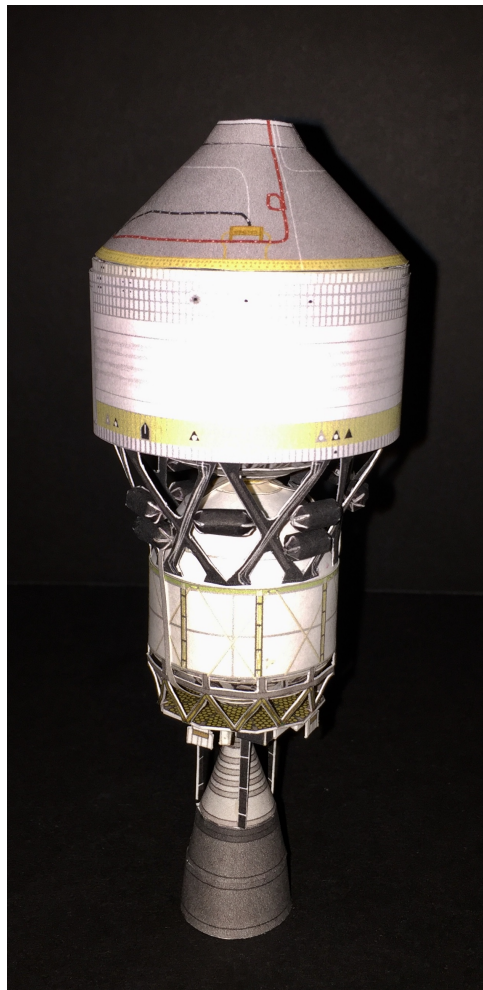




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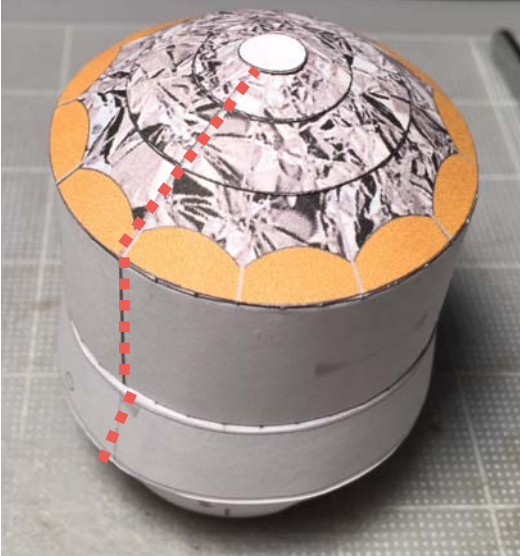
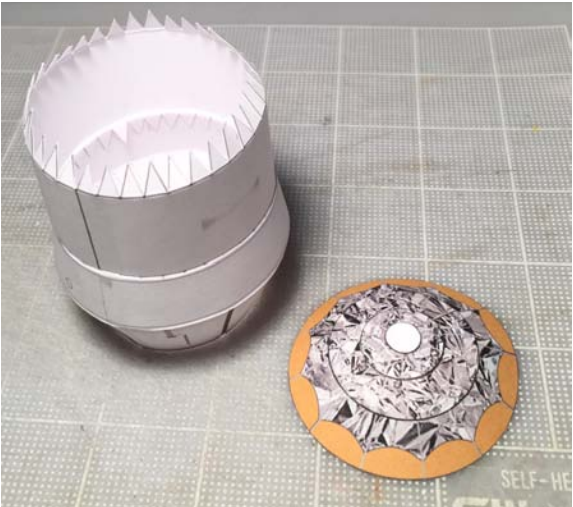
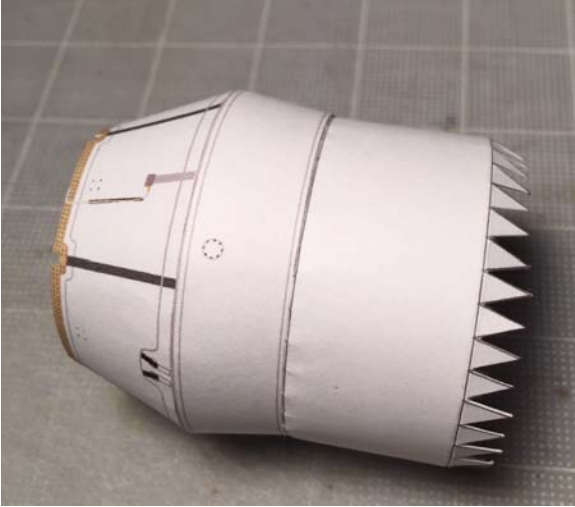
Delta IV Cryogenic Second Stage

