AGENDA ITEM 15.3

REPORT OF THE CATALOGUE SUB-COMMITTEE

Alan Cassidy, Chairman

Recommendations for Catalogue Changes for the Year 2013

Part I - Description of the Catalogue

The following alterations/additions are proposed in order to clarify some matters of the drawing and interpretation of sequence diagrams.

BASIC FIGURES AND COMPLEMENTARY ELEMENTS

(Para 3 revised to read:)

3. Each basic figure starts and ends with a period of level flight. The start is shown by a small circle and the end by a short cross-line. Flight with a positive or zero angle of attack is shown with a solid line; flight with a negative angle of attack is shown with a dashed line. In this description, simple dotted lines are used when no specific angle of attack is shown. Within a figure, flight lines may be vertical, horizontal or at 45° to the horizontal. No other angles are permitted.

(Add new paragraphs as below):

DEPICTION OF CROSS-BOX FIGURE ELEMENTS.

28. Level flight on the secondary axis at the start or end of a figure is shown by a straight line drawn at an angle clearly different from both vertical and 45° lines as well as from horizontal lines on the main axis. Figure 27 shows typical start and end lines drawn against a recommended, notional grid system of 2 units across and 1 down: an angle of approximately 30° to the horizontal. The terminating cross-line is drawn horizontally for those basic figures ending on the secondary axis

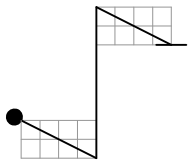


Figure 27

29. When a figure both starts and finishes on the secondary axis, the entry and exit lines must for clarity be drawn parallel to each other, see Figure 28. Entry lines on the secondary axis carry no implication of direction of flight on that axis, but exit lines may show continuation or reversal of direction through the figure.

