Bob's Card Models

www.bobscardmodels.altervista.org and www.zealot.com [Resources]

Douglas DC-3 "Dakota" (Scale 1:50)

The Douglas DC-3 is an American fixed-wing, propeller-driven aircraft whose speed and range revolutionized air transport in the 1930s and 1940s. Because of its lasting impact on the airline industry and World War II, it is generally regarded as one of the most significant transport aircraft ever made.

This model possesses the livery of the South African charter company Springbok Classic Air..
Basis for this design was the excellent 1:12 "C-47 Skytrain-Fly Model" which gave me many ideas used in this model, as well as some techniques used by Alan Rose in his legendary huge and trophy-like 'Half DC-3' wall model.

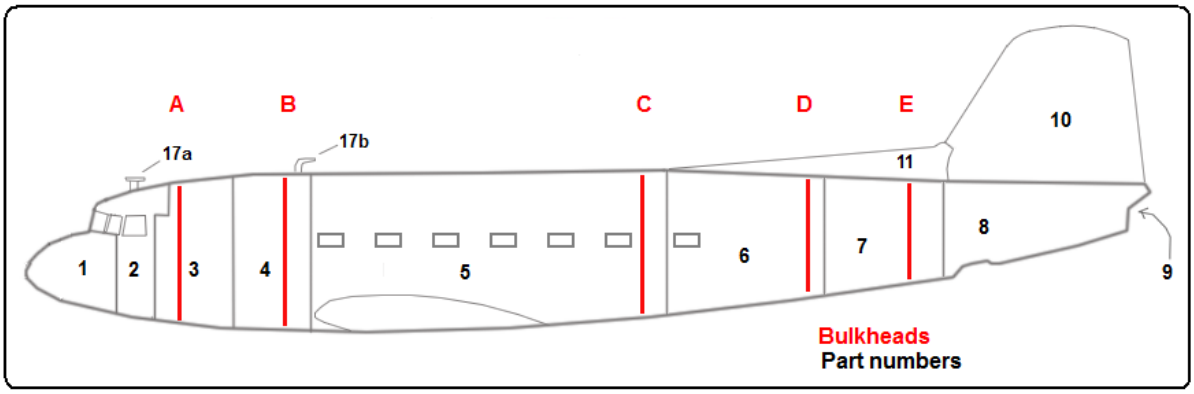
General characteristics (Wikipedia – DC-3A)

Crew :	2
Capacity :	21-32 passengers
Length :	19.7 m
Wingspan :	29.0 m
Height :	5.16 m
Wing area :	91.7 m^2
Empty weight :	7 650 kg
Gross weight :	11 430 kg
Fuel capacity :	3 736 liters
Powerplant :	2 x Wright R-1820 Cyclone 9-cylinder air-cooled radial piston engine, 1 100hp each, or, 2 x Pratt & Whitney R-1830-S1C3G Twin Wasp 14-cylinder air-cooled 2 row radial piston engine, 1 200hp each.
Performance....	
Max speed :	370 km/h
Stall speed :	108 km/h
Service ceiling :	7 100 M

Building Instructions

Print Sheets 1 - 9 on 160g card or thicker, and Sheet 10 on 90g paper . Cut out or slit areas/lines coloured **LIGHT** green, but only when requested.

Fuselage



1. Cut out **1-9** and all bulkheads (BH).
2. Glue **1 -2, 2-3**, with the aid of pincers, insert bulkhead (BH) **A**. Note; 4 main tabs of **1** must be bent upwards, and to form the nose of **1**, it helps greatly to use a paper tissue rolled to a ball, as a counter-pressure when forming the nose.
3. Glue **1/2/3 -4.** Insert **B** in **4**.
4. **5 – 1/2/3/4** .
5. Glue **C** as far back as possible in rear of **5**.
6. **6-5.**
7. Glue **D** as far back as possible in rear of **6**.
8. **7-6.**
9. Glue **E** as far back as possible in rear of **7**.
10. Glue fin **10** in place with the tabs piercing the green slits in **8**.
11. Glue **8** to **7**
12. Glue **11** in place, on top of fuselage and to the fin **10**.

Rear Wing

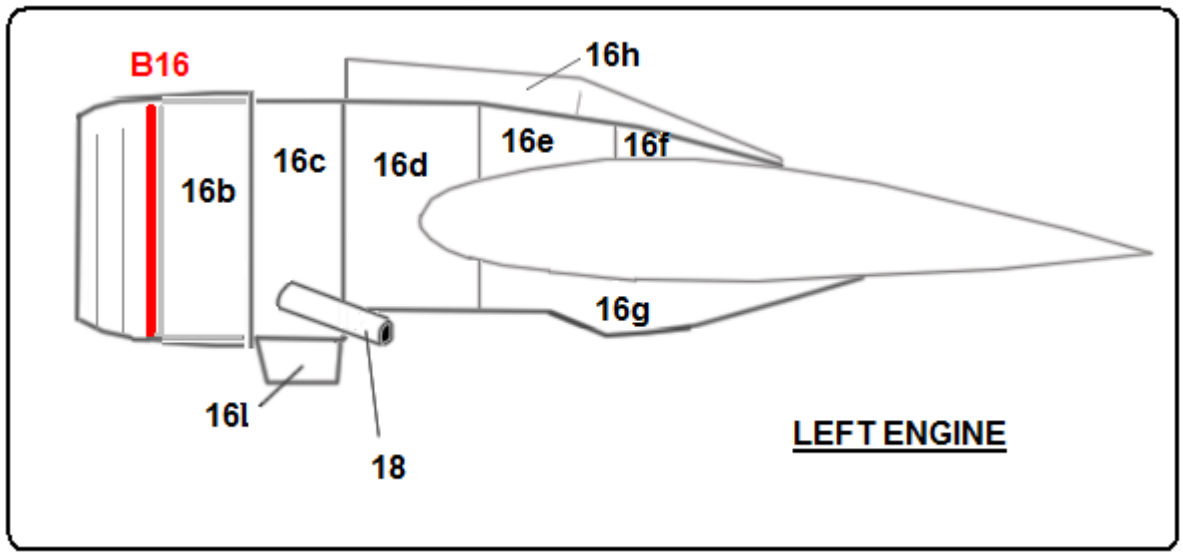
13. Assemble **12**, and glue is place, first slitting the rear of the fuselage. Glue in place the flash **12L** and **12R**.
14. Glue the flash **10L** and **10R** around the fin.
15. Cap rear end of fuselage with **9**.

Main Wing

Note: carry out the following accurately, then the decal will be automatically correct!