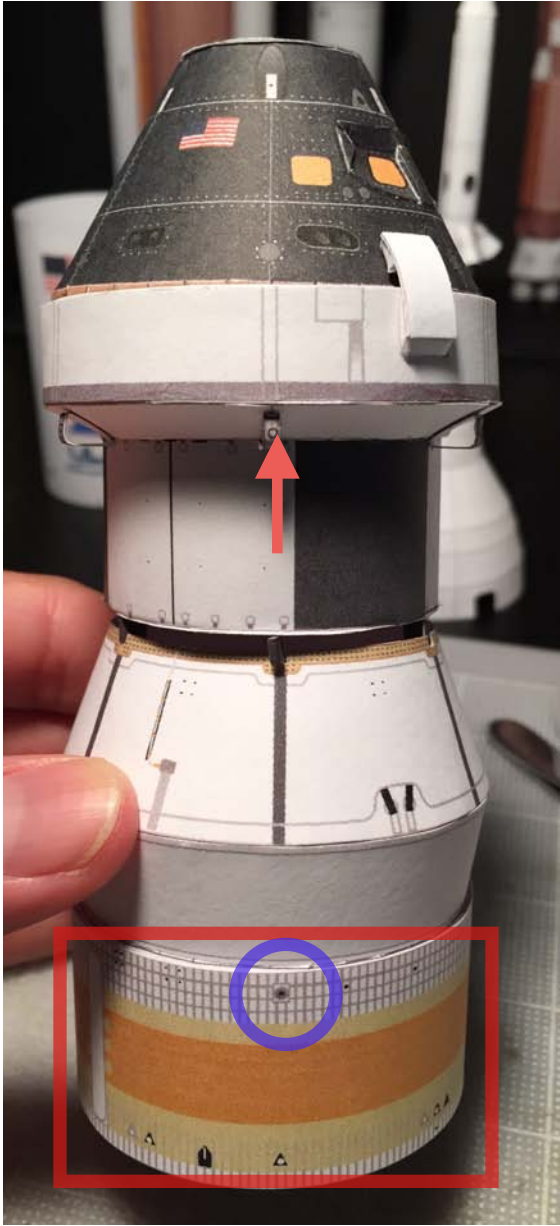


IMPORTANT:

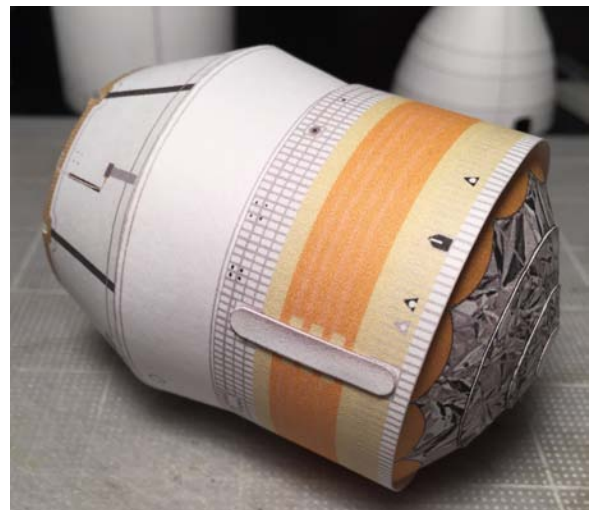
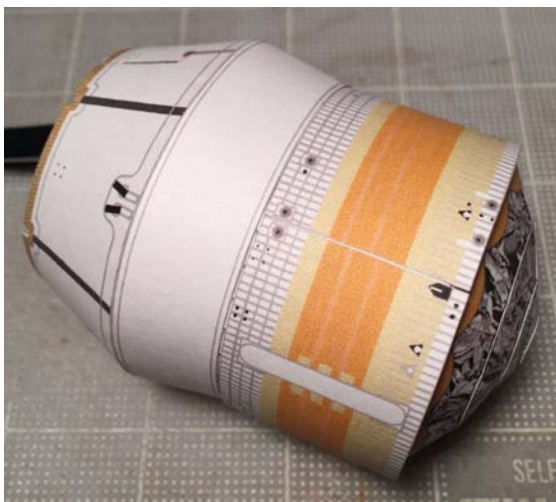
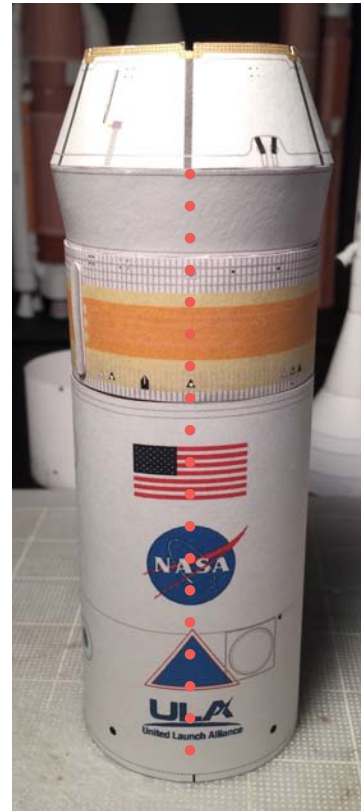
This manual is based from the Orion EFT-1 manual. Some photos show the Orion capsule, but all the steps apply to assemble this version of the Delta IV Cryogenic Second Stage for the Parker Solar Probe mission.

