

# 1/32 Scale F-15 I RAAM

## ASSEMBLY INSTRUCTION

The proposed F-15 I RAAM model is comparatively large and with high level of similarity to the prototype. Thus, a special attention and precision in the assembly procedure is required. Except the basic configuration of the model additional options are included - air intakes in lower position, separate flaps, ailerons and rudders, open canopy and speed brake, and few variants of its external armament. The choice for these additional options has to be done before start assembling the model. Study carefully the illustrative drawings, cutouts and present instruction and select the variant. Try to imagine the separate assembly phases and the purpose of each detail.

After the acquaintance with the model, you may start the assemblage. Follow the sequence given in the instruction. Cut the necessary details shortly before using them in order to avoid possible mistakes. Score all fold lines before cutting the details. The places of scoring are marked with small thin lines on the continuation of fold lines outside the parts. Do not be in a hurry with gluing - carefully check and shape the details until obtaining the exact and correct fit. Before starting the work get hold of the necessary tools: scissors, sharp modeling knife, blunt knife for scoring the fold lines, prickler, ruler, nippers and grinding paper. Additional materials necessary for the assemblage are: four sheets of cardboard with thickness approximately 0.5 mm, a piece of wire with diameter 0.6 - 0.8 mm, transparent foil for the canopy. Supply with a proper glue. BISON Clear Adhesive, UHU or similar are recommended as the most appropriate ones. Waterbased glue is not recommended.

Preparation for assembling includes gluing the pages containing the formers and strengthening elements on the cardboard. All details marked with numbers in a thick circles should be fixed on the cardboard as well. The parts with number rounded with dashed circles are for the alternative variants. Those of them marked in thick dashed circles must also be glued on card.

Start with the framework of the wings. Cut parts 1# - 3# and assemble as shown in view A.

If you have chosen version with ailerons and flaps in position different from the neutral, use also view Z2 from the instruction. Pay attention to the differences between them. Watch out for the eventual twisting of the airframe and remove it before the complete drying of the glue.

Continue with the upper and lower parts of the wing. Try to process assembling several times without glue until convince yourself that the fit is correct. Glue the airframe to the upper part 5 and then fix parts 6 and 7. Glue 16 between 6 and 7. Take care of the symmetry of the wing.

Add the wing consoles 8, 9, 10 and 11 to the obtained fit. Pay special attention to the typical twisting of the front edges of the wing tips downwards when gluing. Look for the symmetry of the entire wing. If you have chosen version with separate movable ailerons and flaps, fix them in the end of the entire model assembling procedure.

Assemble the air conduits of the engines to the first stages of their turbocompressors (parts 16#) and the lower part of the fuselage section 17#, following view B. The former 17a has to be strictly planar with precisely cut internal holes. It also has to be glued precisely and strongly enough to the outgoing edges of 17b, 16a and 16b. Later, the forward part of the fuselage and air intakes must be glued in a frontal position to the prepared detail /former to former/. Don't hurry with gluing the air conduits to the cross-section 17a. Assemble the fuselage section 18#. If you like to prepare the model with a landing gear in a down position, fix the bays 8b and 18c on their places. If you find it easier glue 18 to 17 first, and then fix 18d and air conduits 16. Strengthening element 18d is intended for avoiding deformation of the section due to the weight of the model. It is possible to build the model without air conduits 16#. In that case the internal holes in the former 17 a shouldn't be cut.

Continue with assembling the central part of the fuselage, fixed to the wing, following view D. Glue the upper part of section 17 to the front central part of wing A. Then glue groups B and C. Note that the former 17a should coincide strictly with the front part of 17. Add sections

19, 20, and 21. The assembling requirements for section 21 are the same as for 17. The former 21a has to be strictly planar and glued strongly enough on the rear side of 21 and 21b.

Assemble the engines' cowlings 23#-27# using view E. Provide strong and exact fixing of formers 23c and 25c to the forward edges of 23 and 25. Note, that all F-15 E fly without "turkey plates" which are intended as cowlings of the engines' nozzles. Assemble the nozzles 29#, 30-30b and insert them in part 28 and then in the engine cowlings. Cut 30b to thin stripes and glue them as shown on view E. When all the 30b are on their places, glue 30c.

Fix the engines to the fuselage by gluing each to other formers 23c, 25c and 21a, then glue the cowlings 31#, 34# - 37# to group D.

Assemble the consoles of the tail wings 32 and 33. Gluing them to the rear part of the fuselage is recommended to be done after assembling the vertical stabilizers which can be used as a guide template for fixing them in correct position.

Leave for a while the prepared group E and direct your attention to the air intakes. Their assembling sequence is shown on view F. When selecting their position, take into account that the air intakes are in lower position on the ground only in case of working engines. Forming and assembling of the air intakes should be done very carefully, because it is necessary to form both their external and internal surfaces. All internal holes and formers have to be cut precisely in order to provide possibility to insert freely the internal walls of the air conduits.

First of all assemble the external surfaces of the air intakes 52-59, keeping the strict coincidence of the markers. The backward formers have to be glued strictly and strongly to the back sections 52 and 53. The most difficult operation is to insert the internal parts 60-63. Try first to insert the details without gluing upper plates 62/63. If you find it easier, first glue the lower parts on their places and after that continue with the upper ones. The air intakes should coincide exactly with the crosssection 17a of the fuselage.

Continue with the transparent glazing of canopy /view H/. You may cut it from transparent foil using the template provided on page 7. Cutouts are precise enough to ensure forming

and assembling of the canopy glazing with almost invisible borders between the separate segments. You may also prepare the canopy glazing by vacuum or hot forming or buy a ready one if you prefer a model with completely clear canopy. Assemble the cutout of the canopy 44 using easily removable masking tape on the internal side to connect temporarily the separate segments. Glue from the outside parts 44a - 44d. Store the canopy in the cardboard tube with a proper diameter in order to keep the oval shape until gluing to the fuselage. Remove the masking tape shortly before the canopy montage. The canopy formers 44g,h are intended for opaque /non-transparent/ canopy only.

The front part of the fuselage assembling, illustrated on view G is next. You can choose between variants with open or closed canopy. In case of open canopy cut the marked areas on parts 38, 42, 42a, and use alternative parts, marked with dashed circles for 38h, 40 and 40a.

Follow the central lines of symmetry and do not allow twisting during the assembling. Backward former 39b needs to be glued strongly enough exactly on the rear edge of section 39. Position with the same attention all other strengthening elements exactly on the sticks between the separate segments. Have in mind that any inaccuracy will create problems with the assemblage of the details from the interior of the cockpit and landing gear.

Assemble the pilots' seats and cockpits' interior as shown on the views I, J and K, and position them in 40 and 40a. Then, after some "dry" experimenting, carefully glue the cockpit H on its place to the fuselage /view L/.

Now start the preparation for assembling the group M. You will need the template from page 27 for the correct gluing of the nose part of the fuselage to group E. When gluing the nose part of the fuselage L to E apply the template to the lower line of symmetry and control the angle of gluing of the nose part until complete drying of the glue. Keep the vertical plane of symmetry and do not admit twisting. This step is determinative for the final view of the model. After fixing the nose part in a correct position, glue to it cowlings of the system for eliminating the air intake boundary layer - parts 49 and 50. Install the air intakes F. Press them firmly while gluing

and look for the symmetry. Finish the assembly of group M gluing the cowlings of the machine gun, the refueling system /parts 68-71/ and the underwing cowling panels 72 - 77. The speed brake 51 may be fixed either in open or in slimmed position.

Having the experience obtained during the wing preparation, the assembly of tail wings and fins will not be a problem for you. Refer to view N and O for their assembling sequence. If you like separate rudders look at view Z3.

Continue with the FAST packs /parts 152 - 169/. Assemble them, using view R, testing every step for the fitting to fuselage. Then glue the prepared tail consoles to the fuselage, using the vertical stabilizers as templates, strictly keeping their angles of montage. Fix the FAST packs on their places, and then complete group R by assembling the nose cone 45# - 48#, loading it with about 6 g weight and gluing the tail surfaces.

The assembling sequence for landing gear in a low position is presented on view P. Prepare the wheels, gluing the wheel's parts 110#, 111# and 112# together. It is important that the wheel thickness must be as shown on page 27. After drying of the glue round the wheels using sandpaper and paint the tires in black, using ink or proper paint. Prepare the landing gear base from wire and then assembly the landing gear - parts 98# - 109#. It is recommended a silver self-adhesive foil to be placed on the internal surfaces of the taxing lights 108, 109 and on the hydraulic rods on parts 98, 99, 105. Also parts 107e, f are recommended to be made from transparent foil. Refer view Z1 for installing the landing gear on the model.

For achieving more realistic view of the model you may use wheel stoppers 110g, that are also supplied in the kit. Note that the stoppers for every wheel are connected with laces, that can be modeled with threads. You also can make the arresting hook in down position, using alternative parts 31# as shown on view Z6.

Preparation of the underwing weapon pylons will not be a problem for you. Do not forget to shape the formers according to the wing, FAST packs and fuselage profiles in a way to provide gluing exactly on the ribs of the corresponding details.

You can choose one of the two variants of

the aircraft - strike fighter for ground attacks or interceptor. If your choice is an interceptor variant, you must use alternative pages with FAST packs and Sparrow long range radar guided missiles pods. The assembling sequence is the same as described above, and only the missile racks are different.

Only assembling of the LANTIRN pods, external fuel tank and weapons left. The way of assembling is traditional and does not require additional comments. You can choose a variant of armament using the prototype drawings supplied in the kit. Note that additional armament schemes are possible. For example, for long range dual missions the armament may consist of two GBU10 Paveway II laser guided bombs on wing racks for primary target, 12 Mk 82 Iron bombs on the FAST packs racks for secondary target and one 610 gallon external fuel tank. Four AIM-9L Sidewinder air-to-air infrared selfguided missiles are included in all variants of armament.

The GBU 10 assembling needs few comments. GBU 10 can be build attached to the bomb racks with retracted tail wings or as a separate bombs in flight with open tail wings. If you assemble the bombs with retracted tail wings 213, do not forget to cut them on the marked lines before inserting tail wings 212 in the tail bases, as shown on view Y.

After gluing the small details - antennas and sensors, your model is ready.

Enjoy your F-15 I RAAN.

# F-15 I RAAM 1/32 PRECISE CARD MODEL

## Printing Guide

<b>File No</b>	<b>File Name</b>	<b>Contents</b>	<b>Print on...</b>	<b>Done</b>
1	F15I_PRG_P.PDF	printing guide	normal paper	
2	F15I_TXT_P.PDF	F-15 I RAAM text	normal paper	
3	F15I_I1_P.PDF	assembly instruction	normal paper	
4	F15I_I2_P.PDF	assembly instruction	normal paper	
5	F15I_I3_P.PDF	assembly instruction	normal paper	
6	F15I_I4_P.PDF	assembly instruction	normal paper	
7	F15I_I5_P.PDF	assembly instruction	normal paper	
8	F15I_I6_P.PDF	assembly instruction	normal paper	
9	F15I_I7_P.PDF	assembly instruction	normal paper	
10	F15I_I8_P.PDF	assembly instruction	normal paper	
11	F15I_I9_P.PDF	assembly instruction	normal paper	
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14	F15I_P2_C.PDF	model's parts	card	
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33	F15I_P21_C.PDF	model's parts	card	
34	F15I_P22_C.PDF	model's parts	card	
35	F15I_P23_C.PDF	model's parts	card	
36	F15I_P24_C.PDF	model's parts	card	
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38	F15I_P26_P.PDF	heavy card parts	normal paper	
39	F15I_P27_P.PDF	heavy card parts	normal paper	
40	F15I_P28_P.PDF	heavy card parts	normal paper	
41	F15I_P29_P.PDF	connecting stripes	normal paper	
42	F15I_P30_P.PDF	connecting stripes	normal paper	
43	F15I_P31_P.PDF	connecting stripes	normal paper	
44	F15I_P32_P.PDF	connecting stripes	normal paper	
45	F15I_P33_C.PDF	alternative parts	card	
46	F15I_P34_C.PDF	alternative parts	card	
47	F15I_P35_M.PDF	metal parts	metal coated	
48	F15I_P36_M.PDF	metal parts	metal coated	
49	F15I_P37_M.PDF	metal parts	metal coated	
50	F15I_P38_T.PDF	transparent parts	transparent foil	
51	gallery	models' pictures		

# 1/32 Scale F-15 I RAAM

## DESCRIPTION

F-15 Eagle was designed in the late 1960s as a FAST maneuverable air superiority fighter replacing the older F-4 Phantom. The first flight of the new fighter was performed on 27.06.1972. During its service the type showed remarkable capabilities. In 1984 F-15 won the Air Force competition for Dual Role Fighter and in 1986 the first F-15 E Strike Eagle made its initial flight.

By far the E version, which is the heaviest Eagle, with its maximum gross take-off load of 37 tons is effective in both air-to-air and air-to-surface combat roles. The complexity of these roles resulted in providing of two seat canopy for the pilot and weapon system officer. Two crew members are needed to operate with the complex avionics required for all-weather op-

erations especially against air-to-surface targets. The avionics features many CRT multi-function displays, LANTIRN (Low Altitude Navigation and Targeting Infrared System for Night), AGP 70 radar with precision ground mapping, ring laser giro navigation system, powerful computer capacity and integrated countermeasures.

The combination of air-to-air and air-to-surface capabilities allows F-15 E to fly its way into a target area, put bombs on a target, and fly its way to friendly territory without air escort protection.

From 1998 this aircraft is in service in the Israeli Air Forces under signature F-15-I RAAM /Thunder/.

## Technical specifications of McDonnell-Douglas F-15 I RAAM

Length:	19.43 m	(63' 9")
Height:	5.66 m	(18' 7")
Wingspan:	13.03 m	(42' 9")
Wing area:	56.48 m <sup>2</sup>	(608.00 Ft <sup>2</sup> )
Gross Weight:	36700 kg	(81000 lb.)
Powerplant:	2 x Pratt & Whitney F100-PW-100	
Cruise Speed:	917.00 km/h	(570.00 mph)
Max Speed:	2657.00 km/h	(1650.00 Mph)
Climb:	15239.3 M/min	(50000.0 Ft/min)
Ceiling:	18897.0 m	(62000.0 Ft)

F-15 I STRIKE EAGLE.  
1/32 SCALE PRECISE CARD MODEL

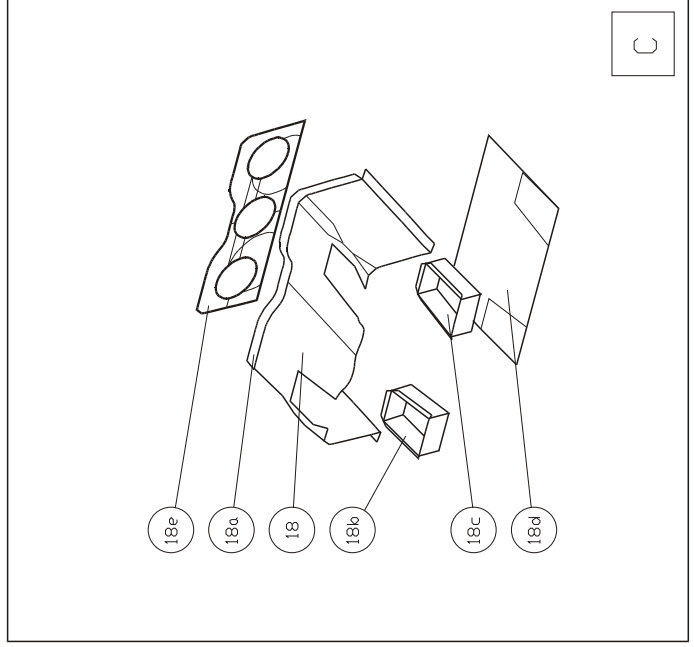
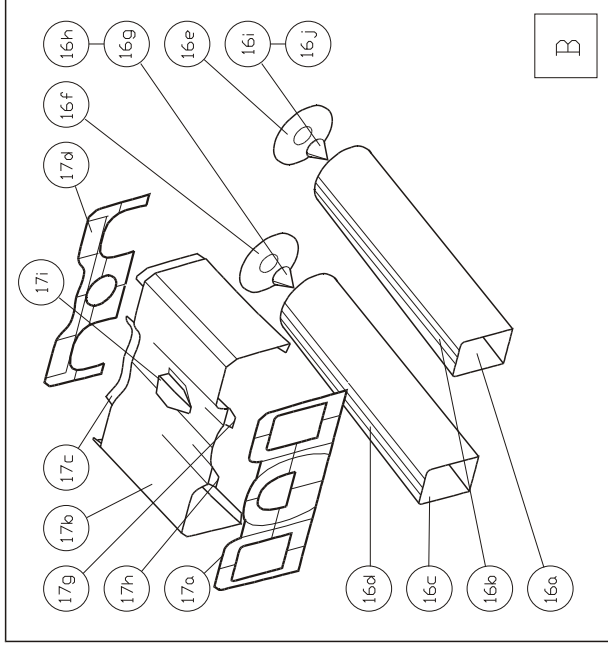
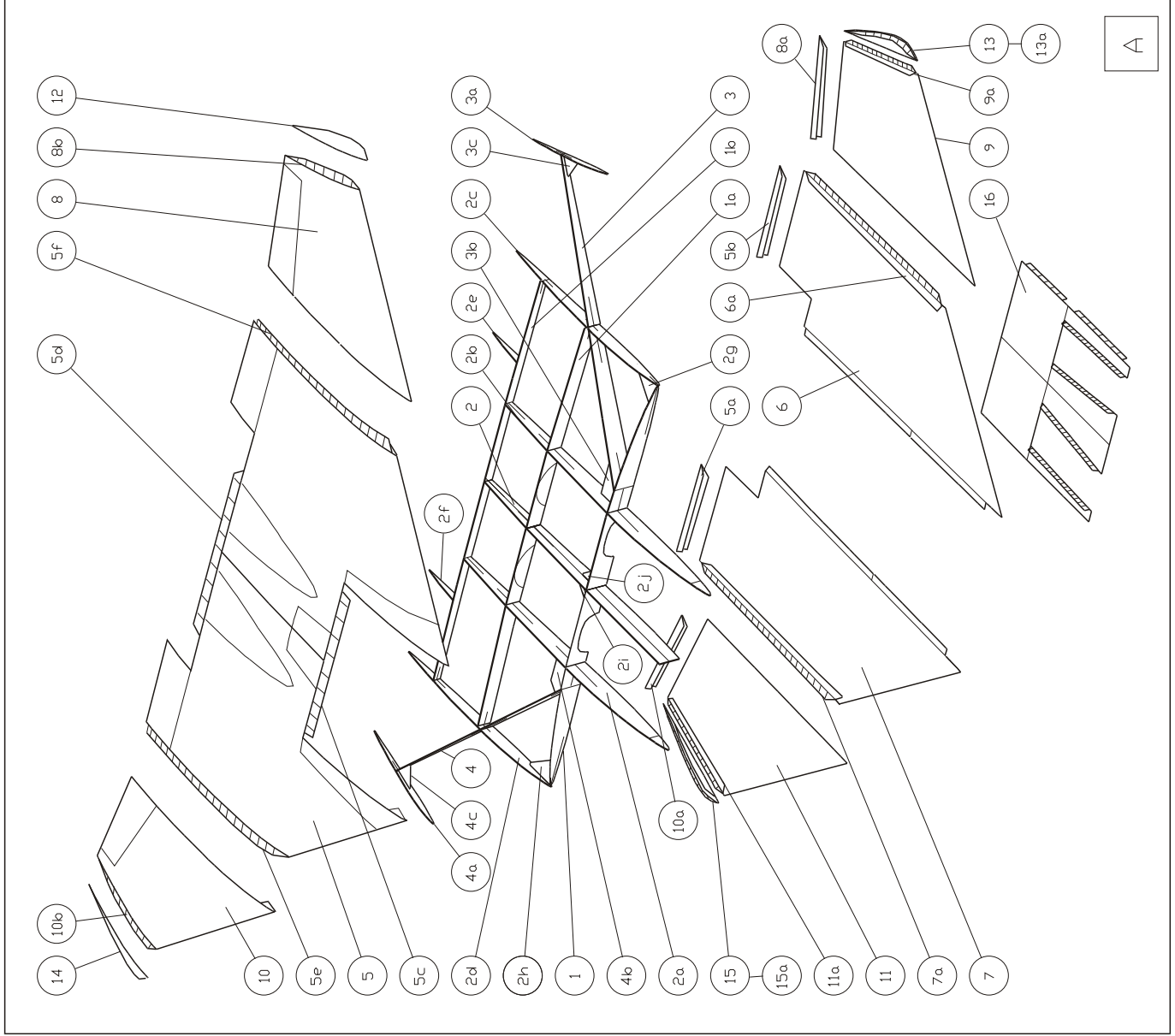
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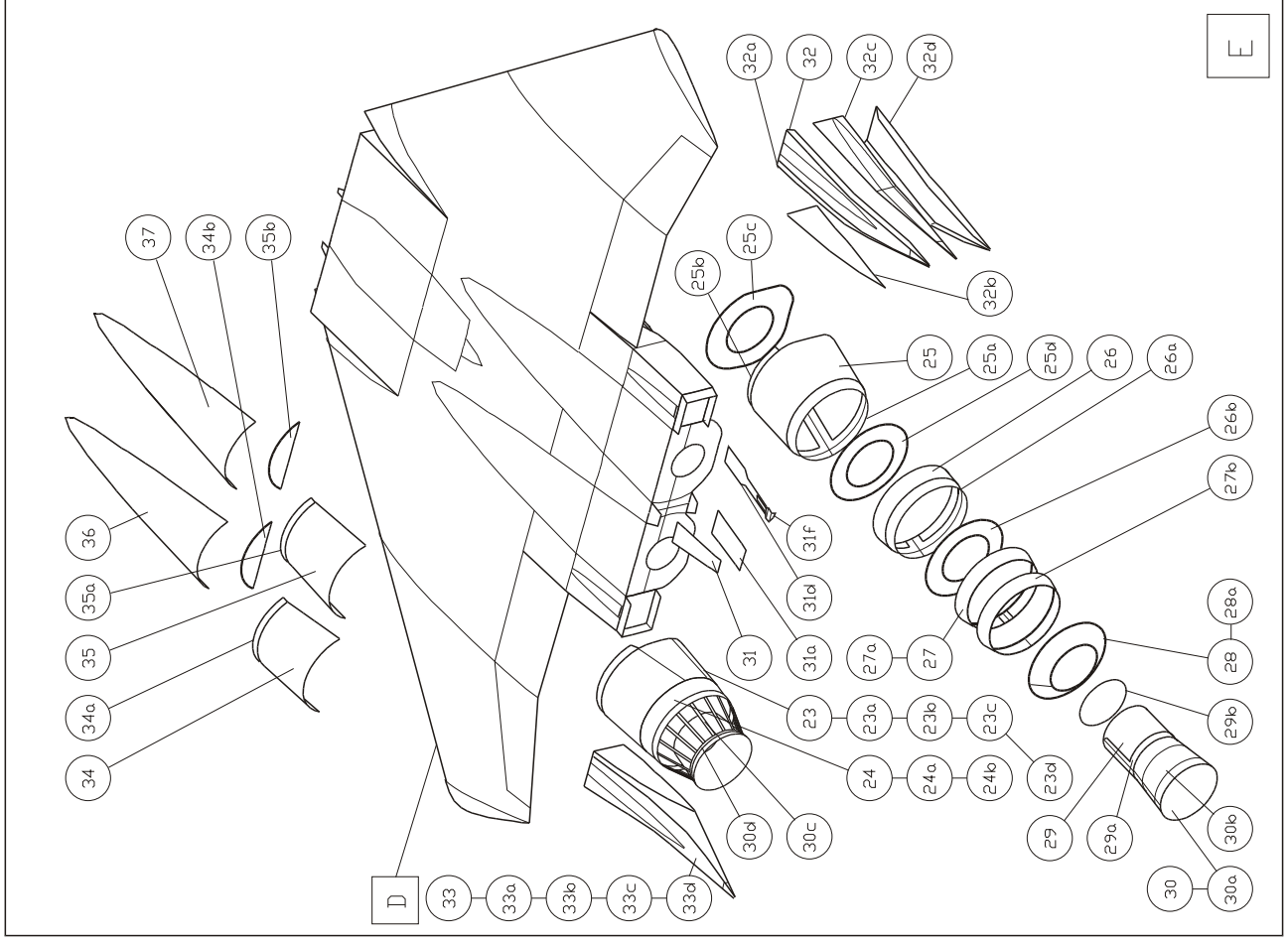
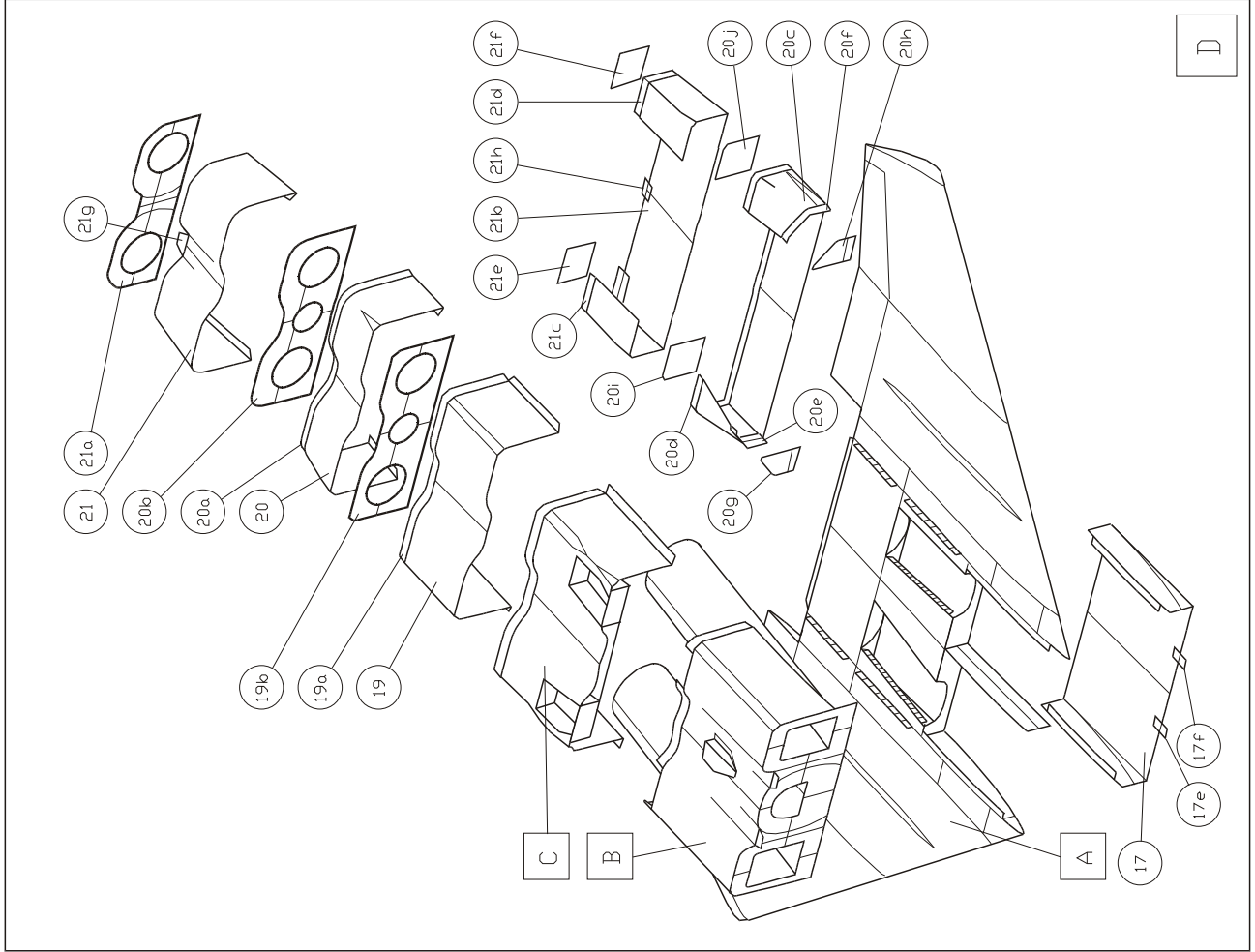
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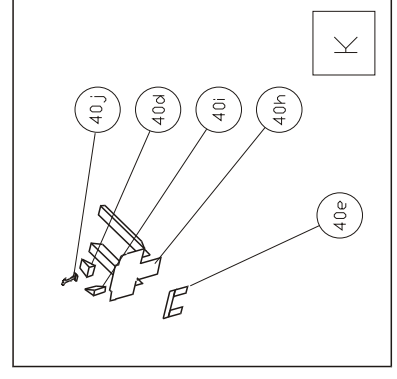
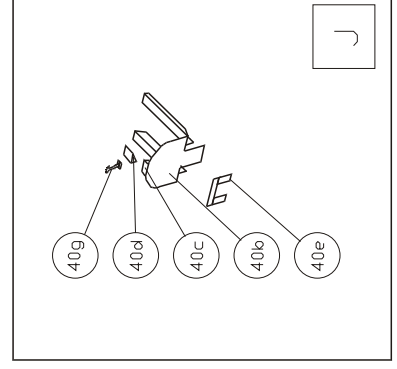
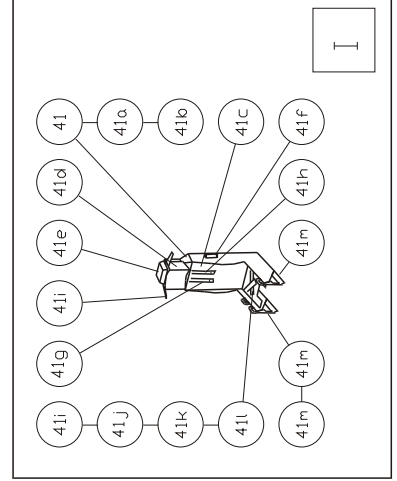
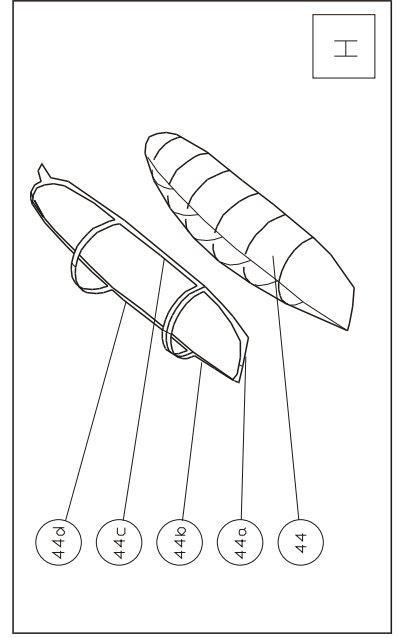
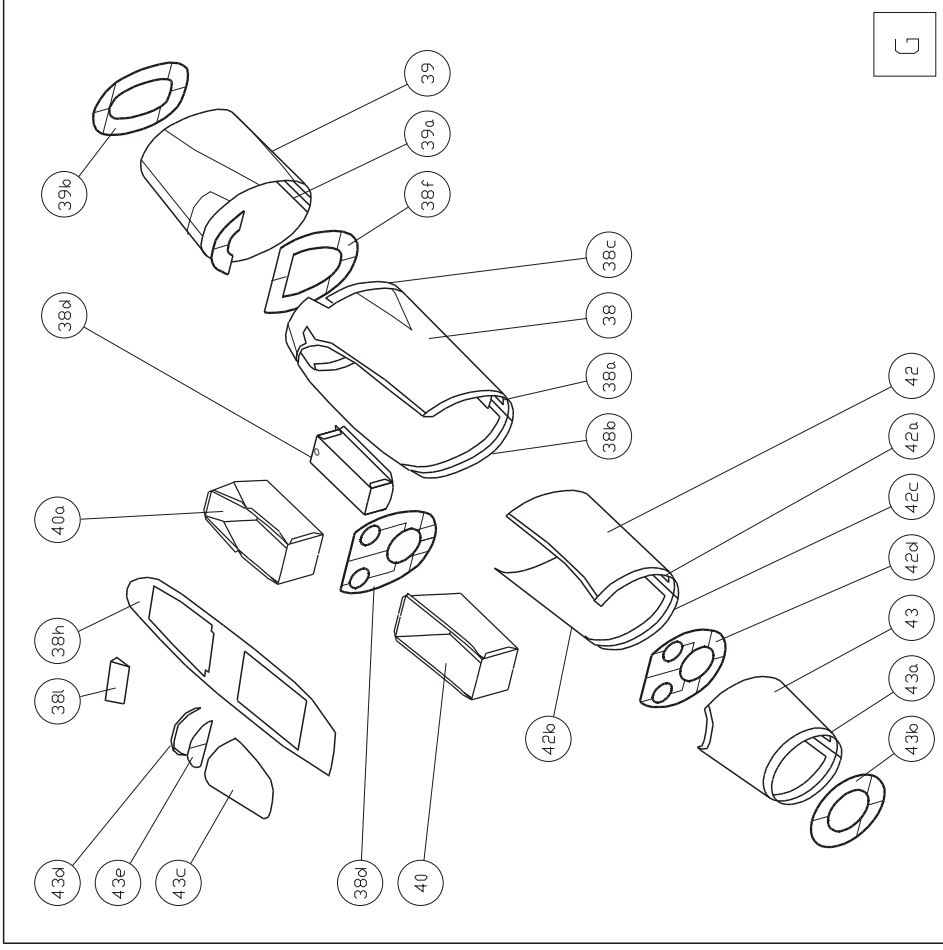
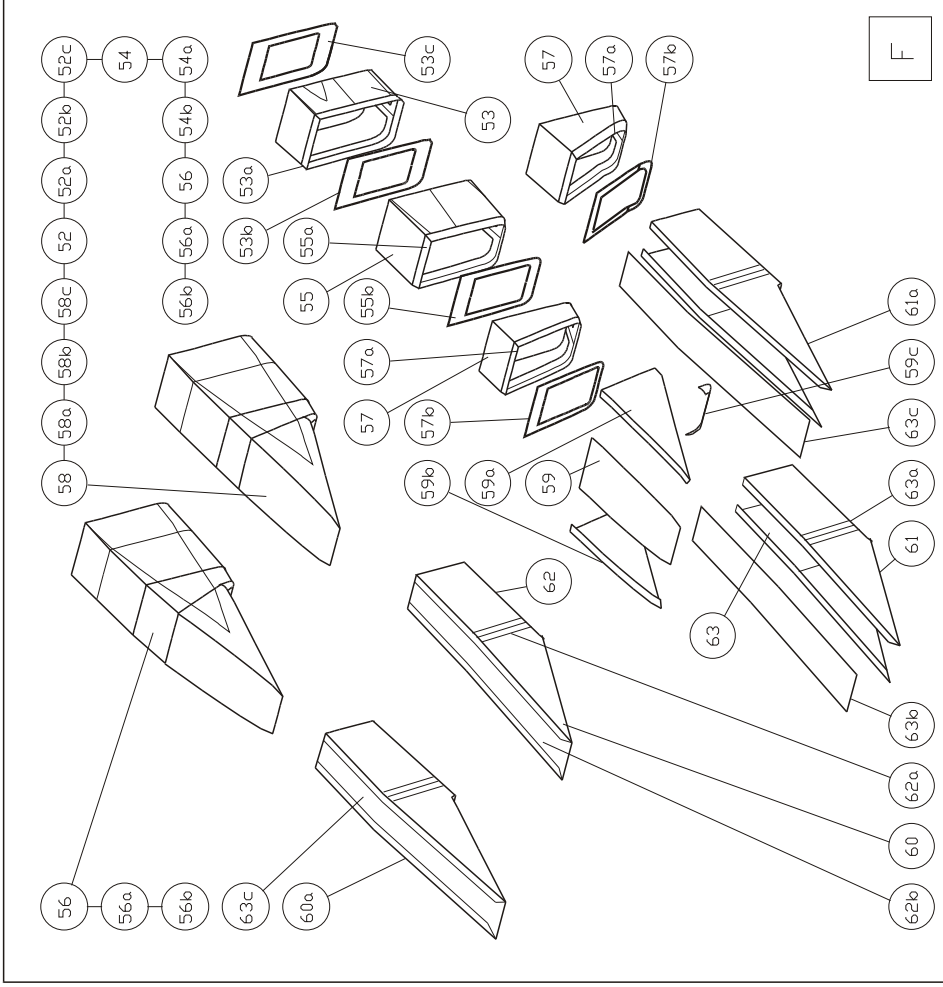
References:

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2. Colors & Markings of the F-15 Eagle /C&M - Vol. 20/ by Bert Kinzey and Ray Leader
3. Eagle by Lou Drendel - 1992 Squadron/Signal Publications Inc.

