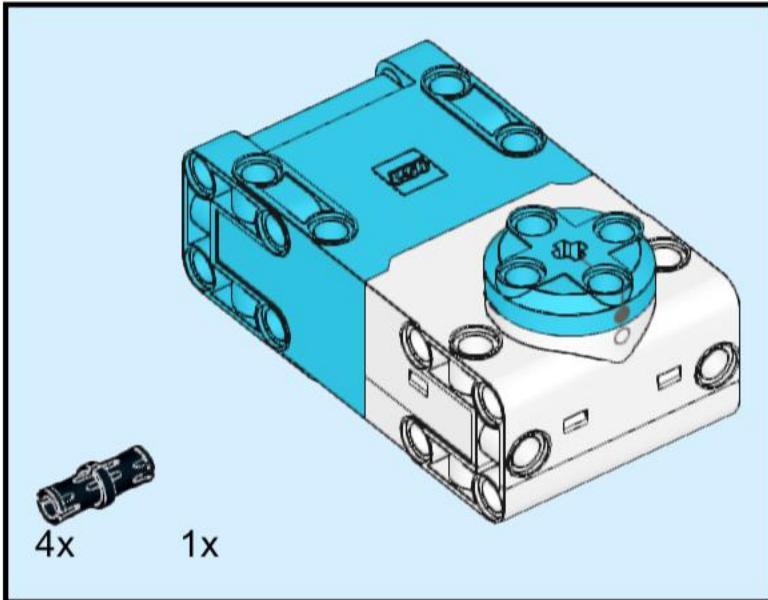
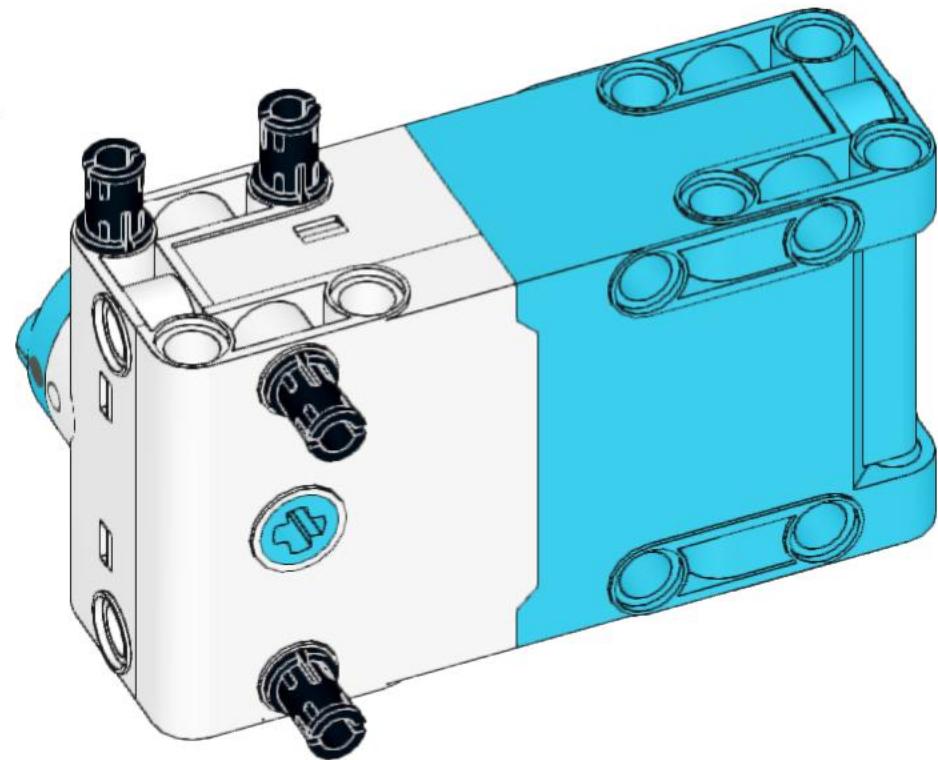


**1**

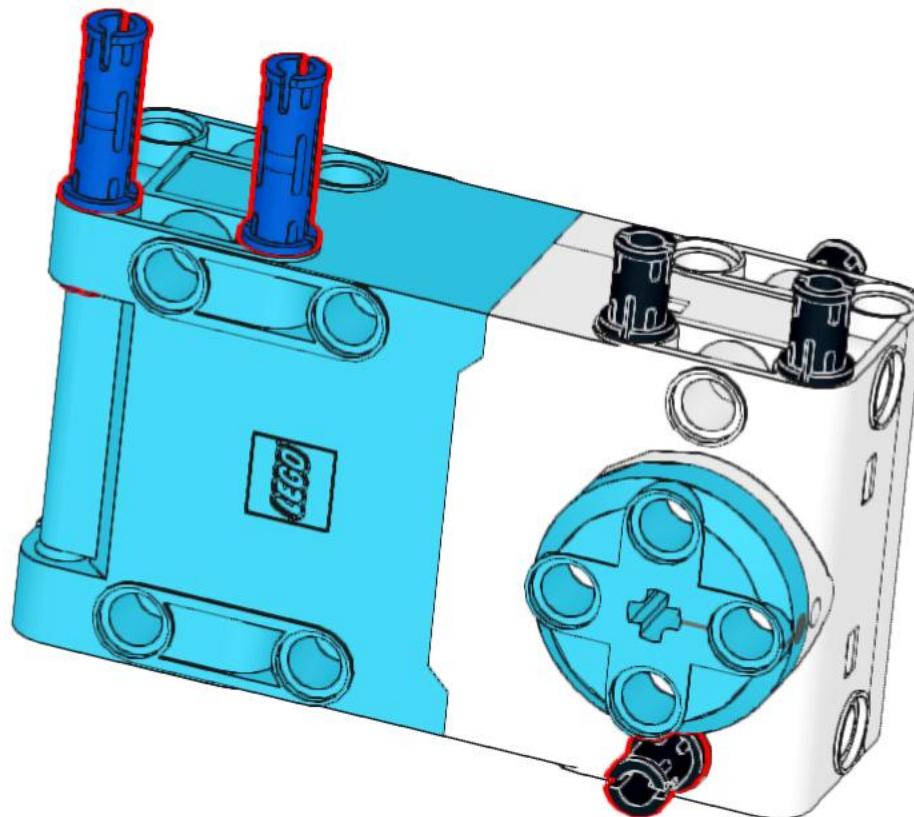
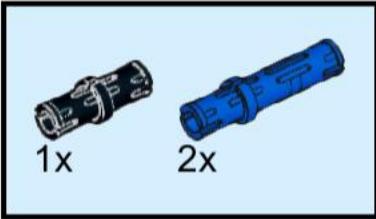


Save some colored beams  
for robot identification:  
(2) nine hole beams  
(2) right-angle 3x5 beams

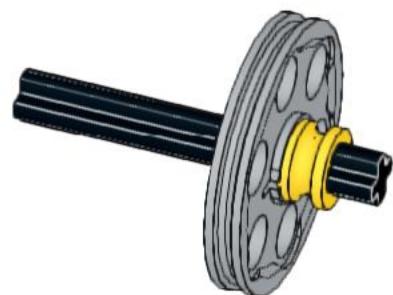
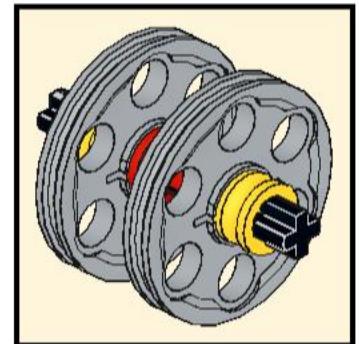
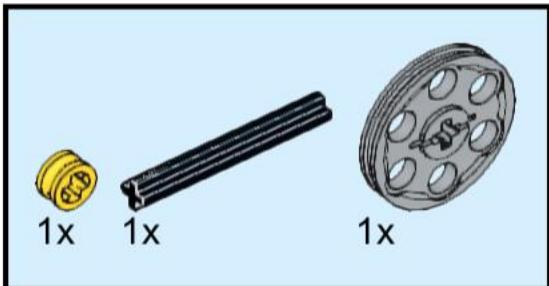
These will go on the top  
layer of the wall surrounding  
the robot.



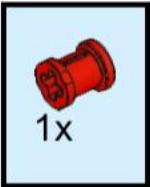
2



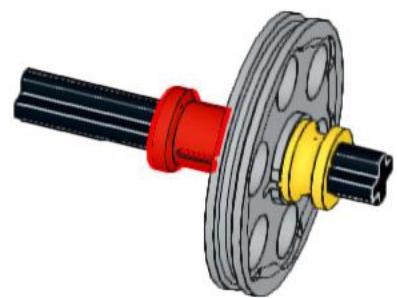
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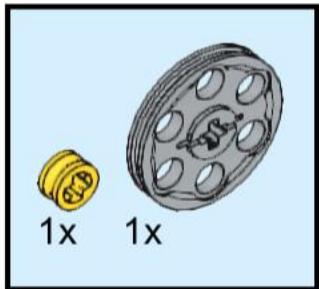
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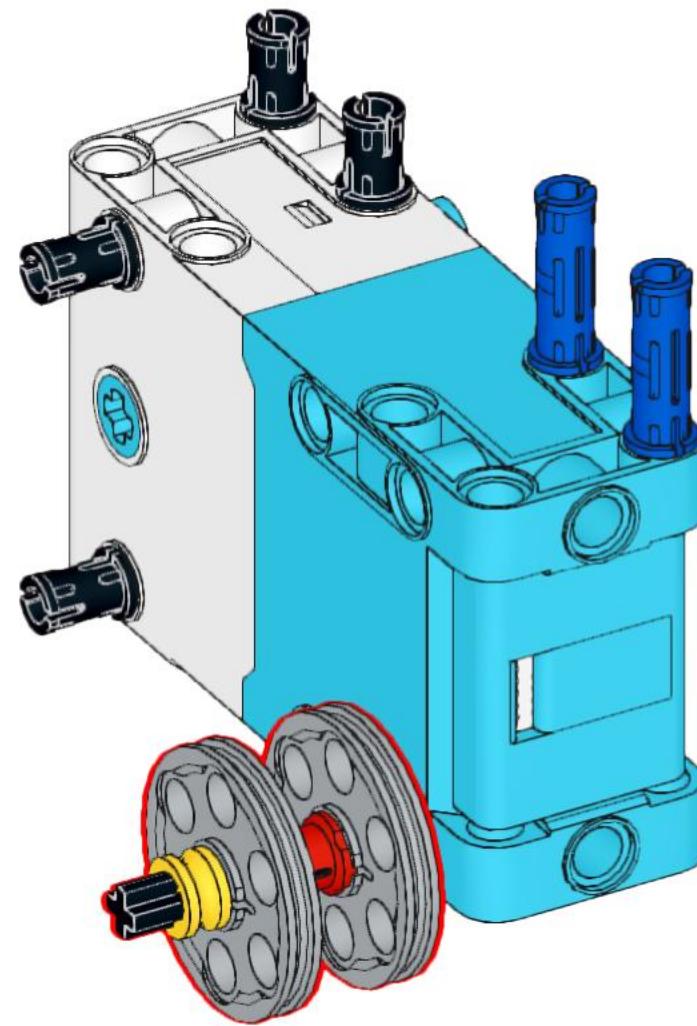
1x



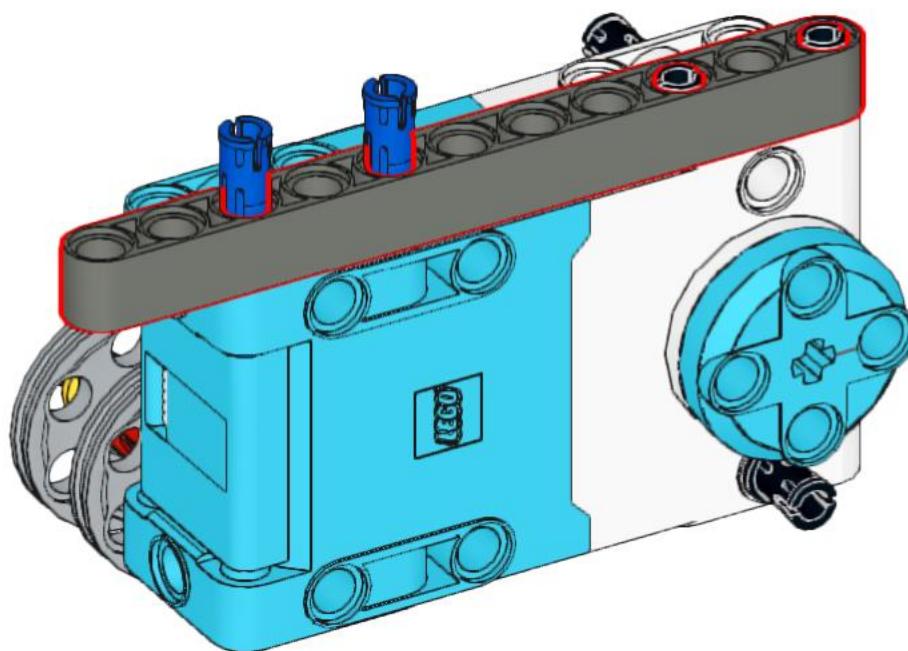
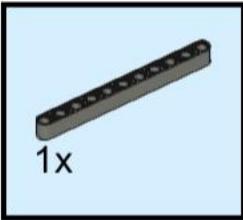
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6