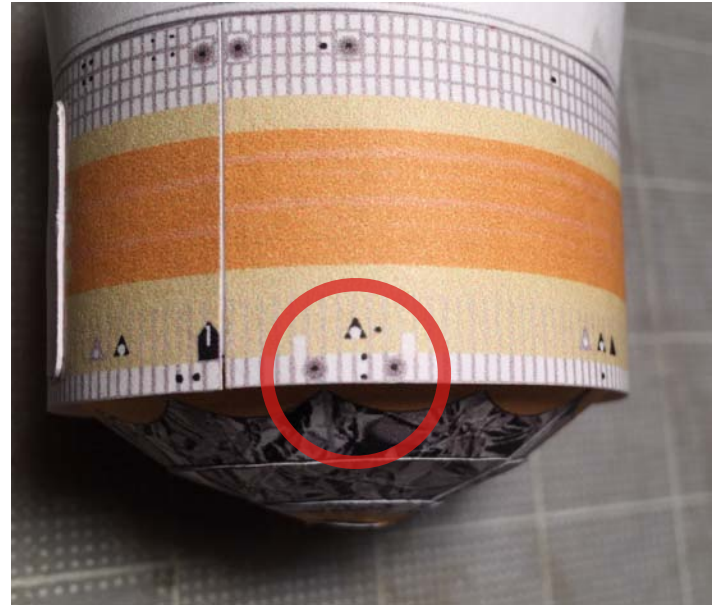
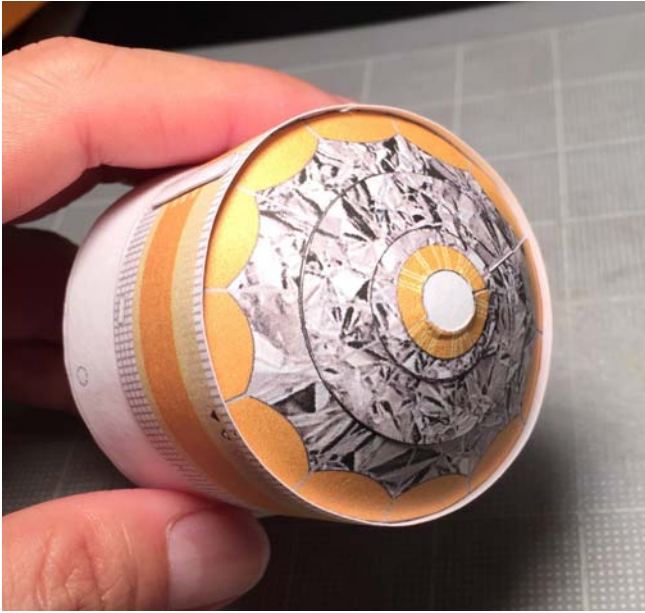
Assembly of the Second Stage (LH2 tank)



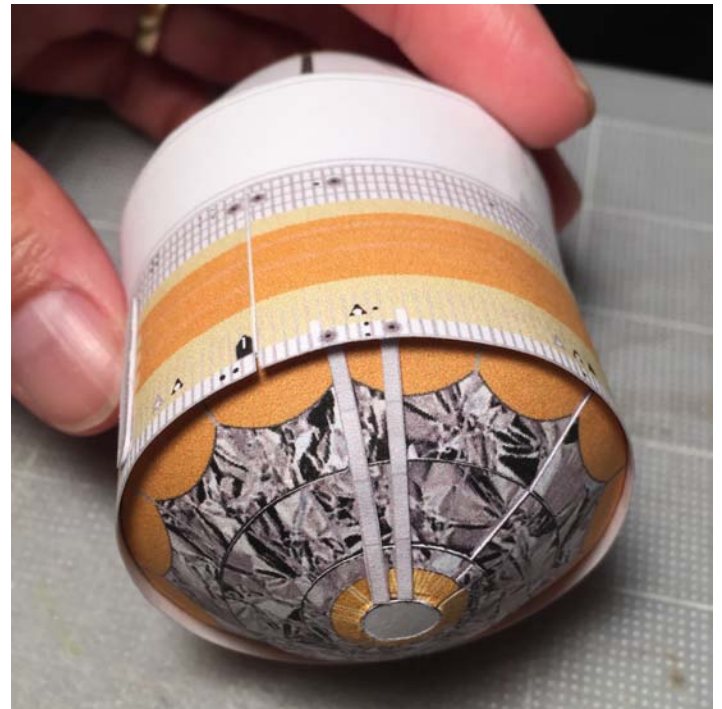


IMPORTANT: Before gluing the Second Stage colored section (red rectangle); position the complete block of Orion, Service Module and Adapter following the Second Reference Point or Front side of Delta IV (red arrow) and align it with the small circle (blue circle). This front side will also be aligned with the Delta IV interstage that has the US Flag and logos.

