



GG1-type Electric Locomotive

The GG1-type electric locomotive was developed and owned by Pennsylvania Railroad, an American company. It was known throughout the world because of its sleek body by French designer Raymond Loewy and is considered Pennsylvania Railroad's "signature locomotive." A total of 139 locomotives were manufactured from 1934 to 1943 and they remained in service until the beginning of the 80s. Today, although they are no longer in use and many have been scrapped, we can still find some in museums, etc.

This "GG1-type Electric Locomotive" papercraft is approximately 1/56 of the original size.

*This model was designed for Papercraft and may differ from the original in some respects.

■ Parts list (Assembly Instructions) : Seventeen A4 sheets

■ No. of Parts: 562

*Build the model by carefully reading the Assembly Instructions, in the parts sheet page order.

Assembly Instructions



Mountain fold
(Dotted line)



Scissors line
(Solid line)



Valley fold
(Dashed and dotted line)



Cut in Line
(Red solid line)



Completed parts become a cylinder
You may like to use a metal rod as a guide.



Layer wrapping (roll)
Wrap around and glue to the cylinder, to use as a glue tab.



Wrap around and glue to the top of the cylinder.



How to make the cylinders

This craft involves making cylinders with diameters of 3 to 7mm, so it may be helpful to have some rods of sizes about 0.5mm thinner handy.



Guide rod

Glue tab notation key

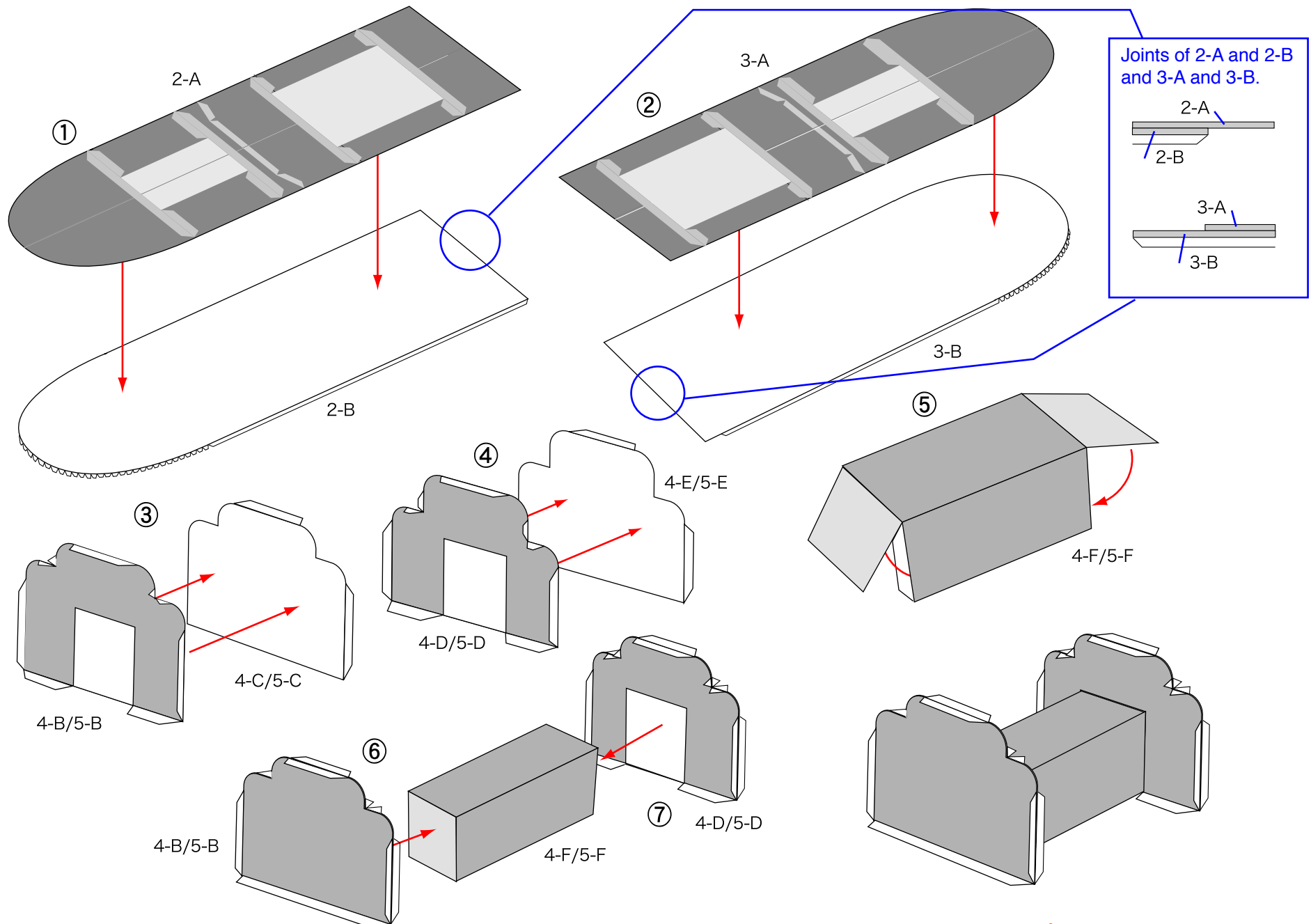
Each glue tab has a symbol and number printed on it. Glue with in the same part.