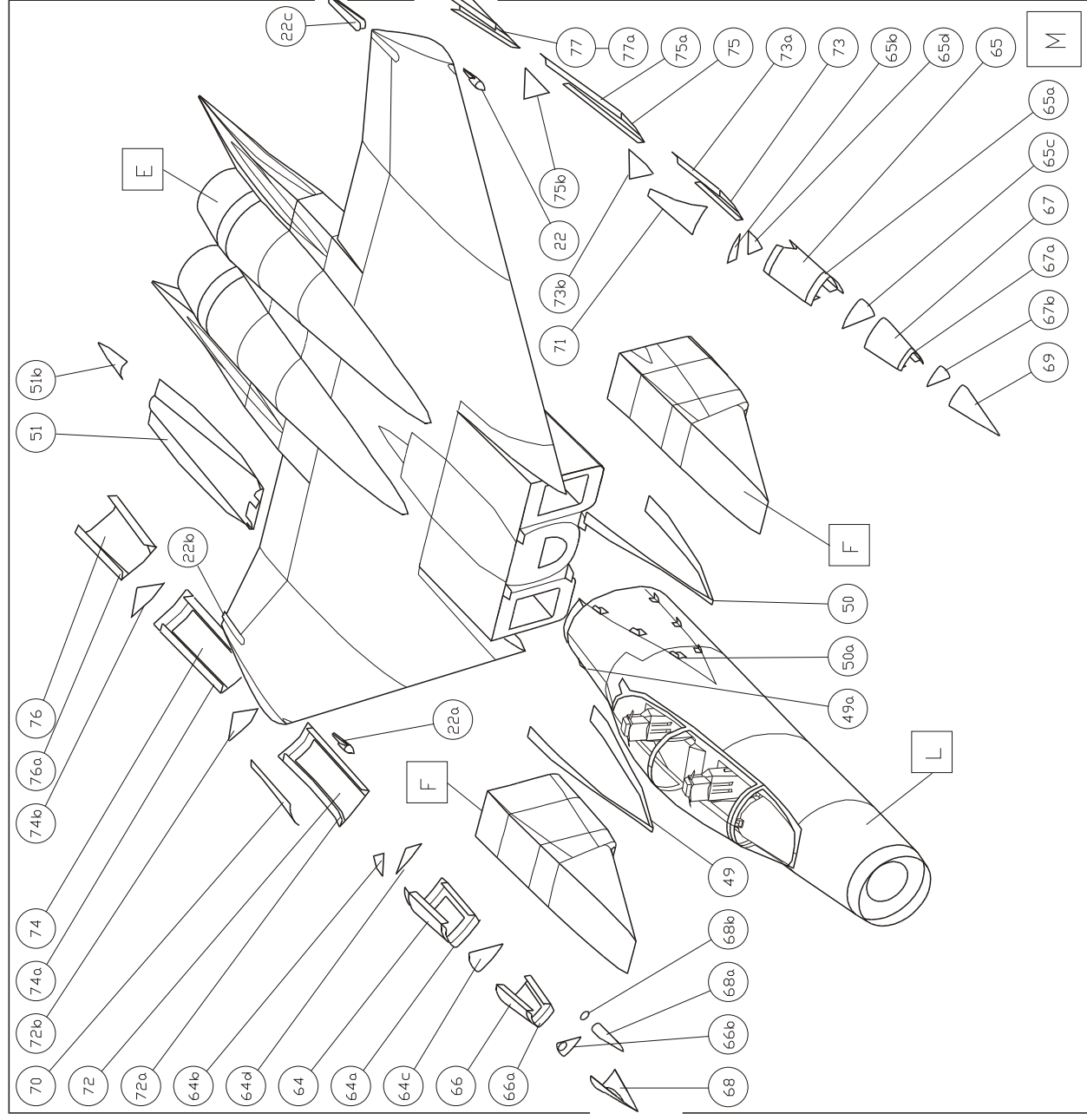
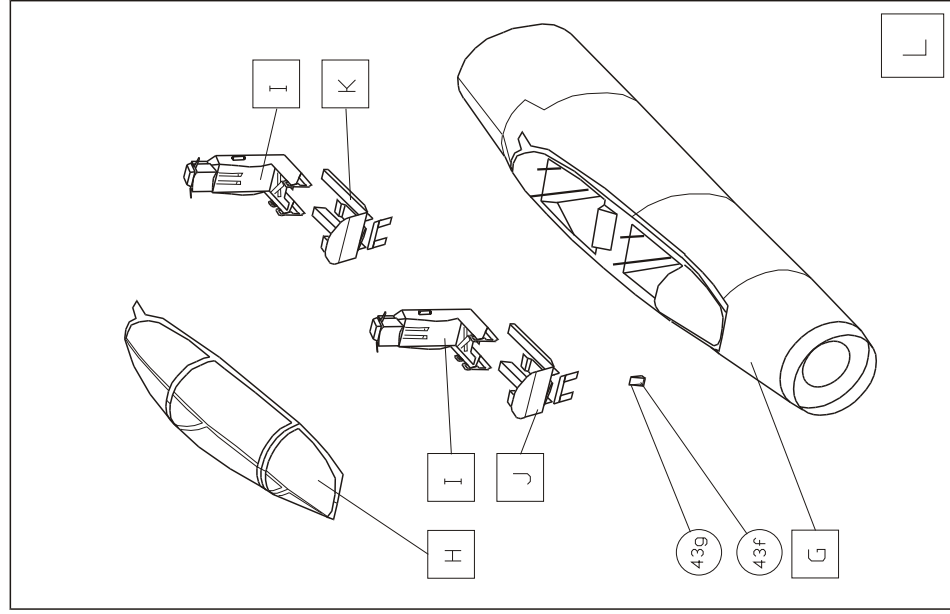
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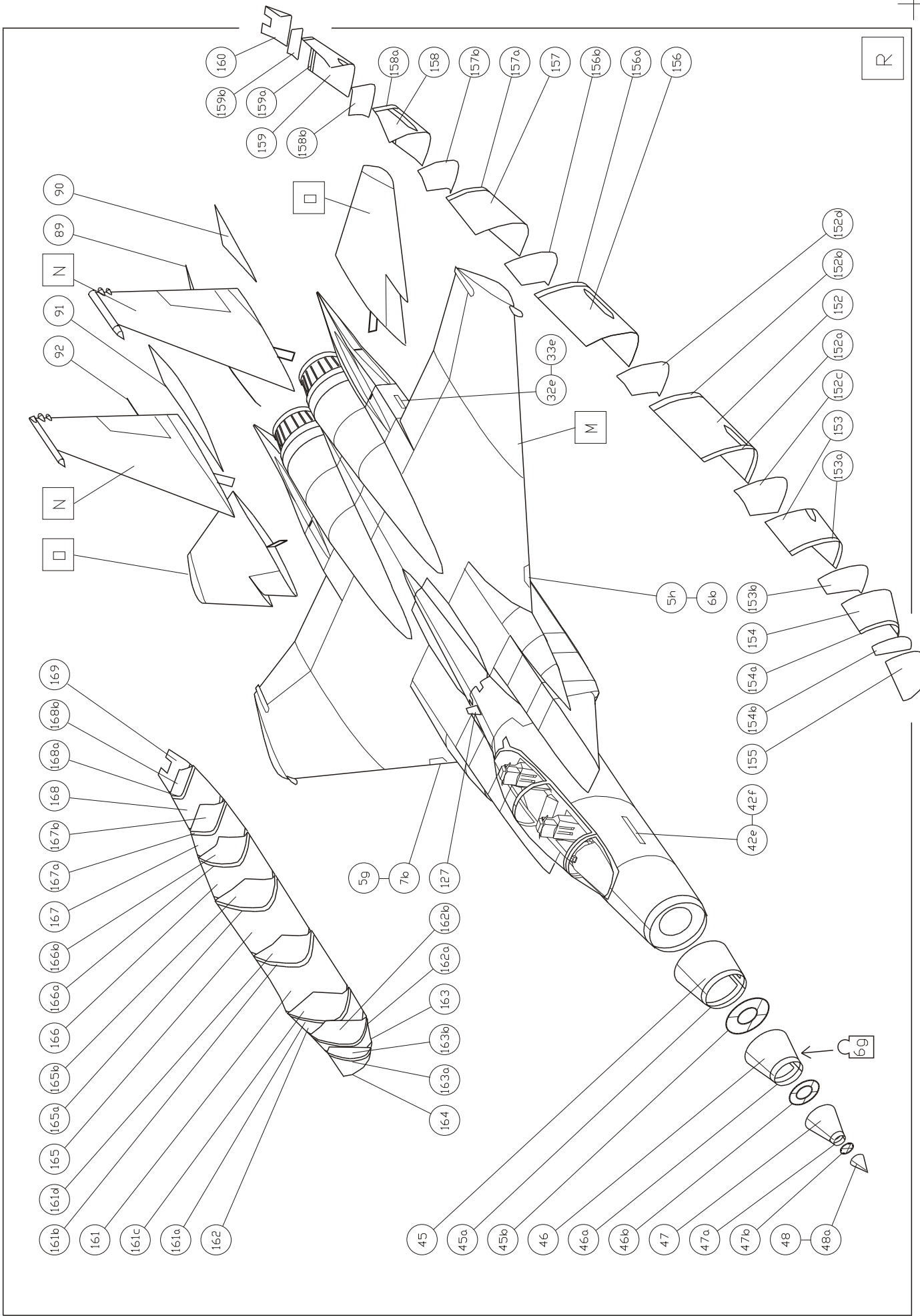


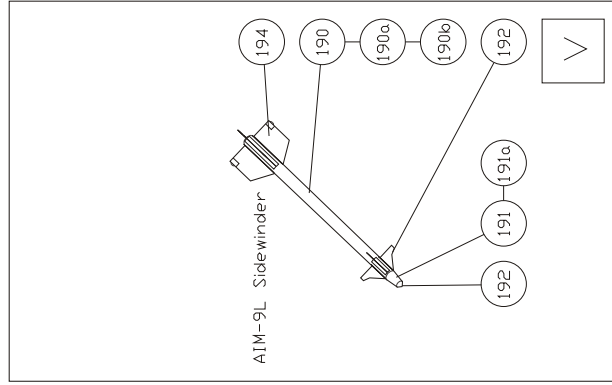
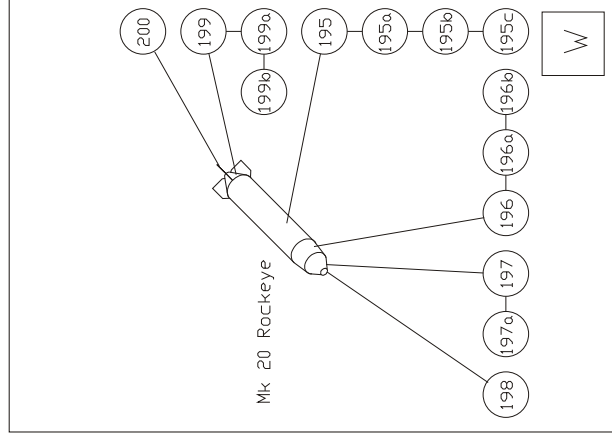
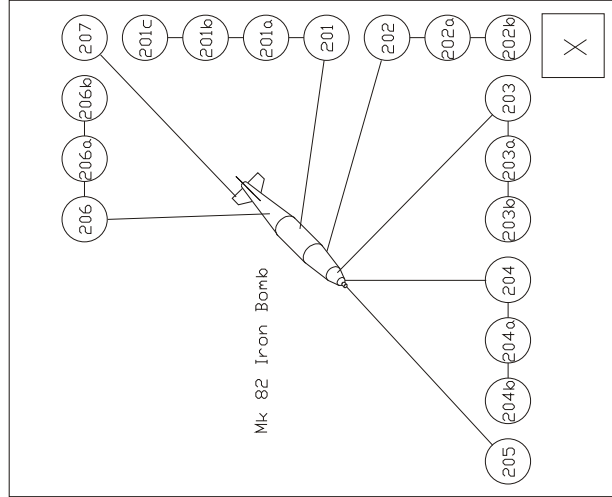
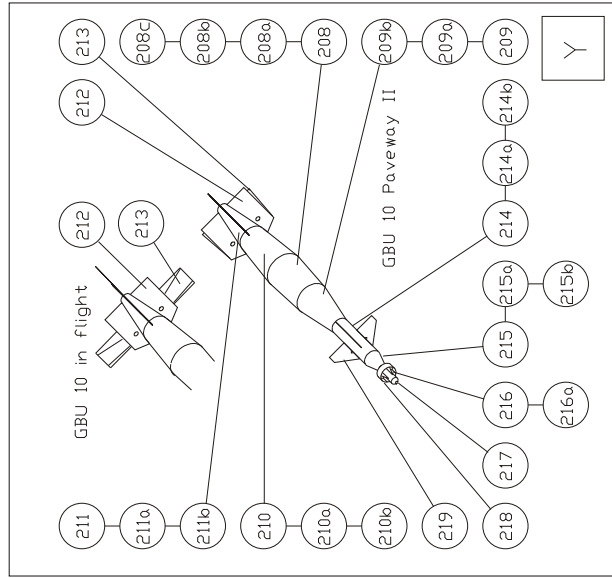
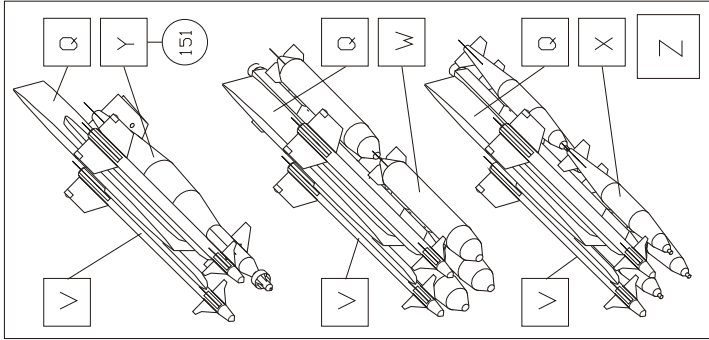
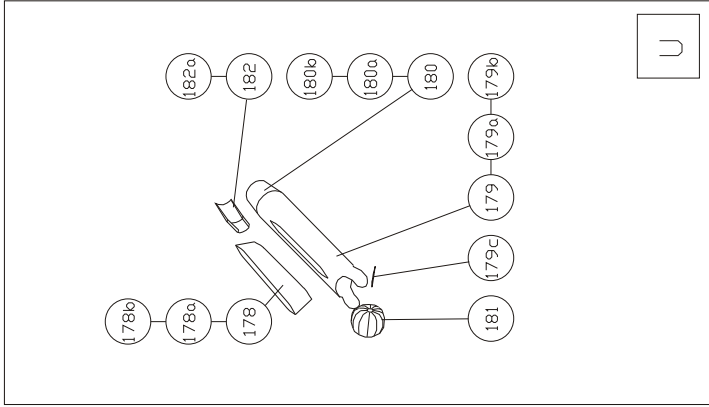
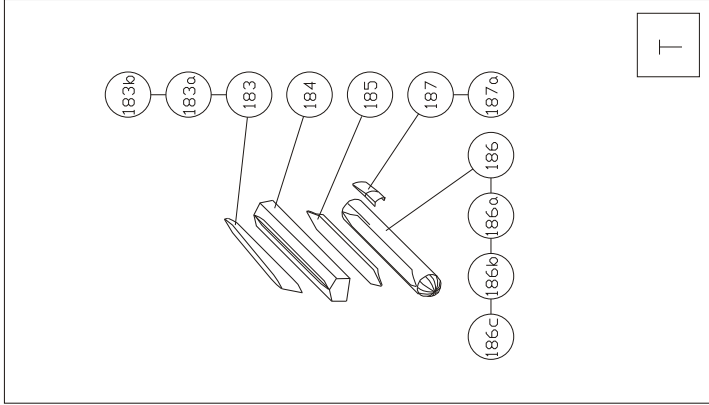
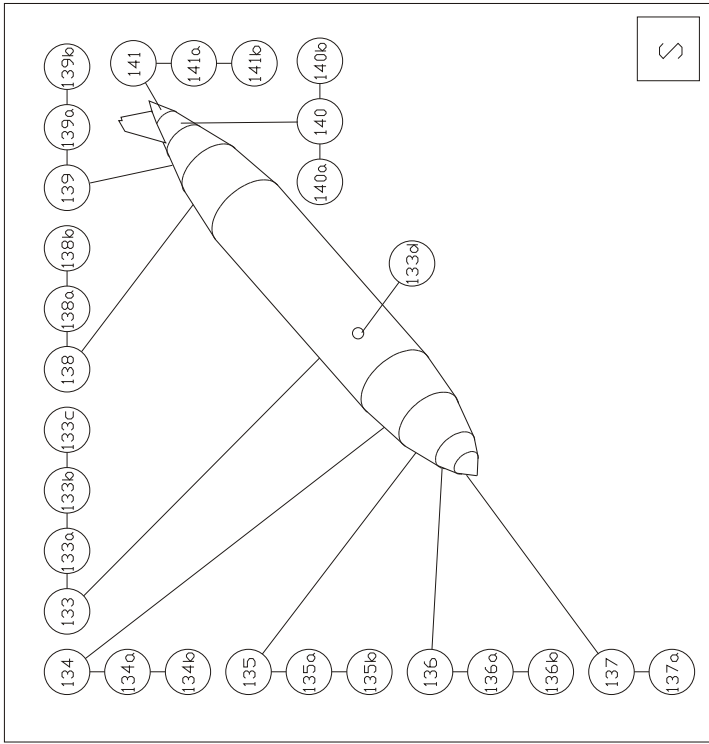


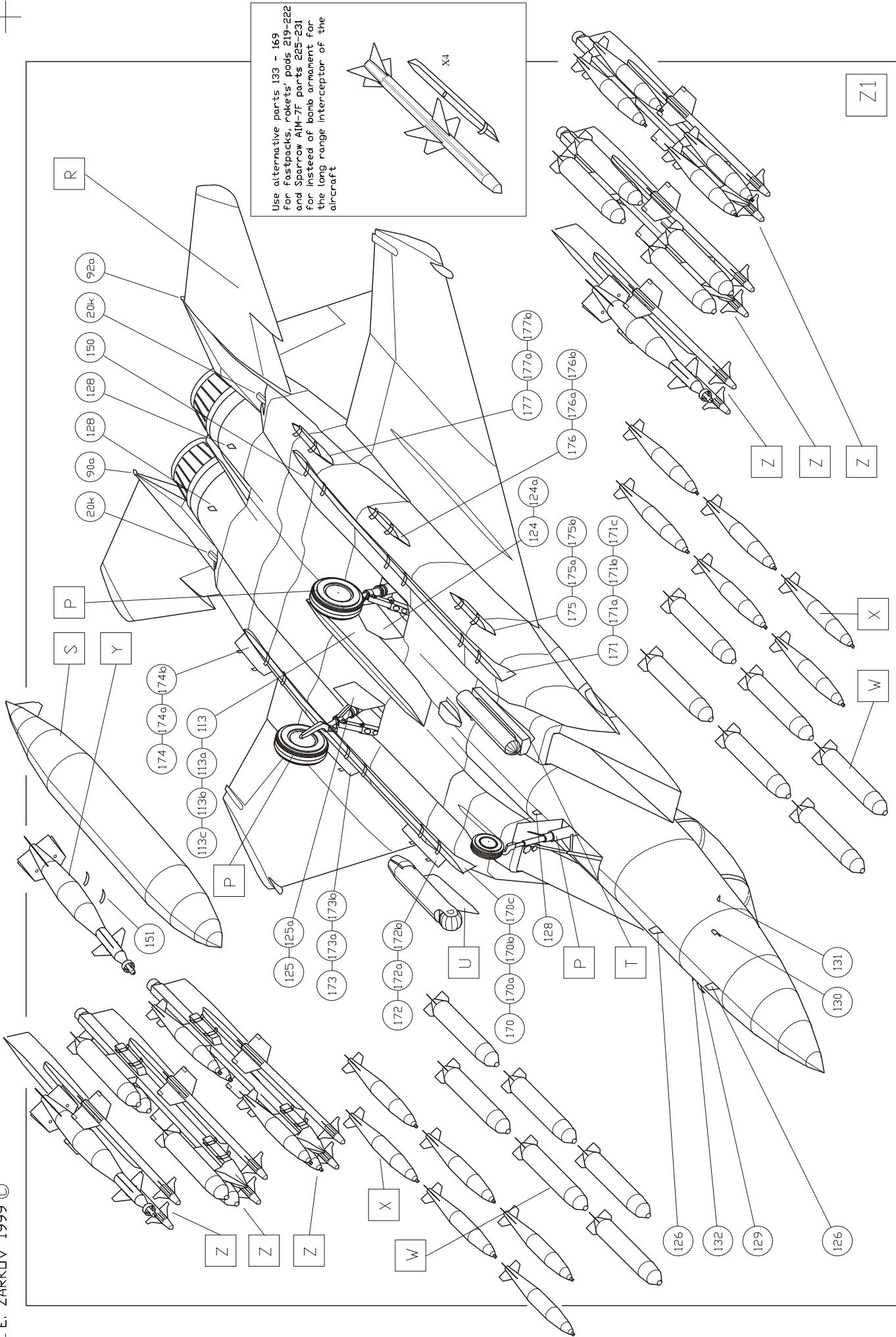


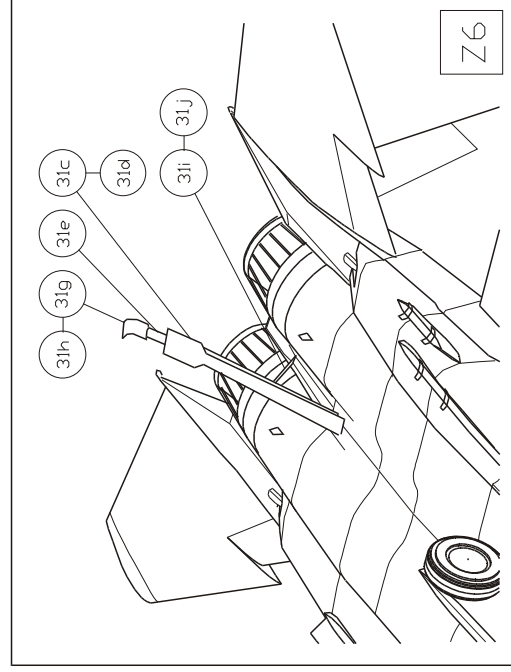
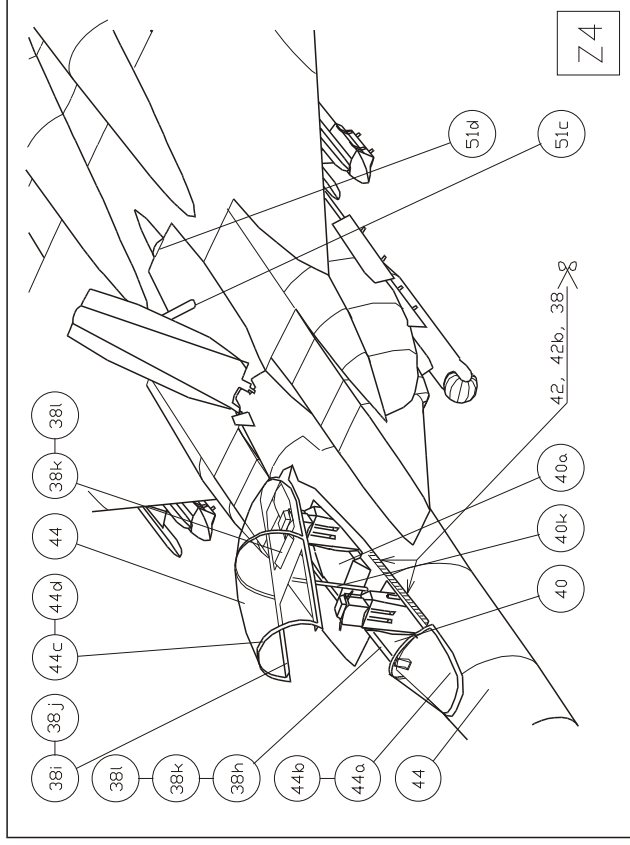
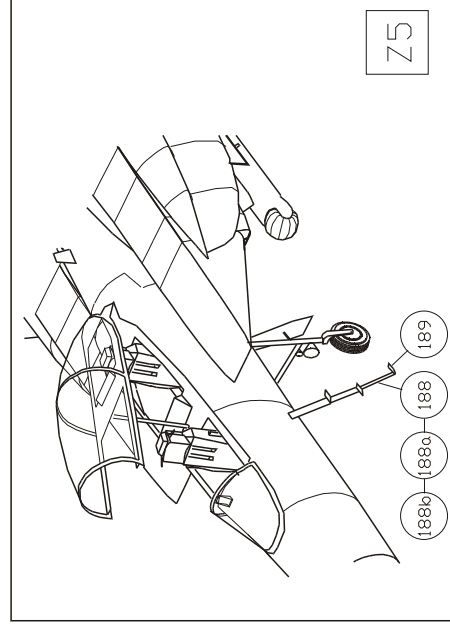
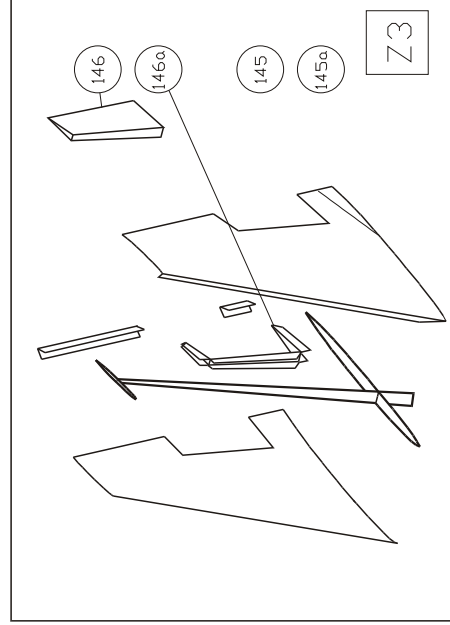
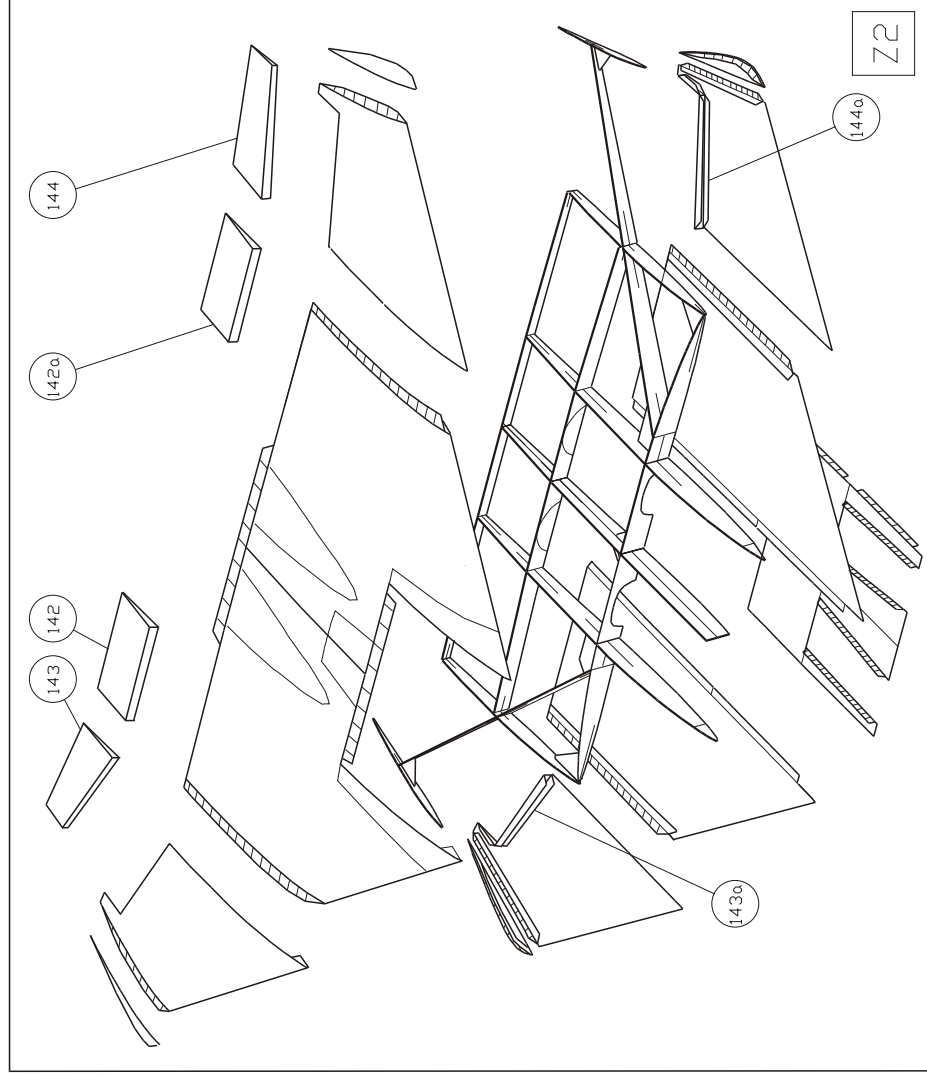


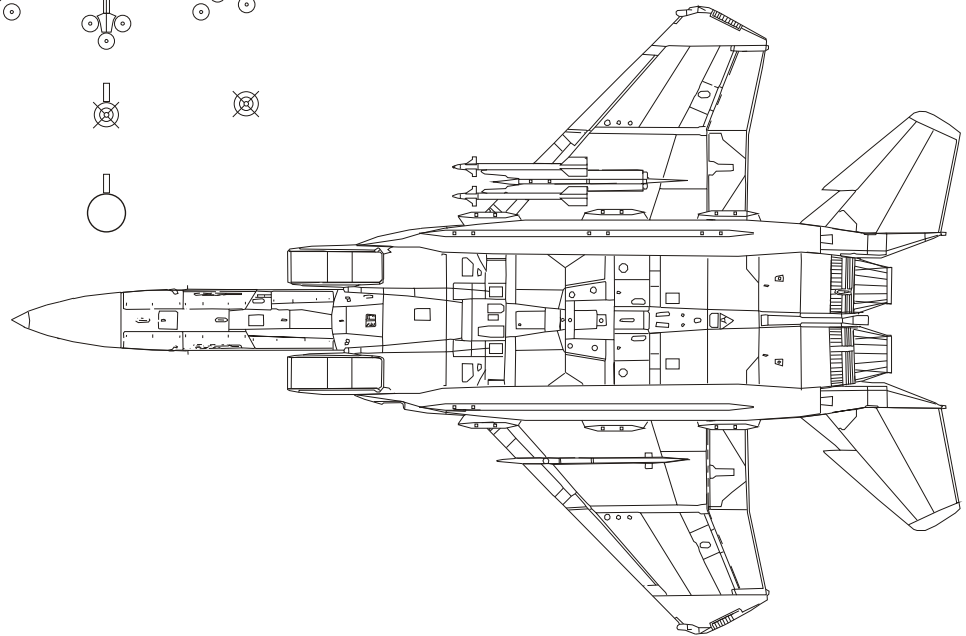
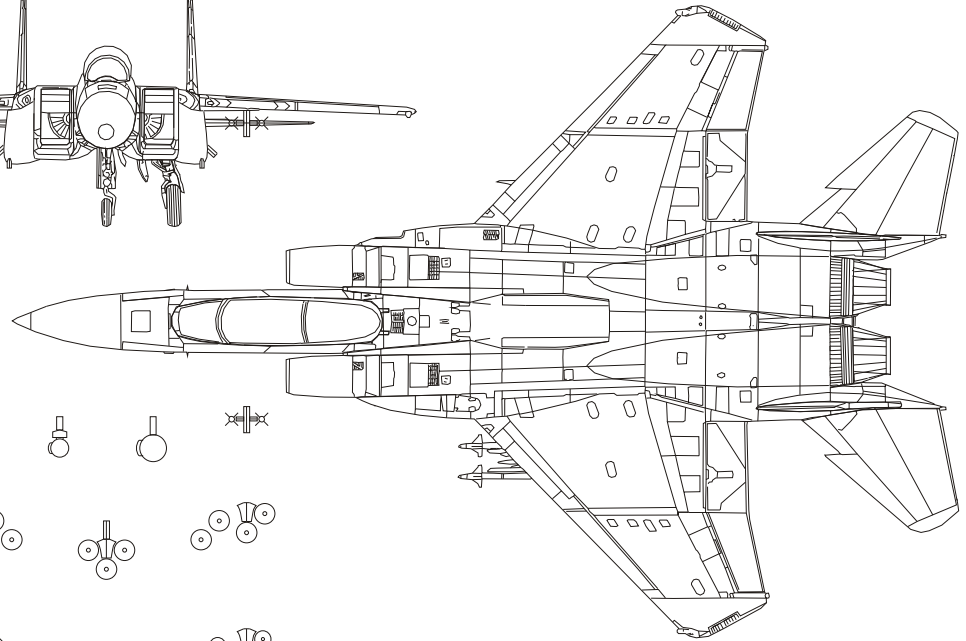
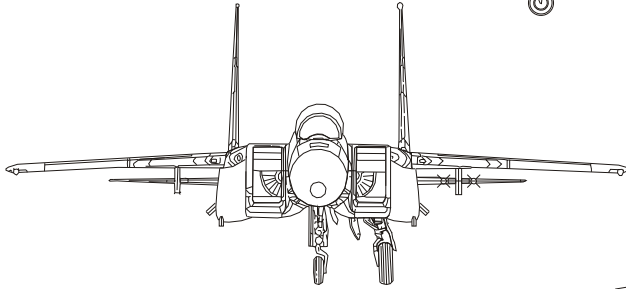
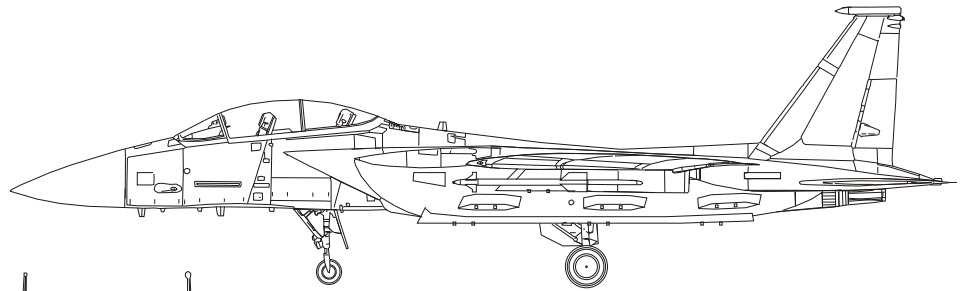










