directions.

1. Exhibit knowledge of aileron rolls.
2. Consider wind conditions, obstructions and emergency procedures.
3. Establish a straight flight path parallel with the demonstration area.
4. Roll smoothly and in a controlled fashion to the right.
5. Maintain a constant rate of roll throughout the roll.
6. Maintain heading during the roll +/- 10 degrees.
7. Complete the roll at an altitude at or above the baseline altitude.
8. Finish roll in a wings level attitude +/- 10 degrees.
9. Finish roll on same heading as entry +/-10 degrees.
10. Be able to abort this figure at any time if needed or instructed by ACE.

*Note: A SAC with the notation, "Rolls Only" may be issued to any applicant who satisfactorily demonstrates these first five (5) maneuvers: the flat pass, the 180-degree repositioning turn, the half roll to inverted and half roll back upright, the left aileron roll and the right aileron roll.*

F. Task: Point Roll (four- or eight-point)

To determine that the applicant possesses advanced rolling abilities and inverted orientation while maintaining the show line and baseline altitude.

1. Exhibit knowledge of point rolls.
2. Consider wind conditions, obstructions and emergency procedures.
3. Establish a straight flight path parallel with the demonstration area.



4. Roll smoothly and in a controlled fashion to each point.
5. Stop each segment of the roll +/- 10 degrees.
6. Maintain heading during the maneuver +/- 10 degrees.
7. Complete the maneuver at an altitude at or above the baseline altitude.
8. Finish roll in a wings level attitude +/- 10 degrees.
9. Finish roll on same heading as entry +/-10 degrees.
10. Be able to abort this figure at any time if needed or instructed by ACE.

#### G. Task: Half Cuban Eight

To determine that the applicant can complete a half Cuban eight: Fly approximately five-eighths of a loop to an inverted down line of approximately 45 degrees. Half roll the aircraft to upright. Recover in upright flight parallel to the demonstration area, while maintaining full situational awareness in reference to the ground.

1. Exhibit the knowledge of the elements of the half Cuban eight.
2. Consider wind conditions, obstructions and emergency procedures.
3. Establish a straight and level flight path parallel to the demonstration area.
4. Fly approximately five-eighths of a loop in a smooth and controlled fashion to an inverted down line of approximately 45 degrees.
5. Half roll to upright flight on a down line.
6. Return to upright level flight at same or greater altitude in the opposite direction from entry +/- 10 degrees.
7. Be able to abort this figure at any time needed or instructed by the ACE.

#### H. Task: Inside Loop

To demonstrate that the applicant has the ability to utilize the vertical while maintaining the show line correcting for wind drift and reestablish level flight upon completion of the maneuver at the baseline altitude.

1. Exhibit the knowledge of the elements of the inside loop.
2. Consider wind conditions, obstructions and emergency procedures.
3. From an established flight path, parallel to the demonstration area initiate the inside loop.
4. Maintain roll and pitch control during loop.
5. Maintain speed control over the top of the loop.
6. Exit the loop on the same flight path as entry +/-10 degrees.
7. Exit the loop at an altitude at or above the baseline altitude.
8. Be able to safely abort the loop at any time if needed or asked to by ACE.

## II. Area of Operation: Cross Wind Correction

#### A. Task: Cross wind correction.

To determine that the applicant can compensate for cross wind conditions by maneuvering the aircraft in a fashion that will keep the aircraft from moving down wind. Many techniques will work for this purpose leaving quite a bit of subjectivity and judgment on the ACE's evaluation. Therefore, the sole task is to verify that the pilot has the control and situational awareness needed to keep the aircraft from passing inside a given "dead line".

The following maneuver is designed to demonstrate the pilot's ability to "move" the aircraft from left to right or vice versa. The amount of sideways movement will vary depending on the size of the loop, time in the loop, and the pilot's ability to input corrections for wind drift.

1. Exhibit knowledge of the elements of cross wind correcting. Specifically, being able to keep the aircraft over the same path along the demonstration area correcting for crosswind, and also being able to move aircraft to the up wind direction at will.
2. Consider wind conditions, obstructions and emergency procedures.
3. While flying the aircraft directly towards the ACE at the demonstration altitude perform one inside loop over a pre-determined ground point.