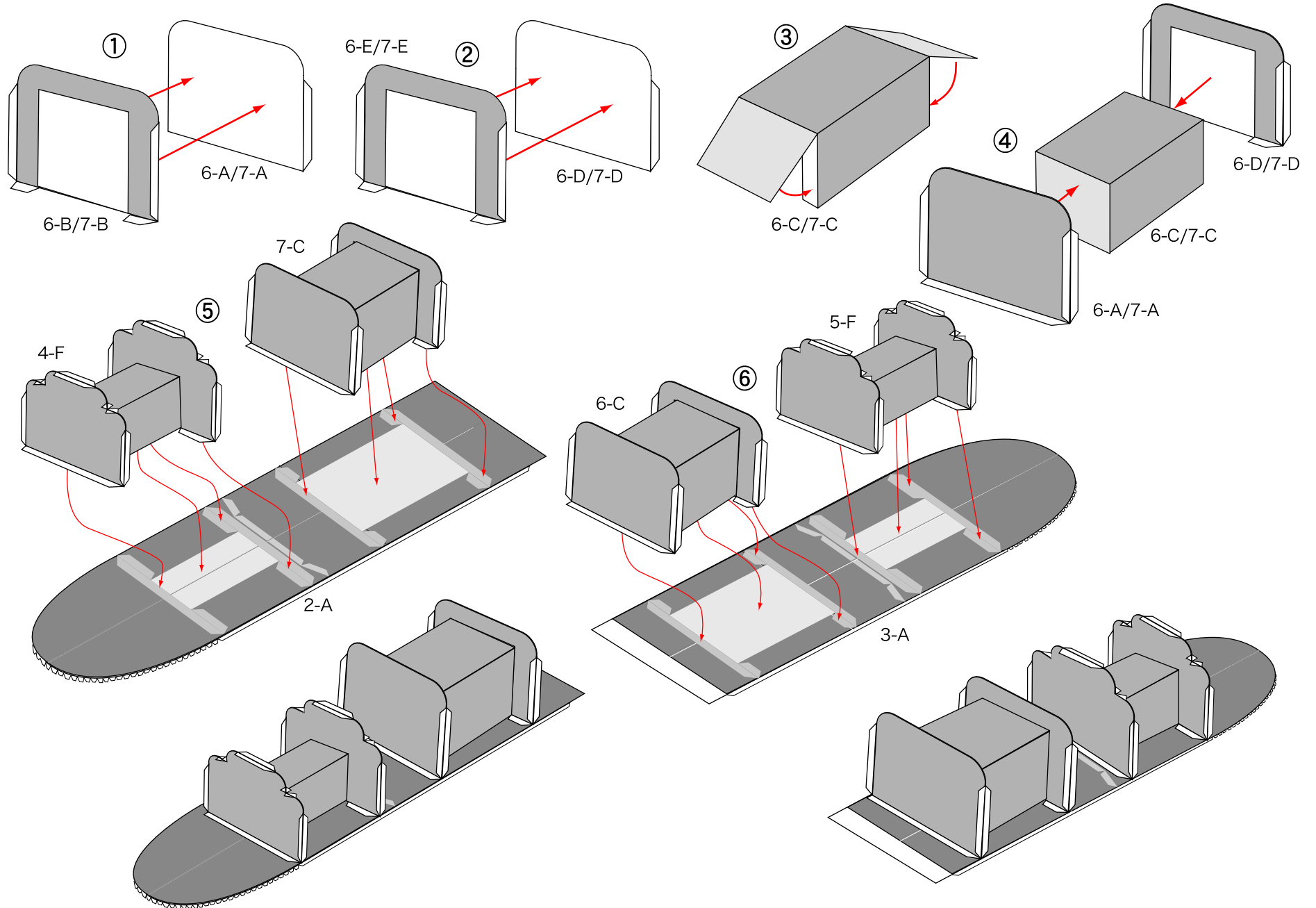
■	Glue
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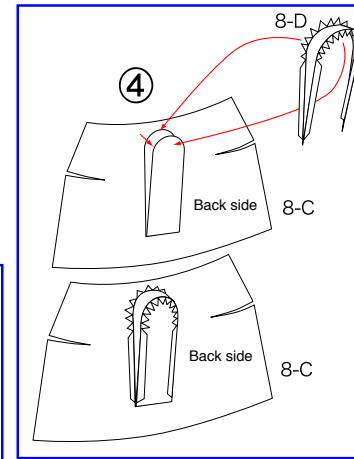
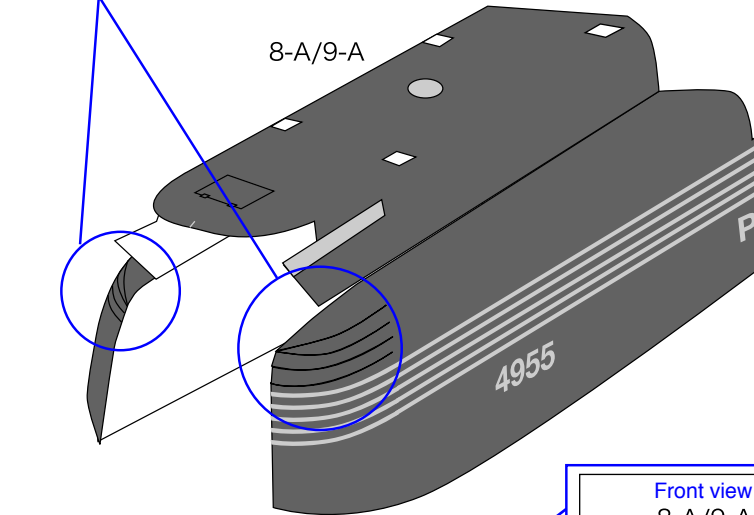
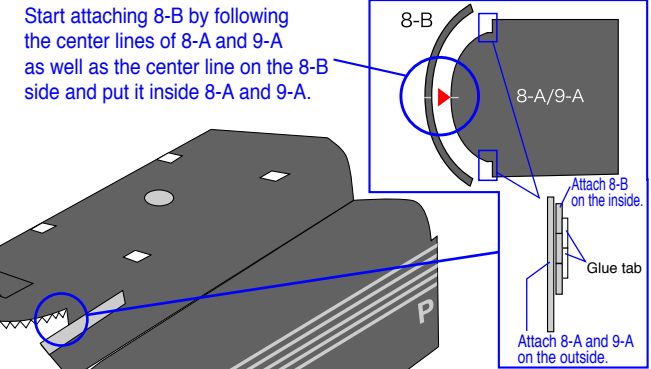
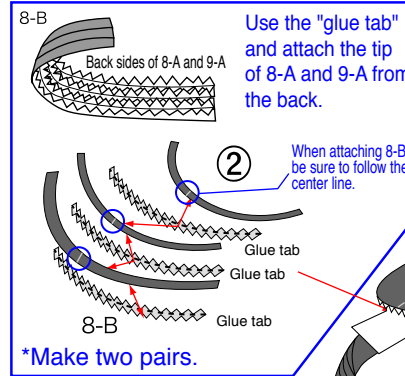
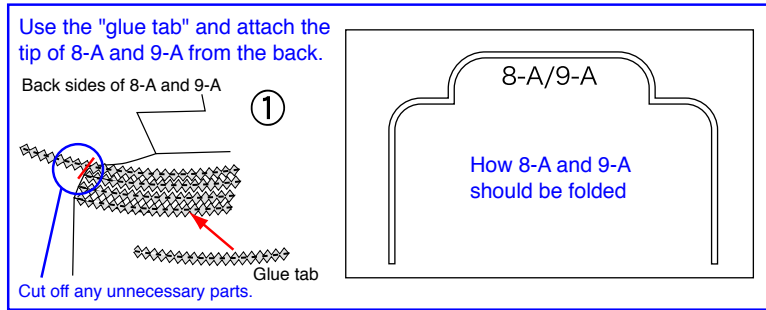


Trace along the folds with a ruler and a used pen (no ink) to get a sharper, easier fold.

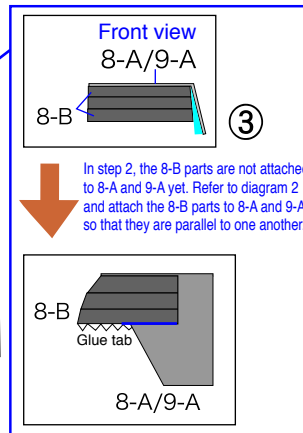
Glue, scissors and other tools may be dangerous to young children so be sure to keep them out of the reach of young children.



