NATIONAL TRANSPORTATION SAFETY BOARD

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AIRWORTHINESS

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NATIONAL AIR-RACING GROUP UNLIMITED RACING DIVISION OFFICIAL COMPETITION RULES AND BYLAWS

As of JANUARY 2006 (Bylaws revised as of July 2006)

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NAG UNLIMITED DIVISION OFFICIAL COMPETITION RULES

These Unlimited Division Official Competition Rules (OCRs) are the only official and approved competition rules of the Unlimited Division of the National Air-Racing Group (NAG). The Unlimited Division Aircraft Specifications, which are the official aircraft specifications, the Unlimited Division Pilot Qualification Specifications, which are the official pilot qualification requirements, and the Unlimited Division Technical Inspection Regulations, which are the official technical inspection requirements, are part of the Official Competition Rules, although they are separate documents.

- A. The Competition Rules are consistent with the requirements of the Bylaws of the Unlimited Racing Division of the National Air-Racing Group (December 21, 1981), Article II, Section 1, and have been prepared by and will be maintained by the Procedure Rules Committee as described in the Bylaws, Appendix G, Article VII, Section 1, Paragraph (a).
- B. The NAG Unlimited Division Aircraft Specification, the Pilot Qualification Specifications, and the Technical Inspection Regulations are consistent with the Bylaws, Article II, Section 1, and Article VII, Section 1, Paragraph (a).
- C. The NAG Unlimited Division Competition Rules, Unlimited Division Aircraft Specifications, the Pilots Qualification Specifications, and Technical Inspection Regulations will be implemented by the NAG Unlimited Division Procedure Rules Committee, the Unlimited Division Pilot Qualification Committee, and the Unlimited Division Technical Committee.
- D. The NAG Unlimited Division Pilot Qualification Committee and the Technical Committee were established by the NAG Unlimited Division Board of Directors, as authorized by the Bylaws, Article VII, Section 2.
- E. Failure to comply with these rules will result in disqualification of pilot and/or aircraft from race competition. Disqualification will be implemented by the Board of Directors of NAG Unlimited Division upon recommendation of the Unlimited Division Procedure Rules Committee, and/or the Pilot Oualification Committee, and/or the Technical Committee.

I. GENERAL

- A. A sanctioning agreement will be negotiated on an individual race event basis between the official race organizers and the NAG Unlimited Division Board of Directors. The sanctioning agreement will include such details as race dates, entry fees and deadlines, the racecourse configuration, aircraft pit configuration, emergency vehicle requirements and disposition, spectator location and crowd control procedures, responsibilities of and chain-of-command of the various committees, the amount of and distribution of prize moneys, insurance coverage, and the schedule of events. The sanctioning agreement will also include these Official Competition Rules.
- B. These Unlimited Division Official Competition Rules will be part of and must be included in or referenced in the competition rules published by and distributed by any race promoter for each specific racing event.
- C. These Unlimited Division Official Competition Rules must be sent to or made available to all pilots and/or aircraft owners who have applied for an entry form for the Unlimited Division of any airracing event sanctioned by or participated in by NAG.
- D. The Contest Committee of each racing event will be responsible for that particular event, and the

Unlimited Division Official Competition Rules will be administered by and interpreted by that committee.

II. AIRCRAFT AND PILOT ELIGIBILITY

- A. Aircraft and Pilot eligibility requirements are defined in the attached documents; NAG Unlimited Division Aircraft Specifications, NAG Unlimited Division Pilot Qualification Specifications, and NAG Unlimited Division Technical Inspection Regulations. The Unlimited Division Pilot Qualification Committee and Technical Committee will advise the Contest Committee as to the aircraft and pilot eligibility qualifications.
- B. Failure to wear and use the safety equipment specified in the NAG Unlimited Division Pilot Qualification Specifications during all practicing, qualifying and racing will result in disqualification from the entire racing event or in the remaining racing events if violation occurs after the racing events have started.

III. PILOT BRIEFINGS: PRE-RACE

- A. Pilot must attend the pilot briefing on the days he intends to fly or is scheduled to fly unless extremely extenuating circumstances are proven to exist, or a \$100 fine will be assessed.
- B. Under special circumstances, alternate pilots and/or pilots who miss the mandatory pilot briefing must be briefed by the director of operations before they are allowed to fly.
- C. Pilots first arriving at a race site prior to a race event must be briefed before flying on or practicing on the racecourse.

IV. PRACTICE AND QUALIFYING PERIODS – GRACE

- A. All entries must qualify in order to establish eligibility and starting positions for their respective events.
- B. Practice and Qualification periods will be scheduled by the operations officer and entrants may be assigned specific times under certain unusual circumstances, (i.e., limited time due to rain, snow or other unscheduled postponements). The periods allotted for practice and qualification will be posted at the race site and/or announced at the daily pilots briefing. Practice and qualifying periods will not be extended unless certain unusual circumstances exist, (i.e., weather conditions).
- C. During qualifying periods, the Contest Committee, race timers and pylon judges will be on station and ready to time a qualification run.
- D. Pilots will communicate with race control on race control frequency to obtain permission to takeoff for qualifying and may be held on the ground or at the end of the runway if the racecourse is too crowded. The pilot may request takeoff and orbit away from the racecourse and await clearance to enter the racecourse when a position is available. The practice and/or qualification order is on a first-come basis after engine start, unless specific times had been prescheduled.
- E. The practice/qualifying periods could be divided as follows: Half of each session would be for practice and qualifying, with a practical limit of eight aircraft on the racecourse at the same time. (This period is intended to allow larger/slower aircraft to qualify while smaller/faster aircraft practice.) Half of each session would be for qualifying only, with no more than three aircraft on

the course at the same time. Qualifying order would be determined on a first-come basis by the order of takeoff for that qualifying period and kept track of and assigned by race control. Aircraft awaiting qualifying runs could orbit away from or above the course after takeoff and be notified by race control when it is their turn for qualifying attempt. If there are no aircraft that specifically want to qualify, then the session may be opened for practice by the race control director. If, after being opened for practice, an aircraft decides to qualify, the course would be cleared of all but two practicing aircraft and the qualifying aircraft would be allowed on the course for a qualifying attempt.

F. If voted for by the majority of the competing entrants, an alternate to Paragraph E would allow a drawing of the order in which aircraft would qualify. First, two aircraft would take off. The aircraft drawing position one would enter the course directly and aircraft two would orbit. When aircraft one finishes qualifying, aircraft two enters the racecourse and aircraft three takes off and orbits until aircraft two completes qualification. This process continues until all aircraft have qualified. If an aircraft decides not to qualify, it moves to the back of the pack. After all aircraft have qualified, other aircraft will be allowed to increase their speed, by those wishing to do so drawing a new order. This procedure can be altered to have drawings for those who want to qualify on a specific day by having a daily drawing if desired by vote of the pilots at the time of the first drawing.

V. QUALIFICATION OF AIRCRAFT

- A. Qualifying will consist of two laps of the racecourse, starting from normal race altitude (below 200' above start finish line). The best speed recorded from either lap will be used as the qualifying speed. Running of the second timed lap is optional, and not required. Aircraft will not dive at the start line or go exceedingly wide around the last pylon preceding the start-finish line to obtain an advantage over other aircraft for the qualifying laps. All aircraft will fly one complete lap around the racecourse, starting at the start-finish line, at race altitude before the start of timing of the first official lap.
 - 1. A contestant, prior to making his qualifying run and before reaching the Home Pylon must signal the chief timer by radio at least thirty seconds before crossing the start-finish line in time to signal the timers that he is starting his first timed lap immediately as he passes the start-finish line. Race control will acknowledge the radio request for qualification on race frequency before the aircraft enters the last turn before the start-finish line. Vigorously wagging wings before reaching the Home Pylon is recommended as an additional method to aid the timers in identifying the aircraft to be timed. The timing stand will have a radio tuned to race frequency to hear the request for qualification timing.
 - 2. The chief timer will communicate to the flagman at the start-finish line to give the qualifying aircraft a Green Flag, if possible.
 - 3. At the end of the first timed lap, the aircraft will be given a White Flag, indicating there is one more timed lap if the pilot desires to continue on that lap.
 - 4. At the end of the second timed lap, the aircraft will be given a Black and White Checkered Flag indicating his qualifying laps are completed.
 - 5. During the first timed lap, the aircraft will attempt a radio communication check with race control to verify that the aircraft radio is operational at high engine power. An unsatisfactory radio check will not nullify an otherwise acceptable qualification speed, however, corrective action must be taken to rectify any radio problems prior to subsequent

racing competition, and a radio check should be made with Operations (tower). The Technical Committee will monitor such problems and assist in and encourage corrective measures. Corrective measures must be completed prior to any subsequent competition.

- 6. A pilot will be permitted to qualify his aircraft only once, unless the alternate procedure described in Section IV, Paragraph F is adopted. Qualifying times are assigned to the aircraft.
- 7. In the event of a cut pylon during a qualifying run, the following will occur:
 - a) If two laps were timed and a pylon was cut on only one lap, the lap on which a pylon was not cut will be used as the qualifying speed.
 - b) If only one lap was timed and a pylon was cut on that lap, the aircraft will be given a second (and last) opportunity to qualify, after all other aircraft have had an opportunity to qualify.
 - c) If two laps were timed and pylon cuts were recorded on both laps, the aircraft will be given a second (and last) opportunity to qualify, after all other aircraft have had an opportunity to qualify.
 - d) If time does not permit another qualification run, a time penalty of four seconds multiplied by the number of pylons cut on either one of the qualifying laps will be added to that specific lap, and the best resulting time will be used as the qualifying speed. Cutting inside the racecourse to avoid an entire portion of the racecourse will not be permitted, and that lap time will be disallowed.
- 8. A qualifying attempt may be aborted by abruptly pulling off the course without passing the Home Pylon at racing altitude or within reasonable time any time during the two timed laps. Aircraft should call out over the radio to race control on race frequency their race number and "aborting." If the abort was on the first timed lap, the aircraft may re-initiate a two lap timing run with the proper communication procedure when desired in that qualifying session or during the later qualifying session. If the abort was on the second time lap, the aircraft may either re-initiate a two lap timing run with the proper communication procedure during that qualifying session, without landing, or land and make a decision with 1 hour after landing to accept the first timed lap as its official time. If the first lap time is rejected as the aircraft's official time, then that time is permanently lost and the aircraft must make another attempt to qualify.
- 9. If two or more aircraft posts identical qualifying times, the aircraft that first posts the speed will take precedence and the others will follow according to when they qualify.
- 10. If time permits, after all aircraft have qualified, previously qualified aircraft will be given the opportunity to improve their qualifying speed if desired. The order of attempt will be by descending qualifying order until time runs out.
- 11. The promoter has the option to add aircraft that have not successfully completed a qualification attempt to the end of the list of qualified aircraft to complete the field of aircraft for race competition if he so desires, providing the pilot and aircraft have demonstrated their ability to perform at race speed.

12. Any Unlimited aircraft that qualifies slower than 300 miles per hour will not be permitted to race even if the field of racing aircraft is not filled. Any aircraft flying at a lower speed is not considered to be a competitive Unlimited aircraft and could be a safety hazard to other faster aircraft on a racecourse.