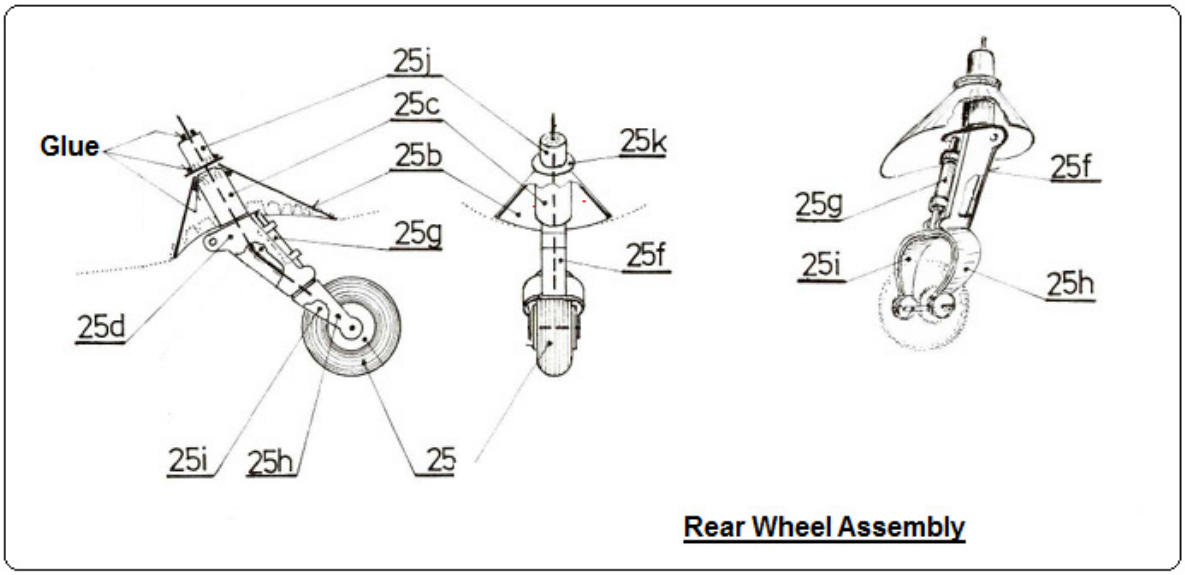
16. Prepare assembled parts **13L**, **13M**, **13R**, **13**, **14L**, **14R**, **14LA**, **14RA.**
17. Place the 3 parts **14L, 13**, **14R** on their bottom surfaces, exactly lined up, then glue on the join strips **14LA** and **14RA.** The latter 2 join strips are over-long – after gluing cut off excess length.
18. Glue on the tabs for each wing end.
19. Insert and glue in place struts **13L** and **13R**, on the inner side but just adjoining, the strips, then add **13M** halfway between both. NOTE: each strut is 3x thick with the outer card having tabs which should be bent outwards before gluing. The struts should be so placed that their rear ends are 3.5mm from the trailing edge.
20. Close/glue the wing, using the strips for the mid-wing, along the trailing edge.7
21. Strengthen the wing joints with flashing **14LB** and **14RB .**
22. Glue in place under the fuselage.
23. Add flashing **15L** and **15R** to cover join fuselage-wing, first rolling with a rod, to produce the correct form.
24. Add flashing **15A** to cover the cavities produced by the flashing under the wing (**15L** and **15R**).

Motors

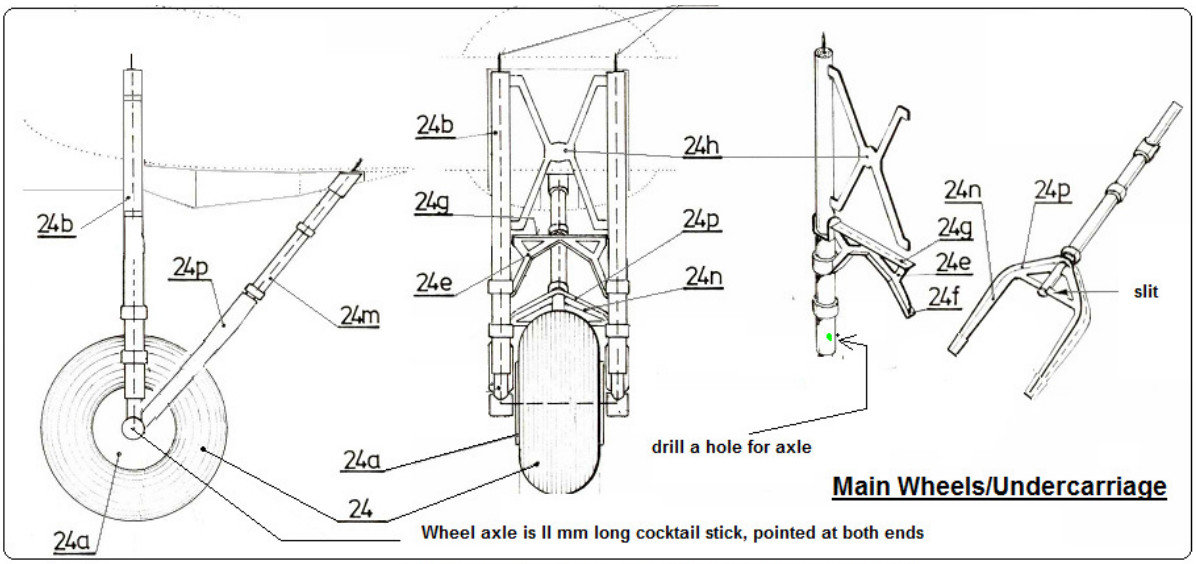


25. Close/glue **16b** & then insert/glue **B16**.
26. Close/glue **16c**, join to **16d**
27. Glue **16c/16d** to inside of **16b**.
28. Cut out the green areas marked **20**.
29. Glue Top and Bottom tabs on **16d,** and then assemble **16e** and **16f**, then glue onto top tab to **16d**.
30. Glue the assembly in position on wing, then finalise with **16g**.
31. Glue on parts **16h**, flashing **16i**, and **16l.**
32. Assemble undercarriage well **16j**. Pierce green dot, which will hold the propeller shaft. The opposite face should be strengthened with a piece of card. After cutting out green area in the engine casing, insert and glue in place within the engine casing.

Undercarriage/Wheels



Adapted from : http://www.papermodels.pl/index.php?topic=2298.10



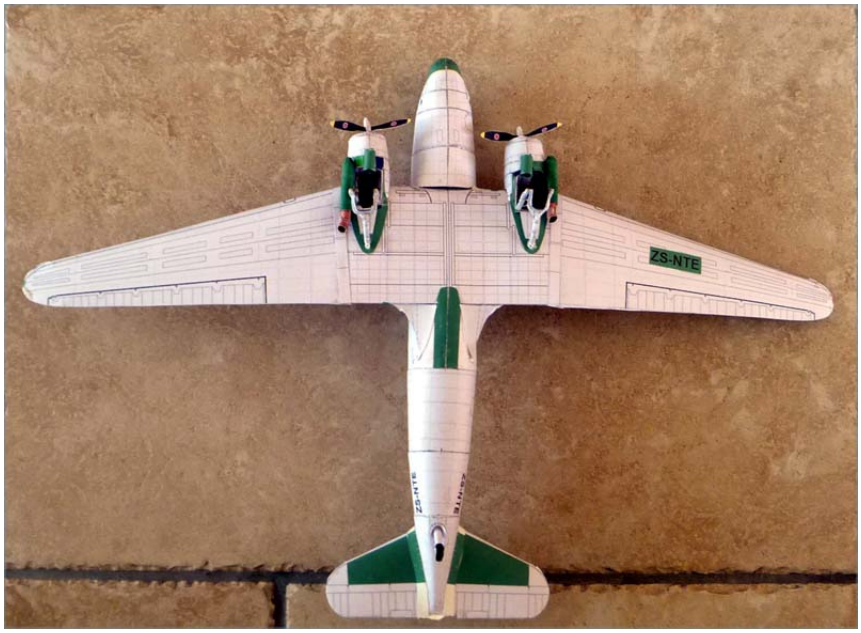
Adapted from : http://www.papermodels.pl/index.php?topic=2298.10

