



Mc Donnell Douglas / Boeing

# F/A-18 Hornet

The F/A-18 Hornet is one of the most commonly used fighter aircraft of the world at present. Its design goes back to the Northrop YF-17 Cobra, which was the rival of the F-16 in the Lightweight Fighter Competition of the U.S. Air Force in the late 1970ies. Because the Navy was sceptical about a naval version of the F-16, the F-17 was developed to become the F/A-18 as a carrier-based combined fighter/fighter-bomber. Even though it looks similar to the F-17 and shares it's basic design, the F/A-18 has not a single part, which is the same as the F-17. The F/A-18 is notably bigger, with stronger engines, as well as foldable wings and enforced landing gear, for carrier operations. The maiden flight of the first F/A-18 Hornet was November

18th 1978. A characteristic feature of the design of the F-18 are the big leading edge extensions or LEX's forward of the wing, which allow flight at a very high angle of attack. The Hornet was one of the first fighter aircraft to use multi-function displays, which allowed it to be deployed both in a fighter role or attack role. That's also the reason for the official designation F/A-18. It was especially designed to allow easy maintenance. For example, the engines are connected in only three places and can be replaced within a matter of hours.

The F/A-18 entered service with the U.S. Navy and U.S. Marines in 1983, first replacing F-4 Phantom II's, then A-7 Corsair II's. In operation, the F/A-18 proved very reliable and easy to maintain. In 1986, the

Navy demonstration team Blue Angels replaced their A-4 Skyhawks with F/A-18's, and have been flying the F/A-18 until today, longer than any other aircraft before. first in the A-version, later in the C-version.

The F/A-18 was first used in Combat during the controversial 1986 attacks on Libya, and massively used during Operation Desert Storm, the first Persian Gulf war. During that war, the Hornet was used in over 4551 missions, with only two getting lost. It was also involved in the Attacks on Bosnia and Kosovo in the 1990ies as well as in the second Persian Gulf War or Operation Enduring Freedom. American F/A-18 Hornets also played an important role in the 1996 motion picture Independence day as the aircraft flown during the

final attacks against the Alien spacecraft.

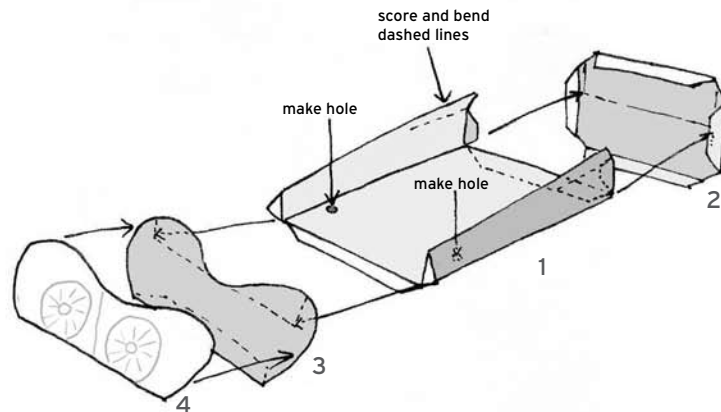
Canada replaced its F-101 Voodoos, F-104 Starfighters and F-5 Freedom Fighters with F/A-18's. Canadian Hornets took part both in the first gulf war as well as in the attacks on former Yugoslavia. Canada was the first export customer for the F/A-18.

Australia ordered F/A-18 Hornets to replace its aging Mirage IIIs. The Australian Hornets have been deployed to Afghanistan in 2001 on air-defense missions. They were also deployed to Qatar in 2003 from where they took part in combat missions over Iraq. The Finnish Air Force used the Hornet to replace the MiG-21's and Saab Draken's in its service, originally under the designation F-18, because they were meant to be used only for the fighter role. Later they were re-equipped to allow air-to-ground missions as well. The Spanish air force flies the Hornet in both roles, and the Spanish Hornets took part in missions to Bosnia, Kosovo and Yugoslavia. Kuwait operates 39 Hornets, which had been ordered already before the Iraqi invasion of 1990 and were delivered to the Kuwait Air Force while the liberation of Kuwait was in progress. Switzerland operates 34 F-18 Hornets since 1996. The smallest Operator of F/A-18 Hornets is Malaysia, which flies 8 two-seater D-models, which serve alongside MiG-29's.

The NASA uses a number of F/A-18's that have been retired from Navy service in a number of roles, mostly as chase planes. One of the chase planes has been equipped with a telescope in the rear seat to observe the sky from higher altitudes, where the air is cleaner. Other NASA versions were modified for test purposes, the F-18 AAW and F-18 HARV.

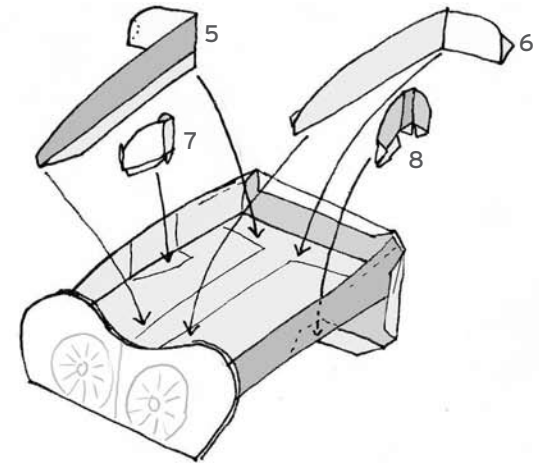
The design of the F/A-18 has been further developed to the F/A-18 E/F, which included a longer fuselage, bigger wings and LEX's plus modified air intakes.

1. Glue the wheel well between the two formers. Glue the intake plate on the fronts. Make holes, if you want to build the landing gear.

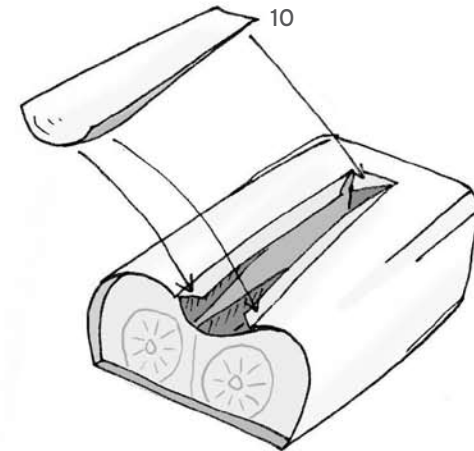
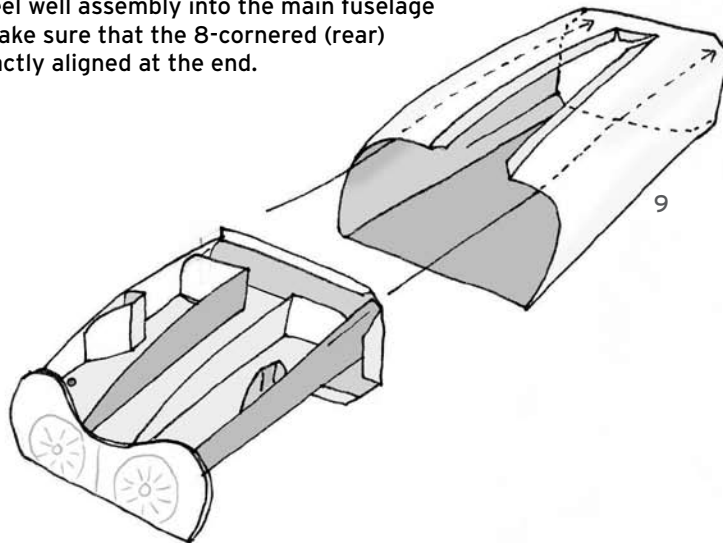


2. Glue the wheel well details into the wheel well

If you want to build the F/A-18 without landing gear down, ignore this step

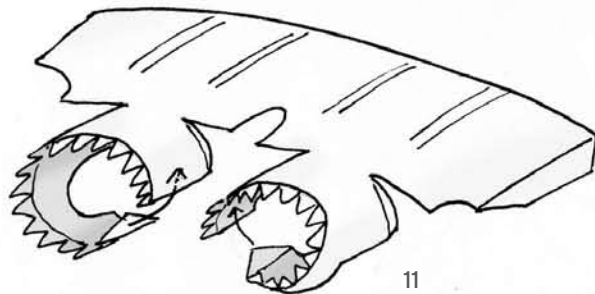


3. Score and bend the main fuselage part (9) on the dashed lines. rounden the front end to follow the former. (3)  
Glue the wheel well assembly into the main fuselage front part. Make sure that the 8-cornered (rear) former is exactly aligned at the end.

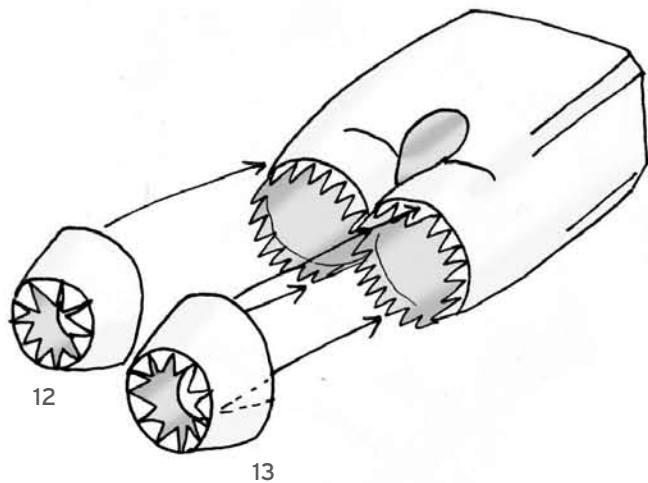


4. rounden the bottom plate and glue it on the main fuselage front section

5. On the rear main fuselage part, score and bend the **dashed lines** and rounden the two ends. Then glue the ends together to make them cylindrical.



7. Build the engine cones and glue them to the fuselage.

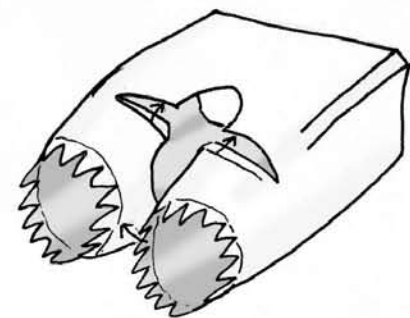


6. Glue together the 8-cornered side.

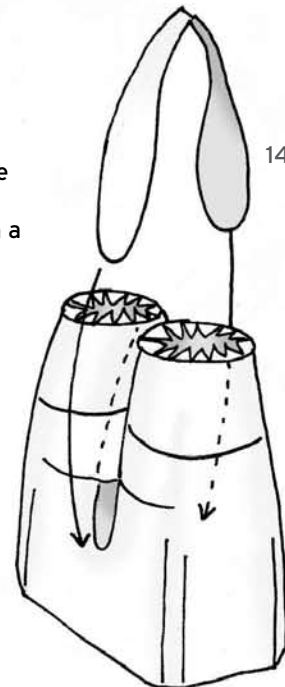


These two steps can also be reversed, see what suits you better.

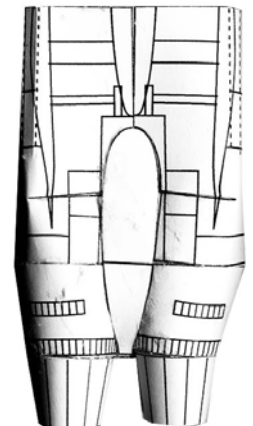
7. Close the gaps by glueing the cylinders to the 8-cornered section.



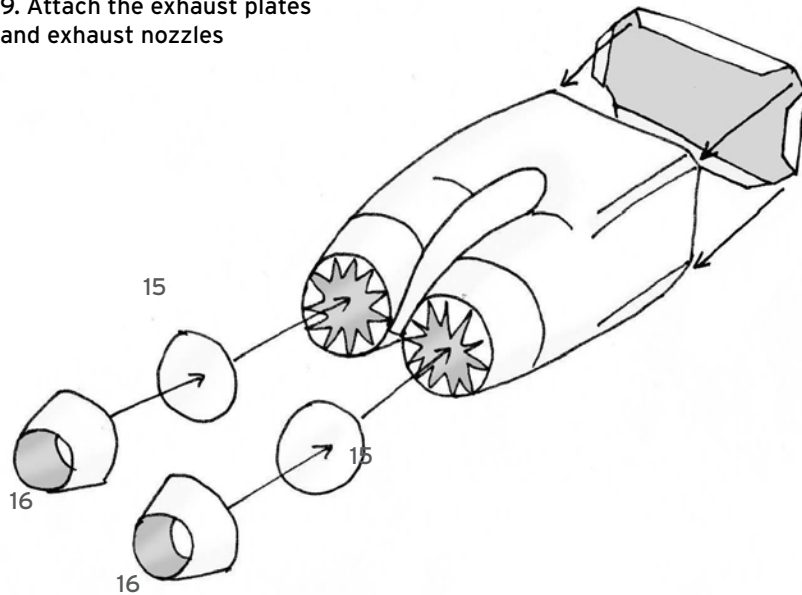
8. Rounden and glue the engine connector part. make sure the side with a line is to the top (see right)



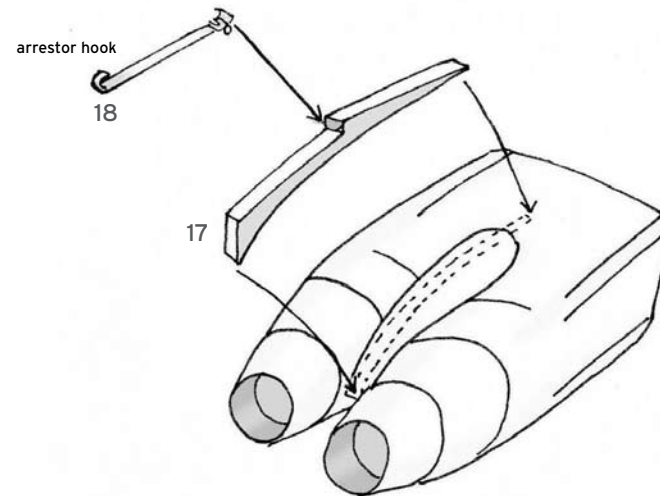
When finished, the top should look like this:



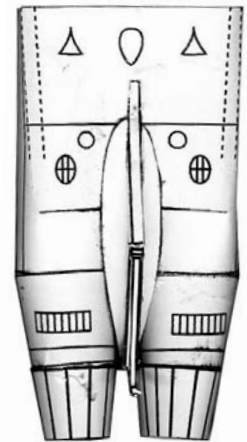
9. Attach the exhaust plates and exhaust nozzles



10. Attach the arrestor hook base. Score and bend the front edge of the arrestor hook, rounden the back end to create a hook.