VI. RACE POSITION ASSIGNMENT

- A. Qualifying speeds will determine starting position for the first day of racing competition, (i.e., the fastest qualifier, the pole position, etc.). The positions for the following day/days of competition will be determined by the official finishing positions from the previous day's racing (Appendix A), or in order of the previous day's speeds as described in Appendix A-l.
- B. The Race Promoter, as part of the sanctioning agreement, establishes the total number of qualified aircraft being allowed to compete in the various races, before the rules and entry forms are distributed to the perspective participants. The number of aircraft in competition determines the number of aircraft advancing or retreating from day-to-day. The number of days of racing in the event, 1, 2, and 3, or 4, also determines the number of aircraft advancing or retreating from day-to day.

VII. RACE POSITION - PROGRESSION TO CHAMPIONSHIP RACE

The methods by which the aircraft progress to the Sunday Championship Race are described in Appendix A or A-l rather than in the body of the Competition Rules. If the methods described in Appendix A or A-l are changed for any reason, then only Appendix A or A-l would need to be modified and redistributed to the Membership. The methods for changing the Competition Rules are described in the Bylaws of the Unlimited Racing Division of the NAG, Article VII, Sections 1(d) and (e).

VIII. RACING

A. RACECOURSE

Several pylon towers placed in a specific pattern will define the racecourse. The dimensions and length of the racecourse are part of the sanctioning agreement. The aircraft will circle around the outside of the pylons in either a clockwise direction or a counterclockwise direction as determined by the physical layout of the racing site and the location of the runways.

B. STARTING POSITIONS

Starting positions for each day's race will be:

- 1. In order of qualification speeds for the first day of racing.
- 2. In order of previous day's finishing order on subsequent days of racing (see Appendix A), or in order of the previous day's speeds as described in Appendix A-l.

C. RACE START

- 1. The number of race laps will be negotiated with the Race Promoter.
- 2. The number of race laps for Sunday will be negotiated with the Race Promoter.

- 3. All races will start at least two-and-one-half (2.5) hours before sunset.
- 4. Air starts will be used for all Unlimited Division pylon races. The pace plane pilot will brief the pilots before takeoff for each race on the following items.
 - a) Time to start engines
 - b) Time for takeoff
 - c) Rendezvous area
 - d) Rendezvous speed and altitude
 - e) Emergency procedures
 - f) VHF Comm frequency
 - g) Each pilot's starting position
 - h) Number of laps for race
 - i) Other procedures as necessary
- 5. If no pace plane is used, the formation will join on the pole position racer, and it will be that pilot's responsibility to brief the other pilots before the race.
- 6. The pace plane will join up with the first aircraft to take off for a race after the first aircraft is airborne. First aircraft is formation leader until pace aircraft joins up.
- 7. The air start will be made from a formation on the starter's aircraft. "Jumping the start," where aircraft racing are ahead of the pace aircraft at the start line, is prohibited. "Sling-shotting" is also prohibited. Violators will be penalized one lap for preceding the starter's aircraft across the start line or "sling-shotting" the start. The pace plane pilot will judge whether an aircraft has "jumped the start," and the chief judge, positioned at an appropriate location will judge whether an aircraft has "sling-shotted" the starting formation.
- 8. In no case will the start be delayed or expedited for:
 - a) Orbiting pilots with low-fuel conditions.
 - b) Pilots unable to find starting formation.
 - c) Pilots with mechanical or personal problems.
- 9. The race officially starts when the pace plane pulls up, or if there is not a pace plane, when the pole position pilot announces "we have a race" over the race frequency at a predetermined point on the initial approach to the racecourse. All aircraft will enter the racecourse at the one and only predetermined point to officially start the race. If an aircraft does not meet up with the initial starting formation before the group descends for the start, it may enter the racecourse at the predetermined point behind the initial group to officially start the race. All aircraft must have entered the racecourse by the time the first

place aircraft crosses the start-finish line to officially start the race or they will be disqualified and not be an official starter.

10. For Sunday's races, all aircraft that takeoff for a race will be eligible for place money in that race whether they make an official start or not.

D. PYLON TURNS

- 1. A pilot who cuts a pylon (turning inside or having any part of the aircraft over the pylon constitutes a "cut") may validly continue in the race, but will be assessed a time penalty of two seconds multiplied by the number of laps in the race for each pylon cut, the penalty time being added to the actual finish time to arrive at a corrected race time, which will be used to compute the adjusted race speed and official finish position. Protests to the Contest Committee will not be allowed on penalties for pylon cuts.
- 2. Aircraft will not be notified of the cut pylons until completion of the race.
- 3. An aircraft forced over or inside a pylon by illegal flying by another aircraft shall be considered to have had a "forced cut," and shall not be penalized. The pylon judges and the Professional Standards Advisory Committee shall judge whether or not a cut is a "forced cut." Protest to the Contest Committee will not be allowed on determinations of whether or not a cut is a "forced cut." If a cut is judged to be a "forced cut," the aircraft flying illegally will be penalized a time penalty of two seconds per lap in the race for each infraction.
- 4. Minimum altitude at the pylons is pylon height. The racing plane cockpit (or pilot's eye level) should remain at or above the top of the pylons. Pylon judges at each Turn Pylon and at Home Pylon shall be responsible for calling violations of the low flying limitations. Violators will be disqualified from the race in which the violation occurred. The maximum race altitude is 1500 feet AGL. Any aircraft obviously above this altitude will be deemed to have left the race, but may re-enter the course after notifying race control over race frequency if re-entry to the racecourse can be made safely without violating course boundary or pylon cut rules.
- 5. At no time will a pilot, in order to avoid cutting a pylon, turn right into traffic on a counter-clockwise racecourse (or turn left into traffic on a clockwise racecourse) for any reason. If an aircraft is forced inside a pylon by a "forced cut," the pilot will not be penalized, but if the pilot turns right into traffic to avoid a pylon cut caused by his own flying error, then the pilot will be reprimanded and possibly fined for actions that are clearly unsafe to other aircraft. The Professional Standards Advisory Committee will monitor this type of infraction.

E. PASSING

- 1. An aircraft overtaken must not in any way impede or interfere with a faster overtaking plane. The overtaking pilot must keep the overtaken aircraft in sight at all times during the pass.
- 2. An aircraft overtaking a slower airplane will not pass between that aircraft and a pylon and will pass on the outside unless the overtaken aircraft is extremely wide and can be kept in sight by the overtaking pilot at all times during the pass. Penalty for passing inside

blind to another aircraft will be a time penalty of two (2) seconds per lap in the race for each infraction. The Professional Standards Advisory Committee shall judge whether an inside pass was accomplished.

F. EMERGENCY PROCEDURES

- 1. When a pilot declares a "Mayday" or when it is obvious that a racing plane is having an emergency, race control will announce by radio that an emergency is in progress and the Yellow Caution Flag will be displayed at the Home Pylon and other pylons if desired.
- 1. Any aircraft declaring a "Mayday" or obviously leaving the racecourse for an emergency condition will not be allowed to re-enter that race and will be considered to have terminated the race at that point.
- 2. All pilots will pull up cautiously, clearing overhead, to an altitude such that the pilot can safely scan for the racing plane with the emergency. The altitude should be adequate to enable the pilot to keep the "Mayday" aircraft in sight and adequate to "give way" to the "Mayday" aircraft by an entirely safe distance when necessary. All aircraft will continue to race.
- 3. A safe "Mayday" altitude will vary depending on the pilot, the type of aircraft, the course and other factors. No specific altitude is designated because a safe altitude for adequate pilot lookout varies, depending on the pilot, course, situation and other factors.
- 4. Failure to "give way" to an aircraft with an emergency will result in a severe penalty. (See Penalty Section)
- 5. When a pilot has an inflight problem, which does not require an immediate emergency landing, he may elect precautionary emergency procedures and maneuvering until he can make a decision regarding the nature of his problem. He may amplify his problems to Race Control and/or safety observers, if practicable. The pilot may decide to continue competition or to take other action including a "Mayday" after such precautionary procedures.
- 6. Emergency conditions will be terminated as soon as possible after the distressed aircraft is on the ground and/or the racecourse is clear and will remain so. The pilot of a distressed aircraft may aid in this by declaring his safety on the ground or when clear of the course. Race Control will officially terminate emergency conditions when it is ascertained that the distressed aircraft is clear of the racecourse and will remain so. Race Control will announce on Comm-radio "Course is clear, resume normal racing," or other clear wording to that effect. Race Control will also notify officials on ground Comm-radio, whereupon yellow flags will be dropped and green flags will be prominently displayed at the Home Pylon and other pylons if desired.
- 7. In the event that a race must be terminated before its normal end, due to an emergency condition, pilots will be notified by radio that the race is terminated and a Red Flag will be displayed at the start-finish pylon. Aircraft shall pull up and off the course in trail at the start-finish pylon as is normally done at the end of a race. Landing instructions will be given as soon as possible after the race termination. This procedure is to prevent uncoordinated departures from the racecourse during an emergency condition.

G. RACE FINISH

- 1. The official start-finish line will be a projected line from the Home Pylon, established at right angles to the edge of the course at the start-finish line.
- 2. The finish for participants of any closed course race will be when the first place racing aircraft passes the start-finish line after completion of the required number of laps. All aircraft will be given the Checkered Flag as they pass the start-finish line, and the finishing positions will be determined by the number of laps completed by each aircraft as they cross the start-finish line after the winning aircraft.
- 3. A safety lap will not be flown.
- 4. The winner and each subsequent place in the race shall be determined by the adjusted race speeds as computed from race times, including any added time penalties for pylon cuts.
- 5. Unofficial results shall be posted within thirty (30) minutes following the finish of a competition. Such results will become official after one hour following the posting of results if there is no protest.

H. RACE FLAGS

- 1. The following race flags will be used during all competition events. Flags will be displayed at the start-finish pylon, and the Yellow and Green Flags may be displayed at other pylons if desired.
 - a. Green Flag Start of race or start of qualification run; also used to resume normal racing after an emergency.
 - b. Black Flag Aircraft signaled to vacate the course.
 - c. Yellow Flag Emergency in progress.
 - d. Red Flag Cancellation of race.
 - e. White Flag Start of final lap.
 - f. Black & White Checkered Flag Finish of race.

IX. PENALTIES

- A. In addition to other offenses included herein, the following shall be deemed violations of the rules and will be grounds for fines and/or disqualification.
 - 1. Bribery or attempt to bribe anyone connected with any competition, and/or the acceptance of such offer.
 - 2. Any intention to enter or aid in the entry of an unqualified participant or aircraft.
 - 3. Any action or proceeding prejudicial to the integrity of the sporting event or to the best interest of air racing.