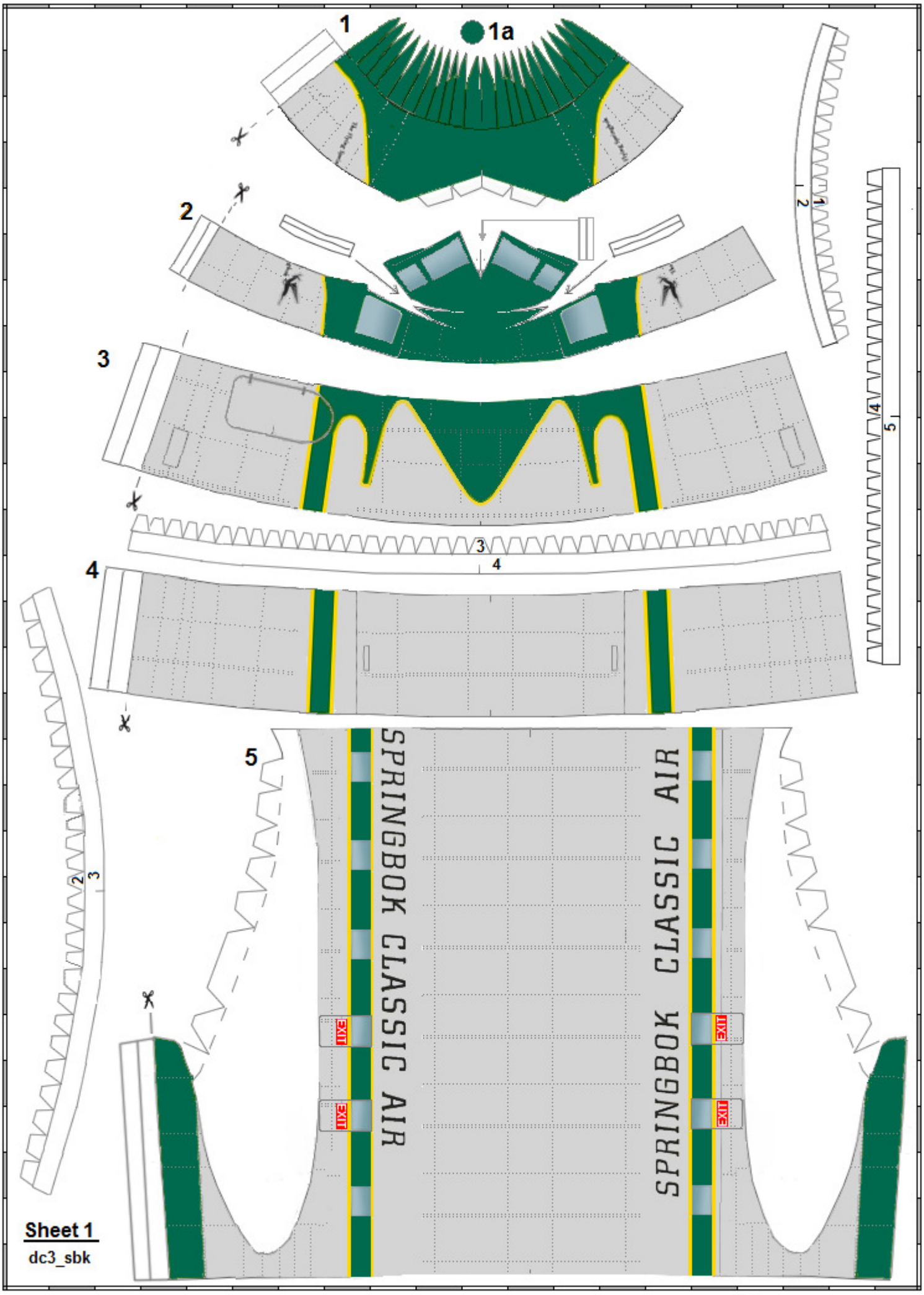
Propellers

33. Glue prop shaft bush **16k** onto **B16** Add the propellers, gluing them on the tip of a cocktail stick, cutting down to length 4-4.5mm and insert, piercing **B16**. Glue nose cap **16a** onto tip of the cocktail stick, first making 3 slits to accommodate the 3 prop blades.

Varia

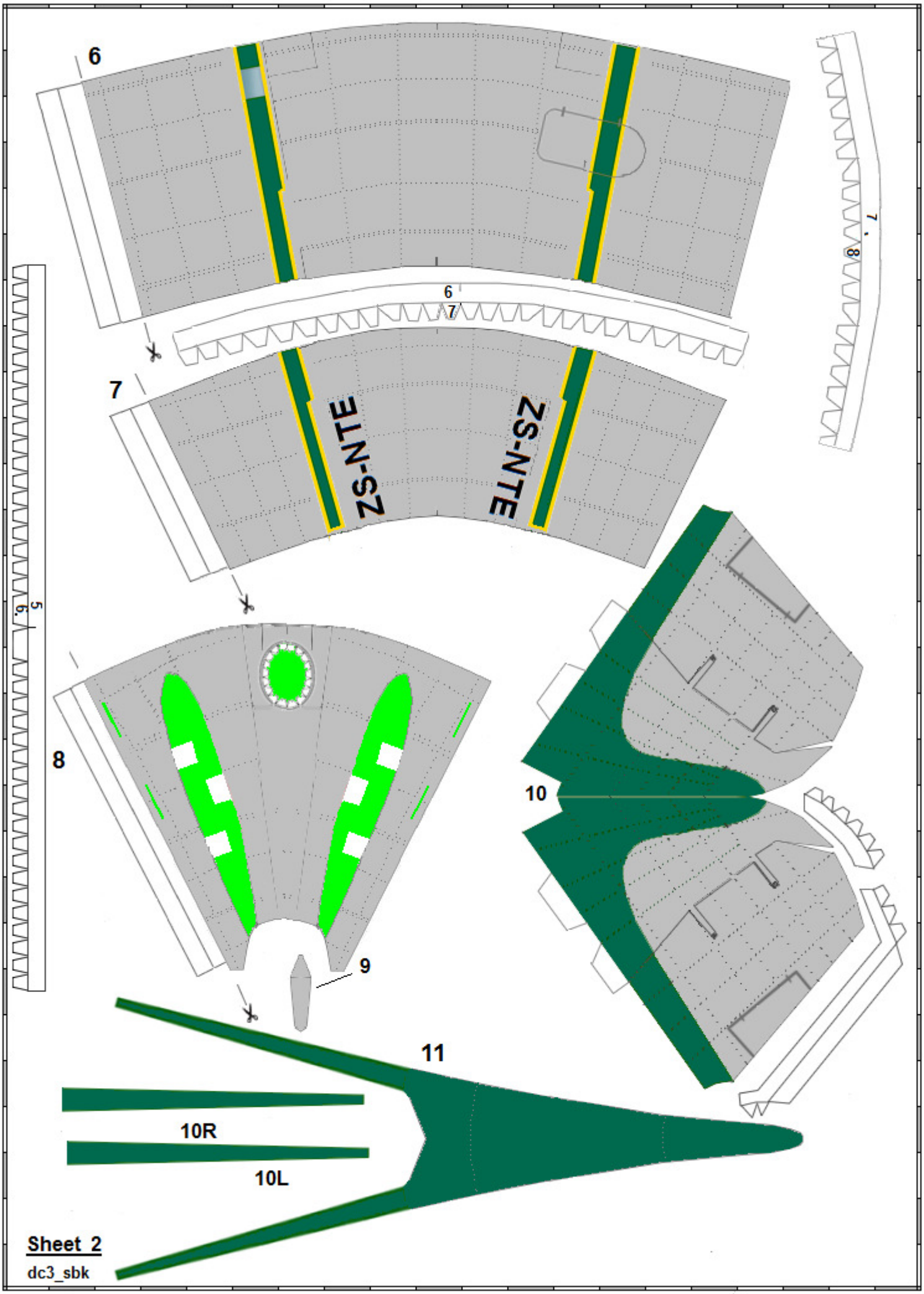
34. Diverse antennae: **17a** and **17b**.
35. Exhaust pipes **18**.