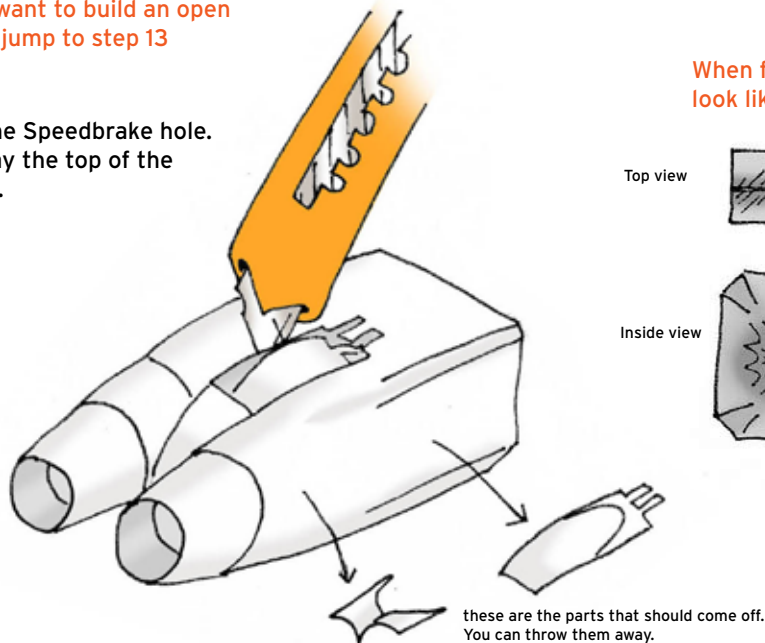


When finished, it should look like this:

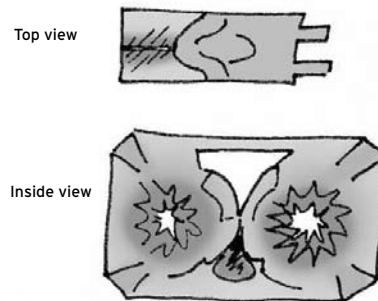


If you don't want to build an open speedbrake, jump to step 13

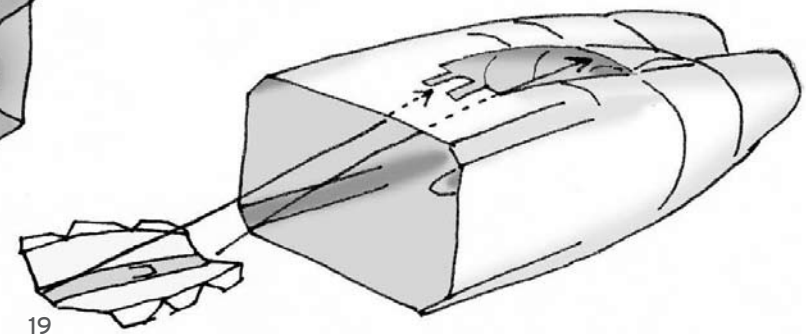
11. Cut out the Speedbrake hole. Also cut away the top of the cones inside.



When finished, it should look like this:

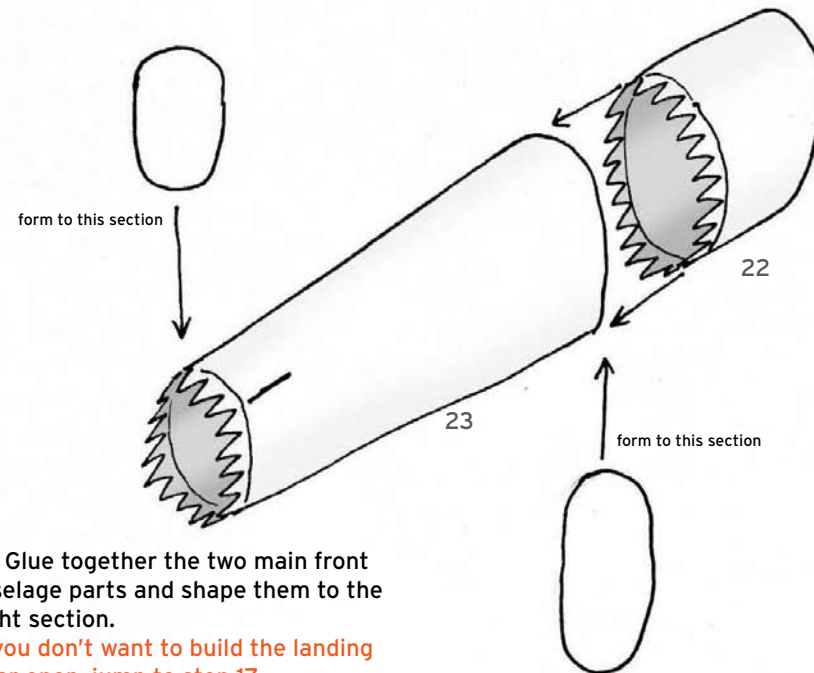
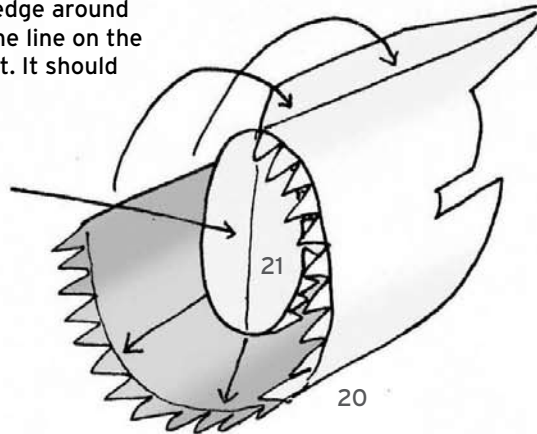


12. Bend the speedbrake floor and glue it into the fuselage





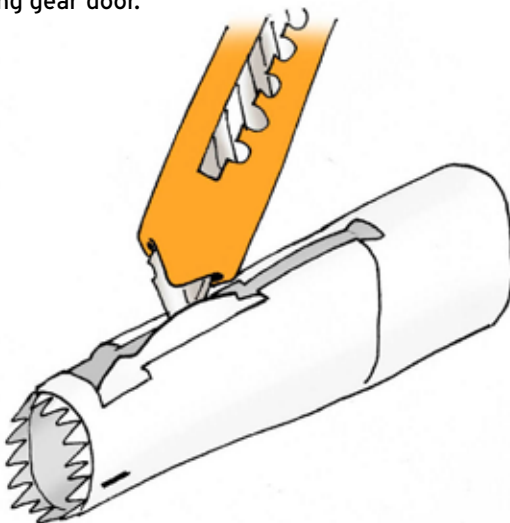
13. Rounden the front fuselage rear part and wrap its front edge around the former. Make sure the line on the former is aligned correct. It should point at the glue edge.



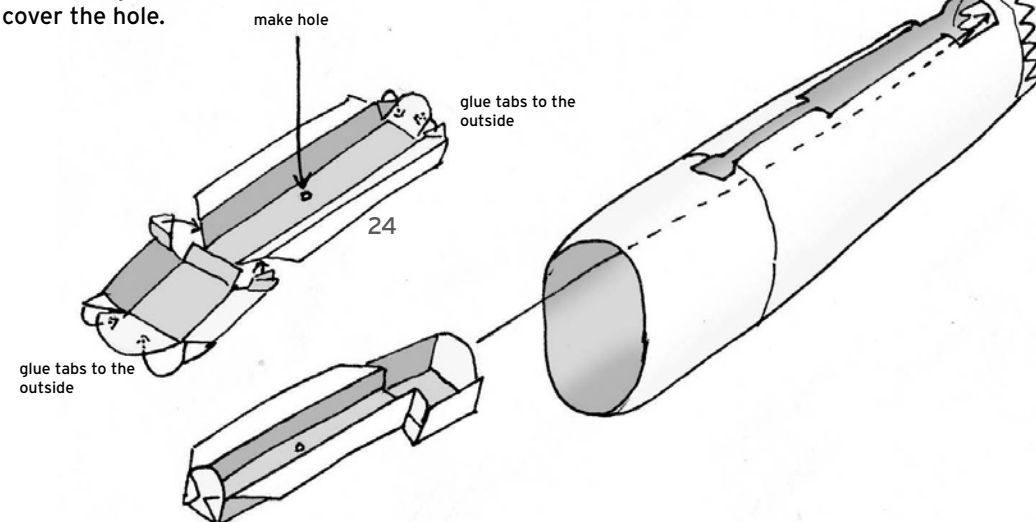
14. Glue together the two main front fuselage parts and shape them to the right section.

If you don't want to build the landing gear open, jump to step 17

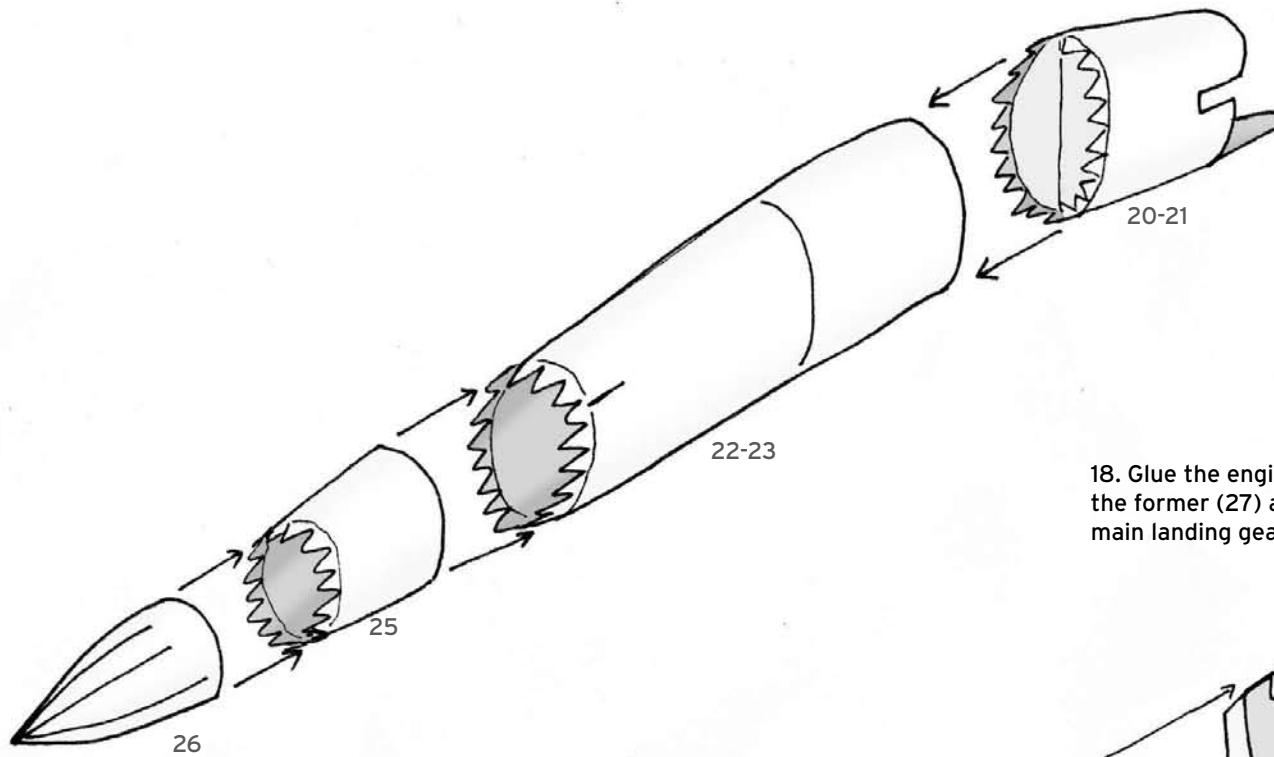
15. Use a knife to cut out the front landing gear door.



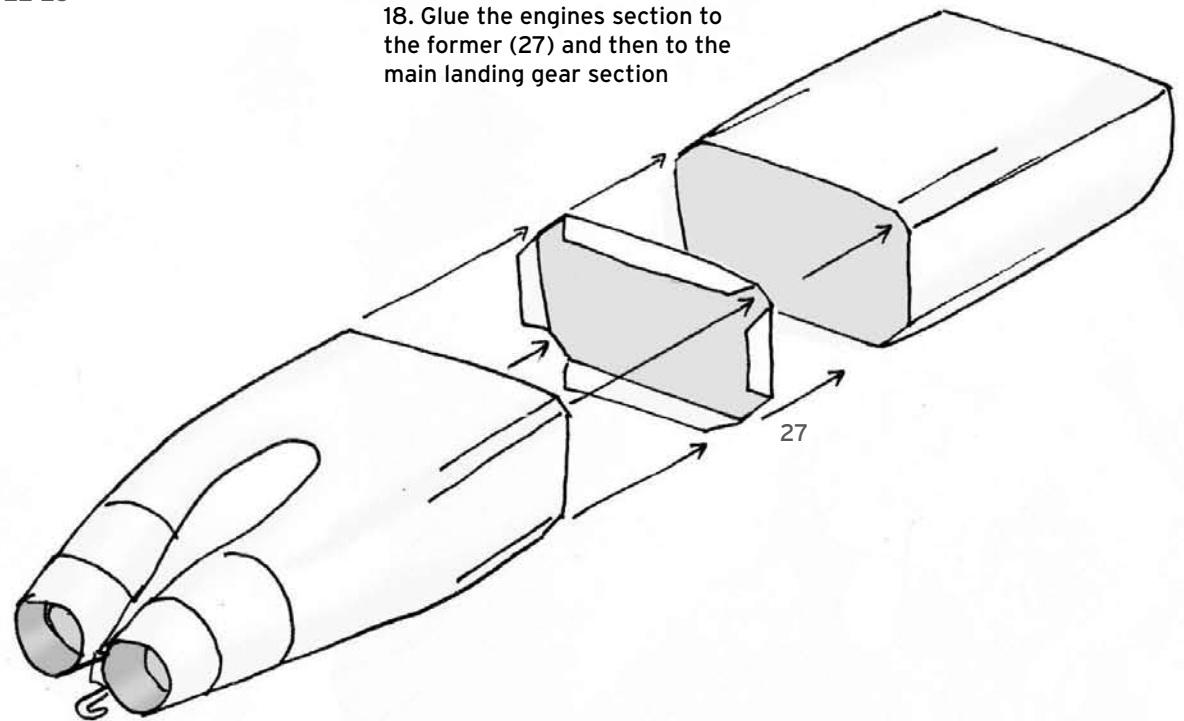
16. Build the front wheel well and glue it in to cover the hole.