- 4. Any unsportsmanlike conduct, any protest offensively formulated, any abusive language or threat uttered publicly or otherwise against participants, officials, or committee members, before, during or after a race or at the race sites.
- 5. Reckless or dangerous flying.
- 6. Violation of any FAA rules and regulations.
- 7. Flying over spectators at any time.
- 8. Failure of pilot or aircraft to conform to regulations set forth in the Unlimited Division Specifications and Technical Inspection Regulations.
- 9. Attempt to race an unqualified aircraft in a race as a substitute for a qualified aircraft.
- B. The penalties which may be assessed shall be as follows:
 - 1. In the event a pilot cuts a pylon (turning or having any part of the aircraft over the pylon constitutes a "cut"), penalty of two (2) seconds per lap for each lap of the race will be assessed. Protests to the Contest Committee will not be allowed on penalties for pylon cuts. Cuts assigned to the wrong aircraft may be discussed with Contest Committee and Chief Pylon Judge.
 - 2. Any contestant/aircraft that violates the prescribed FAA Showline during participation in any race will be disqualified from that race with no right of protest and will receive last place prize money for the specific event involved. Aircraft will be notified by radio if possible and ordered to vacate the course (Black Flag). Pilot will meet with Contest Committee and FAA site representative after landing to discuss reason for the Showline violation. Pilot will also meet with Pilot Qualification Committee to discuss Showline violation.
 - 3. On the approach to and going around the pylon tower nearest to the beginning of the Showline zone, an aircraft will be permitted to change altitude to a minimum of 1500 feet if necessary because of traffic or when overtaking a slower aircraft. However, regardless of altitude, if the aircraft crosses the FAA Showline, the aircraft will be penalized a time penalty of two seconds multiplied by the number of laps in the race for each violation. In the event the aircraft crosses the Showline and is unable to attain an altitude of 1500 feet, he will be disqualified from that race with the same results as Number 2 above.
 - 4. Any contestant/aircraft that violates any other specified racecourse physical boundary will be assessed a two (2) seconds multiplied by the number of laps penalty for each violation.
 - 5. The Contest Committee may order, or cause to be ordered off the course, and disqualify for that race (and possibly for the duration of the racing event) any pilot who is a menace to himself or to other participants. The judges may order off the course any pilot for reckless, dangerous, or unsportsmanlike flying. The pilot should be warned on the radio that his continued erratic behavior will result in disqualification. If the erratic flying continues, the pilot will be disqualified from the race with no right of protest and will receive last place prize money for the specific event involved. Aircraft will be notified by radio if possible and ordered to vacate the course (Black Flag). Pilot will meet with Contest Committee and Pilot Qualification Committee after landing to discuss reason for erratic

behavior and to discuss whether pilot should be disqualified for the duration of the racing event. A fine of \$500 will be paid to the Unlimited Racing Division before the pilot may resume racing.

- 6. Inadvertently passing over the Showline during a "Mayday" emergency maneuver in an attempt to vacate the racecourse to land will not result in disqualification from the race.
- 7. The Contest Committee may impose fines for major infractions. The magnitude of the fine imposed will be reasonable and in accordance with the severity of the infraction, and in no case will the fine exceed the prize money earned. However, disqualification and receipt of last place money in a particular event is usually a severe enough penalty to receive for a flying violation.
- 8. The Contest Committee will coordinate all penalties that are interpretations of the Unlimited Division Procedure Rules Committee, or the chairman of that committee, before assessing the penalties or fines to assure that the penalties or fines are fair and in accordance with Unlimited Division Competition Rules accepted by the Race Director as a part of the sanctioning agreement.
- 9. Any competitor who attempts to enter a race with an unqualified aircraft, substituted in place of another qualified aircraft (of his own or of another owner), will be disqualified from flying in further competition in the remaining portion of the racing event, and he may be temporarily or permanently suspended from future racing events.
- 10. A forced pylon cut will result in a time penalty of two seconds per lap in the race for each infraction.
- 11. Passing inside blind to another aircraft will result in a time penalty of two seconds per lap in the race for each infraction.
- 12. Failure to report to a pre-race briefing or a post-race debriefing without a reasonable excuse will result in a fine of \$100 per infraction to be paid to the Unlimited Division before a pilot may resume racing.
- 13. The Unlimited Division Board of Directors or Pilots' Qualification Committee can assess fines for infractions of the Unlimited Division rules.

X. PROTESTS

- A. The right to protest is vested in competitors and principal owners only, except that the Contest Committee may always institute a protest by virtue of its judging authority even when no protest has been filed.
- B. A protest must be submitted to the appropriate committee in writing and accompanied by the prescribed protest fee. The protest fee will be returned if deemed well founded by the Contest Committee, otherwise it will be given to the pilot or aircraft protested against, or given to the sanctioning organization treasurer if the protest is not against a specific pilot or aircraft.
 - 1. Protests relating to an air racing event or the results of an air racing event must be presented to the Contest Committee at Race Headquarters.

- 2. Technical protests of racing equipment will be submitted to the Chief of the Unlimited Division Technical Committee.
- 3. Protest fee will be \$200.
- C. Time limits for protests will be as follows:
 - 1. Protests against the validity of an entry or qualification of participants must be logged at least twenty-four (24) hours before the first scheduled Unlimited Division race. Such protests will be filed at Race Headquarters in writing, accompanied by the protest fee.
 - 2. Protests against decisions or actions of the judges, timers, scorers, other officials or other participants for qualification times or race results must be logged within one (1) hour following the unofficial posting of such decisions or results. Such protests will be filed at Race Headquarters in writing, accompanied by the protest fee.
- D. Any protest against any error or irregularity committed during a competition shall be decided upon by the Contest Committee and their decision will be final.
- E. The Contest Committee will convene to deal with any contest problem under its jurisdiction as soon as practicable. The Contest Committee will convene no later than one (1) hour after the finish of the final competition of the day and will remain in session until all protests have been resolved and official results are posted. Those results will be final.
 - 1. The Contest Committee will notify all parties concerned of the hearing of any protest. They shall be entitled to call witnesses and they and the witnesses shall be given an opportunity to be heard. Persons knowledgeable in specialized areas pertinent to the contest may be called by the Contest Committee for testimony to assist in fair and equitable judgment. The Unlimited Division Procedure Rules Committee and Board of Directors will be notified and may have some of their members present at the protest hearing if desired.
 - 2. All contestants will remain in the pit area for a period of one (1) hour after the posting of the unofficial results of an event for the purpose of participating in a protest. Failure to remain in the area to receive notice of a protest will not stop the hearing of a protest.
- F. All prizes won by a competitor who has been protested against will be withheld until a final decision on the protest has been pronounced.
- G. All parties concerned shall be bound by the decision given and no appeals to the decisions rendered will be allowed.

XI. RACE CANCELLATION OR POSTPONEMENT

- A. The Contest Committee and/or the Division President shall have the authority to postpone or discontinue any racing competition for the reasons of safety, weather or racecourse conditions. There will be no postponement for mechanical difficulties of entrants.
 - 1. In determining whether a race should proceed, agreement must be unanimous between the Chief Judge, the Race Director and the Division President.

- B. If at anytime it becomes necessary to stop a race, and the lead aircraft has completed more than fifty percent (50%) of the race, it shall be declared completed. Finishing positions shall be taken from the aircraft positions in the field of aircraft at the time of official race stoppage.
- C. If the race is stopped before the lead aircraft has completed fifty percent (50%) of the heat or race, it shall be started again after suitable time has been allowed for contestant preparation.
 - 1. Only those aircraft competing in that race and who had made an official start will be permitted to start again, even if the field is not filled.
 - 2. Aircraft that had officially started the race, but dropped out of the field before the race was stopped for mechanical reasons, will be allowed to enter the restarted race if possible.
 - 3. Aircraft that did not officially start the race due to mechanical reasons will not be allowed to enter the restarted race.
 - 4. Aircraft that were disqualified during the finished portion of the stopped race will not be allowed to enter the restarted race, but they will receive last place money.
 - 5. If the stopped race was not <u>officially</u> started, the aircraft originally scheduled to start the race will be allowed to enter the restarted race. If any of those aircraft are unable to or decline to race in the restarted race, no other aircraft will be substituted in their place in the restarted race.

XII. SPECIAL RULES

- A. Special rules changes deemed necessary at the race site during the event, for safety of spectators and/or contestants at an event, must be approved by the Unlimited Division as stated in their Bylaws and submitted to the Contest Committee for their approval. Such changes will be clearly written and posted conspicuously in contestant briefing areas. A copy of such changes, amendments, additions, deletions, etc. to the rules will be understood and approved by all affected pilot competitors and the Contest Committee.
- B. The Unlimited Division Procedure Rules Committee will communicate with the Contest Committee before and after race week to review new rules and review the need for improvement of the existing rules. These meetings may be scheduled anytime during the months before and after a race.

XII. PRIZE MONEY

- A. Prize money shall be distributed in accordance with the schedule included in the sanctioning agreement.
- B. The prize money distribution schedule will be included in the Competition Rules provided to each prospective contestant by the race promoter with the entry and application information.
- C. All aircraft that officially start a race will be paid prize money.

XIV. PILOT BRIEFINGS: POST-RACE

- A. There will be a mandatory debriefing for all pilots in a race thirty (30) minutes after the finish of each race to discuss the flying from takeoff through landing.
- B. Failure to attend this debriefing without a reasonable excuse will result in a fine of \$100.
- C. A Professional Standards Advisory Committee member will attend this debriefing (preferably the committee spokesman).
- D. The Professional Standards Advisory Committee representative or his designee will conduct the debriefing.
- E. The Professional Standards Advisory Committee representative may waive the debriefing after the last race of the final day of an event if he and his committee agree that no significant items need to be discussed.

APPENDIX A

PROGRESSION TO CHAMPIONSHIP RACE

A. GENERAL

- 1. There are no lock-in or assured positions for the Sunday Gold Championship race.
- 2. The starting order for the first day of competition will be by the order of qualifying time.
- 3. The starting order in all races after the first day of competition will be determined by the previous day's finishing positions as defined below. (Refer to enclosed Figure A-I, "Race Progression Chart.")

i. Disabled Aircraft

If any aircraft scheduled to race on a given day is unable to race, other aircraft will move up one position starting from the dropout's last starting position, and the first available aircraft (the next qualified aircraft) will move into the last starting position in the slowest race. The disabled aircraft will start at the bottom of the slowest race for the next day's race.

ii. Alternate Aircraft

There will be no alternate aircraft for a race. Any competitor has the option to declare himself out of the competition and let the next aircraft in order advance to that race up to one (1) hour before the scheduled start time of the first Unlimited race of the day of the scheduled race. The order of advancement will be by the previous days official speed or by qualifying position, whichever applies. If a competitor declares himself out of the competition after that time limit mentioned on the day of the race, no other aircraft will replace the withdrawn aircraft. Any aircraft that does not officially start the race is given a zero speed and dropped to the bottom of the slowest race (on a first-out goes to the bottom basis) for the following day's racing.

iii. Finish Position

Finish position is by order of speed or by corrected speeds after penalties. Those aircraft that officially start a race will be paid as per their finish position, and those that do not finish will be paid in the order of laps completed. Aircraft that officially start, but do not finish, are given a zero speed and dropped to the bottom of the slowest race.

B. EXAMPLE OF RACE PROGRESSION

An example of a typical racing event will be included. The example is for a four day racing event, where twenty-seven (27) aircraft advance to the Sunday Championship races. Figure A-l shows a typical race progression chart that will be explained in detail in the following paragraphs.