Sheet 1

dc3_sbk



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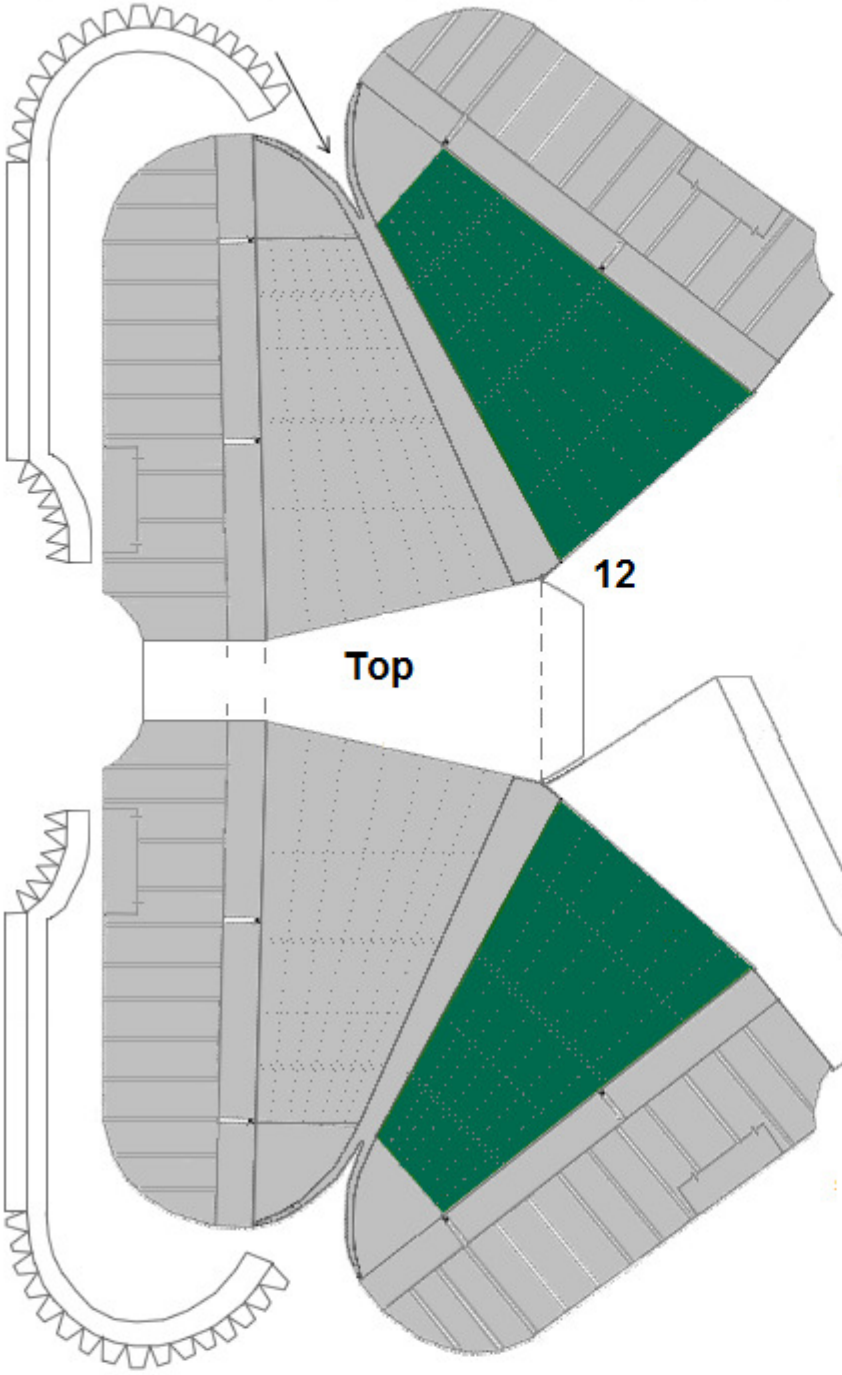
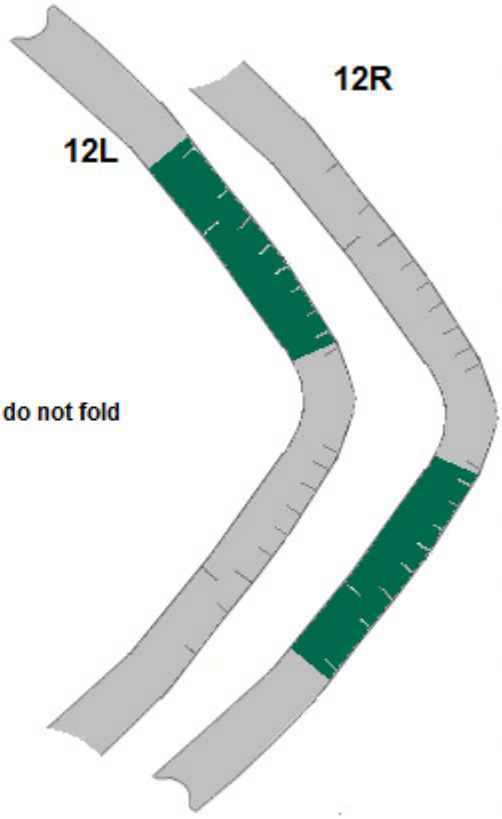
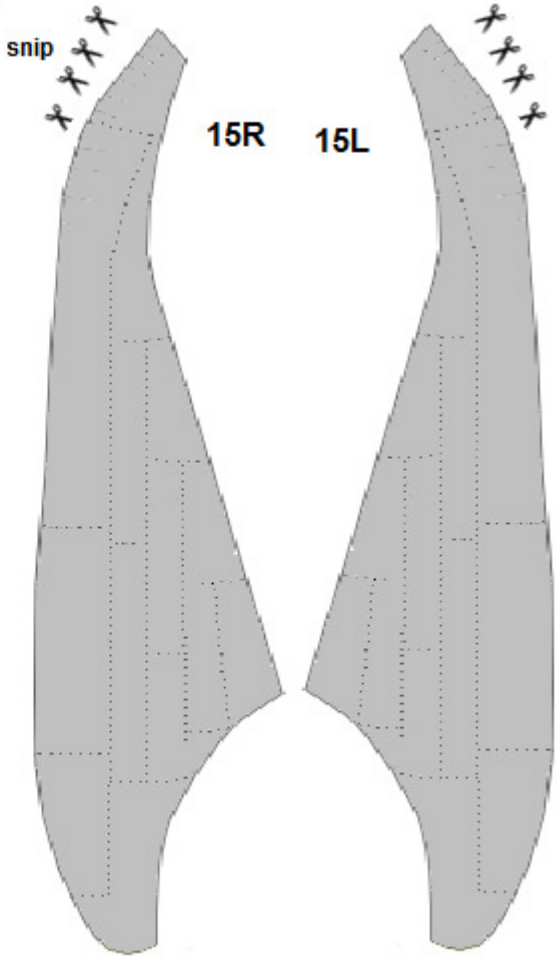
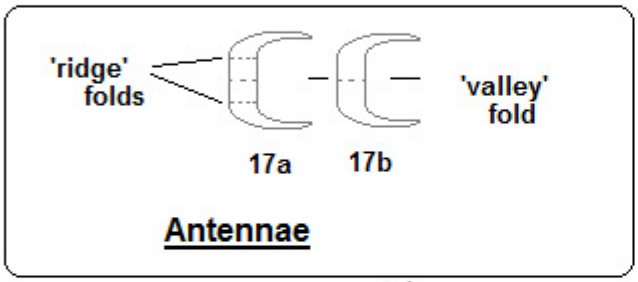


