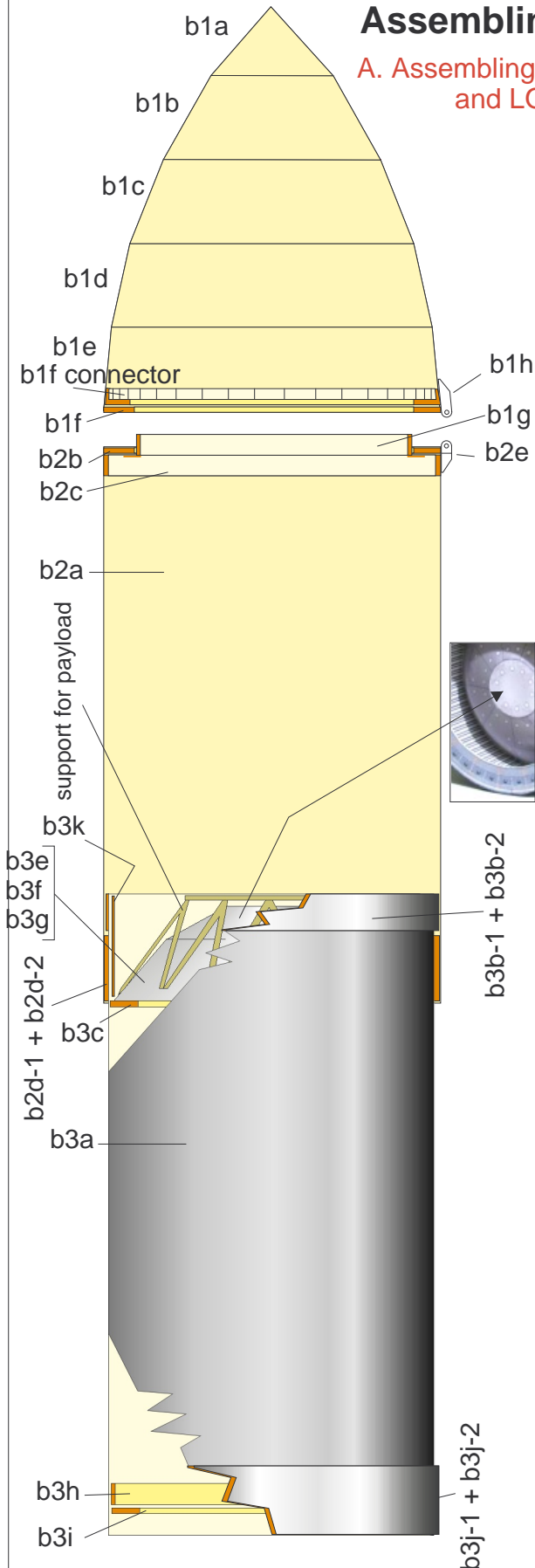


Energia-2

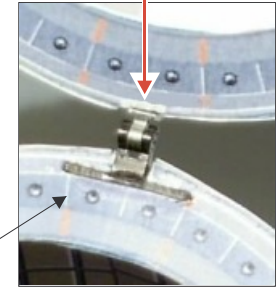
Assembling Instructions

Assembling of stage B

A. Assembling of payload bay and LOX tank



alternative for b1h/b2e
- metal joint part
of the plastic sun glasses



- 1 - glue cylinder b2a and inner strips b2d-2 and b2d-1 on lower part of b2a;
- 2 - glue cylinder b3a and outer strips b3b-1 and b3b-2 on upper part of b3a;
- 3 - assembly top of LOX tank and glue this into top of b3a with b3c and b3k;
- 4 - insert b3a into b2a from top to bottom;
- 5 - glue b2c and b2b into top of b2a;
- 6 - glue b3h and b3i, glue outer strips b3j-1 and b3j-2 above bottom of b3a;
- 7 - assembly b1 and assembly this with b2a by b1h/b2e or by alternative way (see example on top of this page)