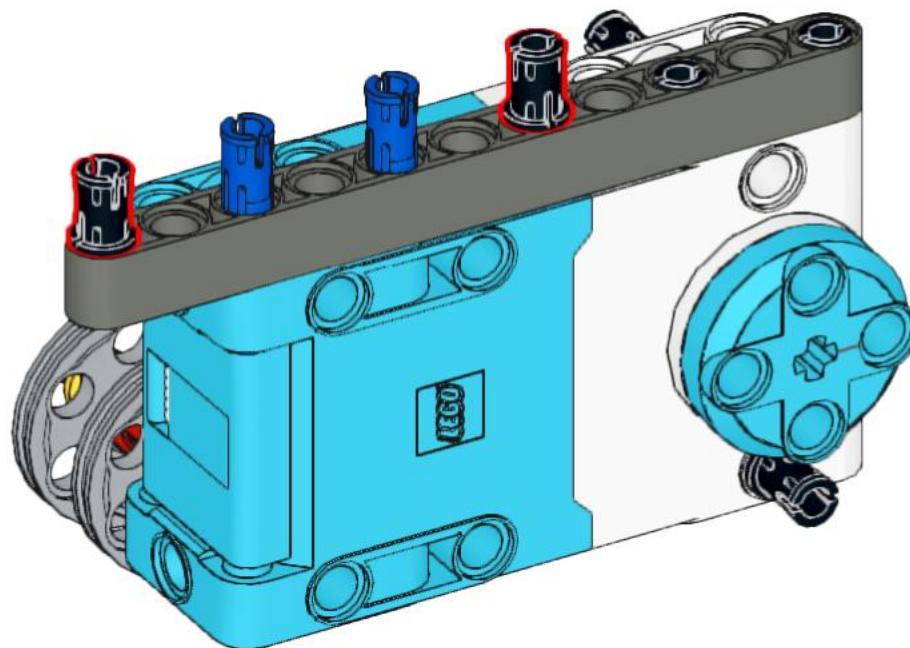


7

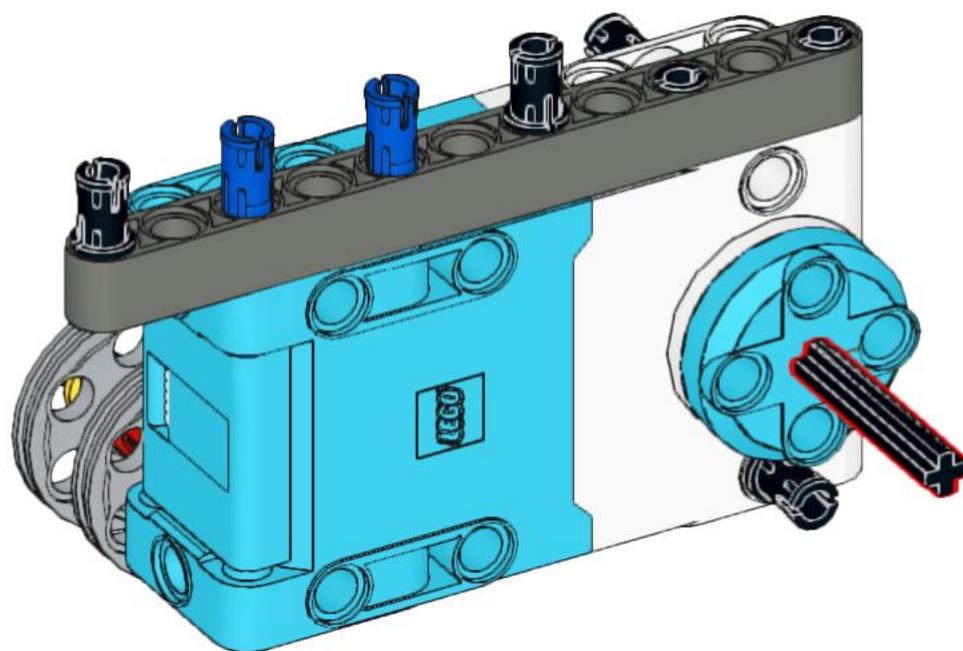
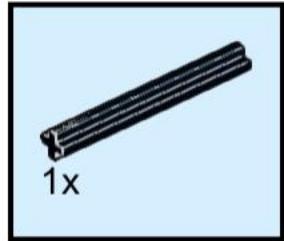


11 1:1

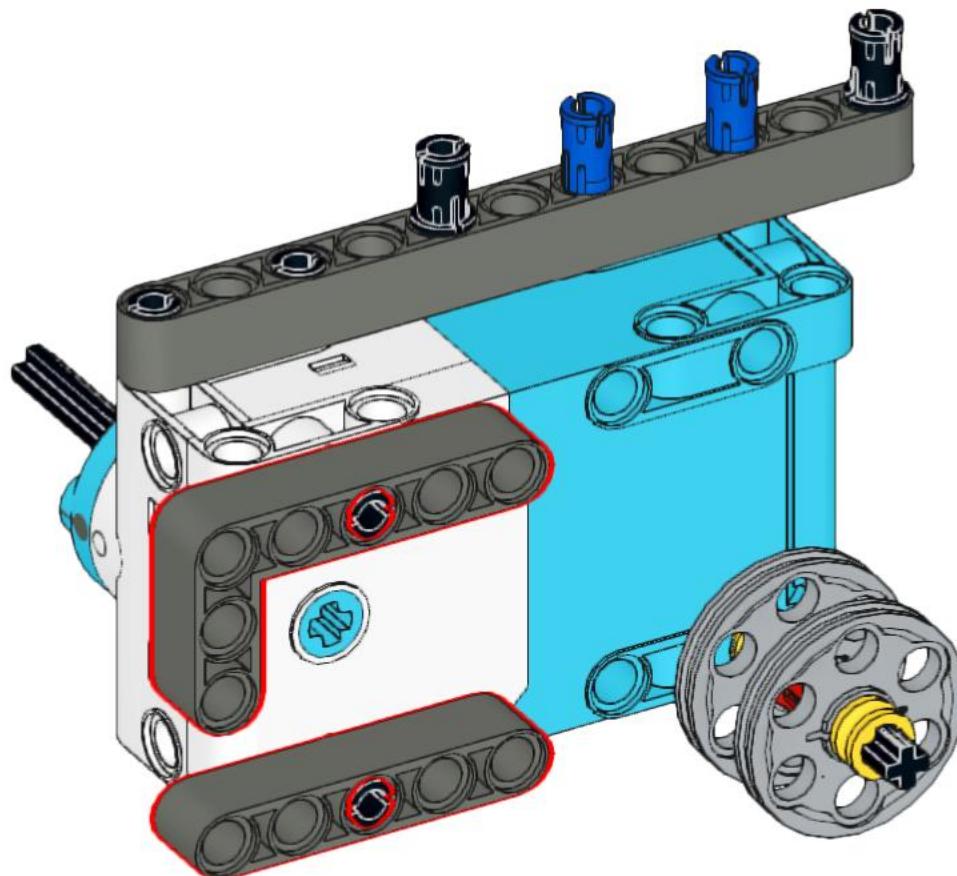
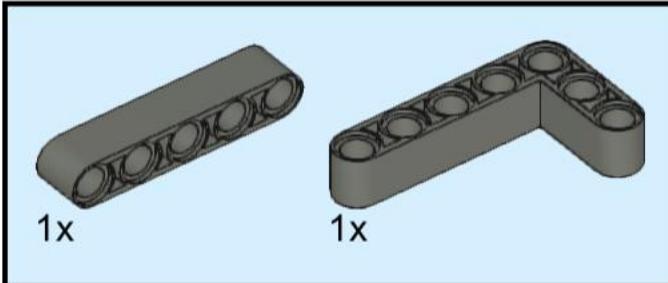
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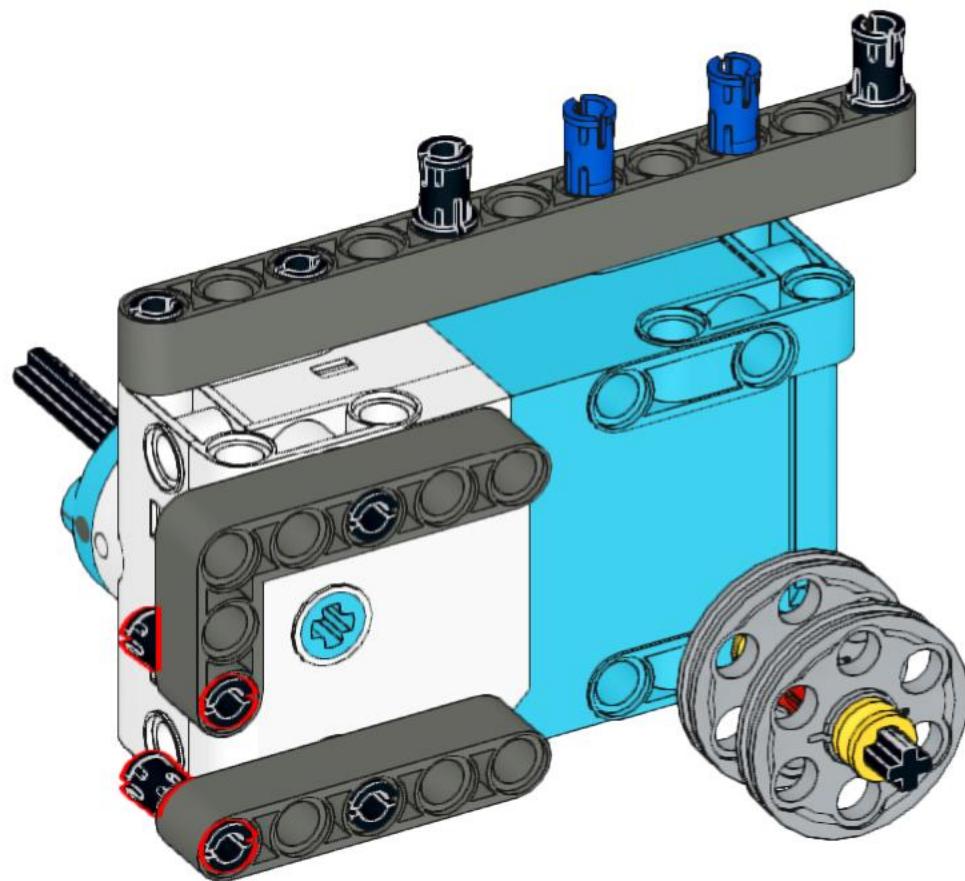
**9**



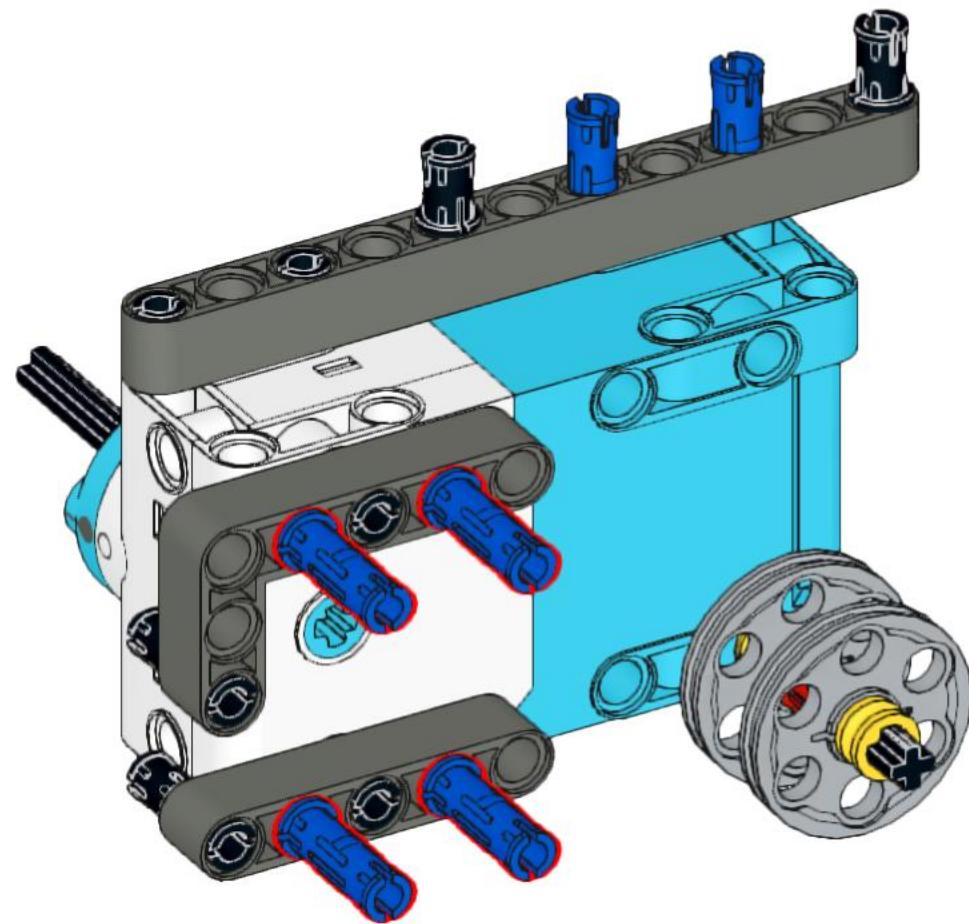
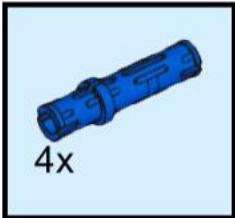
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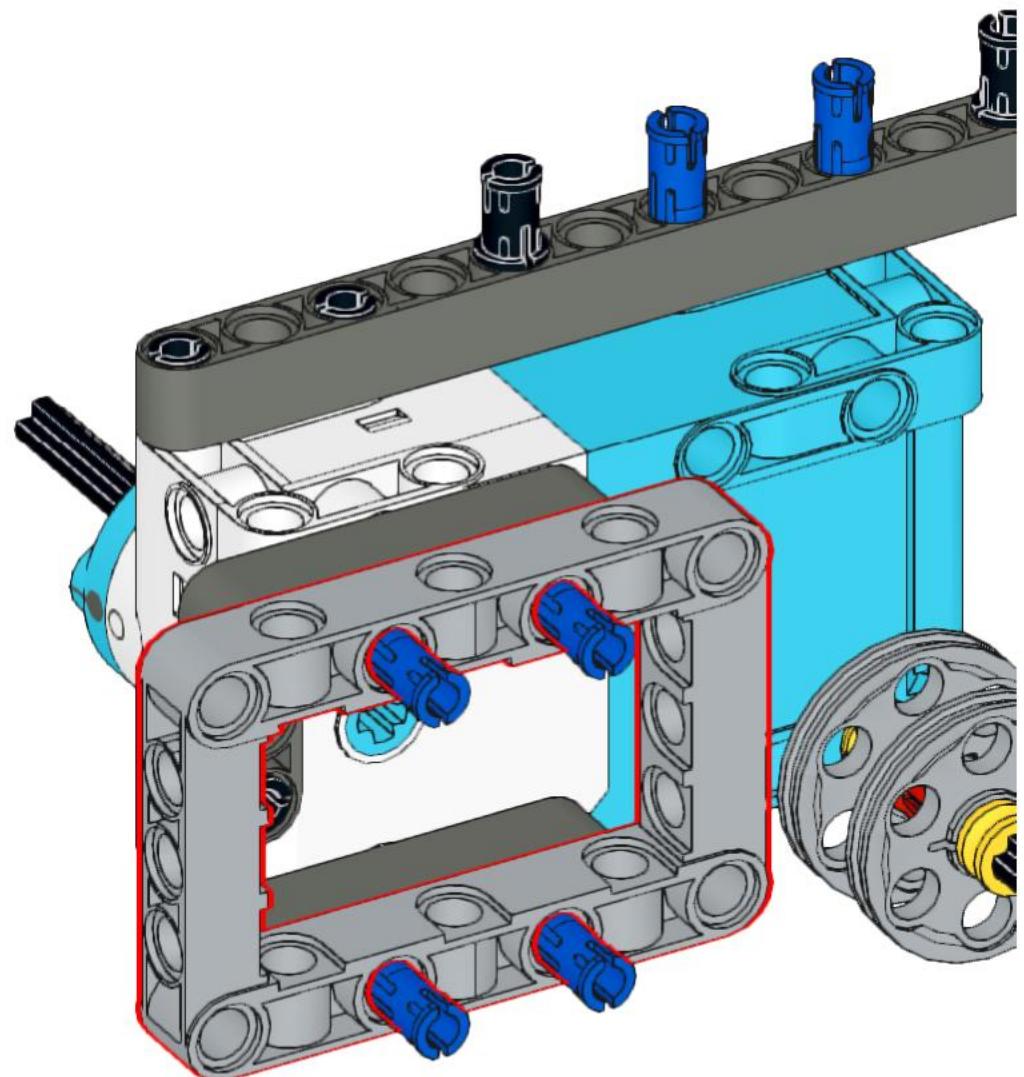
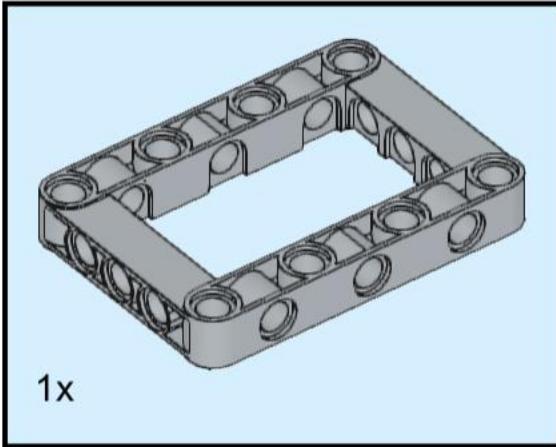
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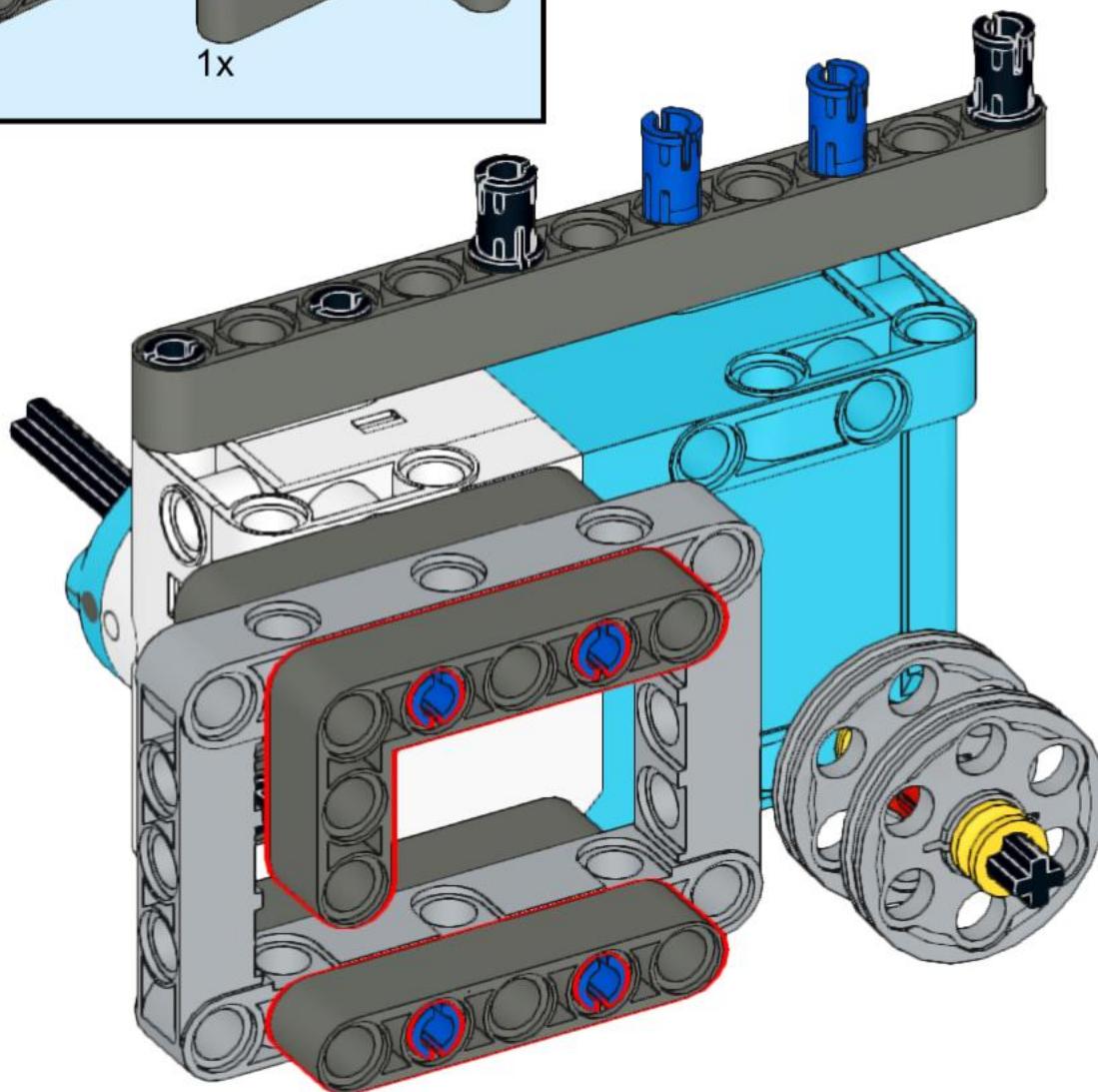
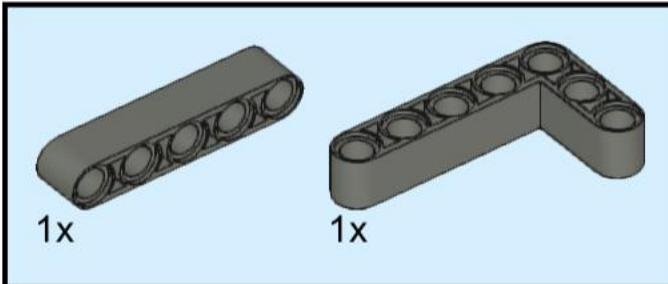
**12**