17. Complete the front fuselage



18. Glue the engines section to the former (27) and then to the main landing gear section

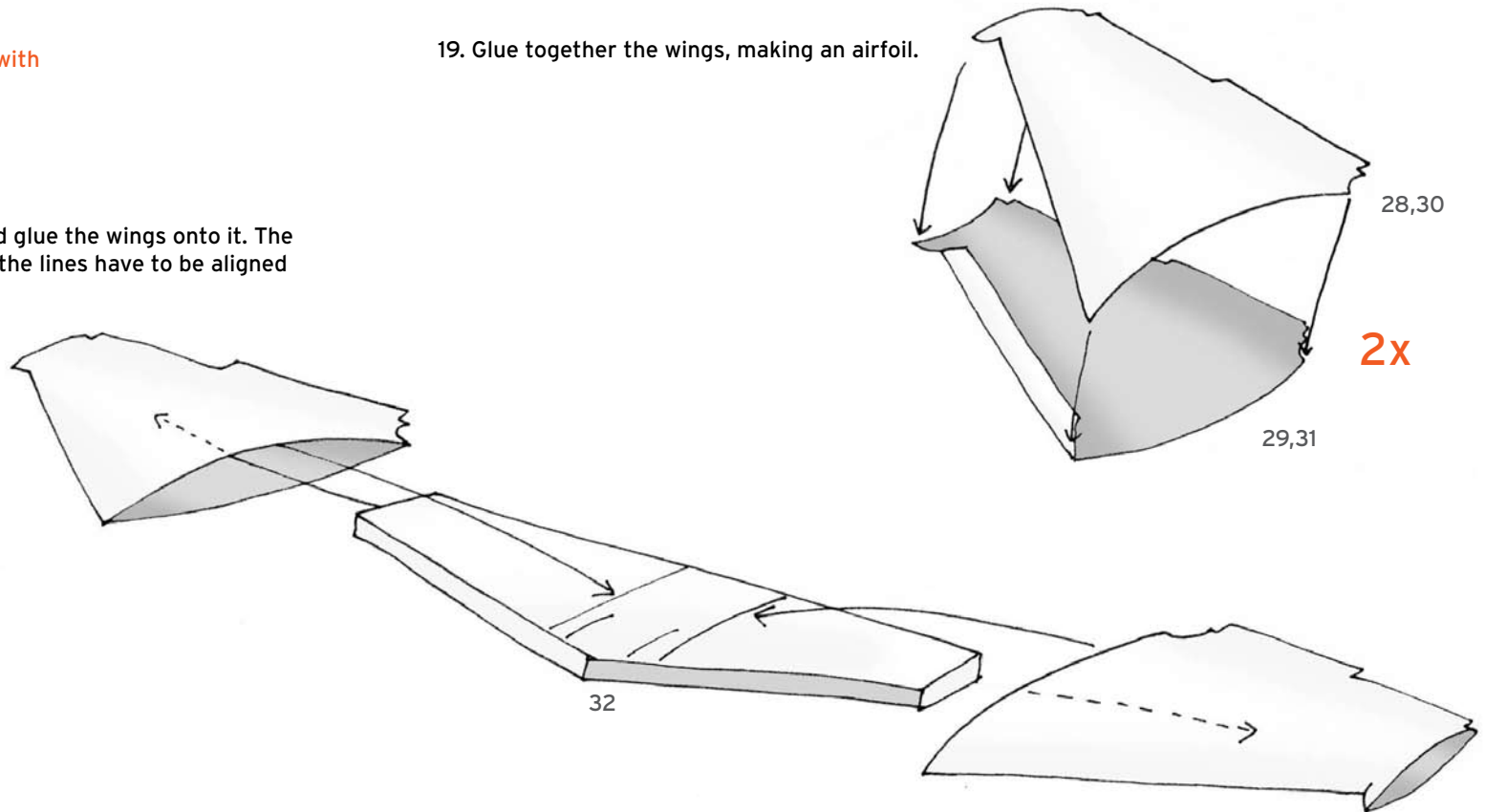


If you want to build the F/A-18 with folded wings, jump to step 21

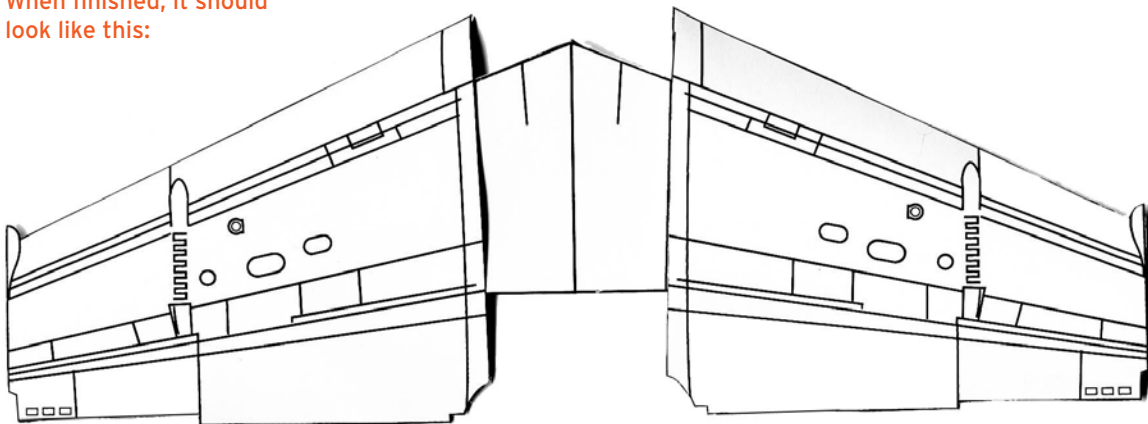
20. Build the wing stiffener and glue the wings onto it. The edge moves up to the line and the lines have to be aligned according to the image below.

jump to step 29

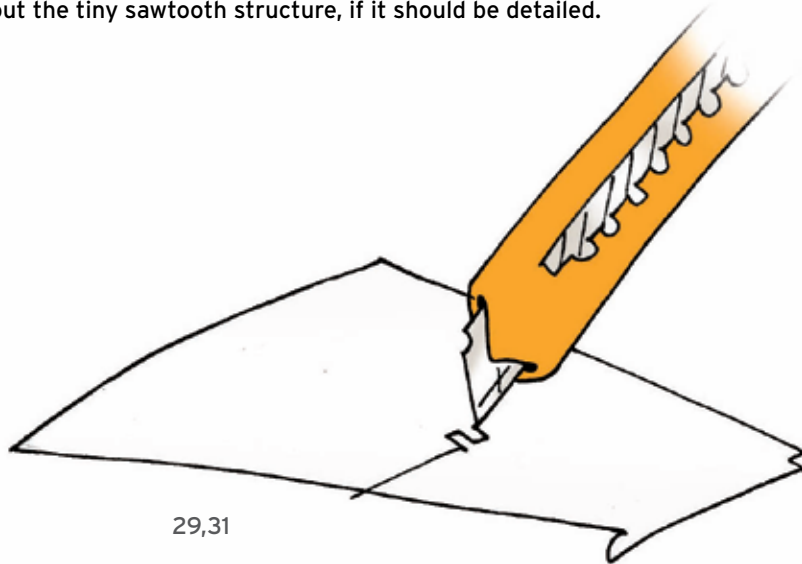
19. Glue together the wings, making an airfoil.



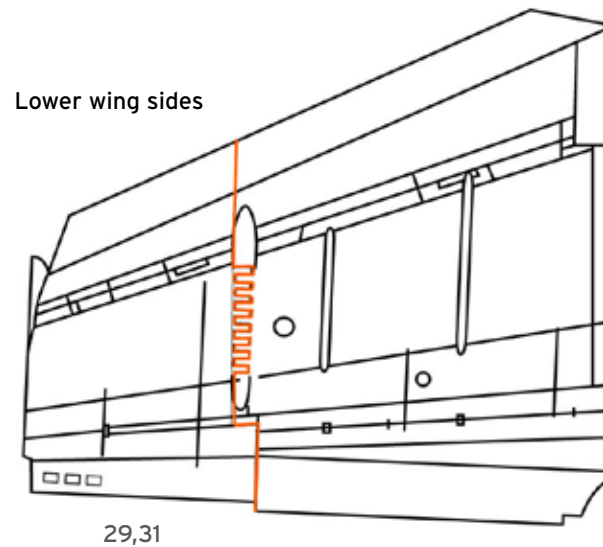
When finished, it should look like this:



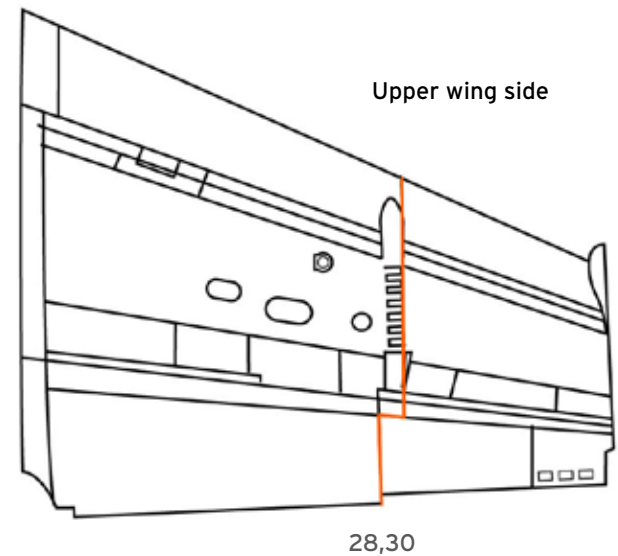
21. For the folded wings, you first have to cut the wings into two pieces for each part. The wings' lower sides require you to cut out the tiny sawtooth structure, if it should be detailed.



Use this as a reference for cutting  
The marked line shows, where to cut.



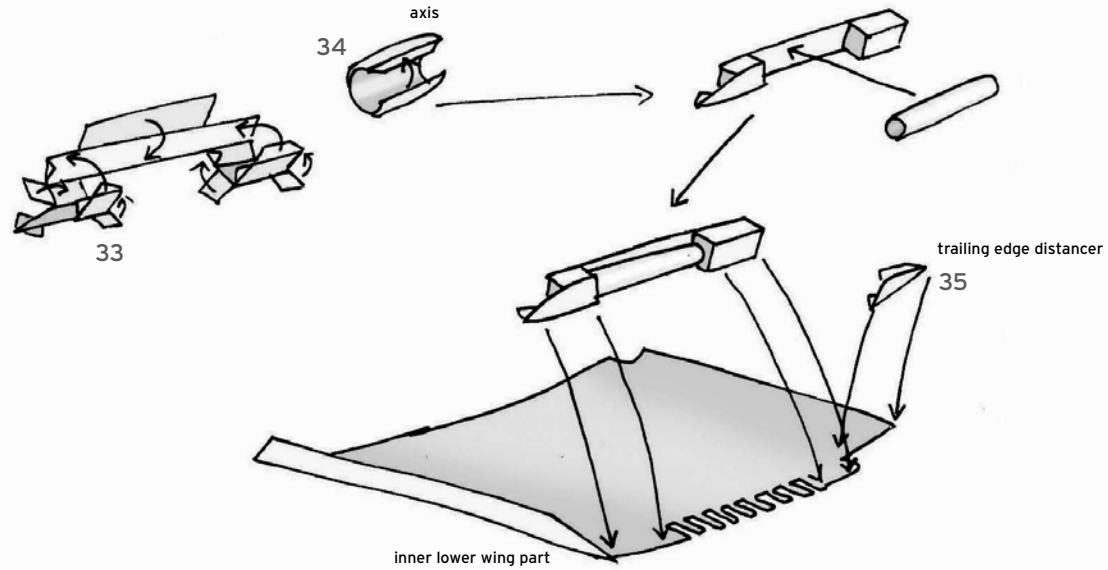
2x



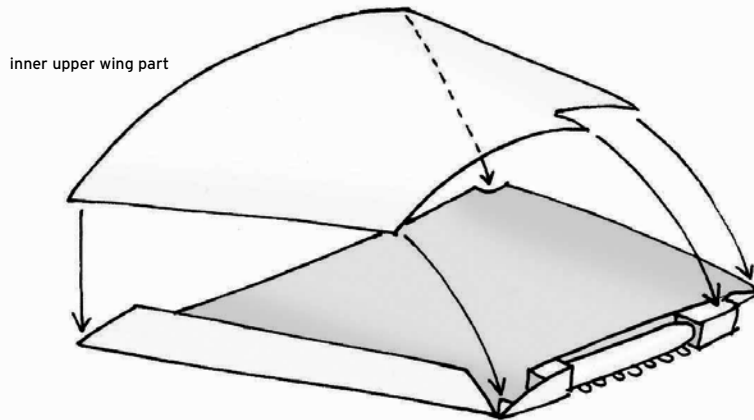


22. Build the inner wing edge. Glue the fold axis in the middle. Then glue it to the wing edge, letting the axis be above the sawtooth structure