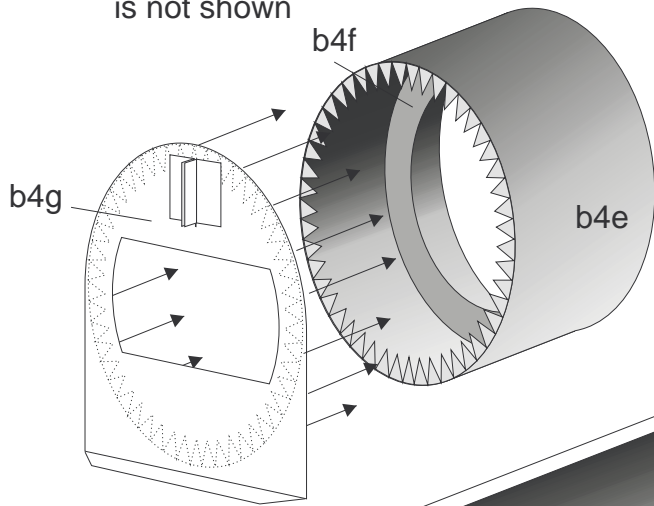


Assembling of stage B

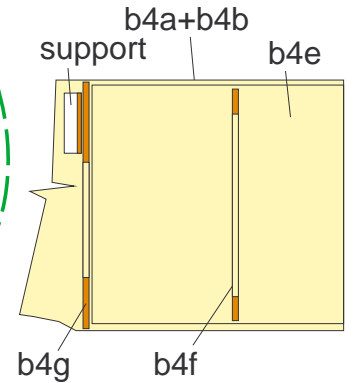
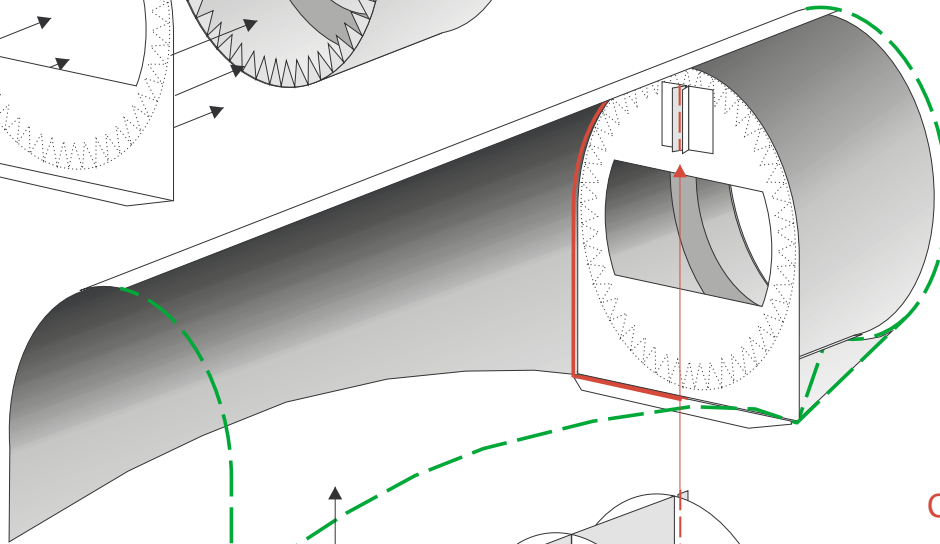
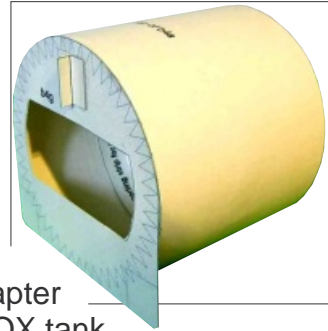
B. Assembling of winging part

- 1 - glue b4a, b4b and b4c
- 2 - glue frame - adapter (b4e, b4f, b4g)
- 3 - glue this into top of b4a+b4b
- 4 - glue frame of winging part
- 5 - glue this into b4a+b4b