- 1. The first day of racing (Thursday) will contain a seven-aircraft Silver race, a seven-aircraft Bronze race and a seven-aircraft Medallion race. The Silver race will contain qualifiers 7 through 13, the Bronze race will contain qualifiers 14 through 20, and the Medallion race will contain qualifiers 21 through 27.
- 2. The second day of racing (Friday) will contain a seven-aircraft Gold race, a seven-aircraft Silver race and a seven-aircraft Bronze race.
 - a) The seven Gold aircraft include the six fastest qualifiers plus the winner of Thursday's Silver race. If any of Friday's Gold aircraft fail to start Friday's Gold race, they will be

- dropped to Saturday's Silver race, (i.e., non-starters drop only one race in one day). Those aircraft that start Friday's Gold race will be in the field for Saturday's Gold race, with others being in order of finish from Friday's Silver race.
- b) The seven Silver aircraft include six from Thursday's Silver race plus the winner of Thursday's Bronze race. If any of Friday's Silver aircraft fail to start Friday's Silver race, they will be dropped to Saturday's Bronze race. Those aircraft that start Friday's Silver race will be in the field for Saturday's Silver race, and if their finish position is high enough could be in the field for Saturday's Gold race, with others being in order of finish from Friday's Bronze race.
- c) The seven Bronze aircraft include six from Friday's Bronze race plus the winner of Thursday's Medallion race and/or any dropped down from Thursday's Silver race. If any of Friday's Bronze aircraft fail to start Friday's Bronze race, they will be dropped to a pool of aircraft and allowed to start in Saturday's or Sunday's Bronze race depending upon their finish. None of the top 27 qualifiers will drop below the Bronze level for Sunday's race.
- d) Starting position in each race will be in order of finishing from previous day races. Aircraft that bump up into or are added to an event are added to the bottom of that particular race in their order from the previous day's race. Aircraft that are dropped down from a previous days race as a result of not starting that race will be dropped to the bottom position of the race into which they are placed, with the order being the order in which they would have started the previous days race (if more than one was dropped down), and they will be behind the people bumped up into that particular race as a result of winning a race the previous day. This procedure will also apply to positioning for subsequent days of racing.
- 3. The third day of racing (Saturday) will contain an eight-aircraft Gold race, an eight-aircraft Silver race and an eight-aircraft Bronze race.
 - a) The eight Gold aircraft include seven from Friday's Gold race plus the first place finisher of Friday's Silver race. If any of Saturday's Gold aircraft fail to start Saturday's Gold race, they will be dropped to Sunday's Silver race, (i.e., non-starters drop only one race in one day). Those aircraft that start Saturday's Gold race will be in the field for Sunday's Gold race, with others being in order of finish from Saturday's Silver race.
 - b) The eight Silver aircraft include six from Friday's Silver race plus the first two finishers from Friday's Bronze race and/or any dropped down from Friday's Gold race. If any of Saturday's Silver aircraft fail to start Saturday's Silver race, they will be dropped to Sunday's Bronze race. Those aircraft that start Saturday's Silver race will be in the field for Sunday's Silver race, and if their finish position is high enough, could be in the field for Sunday's Gold race, with others being in order of finish from Saturday's Bronze race.
 - c) The eight Bronze aircraft include five from Friday's Bronze race plus three aircraft from Thursday's Medallion race and/or any dropped down from Friday's Silver race. If any of Saturday's Bronze aircraft fail to start Saturday's Bronze race, they will be dropped to a pool of aircraft and allowed to start in Sunday's Bronze race. None of the top 27 qualifiers will drop below the Bronze level for Sunday's races.
- 4. The fourth day of racing (Sunday) will contain a nine-aircraft Gold race, a nine-aircraft Silver race and a

nine-aircraft Bronze race.

- a) The nine Gold aircraft include eight from Saturday's Gold race plus the first place finisher of Saturday's Silver race. If any of Saturday's Gold aircraft fail to start Saturday's Gold race, they will be dropped to Sunday's Silver race, (i.e., non-starters drop only one race in one day). Those aircraft that start Saturday's Gold race will be in the field for Sunday's Gold race, with others being in order of finish from Saturday's Silver race.
- b) The nine Silver aircraft include seven from Saturday's Silver race plus the first and second place finishers from Saturday's Bronze race and/or any dropped down from Saturday's Gold race. If any of Saturday's Silver aircraft fail to start Saturday's Silver race, they will be dropped to Sunday's Bronze race. Those aircraft that start Saturday's Silver race will be in the field for Sunday's Silver race, and if their finish position is high enough could be in the field for Sunday's Gold race, with others being in order of finish from Saturday's Bronze race.
- c) The nine Bronze aircraft include six from Saturday's Bronze race plus three aircraft from Thursday's Medallion race and/or any dropped down from Saturday's Silver race. If any of Saturday's Bronze aircraft failed to start Saturday's Bronze race, they will be allowed to start in Sunday's Bronze race. None of the top 27 qualifiers will drop below the Bronze level for Sunday's race.

C. ALTERATION OF FORMAT

Alteration of the described format, for other combinations of aircraft, can be accomplished by modifying Figure A-l, and by modifying the words describing it, to logically meet a specific number of aircraft. Any changes to the described procedures must be accomplished by the Competition Rules Committee of the Unlimited Division before being implemented, and must be approved by the Unlimited Division Board of Directors of the NAG Unlimited Division.

Figures A-2 and A-3 show typical 3-day and 2-day race formats.

Figure A-1. Race Progression Chart

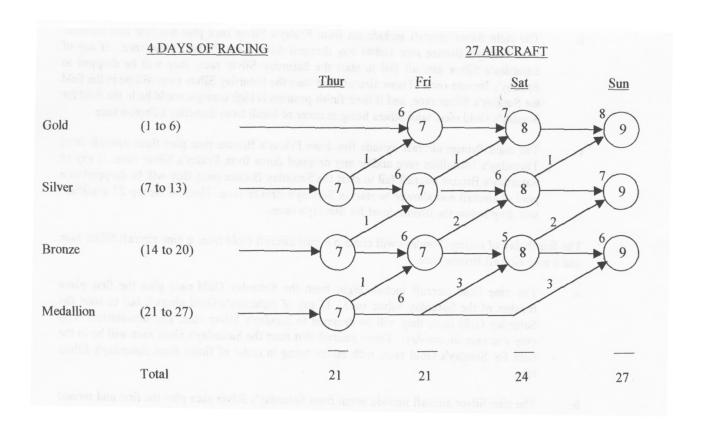


Figure A-2. Race Progression Chart

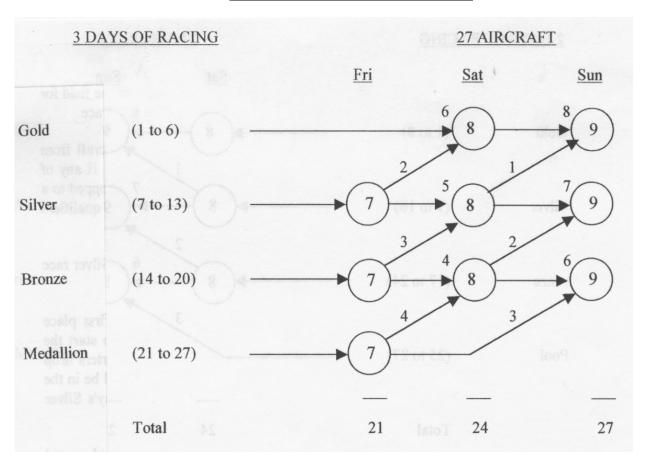
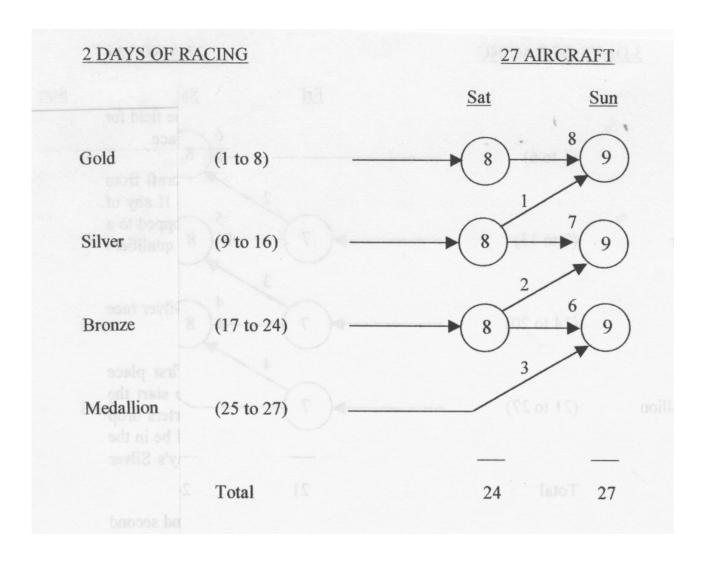


Figure A-3. Race Progression Chart



APPENDIX A-1

ALTERNATE PROGRESSION TO CHAMPIONSHIP RACE

A. GENERAL

- 1. There are no lock-in or assured positions for the Sunday Gold Championship race.
- 2. The starting order for the first day of competition will be by the order of qualifying time.
- 3. The starting order in all races after the first day of competition will be determined by the previous day's speed as defined below.

4. Disabled Aircraft

If any aircraft scheduled to race on a given day is unable to race, other aircraft will move up one position starting from the dropout's last starting position, and the first available aircraft (the next qualified aircraft) will move into the last starting position in the slowest race. The disabled aircraft will start at the bottom of the slowest race for the next day's race.

5. Alternate Aircraft

There will be no alternate aircraft for a race. Any competitor has the option to declare himself out of the competition and let the next aircraft in order advance to that race up to one (1) hour before the scheduled start time of the first Unlimited race of the day of the scheduled race. The order of advancement will be by the previous days official speed or by qualifying position, whichever applies. If a competitor declares himself out of the competition after that time limit mentioned on the day of the race, no other aircraft will replace the withdrawn aircraft. Any aircraft that does not officially start the race is given a zero speed and dropped to the bottom of the slowest race (on a first-out goes to the bottom basis) for the following day's racing.

6. Finish Position

Finish position is by order of speed or by corrected speeds after penalties. Those aircraft that officially start a race will be paid as per their finish position, and those that do not finish will be paid in the order of laps completed. Aircraft that officially start, but do not finish, are given a zero speed and dropped to the bottom of the slowest race.

B. EXAMPLE OF RACE PROGRESSION

- 8. The first day of racing (Thursday) will contain a seven-aircraft Silver race, a seven-aircraft Bronze race and a seven-aircraft Medallion race. The Silver race will contain qualifiers 4 through 10, the Bronze race will contain qualifiers 11 through 17, and the Medallion race will contain qualifiers 18 through 24.
- 9. The second day of racing (Friday) will contain an eight-aircraft Gold race, an eight-aircraft Silver race, and an eight-aircraft Bronze race.
 - a) The eight Gold aircraft include the three fastest qualifiers and the four fastest racers from any of the previous day's races.
 - b) The eight Silver aircraft include the next fastest eight aircraft from any of the previous day's races.
 - c) The eight Bronze aircraft include the eight slowest aircraft from any of the previous day's races. These racers will include any aircraft given a zero speed either because they failed to start or failed to

finish their race in the previous day's races. Planes with zero speed will be ordered by: those planes that failed to finish, in the order of the number of laps they complete, followed by those planes that failed to start the previous day, in order of their qualifying positions.