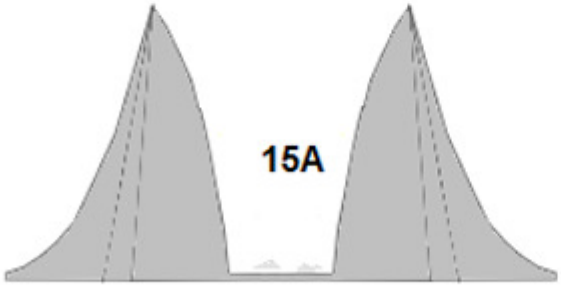


Round, do not fold





Antennae



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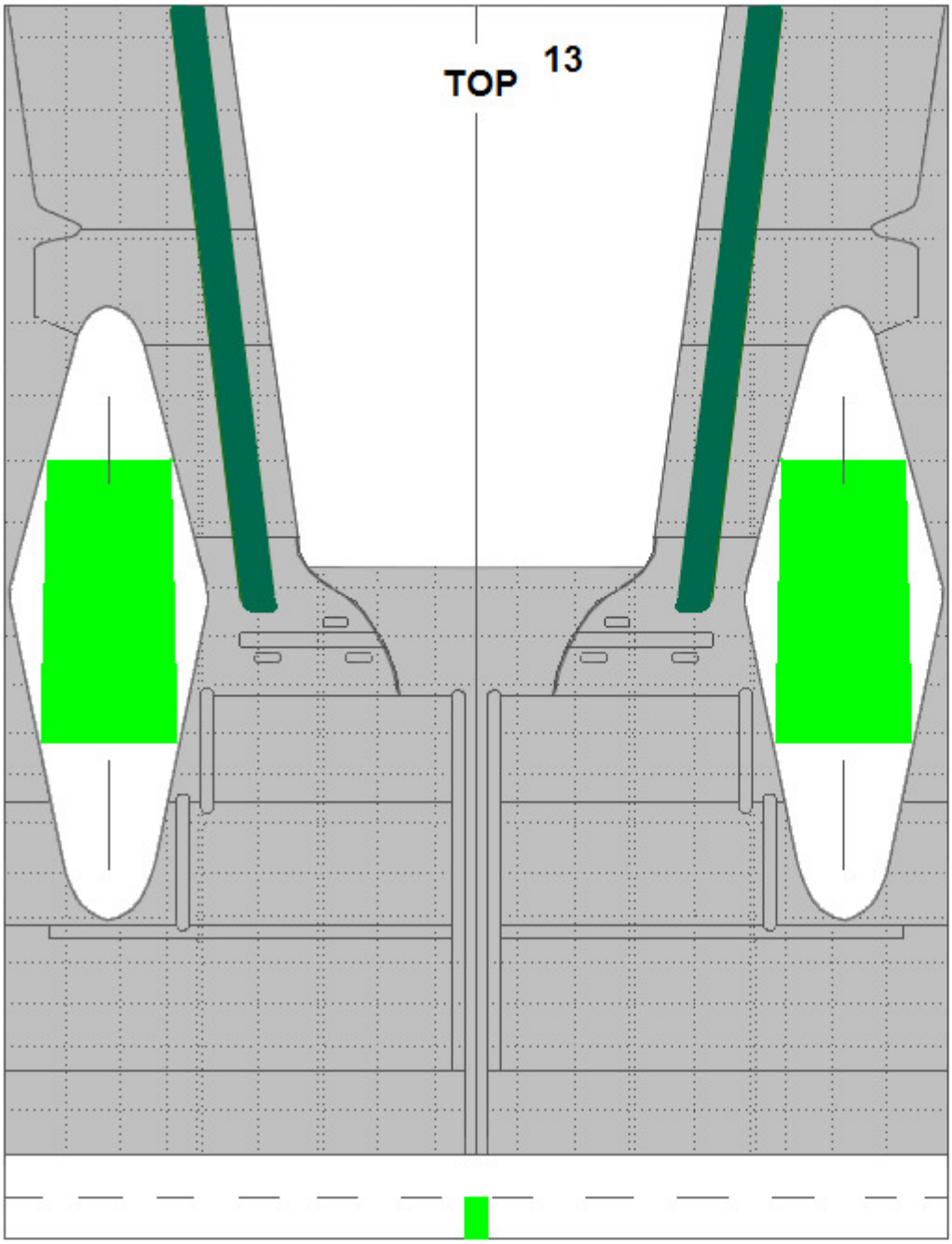