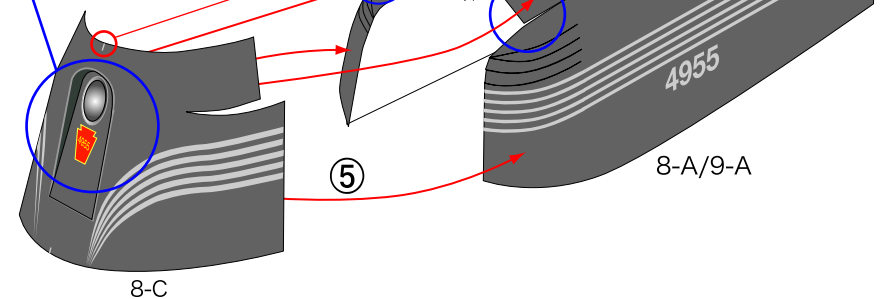
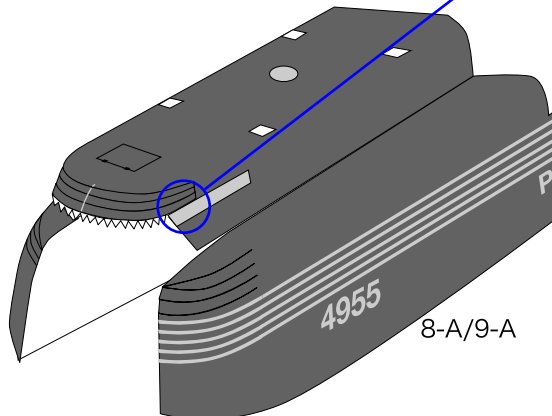