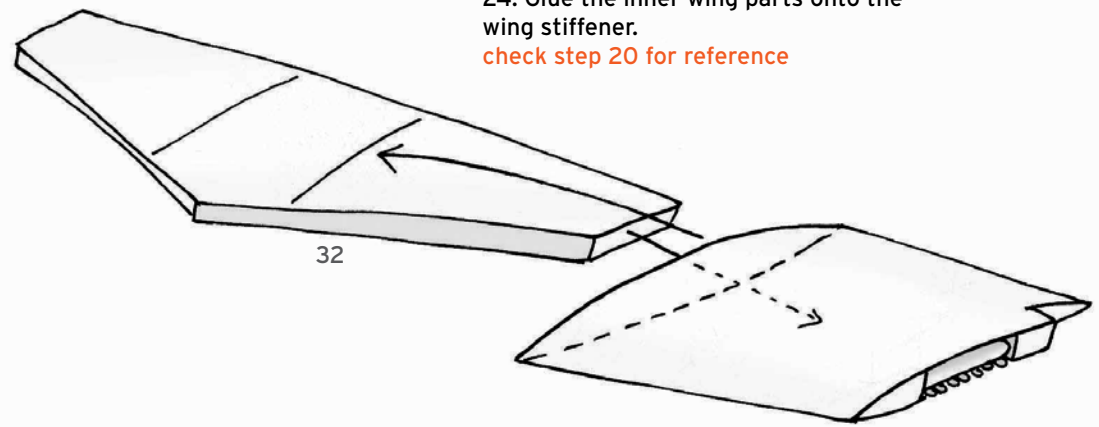
2x



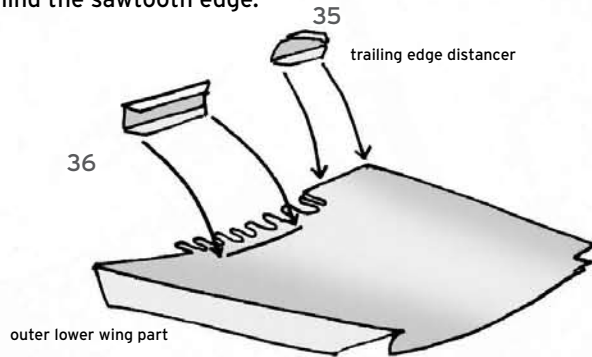
23. Glue the wing parts together



24. Glue the inner wing parts onto the wing stiffener.  
check step 20 for reference

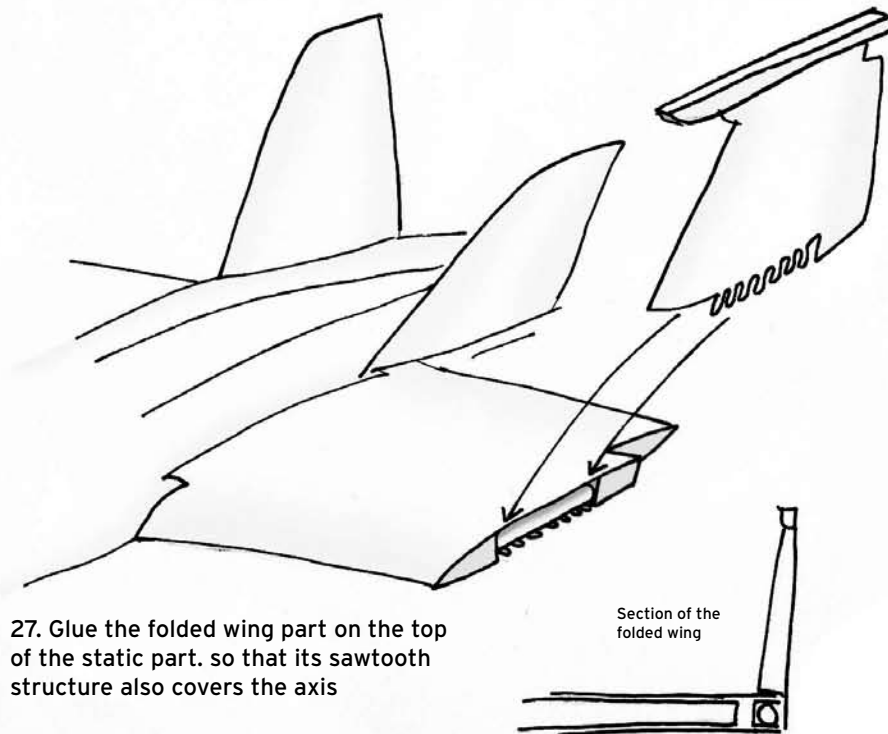
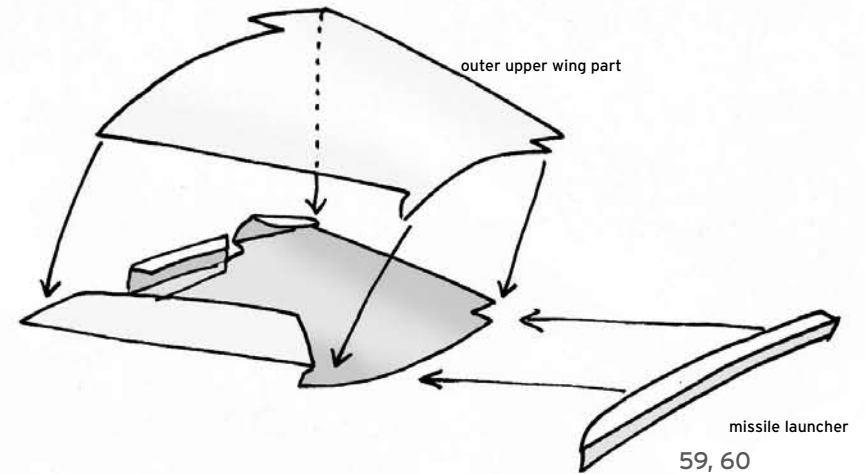


25. Glue the spacers on the outer lower wing. the middle spacer needs to be behind the sawtooth edge.



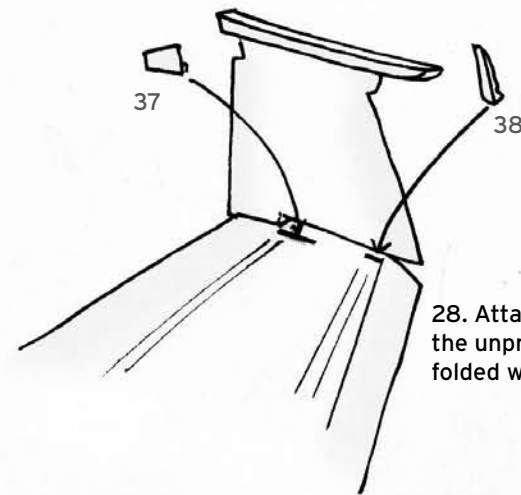
2x

26. Glue the wing parts together



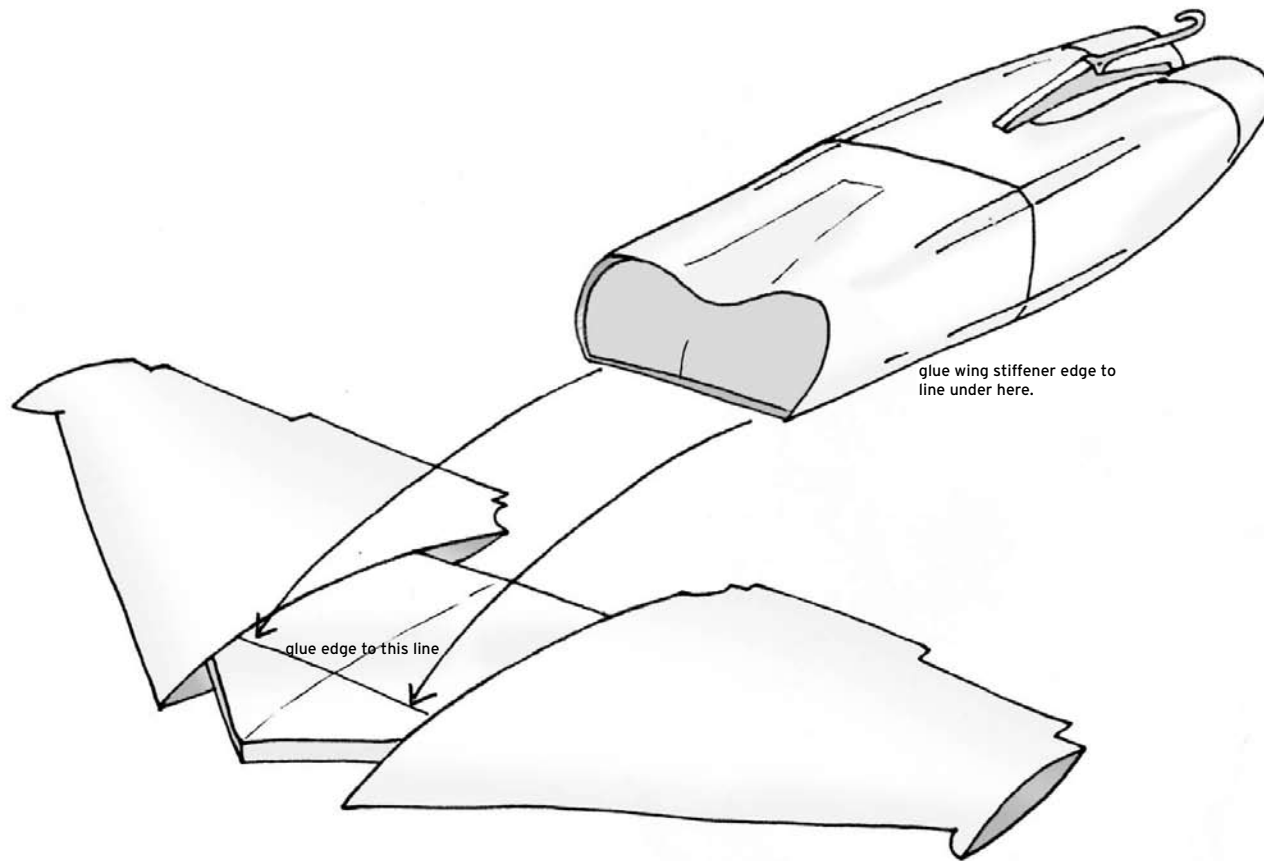
27. Glue the folded wing part on the top of the static part. so that its sawtooth structure also covers the axis

**TIP:** Wait until the rest of the aircraft is assembled to do this step

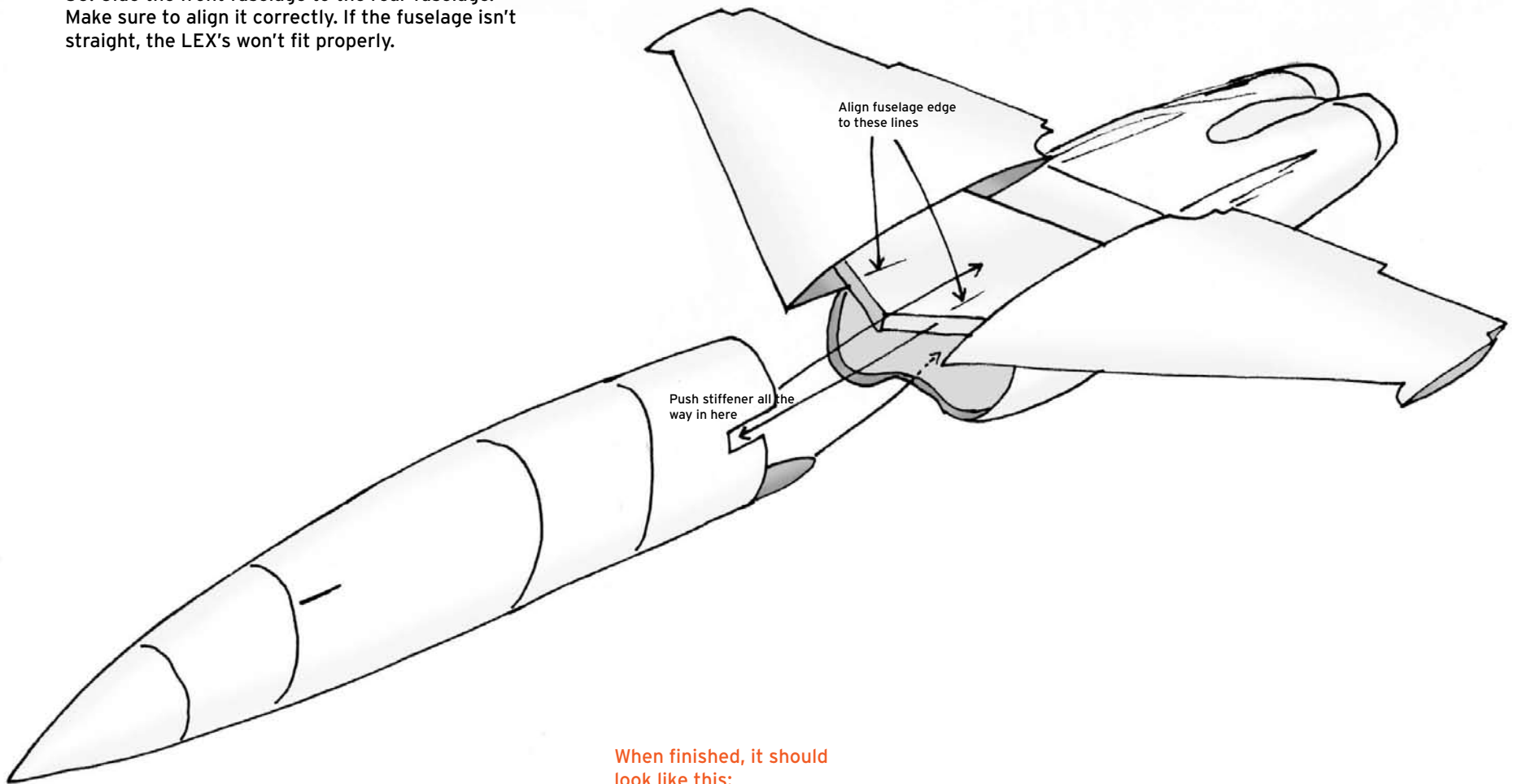


28. Attach the detail parts, with the unprinted side facing the folded wing part.

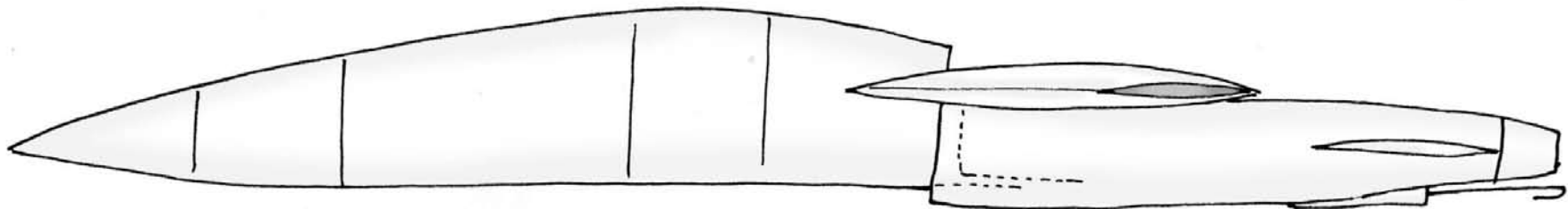
29. Glue together the rear fuselage and the wings. The lines on both parts help you to glue in the correct position. Make sure to align edges with lines following the wingspan, and use the lines facing the fuselage's direction to align centered.



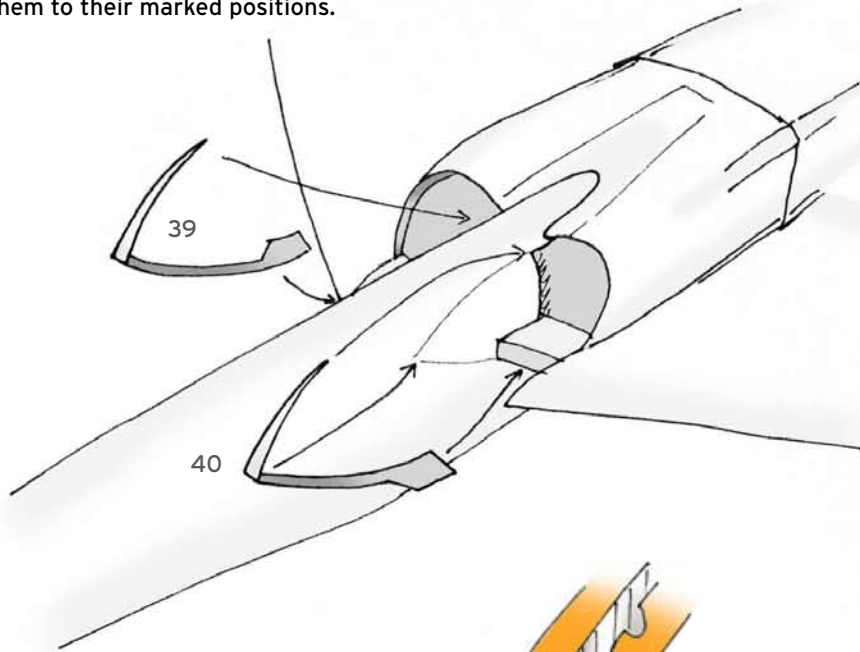
30. Glue the front fuselage to the rear fuselage. Make sure to align it correctly. If the fuselage isn't straight, the LEX's won't fit properly.