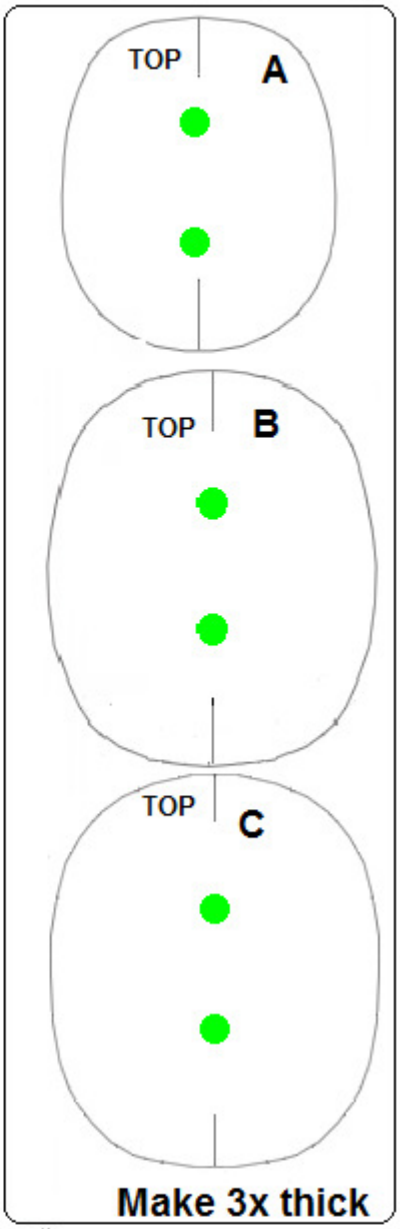

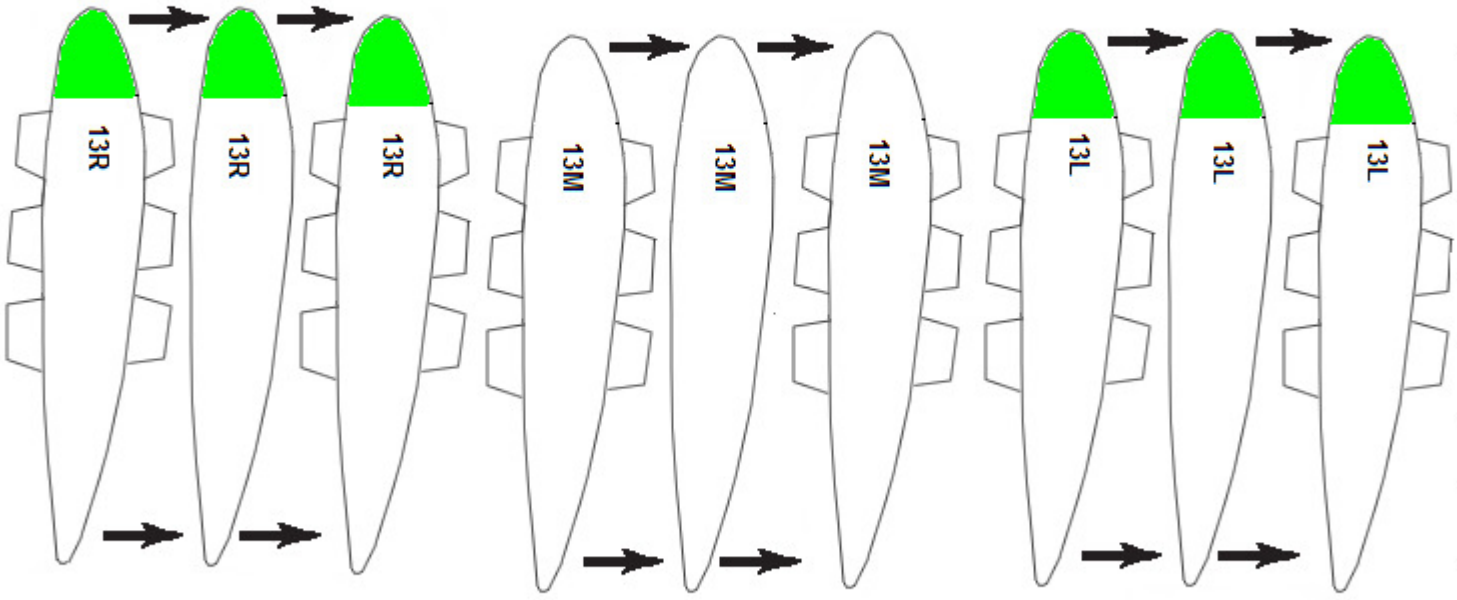

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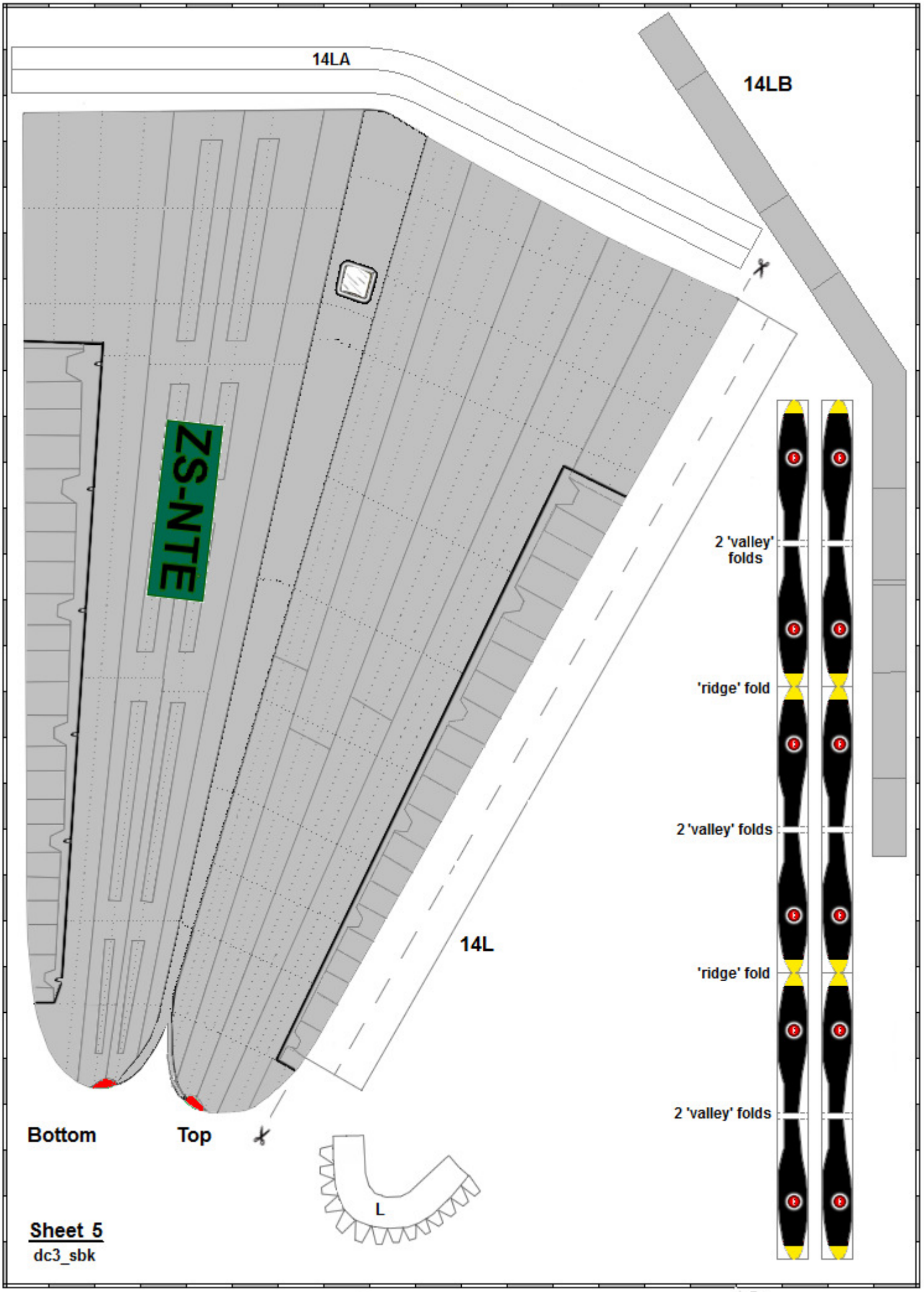