- 3. The third day of racing (Saturday) will contain an eight-aircraft Gold race, an eight (or nine) aircraft Silver race and an eight-aircraft Bronze race.
 - a. The eight Gold aircraft include the eight fastest racers from any of the previous day's races.
 - b. The eight Silver aircraft include the next fastest eight aircraft from any of the previous day's races.
 - c. The eight Bronze aircraft include the eight slowest aircraft from any of the previous day's races. These racers will include any aircraft given a zero speed either because they failed to start or failed to finish their race in the previous day's races. Planes with zero speed will be ordered by: those planes that failed to finish, in the order of the number of laps they complete; followed by those planes that failed to start the previous day, in order of their qualifying positions.
- 4. The fourth day of racing (Sunday) will contain an eight (or nine) aircraft Gold race, an eight (or nine) aircraft Silver race and an eight-aircraft Bronze race.
 - a) The eight Gold aircraft include the eight fastest racers from any of the previous day's races. (The ninth aircraft will be the winner of Sunday's Silver race if the pilot chooses to participate. See d) for options.)
 - b) The eight Silver aircraft include the next fastest eight aircraft from any of the previous day's races. (The ninth aircraft will be the winner of Sunday's Bronze race if the pilot chooses to participate. See d) for options.)
 - c) The eight Bronze aircraft include the eight slowest aircraft from any of the previous day's races. These racers will include any aircraft given a zero speed either because they failed to start or failed to finish their race in the previous day's races. Planes with zero speed will be ordered by: those planes that failed to finish, in the order of the number of laps they complete; followed by those planes that failed to start the previous day, in order of their qualifying positions.
 - d) The winner of Sunday's Silver (and Bronze) race will have the option to advance to into the Gold (and Silver) race and forfeit the prize money from the Silver (and Bronze) race victory. The prize money will be added to the Gold (and Silver) race and paid to the last place finisher of the Gold (and Silver) race. Therefore, the Silver (and Bronze) race winner would win at least as much as was won in the Silver and Bronze) race.
- 5. If a 3-day format is selected, eliminate a) above, and use b), c) and d) above as the race progression, with the first day of racing configured by qualifying speed.

APPENDIX B

SPECIAL RULES

- 1. A special rule in Section IX *Penalites*, Paragraph B 3a) will be added as follows:
 - 3a). Special rule for Reno racecourse:

For reasons of safety, an escape route is provided for aircraft that do not wish to fly down the home straight over Runway 8-26. While crossing the Showline west of the Runway 8 threshold and climbing to 1500 feet AGL, then passing behind the spectator area above 1500 feet AGL, the aircraft may proceed around to pass east of the Runway 26 threshold, descending to rejoin the race circuit without penalty. Caution is advised, as aircraft on the race circuit have the right of way.

- 2. A special rule in Section VIII *Racing*, Paragraph C *Race Start* Subsection 11 will be added as follows:
 - 11. Starting Procedures/Guidelines for Reno racecourse:
 - a) Release point for race start will be before the end of Runway 26, outside of a line extended from connecting Pylons 3 and 4.
 - b) There should be a 10° to 20° left turn at the start.
 - c) Aircraft should be accelerating at start.
 - d) Release speeds (indicated airspeed) at the start should be approximately 220 knots for Bronze race, 250 knots for Silver race and 280 knots for Gold race.

APPENDIX C

NAG UNLIMITED DIVISION AIRCRAFT SPECIFICATION

These Specifications are the only official and approved aircraft specifications of the Unlimited Division of the National Air-Racing Group and are a specific part of the Official Competition Rules (OCR's) of the National Air-Racing Group. Failure to comply with these rules will result in disqualification of pilot and/or aircraft from race competition. Disqualification will be implemented by the Board of Directors of the NAG Unlimited Division upon recommendation of the Technical Committee and/or Procedure Rules Committee of the NAG Unlimited Division.

I. GENERAL REGULATIONS

- A. Aircraft must have a current license issued by the Federal Aviation Administration. All certification, registration and current maintenance records must accompany the aircraft and be available for inspection by the FAA, the NAG Unlimited Division Technical Committee and the Contest Committee.
- B. Aircraft must pass an inspection by the NAG Unlimited Division Technical Committee at each racing meeting prior to qualification and at any other time during the racing meet if deemed necessary by the Technical Committee.
- C. Aircraft must display its assigned racing number on each side of the fuselage or tail and on the lower surface of the right wing, with the number facing inboard. The numbers must be at least 30 inches high and in a highly contrasting color. A stroke width of two-and-one-half (2.5) inches (minimum) is recommended.
- D. Aircraft must be flown by the pilot in the vehicle, (i.e., no remotely piloted vehicles).
- E. The regulations set forth in this document may be temporarily changed at a race site for the duration of that event only by a unanimous vote of all members entered as pilots (or race qualified members if after qualification). Bylaws of the Unlimited Division of the National Air-Racing Group, Article VII, Section 1, Paragraph g).
- F. For a member of the Unlimited Division to reserve and pay for a race number, that member must currently own an aircraft that he intends to race or must currently be building an aircraft that he intends to race, and that member must be able to prove either option to the Unlimited Division Board of Directors. If a new aircraft project is not completed in five years, the member looses the number for one year; if that number is not taken by another member within that year, then the member can reapply for that number if it can be proven that work is progressing on the project. If the holder of that race number has not entered and attempted to race the aircraft for which the number was obtained within the past five years (with respect to the date of passage of this added rule), the holder looses that number. That number will then be available for other owners with current aircraft to pay for and use. The number will lose the entire calendar year in which it was paid and must be renewed yearly. The member will lose the number if it is not renewed by April 1 of each year. Numbers cannot be lent from member to member without approval of the Unlimited Division Board of Directors on a case-by-case basis.

II. ENGINE AND PROPELLER

A. Aircraft must be propeller-driven and powered by a reciprocating engine or engines. The propeller must be driven by the reciprocating engine. (Rotary engines are considered to be reciprocating.)

- B. There are no restrictions on engine modifications.
- C. No aerodynamic turbine, turboprop or rocket thrust devices may be used. Exhaust-driven superchargers are permitted.
- D. Propellers used may be those that have been previously used on production aircraft and may be used either in the stock configuration or in a shortened or trimmed configuration. New custom propellers made from components not used on production aircraft, whether using composite, synthetic, or other materials may also be used, but flight test verification of that exact propeller must be provided to the Unlimited Division Board of Directors. The Board may, if they deem it necessary, have the design and flight test data reviewed by qualified technical personnel engaged by the Board for this purpose in a similar manner to which "Custom Built" aircraft designs are reviewed.

III. AIRFRAME

- A. There are no restrictions on airframe modifications.
- B. Aircraft must be designed to accepted structural design criteria to meet the limiting load factors of +6.0 g and -3,0 g and must be capable of demonstrating these load factors if required by the Technical Inspection Committee Chairman and/or the Pilot Qualification Committee Chairman. Positive load factor will be verified by demonstration, and negative load factor will be verified by submission of computational methods and procedures, which must be available for review.
- C. Aircraft must demonstrate adequate maneuverability (controllability) at racing speed. This can be determined during aircraft qualification.
- D. Aircraft that are not modified versions of previously designed and built fighter aircraft will be designated as "Custom Built" aircraft and will be required to meet certain design and test criteria to ensure their safe operation, above and beyond those criteria specified in the preceding sections. The design of any flight-worthy aircraft should, for the safety of the pilot and those on the ground, be substantiated by the proper computational analysis. The following criteria are considered essential to ensure that an aircraft is properly designed and adequately tested.
 - 1. Structural load analysis for the +6.0 g and -3.0 g load factors, including consideration of design loads, limit loads, and ultimate loads, will be submitted. The ground rules and basic calculations for the structural load limits must be presented in a format that indicates the aircraft designer is familiar with and has used accepted aircraft design procedures and safety factors.
 - 2. A flight flutter test analysis, test plan, and test results will be submitted to verify that the aircraft will safely operate within the structural limits and not be in the flutter region at speeds and load factors within the anticipated flight envelope.
 - 3. Weight and balance data for an empty and full vehicle shall be submitted.
 - 4. The flight test plan and flight test results will be submitted to verify safe operation of the vehicle within its flight envelope.
 - 5. The items specified in 1 through 4 above will be made available for review by qualified technical personnel to ascertain the validity and credibility of the submitted data. The Unlimited Division Board of Directors will hire, for pay, impartial qualified personnel such as Registered

Professional Engineers or people known to be experts in their fields, to review and comment on the data. The review will be made far enough in advance that appropriate modifications, recommended by the qualified experts can be implemented, tested and re-evaluated.

IV. FUEL AND FUEL TANKS

A. Any type of fuel or additive may be used.

V. SAFETY AND EQUIPMENT

A. Oxygen Mask System:

- 1. Single engine aircraft must have an operable oxygen mask system, which must be used when practicing, qualifying and racing.
- 2. Multi-engine aircraft must also have operable oxygen mask systems in the aircraft, but their use is optional.
- B. Aircraft must have a seat belt and shoulder harness, which must be used when practicing, qualifying and racing.
- C. Aircraft must be equipped with a functioning two-way communication radio, which must be used when practicing, qualifying and racing. The radio must have transceiver tuned to race frequency at all times during a race. Pilot must use a second radio of he desires to communicate with his ground crew during a race.
- D. It is recommended (but not required) that the aircraft be equipped with fire extinguishing systems for the cockpit and engine compartment.
- E. Aircraft weighing less than 5,000 pounds gross takeoff weight must have an aft facing light mounted in the aft fuselage or tail section of the aircraft that can be clearly seen from a distance of 3,000 feet, and this light must be on at all times when the aircraft is on the racecourse. This light is to warn oncoming aircraft that a low profile hard-to-spot aircraft is ahead. It is recommended that all Unlimited racing aircraft install such a light as a safety item. (Sometimes ground colors and aircraft colors are not quickly discernible when an aircraft is being approached from the rear at high speed in traffic).
- F. All high-pressure gaseous storage bottles (above 500 psig) must be hydrostatically tested and certified every five years. Proof of certification within five years, as of the date of the inspection, must be presented to the Technical Inspection Committee before an aircraft will be allowed on the racecourse.

APPENDIX D

NAG UNLIMITED DIVISION PILOT QUALIFICATION SPECIFICATIONS

These Specifications are the only official and approved pilot qualification requirements of the Unlimited Division of the National Air-Racing Group and are a specific part of the Official Competition Rules (OCR's) of the National Air-Racing Group. Failure to comply with these rules will result in disqualification of pilot and/or aircraft from race competition. Disqualification will be implemented by the Board of Directors of NAG Unlimited Division upon recommendation of the Pilot Qualification Committee and/or Procedure Rules Committee of NAG Unlimited Division.

I. RESPONSIBILITIES

- A. The Pilot Qualification Committee will be responsible for developing, documenting and maintaining the standards and procedures to be used in determining pylon race pilot competency.
- B. The committee will be responsible for evaluating the experience of applicants for race participation credentials for conformance with the requirements for participation.
- C. The committee will be responsible for the testing of applicants in accordance with current test standards.
- D. The committee will be responsible for issuance of credentials to applicants who meet the requirements for race participation and for requesting a Pylon Racing Competency Letter from the FAA.
- E. The committee will be responsible for observing the performance of participants in race events, for counseling those whose performance is questionable and for withdrawing the credentials of those exhibiting unsatisfactory performance.
- F. The committee will review the credentials of race entrants to assure the currency of experience requirements and credentials.
- G. The committee will keep appropriate records of its activities.
- H. The committee chairperson will be the designee, responsible for recommendations to the FAA for race pilot competency letters.

II. UNLIMITED PILOT REQUIREMENTS

Pilots must meet the following requirements before participating in an Unlimited pylon race:

- A. Pilots must hold a current pilot certificate and a current commercial rating. The requirement for holding a current commercial rating shall not apply to pilots that were qualified pilots at the time this requirement was added.
- B. Pilots must have a current Medical Certificate.
- C. All pilots must have a minimum of five hundred (500) hours of documented pilot-in-command flying time.
- D. All pilots must have a minimum of fifty (50) hours of documented time in the type of aircraft to be raced or a comparable type of aircraft.