When finished, it should look like this:

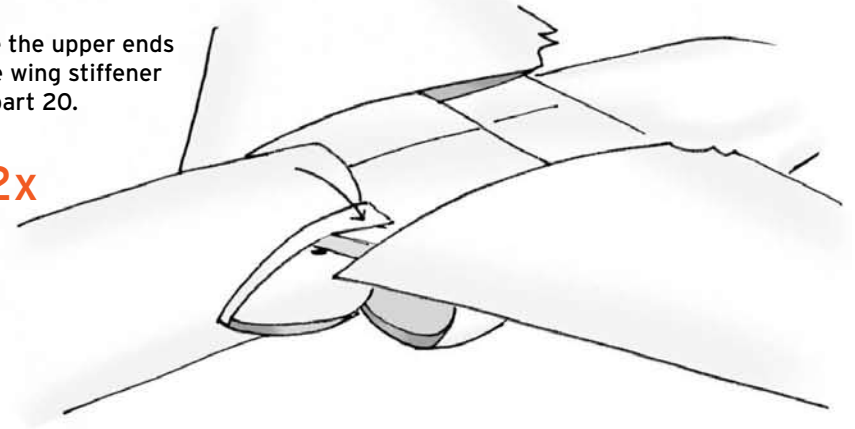


31. Bend and rounden the intake separators. Then glue them to their marked positions.



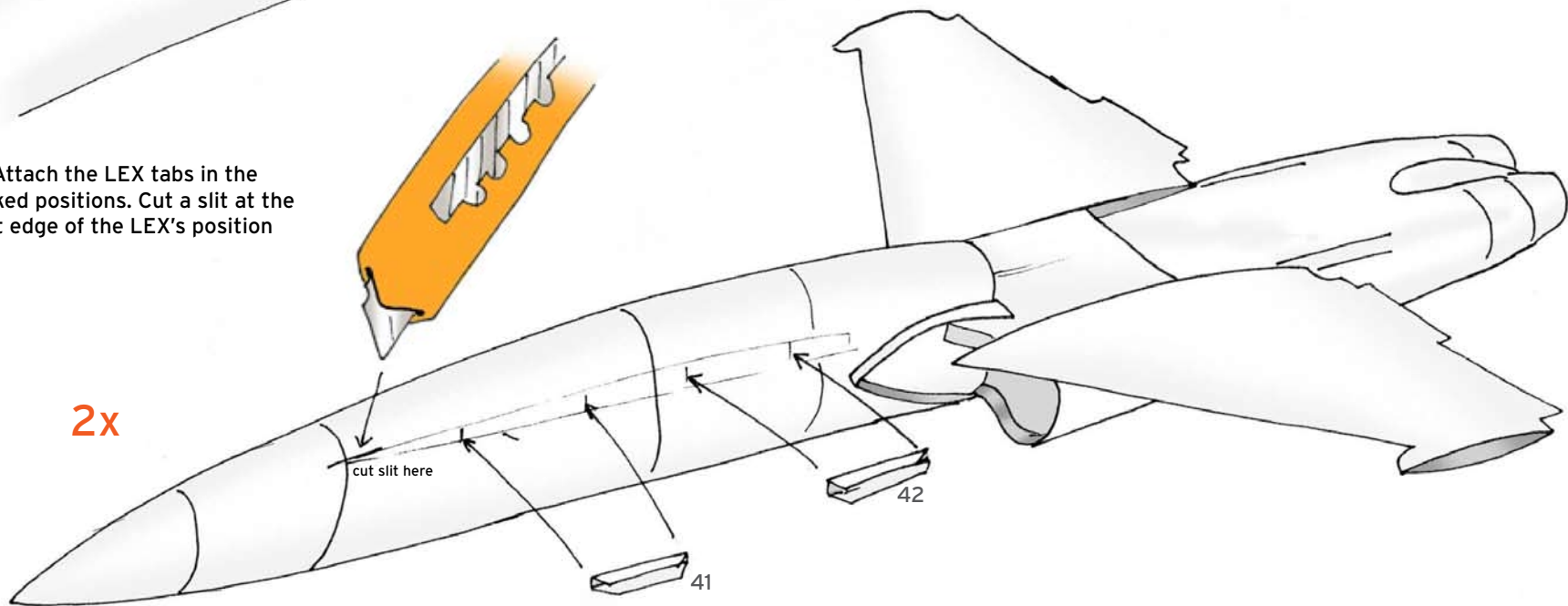
32. Glue the upper ends onto the wing stiffener beside part 20.

2x

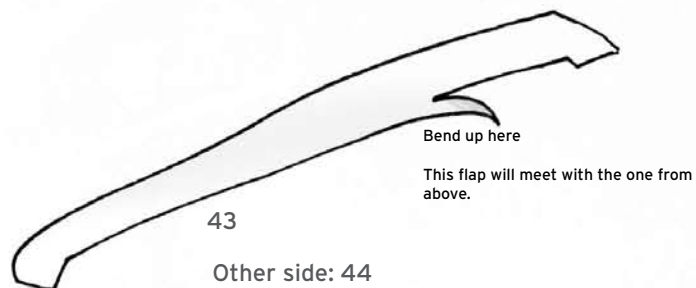


33. Attach the LEX tabs in the marked positions. Cut a slit at the front edge of the LEX's position

2x

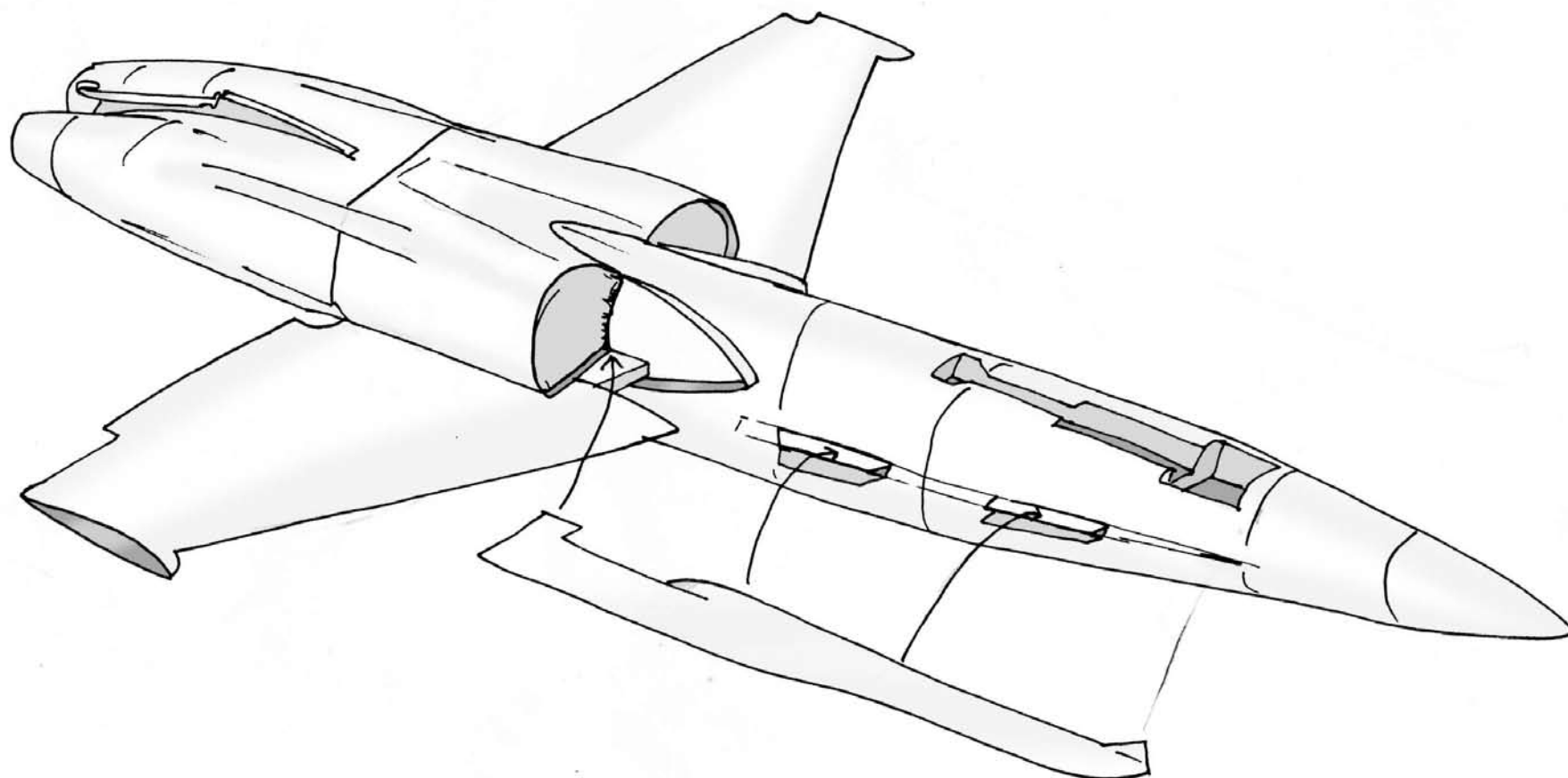






34. First attach the lower side of the LEX's (Leading Edge eXtension). First glue it in the right position at the end, then stretch it along the tabs to become straight and stick the tab in the slit. repeat for other side.

2x

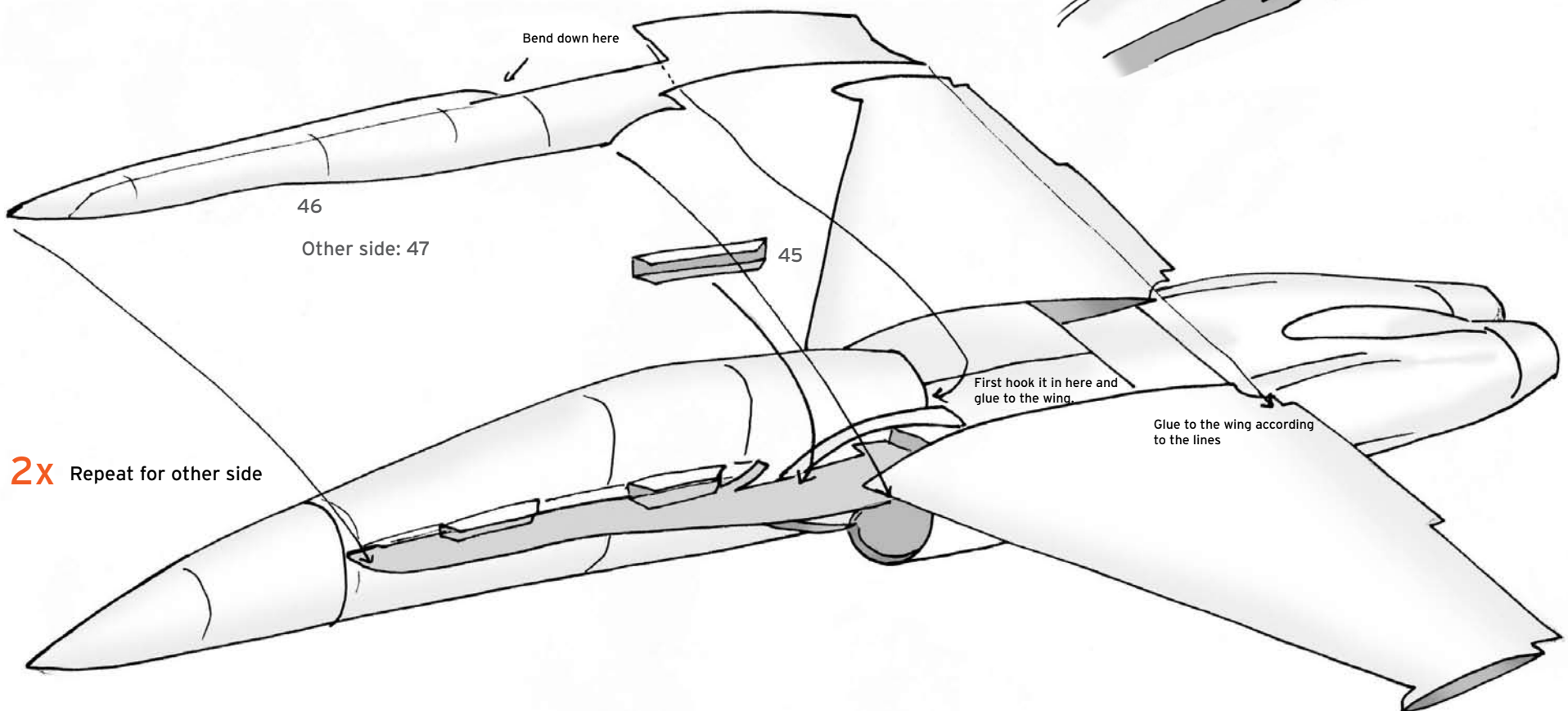


35. First glue in the intake divider wall (44).

Rounden the LEX upper side to where it meets the wing.  
Glue it onto the lower side.

It works best, when the rear end is first hooked into the corner where the front fuselage ends, then glued to the wing toward the back, then glue the rest from rear to front.