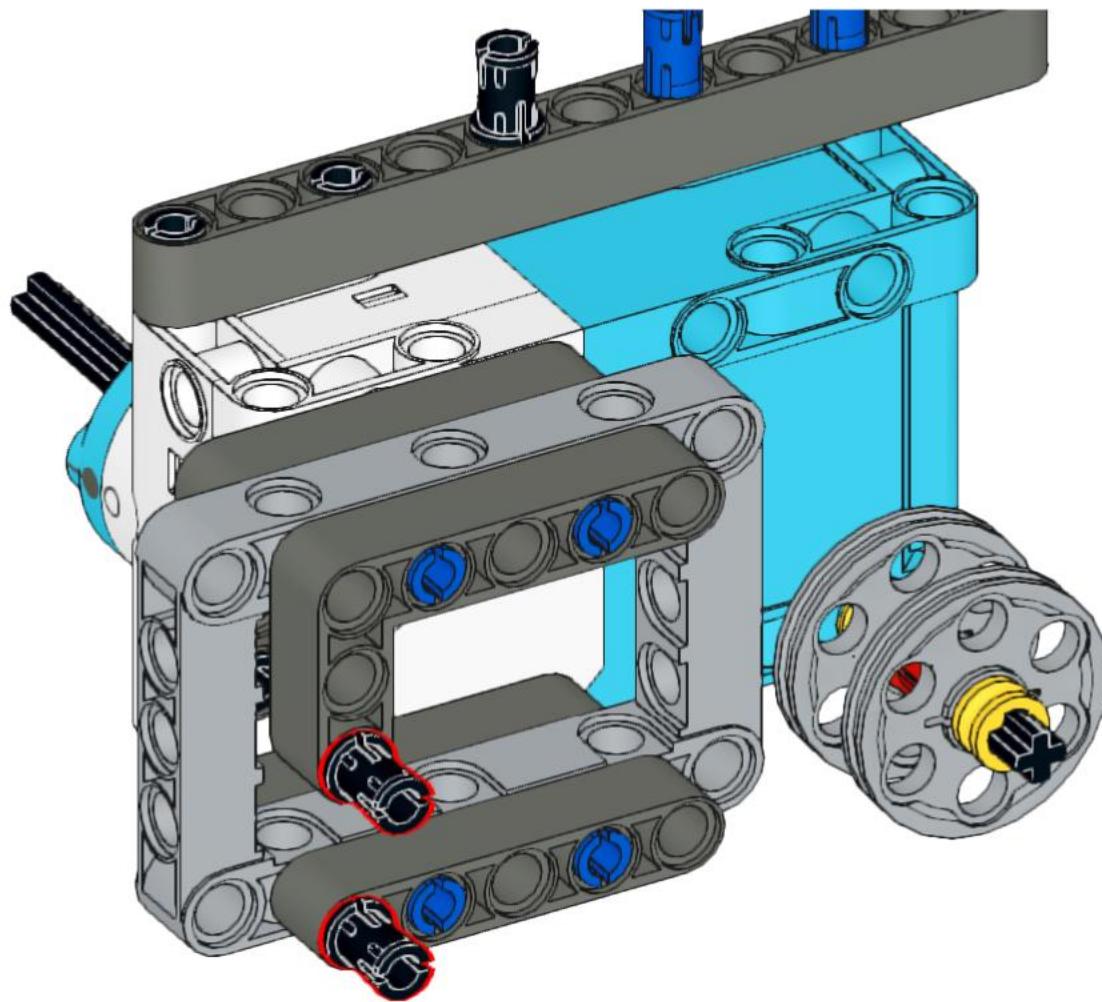
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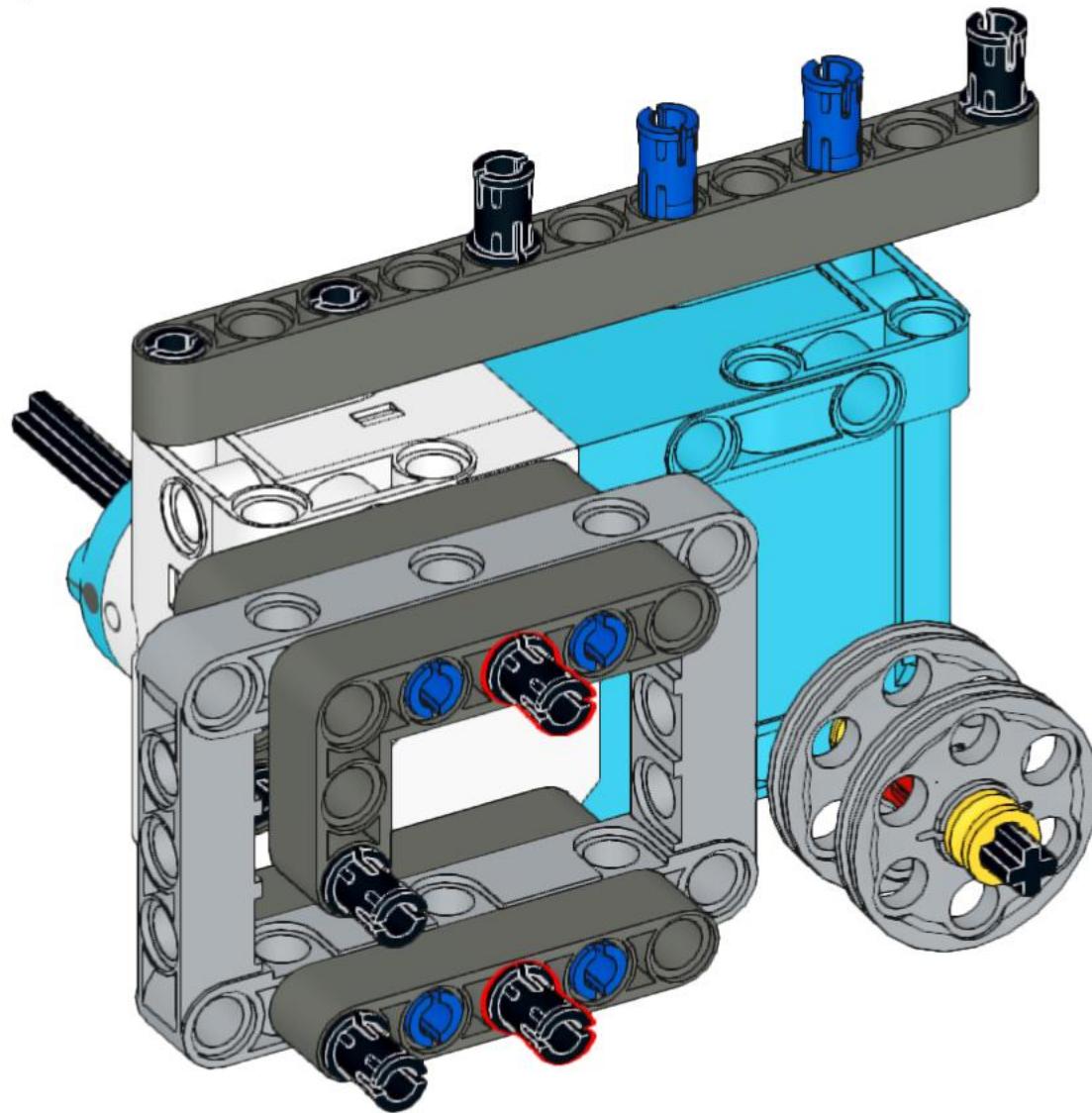
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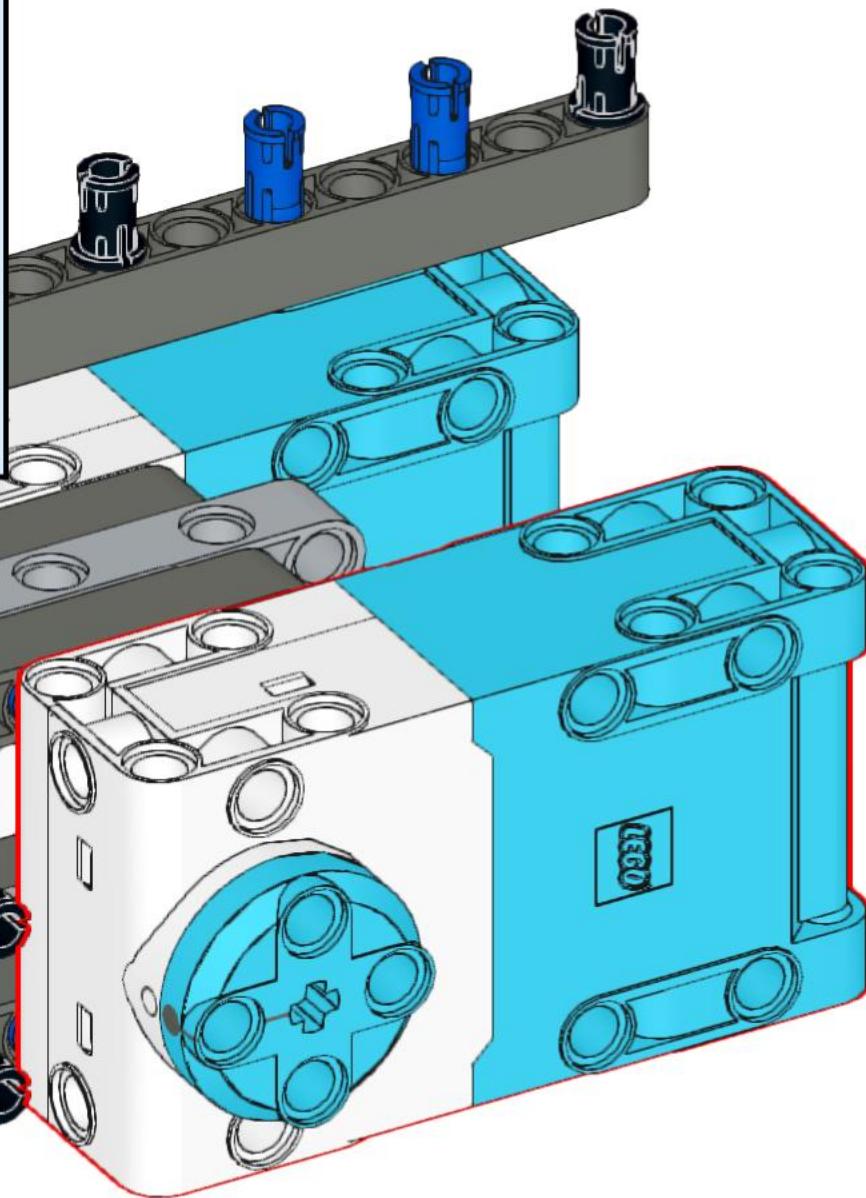
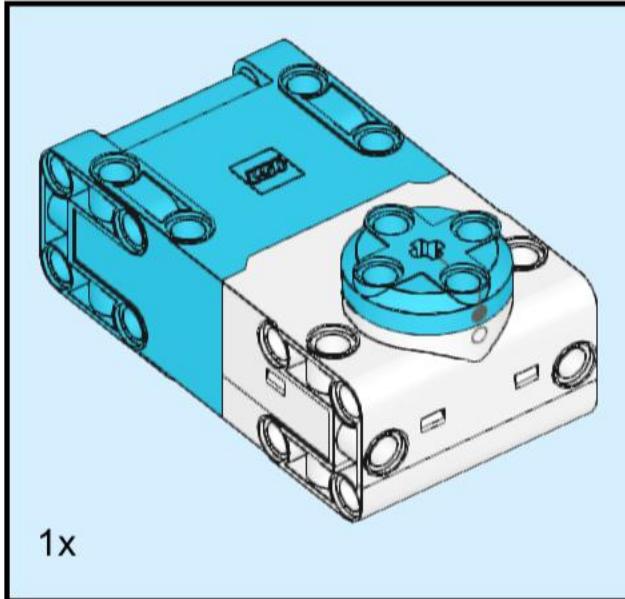
**15**