right half of b4 is not shown



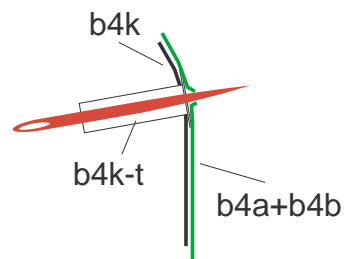
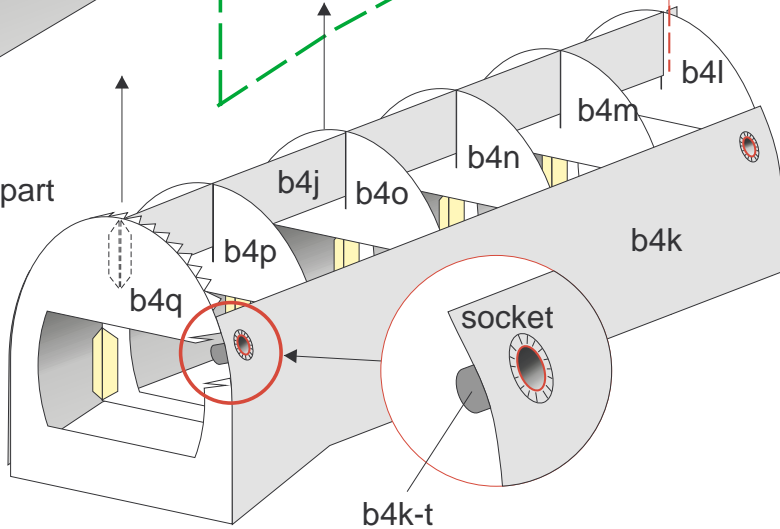
frame - adapter between LOX tank and winging part



C. After assembling of winging part

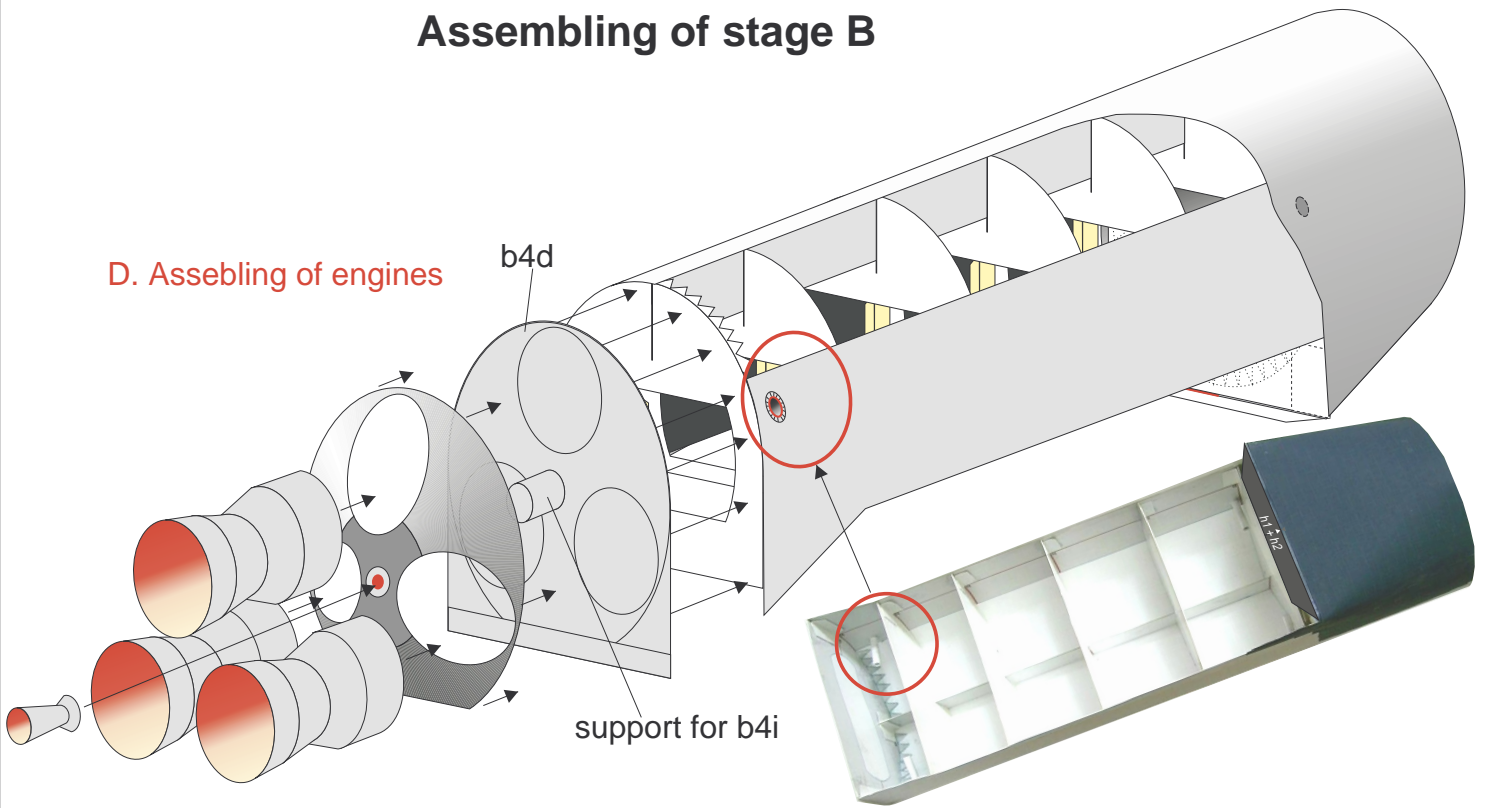
- 1 - Punch hole on b4a+b4b by needle through socket