- E. Pilots must demonstrate formation flying ability to the Pilot Qualification Committee of the NAG Unlimited Division in a demonstration flight with another aircraft. The Pilot Qualification Committee will pass or reject the applicant's ability to participate.
- F. Pilots (and aircraft) who have not competed in a closed-course race must pass a flight check before the Pilot Qualification Committee:
 - 1. Pilots, before making a qualifying attempt, must fly the aircraft to be used in the race at least ten (10) practice laps of the prescribed course. Practice laps will be observed by the Pilot Qualification Committee to determine pilot ability, aircraft maneuverability and controllability. It is encouraged that these practice laps be flown with other aircraft on the course at the same time.
 - 2. Pilots must perform a normal takeoff and landing, which will also be observed and a decision made, based on the pilots ability to handle the aircraft, as to whether he will be allowed to compete in the races.
 - 3. Pilots must demonstrate a simulated "Mayday" and an emergency approach to landing.
- G. All pilots must use a current packed parachute when practicing, test flying in or out of the race controlled air space, qualifying and racing.
- H. The wearing of a crash helmet with oxygen mask is required when practicing, test flying in or out of the race controlled air space, qualifying, and racing. Oxygen masks must be the "Military Type," and rebreather bag type masks are not permitted. Crash helmets must be hard-shelled, full coverage, military or racing type, and a visor is strongly recommended.
- I. Fire protective clothing, including gloves, are required and must be worn when practicing, test flying in or out of he race controlled air space, qualifying and racing. (Fire protective overshoes are strongly recommended).
- J. The alternate pilot specified by the entrant must have the same minimum total time and race plane time as that required of the first pilot and must also be familiar with the racecourse. Same rules must also apply to the alternate pilot.
- K. Pilots must be familiar with, and abide by, the rules and regulations governing closed-course air racing. NAG Unlimited Division will recommend the disqualification of any pilot whom, through drunkenness, hangover, recklessness or otherwise, is deemed a hazard to the other pilots and the public. Such pilots will be suspended from racing for a period of time and may be barred for all time from all races sanctioned by the National Air-Racing Group.

III. GUIDELINES FOR ISSUANCE OF PYLON RACE CREDENTIALS

Pilot must meet the following guidelines before being issued Unlimited Division Pylon Race Credentials.

A. Oral Test

- 1. Discuss past history of racing accidents and common causes of accidents.
- 2. Discuss aircraft speed and "g" restrictions, engine and propeller limitations, weight and balance limitations, and takeoff limitations.

- 3. Density-Altitude considerations.
- 4. Qualification procedures.
- 5. Race start procedures.
- 6. Passing requirements.
- 7. Method of communicating emergency-in-process information to participants and response required.
- 8. Method of declaring an emergency and actions for various types of emergencies.
- 9. Method of communicating emergency termination of race to participants and response required.
- 10. Normal race termination procedures.
- 11. Showline requirements.
- 12. Briefing attendance requirements and outline of briefing contents.
 - a. Federal Air Regulations and waivers that are applicable to air racing.
 - b. Airshow radio control frequencies.
 - c. Crowd and race showline.
 - d. Schedules and relation to staging.
 - e. Aircraft ground safety precautions.
 - f. Race pylon locations.
 - g. Course obstructions.
 - h. Emergency landing facilities.
 - i. Coordination with fire and rescue personnel.
- B. General Preflight Procedures for Checkout Flight
 - 1. Sufficient fuel and oil for proposed time of flight.
 - 2. Oxygen.
 - 3. Seat belts, harness, crash helmet and parachute.
 - 4. Loose objects in aircraft.
 - 5. Canopy and access latches.
 - 6. Controls and aircraft structure.

C. Checkout Flight Observations

The following checkout flight maneuvers will be witnessed by a member of the Pilot Qualification Committee in an aircraft flying with aircraft and pilot to be issued race credentials:

- 1. Make one or more 360° turn at 3 g.
- 2. Make a roll in each direction without appreciable loss in altitude.
- 3. Demonstrate formation joining and formation flying.
- 4. Demonstrate a race start.
- 5. Demonstrate three laps on the racecourse without passing.
- 6. Demonstrate proper passing techniques on the racecourse.
- 7. Demonstrate a normal landing.
- 8. Demonstrate a power-off landing.
- D. Race Pilot Qualifications shall remain in effect as long as the pilot meets the requirements and remains active in racing. Any pilot that has not participated in a race within the preceding two calendar years shall be requalified prior to participating. Pilots that have had racing infractions may be required to requalify at the discretion of the Pilot Qualification Committee, the Professional Standards Committee or the Unlimited Division Board of Directors.

APPENDIX E

NAG UNLIMITED DIVISION TECHNICAL INSPECTION REGULATIONS

These Technical Inspection Regulations are the only official and approved technical inspection requirements of the Unlimited Division of the national Air-Racing Group and are a specific part of the Official Competition Rules (OCR's) of the National Air-Racing Group. Failure to comply with these rules will result in disqualification of pilot and/or aircraft from race competition. Disqualification will be implemented by the Board of Directors of NAG Unlimited Division upon recommendation of the Technical Committee of NAG Unlimited Division.

I. GENERAL REGULATIONS

- A. Each aircraft and its associated logs and paperwork must be inspected at the race site by designated members of the NAG Unlimited Division Technical Inspection Committee prior to race competition. Pilot and aircraft may practice on the racecourse before the technical inspection if a provisional approval is obtained from the Technical Inspection Committee after a quick walk-around inspection of the vehicle and a verification of the appropriate paperwork is accomplished.
- B. Items of paperwork to be inspected and determined to be current include:
 - 1. Aircraft registration certificate
 - 2. Aircraft airworthiness certificate
 - 3. Aircraft and engine maintenance logs
 - 4. Parachute pack date substantiation
 - 5. Hydrostatic test date substantiation
- C. The Technical Inspection Committee will keep a set of records on each aircraft, on a standard inspection form (to be approved by the NAG Unlimited Division Board of Directors), substantiating the receipt of and inspection of the pilot and aircraft paperwork and of the physical inspection of the aircraft. This set of records will be made available to the on-site FAA representative and the Contest Committee upon request. Others requesting to see these records must obtain written approval from the Unlimited Division Board of Directors.
- D. The Technical Inspection Committee may reinspect any aircraft at any other time during the racing meet if deemed necessary as a result of an unusual aircraft maneuver that could have resulted in internal damage, (i.e., inadvertent inverted flight, hard landing, running off of side or end of runway), after an engine failure resulting in a "Mayday" situation, after an engine change (or a propeller change and/or repair, or control surface change and/or repair or structural member changes and/or repair) for any reason. This re-inspection must be approved before the aircraft can continue to participate in the racing event.
- E. Inspection procedures will conform to established race aircraft inspection procedures.
- F. For a member of the Unlimited Division to reserve and pay for a race number, that member must currently own an aircraft that he intends to race or must currently be building an aircraft that he intends to race, and that member must be able to prove either option to the Unlimited Division Board of Directors, If a new aircraft project is not completed in five years, the member loses the number for one year; if that number is not taken by another member within that year, then the member can reapply for that number if

it can be proven that work is progressing on the project. If the holder of that race number has not entered and attempted to race the aircraft for which the number was obtained within the past five years (with respect to the passage of this added rule), the holder loses that number. The number will then be available to other owners with current aircraft to pay for and use. The number will be good for the entire calendar year in which it was paid and must be renewed yearly. The member will lose the number if it is not renewed by April 1 of each year. Numbers cannot be lent from member to member without the approval of the Unlimited Division Board of Directors on a case-by-case basis.

II. AIRCRAFT INSPECTION

- A. The aircraft structure, and all functional components attached to the aircraft structure, will be inspected for structural and functional integrity, for proper attachment and containment, (i.e., safetywire, cotter pins and retention washers) and for cleanliness for fire prevention, (i.e., excessive oil and/or hydraulic fluid and/or fuel and/or other combustible fluid leakage or accumulation).
- B. The specific major areas to be inspected are:
 - a. Main fuselage and cockpit area
 - b. Wings and control surfaces
 - c. Vertical and horizontal surfaces and control surfaces
 - d. Engine and Nacelle components
 - e. Propeller and actuating controls
- C. The following major systems are to be inspected:
 - a. Hydraulic and landing gear systems
 - b. Fuel tanks and fuel distribution systems
 - c. Oxygen tanks and oxygen distribution systems
 - d. Oil and oil cooling system
 - e. Coolant and coolant cooling system
 - f. Control surface actuating system
 - g. Engine controls and actuation systems
 - h. Electrical and communication systems
 - i. Canopy actuation system and seat belt and shoulder harness system
 - j. Crash helmet system (hard shelled full coverage helmet; visor recommended)
 - k. Emergency systems; gear retraction, fire extinguishing system, parachute system and egress system

- 1. Proximity of combustible systems to each other, (i.e., fuel and oxygen systems)
- D. After the aircraft has been inspected or reinspected the appointed chief of the Technical Inspection Committee must give an approval to the pilot and/or owner of the aircraft and to the Chief Judge verifying that the vehicle is ready to commence competition. This approval will be in the form of a signature on the standard inspection form for that aircraft for the date inspected or reinspected.
- E. The approval of the Technical Inspection Committee does not constitute a representation or warranty of any kind or character whatsoever concerning the mechanical condition of the aircraft or whether or not it is airworthy.

APPENDIX F

NAG UNLIMITED DIVISION PROFESSIONAL STANDARDS COMMITTEE

The Professional Standards Committee will judge the capabilities and conduct of race pilots during each race and will observe infractions of the rules during each race. The committee will work with and advise the Contest Committee on enforcement of penalties if required. The formation of and functions of this committee will be as follows:

- 1. The Unlimited Division President will nominate the committee members.
- 2. The committee members will be pilots with previous unlimited class racing experience and do not necessarily have to be competing at the race event.
- 3. Tenure of the committee will be for the duration of the specific race event only.
- 4. The nominated members will be voted on (elected) by a majority of the participating Unlimited Division race pilots at the race event. The voting will be conducted at the first mandatory Unlimited Division Pilots' Briefing of the race event.
- 5. Five pilots will make up this committee; as an example, 2 from the ranks of Gold racers, 2 from the ranks of Silver racers and 1 from the ranks of Bronze racers. One member from the list of nominees will be appointed to this committee by the Unlimited Division President (or Vice-President in the President's absence) and the remaining four will be elected.
- 6. The Unlimited Division President will not be a member of this committee unless a member (or members) of the committee is involved as a participant in a rules infraction. Then the President can appoint a replacement or sit in to replace the member.
- 7. A majority vote of the committee is required before an action can be recommended on all issues brought up by or discussed by the committee.
- 8. Responsibilities of the committee are to include discussion of and recommended actions to be taken as a result of:
 - a. Dangerous or reckless flying
 - b. Forced pylon cuts
 - c. Inside blind passes
 - d. Exceedingly low flying
 - e. Alcohol or other substance abuse
 - f. Pilot qualifications to hold a racing license
 - g. Any pilot related problem that needs attention

- 9. The Chairman of this committee will be appointed by the Unlimited Division President (or by the Vice President in the President's absence) and will also be the debriefer at all the post race debriefings.
- 10. The Chairman of this committee and at least one (1) other member of the committee (can be rotated after each race) will attend all race debriefings with a debriefing form to be completed there.
 - a. The race debriefing of all race pilots will take place immediately after a race at a predetermined location.
 - b. The pilot of the starter or pace aircraft will also attend the debriefings.
- 11. Recommended action will be reported to the Unlimited Division President and/or to the Contest Committee as expeditiously as possible. Any recommendations that would affect a race result will be reported to the Unlimited Division President and the Contest Committee within one (1) hour after the end of a race.
- 12. The committee will advise the Unlimited Division Rules Committee of suggested new rules or changes to existing rules.