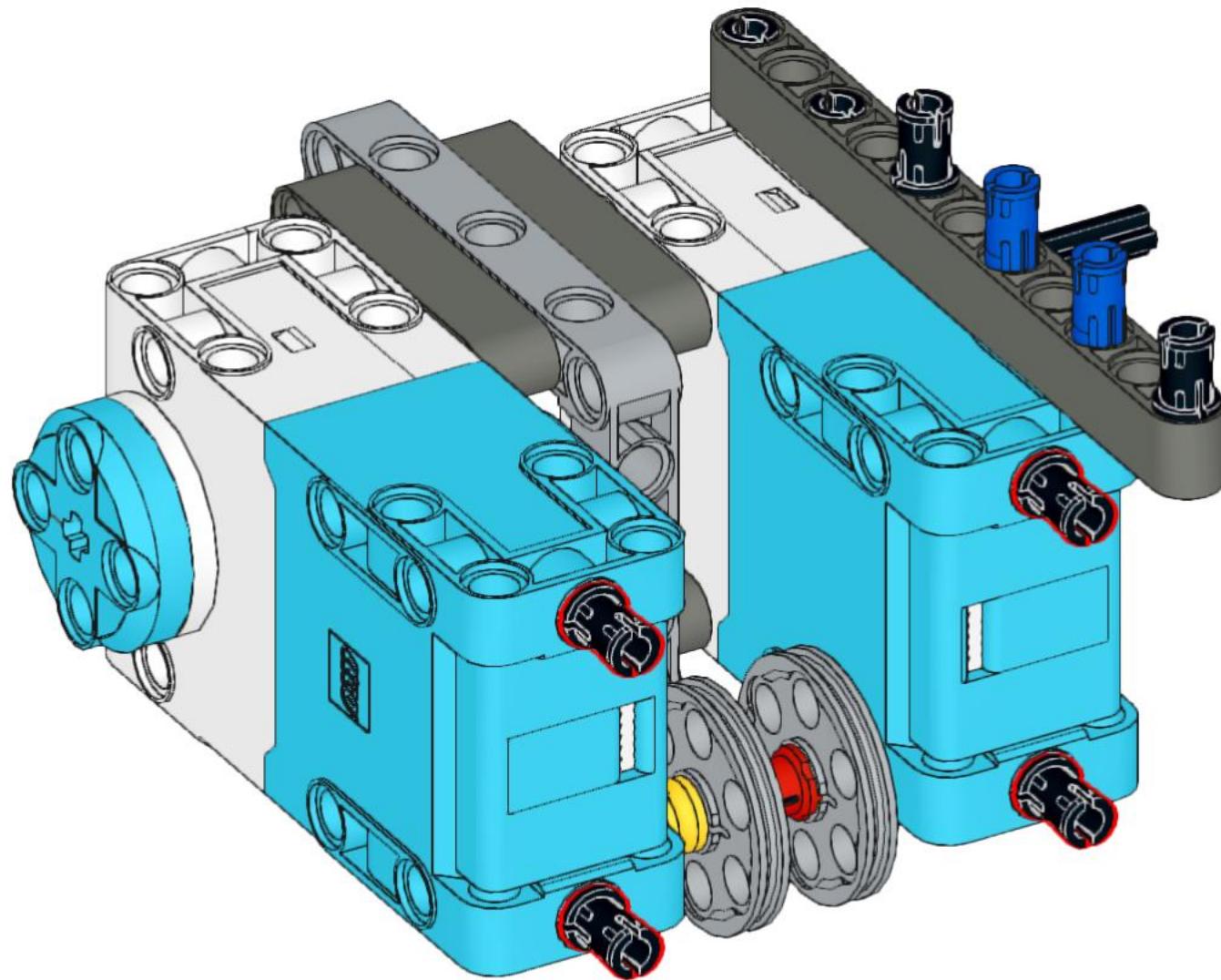
**16**



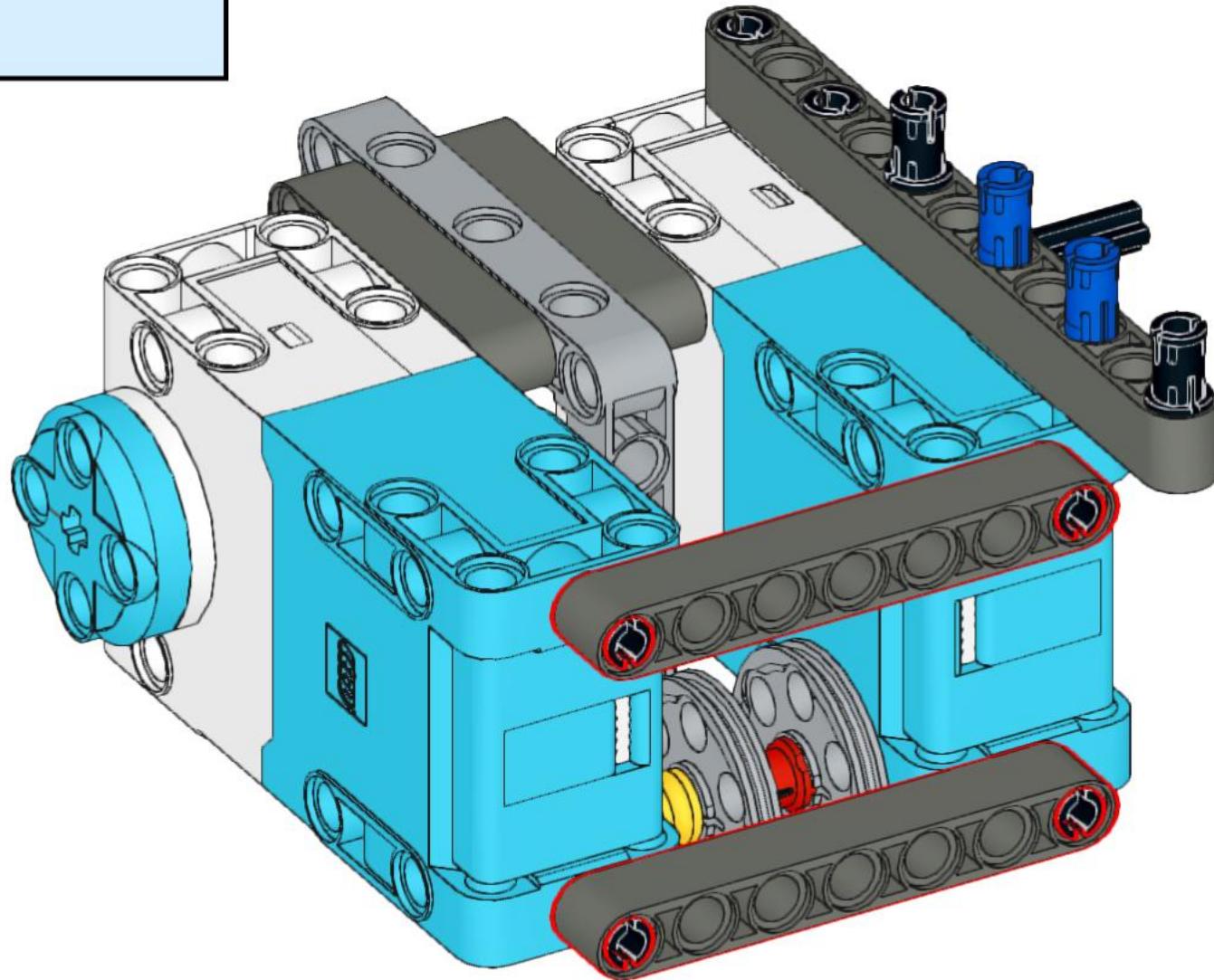
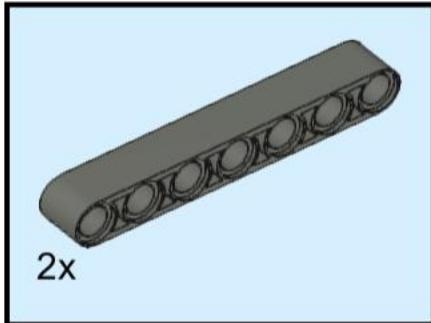
**17**