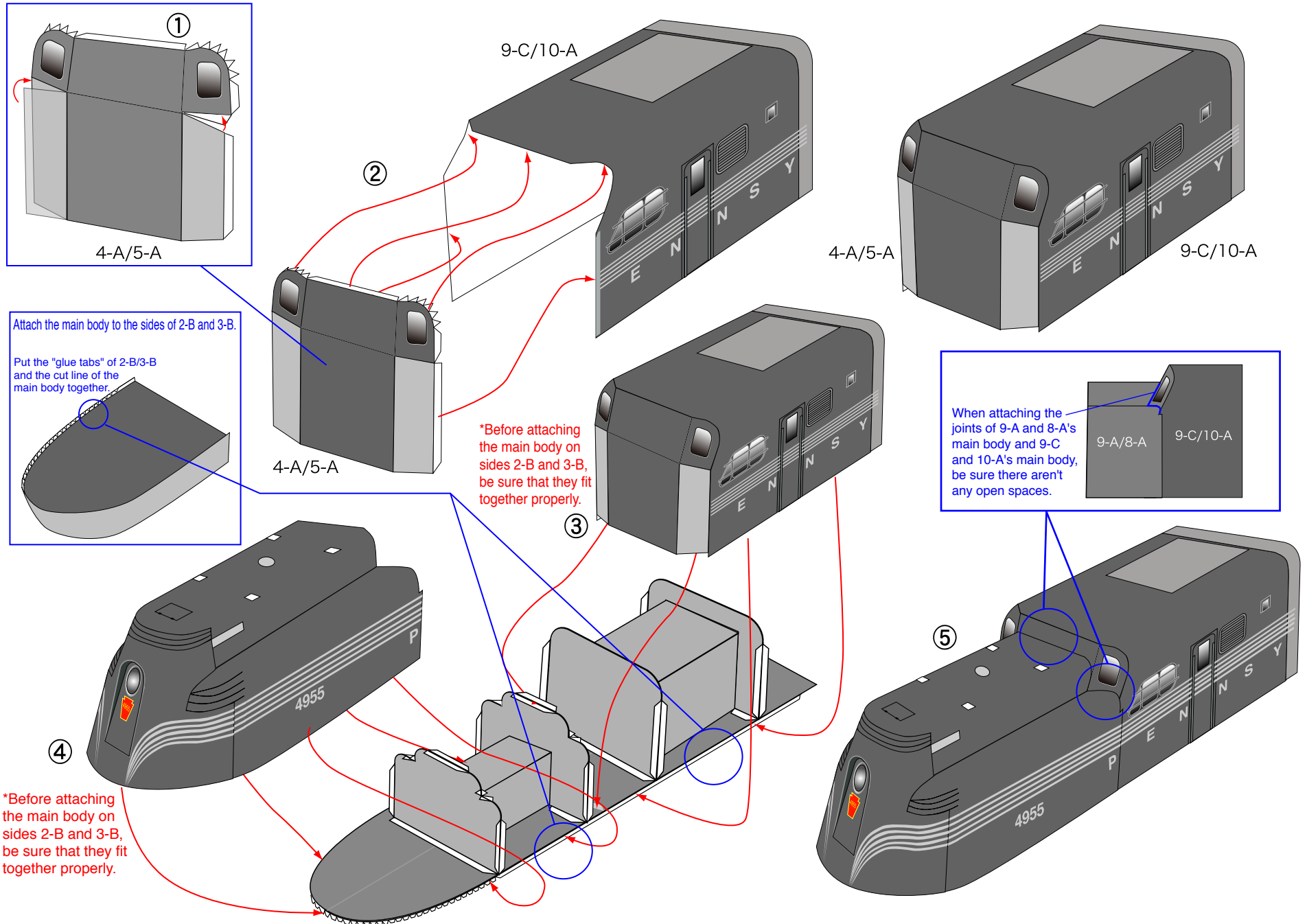


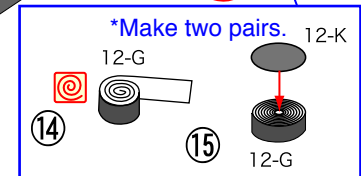
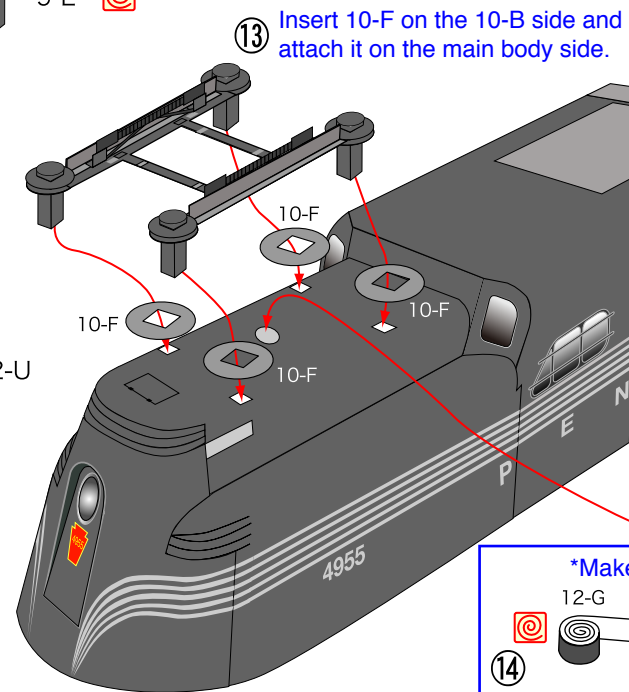
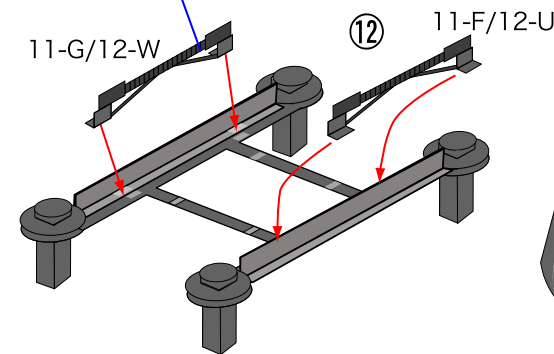
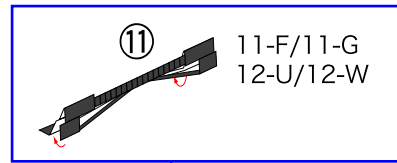
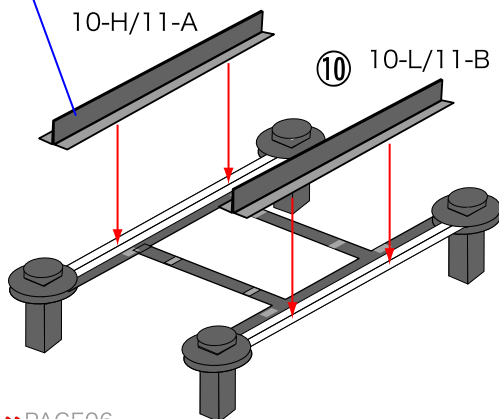
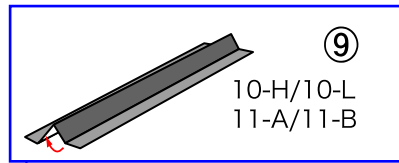
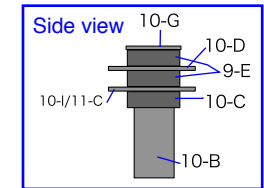
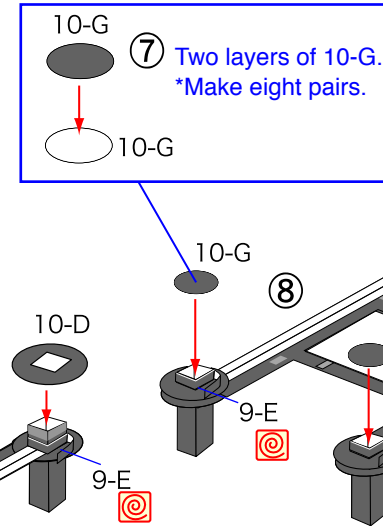
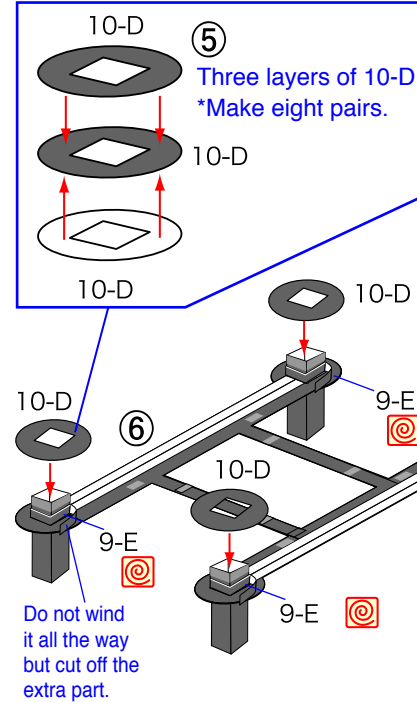
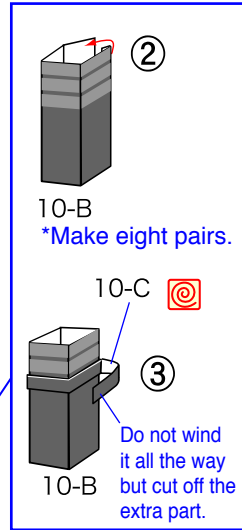
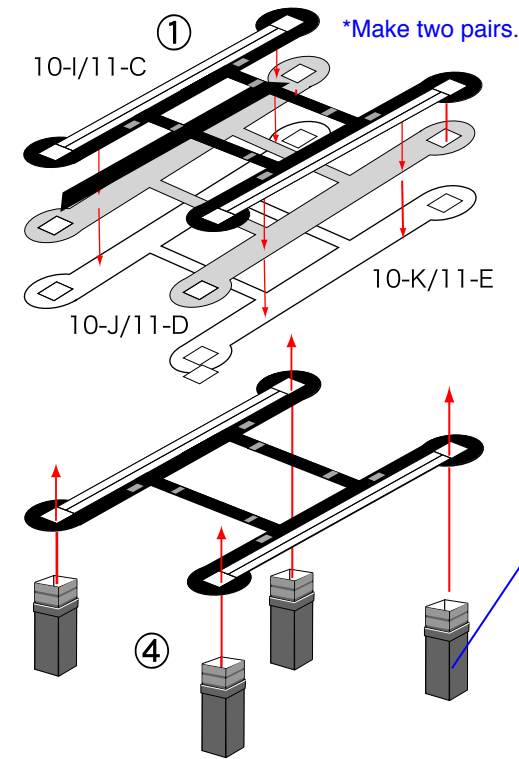
When attaching the top part of 8-C, insert it into the slits on 8-A and 9-A.



Place the center lines of 8-C and 8-B together.







① *Make four pairs.
Layer the three pieces.
11-K/11-N
11-J/11-M
11-I/11-L

Do the same for 12-L, 12-O, 12-M, 12-P, 12-N, and 12-Q.

② Layer the three pieces.
11-O/12-J
11-P/12-R
11-Q/12-S

*Make two pairs.

③ 11-R/12-I
11-S/12-T
11-T/12-X

*Make two pairs.

④ *Make two pairs.

⑤ *Make four pairs.
11-Y/12-Y
11-Y-2/12-Y-2
11-Y-1/12-Y-1

Layer the three pieces.
Side view of 11-Y and 12-Y.

⑥ *Make two sets.

11-Z-1

⑦ *Make four pairs.
11-H
11-H-1

Layer the two pieces.

⑧ 11-Z
*Make two pairs.