The flaps bend down and up on the LEX's have to be glued together in the middle, if it could be seen without fuselage, it would look like this:

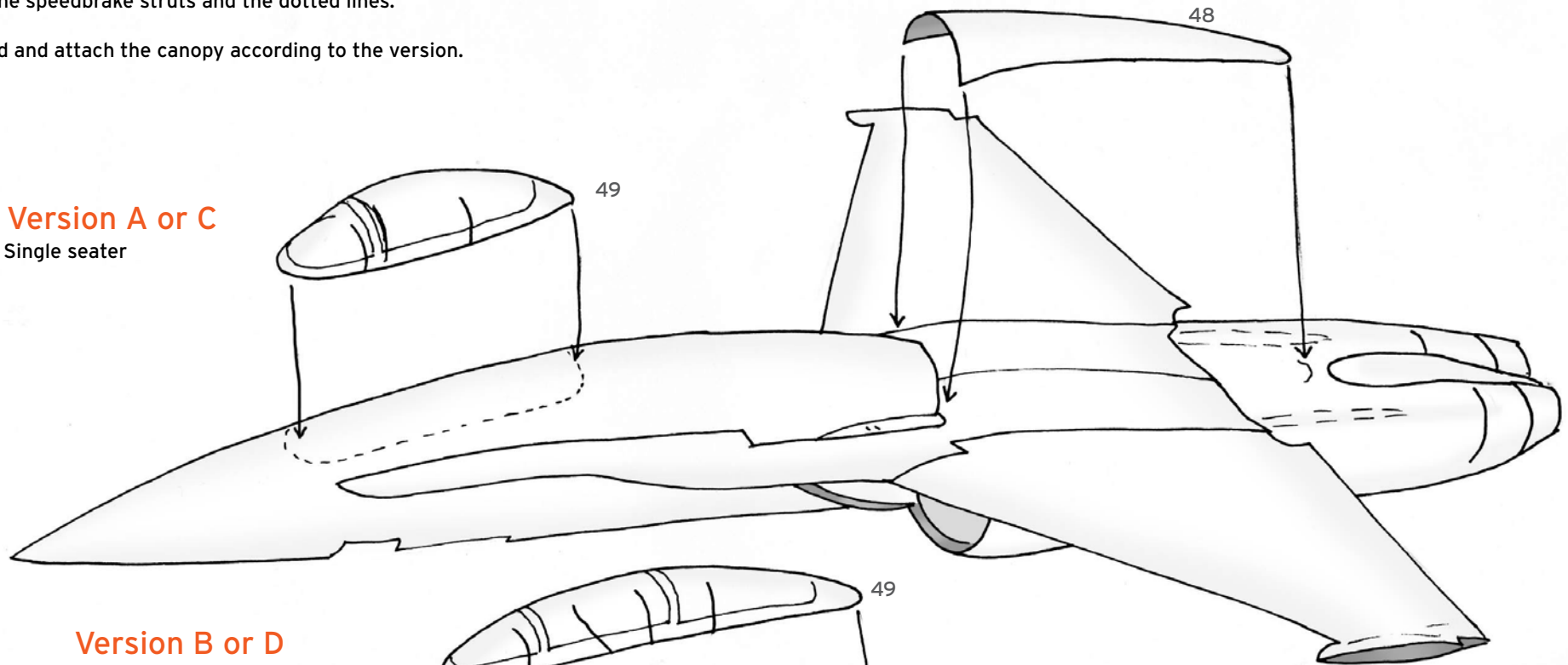


36. Glue the back section on the wings/rear fuselage, Align by the speedbrake struts and the dotted lines.

Build and attach the canopy according to the version.

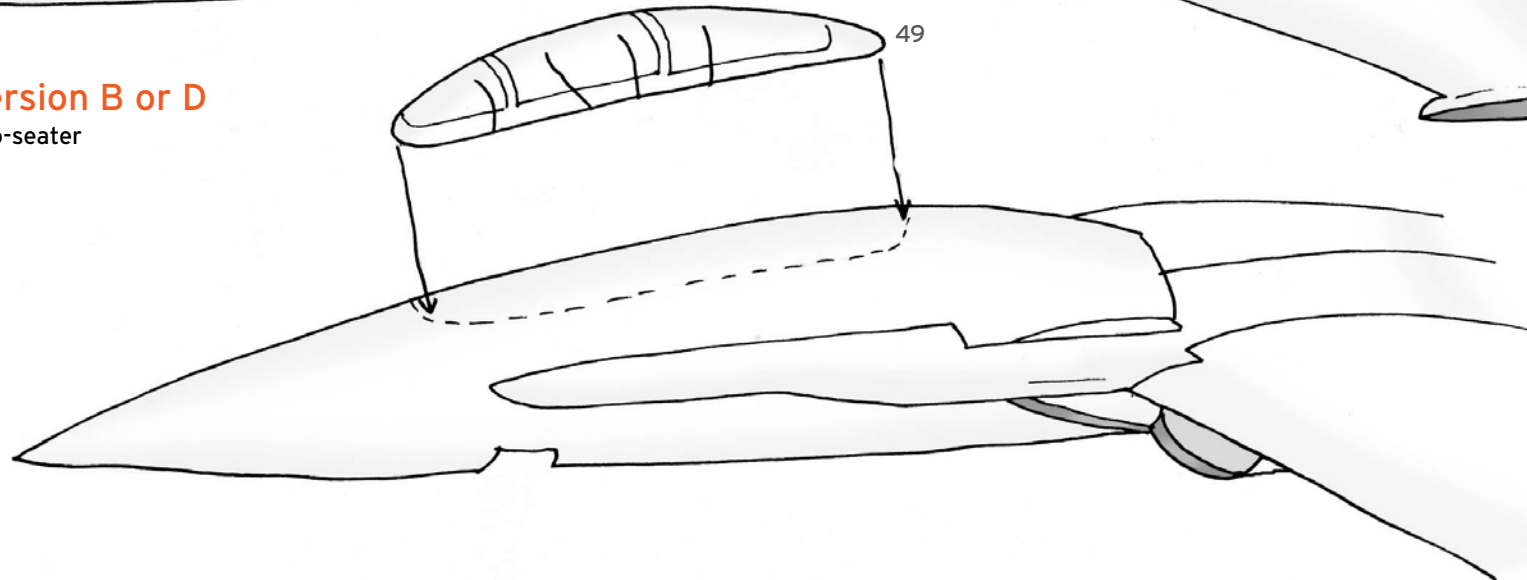
## Version A or C

Single seater

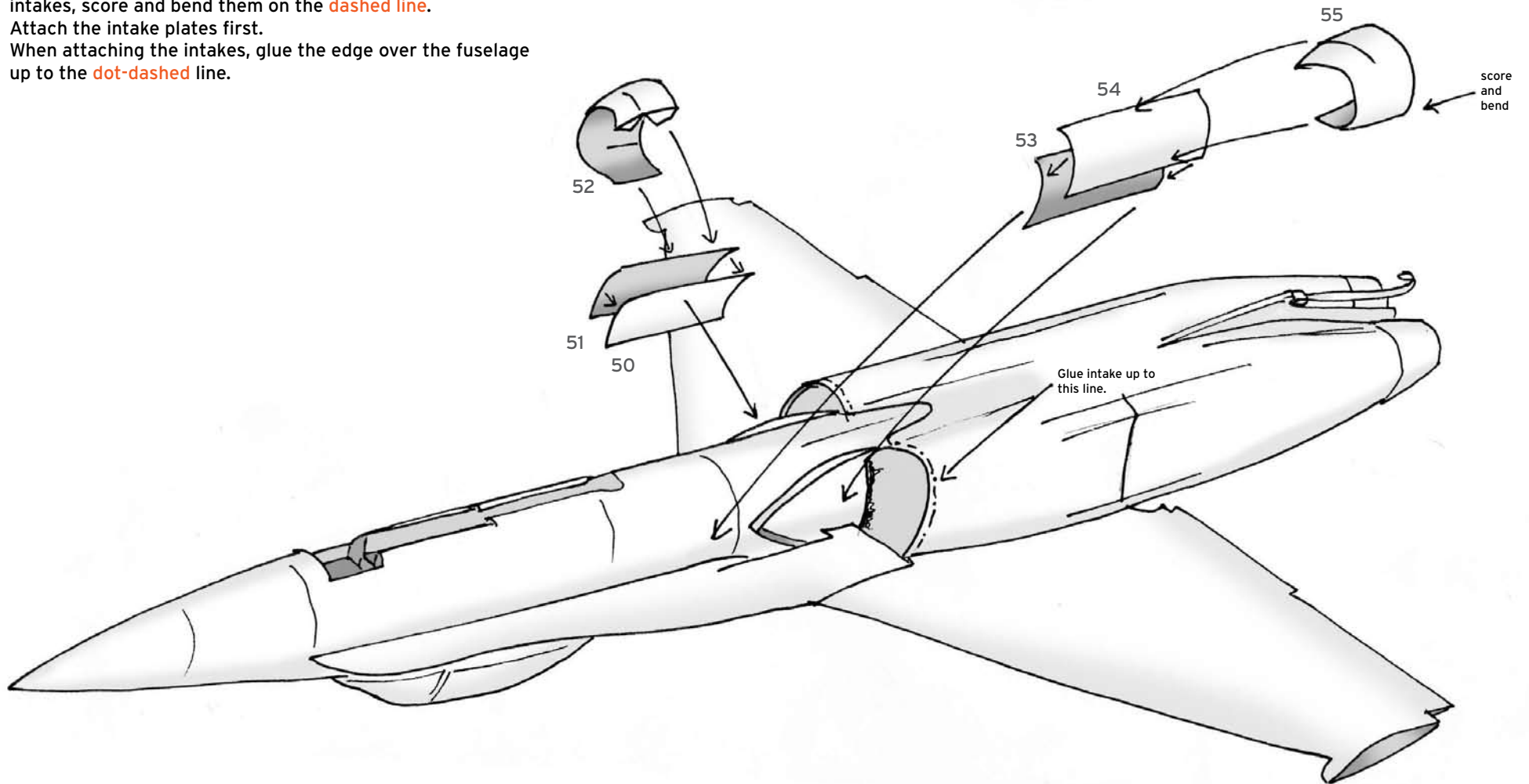


## Version B or D

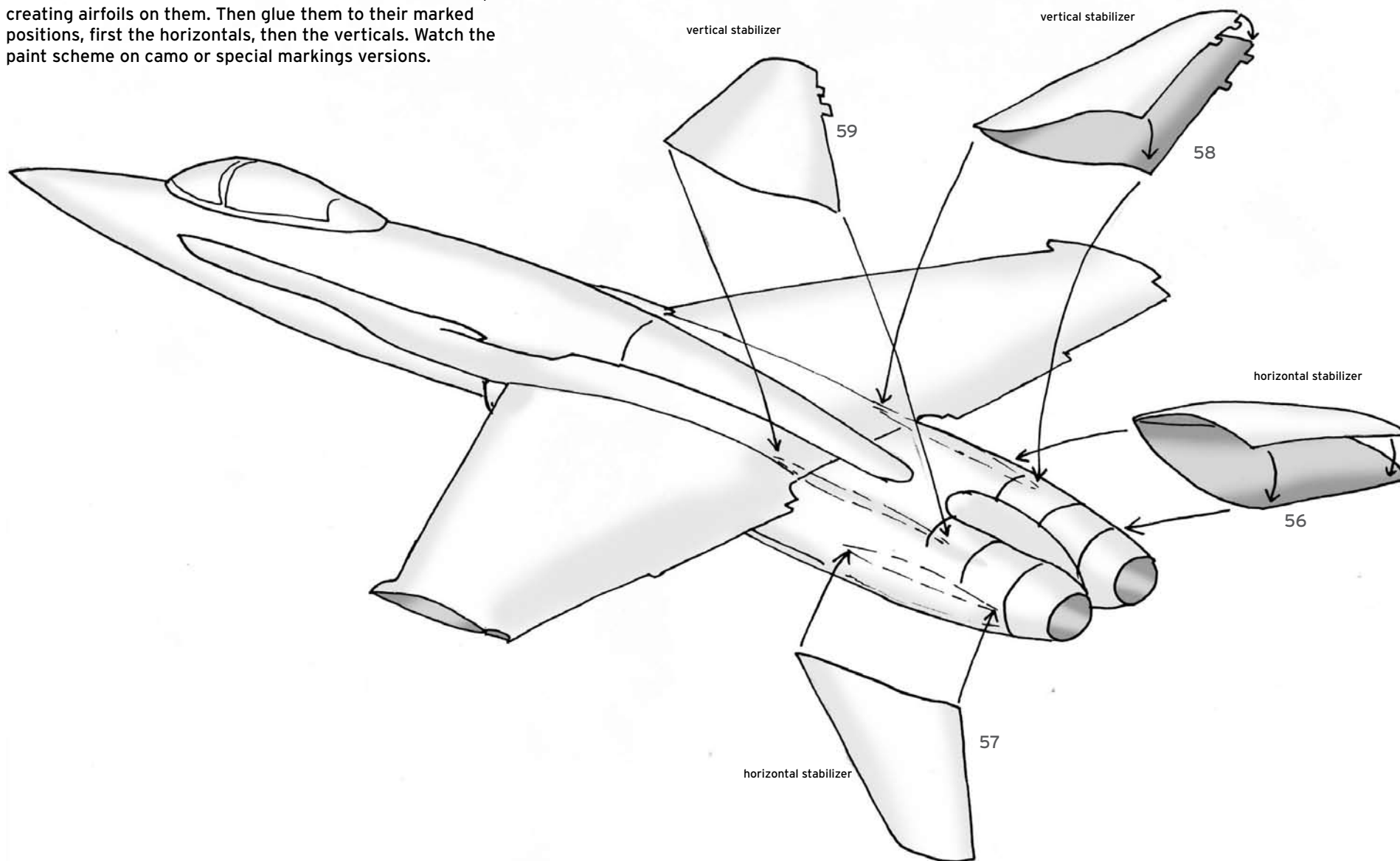
two-seater



37. Glue together the intake plates and slightly rounden the intakes, score and bend them on the **dashed line**. Attach the intake plates first. When attaching the intakes, glue the edge over the fuselage up to the **dot-dashed line**.



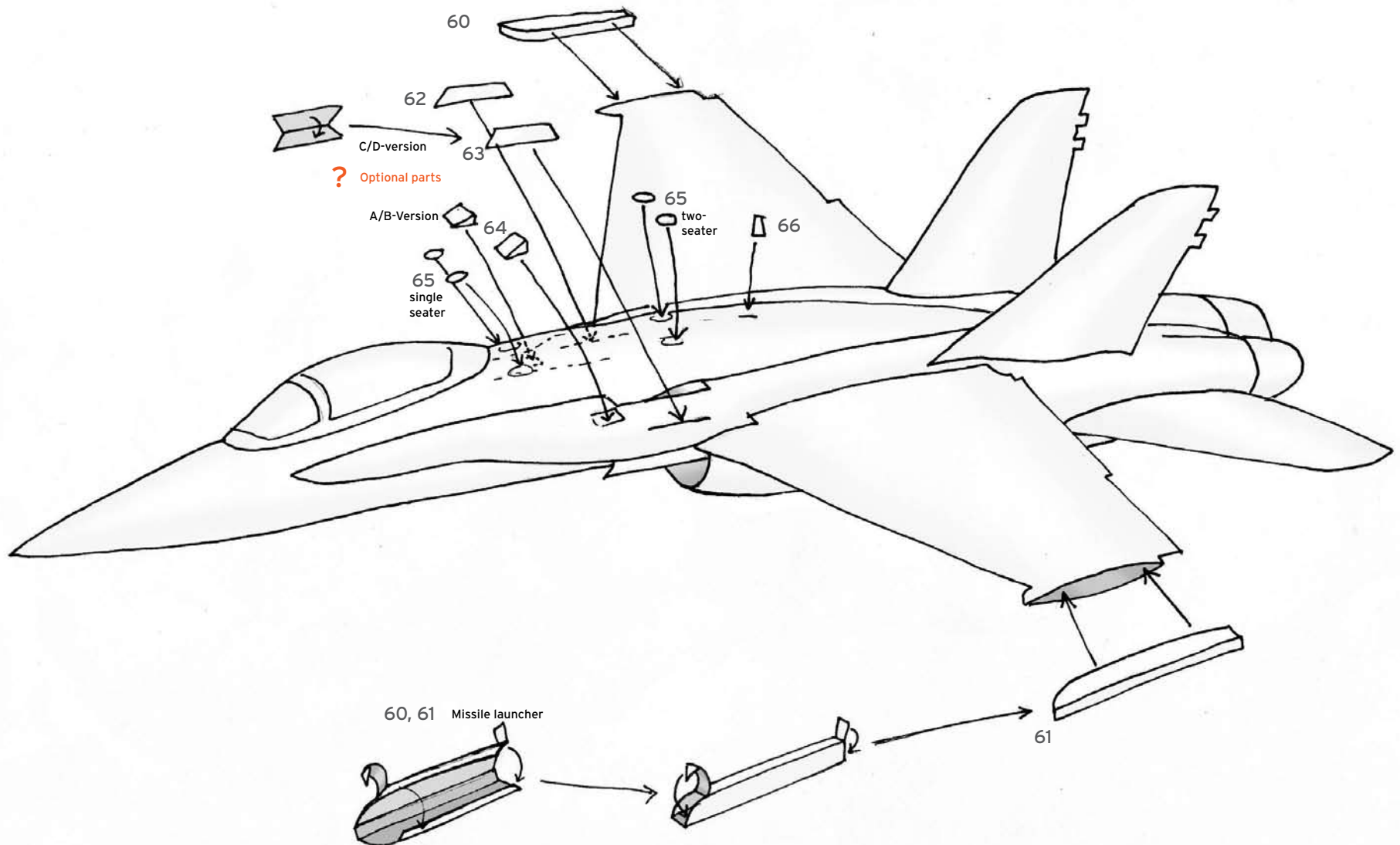
37. Fold and rounden the horizontal and vertical stabilizers, creating airfoils on them. Then glue them to their marked positions, first the horizontals, then the verticals. Watch the paint scheme on camo or special markings versions.