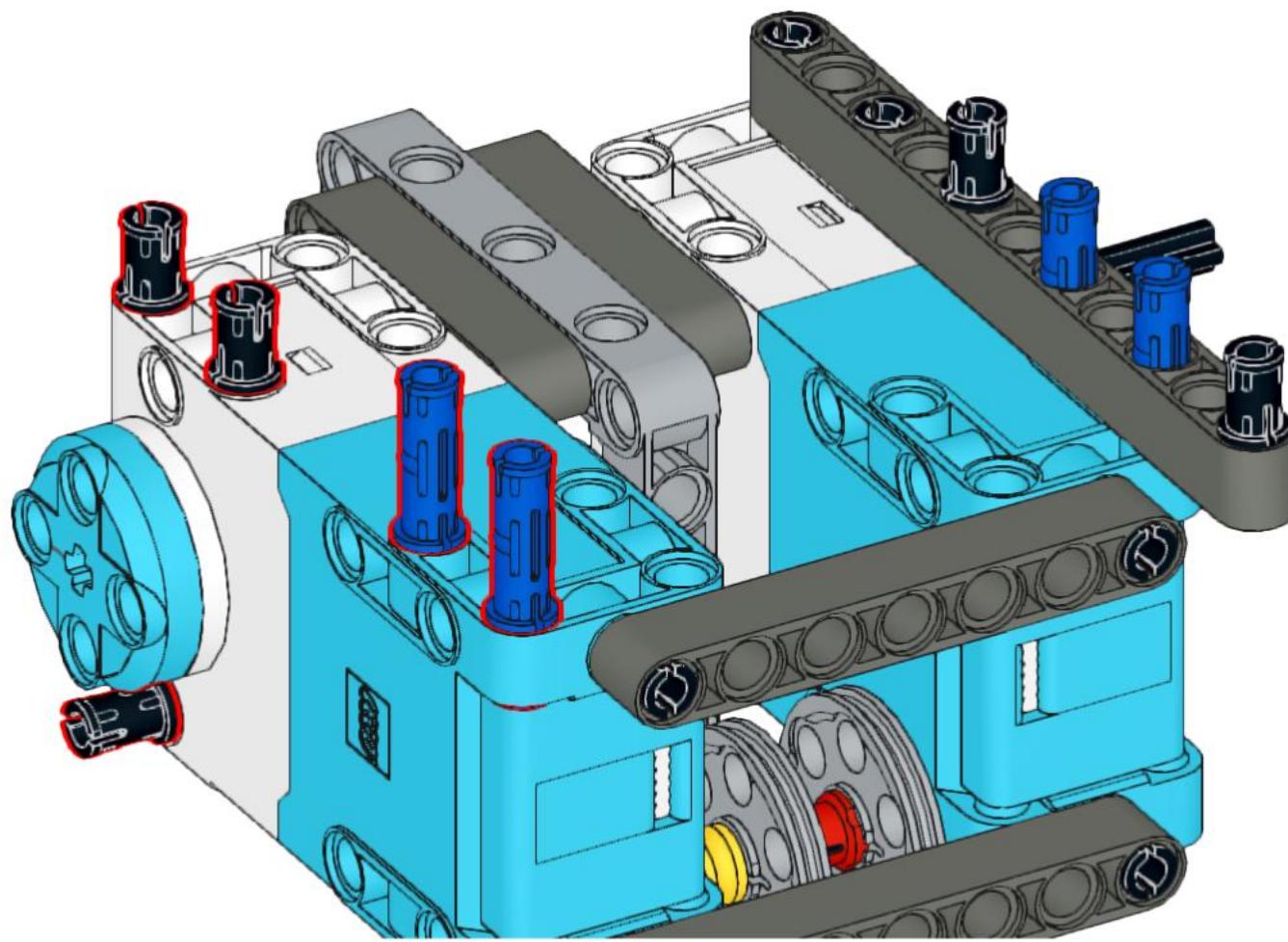
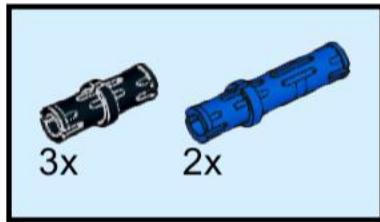
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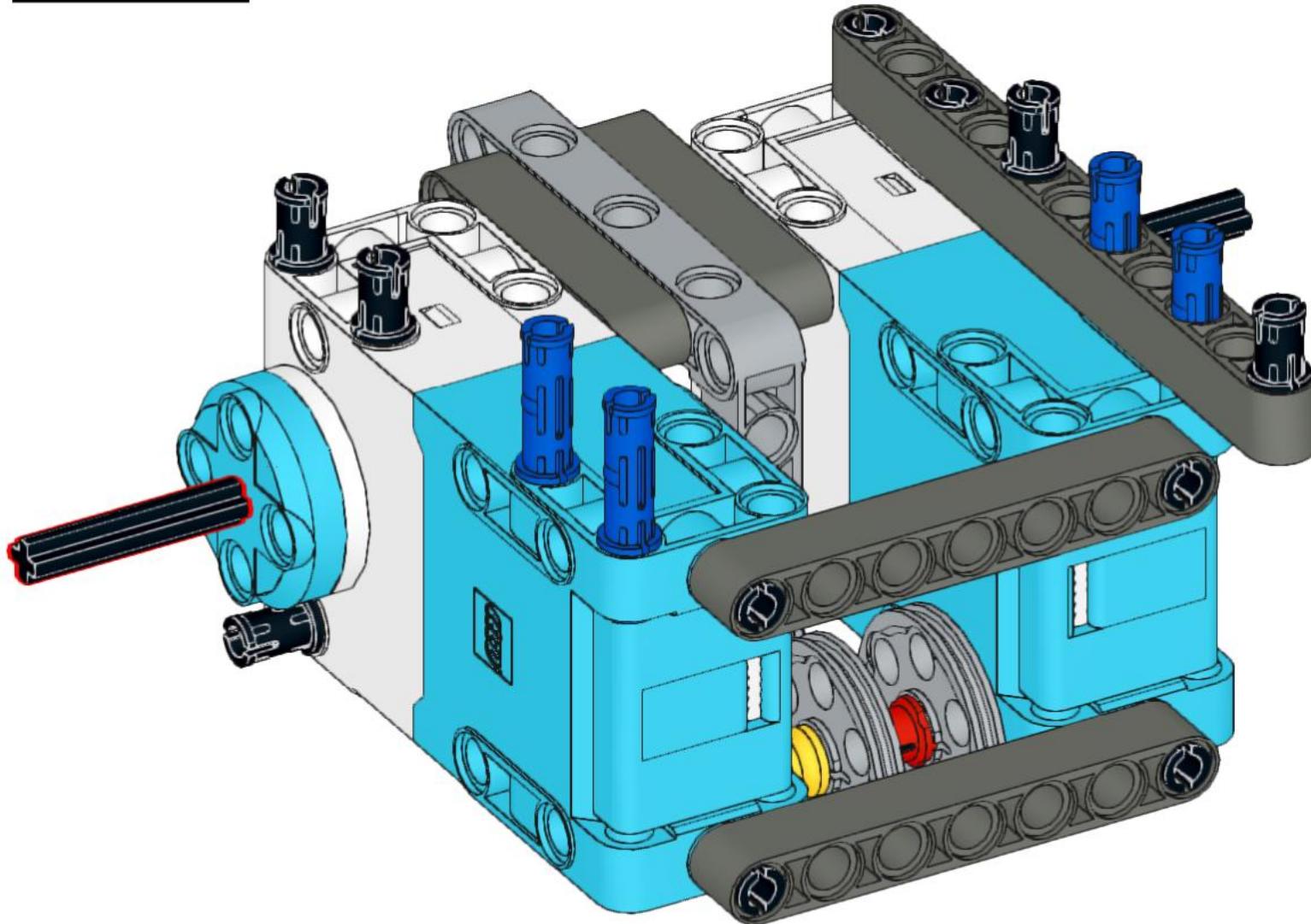
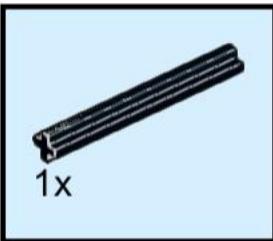
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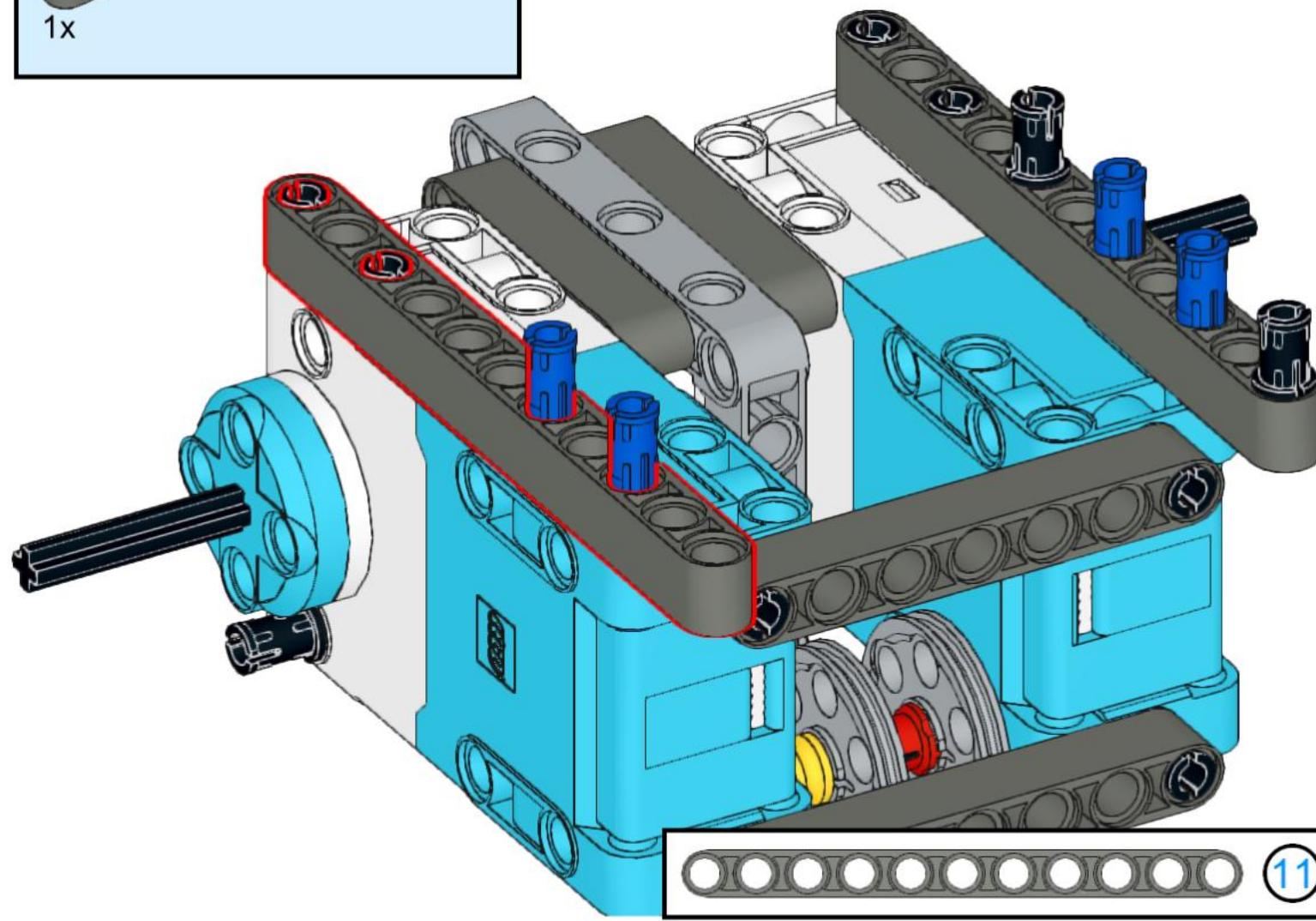
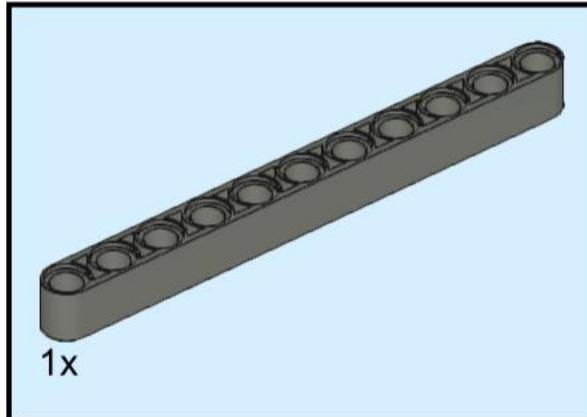
**20**



**21**

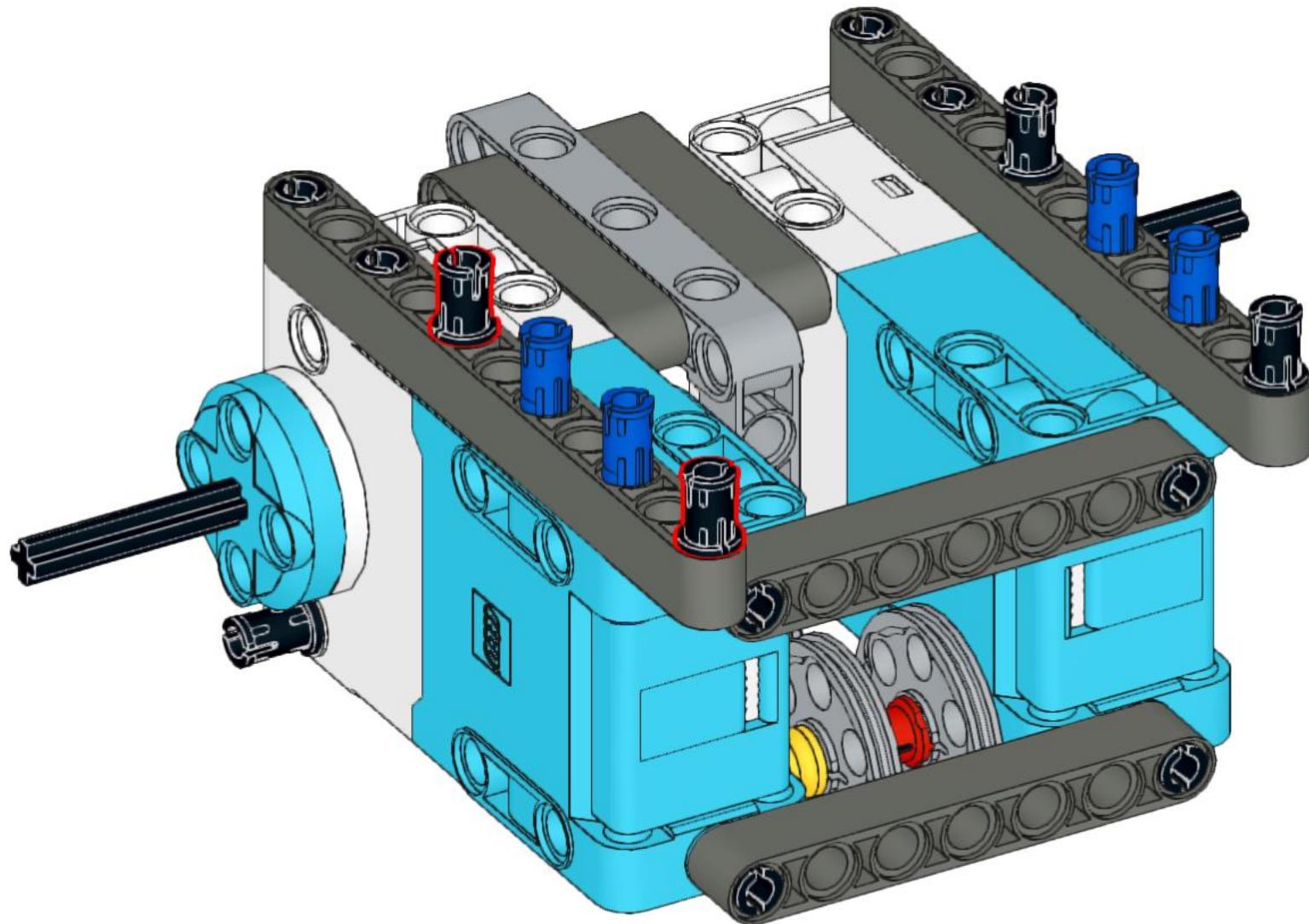
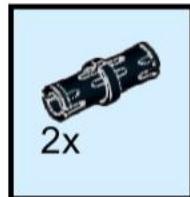


**22**

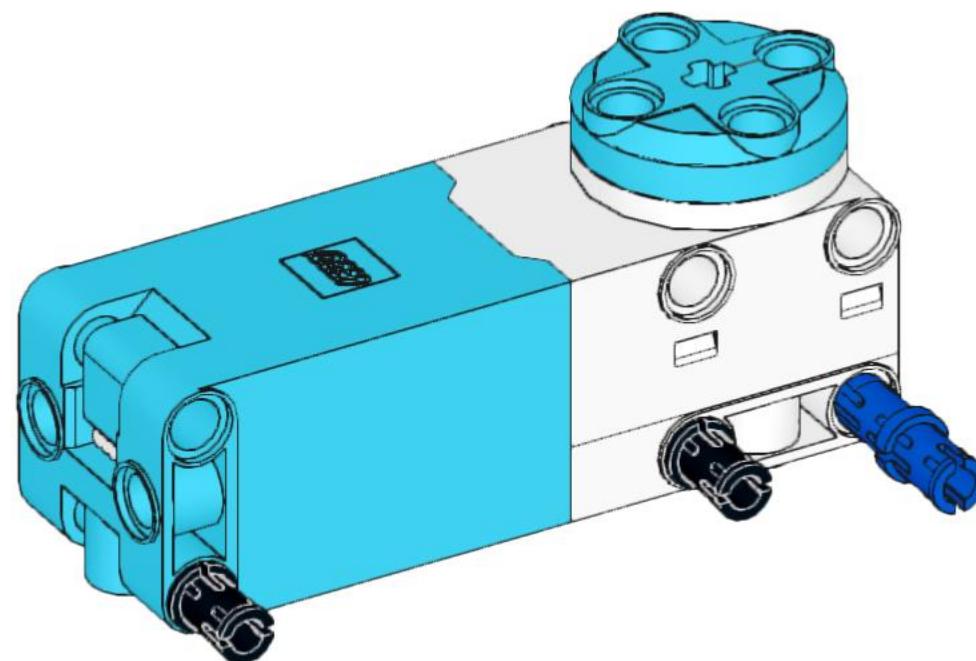
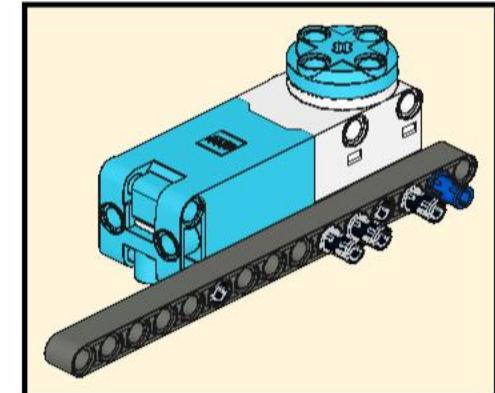
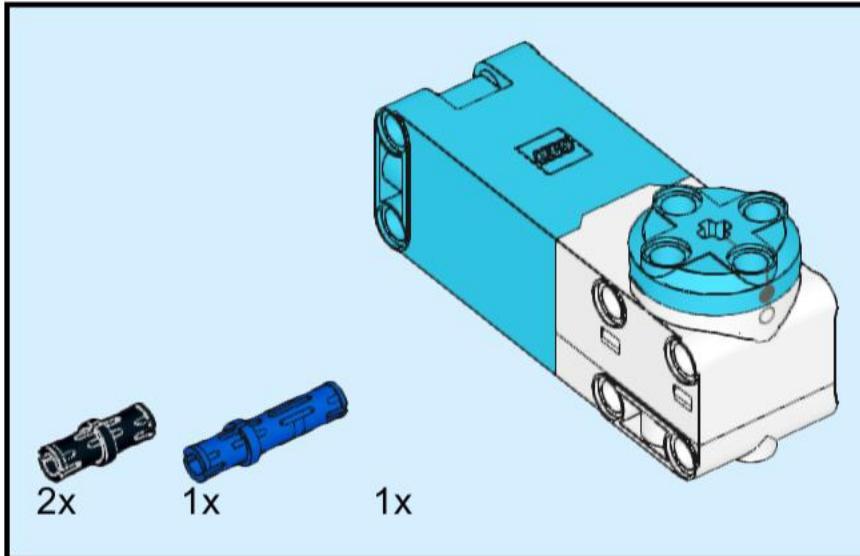