Side view of the pantograph

11-R
11-O
11-Y
11-H
11-I
11-L

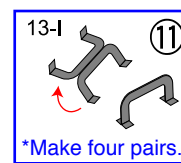
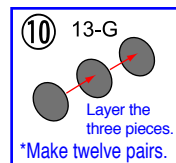
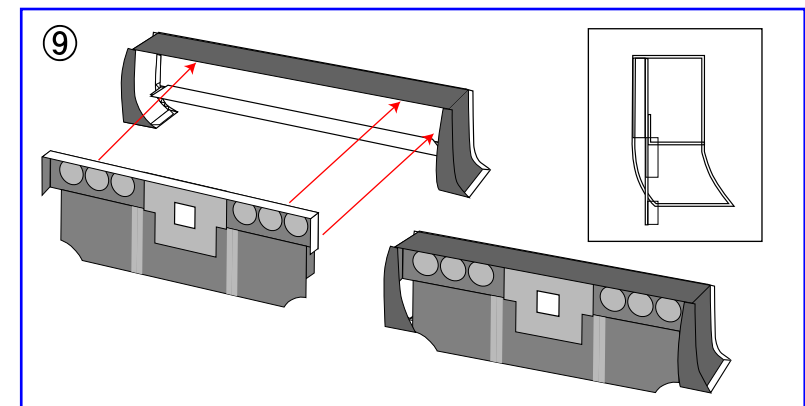
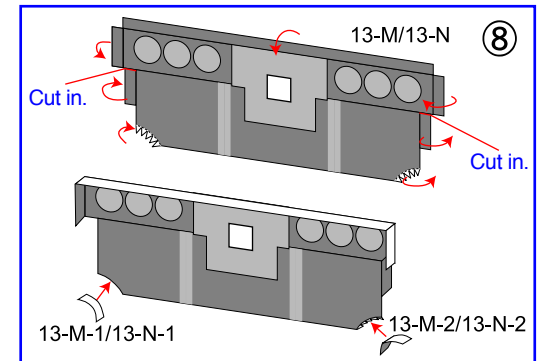
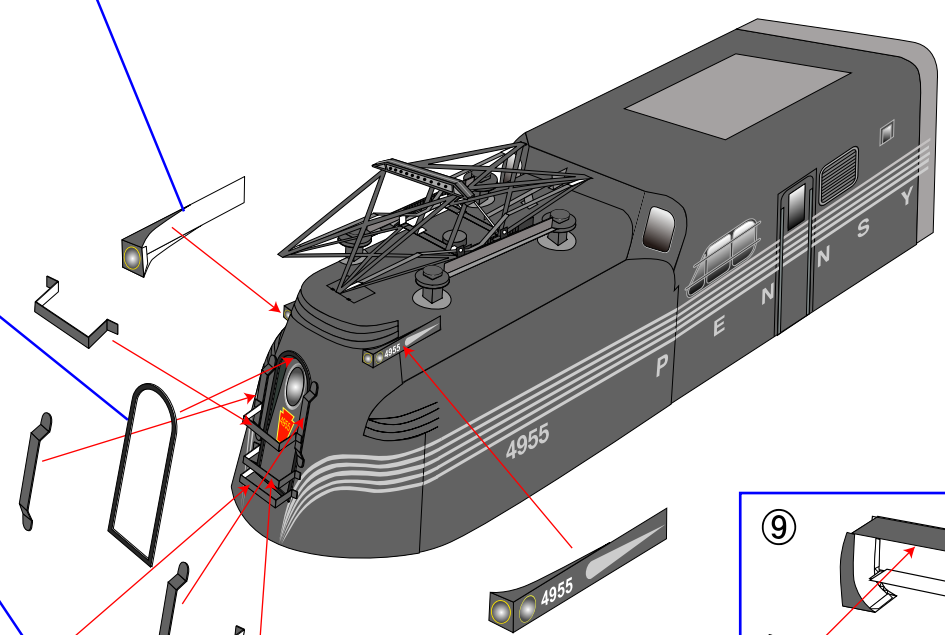
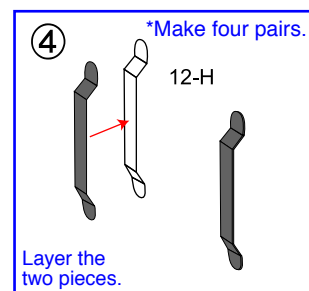
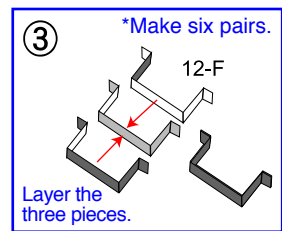
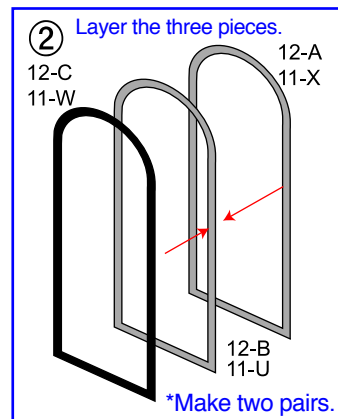
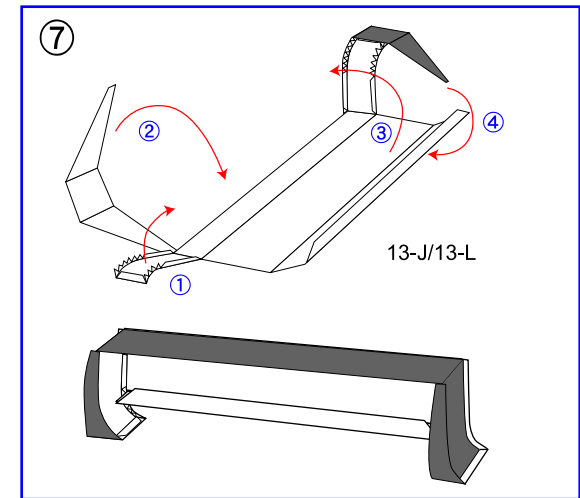
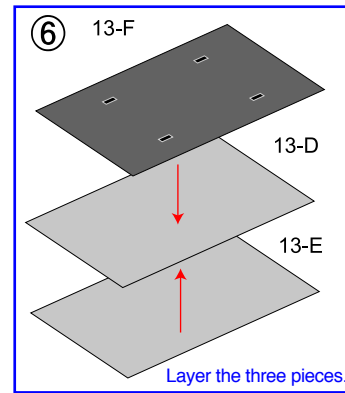
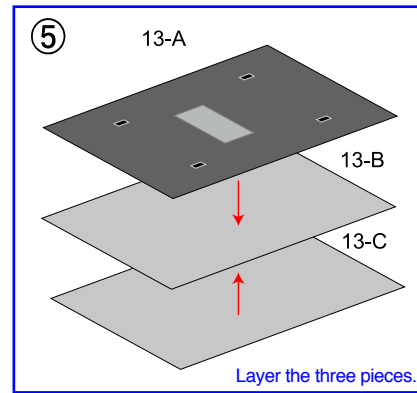
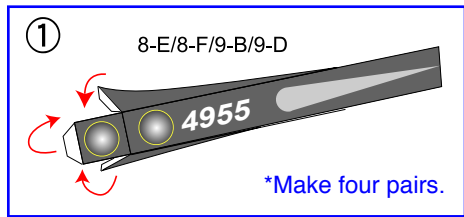
The areas marked in blue are the glue joints. Use 11-H to secure the height.

The areas marked in red are 10-I and 11-C's glue joints.