frame of winging part

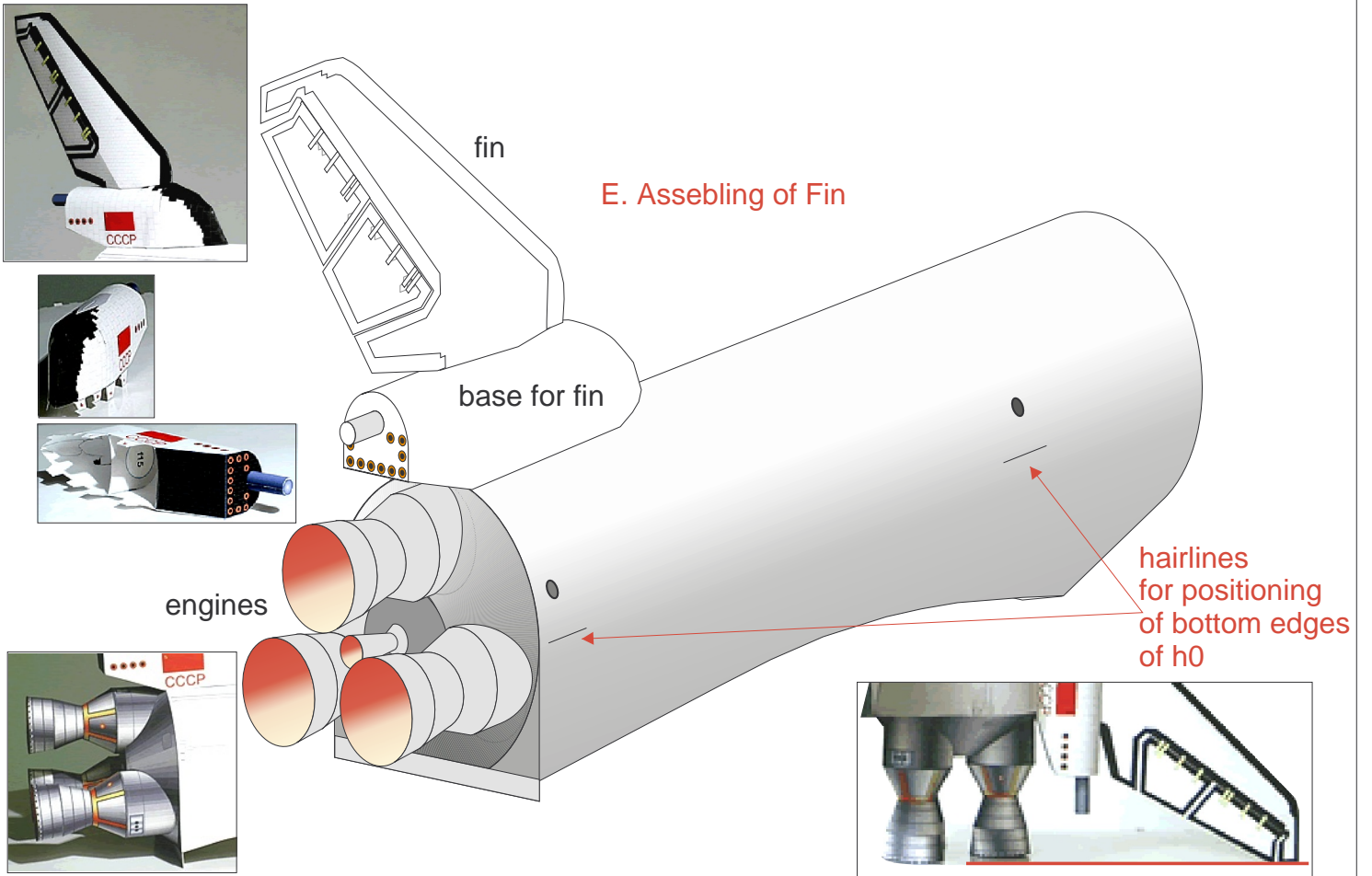


Assembling of stage B

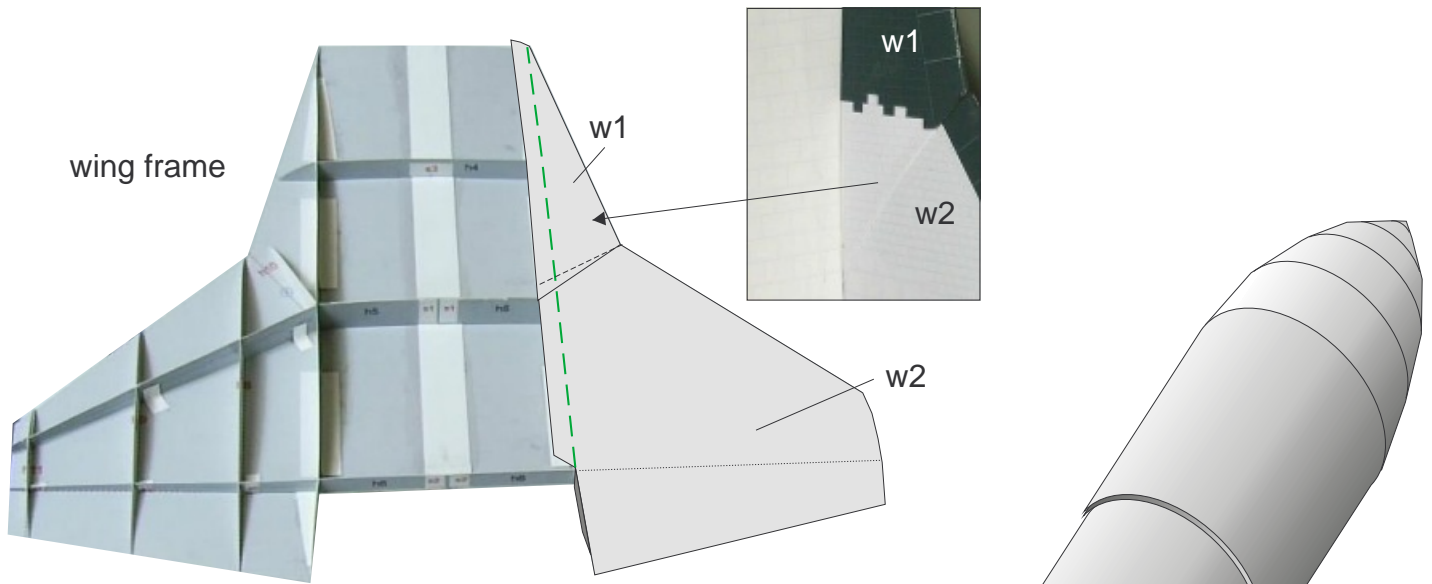