11 1:1

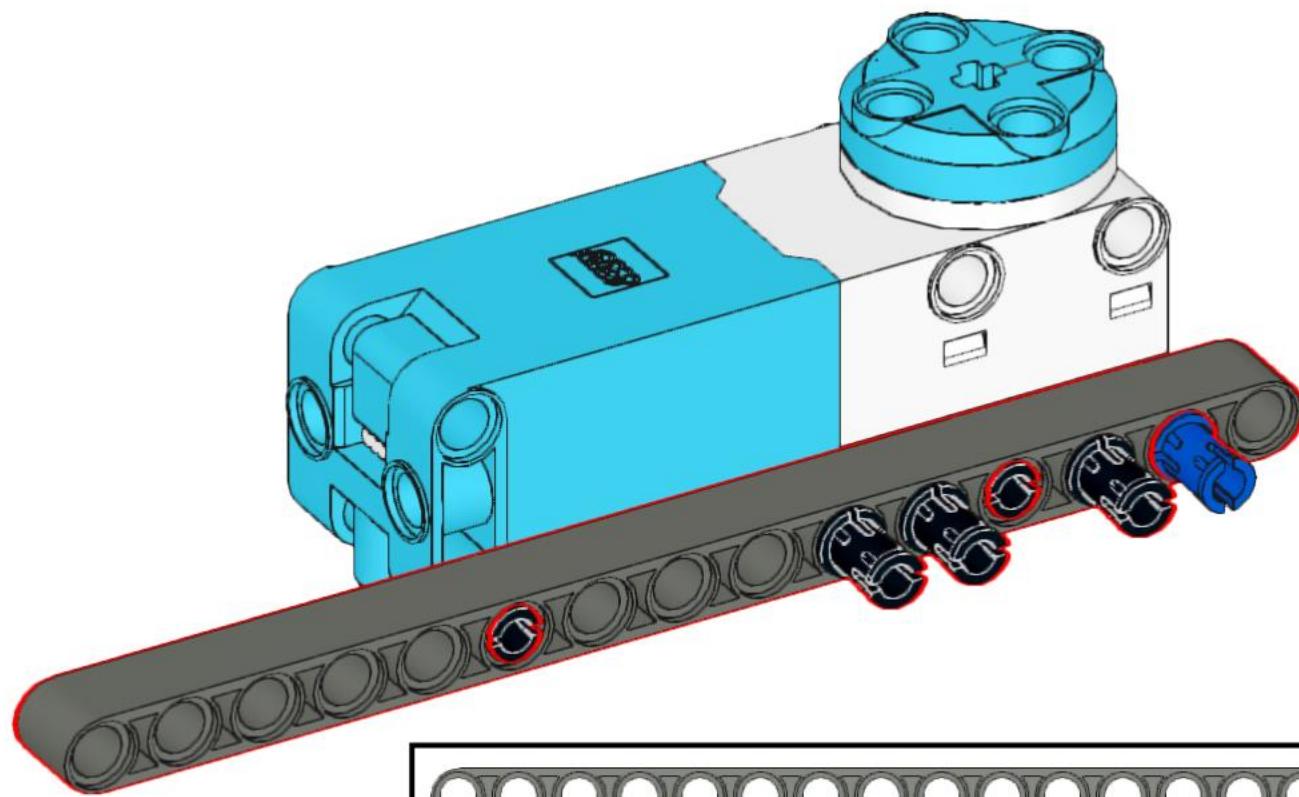
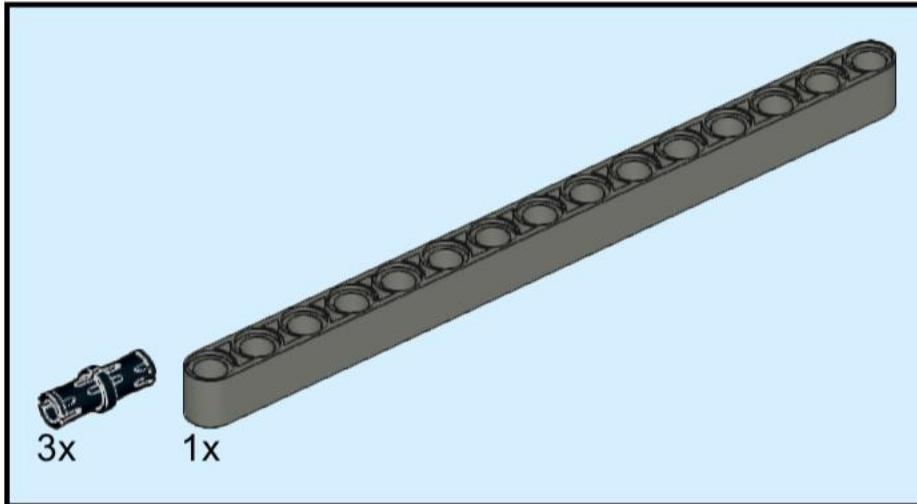
# 23



**24**



**25**

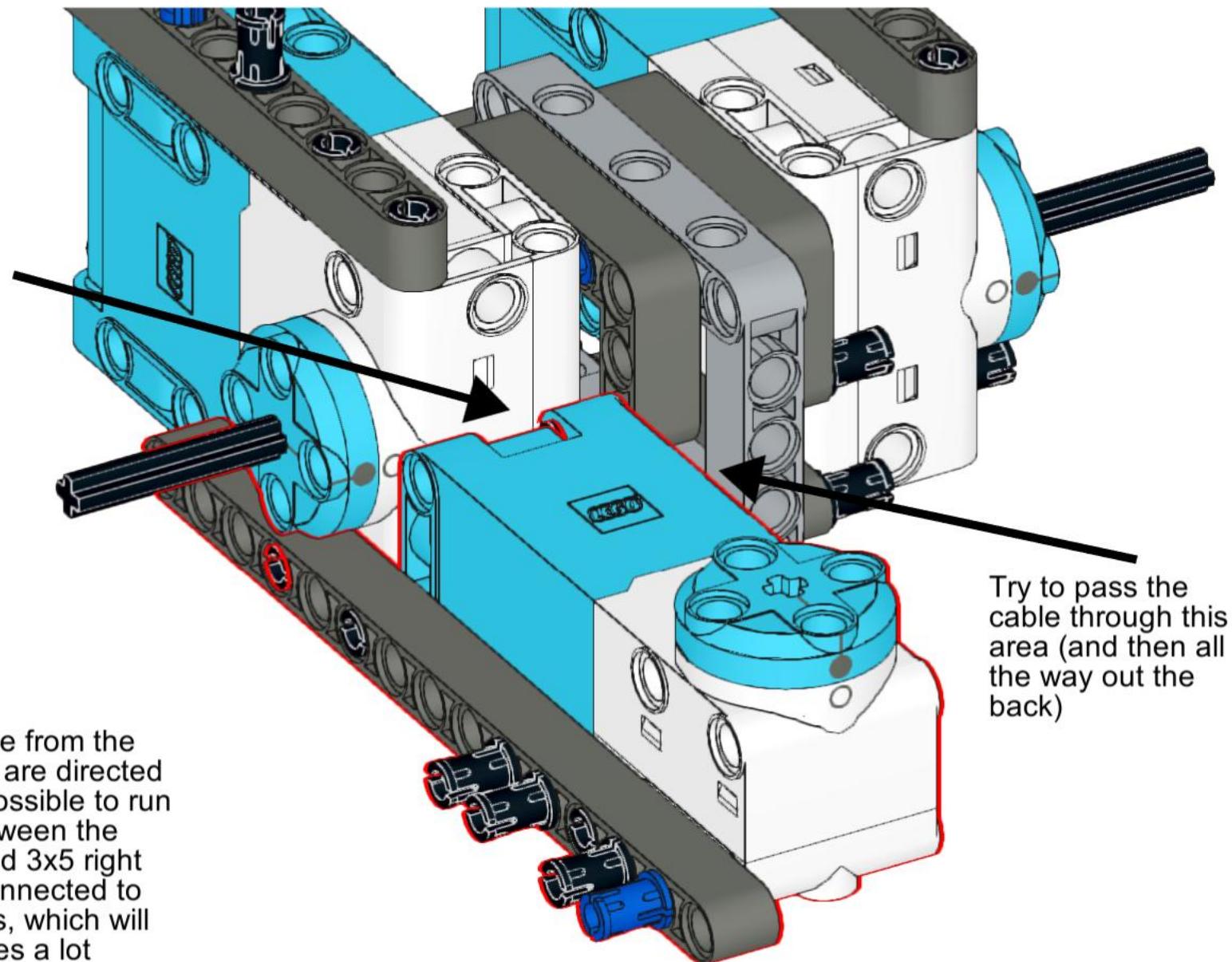


15 1:1

# 26

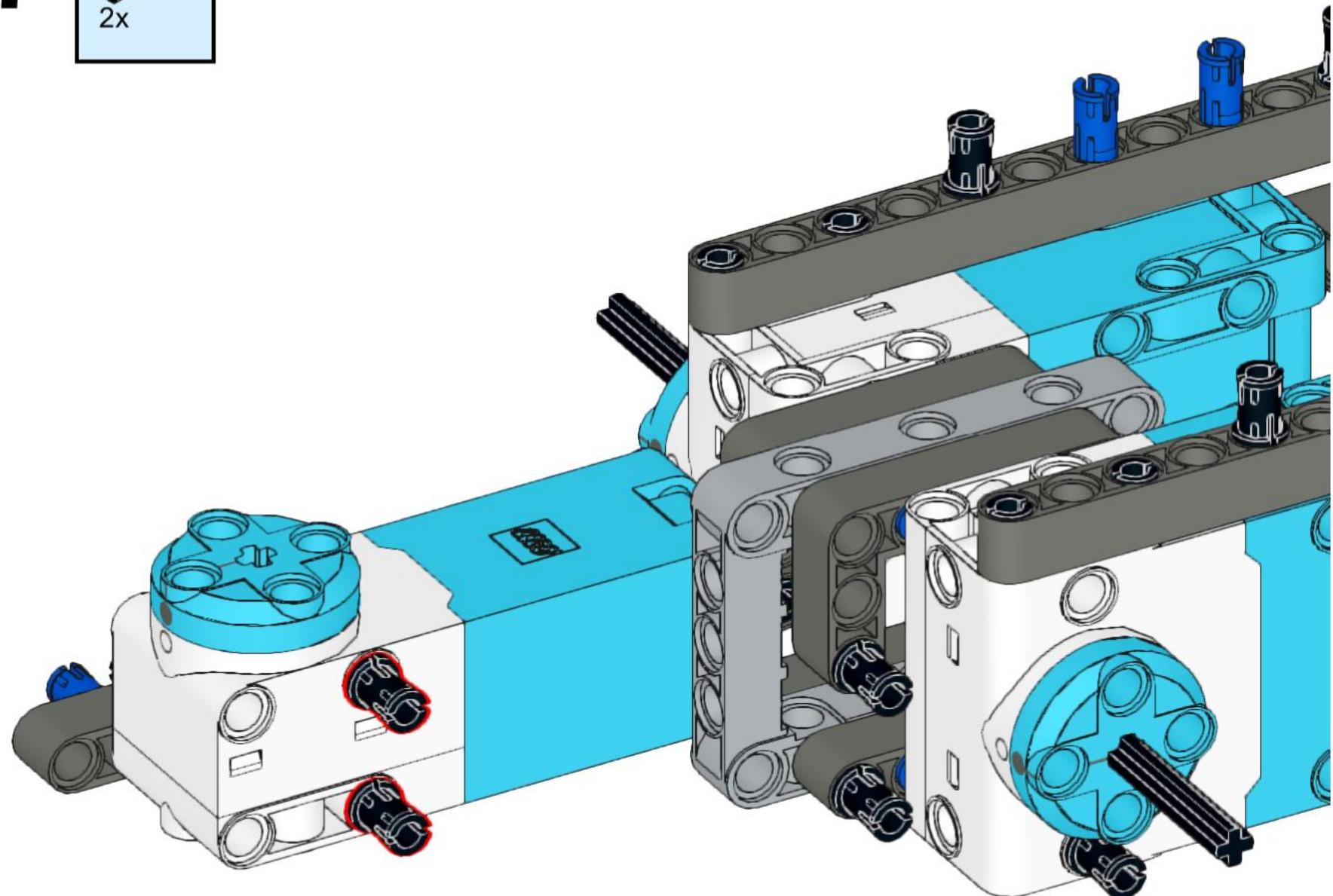
Cable exits here

Ensure the cable from the medium motors are directed upwards. It is possible to run the cable in between the center frame and 3x5 right angle pieces connected to the large motors, which will make your cables a lot neater.

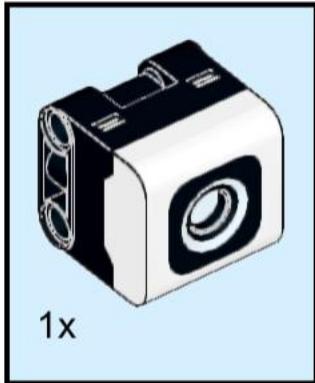


Try to pass the  
cable through this  
area (and then all  
the way out the  
back)