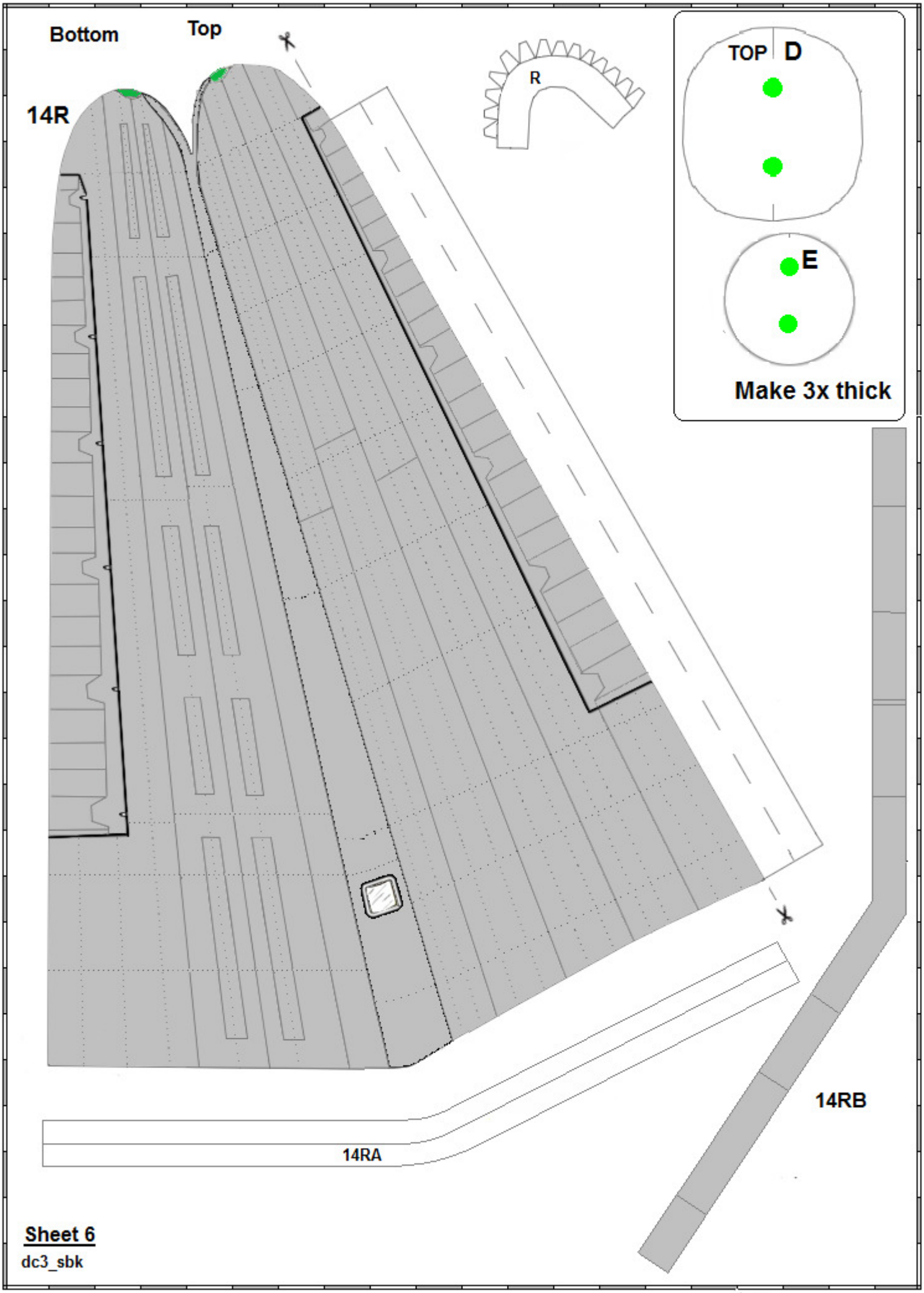

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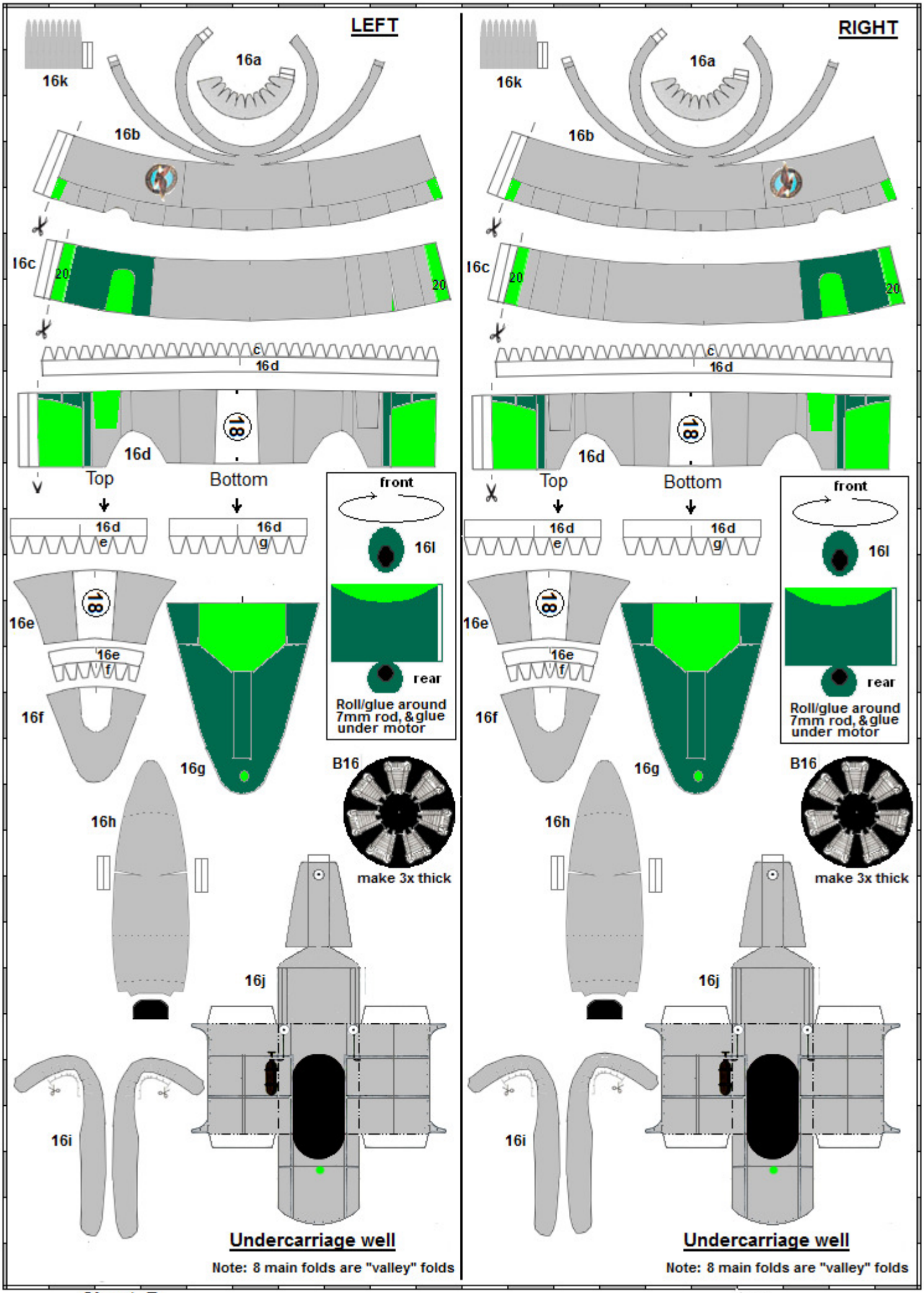
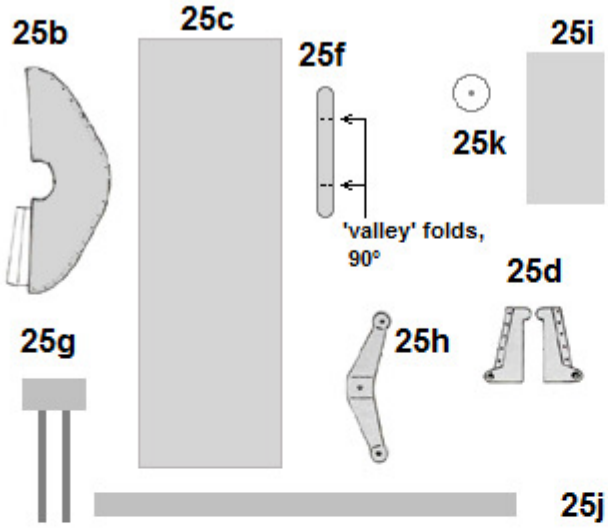