APPENDIX G

BYLAWS OF THE UNLIMITED DIVISION OF THE NATIONAL AIR-RACING GROUP July 1, 2006

Article I Name

Section 1. Name.

The name of this organization is the Unlimited Division.

Article II Purposes

Section 1. Primary Purposes.

The specific and primary purposes are to promote and advance the science and sport of Unlimited Air Racing by providing central leader-ship and organization for the sport, by encouraging the promotion of Unlimited Air Racing events, by providing standards of aircraft and pilot qualifications, by providing technical specifications, by providing competition rules, by publicizing the sport, by encouraging and assisting individuals to enter the sport, and to do all other things either necessary or desirable to further advance the sport.

Section 2. Organization.

This organization shall operate as a division of the National Air-racing Group, Inc. (NAG), a California non-profit corporation, organized under section 23701 g of the California Revenue and Taxation Code. All members of this organization must be members of the National Air-racing Group, Inc.

Section 3. Limitations.

The Unlimited Division shall not engage in activities that in themselves are not in furtherance of the purposes set forth in Section 1 of this Article II, and nothing contained in the foregoing statement of purposes shall be construed to authorize the Division to carry on any activity for the profit of its members, or to distribute any gains, profits, or dividends to any of its members as such, except on dissolution or winding up.

Article III Principal Office

Section 1. Principal Office.

The principal office for the transaction of business of the Unlimited Division shall be the location of the immediate Secretary/Treasurer, or such other place as determined by the Board of Directors. The Board of Directors is granted full power and authority to change the principal office from one location to another. Any change of location shall be noted by the Secretary/Treasurer and shall not be considered an amendment of these bylaws.

Article IV Membership

Section 1. Membership.

Pilots and owners of Unlimited race aircraft, designers and builders of Unlimited race aircraft, designers and builders of components for Unlimited race aircraft, owners of Unlimited race aircraft under construction, and past owners and past pilots of Unlimited race aircraft shall be eligible for membership in the Unlimited Division. Eligibility for membership shall be determined by the Board of Directors.

Section 2. Fees and Dues.

Fees and dues shall be established from time to time by a majority vote of the Board of Directors. Members shall also pay dues as established by NAG for NAG membership. An annual registration fee in an amount established by the Board of Directors shall be paid by the owner or owners for each aircraft that holds a race number issued by the Unlimited Division.

A portion not to exceed \$25,000 of the purse won in any Unlimited event may, by order of the Board of Directors, be withheld to defray Unlimited Division expenses.

Section 3. Termination of Membership.

Any member may resign at any time by written notice. Any dues paid will be forfeited. Any member who is more than two months delinquent in dues shall have his or her membership rights revoked.

Section 4. Expulsion.

Any member may be expelled by a unanimous vote by the Board of Directors for conduct that the Board of Directors deems inimical to the best interests of the Unlimited Division. The member shall be given at least ten (10) days notice prior to a meeting in which expulsion is to be considered and may attend that meeting and present testimony in his or her behalf. Any member expelled has the right to appeal to a Special Committee acceptable to the member and the Board of Directors, appointed under Article VII, Section 2 of these bylaws. The expulsion shall stand if a majority of the Special Committee uphold the decision to expel.

Section 5. Membership Meetings.

Membership meetings shall be held at times and places to be designated by the Board of Directors. All members shall be notified of the time and place of meetings by means of a written, mailed or email notice.

Section 6. Special Membership Meetings.

A special membership meeting may be called by the President, by a majority of the Board of Directors, or by one-fourth (1/4) of the members. All members shall be notified by written notice of the time, date, place, and purpose of such special meeting, mailed or electronically transmitted at least ten (10) days prior to the date established. No business shall be transacted at a special meeting other than as stated in the purpose for the call. A special meeting or vote may specify that the business of the meeting be to be conducted by mail, email or telephone rather than by requiring all members to be at a specific place at a specific time.

Section 7. Voting.

All members shall have equal voting rights and shall be entitled to cast one vote on any question except for changes to the Competition Rules. Only currently qualified race pilots and current race plane owners (defined as those with current, valid, paid race numbers) shall have the right to vote on changes to the Competition Rules. There shall be no voting by proxy. In view of the wide geographic area of membership, most elections and other matters to be voted upon will be conducted by mail, email or telephone, as determined by the Board of Directors.

Section 8. Quorum.

The presence in person of one-fourth (1/4) of the members or ten (10) members, whichever is less, shall constitute a quorum for the transaction of business at any meeting of the members. In order for a mail or telephone meeting to be valid, a bona fide attempt must be made to contact all members at the address or telephone number they have placed on file with the Unlimited Division and a response must be received from at least one-fourth (1/4) of the members or fifteen (15) members, whichever is less, to meet the quorum requirement. Mail meetings must allow at least three (3) weeks between the time of mailing and closing of the vote.

Article V Directors

Section 1. Number.

The President, Vice President, Secretary/Treasurer, one Director at Large and the elected Chairman of the Procedure Rules Committee shall constitute the five (5) members of the Board of Directors. A Director must be a member of the Unlimited Division in good standing.

Section 2. Powers.

Subject to the limitations of the articles of incorporation of NAG, Inc., and of the General Non-Profit Corporation Law of California on action(s) to be authorized or approved by the members, all powers shall be exercised by or under the authority of, and the business and the affairs of the Unlimited Division shall be controlled by the Board of Directors. Without prejudice to the general powers, but subject to the same limitations, it is expressly declared that the Directors shall have the following powers:

- (a) To conduct, manage, and control the affairs of the Unlimited Division and to make such rules and regulations as are consistent with law, with the articles of incorporation of NAG, or with these bylaws.
- (b) To appoint and remove all Officers (except elected Officers), agents, and employees of the Unlimited Division and to prescribe powers and duties for Officers, agents, and employees as may not be inconsistent with law, with the articles of incorporation, or with these bylaws.
- (c) To borrow money and incur debts for the purposes of the Unlimited Division and for that purpose, to cause to be executed and delivered, in the Division's name, promissory notes, bonds, debentures, deeds of trust, mortgages, pledges, hypothecations, or other evidences of debt, and securities for them.
- (d) To manage in the manner they deem best all funds and property, real and personal, received, acquired, or earned by the Unlimited Division and to distribute or dispense them.
- (e) To disburse the funds and moneys in the treasury for normal operations. Expenditures for unusual functions shall not be authorized without having gained the approval by a vote of the members. At no time will the Board or any member of the Board incur any indebtedness to the Unlimited Division.

Section 3. Records.

The Board of Directors shall cause to be kept a complete record of all of their meetings, and shall send a summary to each member or have such summary printed in the Unlimited Division or NAG newsletter. They shall install a system of bookkeeping so that each member may know and be advised from time to time of the receipts, disbursements, and condition of the Division.

Section 4. Election and Term of Office.

On or before November first of every even numbered year beginning in 2006, the Secretary/Treasurer shall send each member a nomination form, which shall list all members in good standing. Each member may nominate one (1) member for President, one (1) member for Secretary/Treasurer and one (1) member for Director at Large by entering their names in the space provided on the form, signing the form, and returning it to the Secretary/Treasurer. On or before the first of December, the Secretary/Treasurer shall send each member, either by mail or electronically, an election ballot, which shall list for each office all members who received two (2) or more nominations and agree to serve in the position, together with a postage paid return envelope. Each member may vote for one nominee for each of the three (3) offices and for the Director at Large from the slate on the ballot. The member receiving the most votes for each office and for the Director at Large shall serve as that Officer and/or as a Director for the Unlimited Division, taking office on January first and serving for the following two (2) years or until a successor has been named, unless otherwise removed by death, resignation, or removal. Ties for Officer/Director positions shall be decided by the flip of a coin. A fifth (5th) Director will be elected and serve a one (1) year term as provided in Article VII, Section 1(a) and Section 1 (b).

Section 5. Vacancies.

Any vacancy on the Board of Directors or elective offices will be filled by a majority vote of the remaining members or member of the Board and confirmed by the membership at the next membership meeting or by a mail or email vote.

Section 6. Organizational Meeting.

Within two (2) weeks of taking office, the President shall convene an organizational meeting of the new Board of Directors. This meeting may be by telephone. At this meeting the Board may appoint additional Officers, committees, agents, or employees of the Division and transact any other business. The Board of Directors may also select one or more banks to act as depository for the funds of the Division and may, by resolution, determine the method of receiving, depositing and disbursing the funds of the Division, and form of checks and the person or persons by whom checks shall be signed, with the power to change such banks and persons at will.

Section 7. Regular Meetings.

Regular meetings of the Board of Directors shall be held at places, times, manners, and dates agreed to at the organizational meeting, or as may be amended at any subsequent meeting. Meetings of the Board of Directors shall be open to both attendance and participation by all members except that an executive session may be called to discuss personnel affairs, and

only Directors maybe present at such executive sessions. Only Directors shall have the authority to vote on matters considered at any meeting.

Section 8. Special Meetings.

Special meetings of the Board of Directors may be called by the President or by any two (2) members of the Board of Directors. Notice of special meetings may be by telephone, email or by mailed notice, mailed at least seven (7) days prior to the date of the meeting.

Section 9. Waiver of Notice.

When all of the Directors are present at any meeting, however called or noticed, or if the majority of Directors are present and those not present sign a written waiver of notice, the transactions of such meeting shall be as valid as if the meeting had been regularly called and noticed. The foregoing may also apply to meetings held by means of a series of telephone calls or emails even though no actual meeting at a single site occurred.

Section 10. Quorum.

A plurality of the members of the Board of Directors shall be present to constitute a quorum.

Section 11. Removal.

Any Officer/Director may be considered for removal from office by a motion duly made and seconded by any ten (10) members, said motion being voted upon by mall ballot sent to all members by the Secretary/Treasurer or any other member. The ballot will include a statement by the originator of the motion as to why the Officer should be removed and a statement by the Officer being considered for removal in his or her defense. The returned ballots shall be counted by the Secretary/Treasurer or other Officer designated by the Board. The vote shall be valid only if two-thirds (2/3) of the ballots are returned within thirty (30) days of mailing. The motion shall be passed and the Officer/Director shall be removed from office if at least two-thirds (2/3) of the returned ballots are voted in favor of the motion.

Section 12. Compensation.

The Officers/Directors of the Unlimited Division shall receive no compensation for their services in serving as Directors or Officers unless such compensation is authorized by a unanimous vote of the Board of Directors.

Article VI Officers

Section 1. Officers.

The Officers of the Unlimited Division shall consist of a President, Vice President, and Secretary/Treasurer. Additional Officers, including a general manager, assistant vice presidents, assistant secretaries, assistant treasurers, or any other Officers may be appointed by a plurality vote of the Board of Directors. The compensation and the tenure in office of all Officers appointed by the Board of Directors shall be fixed and determined by the Board of Directors. The term of office of all appointed Officers shall be concurrent with the term of office of the Board electing them unless removed sooner by death, resignation, or removal by the Board of Directors.

- (a) The President, Vice President, and Secretary/Treasurer shall be elected as provided in Article V of these bylaws. All other Officers shall be appointed by the Board of Directors as provided in this Article of these bylaws.
- (b) Any vacancy in any elective office shall be filled by the procedures of Article V of these bylaws. Any vacancy in any appointive office shall be filled by appointment by the Board of Directors.
- (c) Any elected Officer may be removed from office by the procedures of Article V of these bylaws. Any appointive Officer may be removed by a majority vote of the Board of Directors.