## 38. Upper Details

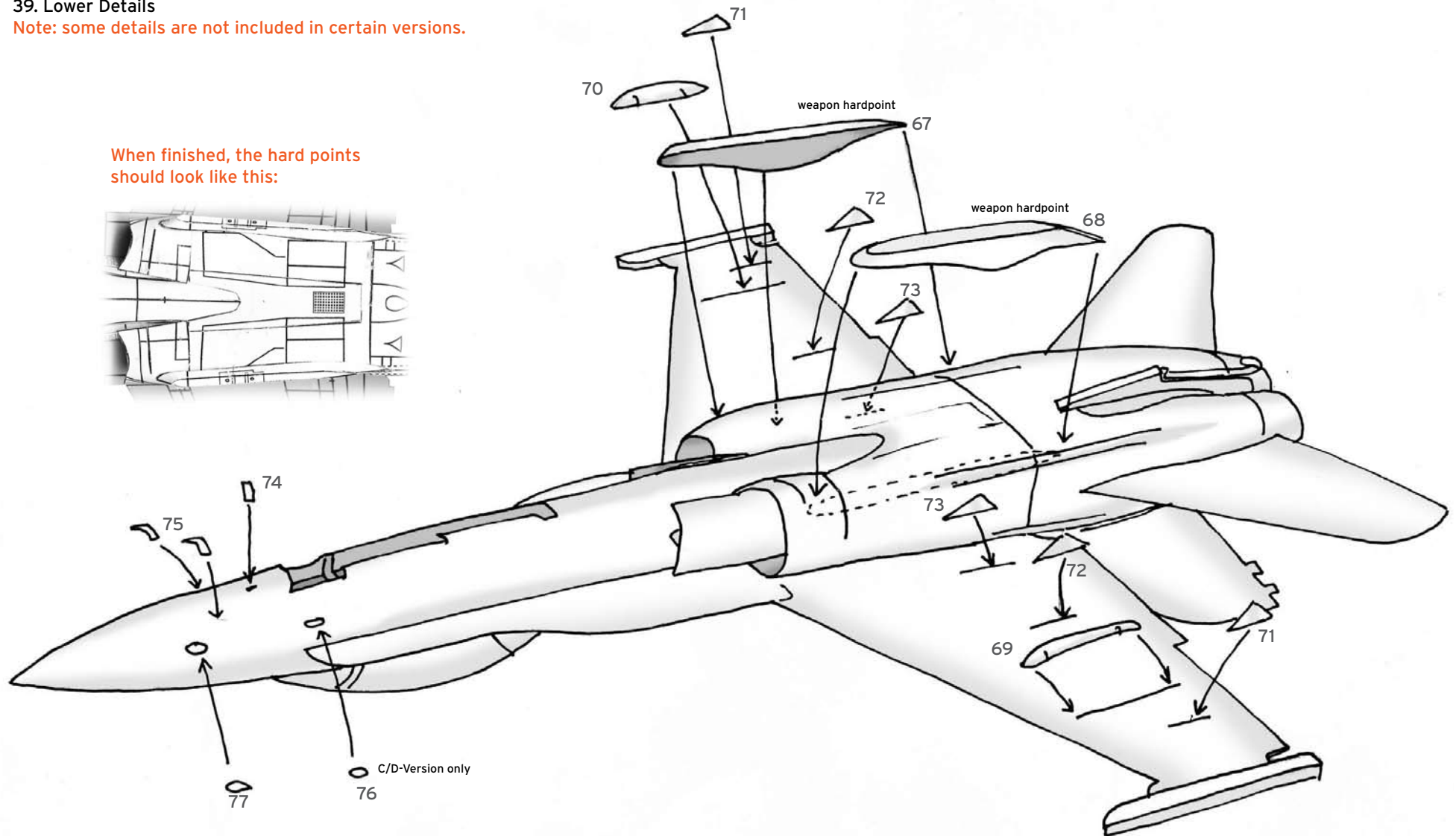
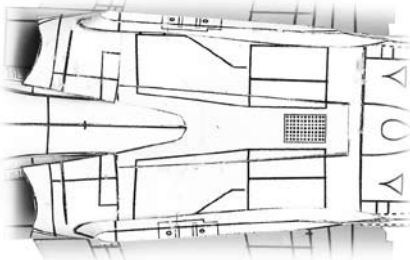
Note: some details are not included in certain versions.



## 39. Lower Details

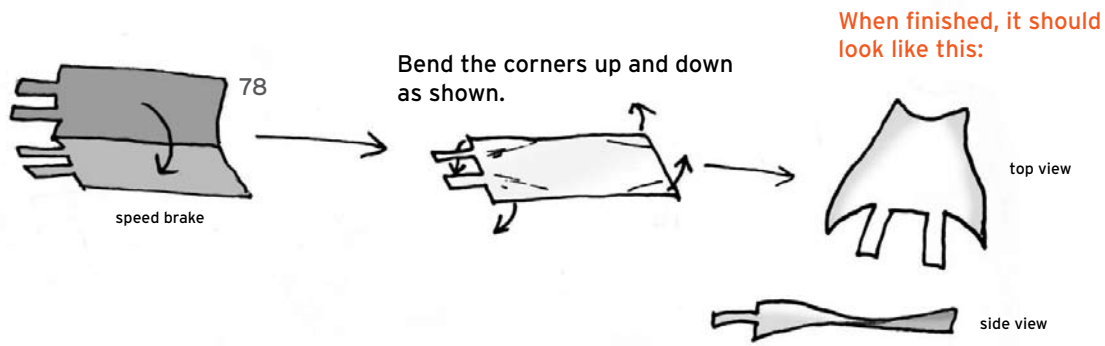
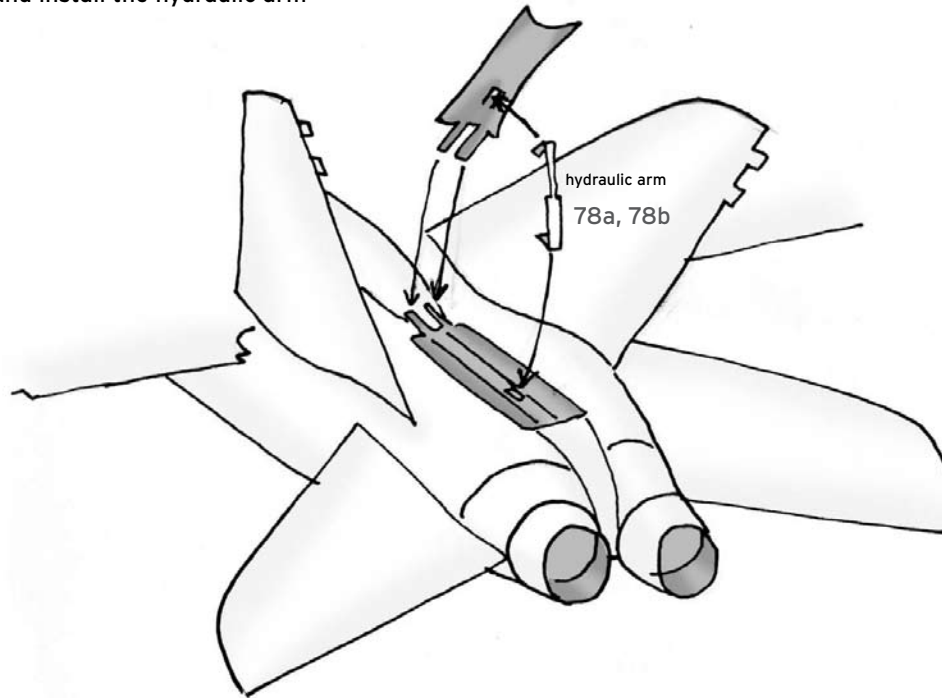
Note: some details are not included in certain versions.

When finished, the hard points should look like this:



Ignore step 40 if you don't build a open speedbrake

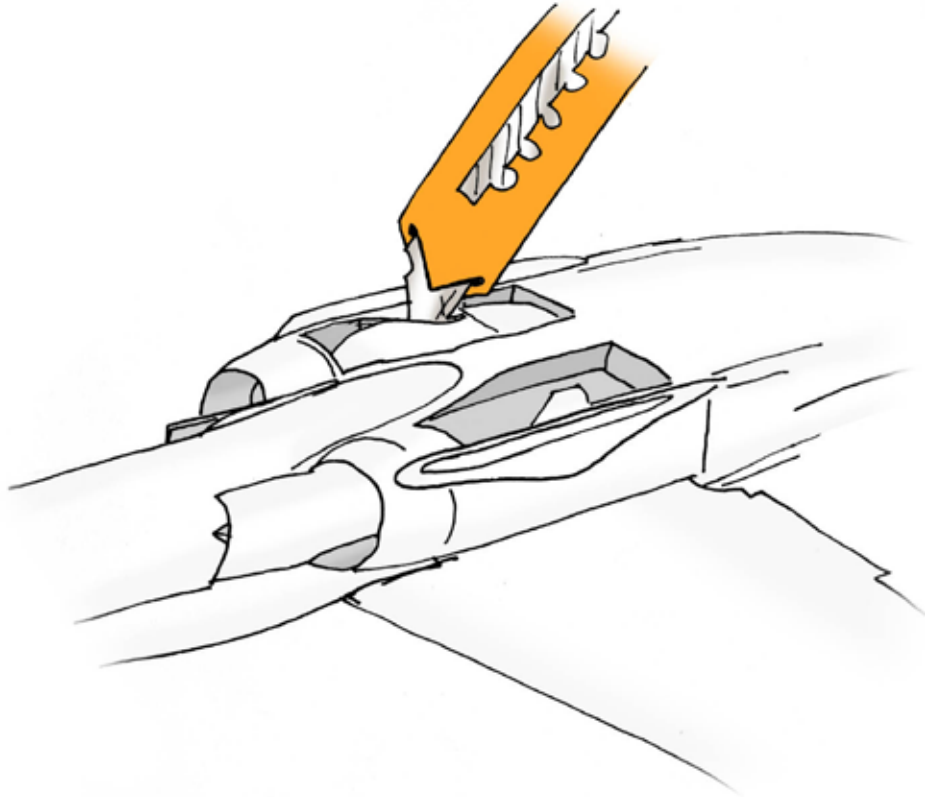
40. Glue together and shape the speedbrake , then glue it to the front of the hole and install the hydraulic arm



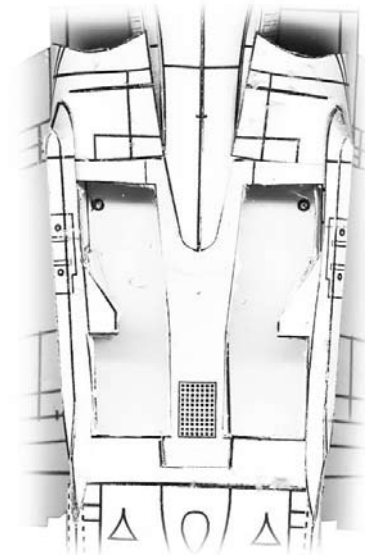
If you don't build open landing gear, jump to 43.

41. Use a knife to cut open the main landing gear doors.

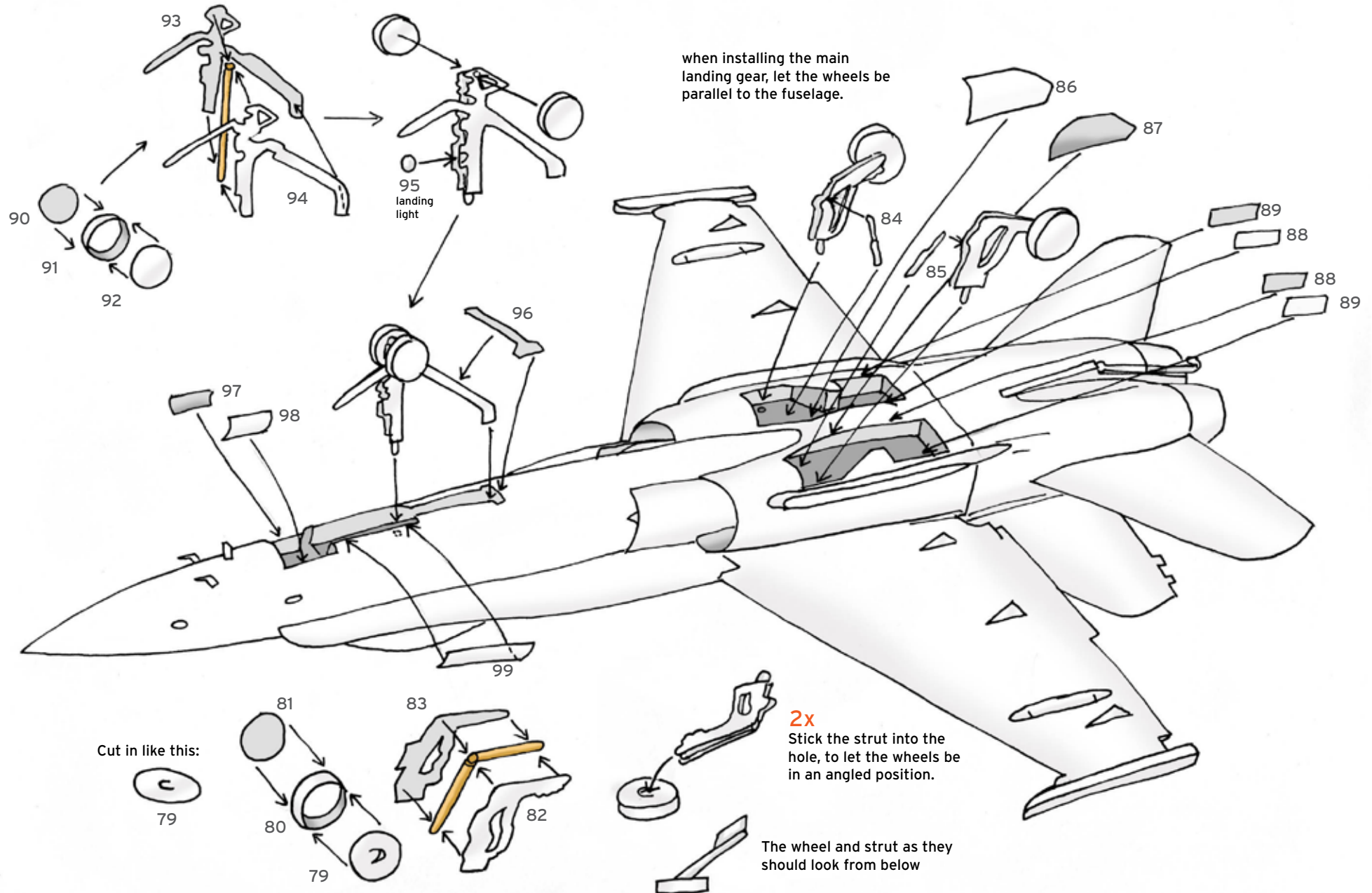
If necessary, push the wheel well walls under the edges and glue them stuck.