D. Assembling of engines



E. Assembling of Fin



Assembling of stage B

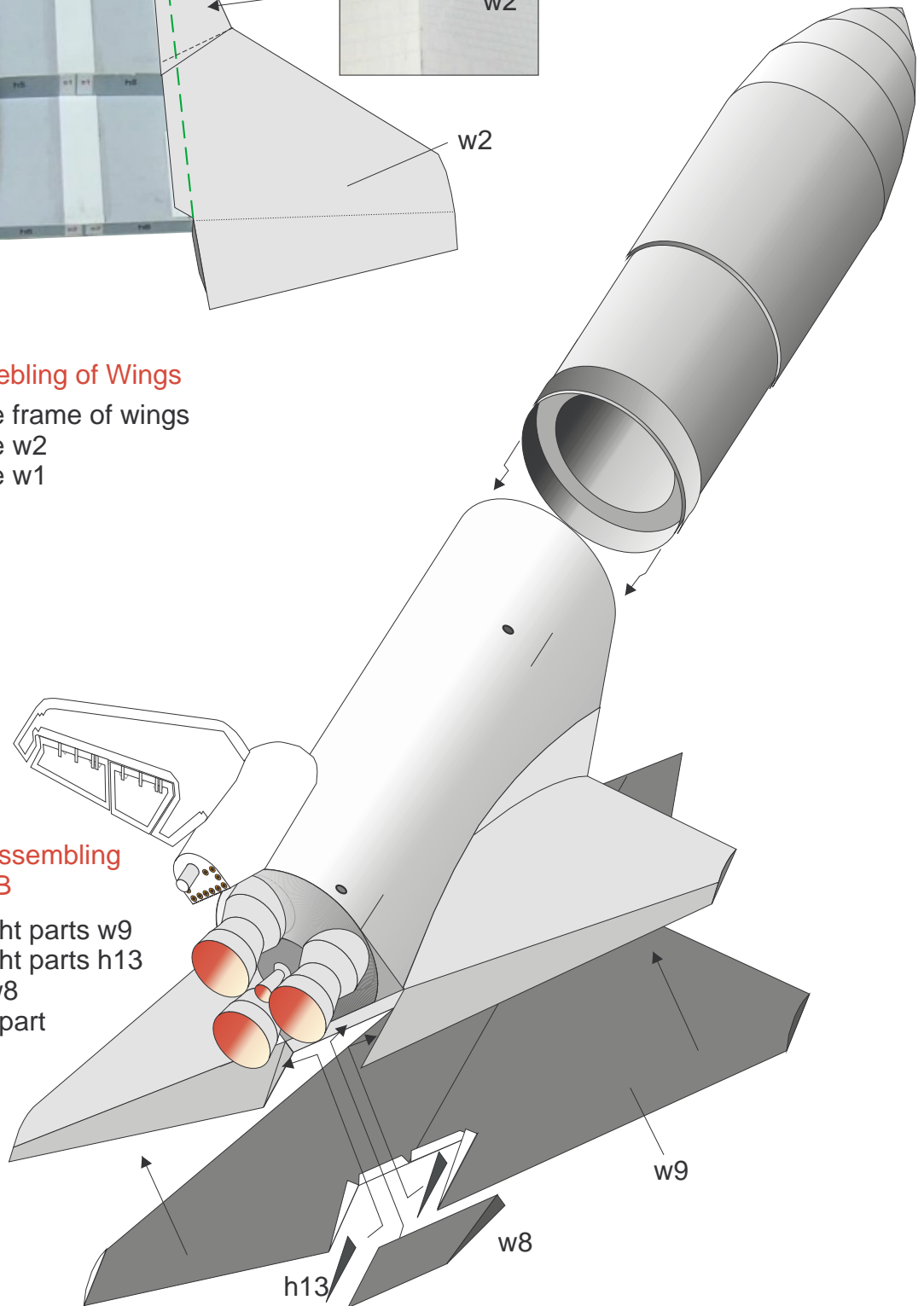