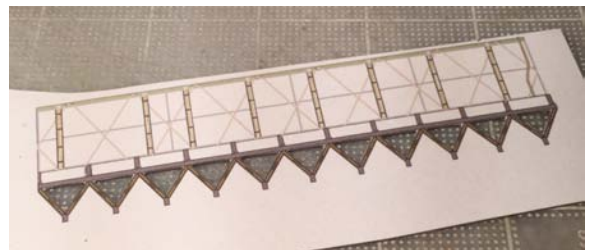
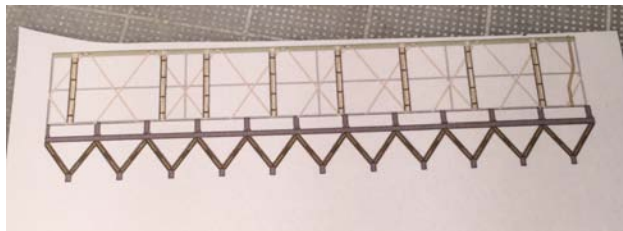
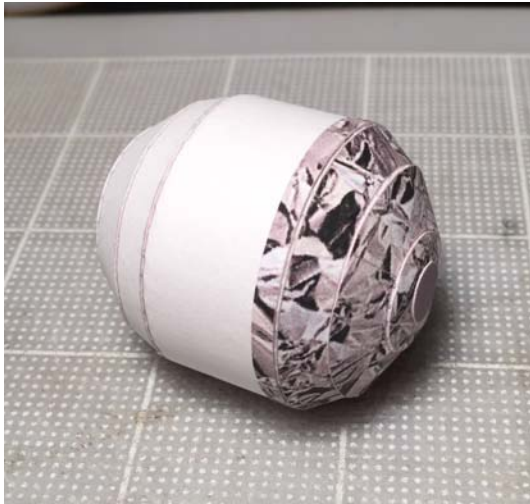
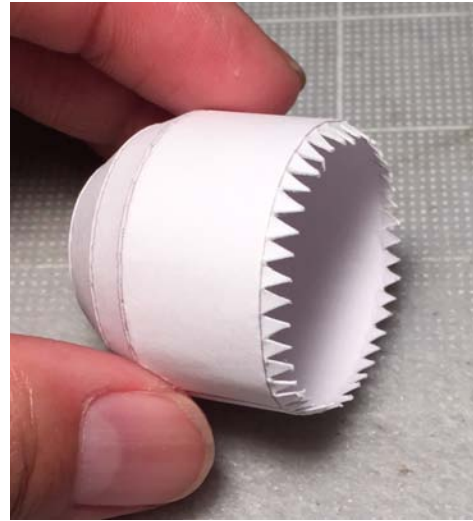
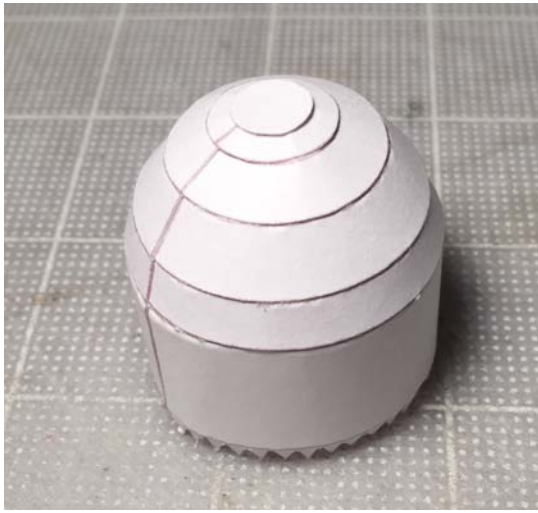




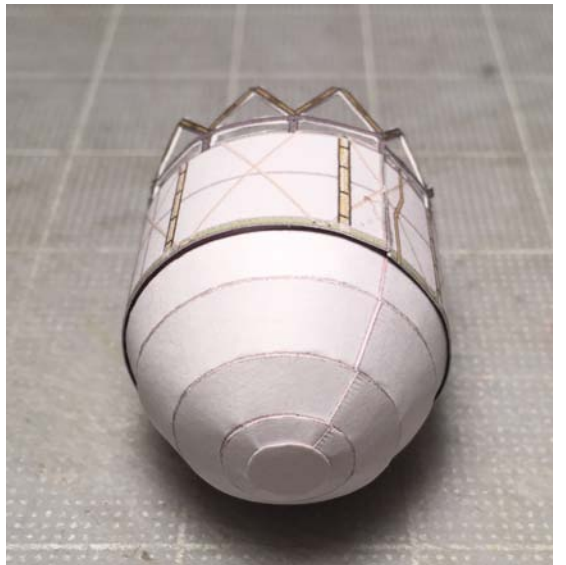
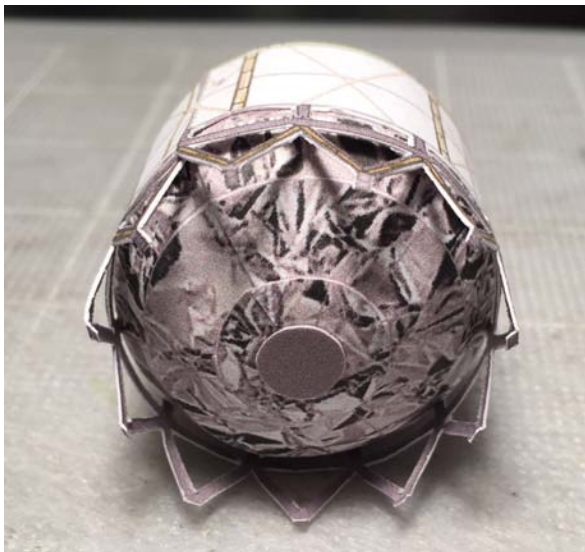
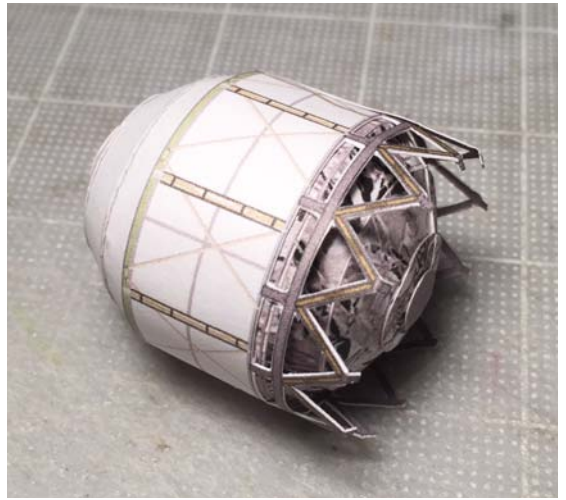
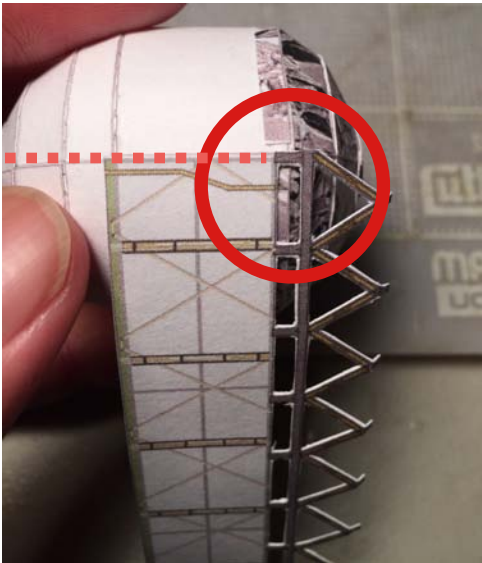
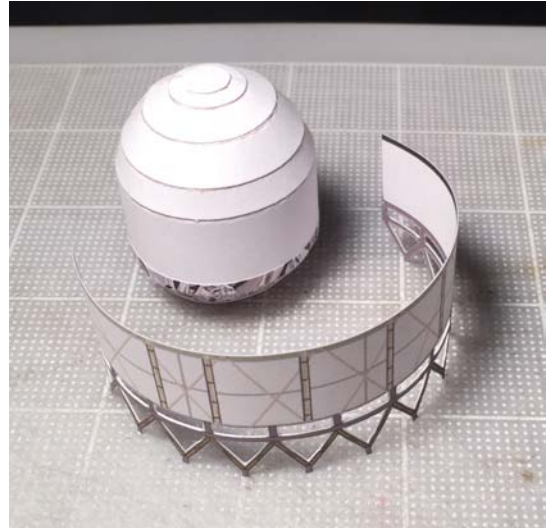
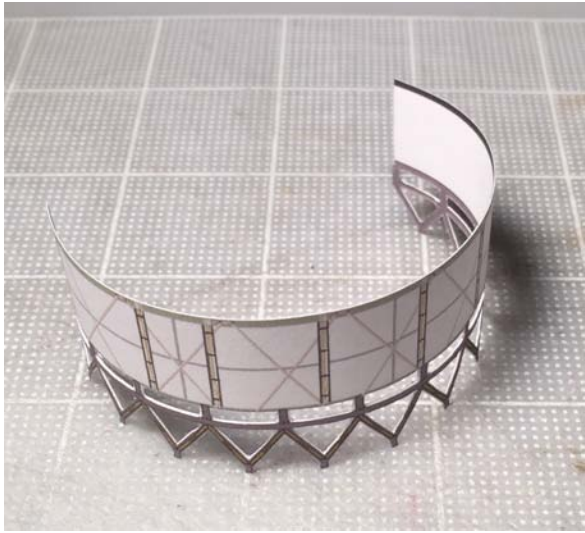
The graphic with the 2 small circles (red circle) indicates where the 2 fuel pipes will be glued on the tank dome.



