



Academy of Model Aeronautics

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AMA Competition Regulations Rules Change Proposal Form

Please complete this form and click on the SUBMIT button at the bottom of the page. This will send the proposal to the Competition Department at AMA HQ. A copy will then be sent to the appropriate Contest Board Chairman. The current issue of the Competition Regulations must be referenced.

Proposal Number: CLA21-08

Received Date: 1/10/2020

Revised Date:

Version Number:

Proposal Type:

Basic

Applicable Competition Regulations this proposal relates to:

CL Aerobatics

Give Brief Summary of the Proposed Change:

Entry to the four leaf clover is now at the 42 degree elevation. This proposed change changes the entry to be from the normal flight altitude of 5 feet.

State exact wording proposed for the Competition Regulations. List paragraph number where applicable. Example: Change "quote present rule book wording" to "exact wording required".

From the Control Line Precision Aerobatics rule book, change Paragraph 13.14 and its related sections to:

13.14. Four Leaf Clover

(One (1) required). The maneuver is entered from normal level flight by turning to be vertical at the maneuver center intersection, which is at 42 degrees elevation, then completes three-fourths (3/4) of an inside loop where the uppermost point is tangent to the vertical plane through the middle of the circle, then upright level flight at a constant 42 degree elevation, then completes three-fourths (3/4) of an outside loop where the bottom point is at normal level flight, then climbs vertically along the vertical path established by the initial climb through the maneuver center intersection, then completes three-fourths (3/4) of an outside loop where the uppermost point is tangent to the vertical plane through the middle of the circle, then inverted level flight at a constant 42 degree elevation as established by the first horizontal transit through the maneuver

center intersection, then completes another three-fourths ($3/4$) inside loop where the bottom point is at normal level flight, then climbs vertically on the same path established by the first two vertical transit paths through the maneuver center intersection. The four 270 degree loops are all 42 degrees in diameter and the lengths of the respective horizontal and vertical paths between them are 42 degree segments of the hemisphere. The two right loops are tangent to the two left loops along a vertical plane of symmetry through the center of the clover leaf and the bottom two loops are tangent to the top two loops along the constant 42 degree elevation. The maneuver starts and ends at the maneuver center intersection.

Maximum 40 points. Minimum 10 points.

Errors: Model is not vertical at the start of the maneuver. Loops are rough and/or not of equal size. Paths connecting loops are not properly horizontal or vertical according to the maneuver sketch. Bottom of lower loops are not at normal level flight which is between 1.2—1.8 meters (3.9—5.9 feet). Tops of the upper loops are not within 1.2 meters (3.9 feet) of the vertical plane through the circle center.

The maneuver diagram changes by showing entry at 1.5m elevation, a 90 degree turn to vertical flight through the maneuver center intersection, the first $3/4$ inside loop instead of the 360 degree loop shown, show the start and end points at the same location in the center of the maneuver, and delete the statement “Exit maneuver over top of circle into the wind”.

For the Judges’ Guide

14.36. One Four-leaf Clover Paragraph 13.14).

14.36.1 Delete this paragraph and insert: “Entry: The maneuver is started from normal level flight by turning one-fourth ($1/4$) of an inside loop so the model aircraft passes the maneuver center intersection located at the 42 degree elevation in a vertical direction before starting the first three-fourths ($3/4$) inside loop.”

14.36.2 Delete this paragraph and insert: “Start judging with the model aircraft on a vertical path at the maneuver center intersection located at the 42 degree elevation which is just before the first three-fourths ($3/4$) inside loop.”

14.36.3 Delete the first and second sentences and replace them with: “Judging the first three-fourth ($3/4$) inside loop which is positioned tangentially to an imaginary “vertical line drawn upward at right angles from the ground. The lateral position of this line is determined when the model aircraft initially turns from normal level flight to the vertical path through the maneuver center intersection and this vertical path then becomes the vertical path reference for the rest of the maneuver.”

14.36.6. Change the first phrase of this sentence from “Judging the first “vertical” climb segment: ...” to “Judging the second “vertical climb segment...”

14.36.10. Change the first phrase of this sentence from “Judging the second “vertical” climb segment: ...” to “Judging the third “vertical” climb segment: ...”

14.36.11. Change this sentence to read: “Stop judging when the model passes vertically through the maneuver center intersection, which is at the 42 degree elevation.”

14.36.12. Change this sentence to read: “Exit procedure can be flown with the model continuing vertically past the maneuver center intersection, which is at the 42 degree elevation, over the top of the circle but should not be judged or marked.”

14.36.13. Change the first sentence to read: “Critical points are: model aircraft is not flying at the normal flight altitude at the beginning of the maneuver and is not on a vertical flight path as it passes through the maneuver center intersection at the 42 degree elevation.” Change the last

sentence to read: “The final “vertical” climb through the maneuver center intersection is not at right angles to the ground.”

**State logic behind proposed change, including alleged shortcoming of the present rule(s).
STATE INTENT FOR FUTURE REFERENCE:**

Currently, the four leaf clover is started in its middle and the first loop is a full 360 degree loop, followed by three 270 degree loops. The model is then required to fly over the top of the circle, into the wind where the judging stops. This proposal starts the maneuver from the normal flight altitude of 5 feet where judging starts at the center of the maneuver after which the first of the four 270 degree loops are performed. This gives symmetry to the shape of the figure. Judging stops after the fourth loop as the model passed through the center of the maneuver, thereby not requiring the model to climb over the top of the circle into the wind which on windy days puts the model at risk.

If this proposal is for a new event, include all event test data/information here. Please provide information on what testing of this new event has taken place to include number of participants and number of contests.

None

State effect, if any, on current AMA records:

None

Note: The Contest Board Chairman may, in coordination with the submitter of the proposal, at any time prior to submitting a proposal to the contest board for Final Vote, edit proposal wording to increase clarity and to avoid ambiguity, provided the proposal intent is not changed.

Submitter Information:

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Accompanying Documents: