

Assembly Instructions for N-1 rocket (upper stages)

About the Model

This document contains the instructions for the **N-1 upper stages** only. Parts for this kit are contained in the document n1_part2.pdf. If you have not yet built the first stage (available as a separate kit) it is strongly recommended you do so.

In these instructions it is assumed that you have already completed the first stage and are familiar with the assembly methods used. If you have any comments or suggestions regarding this kit, I can be reached by e-mail at models@currell.net

Assembly

General notes

Print out the parts document on 8.5"x11" or A4 size white card stock suitable to your printer.

In these instructions, the directional terms "top" and "bottom" assume the rocket is vertical (engines at bottom). Scoring of parts is indicated by thin black lines outside the part's outline or by dashed or shaded lines on the part's surface. Score parts *before* cutting them out. In the diagrams, sub-assemblies are identified by a number within a circle (e.g. ②), corresponding to the step in which it was assembled.

Second stage

Assemble the fuel tank sections (**step 1**) and join together.

Glue connecting strip and surface detail parts to upper body surface (**step 2**). Join body edges (**step 3**) and attach former ring F5/F6, ensuring the top of the ring is flush with the edge of the body, and that the printed triangle lines up with the body seam. Insert former ring F7/F8 ensuring it does not interfere with the slots cut in the surface. Fold and glue the fuel line fairings B8 (**step 4**), and attach to the body using the tabs & slots for alignment. Assemble the lower body (**steps 5, 6**). A small gap between the ends of inside strip B3 is acceptable (it will be hidden). Fold and glue roll thrusters A1 & A2 and attach to lower body (**step 7**) using printed markings on the body for location.

Assemble the exhaust cones (**step 8**). The inner and outer surfaces are attached such that they will overlap when the rolled into a cone shape. Ensure that the inked surface of part B12 faces the inside of the cone. Glue vent tube B7 as shown in diagram.

Assemble engine base plate (**step 9**) and add exhaust cones (**step 10**), aligning the vent tubes with the "bulge" on the printed shapes around the holes. Glue the base plate assembly into the lower body (**step 11**), resting the edge of the base plate against the top edge of the inside strip, and aligning the small black triangle on the base plate with the outside seam of the lower body.

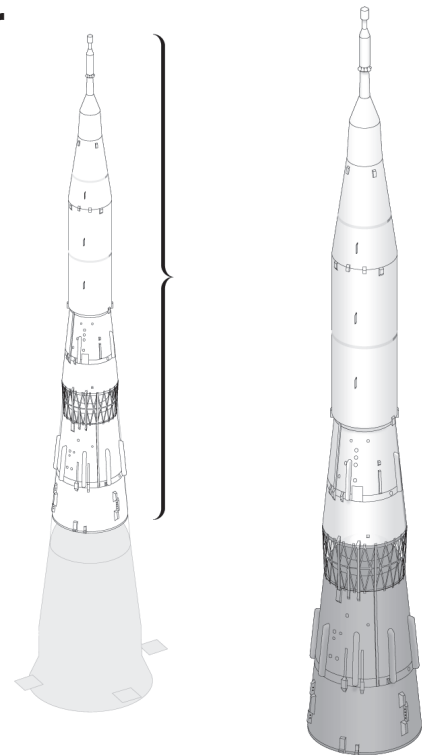
Glue the inner ring surfaces together (**step 12**) aligning the end of B4 with the black triangle printed on B5. Before joining the ends together, dry-fit the ring inside the base of the lower body assembly. It may be necessary to trim the ends slightly to obtain a snug fit against the inside surface of the body. When forming the ring, B5 forms the outside surface. Attach the ring to the lower body (**step 13**), lining up the outside seam of the ring with the outside body seam. Fold and glue parts B11 and attach as indicated by the printed shapes on the inner surface of the ring.

Join the fuel tank, and upper and lower sections (**step 14**). Ensure the body seams are aligned.

Glue truss surfaces C2 & C3 together (**step 15**), ensuring the glue is applied in a thin layer over the entire surface. When dry, carefully cut out the truss shape. This is somewhat challenging, so take your time and ensure your blade is sharp. It will be easier if the inner triangles are cut first, but do not remove the cut-out parts until the outer edges are cut. Wrap the truss around the upper part of the body (**step 16**), using the printed squares on the body surface as gluing points for the small pads at the bottom of the truss. Ensure the first truss segment (with the dark/light colouring on the top pad) is attached to the gluing point at the body seam, and that the light coloured pads are facing outside and are at the top of the truss. Glue the ends of the truss together where they meet.

Fold and glue the surface details and attach as indicated by the printed shapes on the body (**step 17**). Conduit A23/A24 will extend up the outside of the truss.

(**Step 18**) attach stage 2 to the first stage (previously assembled) by gluing the top pads of the stage 1 truss to the printed squares on the stage 2 lower body. Ensure that the surface details line up as shown in the diagram. Fold and attach the inter-stage conduits (**step 19**). It may be necessary to trim the conduit parts slightly to obtain a good fit.



Third stage

Glue the connecting strip, inner strip and surface detail parts to the body surface (**step 20**). Join body edges and attach former rings F11/F12 and F15/16 (**step 21**). A small gap between the ends of inside strip D13 is acceptable (it will be hidden). Fold and glue the fuel line fairings B27 & B28 (**step 22**), and attach to the body (match the fairing colour to the surface colour).

Assemble the engine mounts (**step 23**) and exhaust cones (**step 24**). Assemble the base plate assembly (**step 25**) and add the engine mounts (**step 26**) so that the bottoms of the mounts lie in the same horizontal plane. Insert the exhaust cones in the engine mounts (wide end flush with bottom of mount), and add parts C9 as indicated by the printed shapes on the base.

Assemble inner ring (**step 27**). Dry-fit before gluing the ends together, as it may be necessary to trim one end slightly to obtain a snug fit. The completed ring should rest against the inside surface of the body with the darker coloured band protruding from the bottom. Join the inner ring to the base assembly (**step 28**) using gluing strips C1. The dark band on the ring should be oriented downward. Insert the assembly into the body (**step 29**), aligning one of the engine cones with the outer body seam.

Assemble the support ring (**step 30**) and join to top of the stage. Fold and glue the surface details and attach as indicated by the printed shapes on the body (**step 31**).

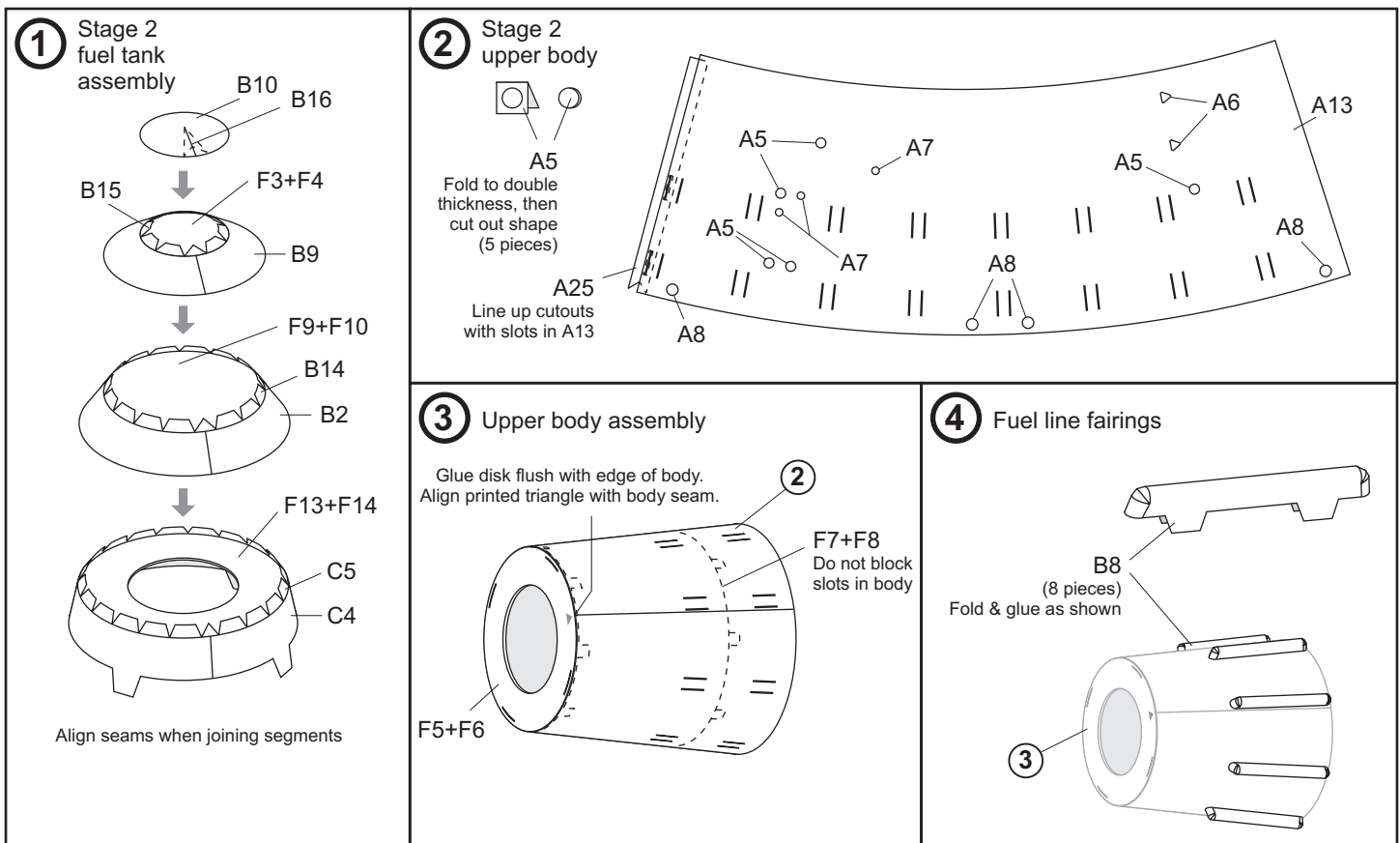
(**Step 32**) attach stage 3 to the lower stages by gluing the top pads of the stage 2 truss to the printed squares on the stage 3 body. Align so that the ink colour on the top pads matches the surface colour. Fold and glue the inter-stage conduits and attach as shown (**step 33**).

Payload stack

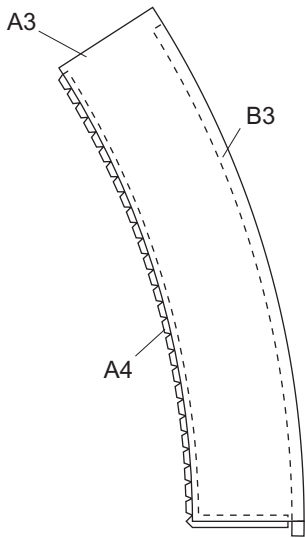
Assemble the first section of the payload stack (**steps 34, 35**). Take care that the notched edge of connecting strip E13 is toward the *top* edge of surface E14. Former ring D31/32 is attached to the base, flush with the edge of the body and with the printed triangle lined up with the body seam. Assemble subsequent payload sections and join together (**steps 36, 37**) ensuring body seams line up. Roll cylindrical rocket exhausts E20 (**step 38**) and attach to printed shapes on the upper payload section.

Assemble tip sections (**step 39**), ensuring body seams line up, and that former disk E15 is positioned as shown in diagram. Take care when joining these small assemblies that the vertical alignment is correct, with no parts tilted or off-centre.

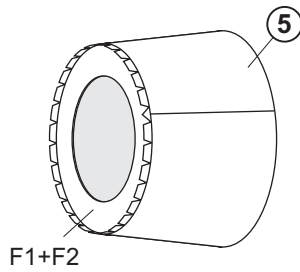
Assemble the Cosmonaut figure (**step 40**). Finally, join the payload to the lower stages by aligning the printed arrows on the mating surfaces and sliding the tabs on the top of stage 3 into the slots at the base of the payload stack (**step 41**). Do not glue if you wish to be able to disassemble the model for transportation or storage. The completed model may be displayed on the stand provided with the first stage kit.



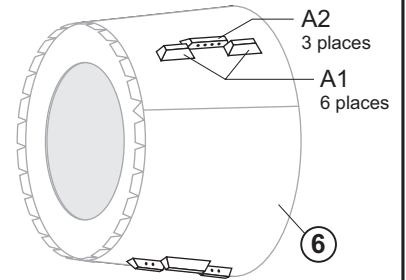
5 Stage 2 lower body



6 Lower body assembly

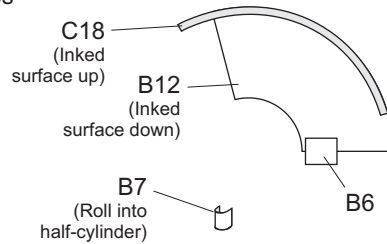


7 Attach roll thrusters

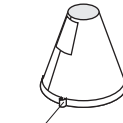


Fold & glue as shown.
Attach to shaded areas printed on body.

8 Exhaust cones (8 pieces)

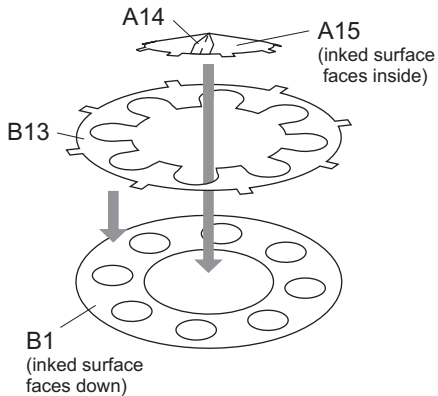


Roll into cone shape with inked surface of B12 facing inside.

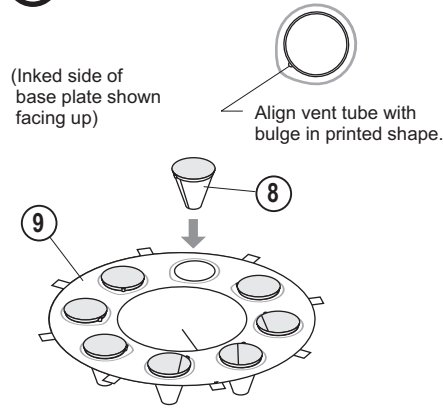


Glue B7 over seam, aligning with bottom of cone.

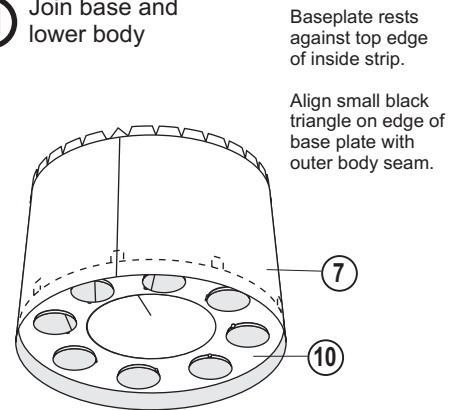
9 Stage 2 base plate



10 Engine assembly



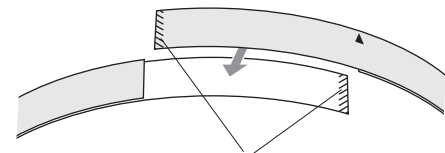
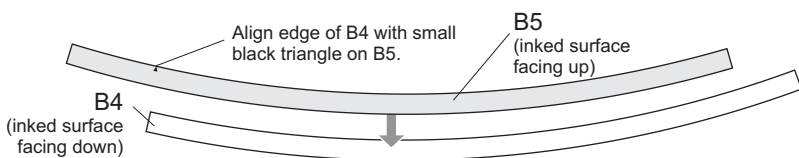
11 Join base and lower body



Baseplate rests against top edge of inside strip.

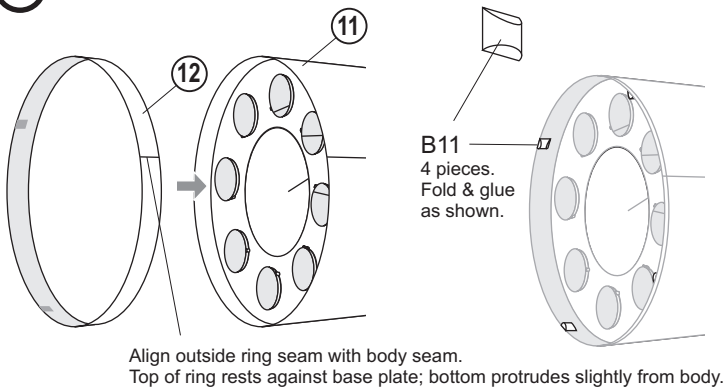
Align small black triangle on edge of base plate with outer body seam.

12 Lower body inner ring

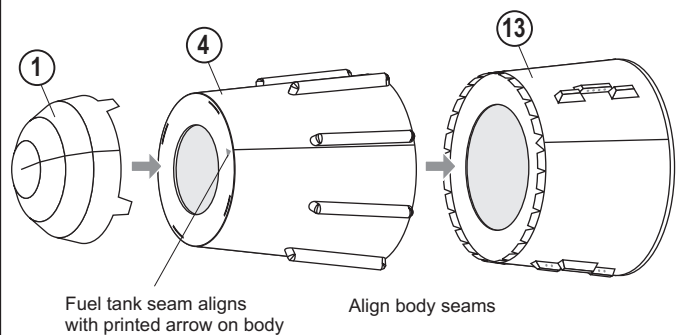


If necessary, trim the ends of parts B4 and B5 so that the ring fits snugly within the base of the lower body (see step 13).

13 Attach inner ring



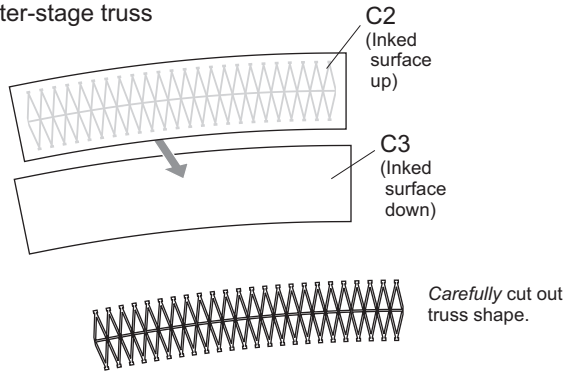
14 Stage 2 final assembly



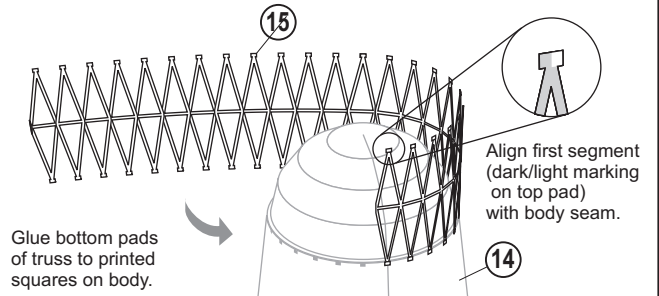
Fuel tank seam aligns with printed arrow on body

Align body seams

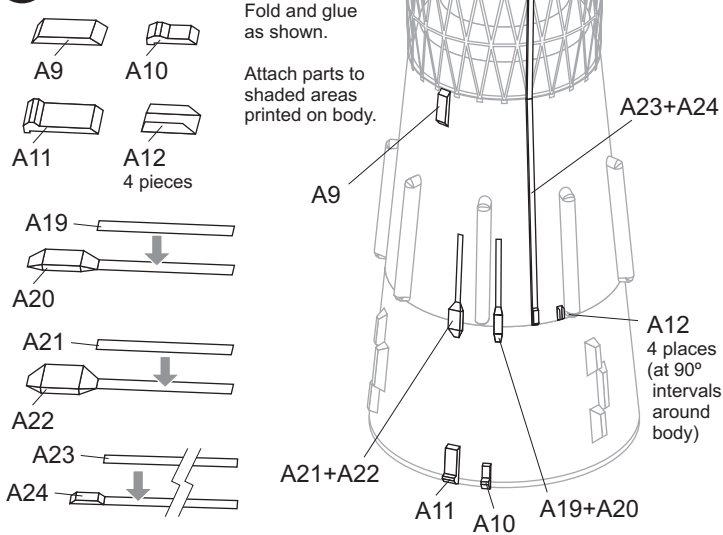
15 Inter-stage truss



16 Attach truss

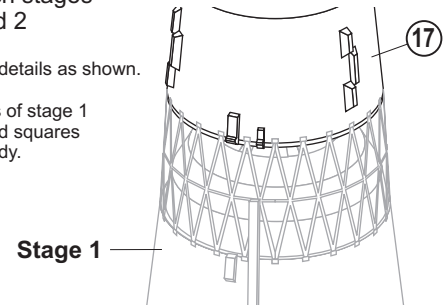


17 Surface details



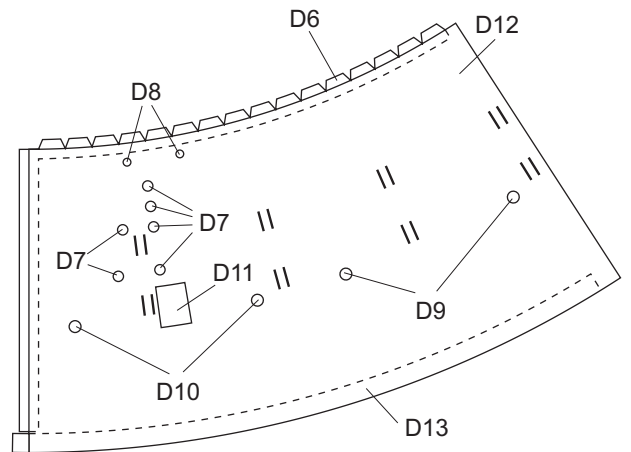
18 Attach stages 1 and 2

Align surface details as shown.
Glue top pads of stage 1 truss to printed squares on stage 2 body.

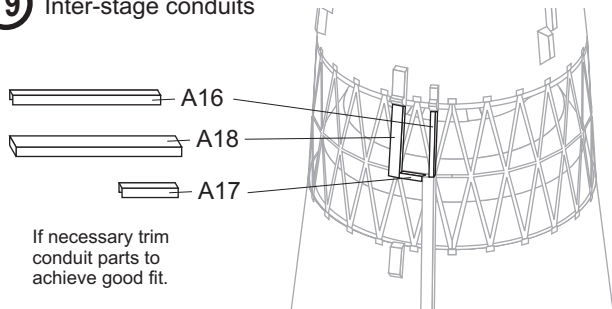


20 Stage 3 outer surface

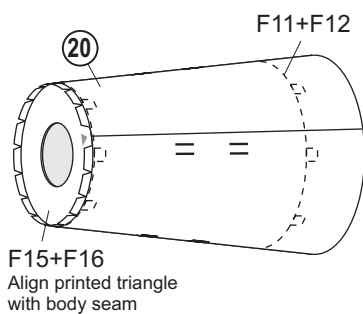
D7
Fold to double thickness, then cut out shape (6 pieces)



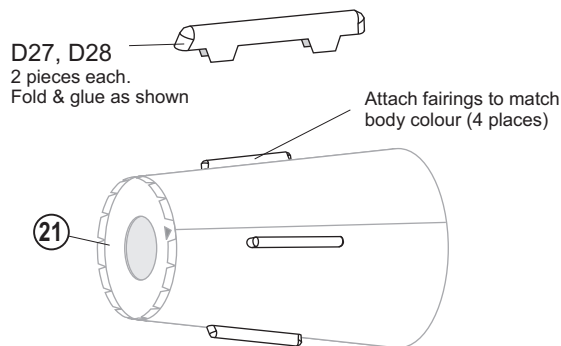
19 Inter-stage conduits



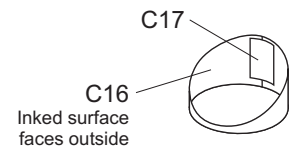
21 Stage 3 assembly



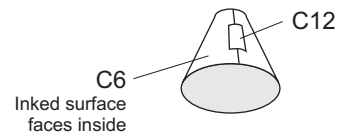
22 Fuel line fairings



23 Engine mount (4 pieces)



24 Exhaust cone (4 pieces)



25 Base plate assembly

C7 (inked surface faces inside)
C8 (4 pieces)
C10
C11
C13 (inked surface faces inside)

26 Engine assembly

C9 (4 pieces) fold and glue as shown
23
24
25

27 Inner ring

If necessary, trim the end of D15 so the ring fits snugly within the stage 3 body, with the darker band protruding from the bottom (see step 29).
D15
D14

28 Join base and ring

C1 (8 places)
27
26

29 Join base and body

Position base so that an engine cone lines up with outer body seam.
22
28

30 Payload support ring

C14
C15
29
Align seams

31 Surface details

D21, D22 (2 pieces each)
D19 (1 piece)
D20 (2 pieces)
D3
D4
D5
Fold and glue as shown.
Attach parts to shaded areas printed on body.
D3
D4
D5
D22
D21
D19
D20
Light coloured side
Dark coloured side

32 Attach stage 3 to lower stages

Align stage 3 so that light and dark truss pads match surface colour.
Glue top pads of stage 2 truss to printed squares on stage 3 body.
31
19

33 Inter-stage conduits

D16
D2
D1
D18
D17
D1
D2
D18
Fold and glue as shown.
Attach parts to shaded areas printed on body.
D16
D17
D1
D2
D18

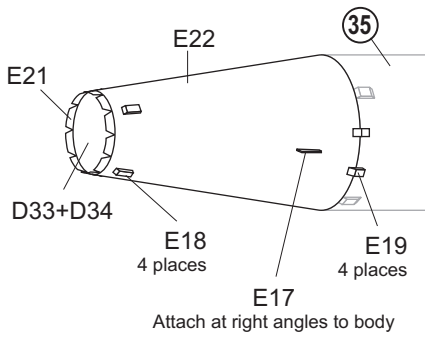
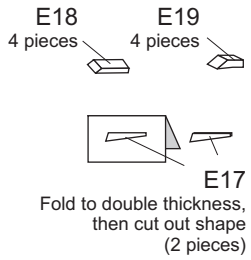
34 Payload stack first segment

D29+D30
E13
E14
D26
D31+D32
Glue flush with bottom edge. Align triangle with body seam.
Top end
Bottom end

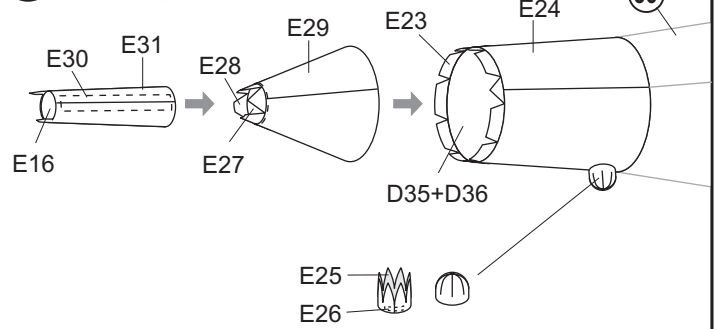
35 Surface details

D23 (4 pieces)
D24 (4 pieces)
D25
Fold to double thickness, then cut out shape (2 pieces)
D23 (4 places)
D24 (4 places)
D25
Attach at right angles to body
34
Attach D24 to bottom edge as shown.

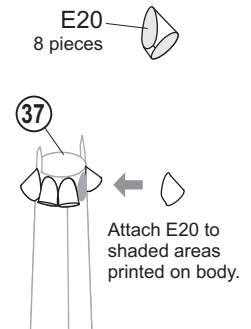
36 Payload stack second segment



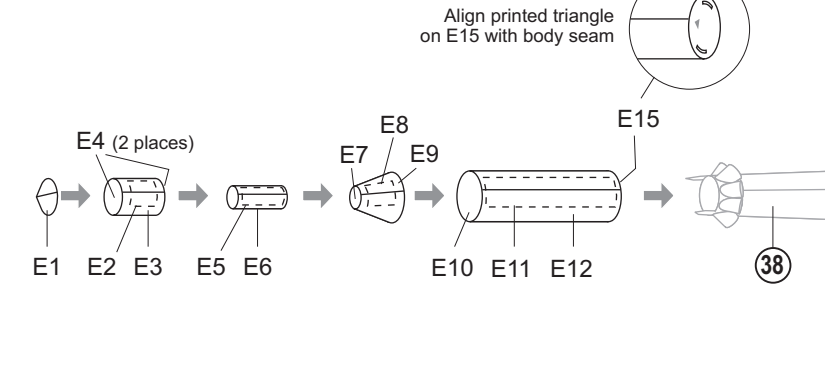
37 Payload stack upper segments



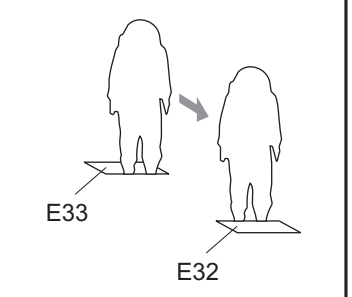
38 Payload jettison rockets



39 Tip segments



40 Cosmonaut figure



41 Join payload to booster stages

Align printed arrows on top of stage 3 and bottom of payload stack; slide tabs into slots.
Do not glue if you wish to disassemble for transportation or storage.