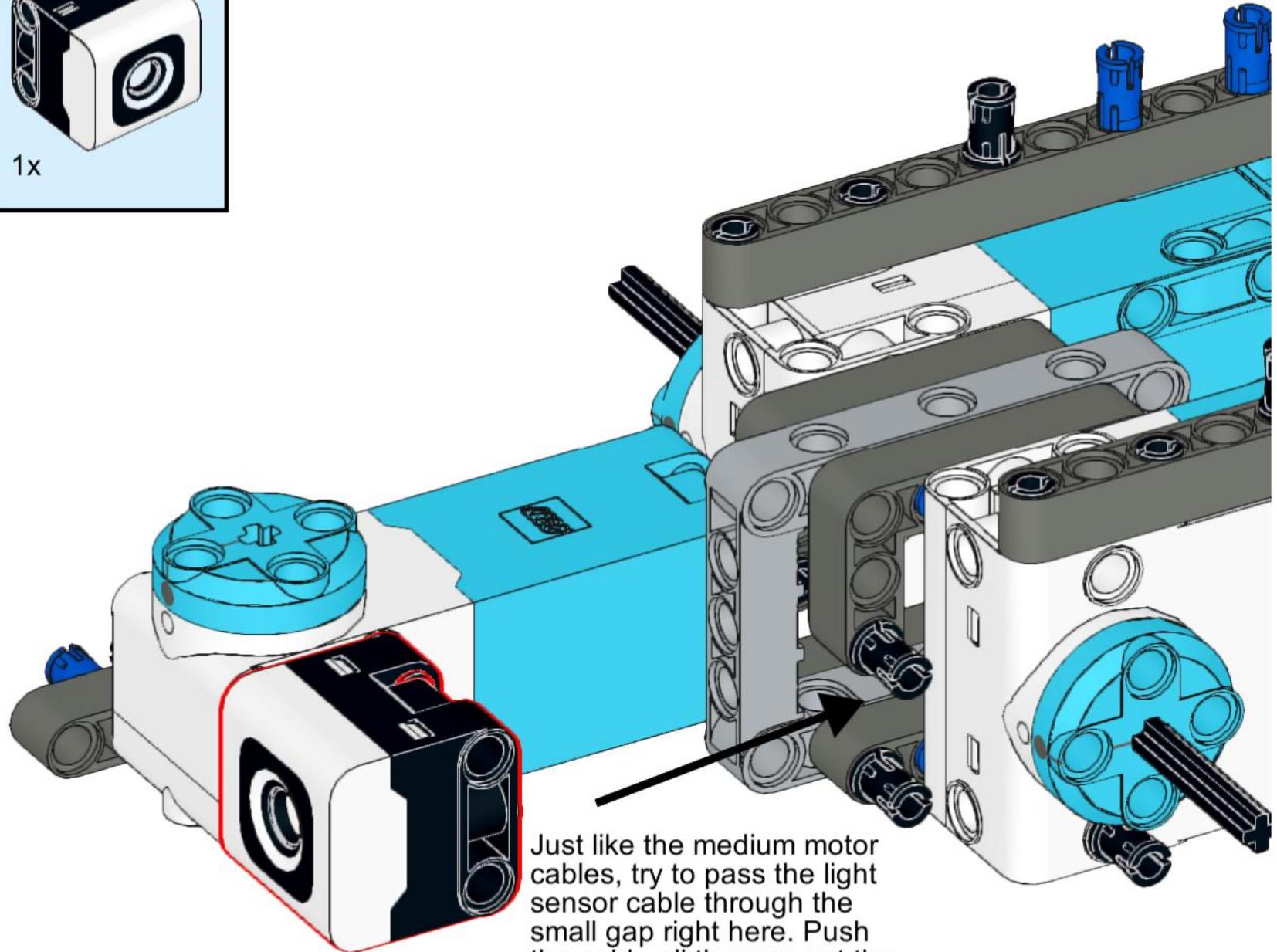
**27**



# 28

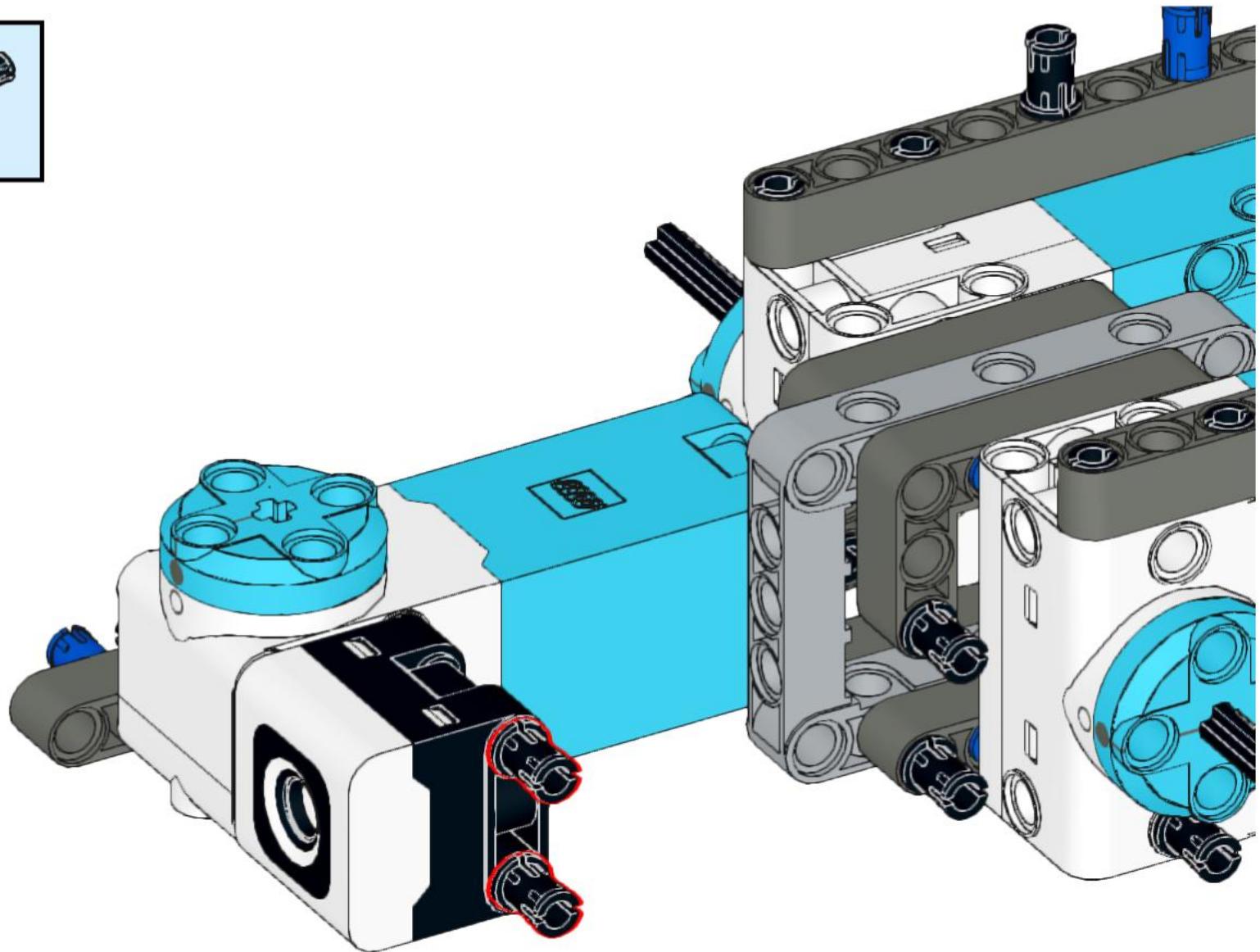


1x

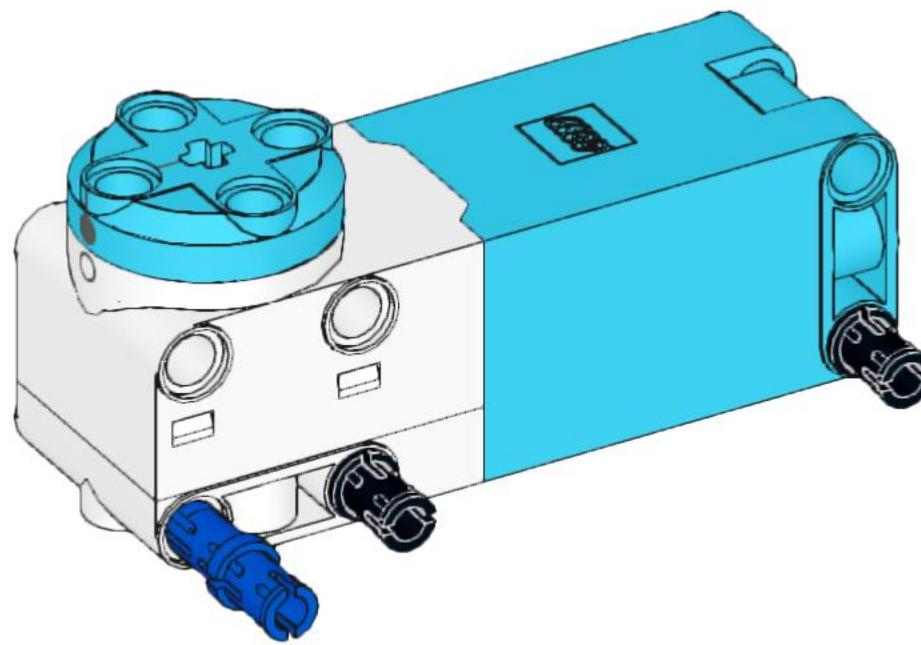
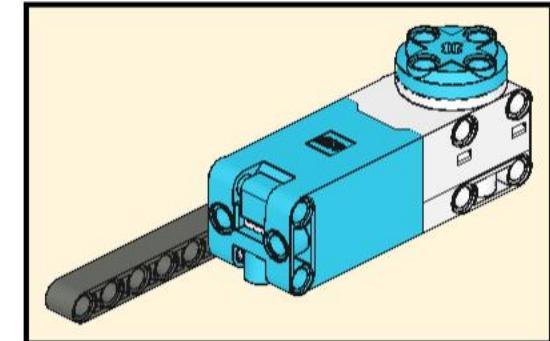
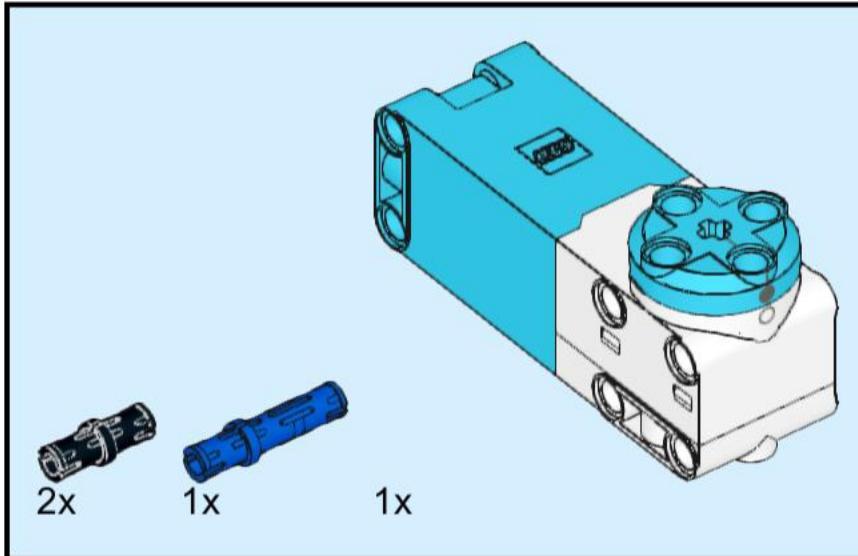


Just like the medium motor cables, try to pass the light sensor cable through the small gap right here. Push the cable all the way out the back of the robot.

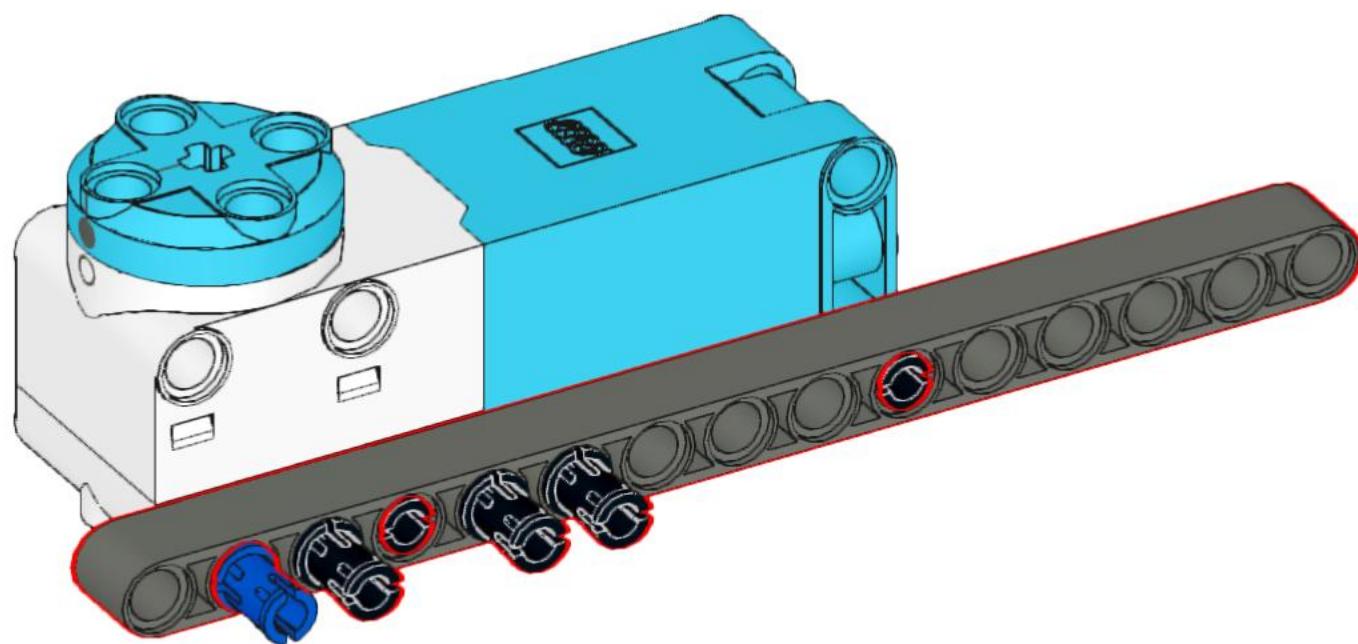
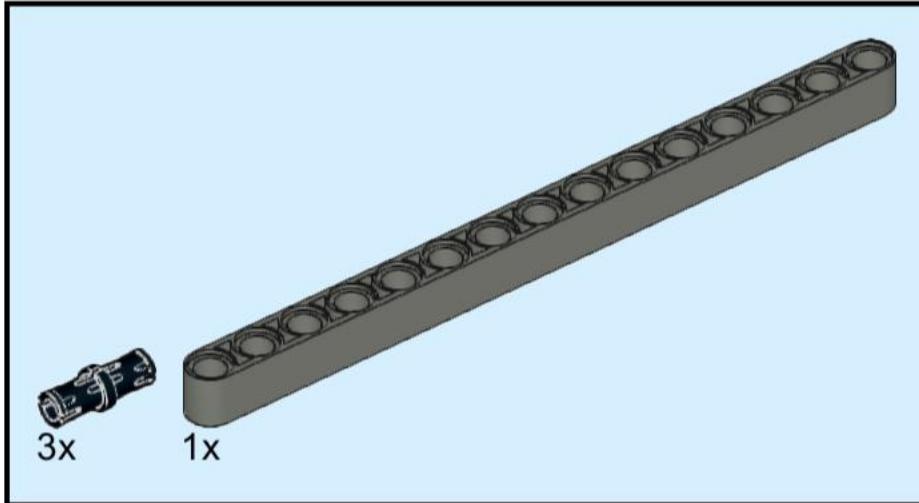
**29**