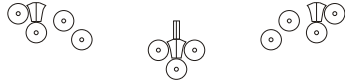


ARMAMENT

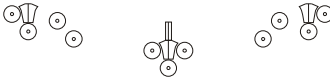
4 x AIM-9L Sidewinder  
LANTIRN



26 x Mk 20 Rockeye



26 x Mk 82



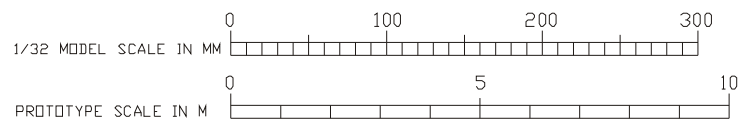
3 x GBU 10 Paveway II

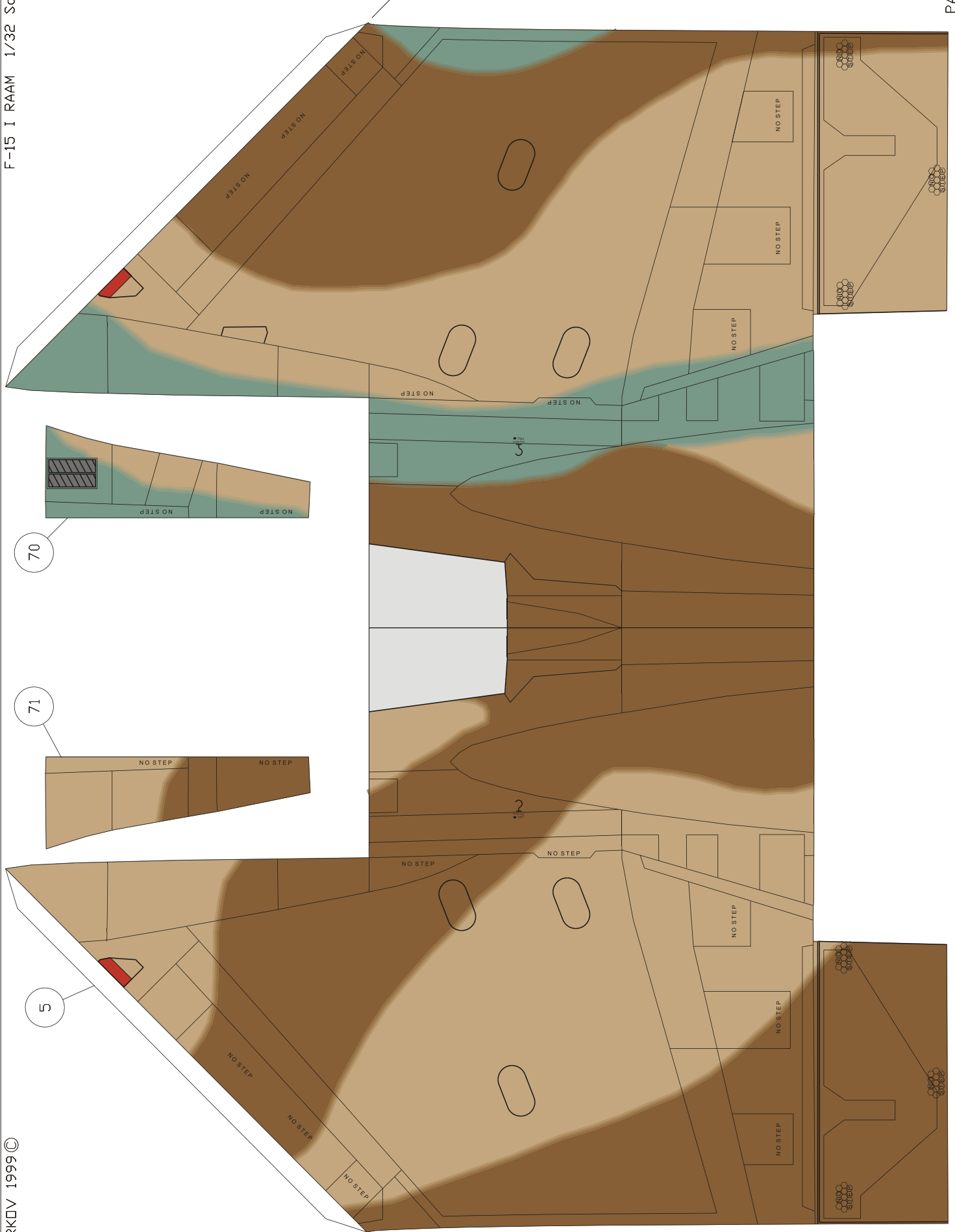


610 gallon fuel tank

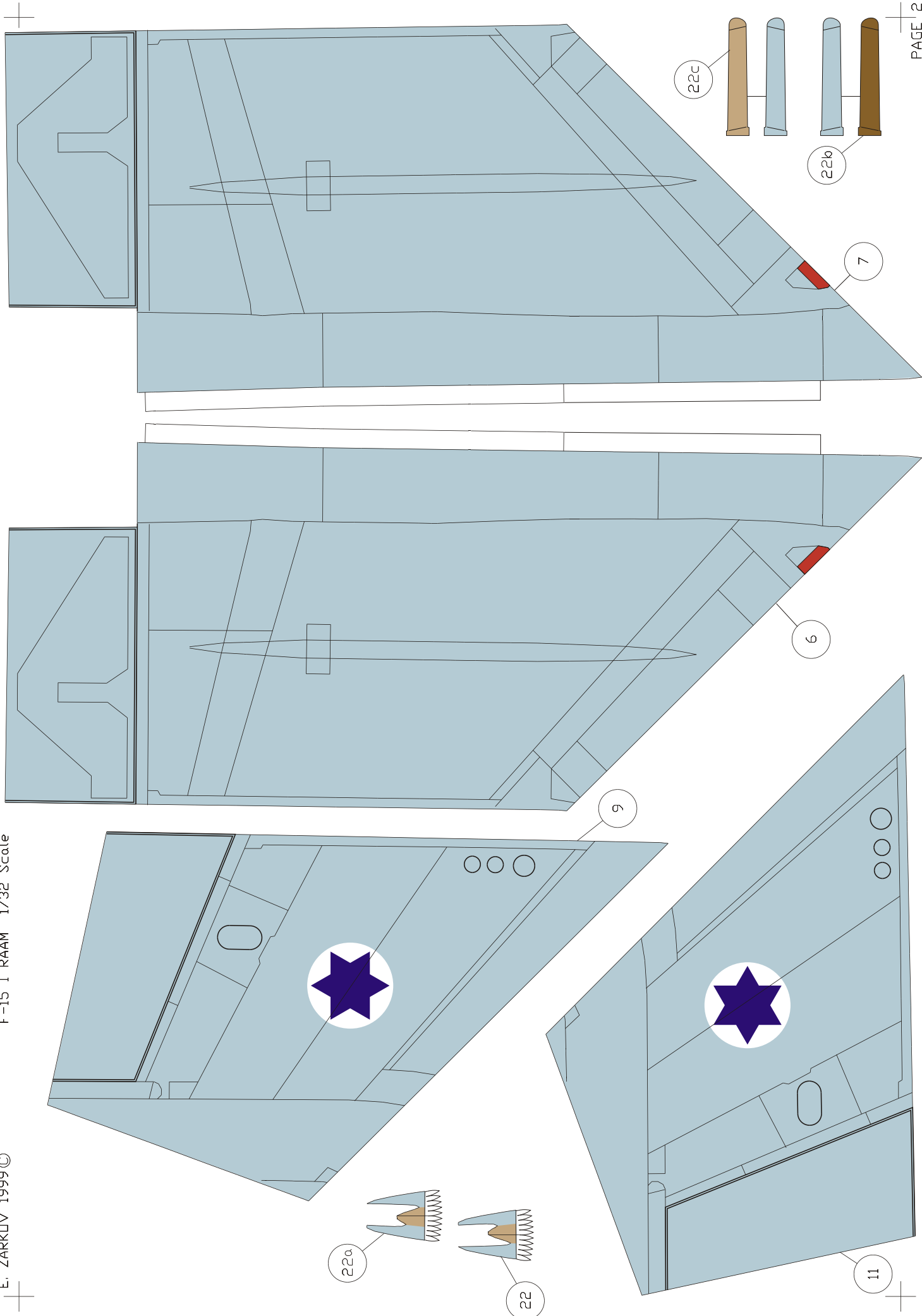


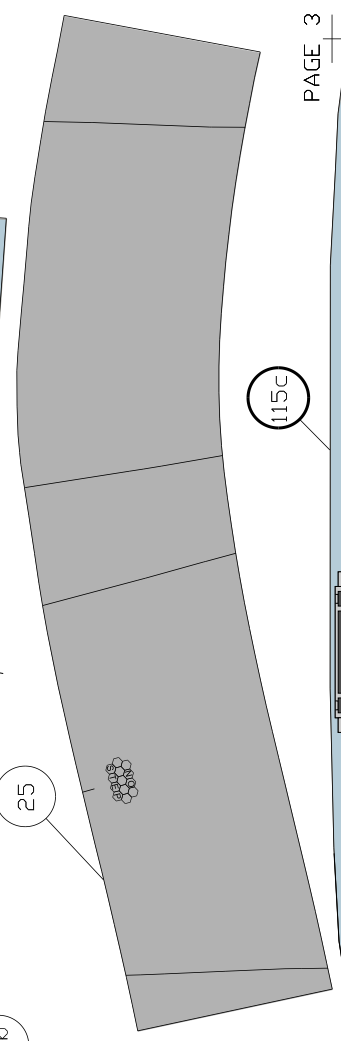
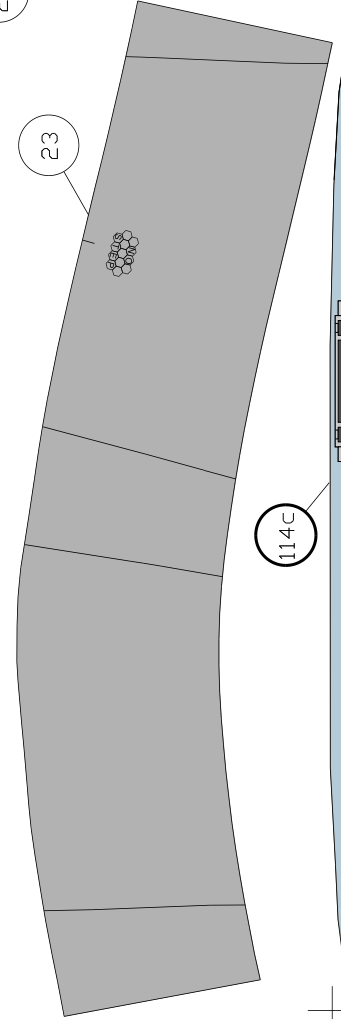
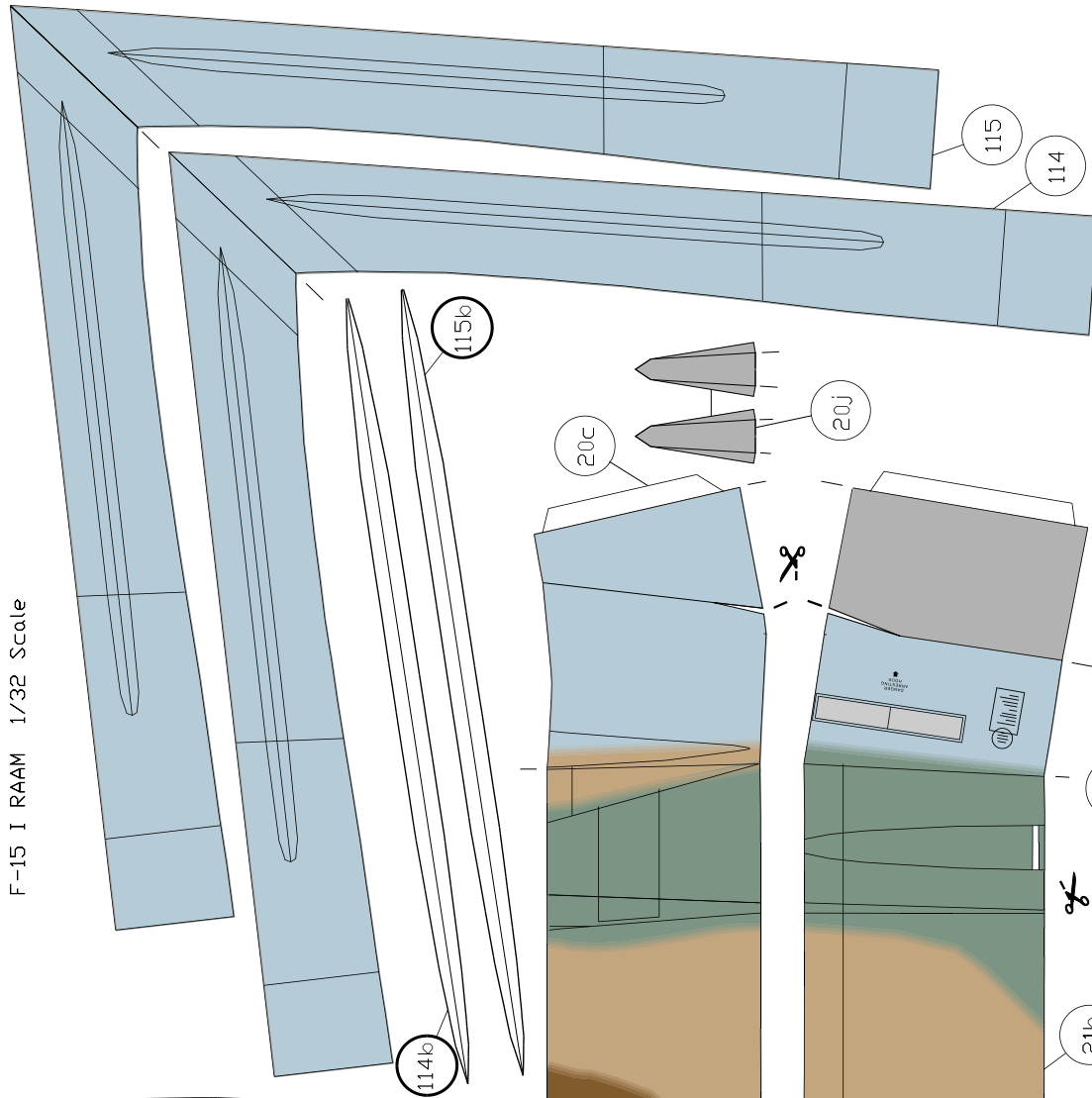
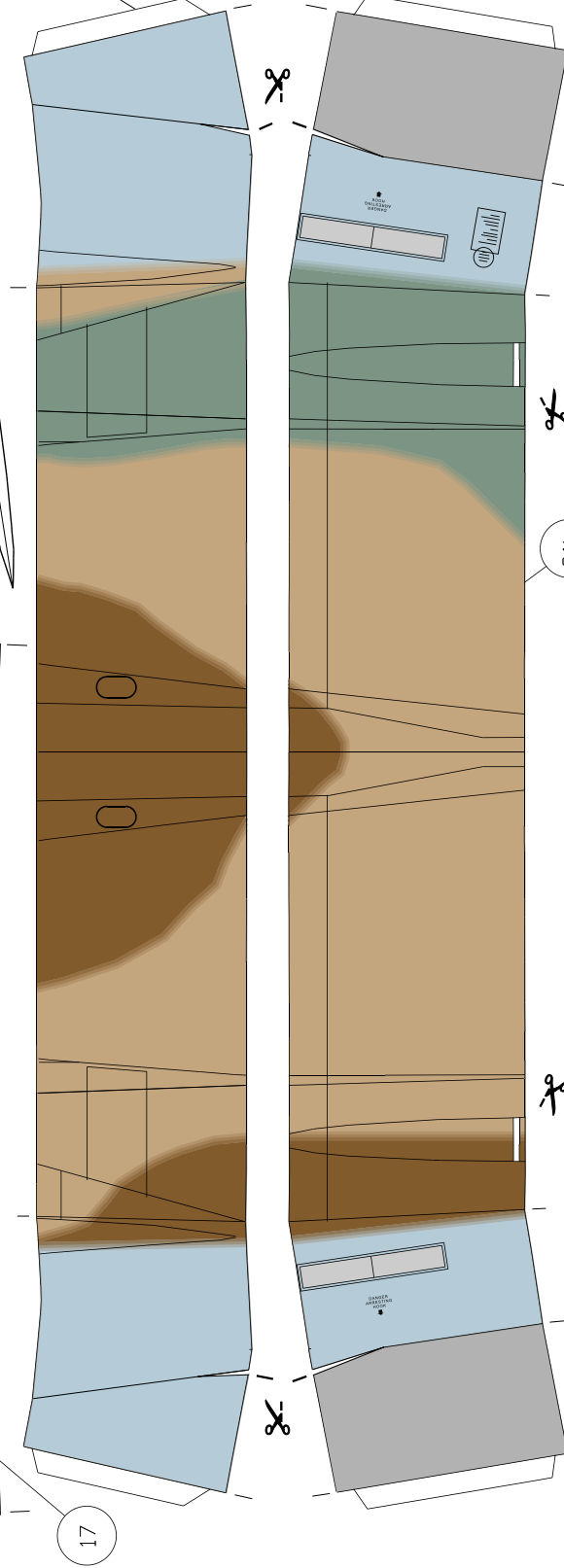
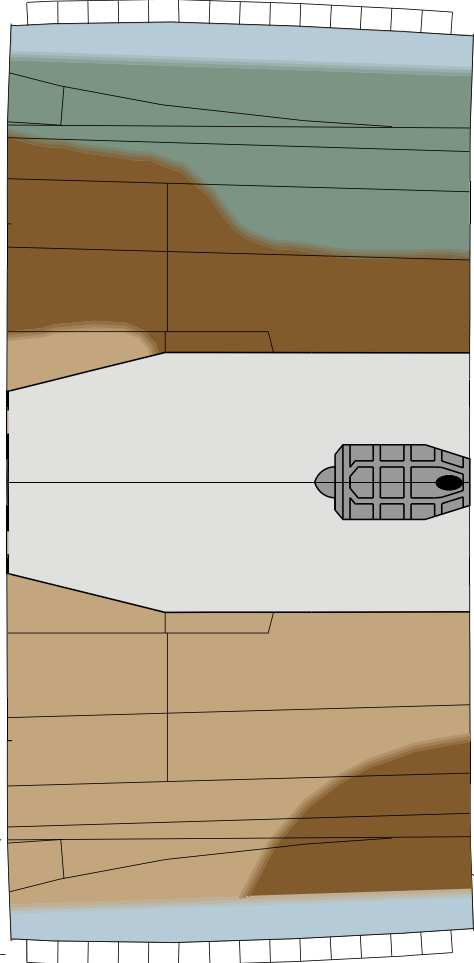
F-15 I RAAM

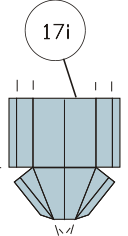
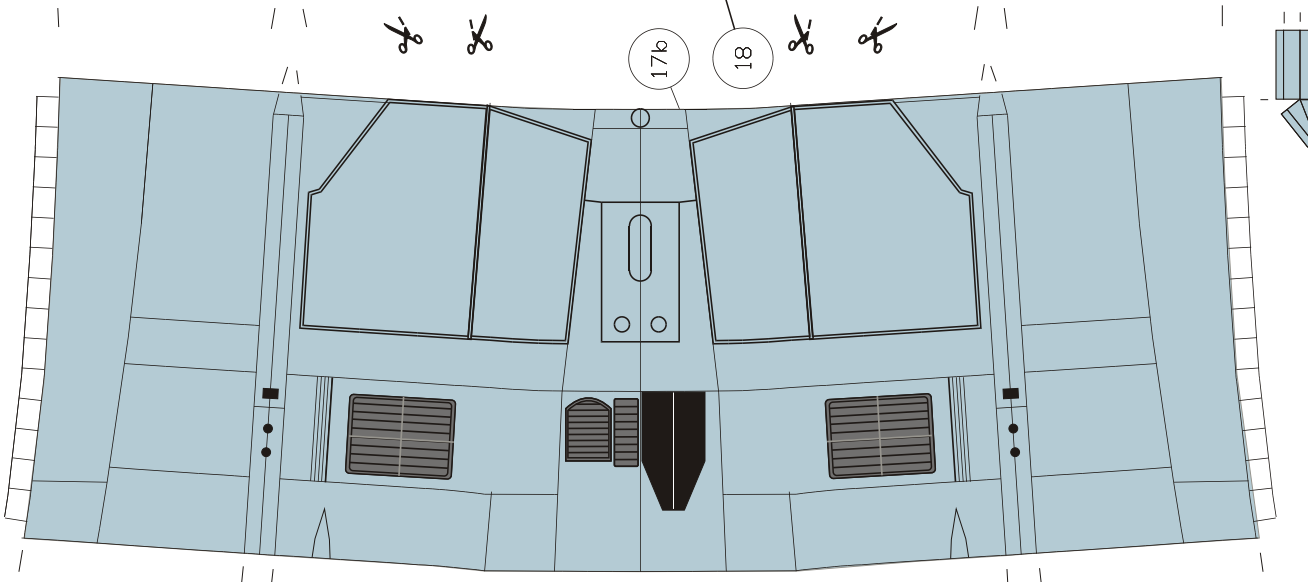
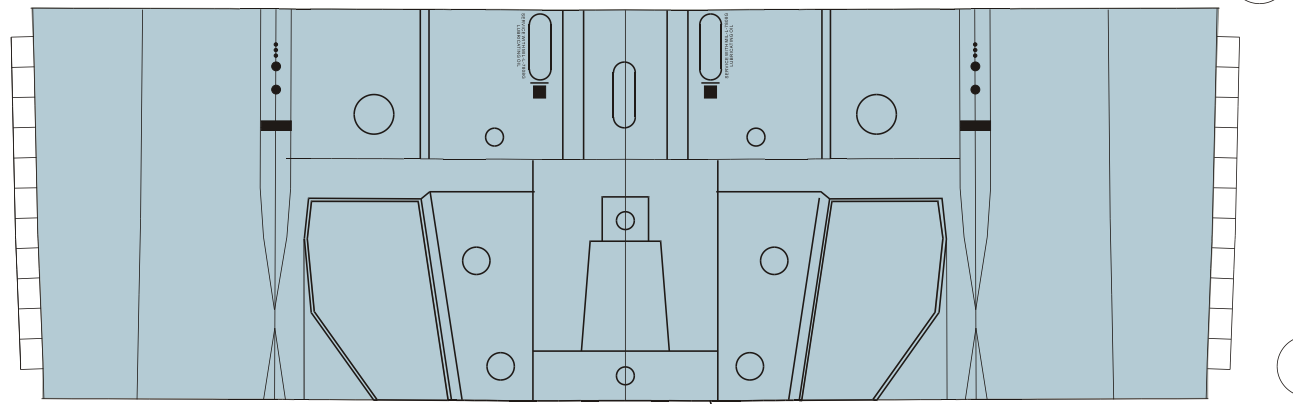
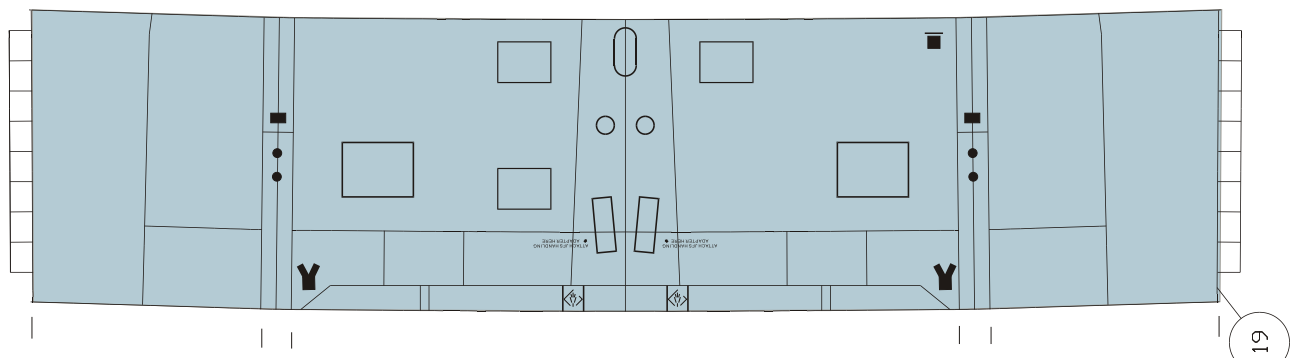
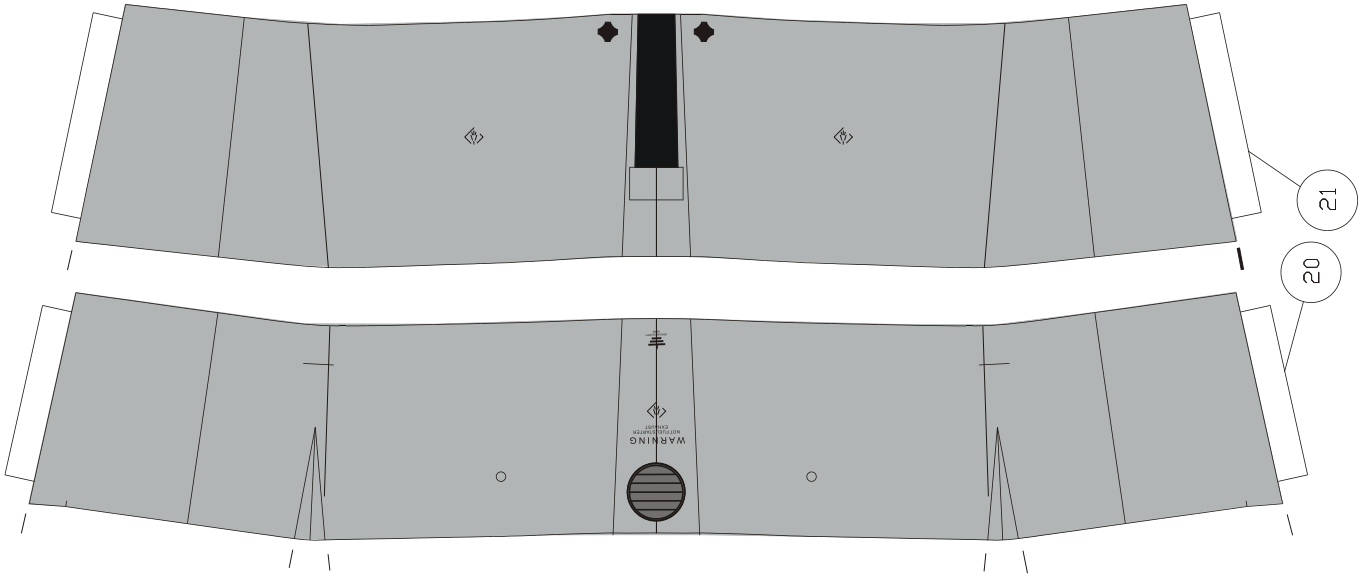