F. Assembling of Wings

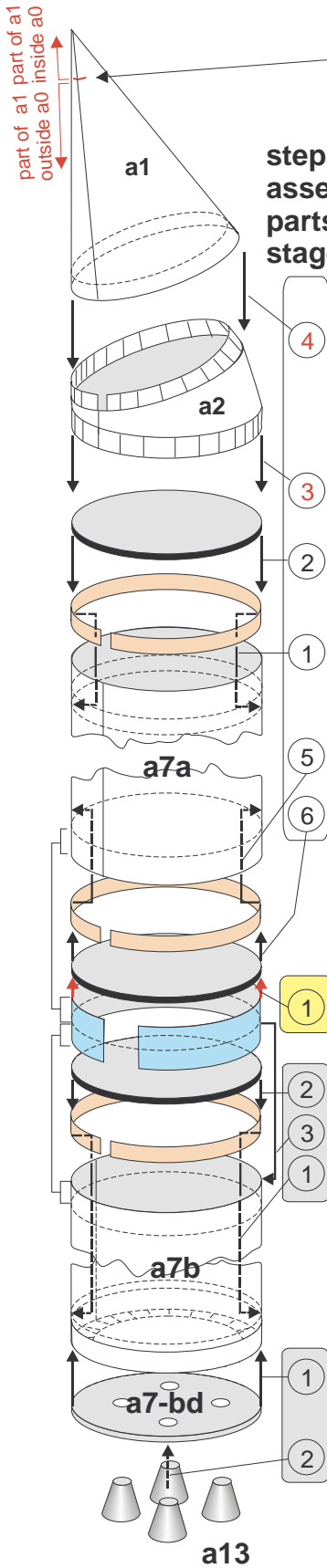
- 1 - glue frame of wings
- 2 - glue w2
- 3 - glue w1