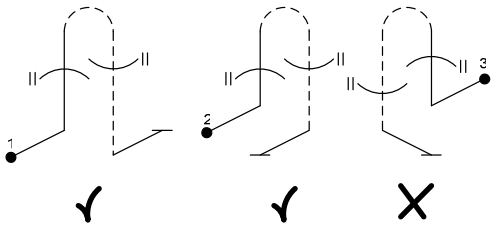


Figure 28

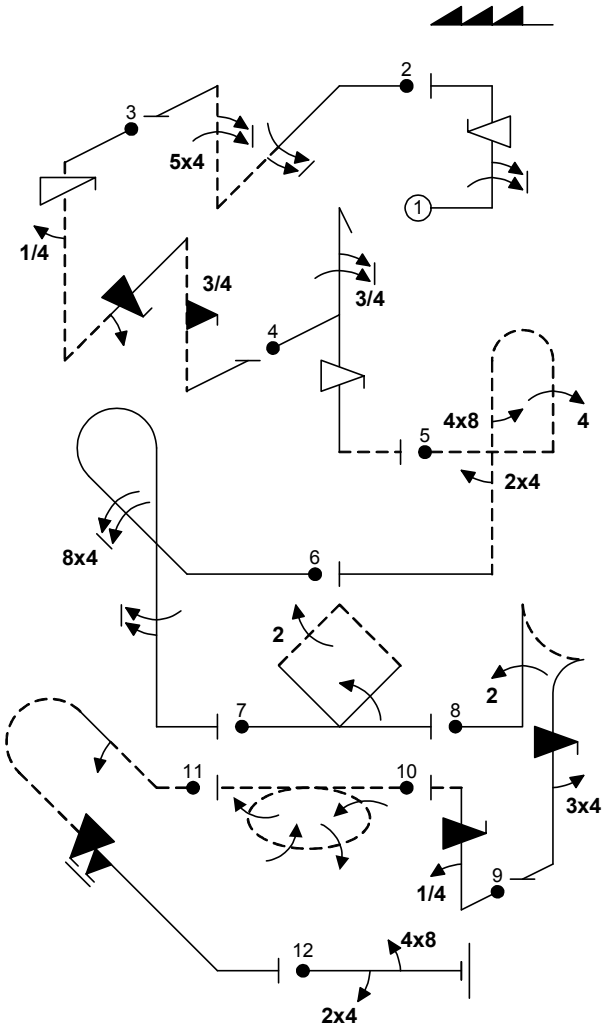


Fig 1	1.1.6.1 9.1.1.6 9.9.1.4	10 15 15	40
Fig 2	1.2.3.3 9.1.4.6 9.4.1.5	15 10 18	43
Fig 3	1.3.12.3 9.11.1.4 9.1.5.1 9.1.2.2 9.10.7.4 9.10.5.3	25 5 2 6 17 13	68
Fig 4	5.2.1.3 9.9.5.4 9.1.1.7	18 11 17	46
Fig 5	8.4.2.2 9.4.1.4 9.8.5.2 9.4.5.2	17 15 7 5	44
Fig 6	8.5.9.1 9.4.2.8 9.1.5.6	12 22 10	44
Fig 7	7.4.5.1 9.1.2.4 9.2.4.4	15 10 9	34
Fig 8	6.2.2.1 9.2.1.4 9.10.5.4 9.4.5.3	15 13 13 8	49
Fig 9	1.1.7.1 9.1.1.1 9.10.1.4	9 6 17	32
Fig 10	2.4.8.4	47	47
Fig 11	8.4.16.2 9.1.2.2 9.10.4.6	16 6 16	38
Fig 12	1.1.1.1 9.4.3.2 9.8.3.2	2 5 7	14
Total K = 499			

INTERPRETATION OF SEQUENCE DIAGRAMS

30. Every sequence diagram shall incorporate an arrow-shaped object showing the direction of the official wind: e.g. ◢◢◢— on Figure 29.

31. No symbol in a sequence diagram shall in isolation be interpreted to mandate that the aircraft rolls or turns to the left or right. For some combinations of turn or roll, the direction chosen initially may determine the direction that must follow in a subsequent element. For example, the 3x4 roll down on Fig. 8 of Figure 29 may be flown to left or right, but the 1/4 roll following on Fig. 9 must be made in the opposite direction in order that Fig. 9 ends downwind.

32. For simplicity in drawing, some elements of certain figures are depicted identically whether they are intended to be flown on the main or secondary axis. For example, in Figure 28 the apical half loop of the Humpty Bump may be shown as a simple semi-circle, without perspective, when flown on the secondary axis, just as it would be shown if flown on the main axis.

Figure 29

Rationale:

Para 3

This minor rewording makes the entry and exit line conventions more clear, with regard to main axis figures.

Para 28

This makes explicit the drawing convention used in Figure 27. It recommends a drawing convention but does not mandate the precise angle. It makes clear that Y-axis horizontal lines should not be confused with X-axis 45° lines.

Para 29

This paragraph requires that start and end lines for Y-Y axis figures be drawn parallel.

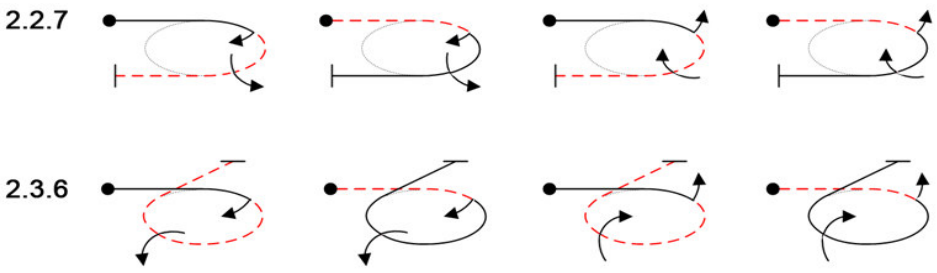
Para 30, 31 and 32

Statement of requirement of arrow to show official wind. Clarification that nothing on a diagram implies left or right, turn, roll or spin, although subsequent rotations or turns might be dictated by a previous choice. Some additional explanation from RSA proposal 3 regarding standard drawing of internal figure elements on Y-axis.

Part III - List of Figures

New Family 2 Figures. The following figures have been proposed by the Delegate of the UK: Add 180° and 270° Rolling Turns of 1½ roll type with the first internal element as the ½ roll and the second as the full roll, to provide complementary figures to existing Aresti Families 2.2.3 and 2.2.4 thus:

Proposer's Rationale: None included.



Comment: The CSC recommends inclusion of these figures as shown above. Row 2.2.8 not recommended for gliders.

New Family 8 Figures: (see drawings on following pages) The following figures have been proposed by the delegate of Norway:

Proposer's Rationale:

P-loops are very versatile figures. They can be used with entry and exit in the same direction or for axis / direction changes. They can also to a certain degree be used to manage energy.

Adding a new set of P-loops with half roll elements in the arch will add variety and challenge to these figures. We therefore propose the following new Family 8 set of figures; 8.6.17.x through 8.6.24.x.