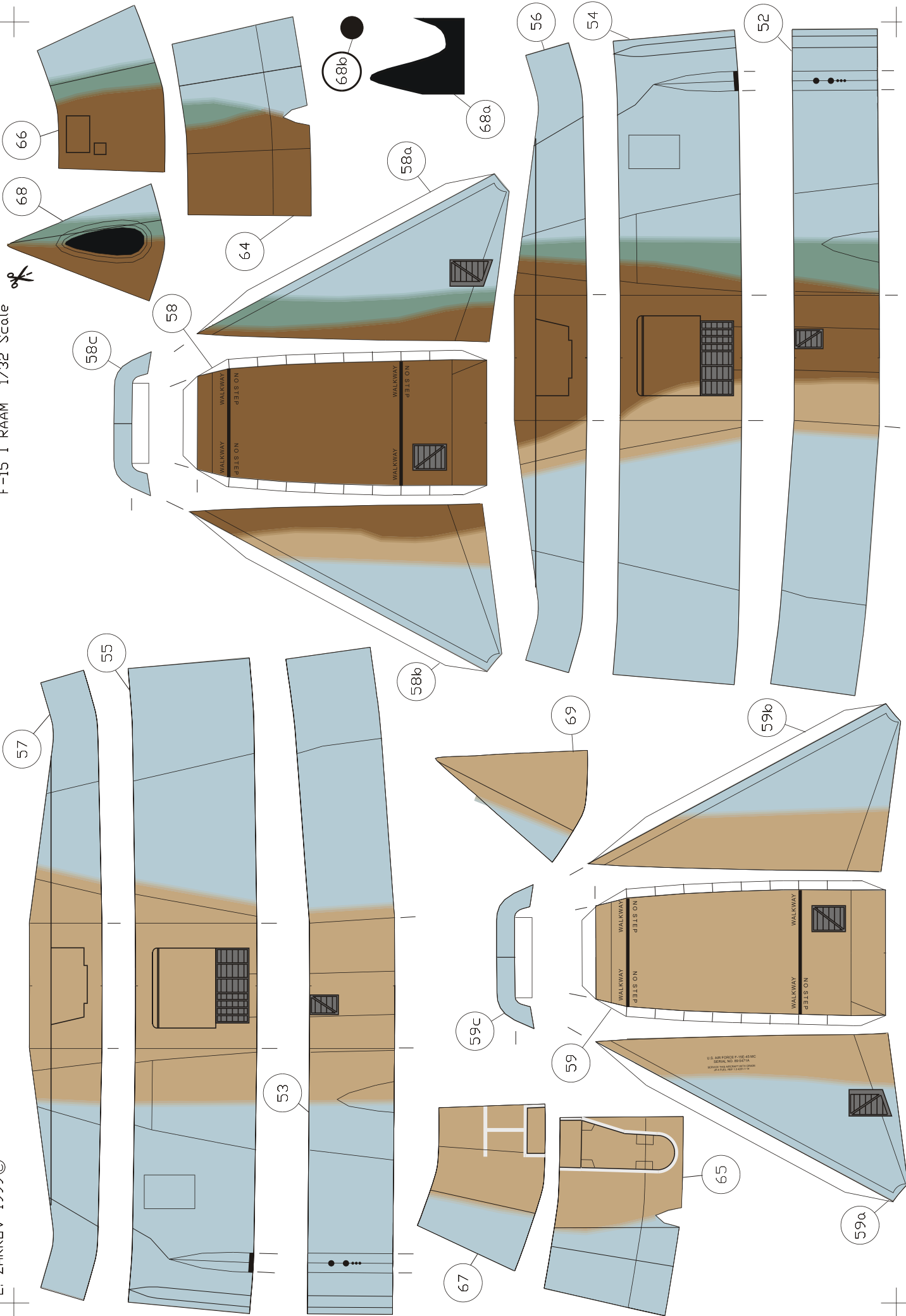


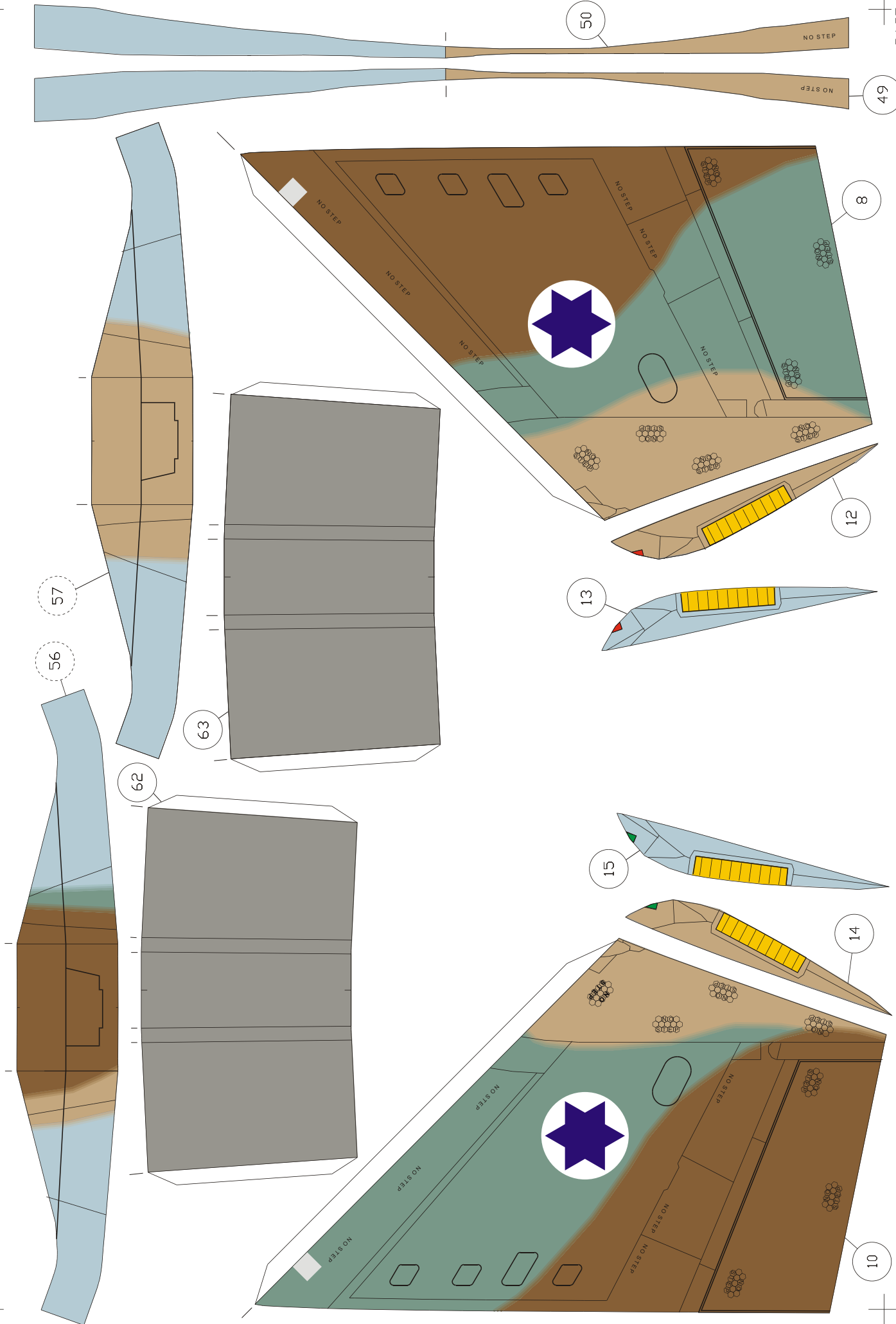


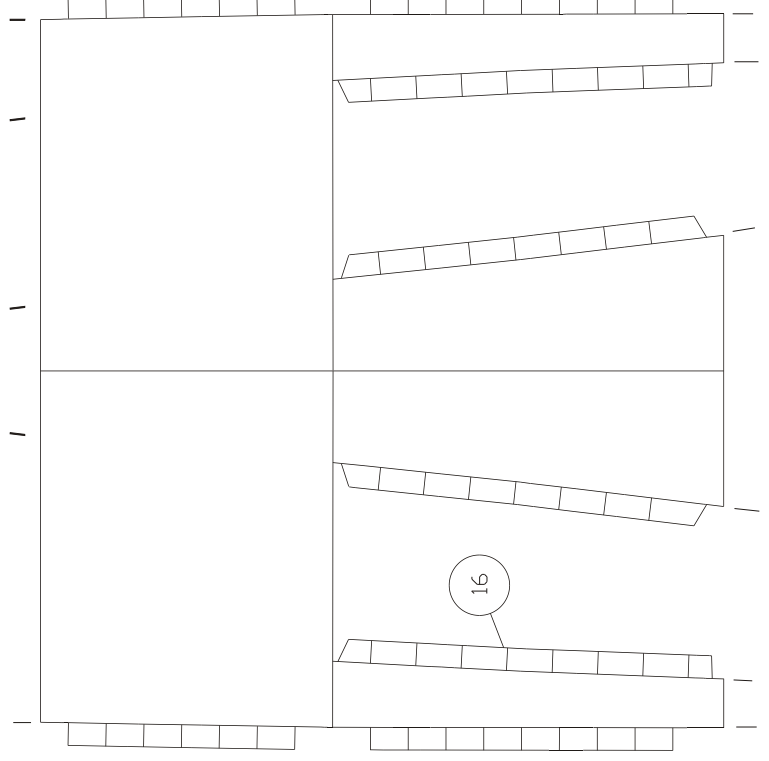
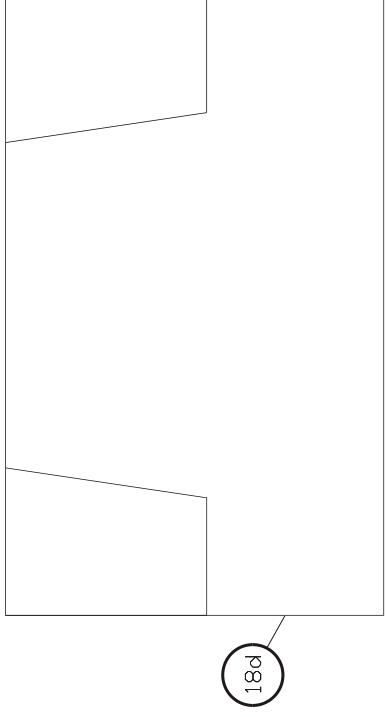
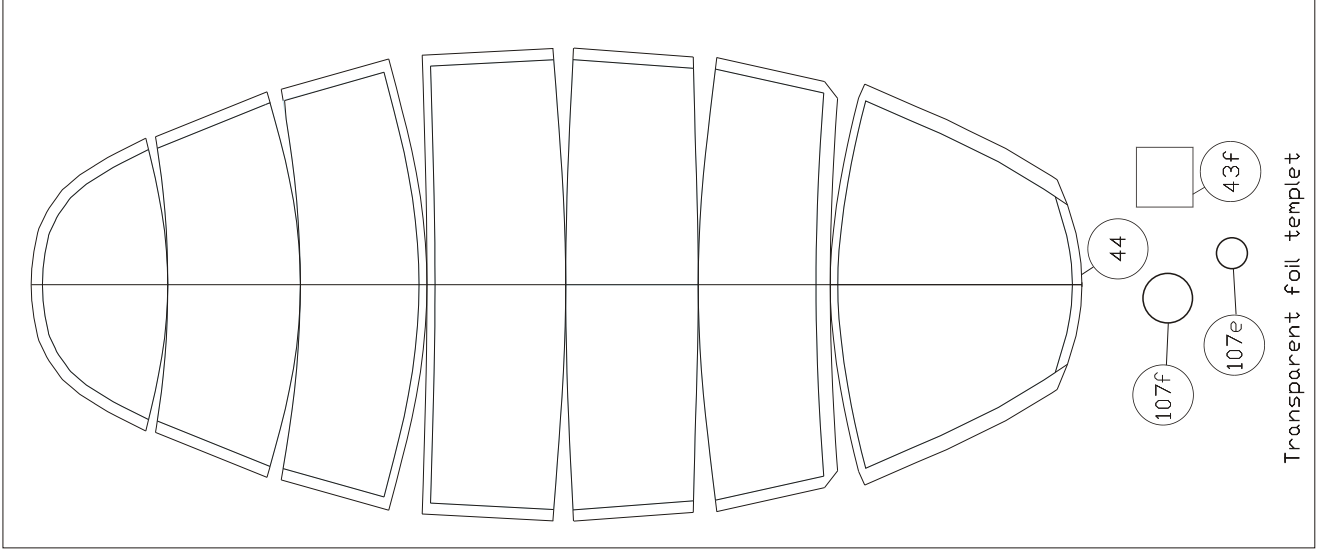
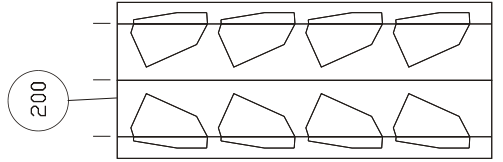
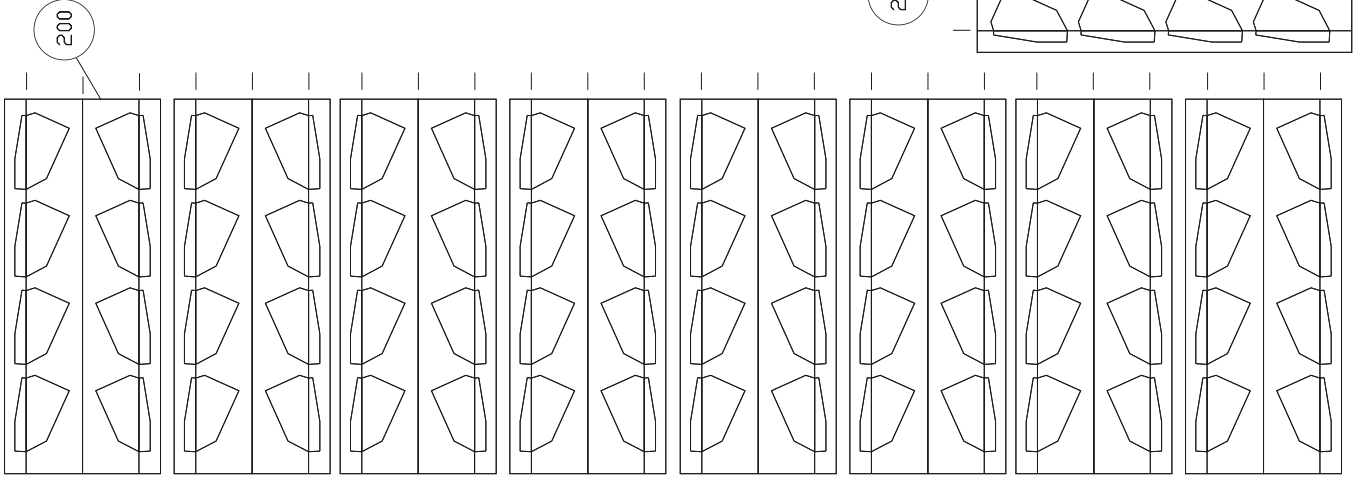


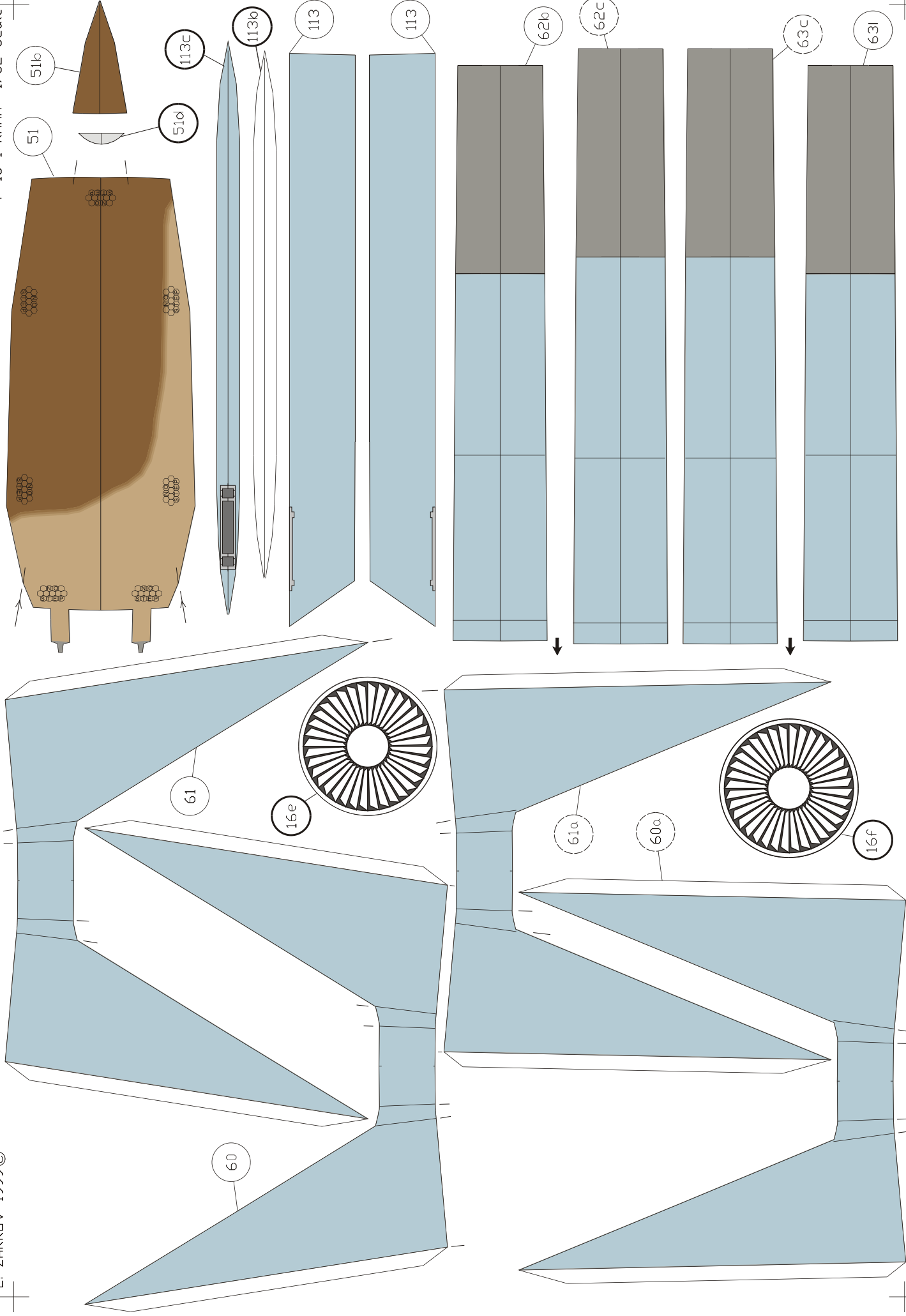




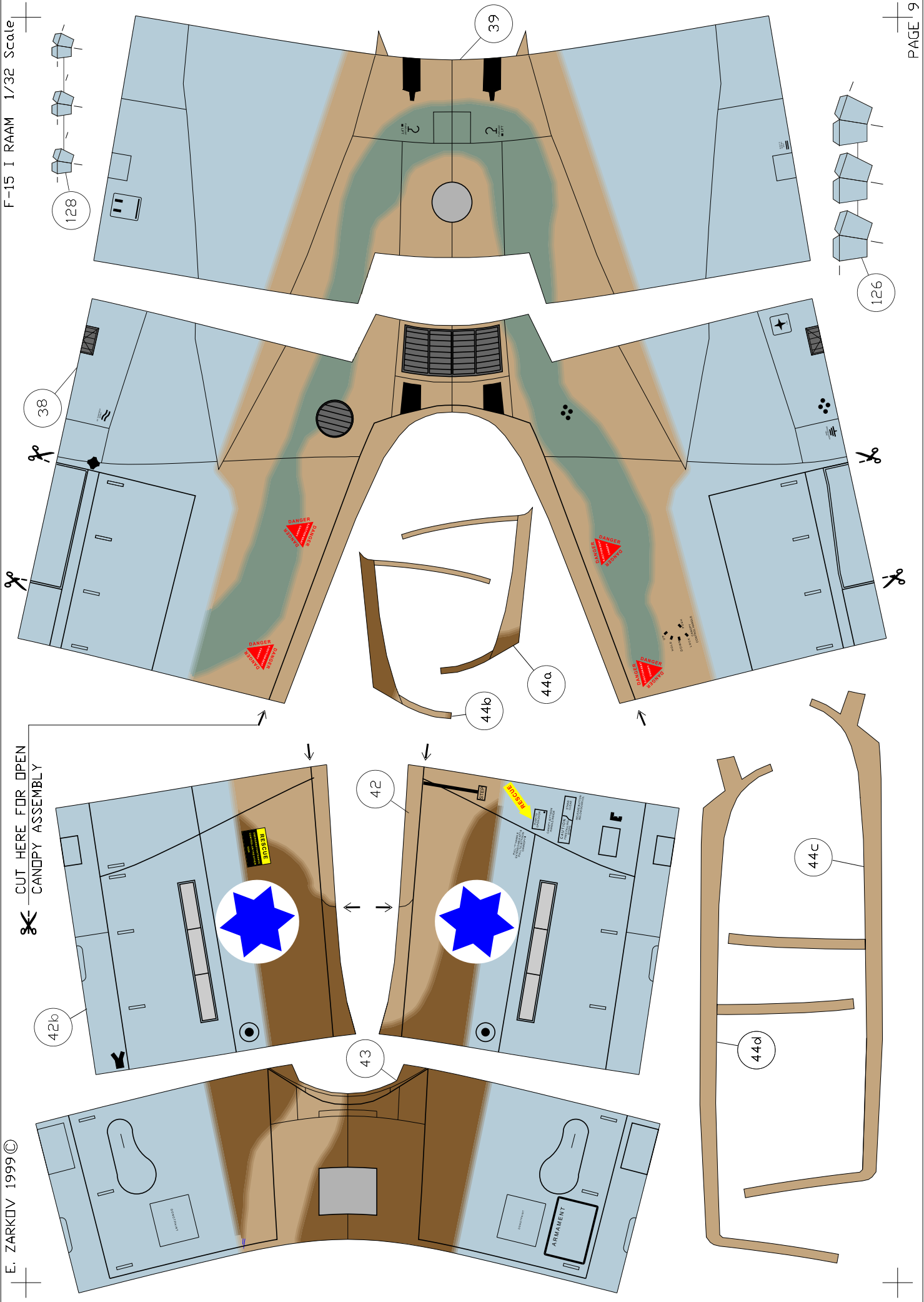




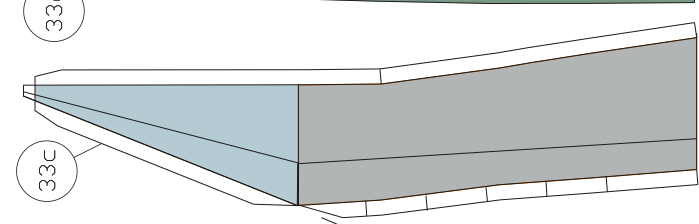
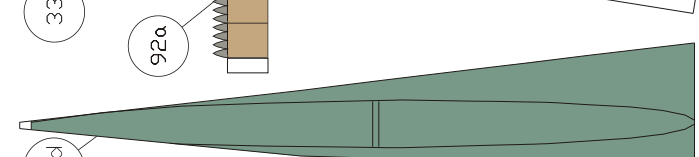
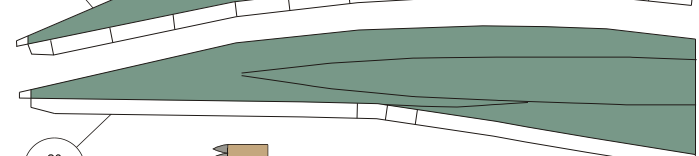
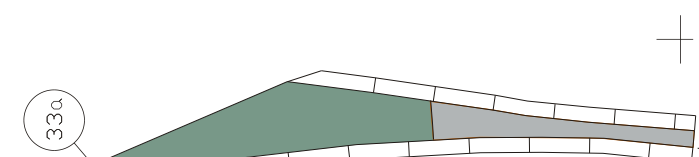
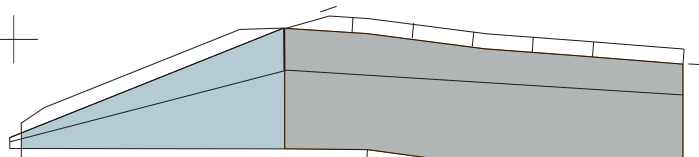
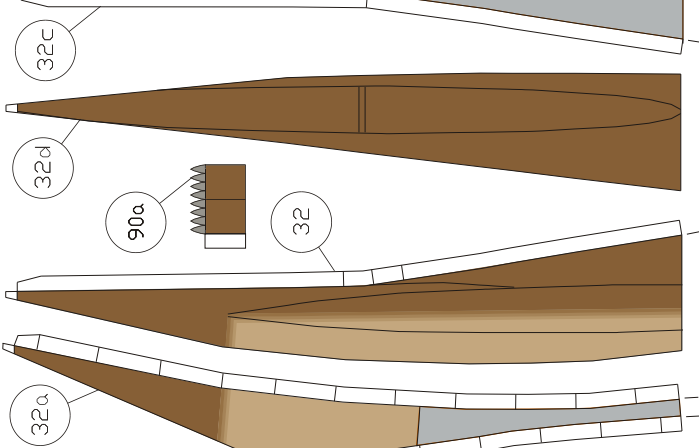
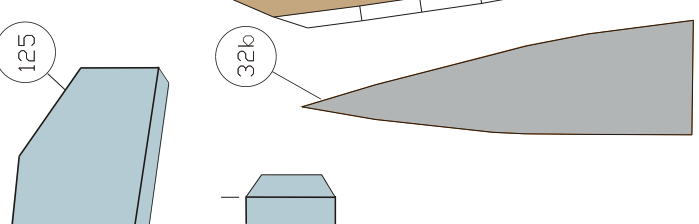
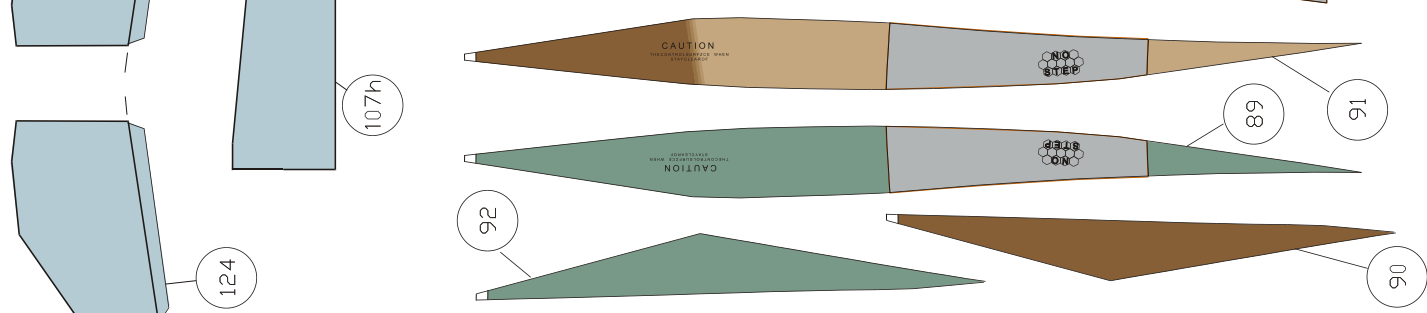
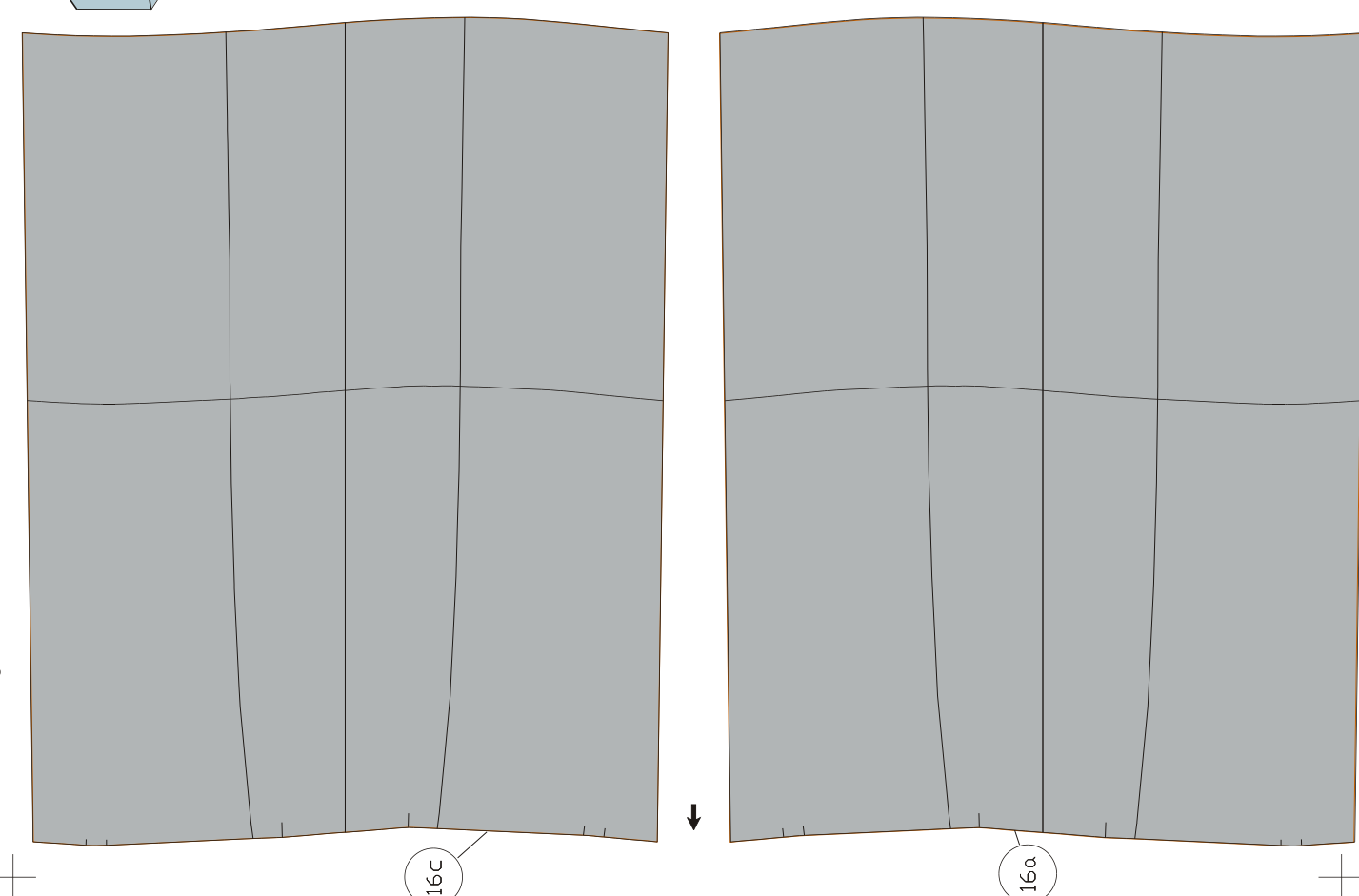


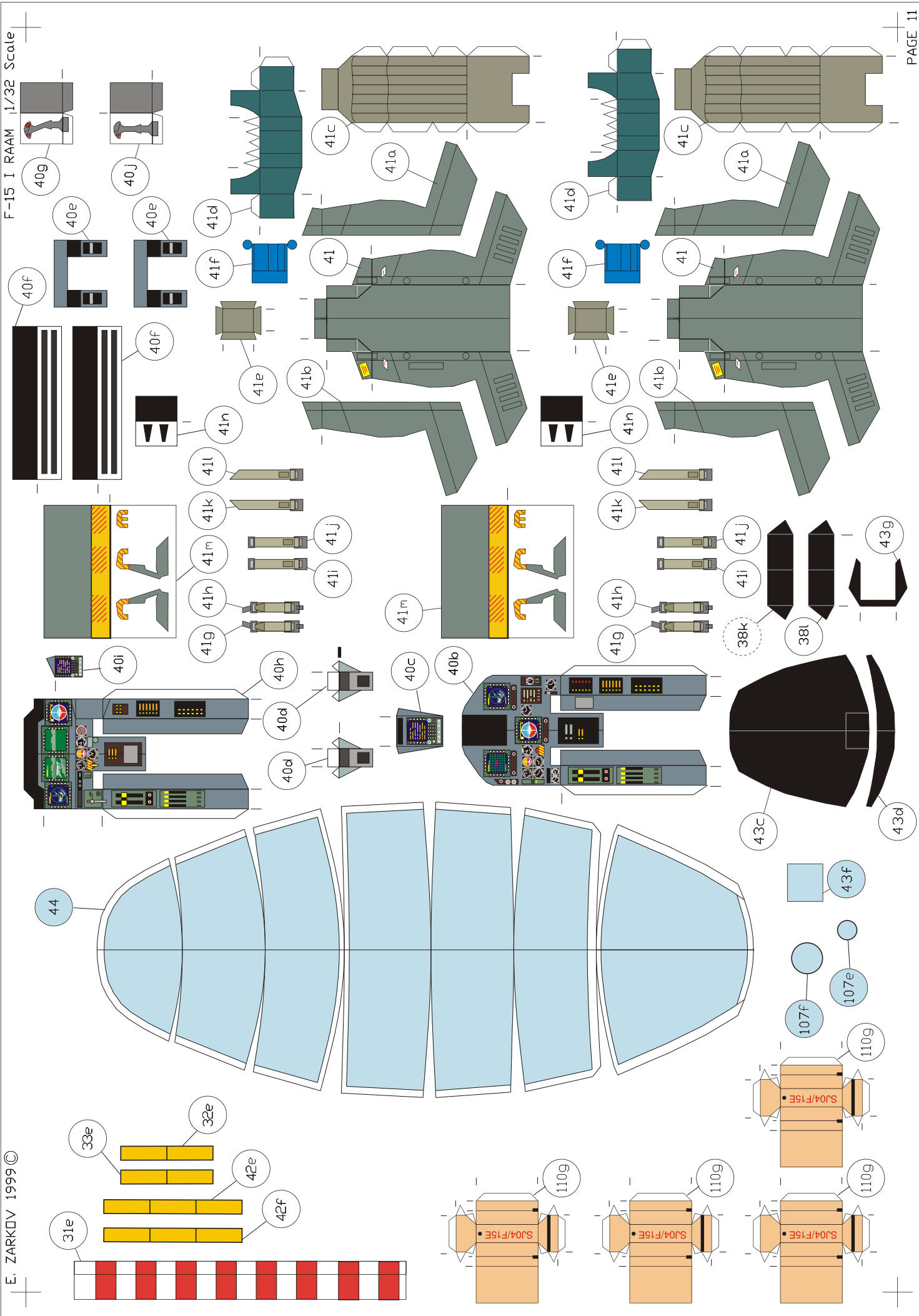


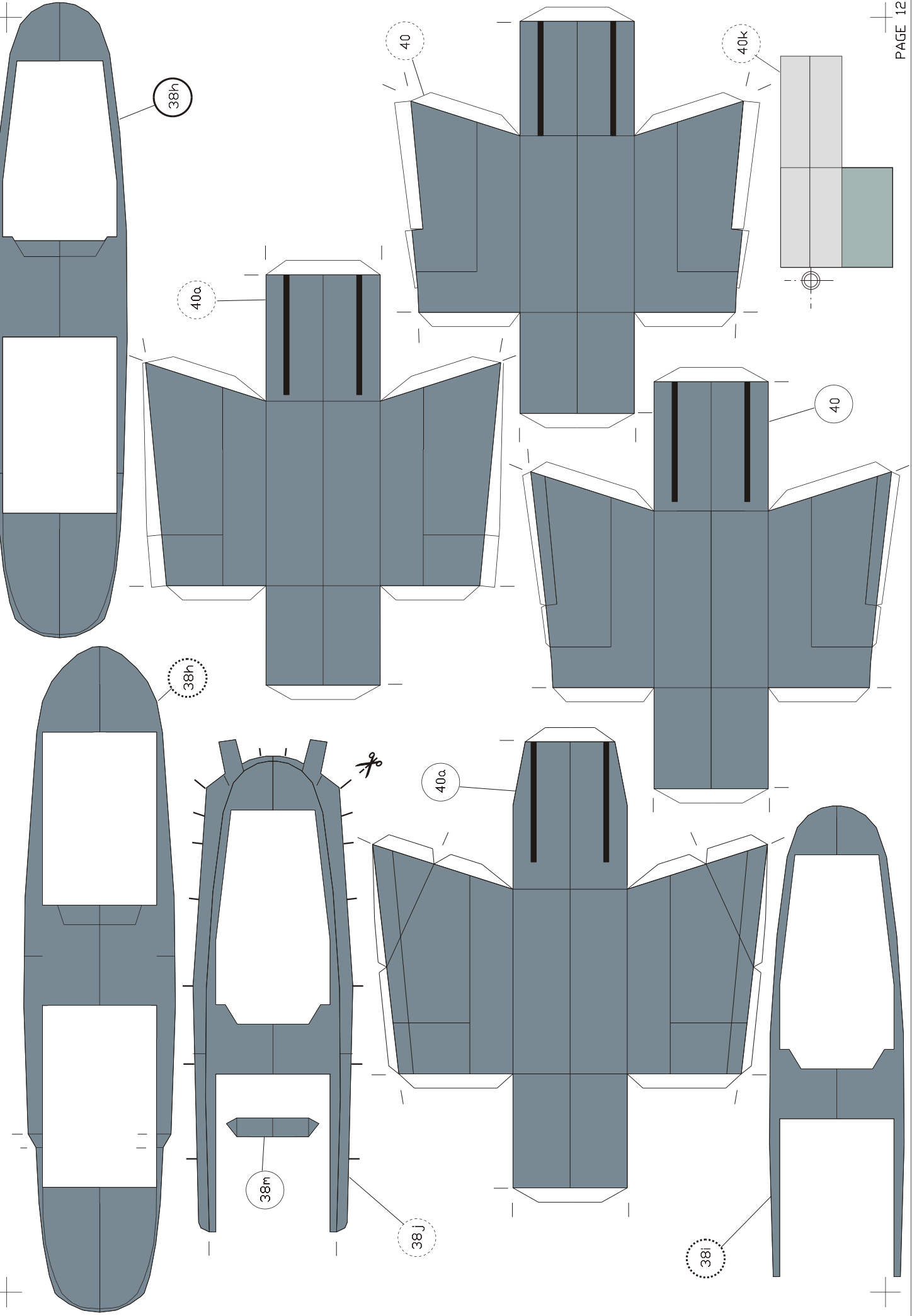
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CANOPY ASSEMBLY