4. The applicant should be able to “move” the aircraft “up-wind” to the left or right by no less than 100 feet. (The use of runway lights normally spaced 200 feet is a good reference for the ACE to use.)
5. Refer to Task H: Inside Loop in Section I.

If sufficient cross wind exists, the applicant may perform the loop in a direction that would expose his/her aircraft to a 90-degree cross wind. If this method is used, the applicant will be expected to keep his/her aircraft over the pre-determined ground point during the entire loop. The ACE may want to refer to the enclosed Crosswind Component Charts for wind vs. distance drift.

### III. Area of Operation: Full aerobatic sequence

#### A. Task: Aerobatic sequence demonstration

To determine that the applicant can complete a full aerobatic demonstration. During the flight, the pilot shall be able to complete the following:

1. Maintain a safe altitude at all times as appropriate for the level being applied for.
2. Maintain directional control of his/her aircraft at all times during the aerobatic demonstration. This is to include take off and landings.
3. Maintain an energy level that is appropriate for the given sequence and maneuvers being demonstrated.
4. Compensate for winds during the sequence so as to remain over the primary demonstration area, remaining no less than 1,000 feet in front of the ACE, and keeping the sequence balanced and centered.
5. Be able to abort or interrupt the sequence at any time if needed or asked to by the ACE. After interruption, being able to return to the aerobatic area and continue with the remainder of the sequence without the flow and safety being compromised.
6. All maneuvers shall be performed to the same standards as set forth in the proceeding “tasks.”

## **Appendix E**

### **Statement of Aerobatic Competency Endorsements and Requirements**

The following are accepted SAC Endorsements/Limitations/Restrictions with associated minimum requirements:

- A. Rolls only
  1. 10 practice sessions for Initial Endorsement
  2. Level as required
  3. Completed evaluation
  4. Qualification period of 36 months in category evaluated
- B. Solo Aerobatics
  1. 30 documented practice sessions for Initial Endorsement
  2. Level as required
  3. Completed evaluation
  4. Qualification period of 36 months in category evaluate
- C. Dog Fight
  1. Complete evaluation
  2. Qualification period of 36 months in a category evaluation

# **“TO BE DETERMINED”**

## **Appendix F Figures**

NOTE: Figures 1, 2, 3, 4 and 5 will be replaced with the new documents upon approval and prior to implementation.

Figure 1  
Front of FAA SAC

Figure 2  
Front of Transport Canada SAC

Figure 3  
Back of Transport Canada SAC

Figure 4  
Statement of Aerobatic Competency Application

Figure 5  
Aircraft/Category Reference

### AIRCRAFT SHOW LINE CATEGORIES

| Aircraft                                | Show Line Category |
|---|--------------------|
| Aero Vodochody L-39 Albatros            | 1                  |
| Boeing Stearman - All variants*         | 3                  |
| BAC 167 Strikemaster                    | 2                  |
| BAC Jet Provost                         | 2                  |
| Chance-Vought F-4U Corsair              | 2                  |
| Curtiss P-36 Hawk                       | 2                  |
| Curtiss P-40 Warhawk                    | 2                  |
| Douglas A-1 Skyraider - All variants    | 3                  |
| Grumman F4F/General Motors FM-2 Wildcat | 2                  |
| Grumman F6F Hellcat                     | 2                  |
| Grumman F8F Bearcat                     | 2                  |
| Hawker Sea Fury                         | 2                  |
| Mikoyan-Gurevich MiG-17                 | 1                  |
| Nanchang CJ-6/Yakovlev Yak 18*          | 3                  |
| North American F-86 Sabre/FJ-4 Fury     | 1                  |
| North American P-51 Mustang             | 2                  |
| North American T-28 Trojan              | 2                  |
| North American T-6/SNJ/Harvard*         | 3                  |
| Republic P-47 Thunderbolt               | 2                  |

|                                 |   |
|---------------------------------|---|
| Supermarine Spitfire            | 2 |
| Yakovlev Yak 50*                | 3 |
| Yakovlev Yak 52 - All variants* | 3 |
| Yakovlev Yak 55*                | 3 |

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