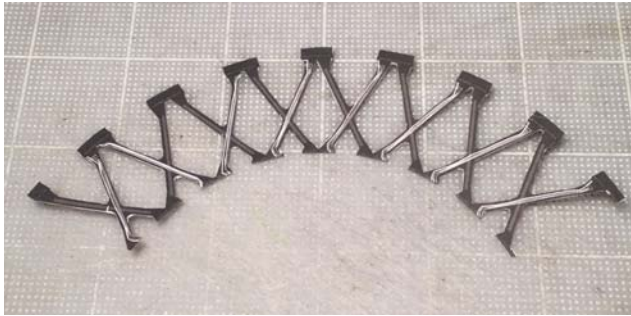
Second Stage (LO2 tank)



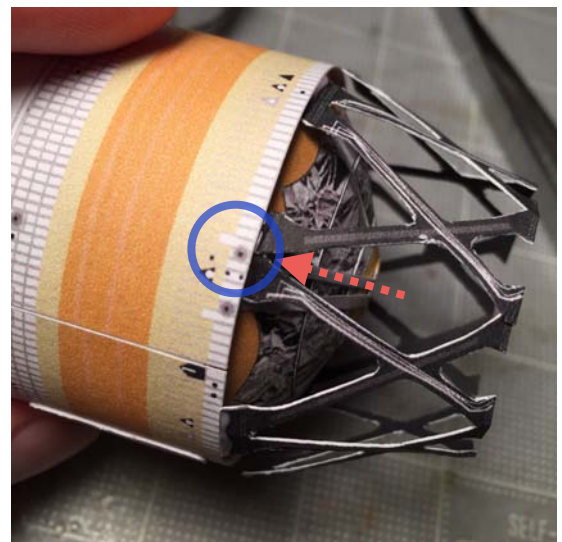
These photos are from the prototype model, therefore some mistakes are observed, such as the number of triangular sections. The photos show 11 triangles but the final product will have 10 which is the correct number. These will glue to the decagonal instrument platform.