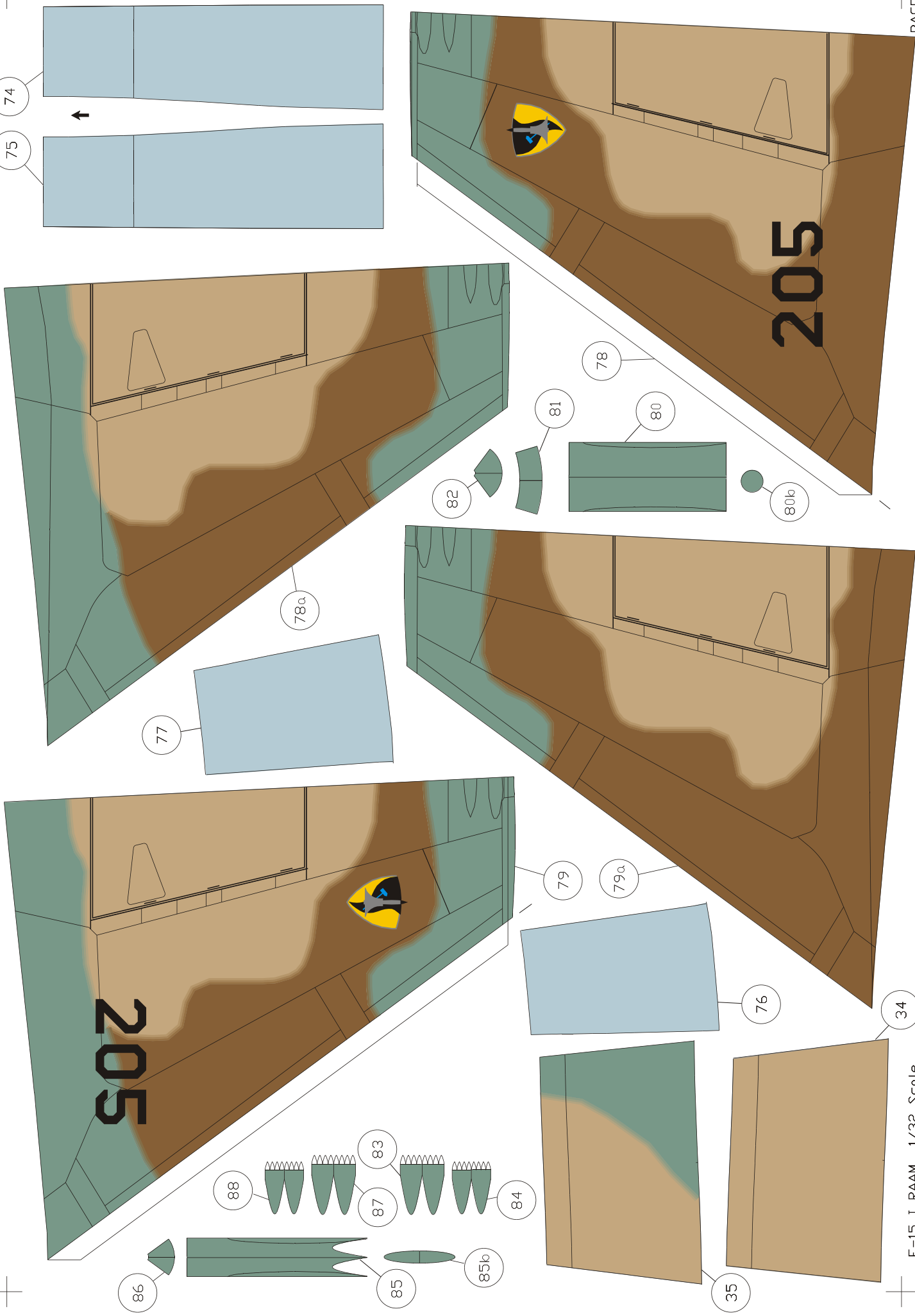


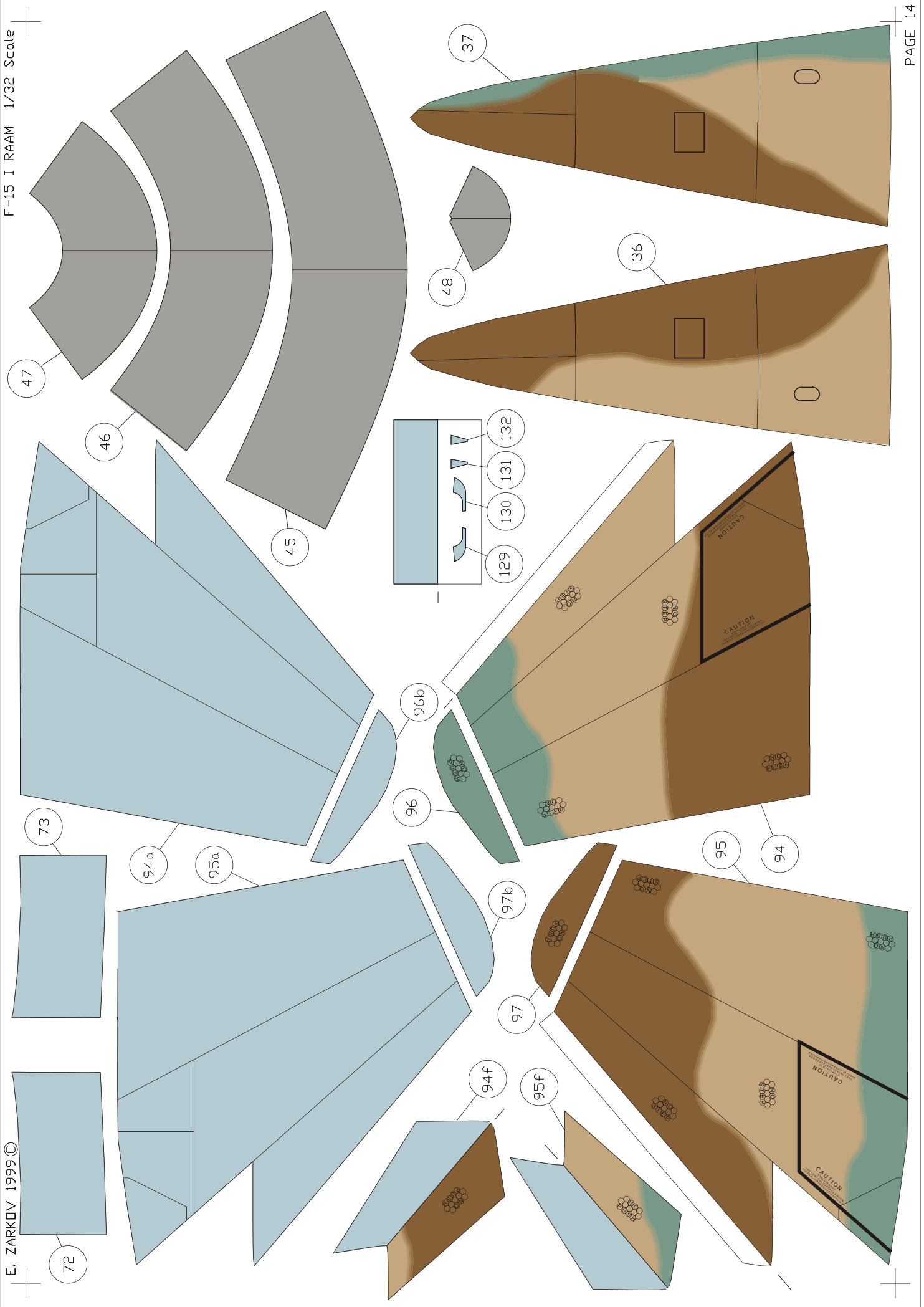


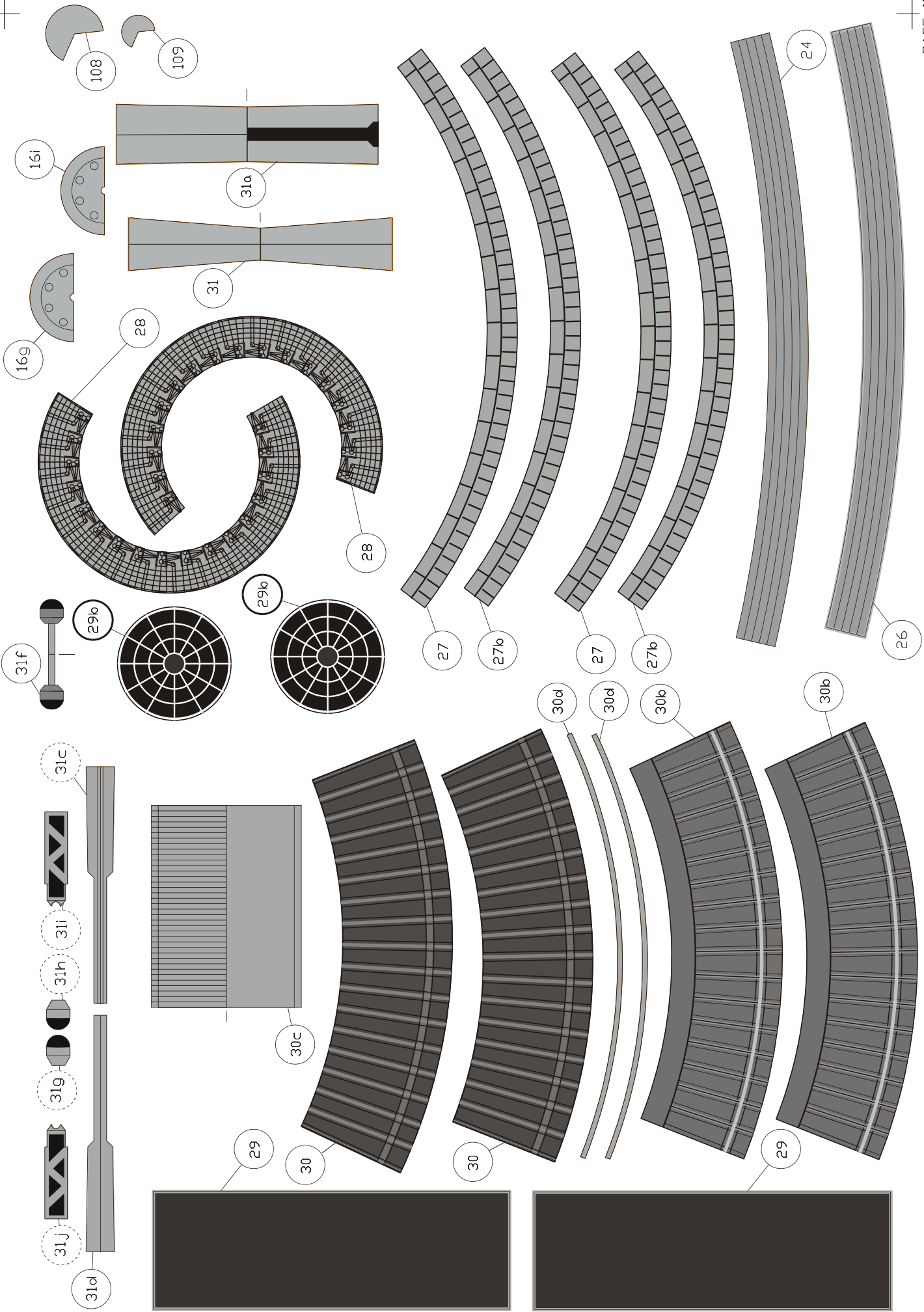


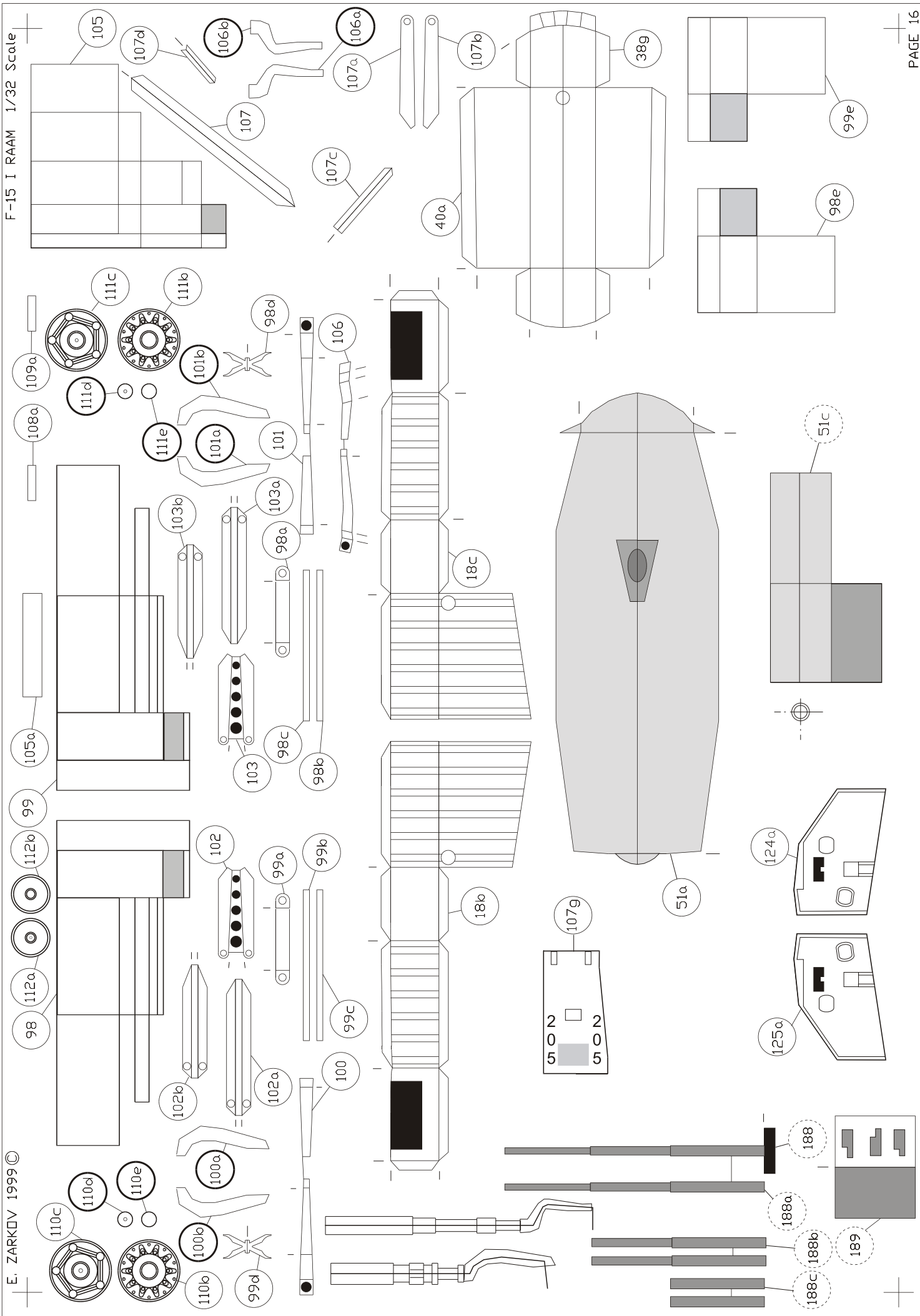


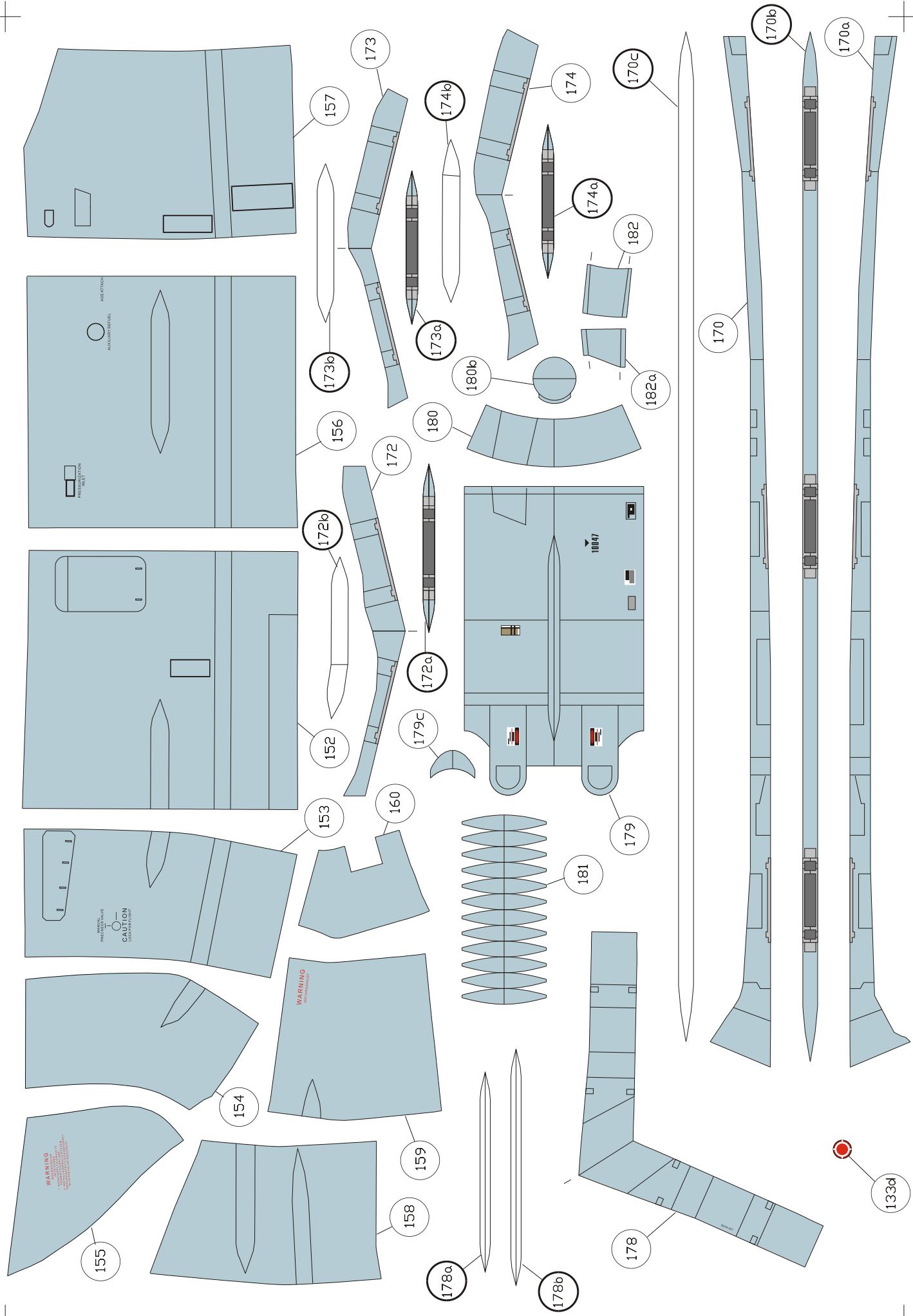




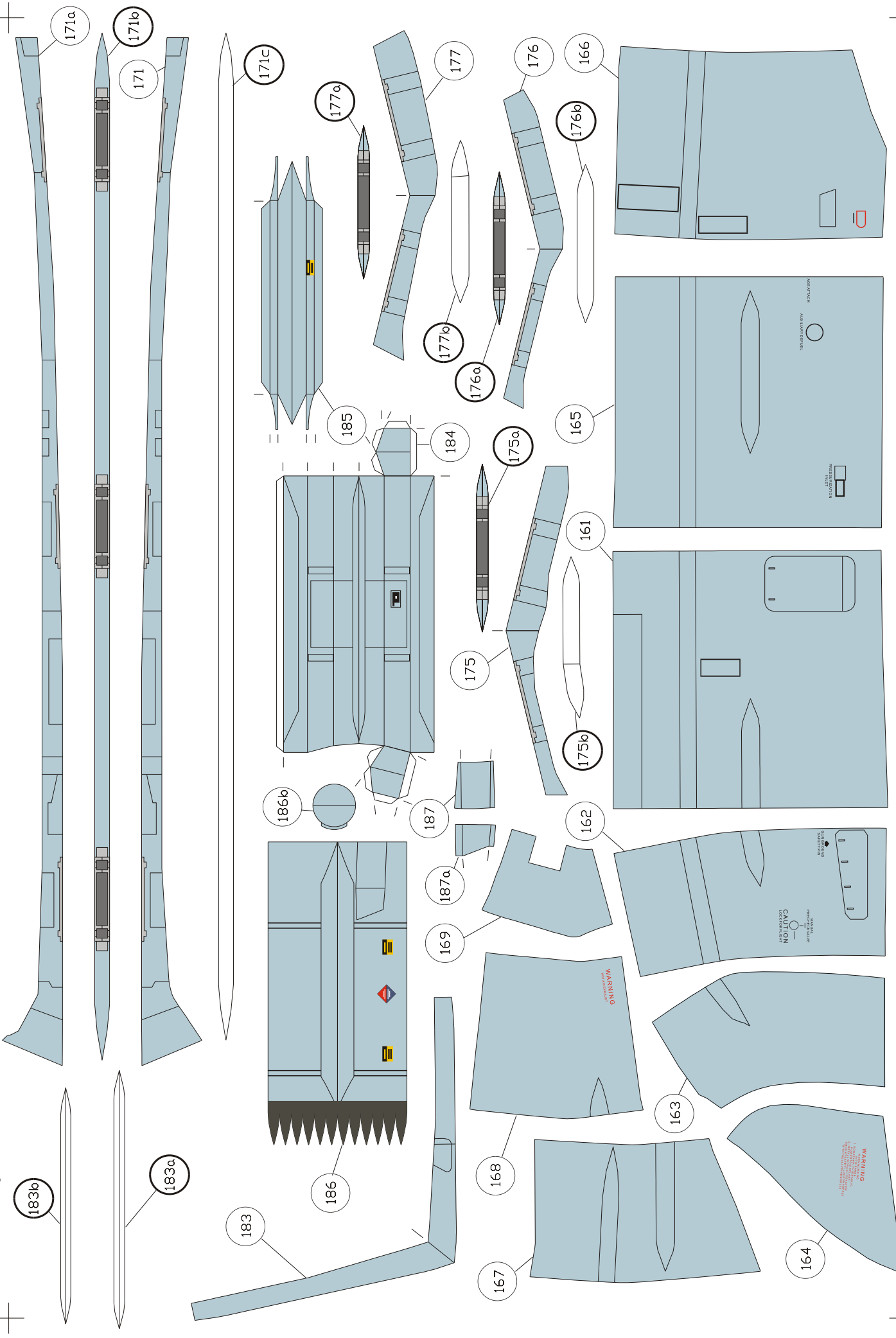


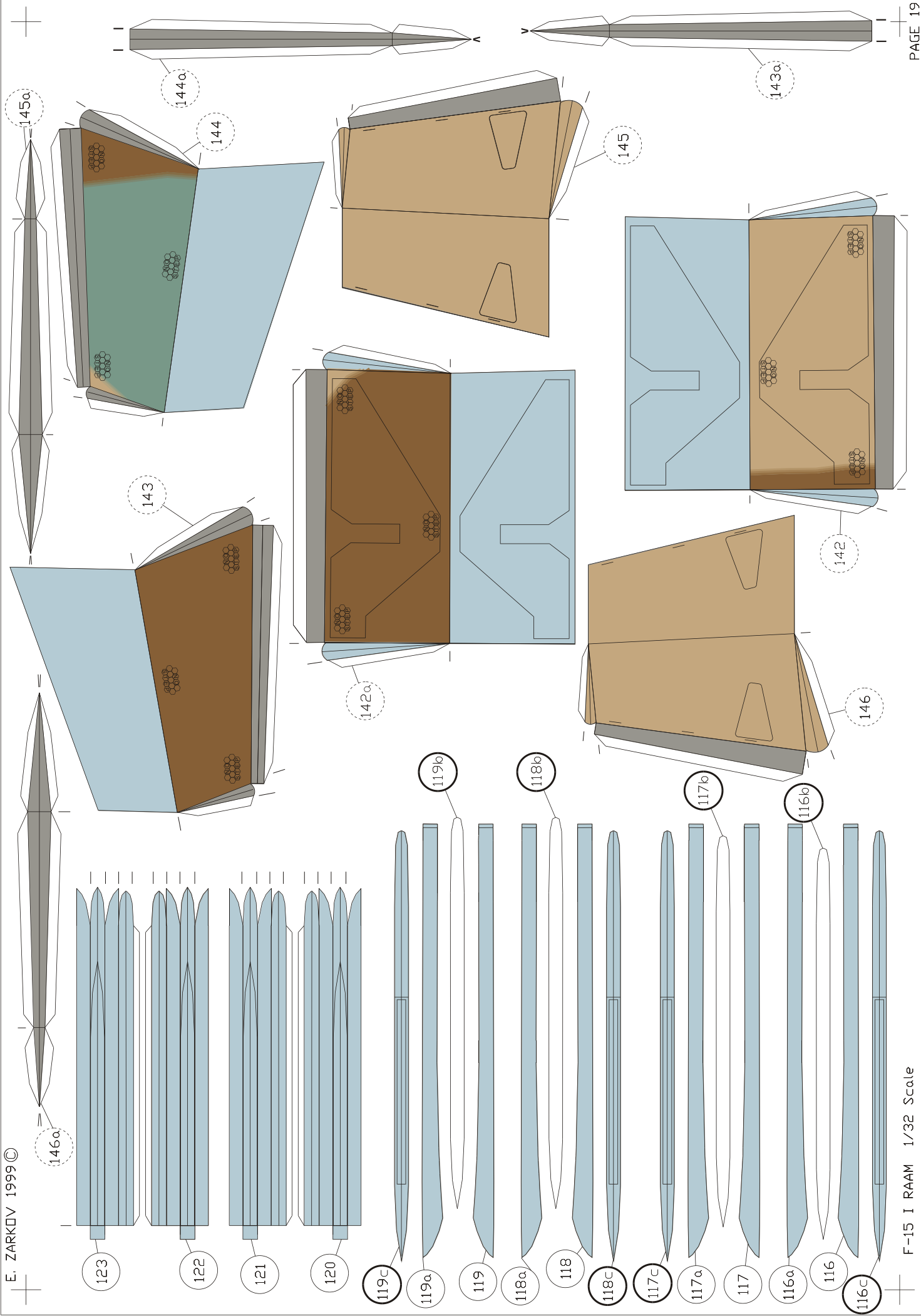


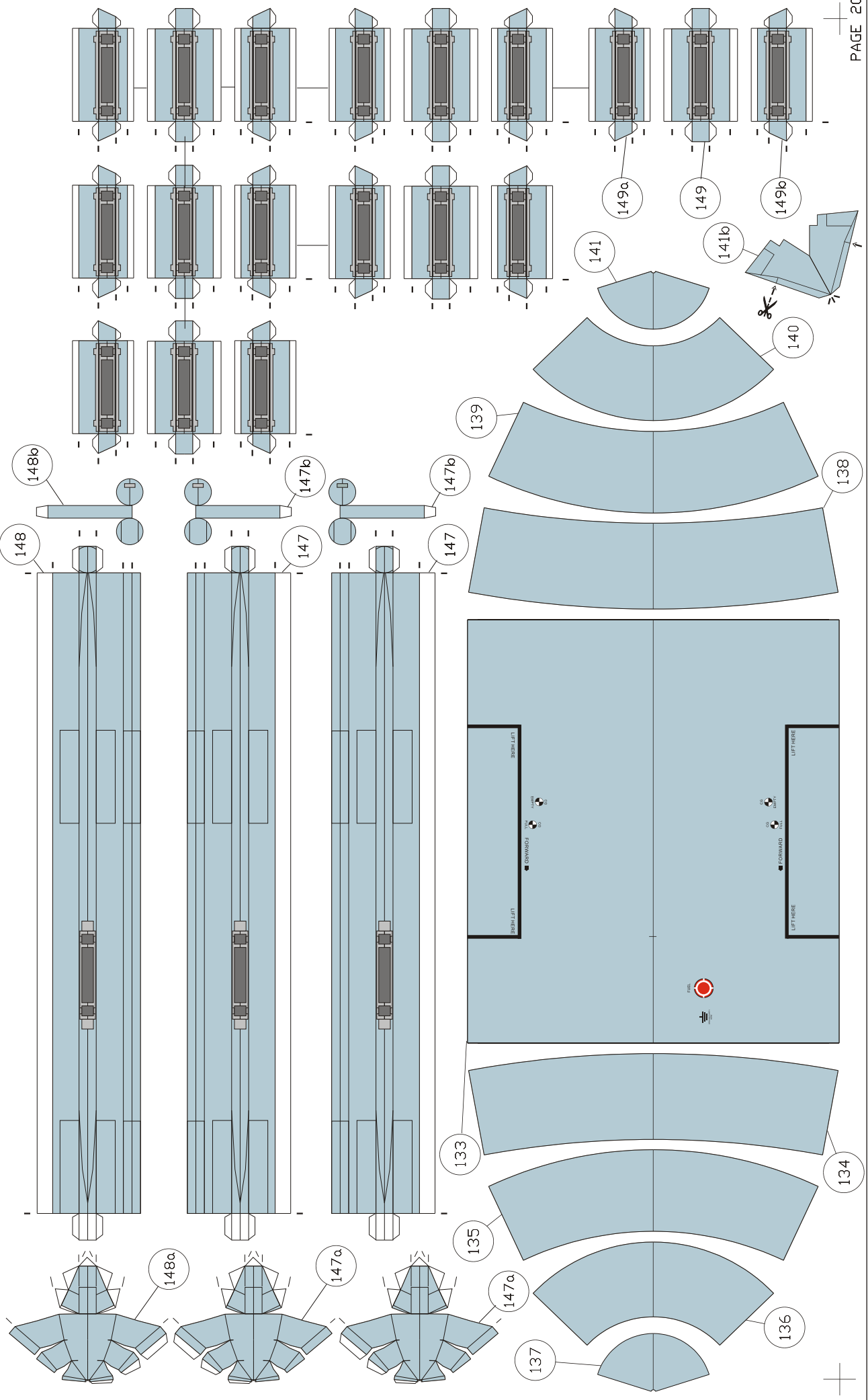
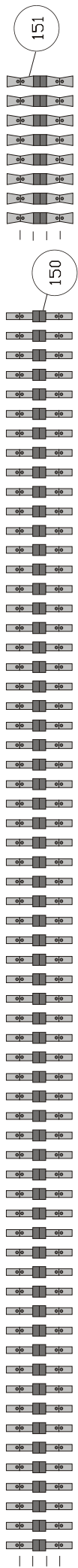