Note: K-factors are derived from the Aresti catalogue chapter II – Method of Evaluation. Where a .5 K-factor results, the value is rounded up the next whole number.

Comments

K Factor for the figure called 8.78.1 should be 13K not 14K; others are correct.

If adopted, new catalogue numbers would be:

Proposed	New	Proposed	New
8.73.x	8.6.17.x	8.77.x	8.6.21.x
8.74.x	8.6.19.x	8.78.x	8.6.22.x
8.75.x	8.6.18.x	8.79.x	8.6.23.x
8.76.x	8.6.20.x	8.80.x	8.6.24.x

In current subfamilies 8.6.1. to 8.6.16 there are no optional rolls shown at the lowest points of figures in columns 3 and 4. Similar issues attend figures in columns 3 and 4 of the Norwegian proposal. The Catalogue should be consistent in this respect. If CIVA accepts these figures, then optional roll symbols will be added in columns 3 and 4 of sub-families 8.6.1 to 8.6.16. No figures from columns 3 and 4 for gliders.

Alan Cassidy, Chairman
1 September 2012

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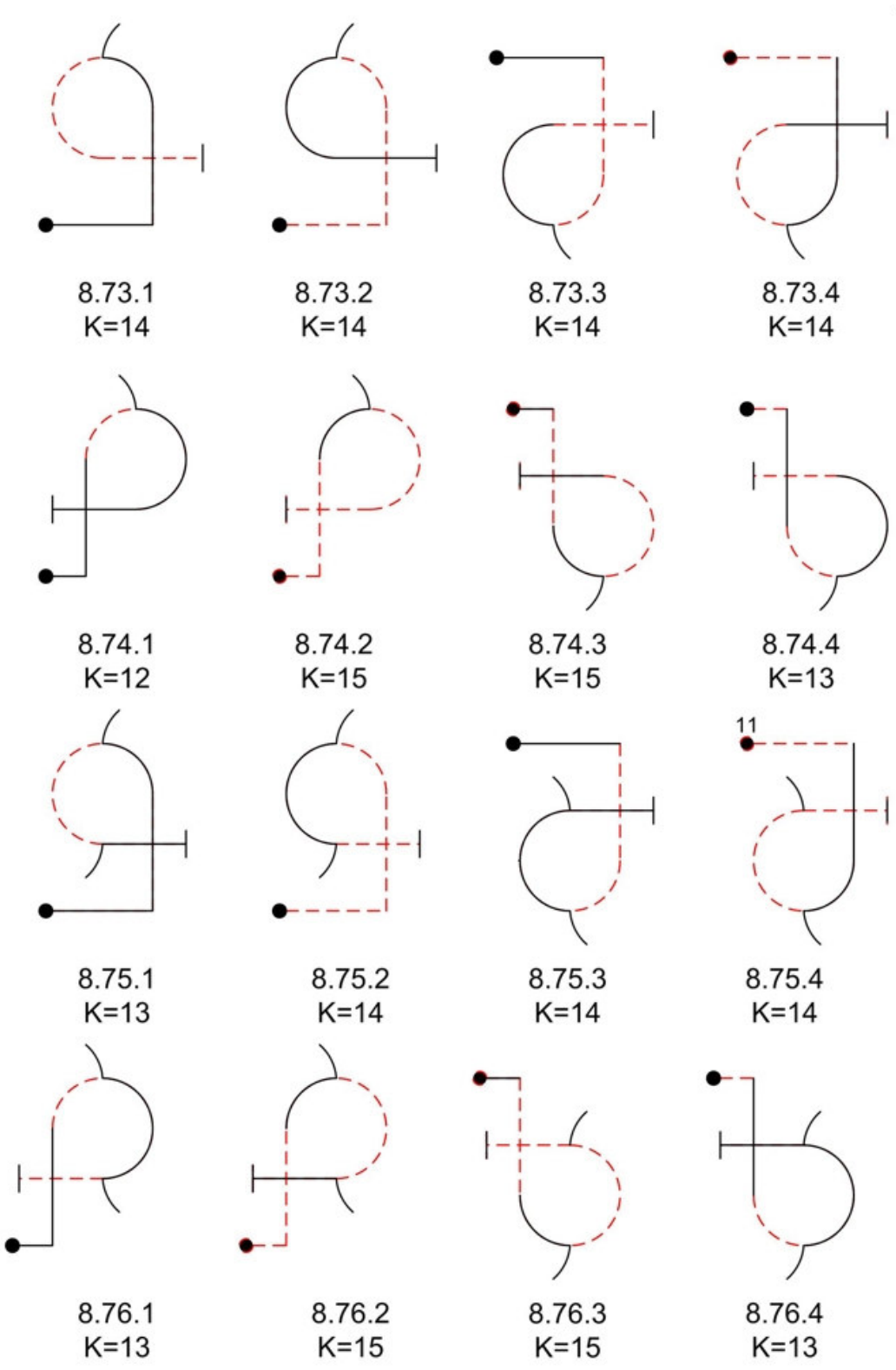
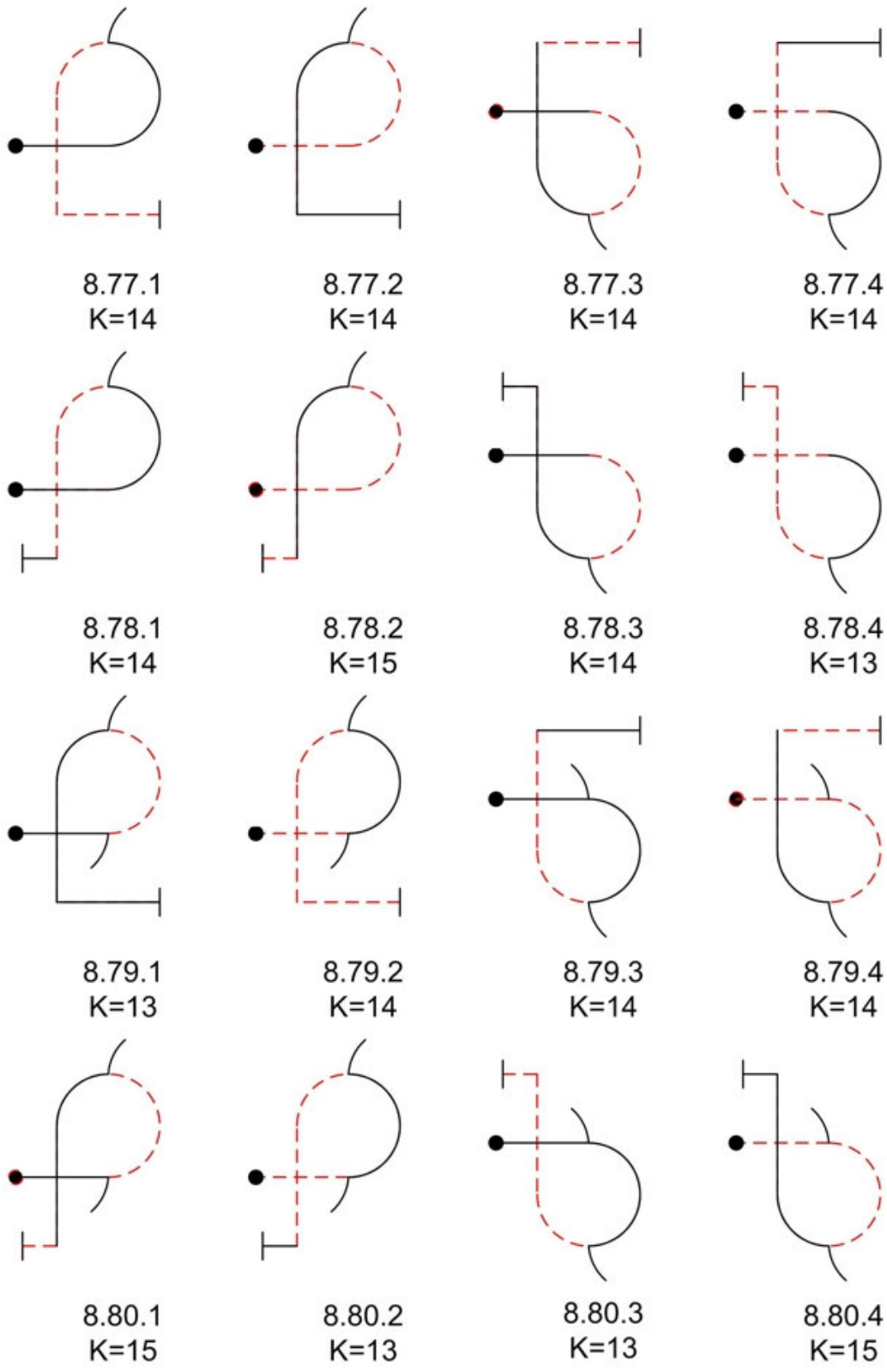
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