⑨ 11-Z

⑩ 11-Z

⑪

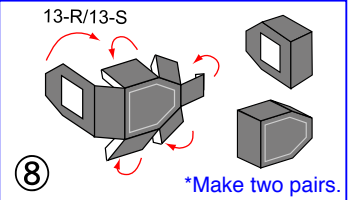
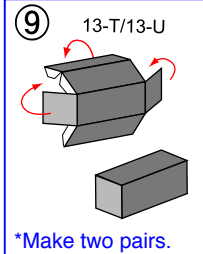
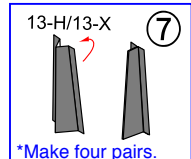
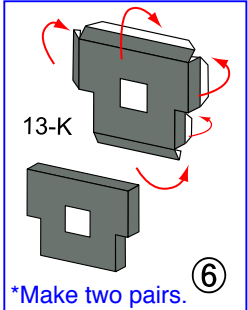
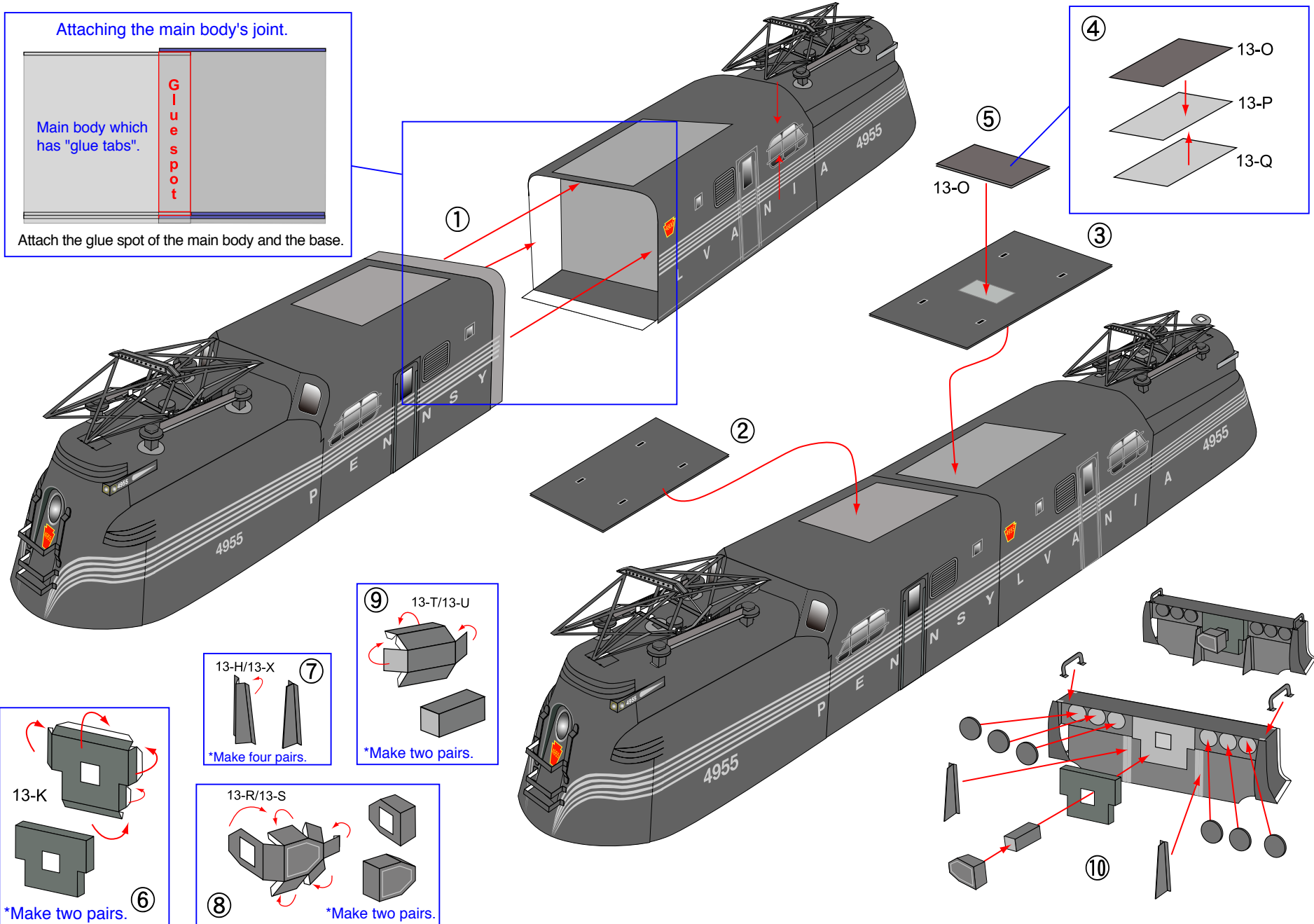