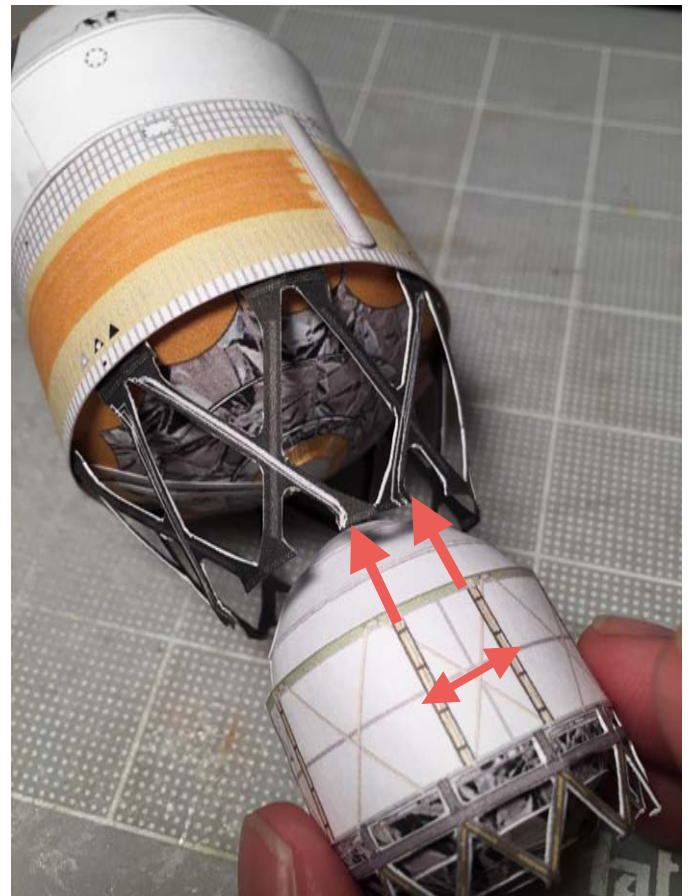
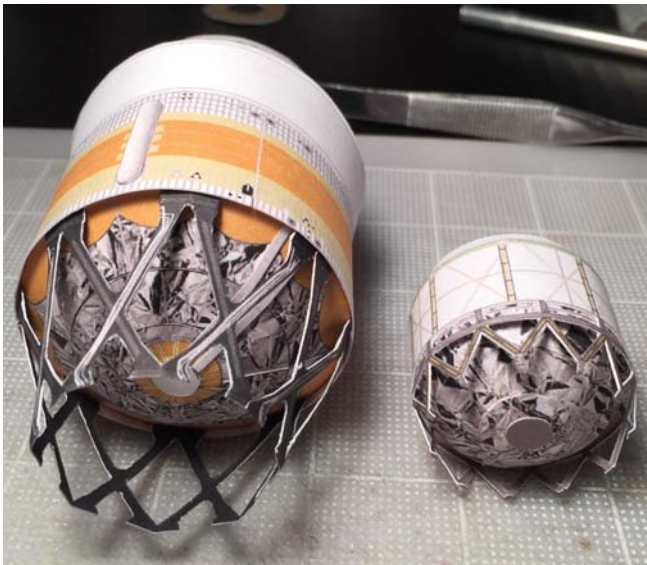
Adding the X pattern framework



This is a prototype model part and lacks the holders for the tanks.

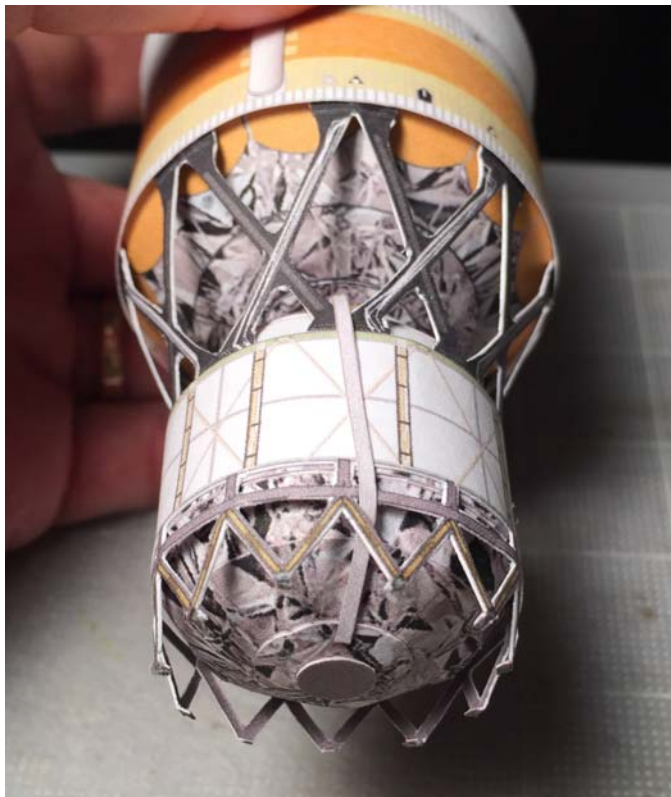
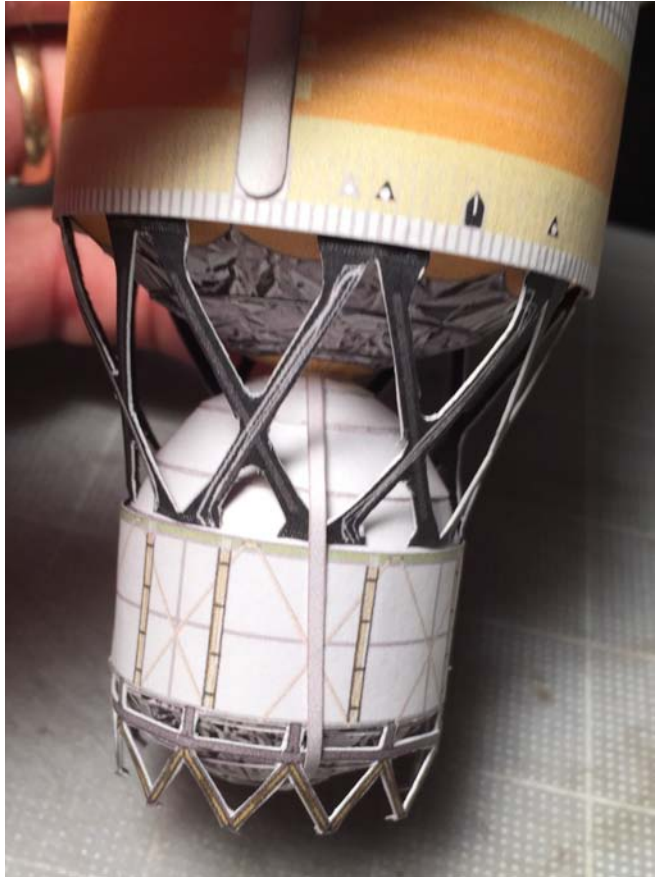