G. Final steps of assembling of stage B

- 1 - glue left and right parts w9
- 2 - glue left and right parts h13
- 3 - glue balanser w8
- 4 - assembly wing part and LOX tank




Assembling of stage A



glue a0 using **hairlines** on cone a1

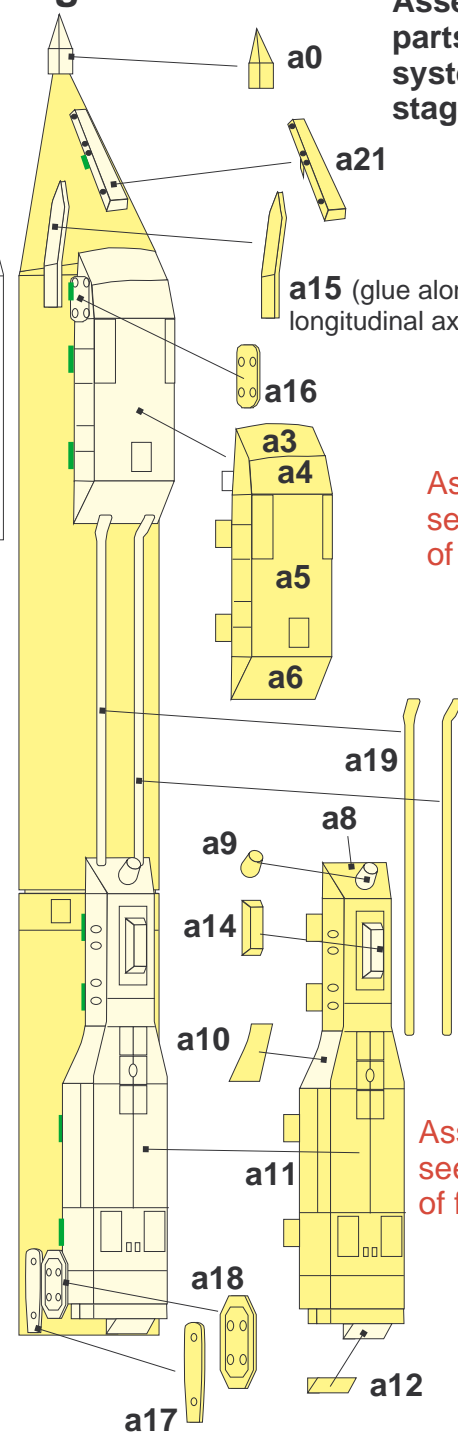
For details of steps 3 and 4 see pp. 33,34 of file [Energia-2.pdf](#)