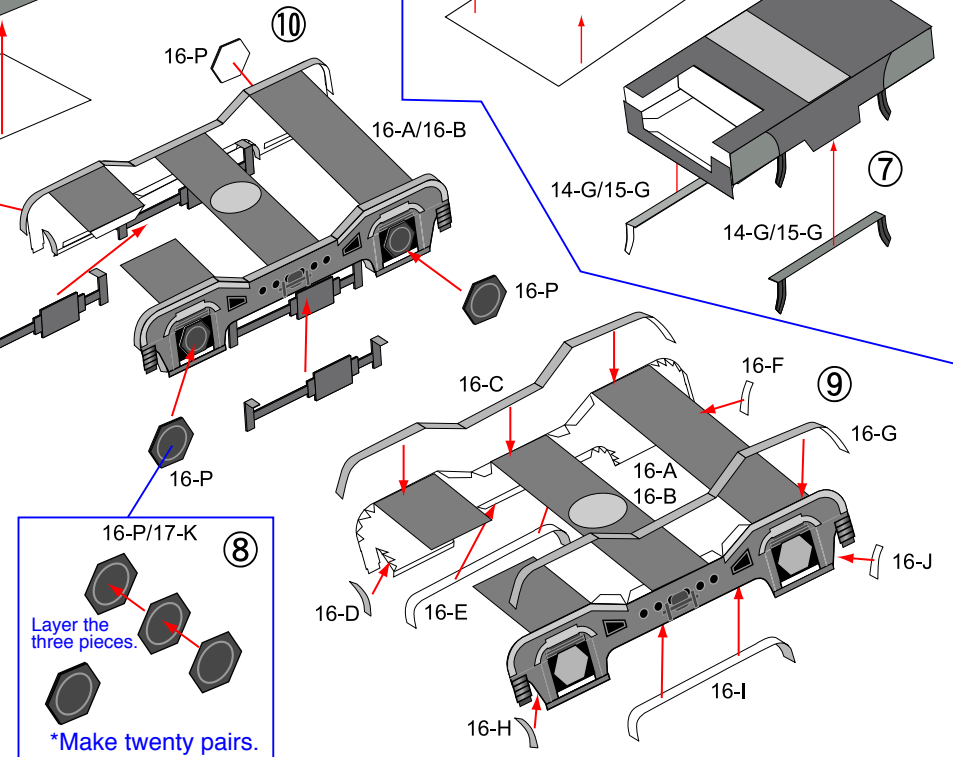
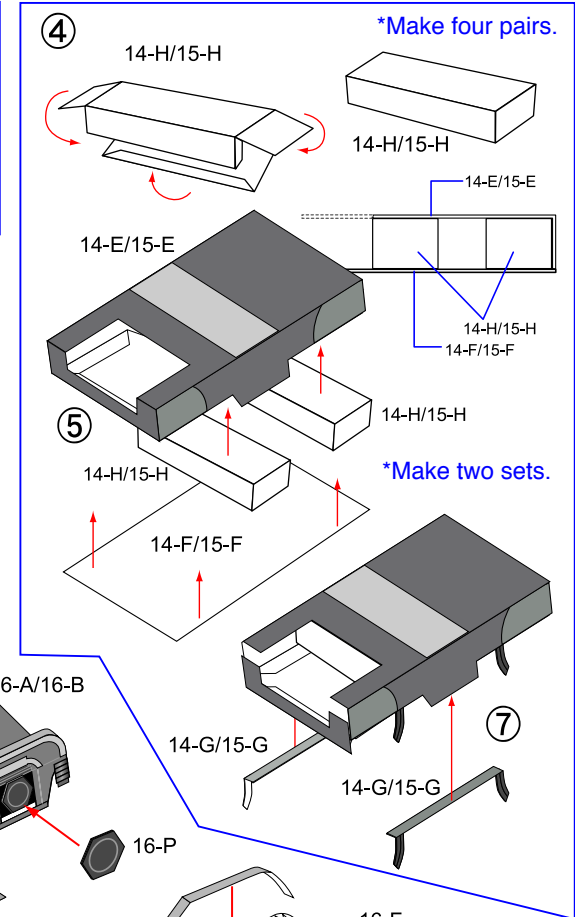
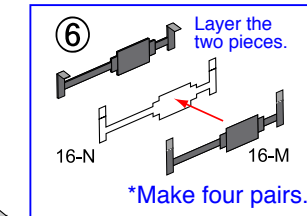
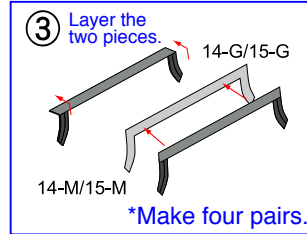
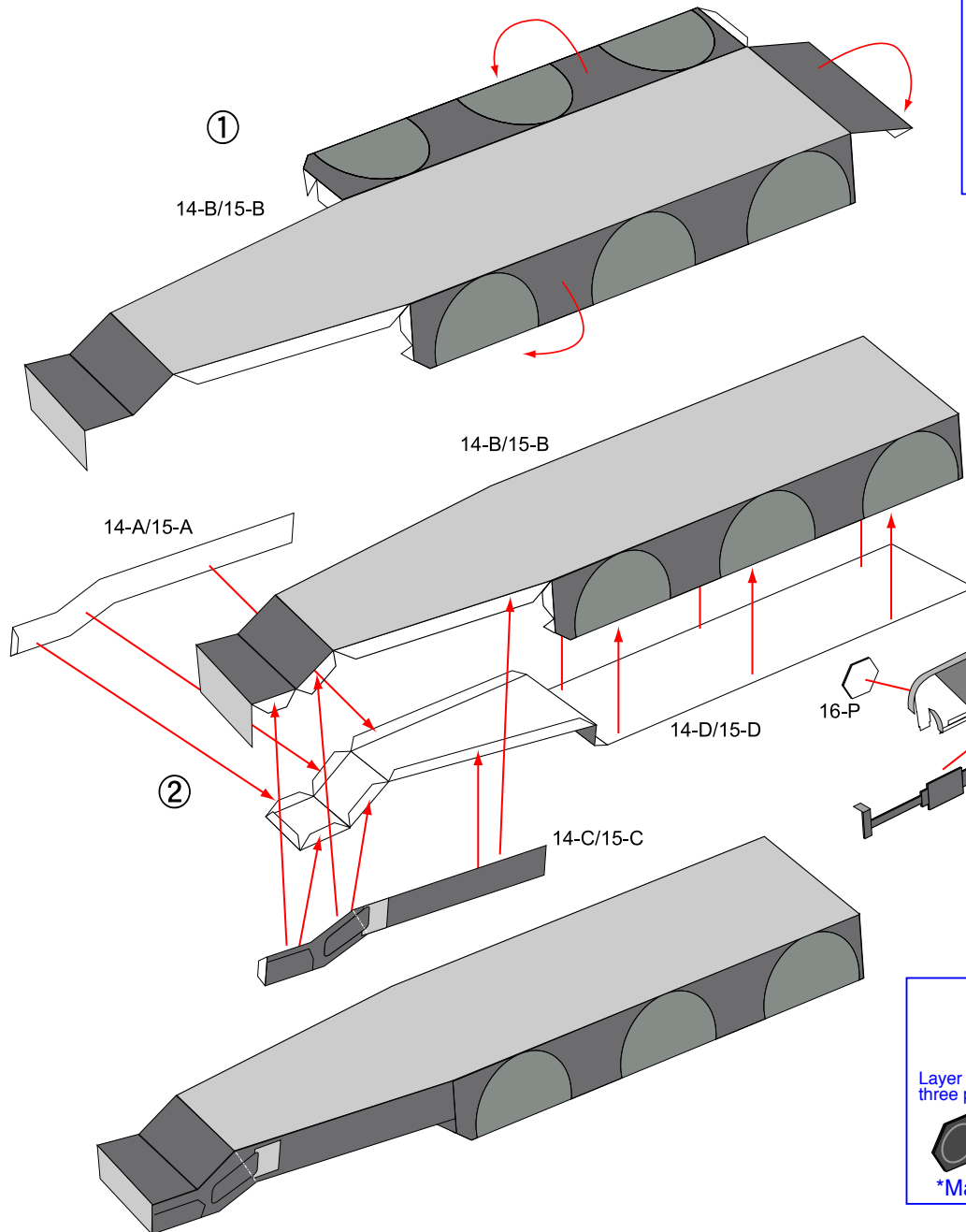
Attaching the main body's joint.

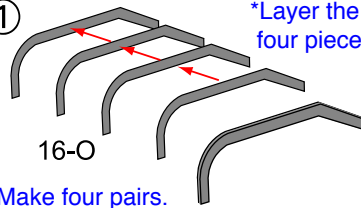
Main body which has "glue tabs".

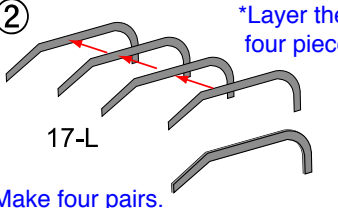
Glue spot

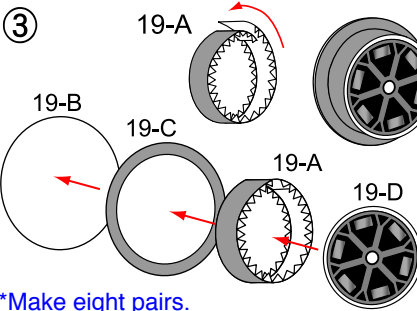
Attach the glue spot of the main body and the base.