Section 2. President.

The President shall preside over all meetings of the membership and at all meetings of the Board of Directors. He shall sign, as President, all instruments approved by the Board of Directors. The President shall call the Board of Directors to meetings whenever he deems it necessary and shall have, subject to the advice of the Directors, direction of the affairs of the corporation. He shall appoint all committees, except elected or standing committees, and shall be an ex officio

member of all committees.

Section 3. Vice President.

The Vice President, in the absence or disability of the President, shall perform all of the duties of the President and, when so acting, shall have all of the powers of and be subject to all of the restrictions of the President.

Section 4. Secretary/Treasurer.

The Secretary/Treasurer shall keep a record of the proceedings of the Board of Directors and of the members, maintain a membership book showing the name, address, and telephone number of each member, conduct the official correspondence of the Unlimited Division, serve all notices required by law or by the bylaws, and discharge such other duties as are prescribed by the Board of Directors. He shall have general charge of all of the financial records and accounts of the corporation and shall keep and maintain adequate and correct books of accounts showing the receipts and disbursements of the Division and an account of its cash, debts and assets. He shall deposit all moneys of the Division with such depositories as are designated by the Board of Directors, and shall disburse funds as may be ordered by the Board of Directors. Statements of the financial condition of the organization shall be rendered to the Board of Directors upon request, and at least annually, such statements shall be made available to all members and to the NAG treasurer.

Article VII Committees

Section 1. Standing Committees.

There shall be at least one (1) standing committee: The Procedure Rules Committee.

- (a) The Procedure Rules Committee shall have four (4) members with two (2) year terms, all members taking office in odd numbered years. This committee shall be responsible for maintenance of the competition rules; rules change procedures, sanctioning agreements, and all other rules, regulations, and procedures.
- (b) A Chairman shall be elected annually by the members of the Procedure Rules Committee and shall serve as a member of the Board of Directors for that year.
- (c) Standing committee members shall be members of the Unlimited Division in good standing, and shall be elected in the same manner and at the same time as Officer/Directors, as described in Article V of these bylaws. The President shall be an ex officio member of the Procedures Rules Committee, but shall have no vote. Standing committee members may be removed or replaced in the same manner, as are Officers as described in Article V. The President shall not also be an elected member of the Procedure Rules Committee.
- (d) Rules changes approved by a majority of any Committee's members shall be sent to the President to be forwarded by the Secretary/Treasurer to members for vote, provided that the President does not veto the proposed change. If the change is approved by a majority of those voting and a quorum of votes (as defined in Article IV, Section 8) is received, the new or revised rule(s) will take effect on January first of the following year.
- (e) Rules changes may be initiated by a petition signed by thirty percent (30%) of the members qualified to vote on rules changes. If the change is approved by a majority of the members voting, the revised rule will take effect on January first of the following year.
- (f) A veto by the President of a proposed rules change may be overridden by the members qualified to vote on rules changes using the procedure in this Article VII, Section 1 (e) above.
- (g) Rules may be temporarily changed at a race site for the duration of that event only by the unanimous vote of all members entered as pilots (or race qualified members if after race qualification).
- (h) Members qualified to vote on rules changes may ask the Rules Committee Chairman for clarification of any rule under the jurisdiction of the Rules Committee. If the item is questionable or open to different interpretation, the Rules Committee Chairman shall consult with the Rules Committee as to their intent, and, taking their opinion into consideration, shall issue a binding ruling. This will be in the form of an addendum to the technical rules, and as such, shall have the same force and effect as the rules. This addendum shall be sent by mail or email to all

members by the Secretary/Treasurer. The addendum will stand until incorporated into the rules, overturned by a rules change, or temporarily waived at a race site as provided for in Article VII, Section I (g).

Section 2. Other Committees.

The Board may authorize other committees from time to time, as they deem best. Membership on committees other than standing committees shall be by appointment by the President. Their terms shall expire at the same time as the President's term. The President shall be an ex-officio member of all other committees.

Article VIII Amendments to Bylaws

Section 1. By the Membership.

These bylaws may be amended by the vote or written assent of a majority of the members, or by the vote of a majority of a quorum of the members at a meeting, regular, special, telephone, or mail, in which the proposed change was announced in the call for the meeting, except that a vote of two-thirds(2/3) of those voting shall be required to change the number of Directors.

Section 2. By the Directors.

These bylaws may be amended at any time by the Board of Directors except for the number of Directors. Any amendment(s) to these bylaws adopted by the Board of Directors shall be binding on the members unless and until rejected by a plurality vote of the members at a regular, special, telephone, or mail meeting of the members. It shall be the duty of the President to present to the members for their ratification or rejection, within (30) days, amendments to the bylaws that have been made by the Board of Directors.

Article IX Miscellaneous

Section 1. Assessments.

The members shall be required to pay any assessment proposed by the Board of Directors and approved by at least two-thirds (2/3) of the members voting at any membership meeting provided that written notice is given prior to the vote and a quorum is voting. Failure to pay any assessment within sixty (60) days of notification will terminate that person's membership in the Unlimited Division.

Section 2. Ballots.

All elections of Officers and Directors, other than to fill vacancies, shall be carried out by mail or electronic ballots as prescribed in Article V of these bylaws. Any matter to be voted upon at any membership meeting, either regular or special, shall be determined by mail ballot when so requested by at least one-fifth (1/5) of the members present at the meeting, or by a majority vote of the Board of Directors. The ballots shall be prepared and mailed by the Secretary/Treasurer and shall be counted by an election committee consisting of the Vice President and Secretary/Treasurer. The election shall be valid if the number of ballots returned within thirty (30) days of the mailing shall be at least equal to a quorum.

Section 3. Rules of Order.

The rules contained in Robert's Rules of Order, Revised, shall govern all members meetings and directors meetings, except in instances of conflict between Robert's Rules of Order and the NAG articles of incorporation, these bylaws, or provisions of law.

Section 4. Inspection of Bylaws.

The Secretary/Treasurer shall keep the original or a copy of these bylaws, as amended or otherwise altered to date, which shall be open to inspection and available for copying by any member at all reasonable times.

Section 5. Liabilities,

No person who is now or later becomes a member of the Unlimited Division shall be personally liable to its creditors for any indebtedness or liability. Any and all creditors of the Unlimited Division shall look only to the assets of the Unlimited Division for payment.

Section 6. Conflict With Race Rules.

Where these rules conflict with the race rules of a particular event, the race rules of the particular event shall be binding.

Article X Relationship with NAG, Inc.

The relationship between the Unlimited Division and NAG shall be subject to the following conditions:

Section 1. Sanctioning.

The Unlimited Division shall be responsible for sanctioning and supervising Unlimited Class racing competition in the United States of America.

Section 2. Independent Operation.

The Unlimited Division shall operate under its own Board of Directors and bylaws, shall determine and control its own budget, shall disperse its own funds, including those collected from its own members, gifts from individuals and organizations, and any other income from the Division's activities, provided, however, that all actions do not conflict with NAG bylaws.

Section 3. Non-interference.

The NAG Board of Directors, Officers, or any committee appointed by either, shall not interfere in any manner with the organization, elections, qualifications for membership, financial affairs, bylaws, competition rules, pilot proficiency standards or sanction agreements of the Unlimited Division unless specifically authorized in each instance by action of the Board of Directors.

Section 4. NAG Membership.

All members of the Unlimited Division shall be members of NAG, receiving all benefits of membership, and paying the same dues as all other NAG members of the same class of membership.

Section 5. Reports.

The Unlimited Division shall make available to the NAG Treasurer periodic financial statements, which shall include an accounting of sources of income, expenditures, assets, and liabilities.

Section 6. Support.

NAG agrees to support all Unlimited competitions to the best of its abilities, including the publicizing of race events, assisting in fund raising for events, encouraging NAG members to assist in the preparation of race sites, training of race officials, and in providing officials and other workers for events.

RECORD OF BYLAWS AMENDMENTS

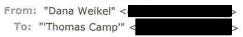
- 1. Qualifications for membership expanded to include builders of Unlimited aircraft and designers and builders of Unlimited aircraft components. Bylaws: Article IV, Section 1. (Board action of January 24, 1983; confirmed by membership.)
- 2. Nomination procedure changed to nomination for specific office rather than the offices being determined by the number of votes received by the three persons receiving the most votes. Bylaws: Article V, Section 4. (Membership action at Special Meeting of September 9, 1984)
- 3. Rules changes to require a majority of those voting (rather than a majority of the membership), provided a quorum votes. Bylaws: Article VII, Section 1(d). (Board action of December 2,1990; confirmed by membership)
- 4. Voting on changes to the Competition Rules changed to permit voting only by currently qualified race pilots and current race plane owners. Bylaws: Article IV, Section 7. (Membership vote May 15, 1996)
- 5. Location of principal office changed to the location of the immediate Secretary/Treasurer. Bylaws: Article III, Section 1. (Membership vote May 31, 2006)
- 6. Determination of membership eligibility changed to Board of Directors. Bylaws: Article IV, Section 1. (Membership vote May 31, 2006)
- 7. Registration fee changed to apply annually to owners of aircraft that hold race numbers and change the amount of prize money that may be withheld for Division expenses to an amount not to exceed \$25,000 per event. Bylaws: Article IV, Section 2. (Membership vote May 31, 2006)
- 8. Appeal of a decision to expel changed to a Special Committee. Bylaws: Article IV, Section 4. (Membership vote May 31, 2006)
- 9. Change number of Directors to five. Bylaws: Article V, Section 1. (Membership vote May 31, 2006)

- 10. Change term of office for Officers and Director at Large to two years and add the Chairman of the Procedure Rules Committee as a Director for a one-year term. Bylaws: Article IV, Section 4. (Membership vote May 31, 2006)
- 11. Change criteria for removal of any Officer/Director to a motion by any ten members. Bylaws: Article V, Section 11. (Membership vote May 31, 2006)
- 12. Change authorization for compensation of Officers/Directors to a unanimous vote of the Board of Directors and permit reimbursement of expenses incurred by Officer/Directors. Bylaws: Article V, Section 12. (Membership vote May 31, 2006)
- 13. Remove reference to Membership Committee. Bylaws: Article VI, Section 2. (Membership vote May 31, 2006)
- 14. Change number of Standing Committees to at least one, change term of membership on the Procedure Rules Committee to two consecutive years, eliminate the Membership Committee and add the Chairman of the Procedure Rules Committee to the Board of Directors for a one-year term. Bylaws: Article VI, Section 1. (Membership vote May 31, 2006)



RE: Major modifications

Monday, August 31, 2009 12:19 PM



Hi Tom,

There are only two planes that have said they have had major modifications. #77 and #177.

However, on site, all pilot must update the Major Modification Form. I will let you know if anyone else says they have made major modifications.

Thanks,

Dana

From: Thomas Camp [mailto:

Sent: Friday, August 28, 2009 7:10 AM

To: Dana Weikel

Cc: Matt Jackson; Joel Swager Subject: Major modifications

Hi Dana,

Please send me a list of each Unlimited entry that contains a YES response to the "Major Changes" question on the 2009 Aircraft Data and Safety Data Information form. Our tech guys will need this prior to the races in order to prepare for their safety inspections.

Thanks,

Tom