When finished, it should look like this:



42. Landing gear assembly. Use matchsticks or toothpicks to stiffen the landing gear struts.

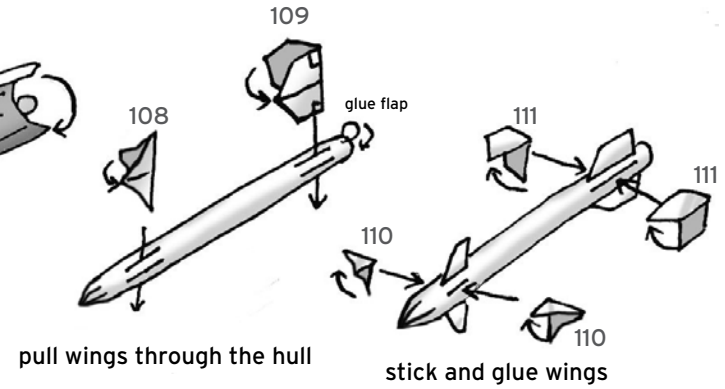
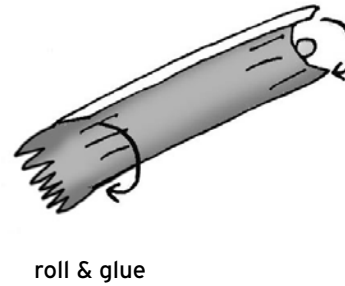
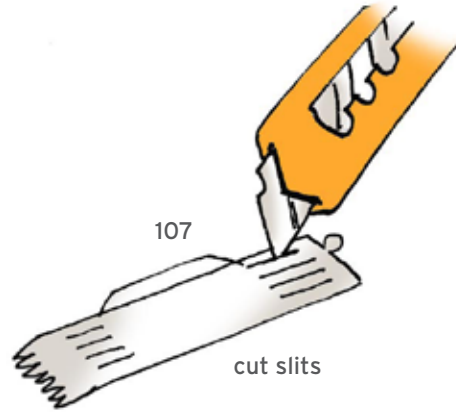




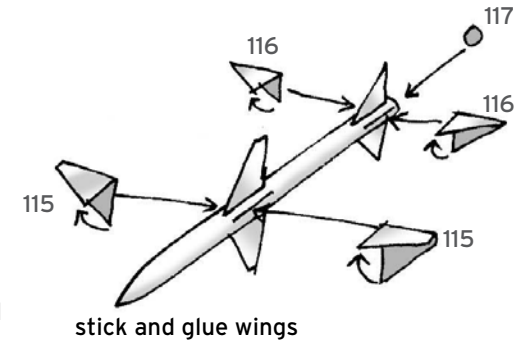
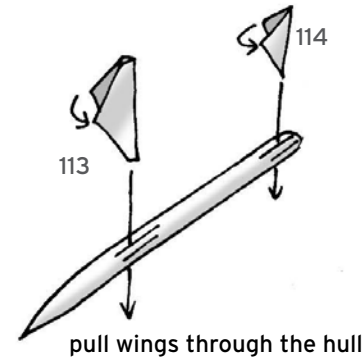
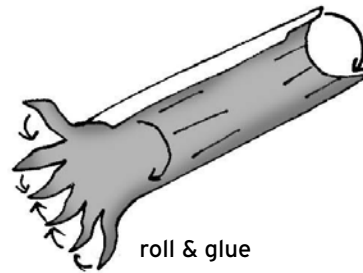
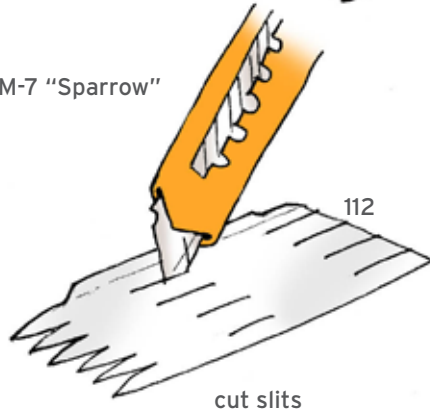
## 43. air-to-air weaponry

AIM-9J "Sidewinder"

The AIM-120 AMRAAM included in some versions is build the same as the AIM-7

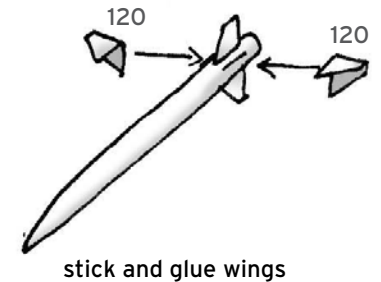
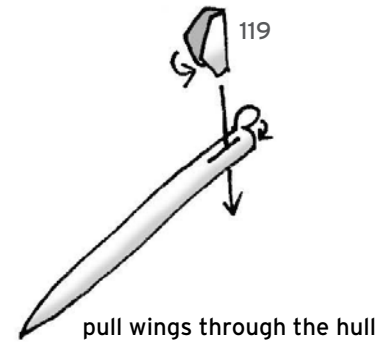
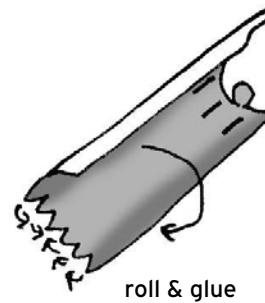
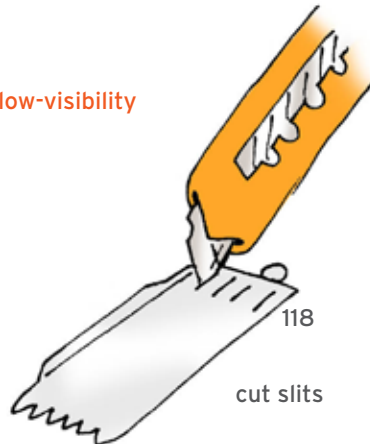


AIM-7 "Sparrow"



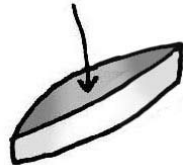
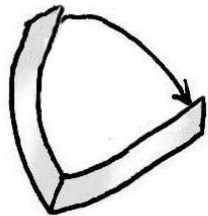
AIM-132 ASRAAM

The RAAF 20th and low-visibility include this missile

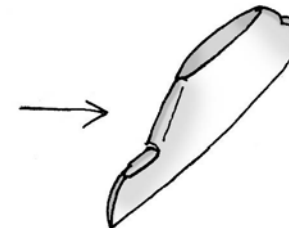
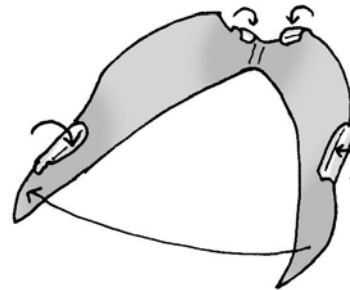


## 44. Equipment

centerline  
hardpoint  
104

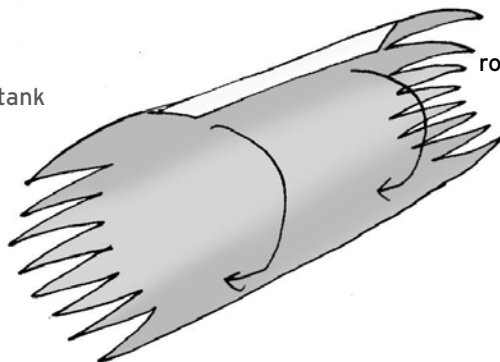


wing hardpoints  
102, 103

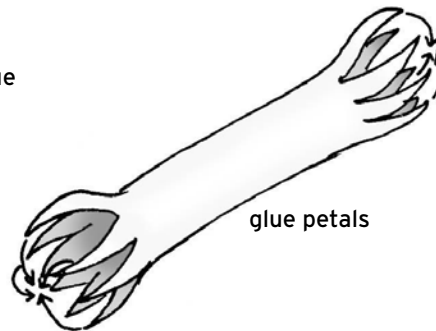


! The hardpoints and drop tanks are located on the extra page

drop tank  
121



roll & glue



glue petals

FLIR-Pod  
106



roll & glue



glue petals

LGB guidance pod  
105



Build the box at the end first,  
then roll & glue

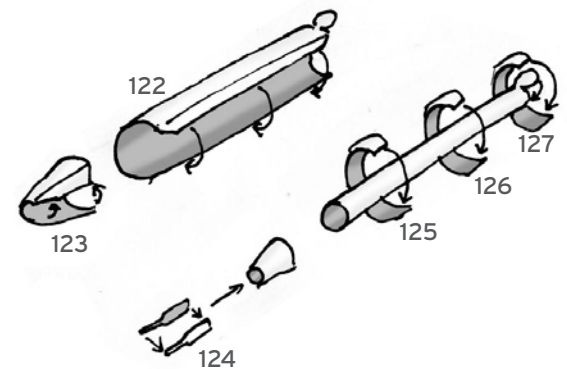
hook in the flaps of the sides,  
then glue the roof



glue the front petals



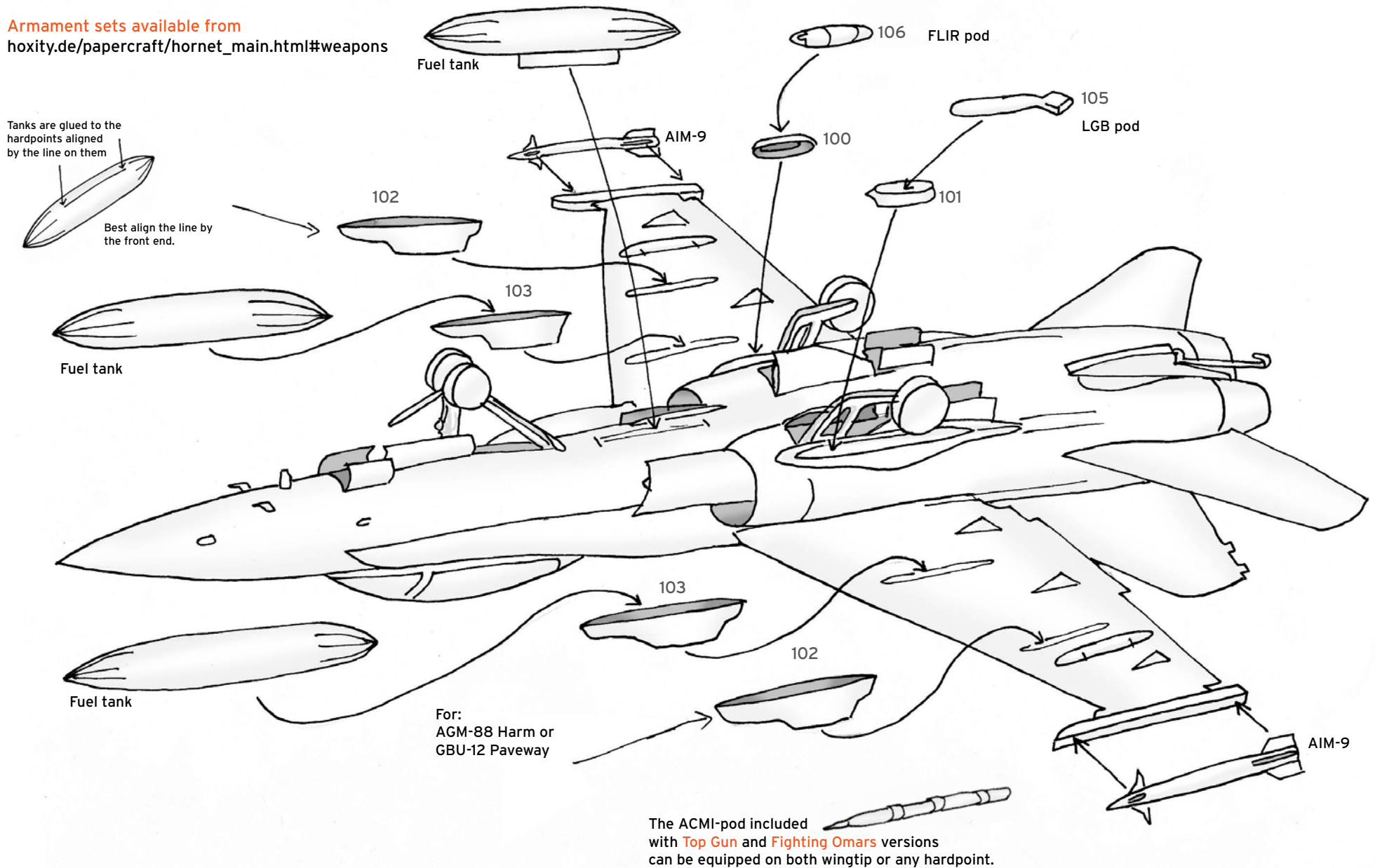
The **Top Gun** and **Fighting Omars** versions feature these ACMI-pods:



## 43. Ground attack configuration

Armament sets available from  
[hoxity.de/papercraft/hornet\\_main.html#weapons](http://hoxity.de/papercraft/hornet_main.html#weapons)

FLIR = Forward Looking Infra-Red  
 LGB = Laser guided bomb



## 44. Interceptor configuration

Armament sets available from  
[hoxity.de/papercraft/hornet\\_main.html#weapons](http://hoxity.de/papercraft/hornet_main.html#weapons)