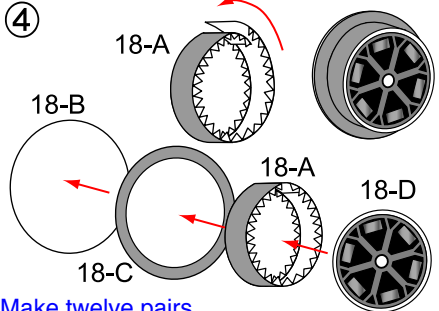


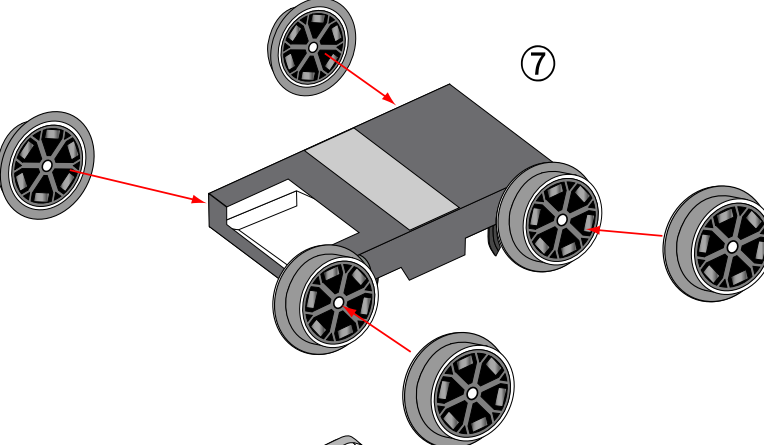


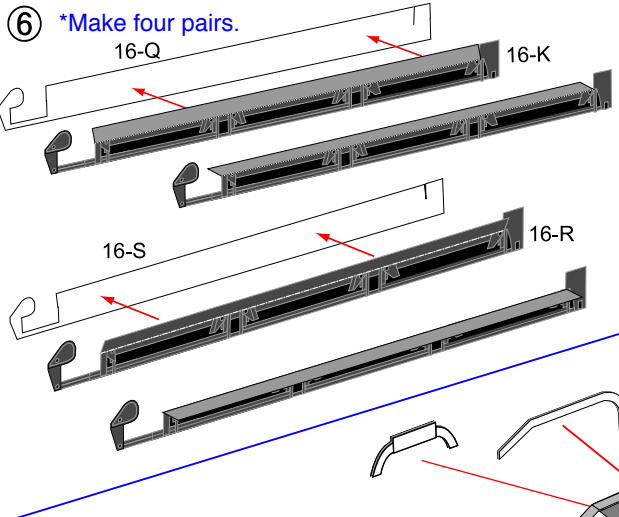
①  *Layer the four pieces.
16-O
*Make four pairs.

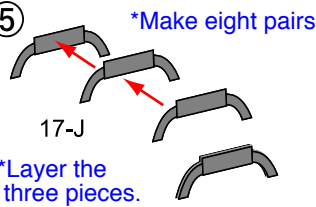
②  *Layer the four pieces.
17-L
*Make four pairs.

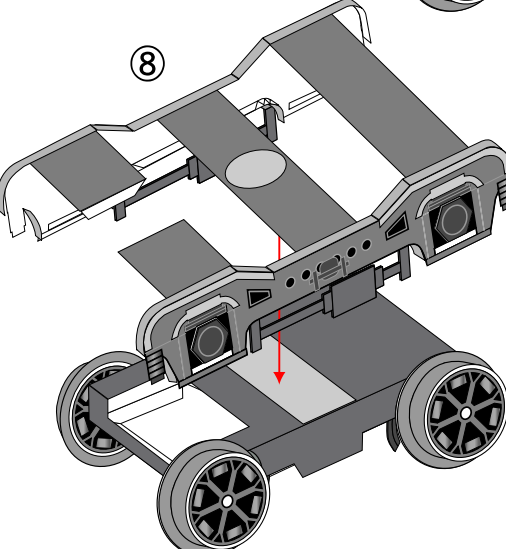
③  19-A, 19-B, 19-C, 19-D
*Make eight pairs.

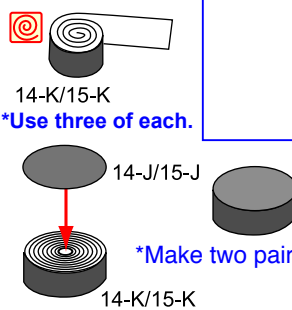
④  18-A, 18-B, 18-C, 18-D
*Make twelve pairs.

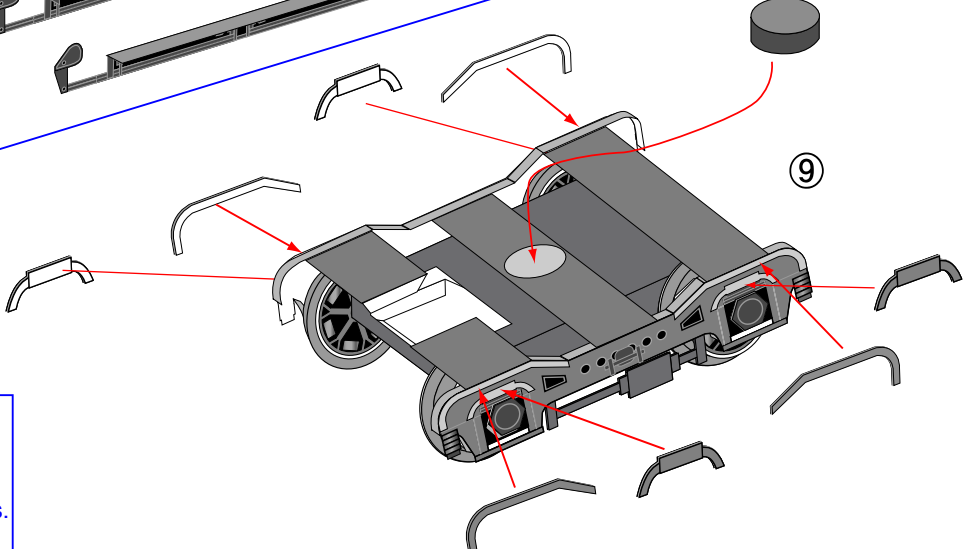
⑦ 

⑥ *Make four pairs.
16-Q, 16-K, 16-S, 16-R


⑤ *Make eight pairs.
17-J
*Layer the three pieces.


⑧ 

 14-K/15-K
*Use three of each.
14-J/15-J
*Make two pairs.
14-K/15-K

⑨ 

Positions on sides 14-D and 15-D where 16-K and 16-S should be attached.
As for the areas marked in blue, follow the respective designs of 16-K and 16-S.