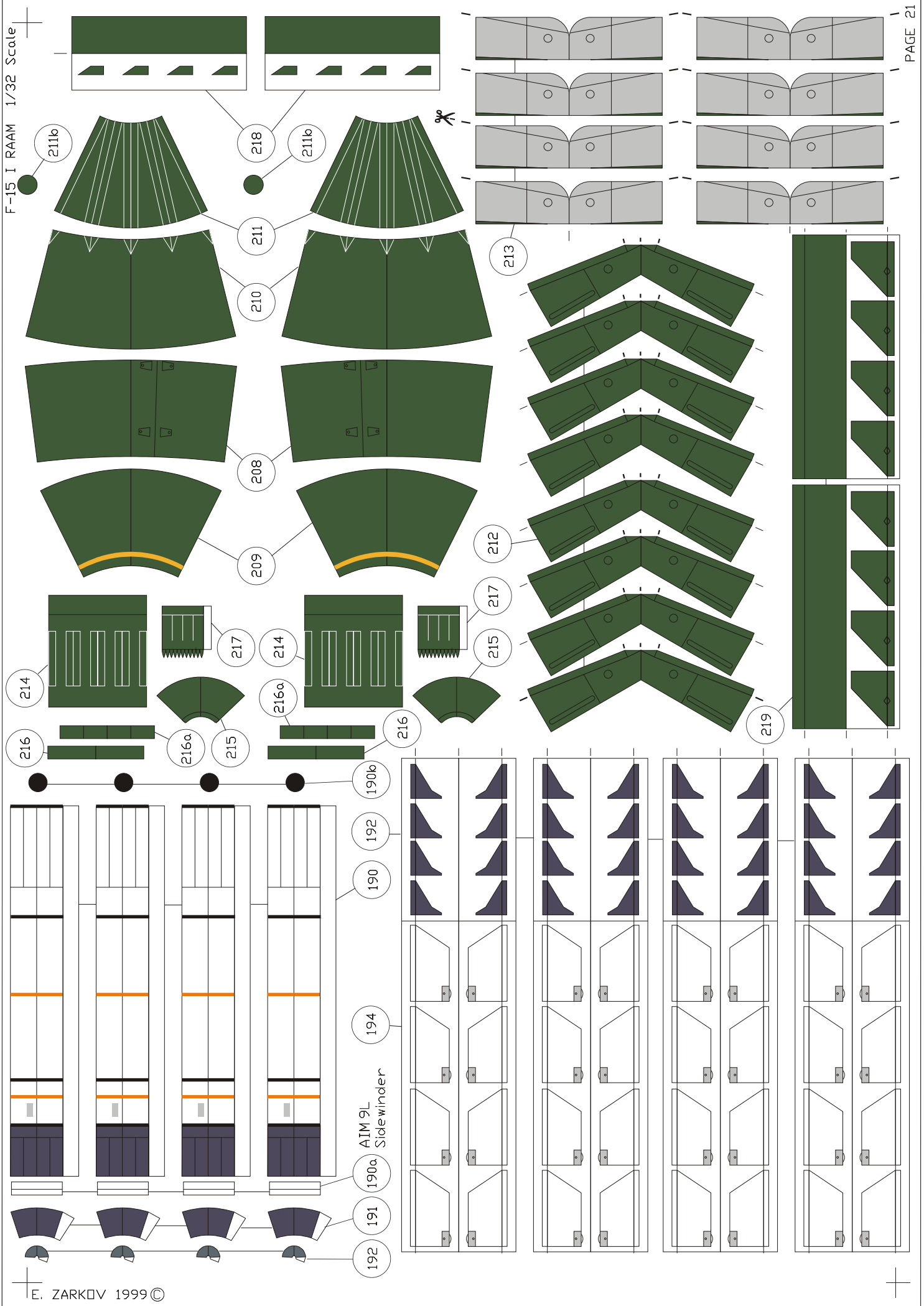


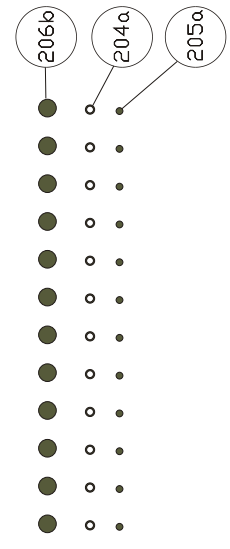
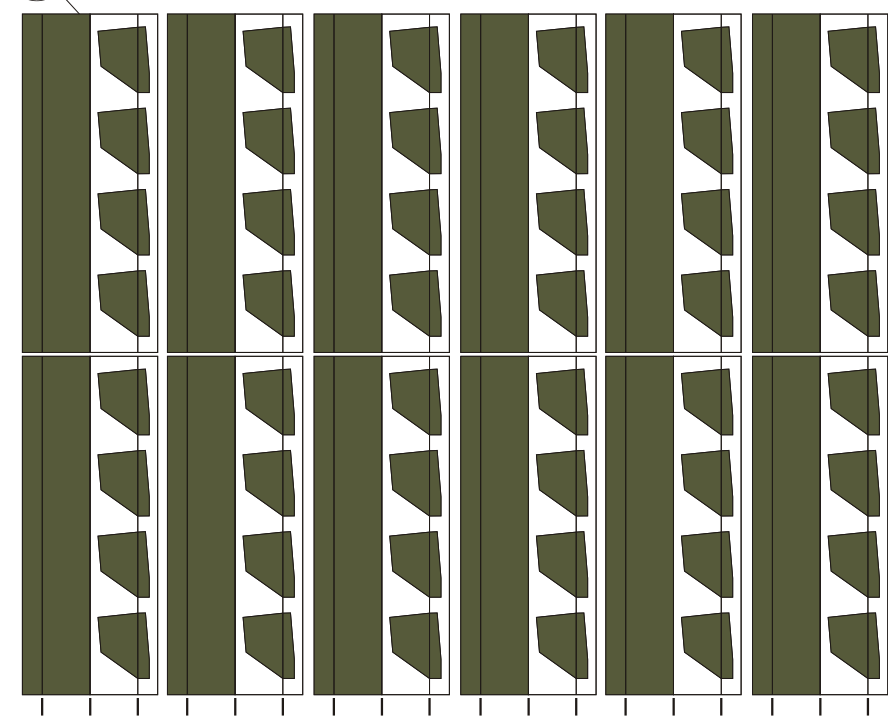
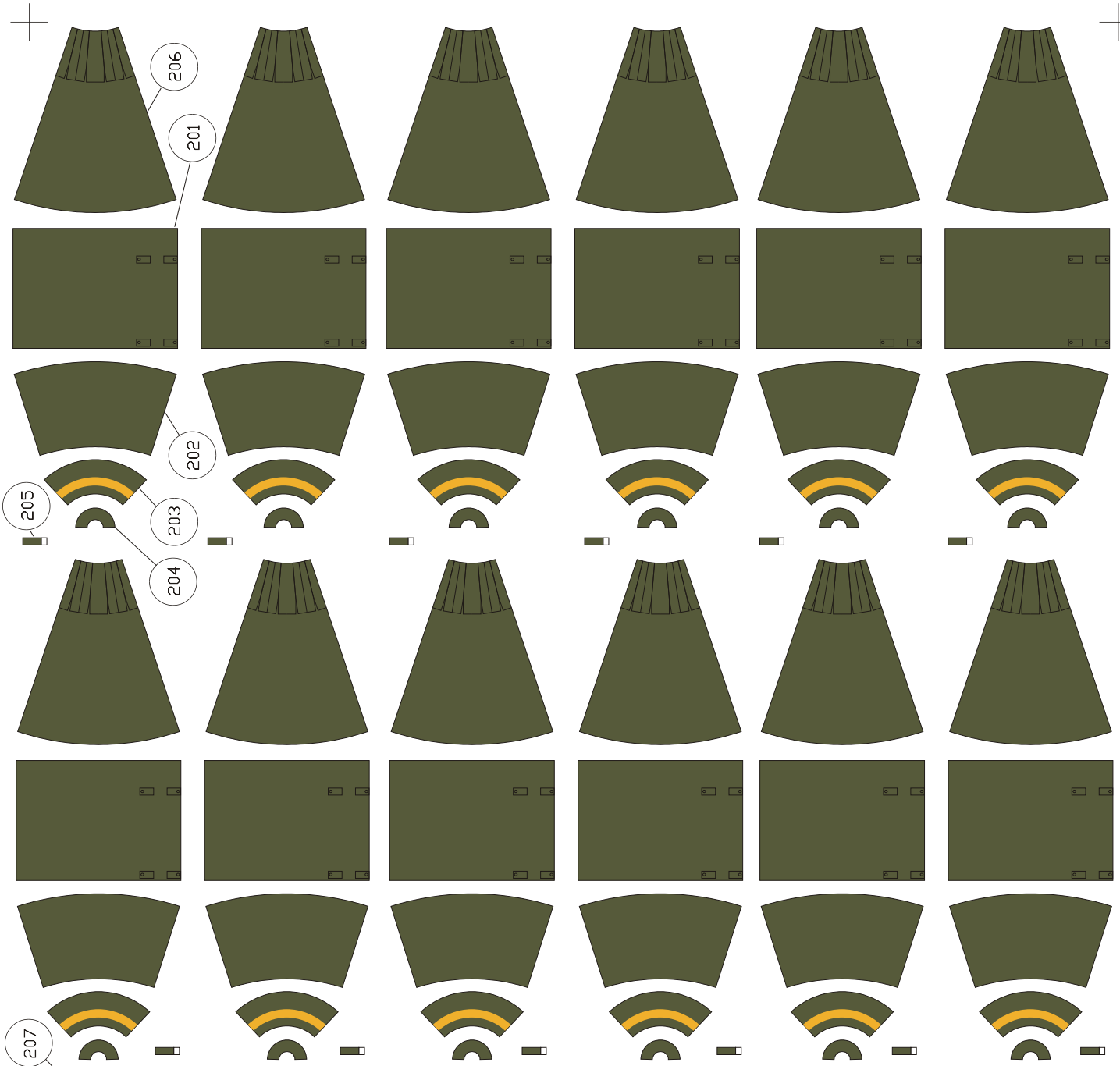


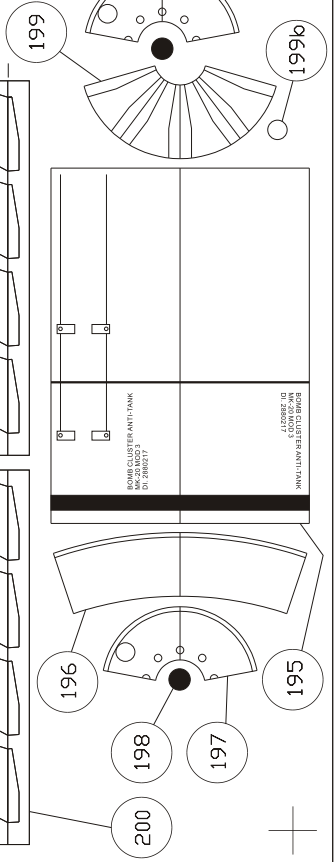
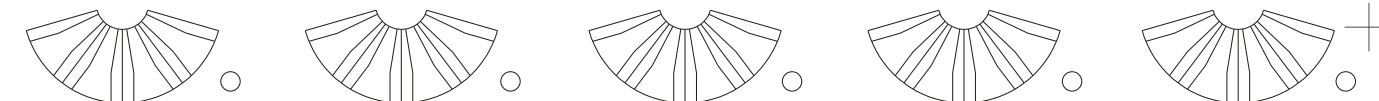
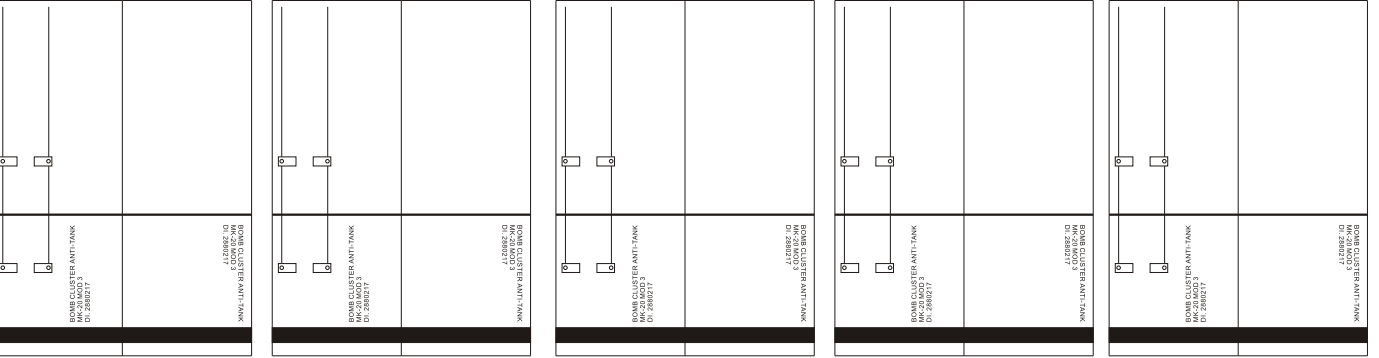
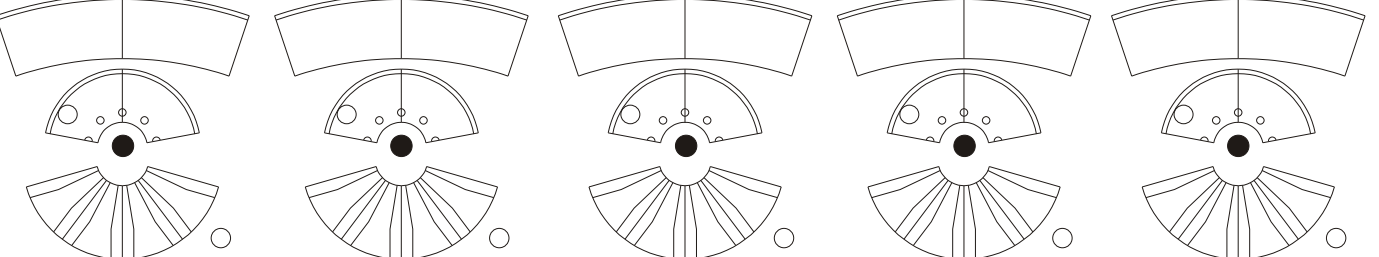
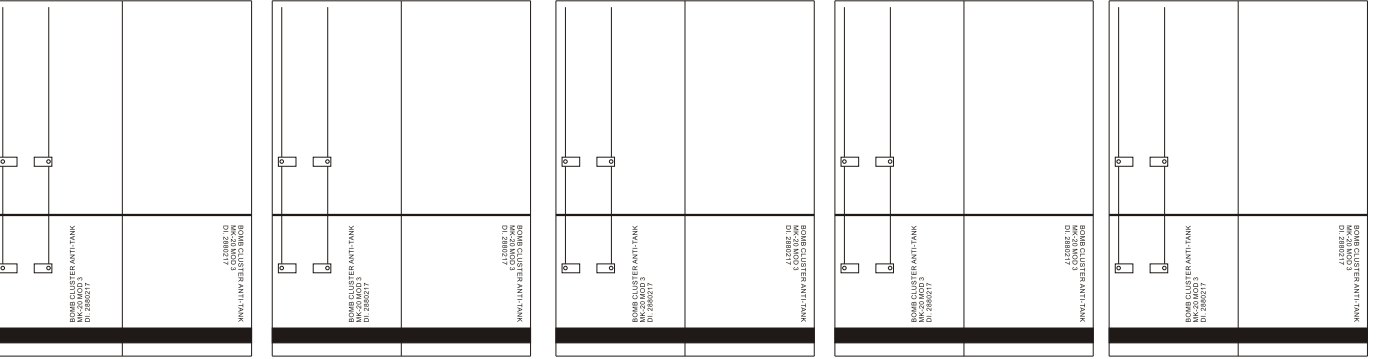
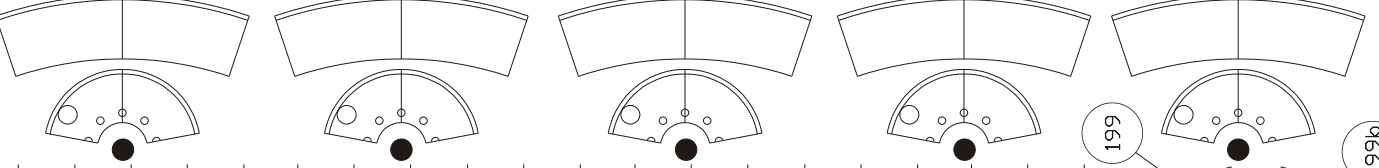
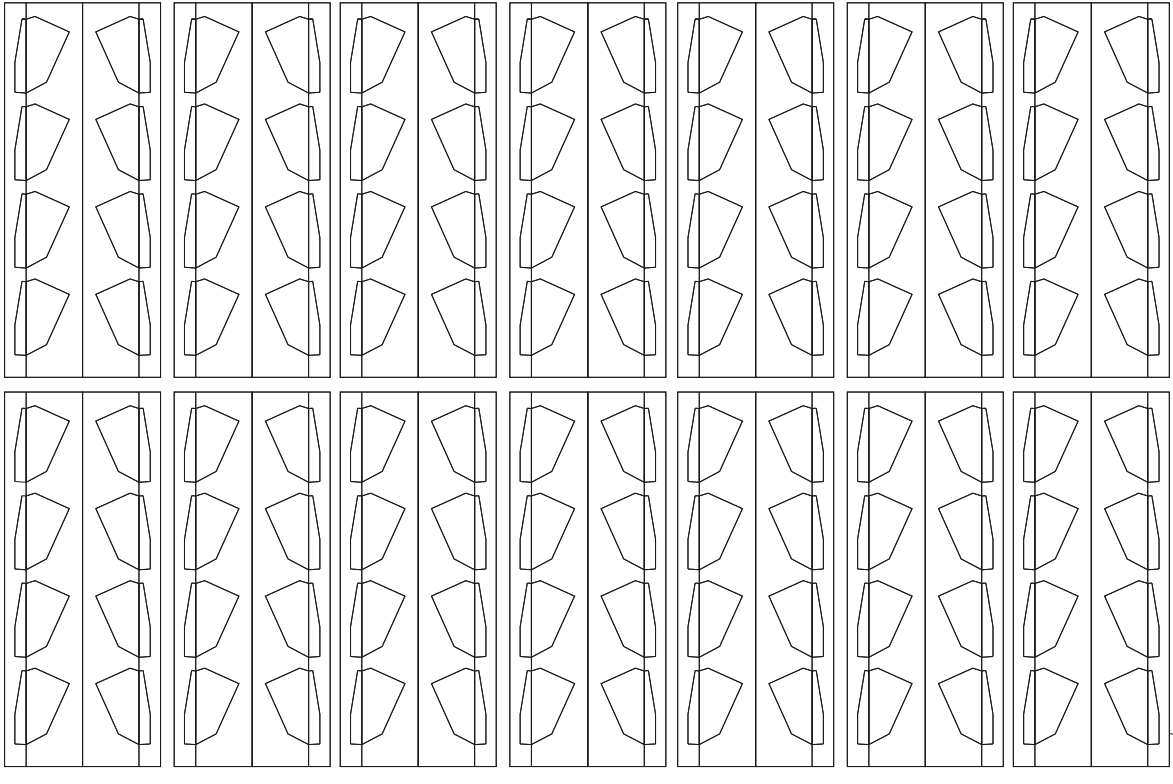


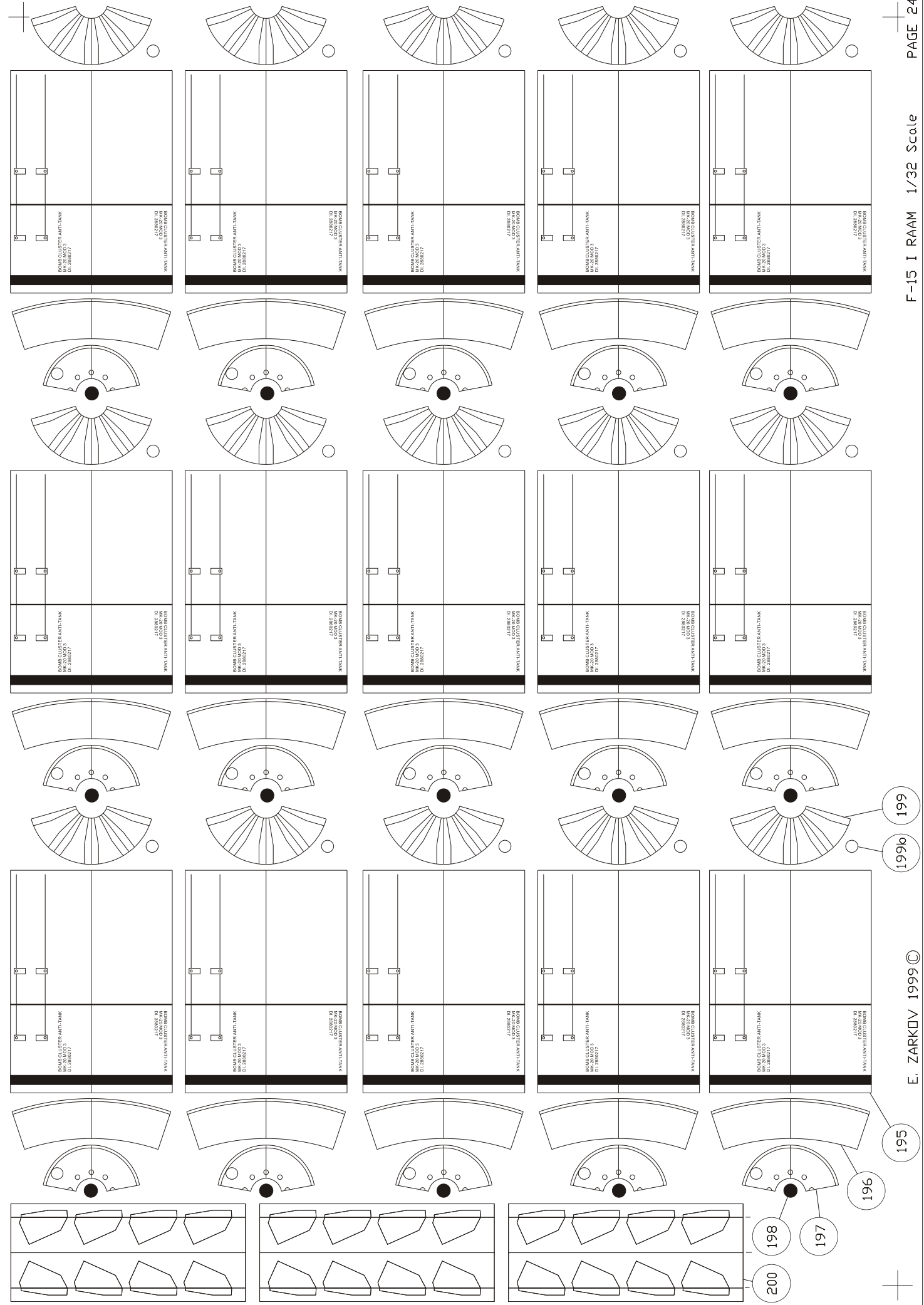


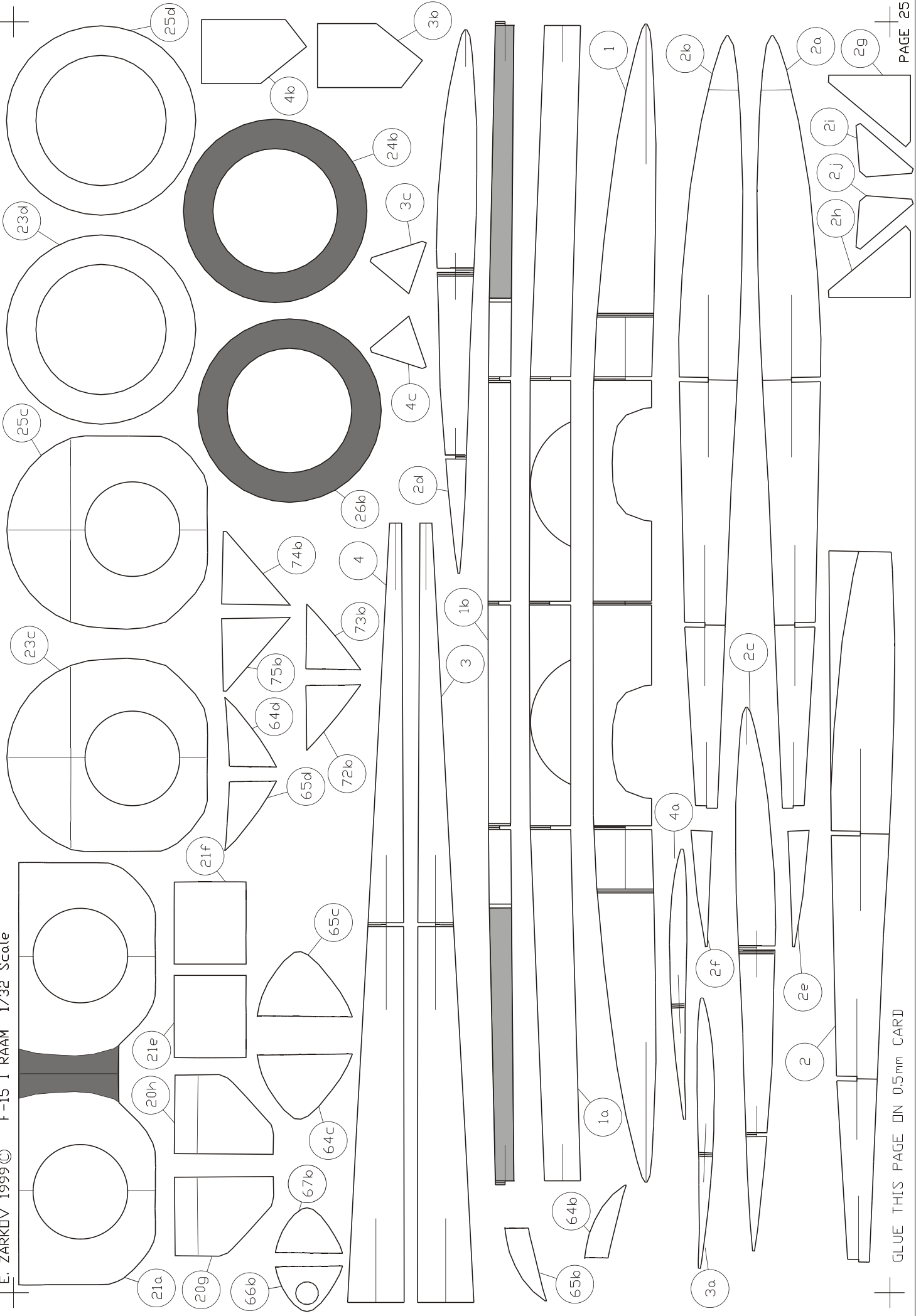






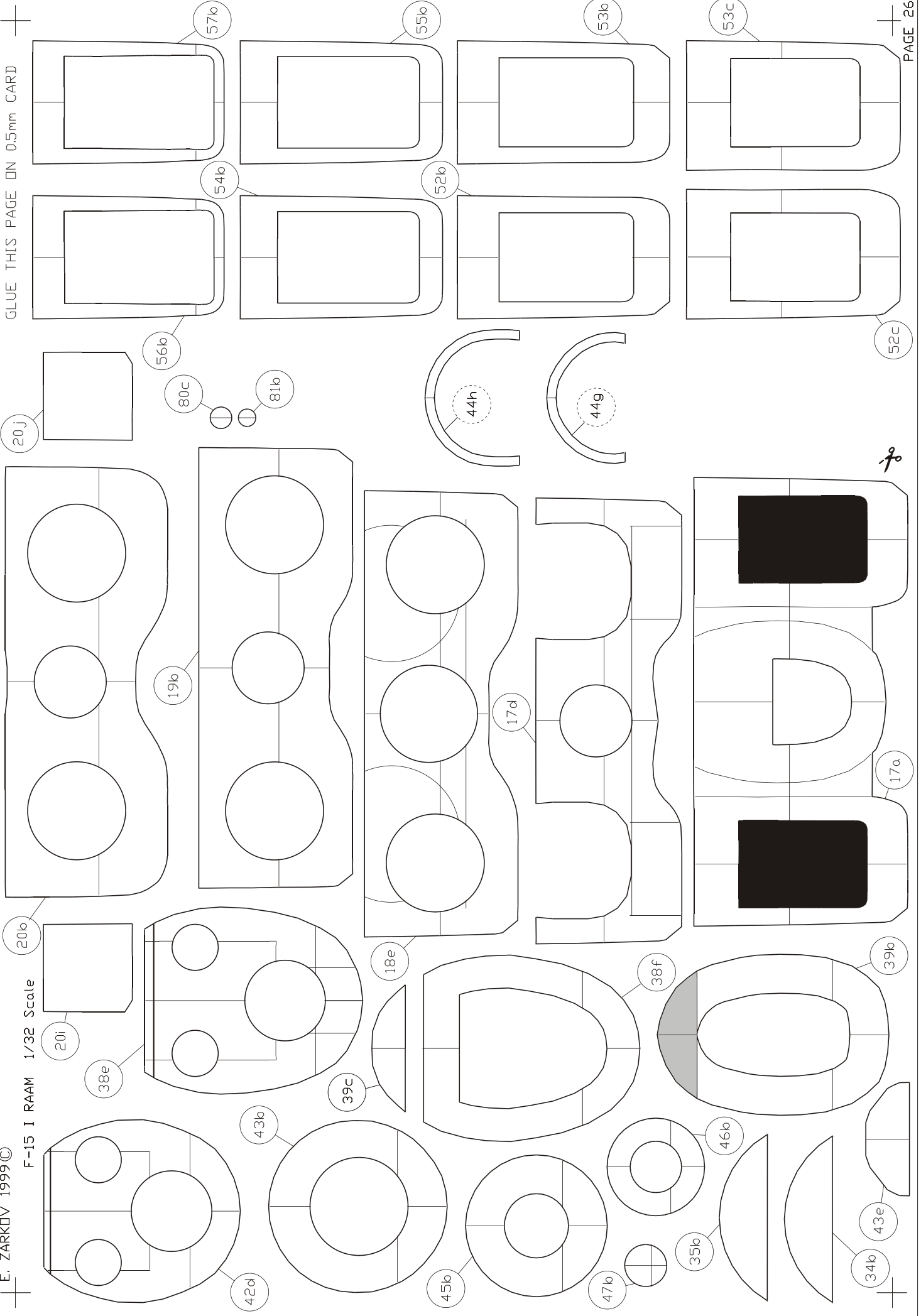






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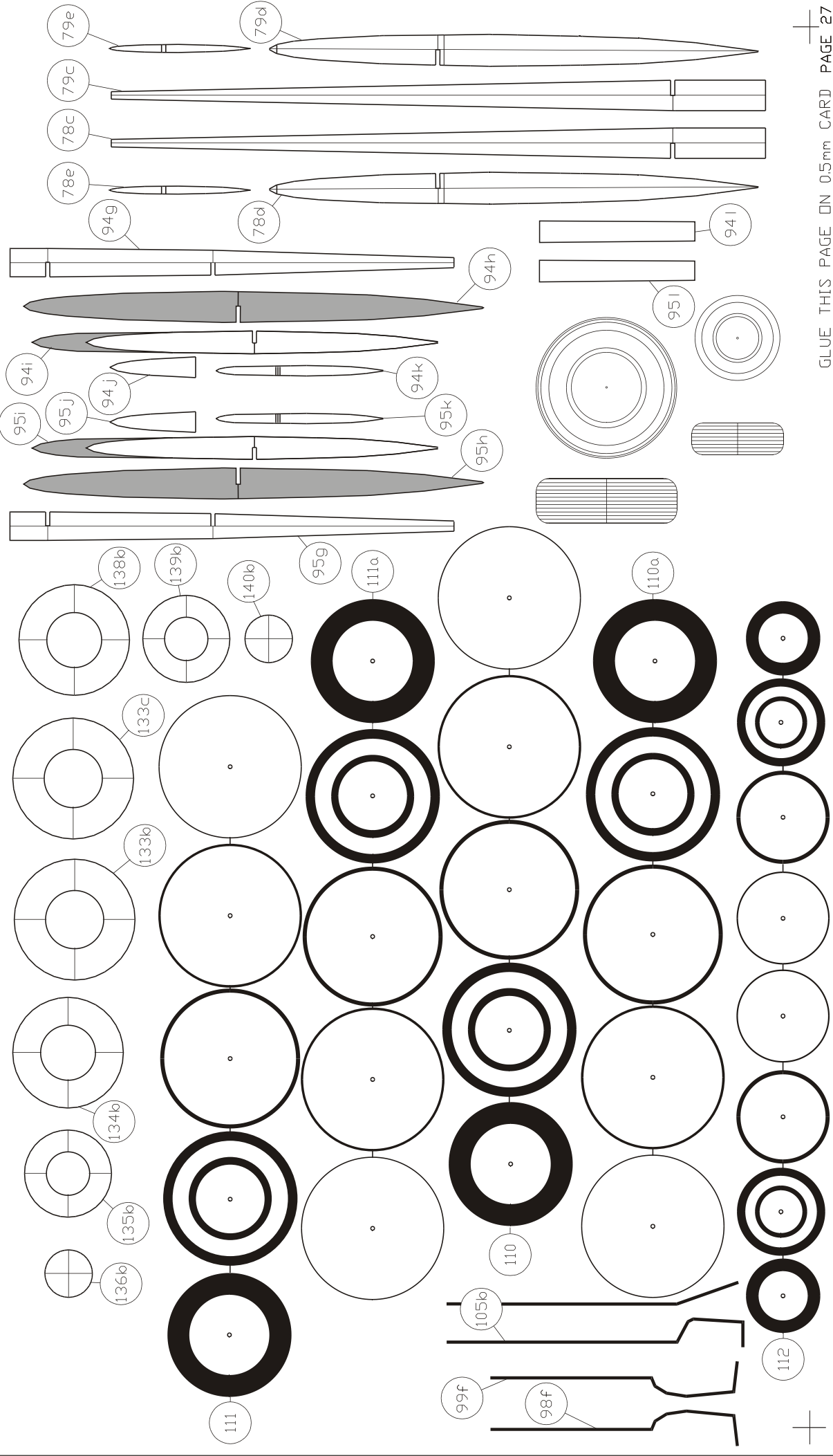