The seam of the X pattern framework needs to align with the small black dot as shown on the photo on the right.

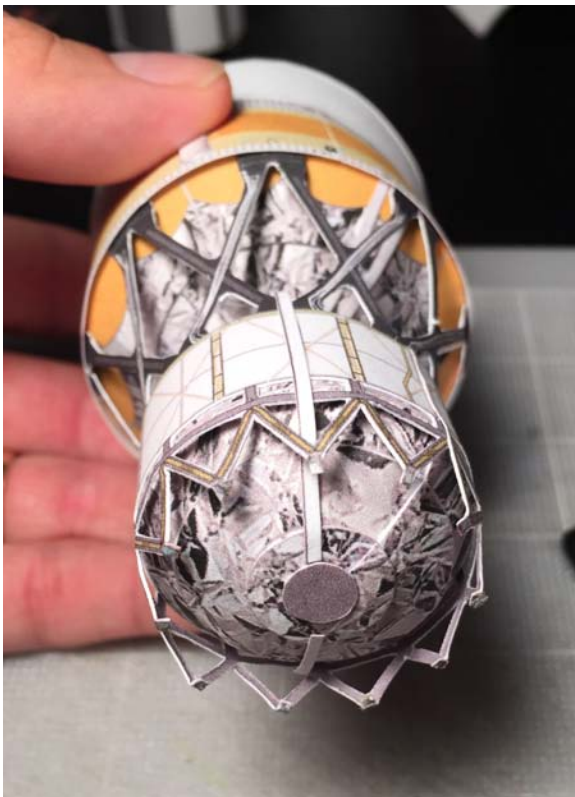
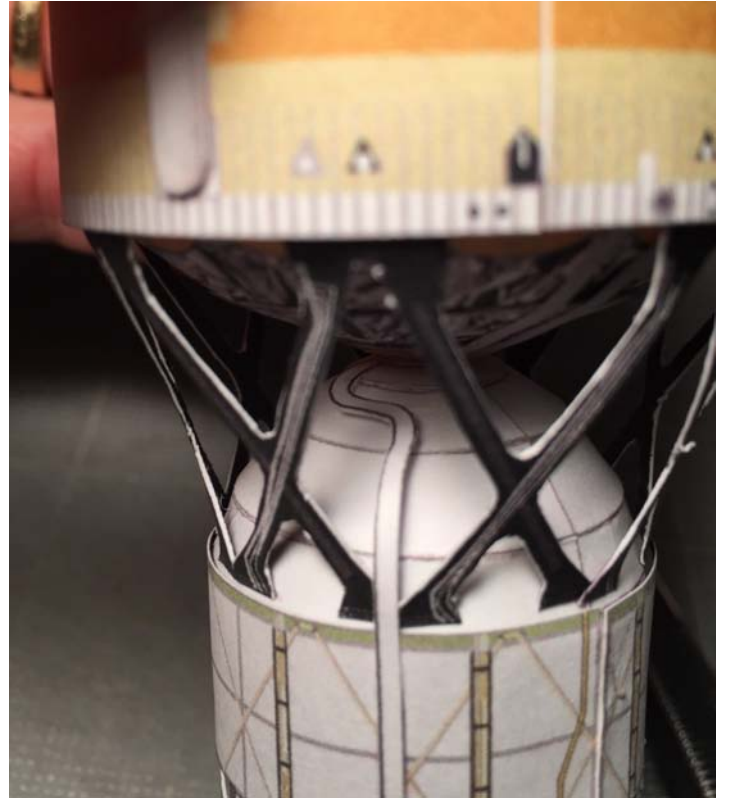
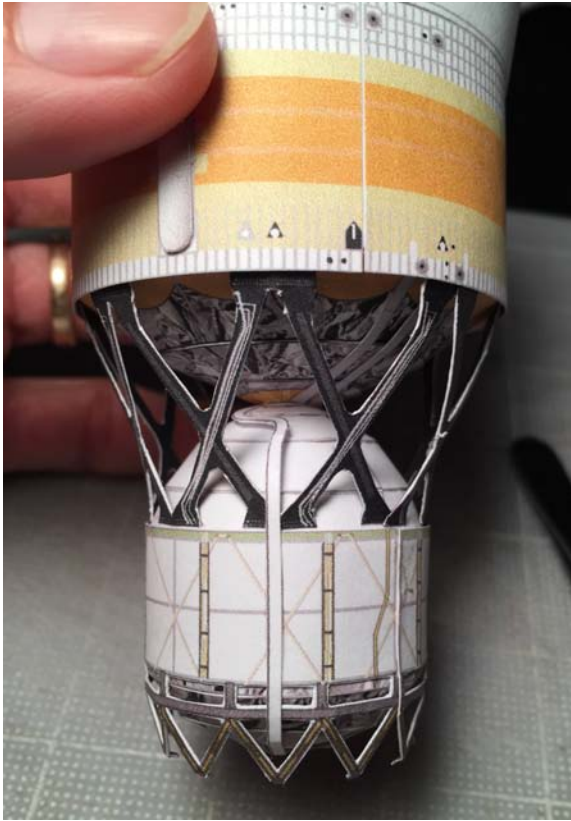