-  supporting rings
-  connecting ring

 slots

last step of assembling body of stage A

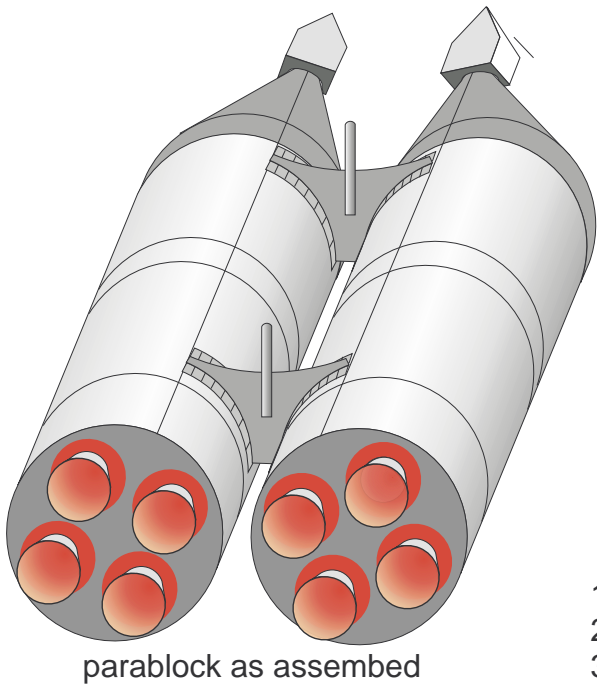
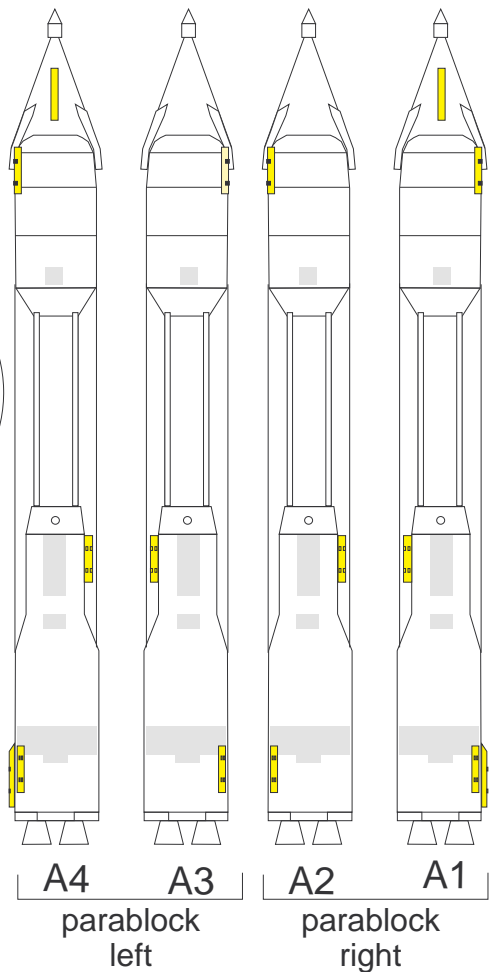
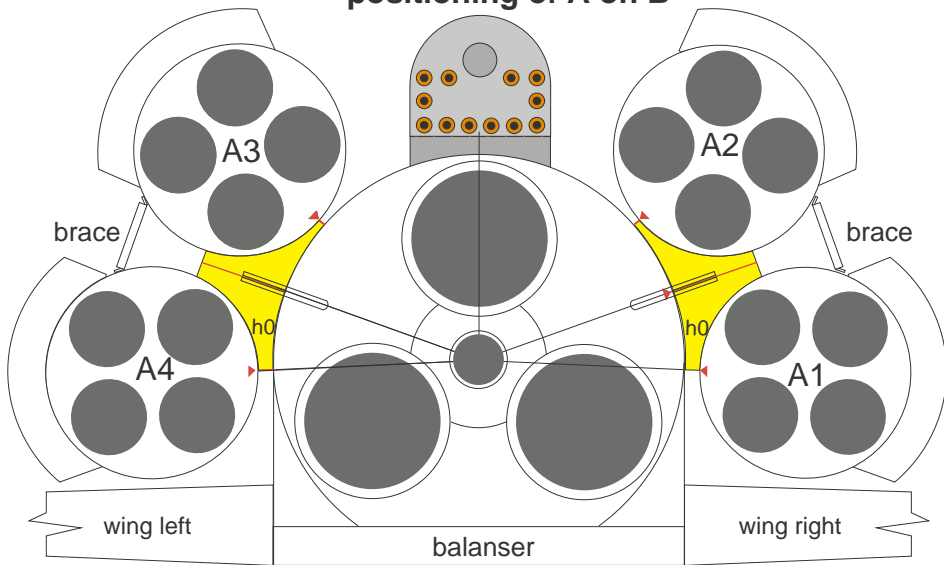
Assembling parts of flyback system stage A



Assembling of a5 see p. 35 of file [Energia-2.pdf](#)

Assembling of a11 see p. 35 of file [Energia-2.pdf](#)

positioning of A on B



Assembling of spars and parablocks of stage A

- 1 - cut and bend tabs, glue half parts of h0
- 2 - insert half of rod into hole on b4a+b4b (**not glue!**)
- 3 - insert h0 into slit of rod, superpose bottom edge of h0 with **hairline** (thin and short black line near narrow twin fairings on flanks of b4a+b4b) and glue this with rod
- 4 - assembly second spar
- 5 - assembly parablock: glue two blocks on spars by tabs (see diagrams above). **NOTE:** Edges of all engines of stages A and B must be on common level.

Extract parablock from slots only after full assembling