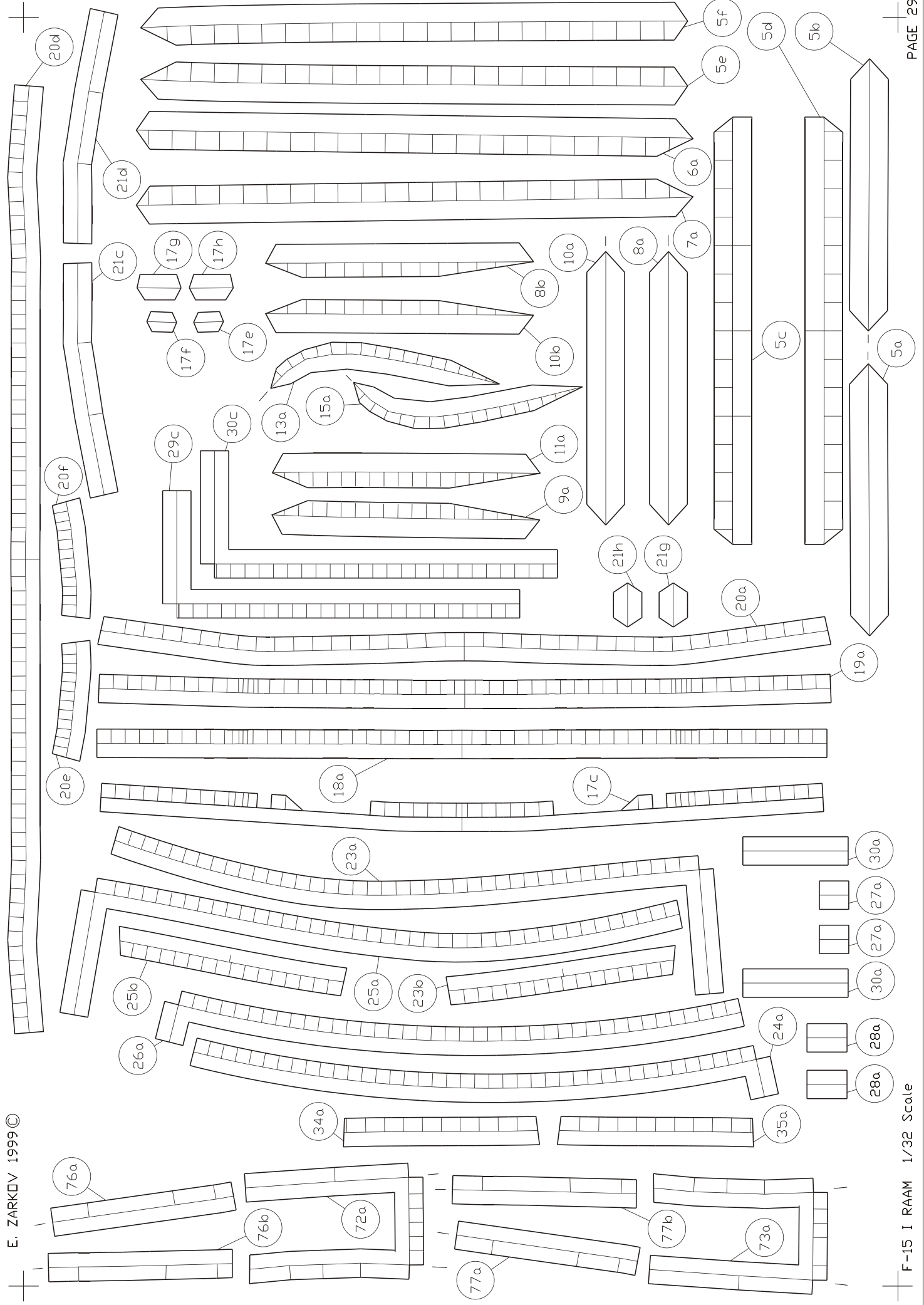
42 38 39 39 L M 17B 18

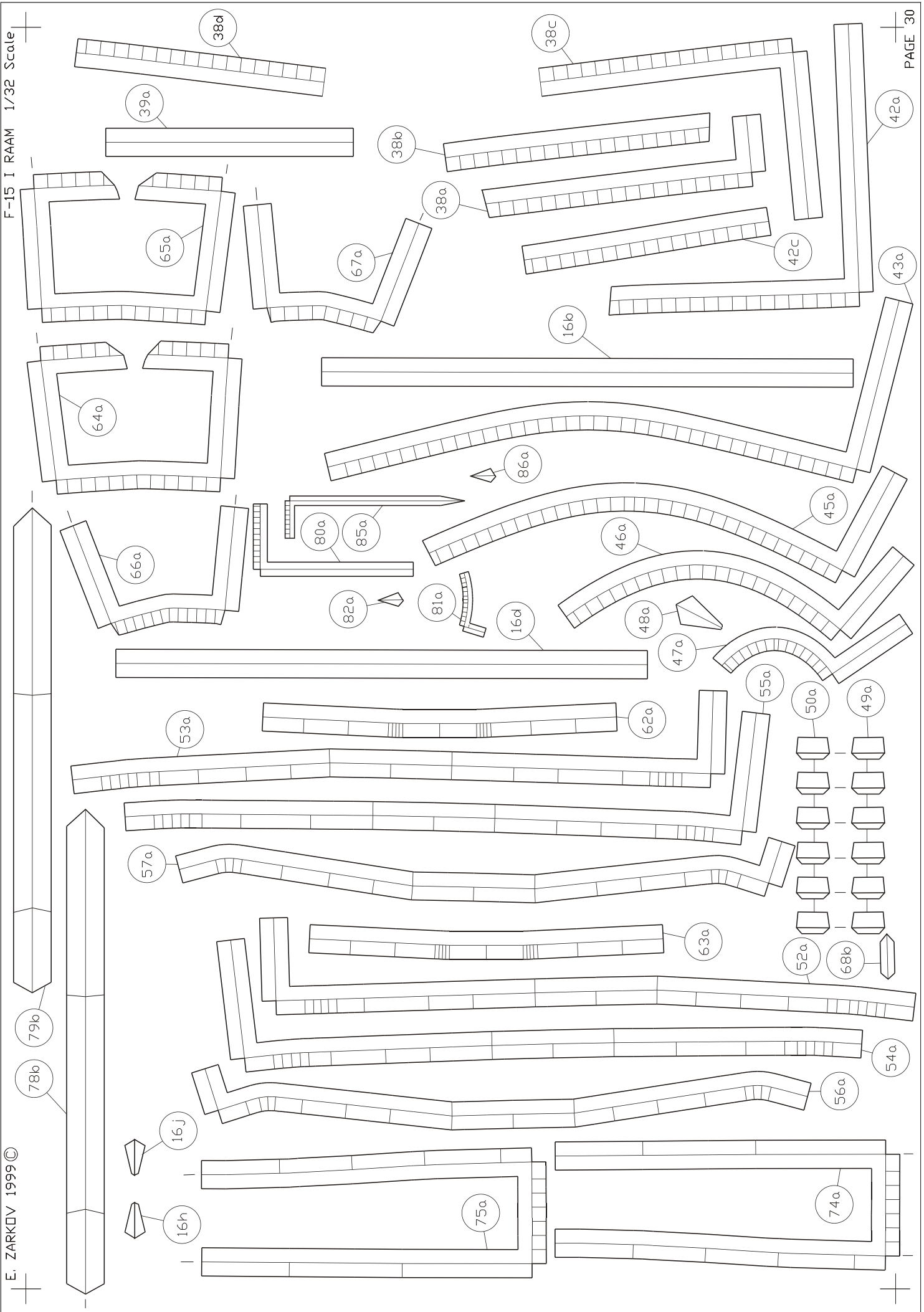
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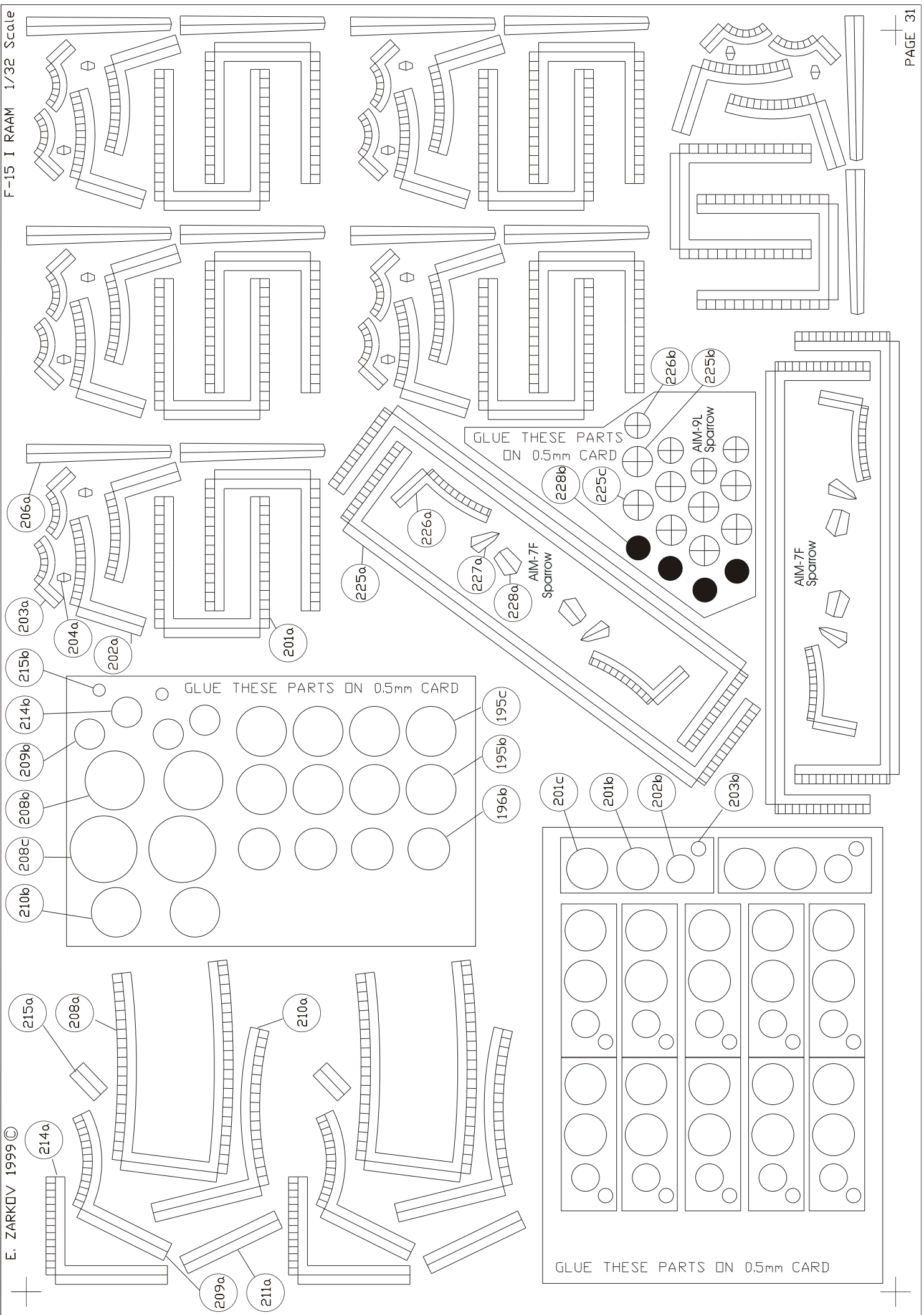
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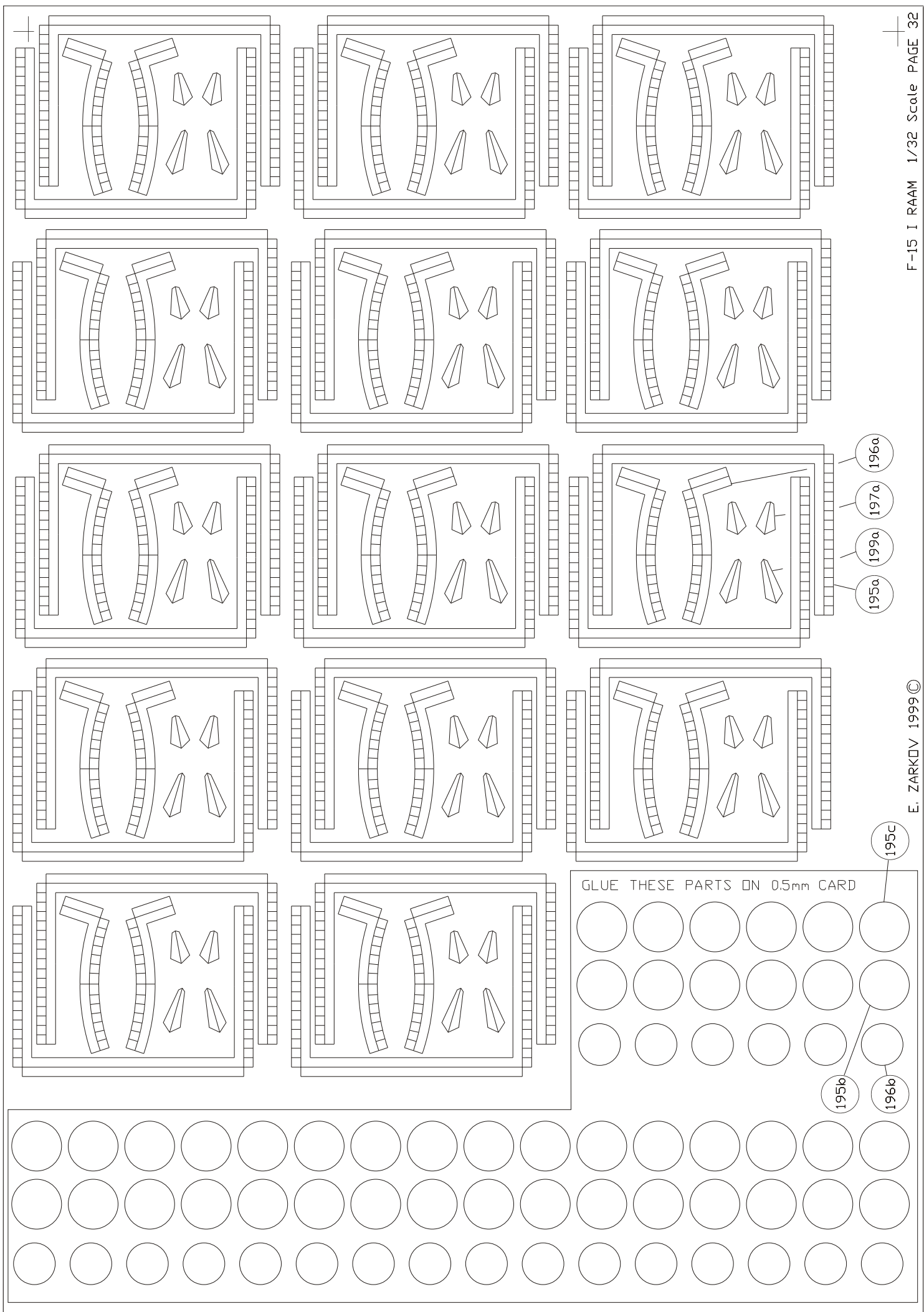












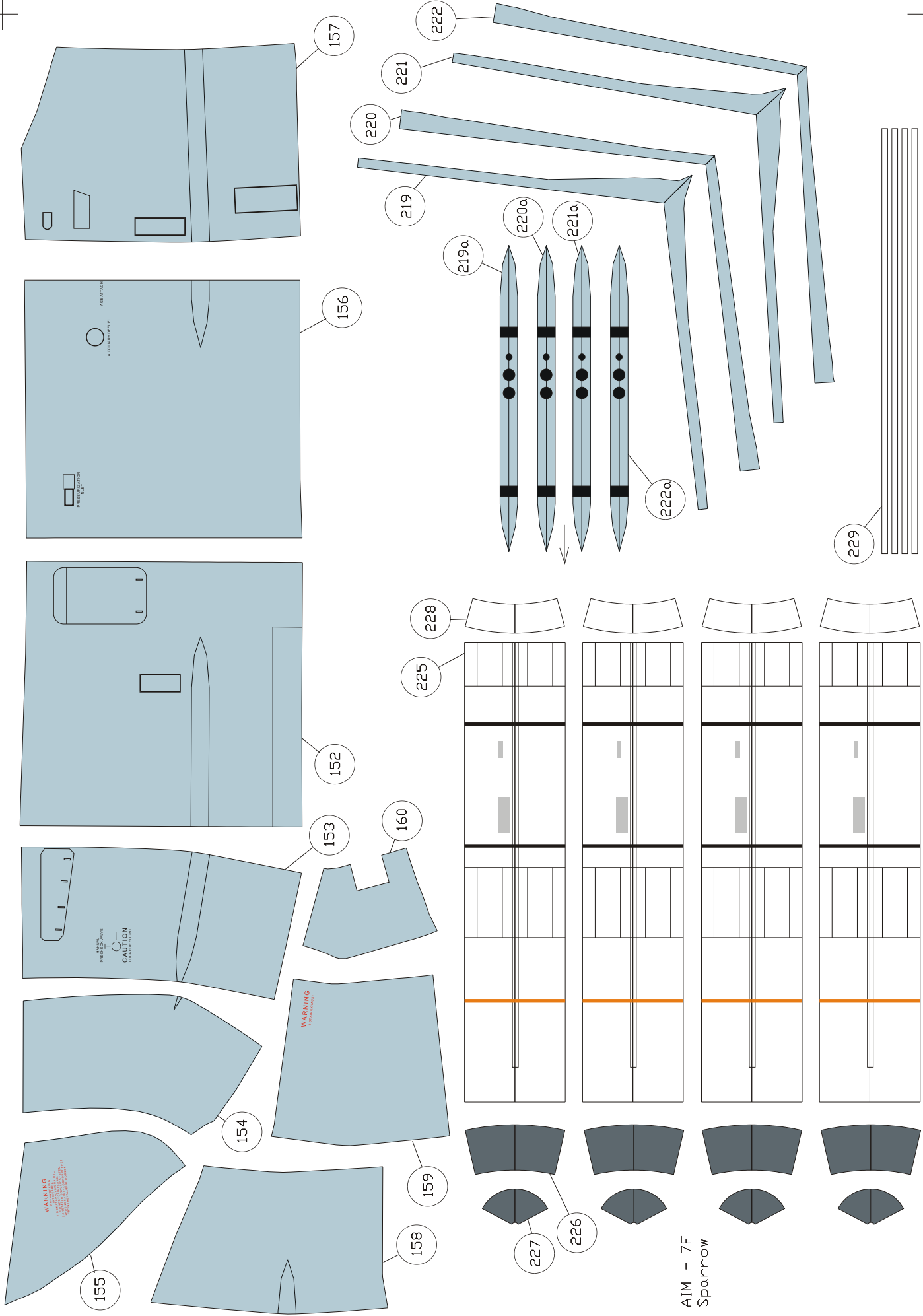
195a  
195b  
195c  
196a  
196b

GLUE THESE PARTS ON 0.5mm CARD

195c

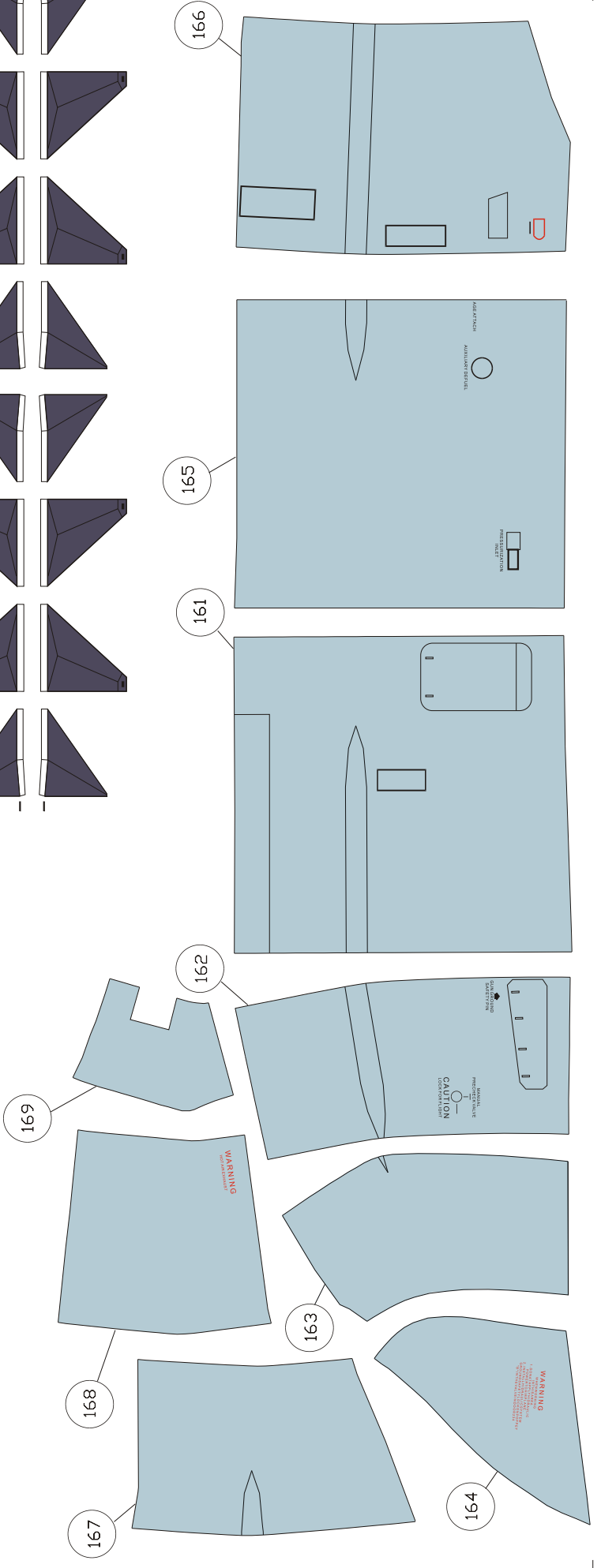
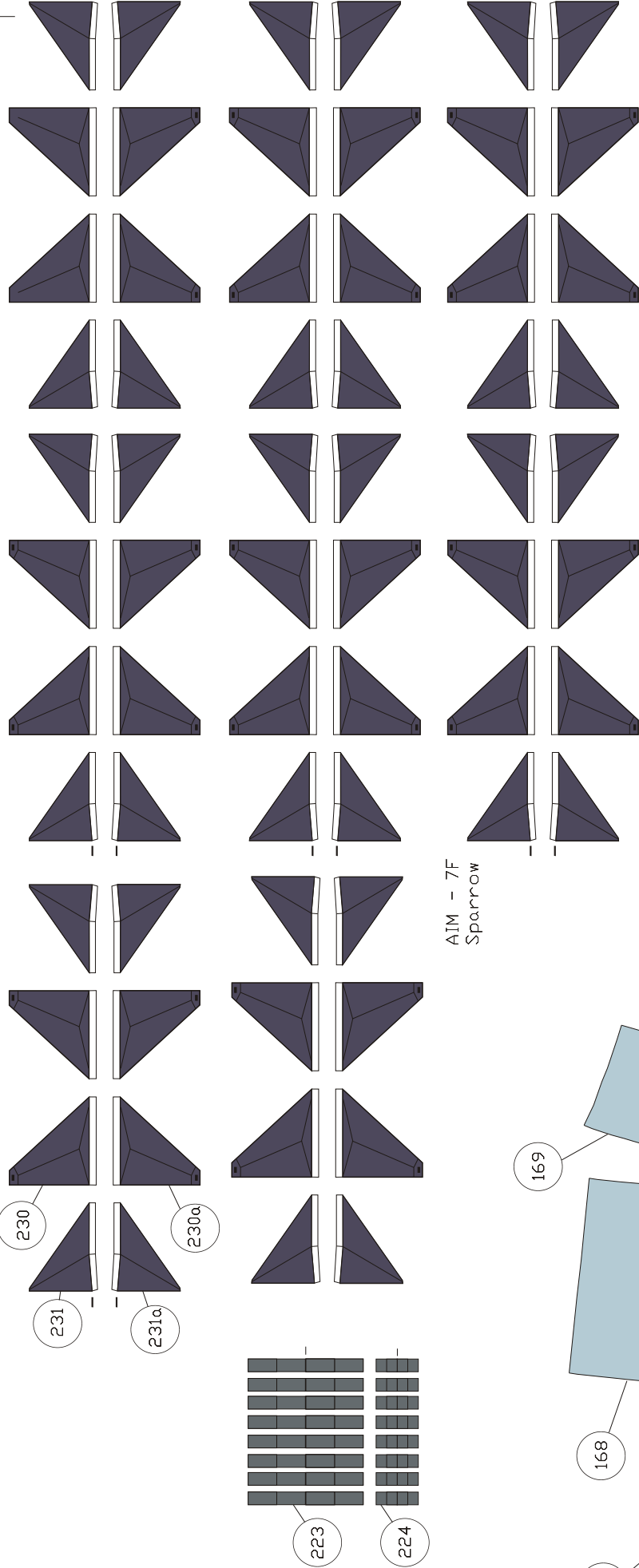
195b

196b

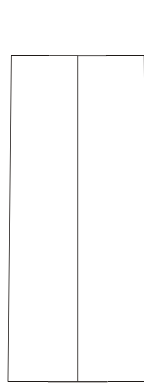
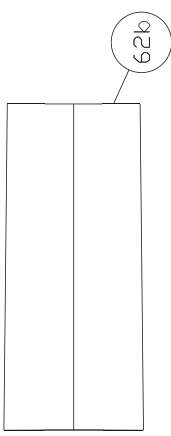
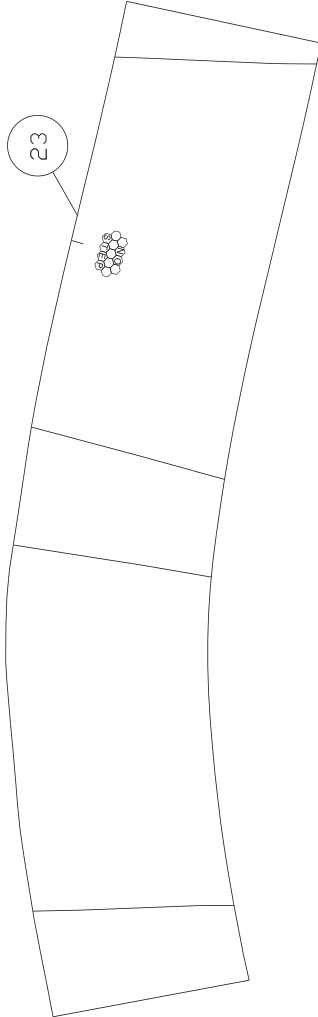
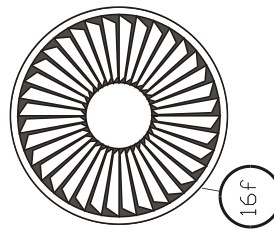
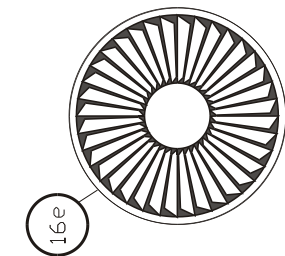
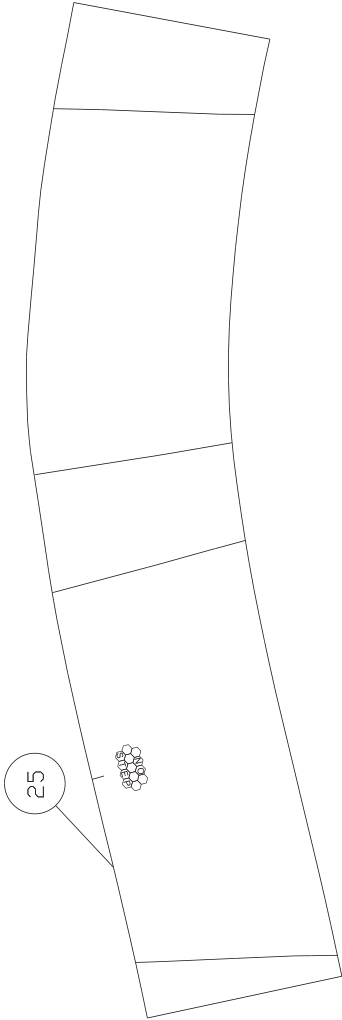
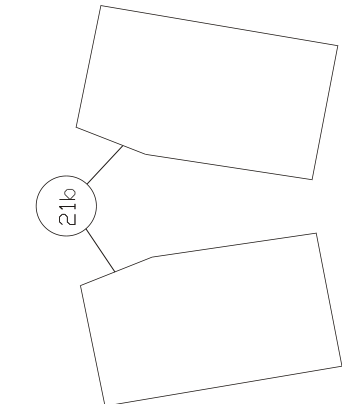


AIM - 7F Sparrow

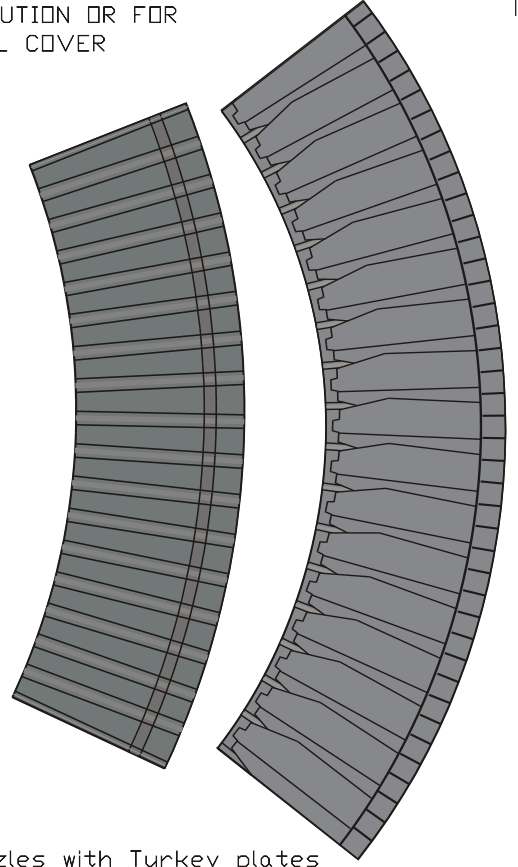
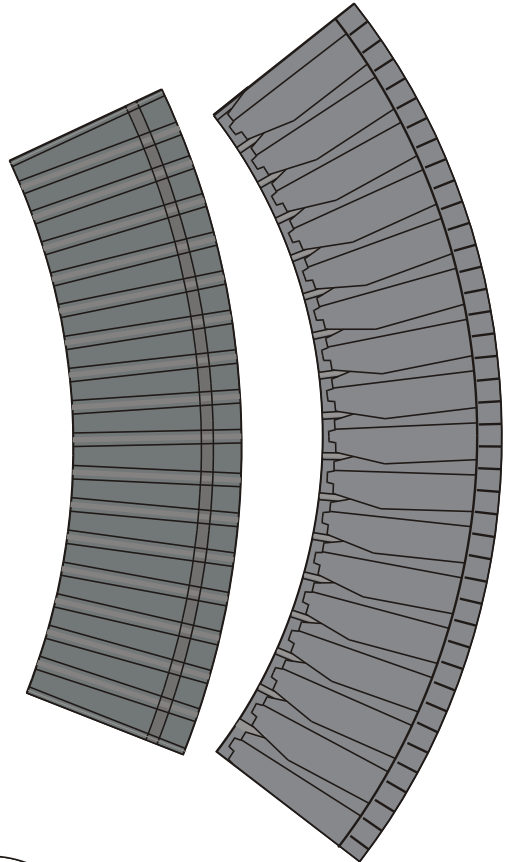




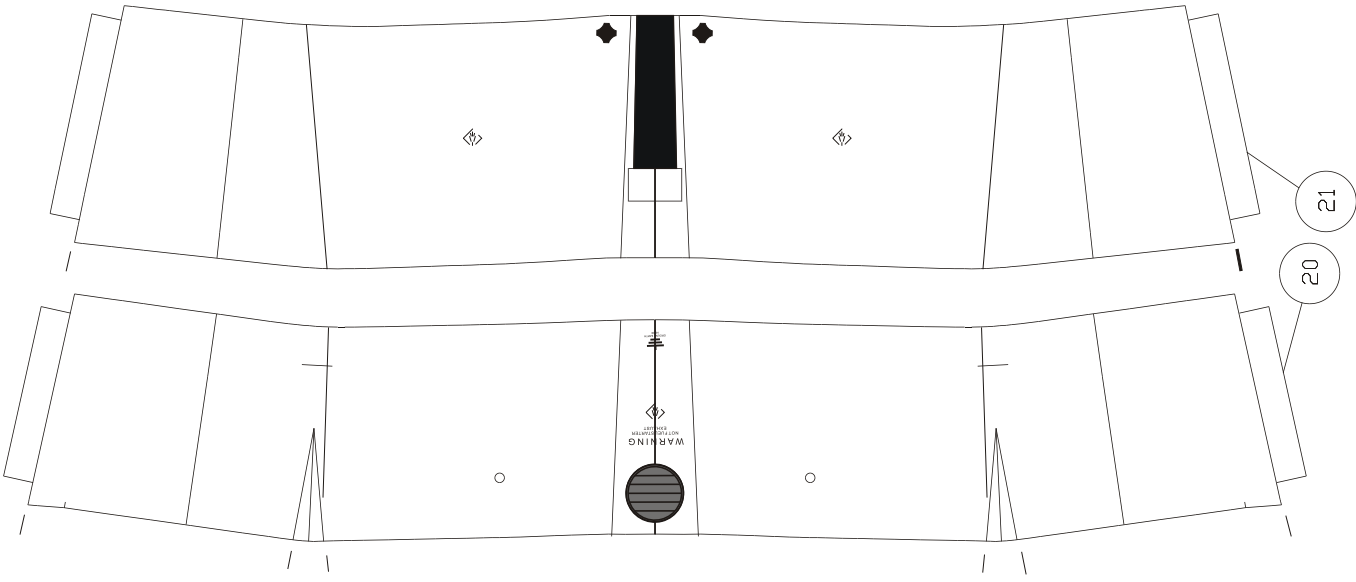
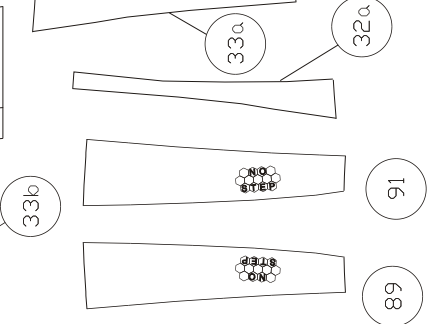
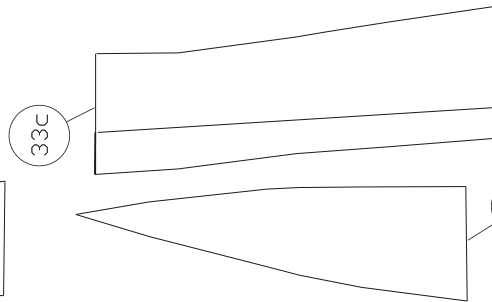
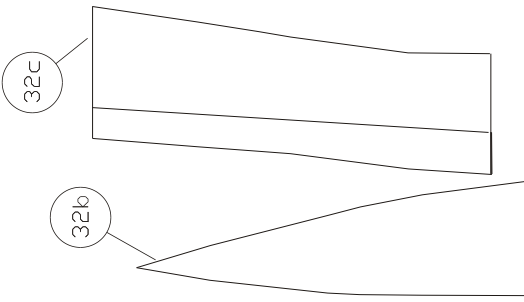
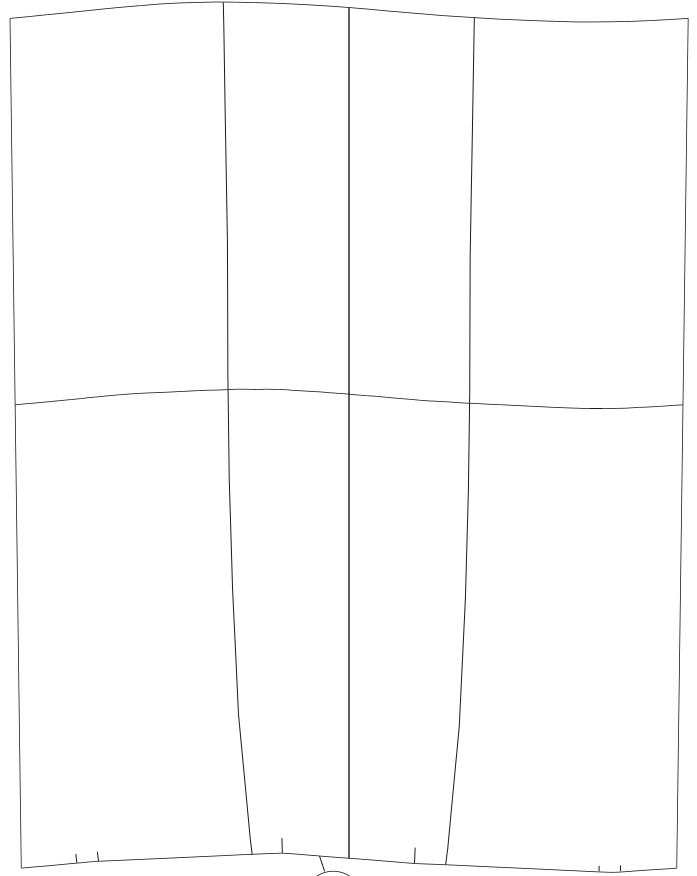
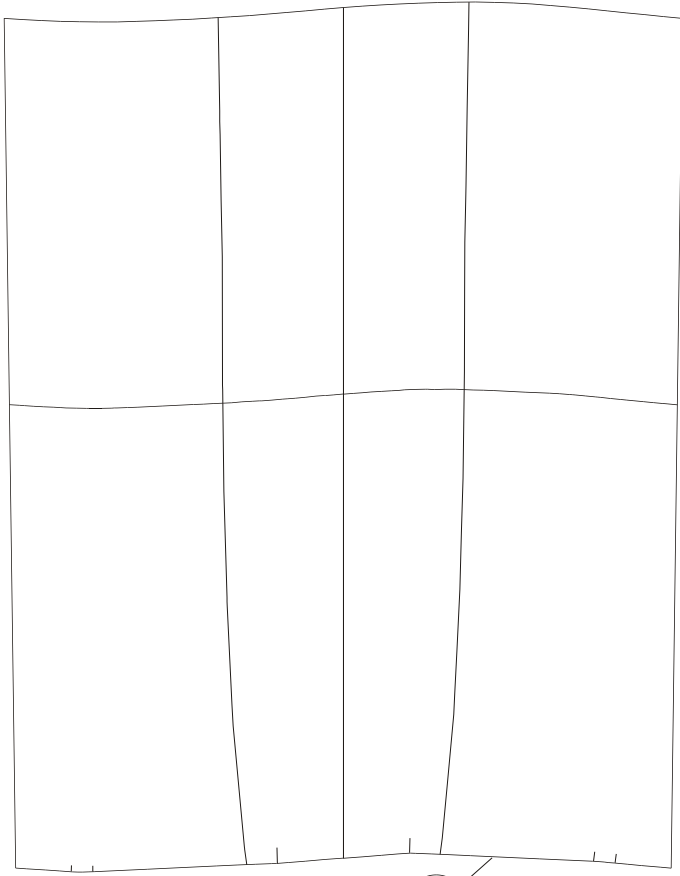
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USE THESE PARTS FOR SUBSTITUTION OR FOR  
ADDITION TO PARTS WITH METAL COVER