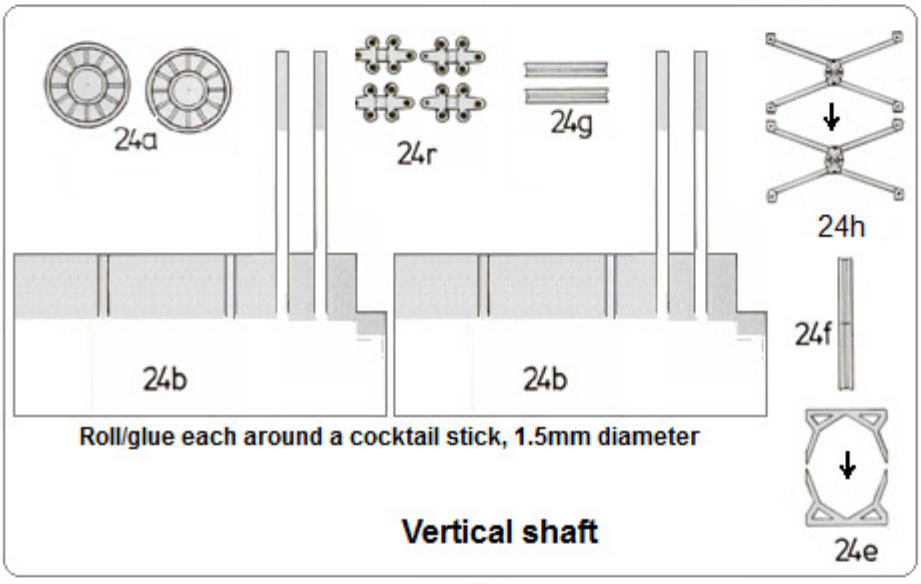
Sheet 7
dc3_sbk

25 Rear Wheel



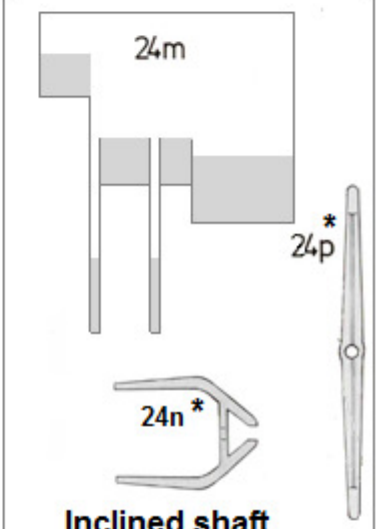
1. Roll/glue 25c, 25k, and 25j around a pin, and glue together.
2. Bend 25h to form, then inside, glue on 25i. Cut off excess flash.
3. Push pin through inside, then add the unit 25c-25k-25j.
4. Glue the 2 parts 25d on either side.
5. Part 25f: bend ends to 90°, then glue in between the ends, piston 25g.
6. Remove pin, and strengthen all joins with glue.
7. Glue wheel 25 inside 25h.

Rear Wheel Assembly

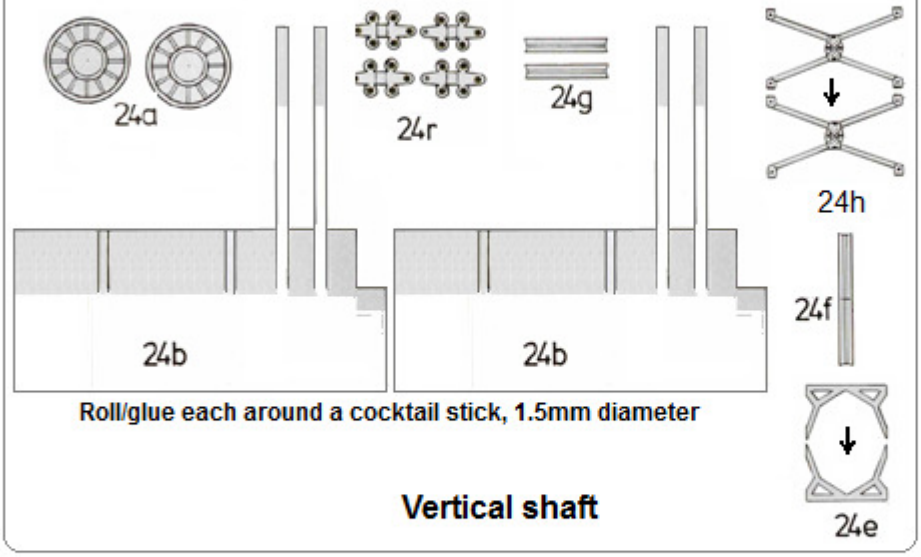


Roll/glue each around a cocktail stick, 1.5mm diameter

Vertical shaft

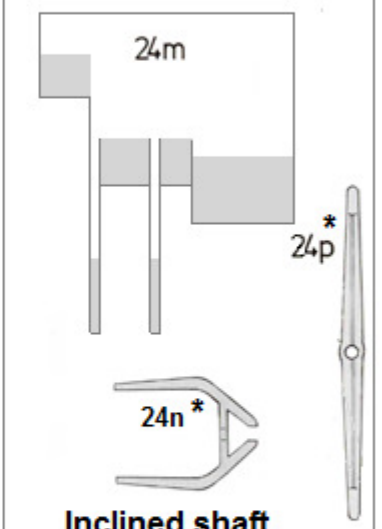


Inclined shaft



Roll/glue each around a cocktail stick, 1.5mm diameter

Vertical shaft



Inclined shaft

Starred parts * : make 2x thick

Front Wheel Assembly

Sheet 8

dc3_sbk

Sheet 9
dc3_sbk

start

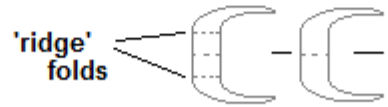
end

2 Rear Tyres

start

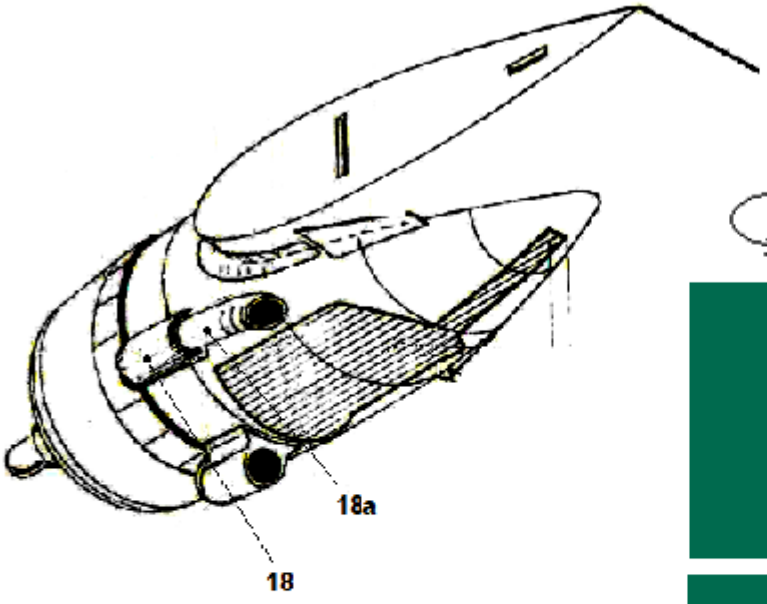
end

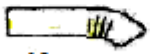
Roll/glue each tyre in the centre of a cocktail stick, 15mm long, and pointed at each end.

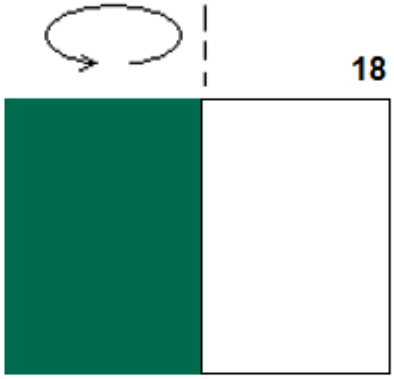


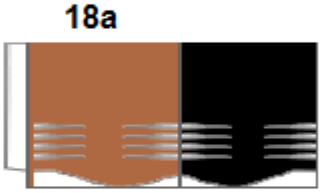
Antennae

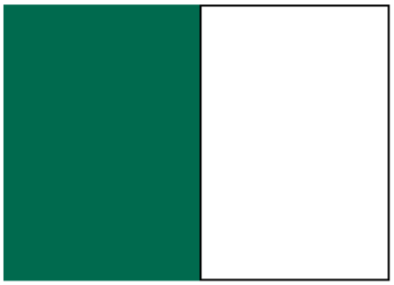
Sheet 9
dc3_swiss











Roll around 6mm rod.

EXHAUSTS

Fold in half, glue, then immediately roll/glue around 7mm rod.

Remove rod

WHITE INSIDE !

BLACK INSIDE

PRINT ON PAPER

Sheet 10

dc3_sbk