The photo on the right shows the correct way to align and glue the Second stage tanks. On the X pattern, find the only 2 arms on which the wiring forms a V shape. These need to align with the only 2 vertical wiring bars that are in close proximity on the LO2 tank as compared to the other bars that are separated at an equal distance.

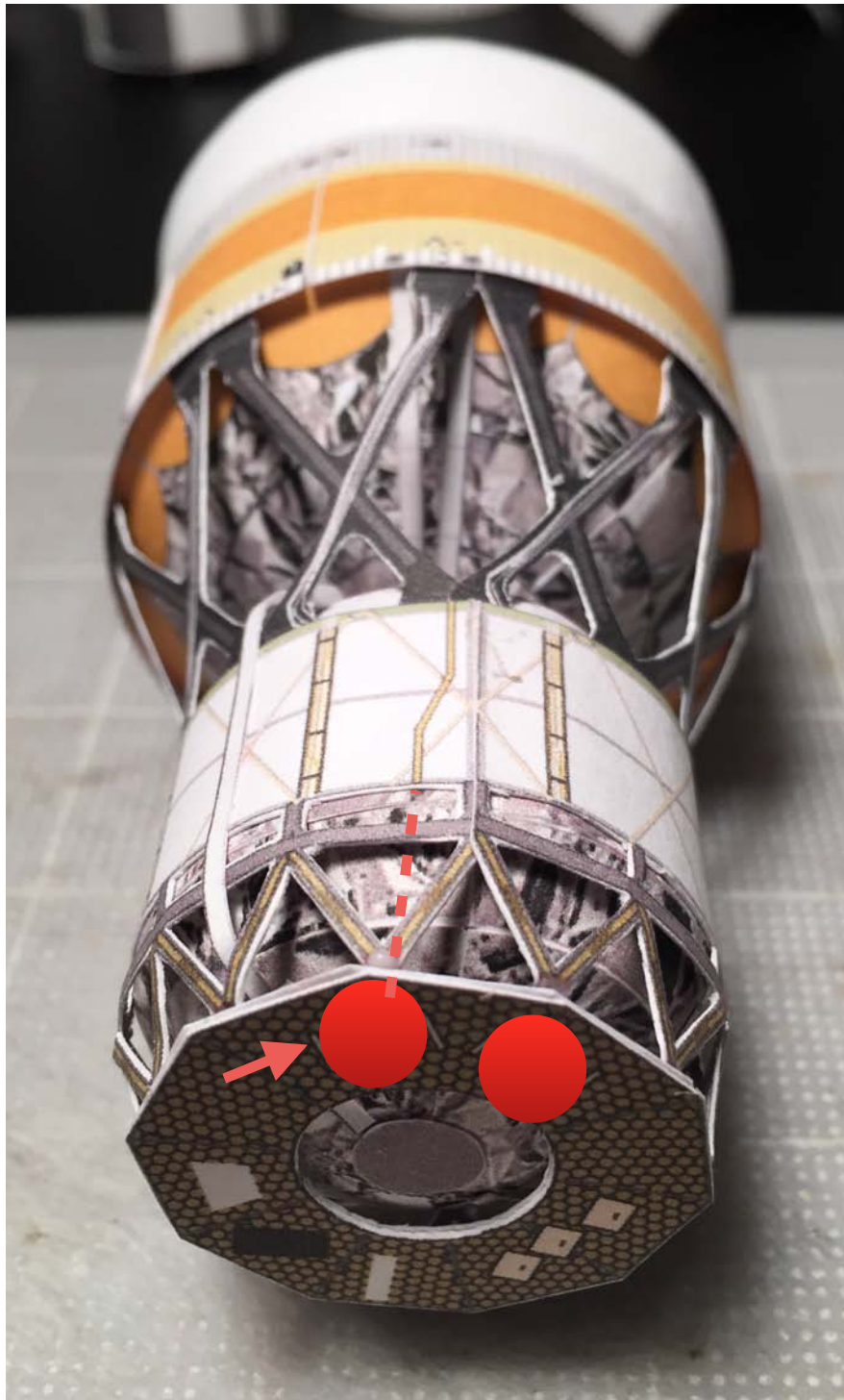
When both segments of the Second stage are glued, both tank domes will touch each other firmly.



Follow the details from these photos in order to glue this first fuel line on the LO2 tank.



Follow the details on these photos in order to glue the second fuel line that has a curvature at the top.



This photo shows how to align the decagon platform with the rest of the tanks. The red tank on the left (arrow) is centered with the thin golden fuel line.