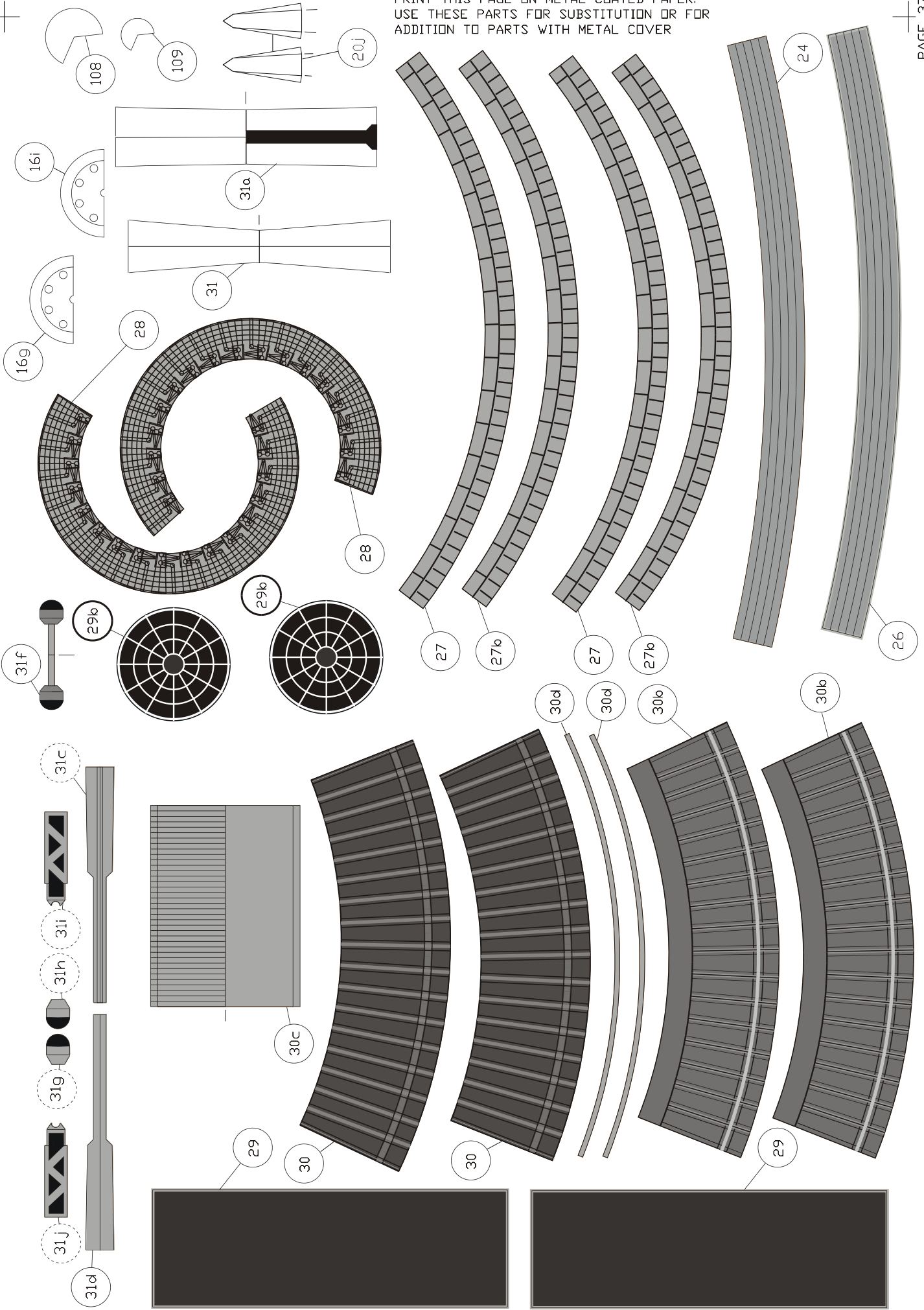
Engine nozzles with Turkey plates



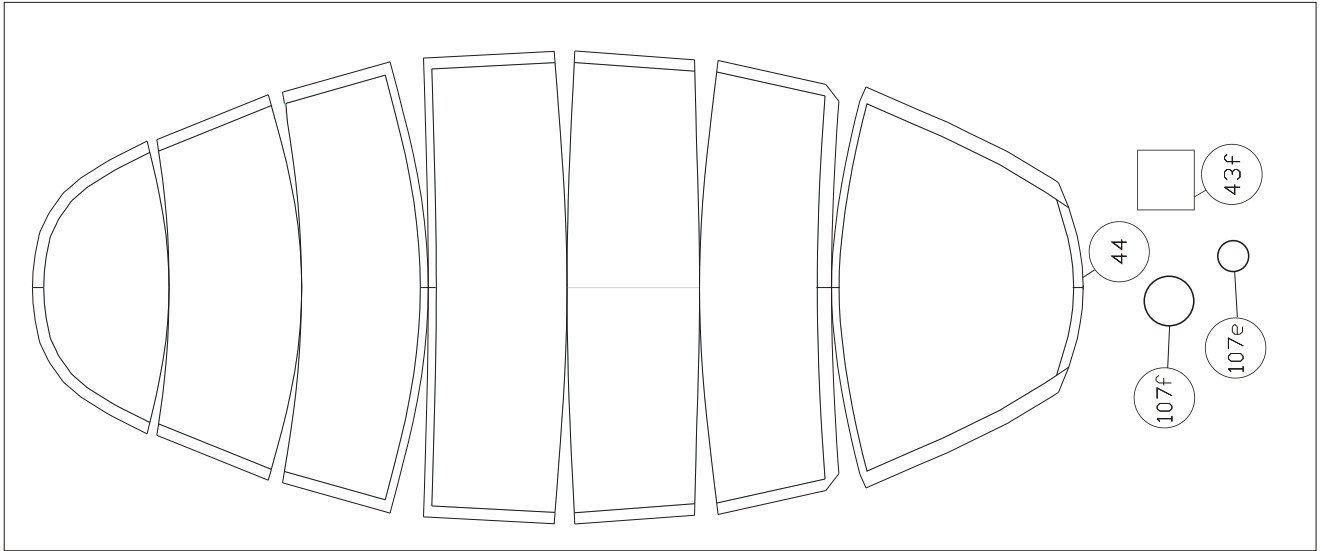
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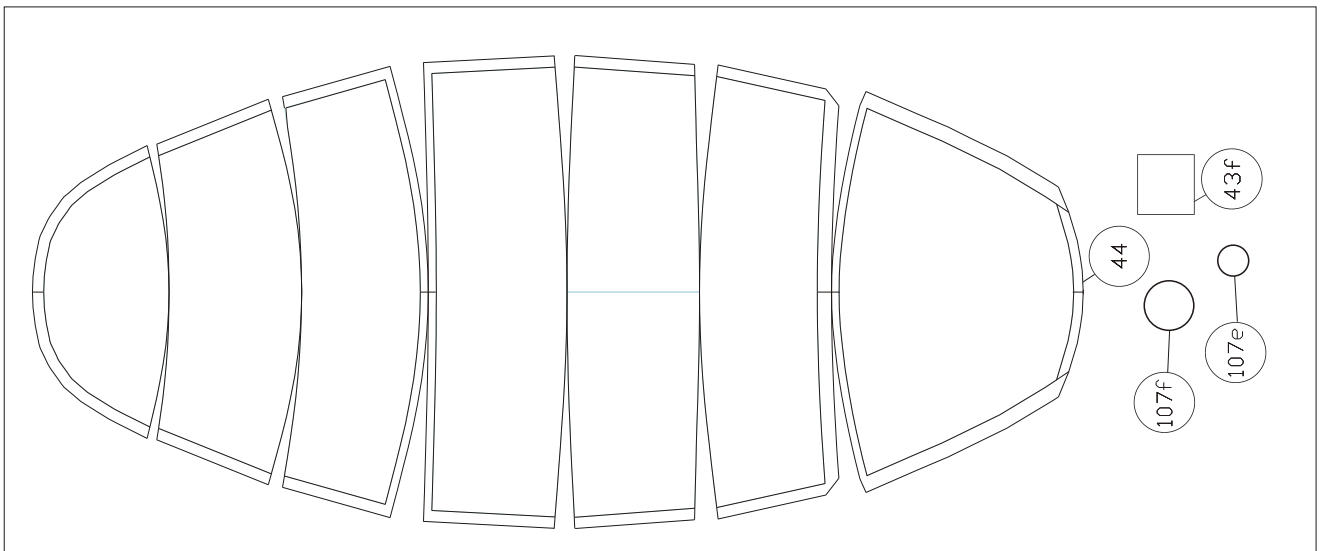
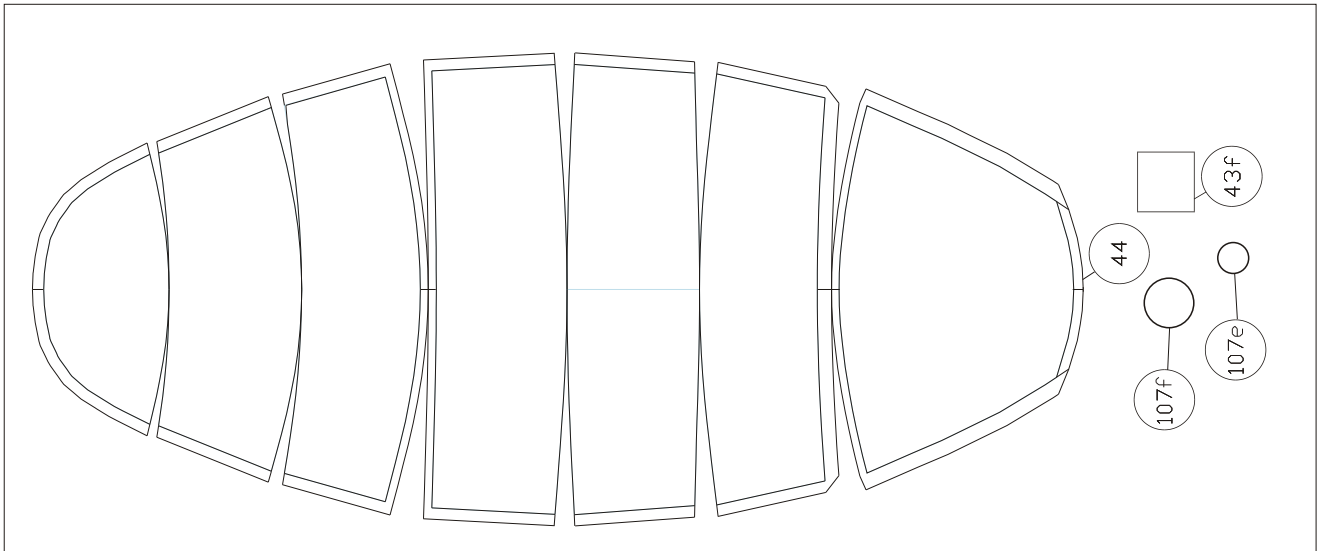
PRINT THIS PAGE ON METAL COATED PAPER.  
USE THESE PARTS FOR SUBSTITUTION OR FOR  
ADDITION TO PARTS WITH METAL COVER



PRINT THIS PAGE ON TRANSPARENCY FOIL



Tip: You can use two additional sets as spare parts



## Supplement To The Assembly Instructions of the F-15I

**Note to the modeler:** If you have any questions or comments, about this kit or if you would like to share with us your 'wish list' please E-mail to: [moshelmr@bezeqint.net](mailto:moshelmr@bezeqint.net), or write to: Moshe Lemer 17/5 Avraham Keren Street, Kfar-Saba 44208 Israel. Please visit my web site:

<http://www.papermodels.co.il>

\*\*\* The Technician's ladder can be downloaded from the web page.

### We found a few errors after printing, you can correct them on the sheets:

- View I, part#41I, should be numbered 41n (on top of the pilot seat).
- View G, part#38d, should be numbered 38e (fuselage former) on page#26.
- View G, the part# is missing for part#38d, on the rear right side of 38.
- View G, between part#38f and part#39, there is a former without a part#  
It is part#39c on page#26.
- View G, part#38d, the front wheel well should be numbered on the view as 38g as is on page#16  
Ignore the 40a part# mark.
- View Z1, two parts#20k (fuel jettisons on the rear ends of the fast packs, should be parts#20j.
- View Z1, the parts# of the front wheel door, are missing. They are 107h on page#10 and 107g  
Page#16.
- Page#8, part#63I on the bottom, should be numbered 63b.
- Page#10, parts#107h, 124,125. If you build the model with the wheels down, it is recommended  
That you cut out carefully the corresponding areas in part#38 on page#9 and Part#18 on page#4 and use them as doors instead.
- Page#17, a part number is missing from its circle. It's between 178 and 178a. It should be Numbered 178b.
- Page#27, there are 2 parts#105b. they are templates for the front landing gear metal wire enforcement. The one on the left is the front view of the wire and the one on the right is the side view.
- Page#28, there are 2 parts#168b, the circle part (on the left side in the frame) should be Numbered 186c (of the Lantiran in view T).

### The following options are available and the choice of some of them must be made prior to the assembly of that section:

- Air intakes in up/down position.
- Air ducts and the first stage of the turbines.
- Four Sidewinder missiles.
- 3 different kinds of bombs: 12 Mk-82 500 lbs (227 kg)  
general purpose 'iron' bombs, 26 Mk-20 Rockeye  
anti tank, 2 GBU-10 laser guided.
- One external fuel tank.
- Built in telescopic ladder.
- Technician ladder, see the note above.
- Arresting hook in up/down position.
- Clear/opaque canopy in up/down position.
- Detailed cockpit.
- Landing gear in up/down position.
- Cannon bay on the right wing root.
- Open/closed speed brake.
- Flaps, ailerons, horizontal/vertical control  
surfaces in a straight/deflected positions.
- Wheels chocks.

### General assembly tips:

Make copies of the thin paper sheets, for spare parts. All joining/connecting tabs are printed on a regular paper to allow the formers to be placed exactly on the edges of the parts. Part number in dashed circle

means that this is an optional part and those with bold circles are to be glued on a scrap paper or cardboard. Note that the gluing areas on the parts were not left white.

### View A: Wings, parts 1 - 16

Page#1, part#5.  
Page#2, parts#6,7,9,11.  
Page#6, parts#8,10,12-15.  
Page#7, part#16.

Page#25, parts#1-1b,2-2j,3-3c,4-4c.  
Page#29, parts#5a-5f,6a,7a,8a-8b,9a,10a-10b,11a,13a,15a.

### View Z2: Flaps and Ailerons in deflected position:

- Ailerons - page#19, parts#143-143a,144-144a.

- Flaps - page#19, parts#142-142a.

**Assembly tips:** The shaded areas on part#1b are to face backward, to be seen in flaps down position. The front end of the wing tips, parts#12-13 and 14-15 are to be

curved down, it can be done with the fingers. Attach the flaps and ailerons at the end of the kit assembly.

### Views B, D: Air ducts, first stage of the turbines and corresponding fuselage section: parts 16 - 17.

Page#4, parts#17b,i.  
Page#8, parts#16e,f.  
Page#10, parts#16a,c.  
Page#15, part#16g,i.

Page#26, parts#17a,d.  
Page#29, parts#17c,17e-h.  
Page#30, parts#16b,d.

**Assembly tips:** The arrow between parts#16a,16c on page#10 indicates forward direction

### Views C, D: Main Gear housing and corresponding fuselage section: part#18.

Page#4, part#18.

Page#7, part#18d.

Page#16, parts#18b,18c.  
Page#26, part#18e.

Page#29, part#18a.

**Assembly tip:** Parts#18b-18d are to be used in wheels down position.

**View D: Fuselage segments, parts#17 - 21.**

Also views A,B,C.

Page#3, parts#17,20c,20j(2x),21b.

Page#4, parts#17b,i,19,20,21.

Page#25, parts#20g,h,21a,e,f.

Page#26, parts#,19b,20b,20i,j.

Page#29, parts#17e,f,19a,20a,20d-  
f,21c,d,21g,h.

**View E: Engines exhausts & cowlings, tail consoles, arresting hook parts#23-30,31,32-33,34-37.**

Page#3, parts#23,25.

Page#10, parts#32-32d,33-33d.

Page#13, parts#34,35.

Page#14, parts#36,37.

Page#15, parts#24,26,27,27b,28,29,29b,30,  
30b-c,31,31a,31d,31f.

Page#25, parts#23c-d,24b,25c-d,26b.

Page#26, parts#34b,35b

Page#29, parts#23a-b,24a,25a-  
b,26a,27a,28a,29c,30a-c,  
34a,35a.

**Assembly tip:** the lines inside/along parts#32c,33c (the tail consoles), are needed to be bent slightly in order to get the correct shape.

**View F: Air intakes, parts#52-63**

Page#5, parts#52,54,56,58-58c - right air intake.

parts#53,55,57,59-59c - left air intake.

Page#6, Part#56 is for the right air intakes in

down position.

Part#57 is for the left air intakes in

down position.

Parts#62,63.

Page#8, parts#60,6 - inner walls of the air intakes.

Parts#60a,61a are optional.

Parts#62b,63b. Parts#62c,63c are optional,

for air intakes in down position.

Page#26, parts#52b,52c,54b,56b - right side.

parts#53b,53c,55b,57b - left side.

Page#30, parts#52a,54a,56a,62a - right side

Parts#53a,55a,57a,63a - left side.

**View G: Cockpit area of the fuselage, parts#38-43.**

Page#9, parts#38,39,42,42b,43.

Page#11, parts#38l,43c-d.

Page#12, parts#38h,40-a (those with the solid bold circles

**Assembly tips:** It might be easier to install the pilots seats in parts#40-40a now, before inserting

**View H: Canopy, part#44**

Page#7, part#44 - template for transparent canopy.

Page#9, 44a-d.

Page#11, part#44 - opaque canopy.

around the part#).

Page#16, part#38g.

Page#26, part#38e,38f,39b,42d,43b,43e,

Page#30, parts#38a-d,39a,42a,42c,43a.

40-40a into 38 and 42, (see view L). Use parts#38h-I for canopy in a down position.

Page#26, parts#44g-h - formers, to be used with

closed opaque canopy. 44g in front, where Parts#44a-b are connected to parts#c-d and 44h in the rear under the arc (44c-d).

**View I: Pilots seats, page#11, parts#41-41n.**

**Assembly tip:** part#41c (the back cushion/parachute and life raft) is needed to be modified as follows in order to get a more realistic look: Cut away the six tabs from both sides

of the top section of the part (the back cushion) and curve it to a shape of a 'flat' letter 'S', similar to the shape of the sides of part#41).

**View J: Front instruments, page#11, parts#40b-e,40g.**

**View K: Rear instruments panel, page#11, parts#40d-e,40h-j**

**View L: Assembly of views G,H,I,J,K and the HUD (Head Up Display).**

Page#7, part#43f - template for the HUD's transparent foil.

Page#11, parts#43f-g.

**View M: Assembly of views E, F, L and closed speed break, fuselage cowlings,**

**fuel jettison (on the trailing edges of the wings) and antennas.**

**Parts#22,49-51,64-77.**

Page#1, parts#70-71.

Page#2, parts#22-22c.

Page#5, parts#64-68-68b,69.

Page#6, parts#49-50.

Page#8, parts#51,51b,51d.

Page#13, parts#74-77.

Page#14, parts#72-73.

Page#25, parts#64b-d,65b-

d,66b,67b,72b,73b,74b,75b.

Page#29, parts#72a,73a,76a-b,77a-b.

Page#30,

parts#49a,50a64a,65a,66a,67a,74a,75a.

**Assembly tip:** parts#68a-b are optional.

If used,

cut out the black ellipse from part#68.

**View N: Vertical stabilizers: parts 78-88.**

Page#13, parts#78-a,79-a,80,80b,81-85b,86-88.

Page#26, parts#80c,81b.

Page#27, parts#78c-e,79c-e.

Page#30, parts#78b,79b.

**Assembly tips:** The strips 78b,79b are optional.

The trailing edges can be butt glued. Glue both

rudder halves to each other with the gluing tab on

the leading edge, and only then the formers

78c,

78d,78e onto one side.

**View O: Horizontal stabilizers: parts#94-97**

Page#14, parts#94-94a,94f,95-95a,95f,96,96b,97,97b. with their shaded areas visible (optional for 94h,95h).  
Page#27, parts#94g-94k,95g-95k. Glue the four edges to their corresponding parts using  
Page#28, parts#94b-94e,95b-95e,96a,97a. 94e,95e prior to attaching the main surfaces to each other. Glue 94j,95j onto the shorter edged of 4f,95f.

**Assembly tips:** Parts#94b,95b,96a,97a are for the trailing edges. Parts#94h,94i,95h,95i should be glued

**View Z3: Horizontal stabilizers with deflected control surfaces**

Page#19, parts#145-a,146-a.

**View P: Main gear - parts#98-103, front gear - parts#105-109, Wheels - parts#110-112.**

Page#15, parts#109-109. drawing on the left end side of page#16).  
Page#16, parts#98-112. Parts#108-109  
Page#27, parts#98f,99f,105b,107b,110-110a,111-111a,112. need to be prepared with the printed side inward, or, glue them onto an aluminum foil, if you make parts#107e,107f transparent. Parts#108a,109a are to be rounded into rings and glued onto the rear of parts#108,109.

**Assembly tips:** prepare metal wires in the shapes of parts#98f,99f, to strengthen the struts, (the actual size

**View Q: Wing pylons, missiles racks and bombs racks, parts#115-123, 147-150.**

Page#3, parts#114,114b-c,115-115b-c. Page#28, parts#114a,115a,116b,117b,118b,119b.  
Page#19, parts#116-116c,117-117c,118-118c,119-119c, Page#20, parts#147-b,148-b,149-149b (6 times).  
120-123.

**View R: Nose cone - parts 45-48, Fast Packs - parts#152-160,161-169, Tail cowlings**

**and assembly of views N, O to M.**

Page#6, parts#5g-h,6b,7b. Page#26, parts#45b,46b,47b.  
Page#10, parts#89-92. Page#28, the parts in the frame to be glued on the cardboard.  
Page#11, parts#32e,33e,42e-f. Page#30, parts#45a,46a,47a,48a.  
Page#14, parts#45-48.  
Page#17, parts#152-160.  
Page#18, parts#161-169.  
Page#33,34 - fast packs for Sparrow missiles, the missiles and their pylons.  
Parts#152-169, 219-222, 223-231. See the small frame in view z1 for the pylon and missile assembly.  
Page#31, parts#225-229, the missiles.

**View S: Fuel tank**

Page#17, part#133d. **Assembly tips:** The seams of the fuel tank are to be down. The front end of the pylon is to be on the small crossing line that is on the line along part#133.  
Page#20, parts#133-141,141b.  
Page#27, parts#133b-c,134b,135b,136b,138b,139b,140b.  
Page#28, parts#133a,134a,135a,136a,137a,138a,139a,140a,  
141a.

**View T: LANTIRAN pod, under the right air intake, parts#183-187.**

Page#18, parts#183-b,184-186,186b,187-a.  
Page#28, parts#186a,186c,187b.

**View U: LANTIRAN pod, under the left air intake, parts#178-182.**

Page#17, parts#178-b,179-179c,180,180b,181,182-a. Page#28, parts#179b-c,180a,182a.

**View V: 4 Sidewinder missiles, page#21, parts#190-b,191-192,194.**

**View W: 26 Mk-20 Rockeye, parts#195-200.**

Page#23-24, parts#195-199,199b,200. Page#32, parts#195a-c,196a-b,197a,199a.  
Page#31, parts#195b-c,196b.

**View X: 12 Mk-82 500 lbs (227 Kg), general purpose iron bombs, parts#201-207.**

Page#22, parts#201-207,204a,205a,206b. Page#31, parts#201a-c,202a-b,203a-b,204a,206a.

**View Y: 2 GBU 10 laser guided bombs, parts#208-219.**

Page#21, parts#208-211,211b,212-216a,217-219. Page#31, parts#208a-c,209a-b,210a-b,211a,214a-b,215a-b. and they are opened only after the bomb is dropped off of the aircraft.

**Assembly tips:** Parts#213 are the bomb stabilizers

**View Z: assembly of views Q,V,W,X,Y.**

Page#20, parts#151 - are the bombs supports and are to be glued onto 2 parts#208 and 114c,115c (bottom of the wing pylons).



**View Z1 - assembly of views P,R,S,T,U,W,X,Y,Z, bombs racks on the Fast Packs,fuel jettisons,antennas/sensors, center pylon:**

Page#8, parts#113,113b-c. Page#17, parts#170-c,172-b,173-b,174-b.  
Page#9, parts#126,128. Page#18, parts#171-c,175-b,176-b,177-b.  
Page#10, parts#90a,92a,124,125,107h. Page#20, parts#150.  
Page#14, parts#129-132. Page#28, part#113a.  
Page#16, parts#107g,124a,125a.

**View Z4 - Open canopy and speed break, parts#38,40,44,51.**

Page#7, part#44 - canopy template. 40k (canopy support).  
Page#8, parts#51,51b,51d. Page#12, parts#38h-j,(part#38h in the  
Page#9, parts#44a-d. dotted circle).  
Page#11, parts#38k-l,44,40-a,(with the  
dotted circles), Page#16, part#51a.

**View Z5 - Telescopic ladder.**

Page#16, parts#188-c,189.

**Assembly tips:** Glue 188a on the back of  
188, 188b

on 188-a, 188c on both sides of 188b.

**View Z6 - Arresting hook down.**

Page#11, part#31e.

Page#15, parts#31c-e,31g-j.

**View Z7 - Technician's Ladder.**

Page#33, parts#1-12.

**Assembly tips:** The short bold lines  
mark the places to cut about 1-2.5 mm,  
fold, glue the center sections back to back  
and onto parts#1,2.

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The following article was written by Jon Murray the editor of the Card Formation newsletter.

**Kit Review: ModelArt Air Superiority Fighter, F-15C Eagle 1/32 Scale, Precise Card Model.**

**The F-15I is very similar to the F-15C, therefore, this article can be for a help.**

I chose this F-15 model for a number of reasons. The first reason is that I was part of the McDonnell Douglas Team that won the Air Superiority competition in 1969. The result of that win over General Dynamics, Lockheed, and Republic was the F-15. Have watched with pride as the Eagle went from drawing to metal and composites to the operation on the flight line. Anyone who has witness the McDonnell test pilot take one of these birds off in a 'Viking' takeoff will never forget. The purpose of the Viking , is to leave the St. Louis air traffic control before going over the Airport fence. To do this it takes a vertical climb and a roll out at 10,000 feet. At this point the regional air traffic control acquires the aircraft and the St Louis tower is done. It takes less than a minute of accomplish. Each one is like a rocket launch.

Enough of that. I also wanted to build a 'state of the art' computer generated card model. Emil Zarkov (the designer) calls it a computer Synthesized Model.

Upon receiving my model from Moshe Lemer Publications I was immediately impressed by the art work. I was also impressed by the 21 plus pages (8.5 X 11) and 1029 parts. Once I got over this impact, I got down to reading the instructions. The instructions are many and long. Moshe Lemer has also supplemented the original instructions with additional help. After I read for a while I finally reached the point were no matter how much you read, there is nothing like picking up the knife and glue and beginning to work.

There are many ways one can start this model. You can choose to build it with control surfaces deflected and landing gear up. You can choose to make it with gear down, safety locks in and all avionics bays open and loaded. You can also choose between the US Air Force and the Israeli Air Force. It has all the parts needed for the many variations. You can make all the subassemblies first and then build the main frame. But sooner or later you must 'bite the bullet' and start. I chose to start with part number (1) and build a closed up USAF version with flaps up and gear down.

The kit comes with an abundance of very good 'exploded assembly drawings, numbered and beautifully computer drafted.

Tip 1. Be very careful if you choose to use water base glues (white glue). The computer ink color finish on my ModelArt F-15C was not waterproof. (My ModelArt F-15E I received recently was printed with waterproof ink.) So be careful and check it out first. I water proofed each sheet with a coat of 3M Matt spray artists fixative coating. (Always test glues and waterproofing methods on an optional part of the models you are not going to use. If the ink runs on the sample don't use it.) This waterproofing worked well on my F-15 and didn't hurt a thing.

My first assembly challenge, or maybe a lesson learned, was with the core framework of the wing. This frame is the key and keel for the entire model. Get it right and the rest of the model will follow perfectly. Get it wrong and the appearance suffers. When I 'jumped in' to build this frame I assumed that the assembly would be rigid enough to support itself and stay aligned. (Each element of the aircraft wing frame is printed on thin paper stock and is to be glued to the card heavy card stock provided.)

Tip 2. Use a denser card stock than the stock provided, to create the rigid wing frame and spars. (I used picture frame matting on the F-15E I am starting) Or use 1/16 balsa sheet . This frame must be aligned, rigid and symmetrical. I used a homemade holding jig to support the frame while it dries. The whole model depends on it. The cardboard supplied is OK for the fuselage stations.

After completing the wing frame I began to add the skins and frames per the instructions and visual guide sheets. The numerical sequence works well and all the fits are excellent. The construction is amazing like the fuselage sections we see in our Building 1 final assembly area. I have chosen the gear down version and have added the wheel well boxes. These come with nice detail lines.

Tip 3 .Copy the splice joiner sheets onto ordinary 24 pound typing paper. The paper supplied is just a little too thin to provide the needed support and guide the tight /close splice fits.

I am about one half finished with the model. I found the fit of the parts for this kit exceptional. Dry fitting each part carefully and repeatedly before gluing is always the best practice and results in a perfect fit. As I sit here and hold the center fuselage and wings in my hands (18½" wingspan) I see no gaps. The Air Superiority two tone gray color is accurate and correct. I know this from the factory paint shop. The markings (no step, etc ) are correct The panel and wing lights are correct. I am looking forward to a very nice model when I get it finished.

In the last issue editor is just finishing the basic airframe of the F-15C. Taking up where I left off last issue, I began working my way aft though the fuselage and engine section. The more sections I finished the better I got at fitting this precise model together. One error and it will move with you. A small initial error I committed around the wing to fuselage root, showed as small gaps later in the finishing of the fuselage side fairing. I can't tell you what I did, but a couple of 1/8" strips taken from spare matching skin fixed the error. The exact fit is just that and mistakes show up quickly.

Once I finished the fuselage and aft tail pipes, I made the inlet ducts. These assemble very nicely with the external and internal skins fitting great. I was pleased, because they looked so real. The forward fuselage took more time, or more precisely I took more care with it. The ring formers and the skins matched perfectly. The cockpit was fun and the detail possibilities are unlimited. With more time I could have scratch built all kinds of enhancements to put in the cockpit.

The radome was easy. The model has a realistic slightly weathered appearance, like F-15Cs that sit on the ramp at the St Louis Air National Guard. (Nicknamed 'Lindbergh's Own').

Tip 4. Add a couple of ounces of lead shot or lead tape inside radome To hold the nose gear on the ground. The biggest challenge of the whole job was the clear foil canopy. I wanted to look into the cockpit and see the seat and controls I built. I carefully cut out the canopy pattern and stuck it to the clear foil with scotch temporary, double sided tape. I painstakingly cut around the patterns. I then cut out the heavier cardboard canopy frame and the thin canopy edging, (very thin). How was I going to glue all this together? I went to my glue shelf and found my industrial strength white glue.

Tip 5. Use 'Weld Bond' Industrial Space Age Adhesive for foil to paper bond. Made by Frank T. Ross and Sons, P.O. Box 128 Spring Grove Il. 60081, Bonds almost anything. This non-toxic white glue holds foil to paper. Dries clear, also provides extra strength bonding for the laminated wheels and landing gear. Great stuff, get it at your hardware store.

After forming the canopy to the frames using Weld Bond, I glued the canopy in place. Other than the seam lines, it is very realistic.

Tip 6. Use Micro Mark's Micro Glaze to seal the seams in the canopy. A very thin, thin line of this material will dry transparent and seal these edges. Micro Mark, 340-2261 Snyder Ave. Berkeley Hts, N.J 07922-1595.

The wheels are a simple lamination job. When I got them laminated, I chucked them up in my Dremel tool and spun them against sandpaper first, and then against a black marker. They look like rubber. The landing gear struts are very detailed, but not impossible. WeldBond worked well here also adding extra strength. The assembly instructions and the picture of the landing gear are not very detailed. I had to do some guessing on some of the very smallest parts provided. (Tiny struts and brackets.)

I've reached the point were I must go back over the model to include all the antenna that come on the sheets. These tend to get snipped off and put aside, as the larger assemblies are added. I still have 3 Belly tanks, 4 Sparrow missiles and some Sidewinder Missiles to complete. I also have spray coated the model with matt finish.

Tip 7. Use Krylon Matt Finish #1311 to waterproof the finished model. Do this before adding clear foil canopy. (Again use caution, test before using).

Overall I am very, very pleased with this model. The small mismatches, smudges and goofs, blend in to the finished model. The eye loses sight of them in the impact of the large and impressive model.

Sniper gives ModelArt F-15C, 5 Snipers out of 5, our highest rating.

**\*\*\* Reviewed by Jon Murray \*\*\***

The CardFormation newsletter, dedicated to card modeling. Published quarterly and costs \$12.50 in the U.S. and \$15.00 outside the U.S. It has articles, reviews, wanted and a simple free kit.

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