**30**

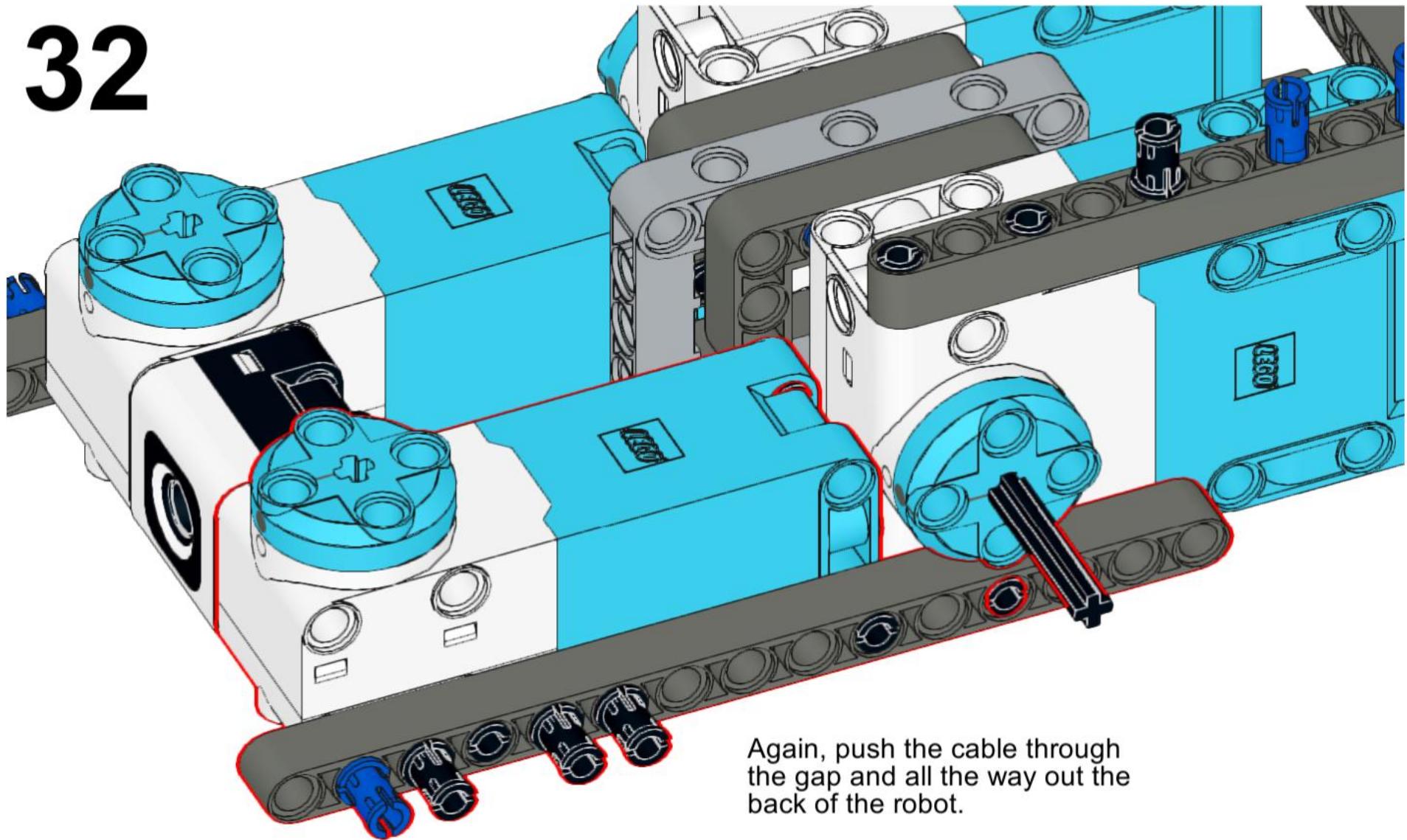


**31**



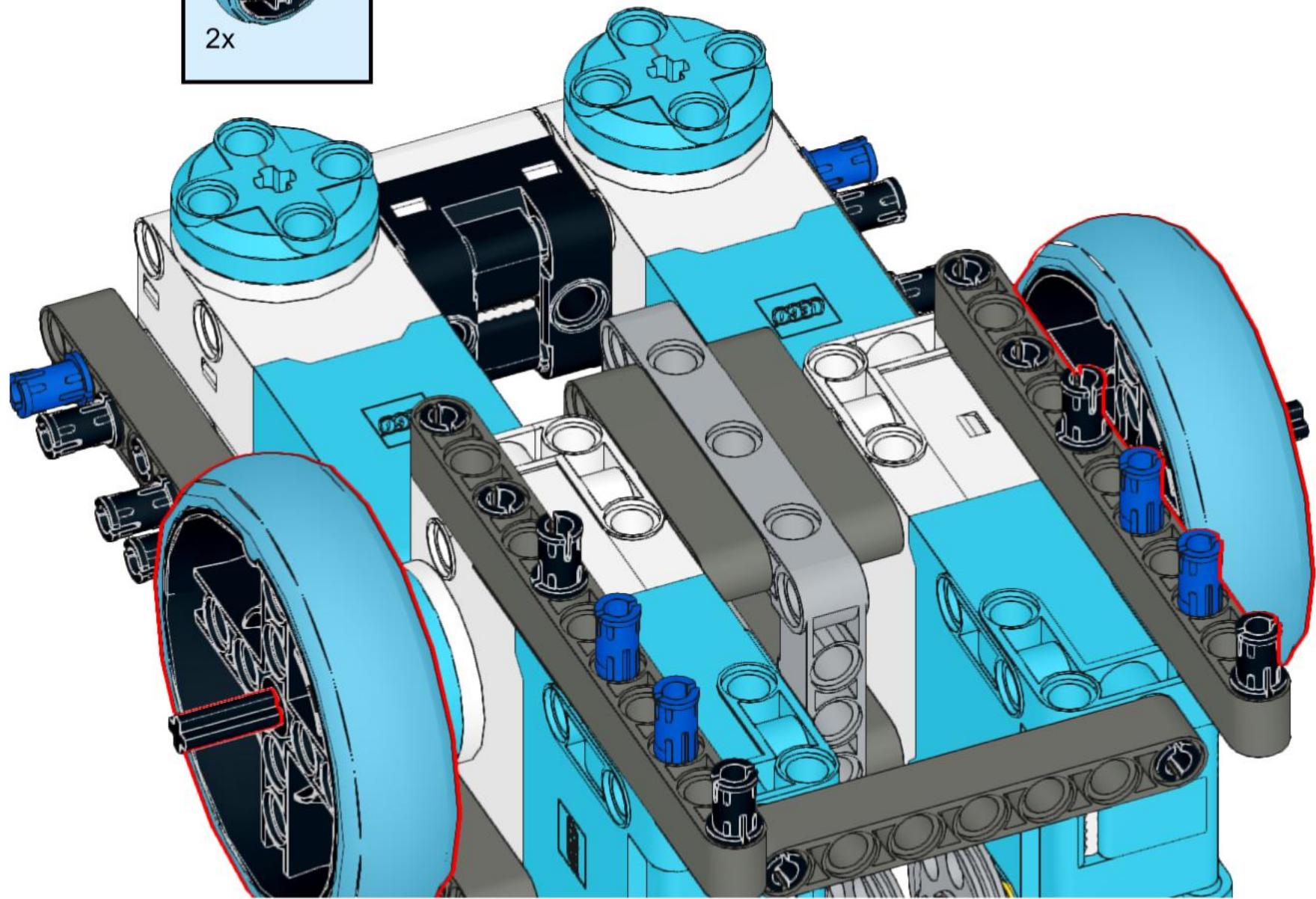
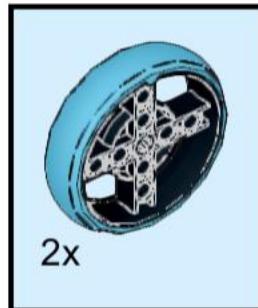
15 1:1

# 32

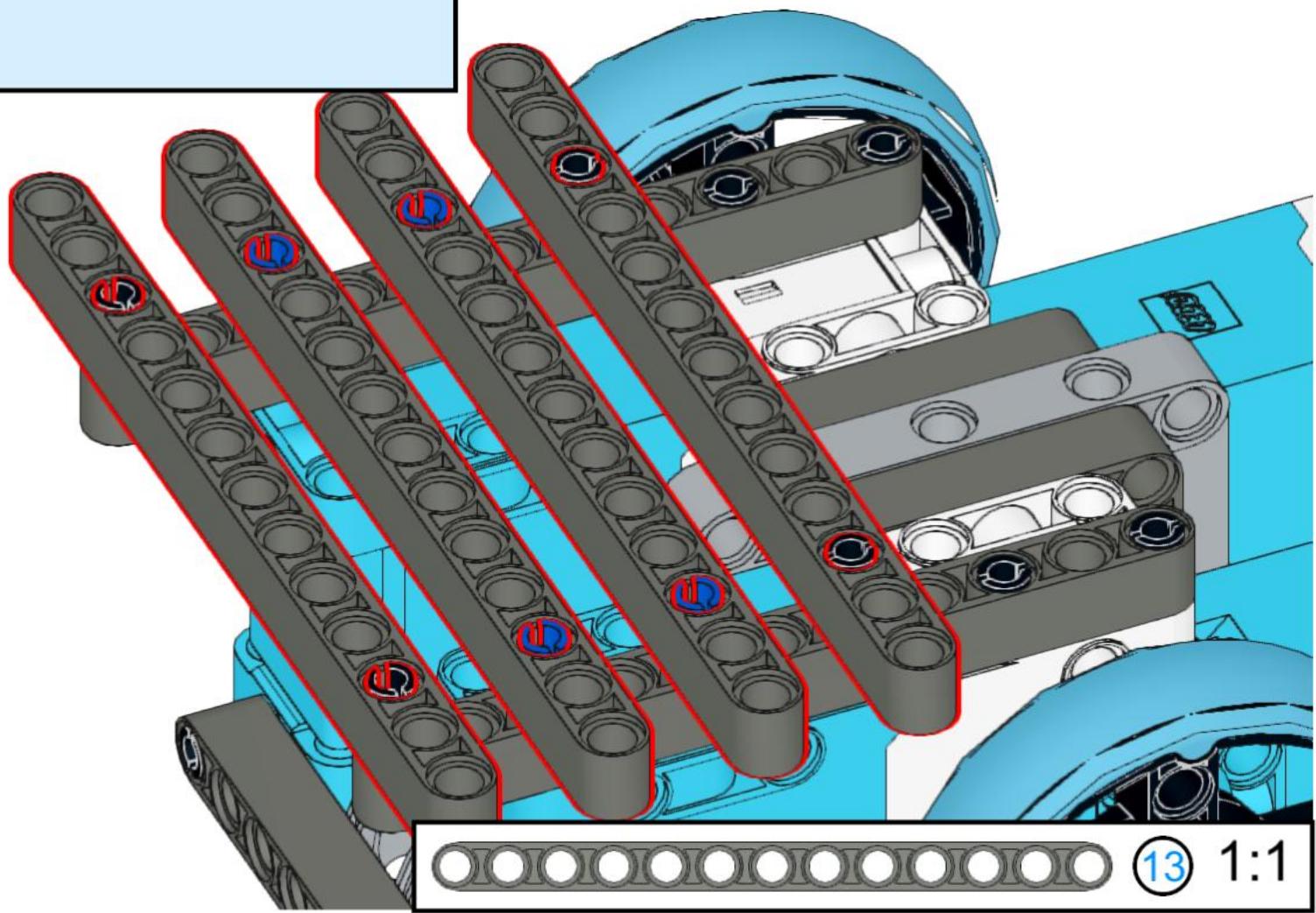
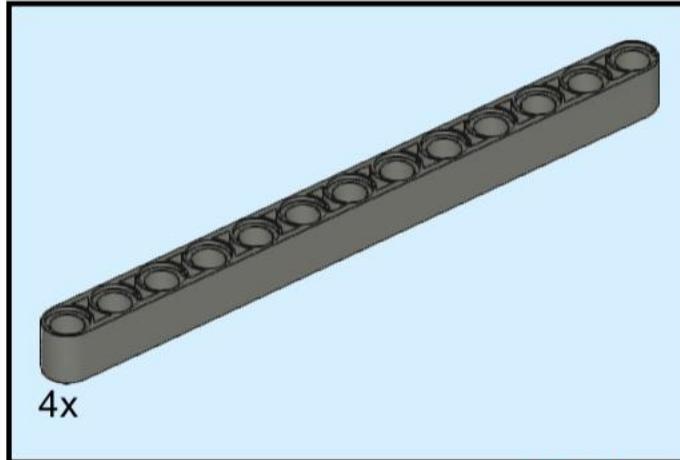


Again, push the cable through  
the gap and all the way out the  
back of the robot.

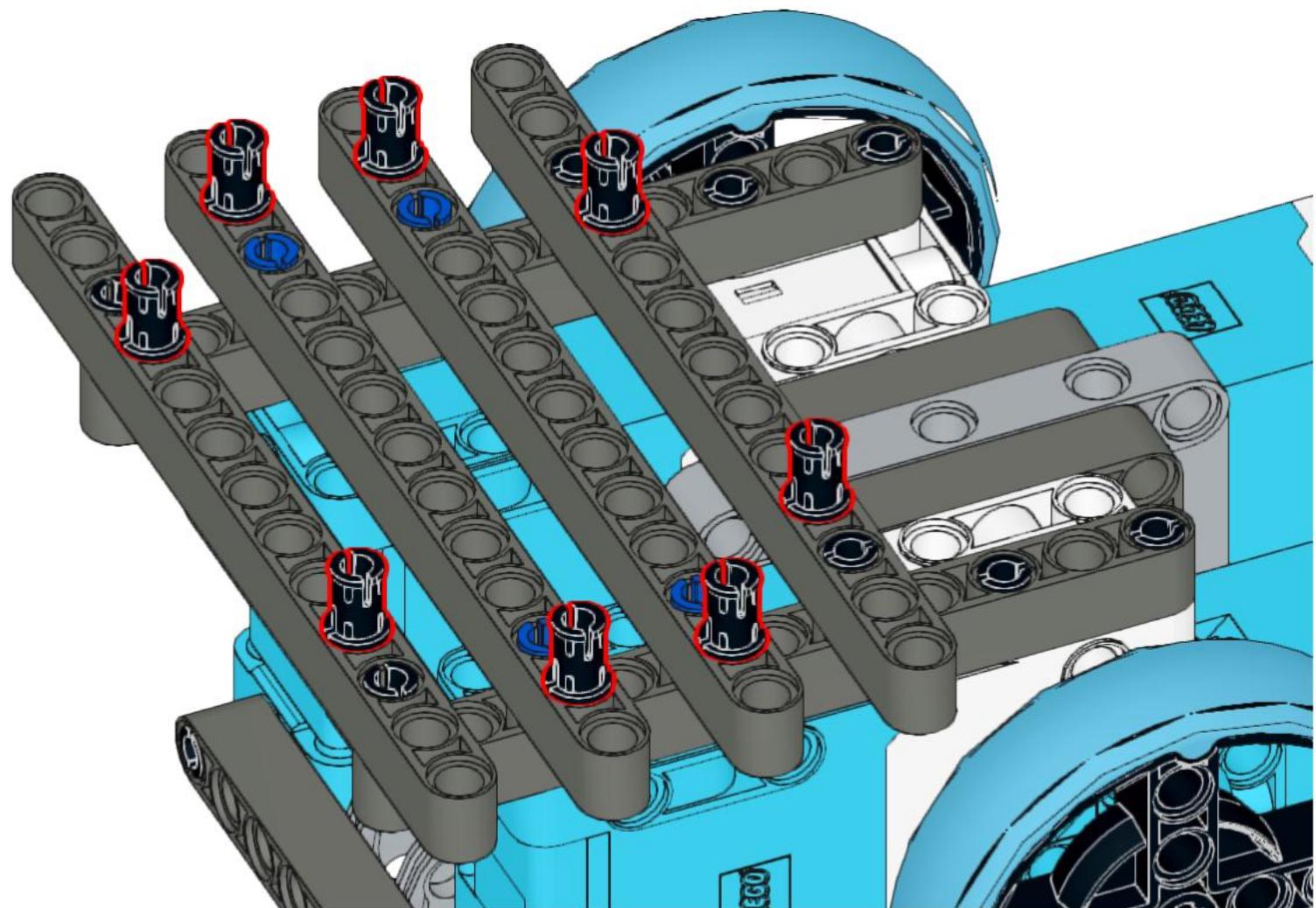
**33**



**34**



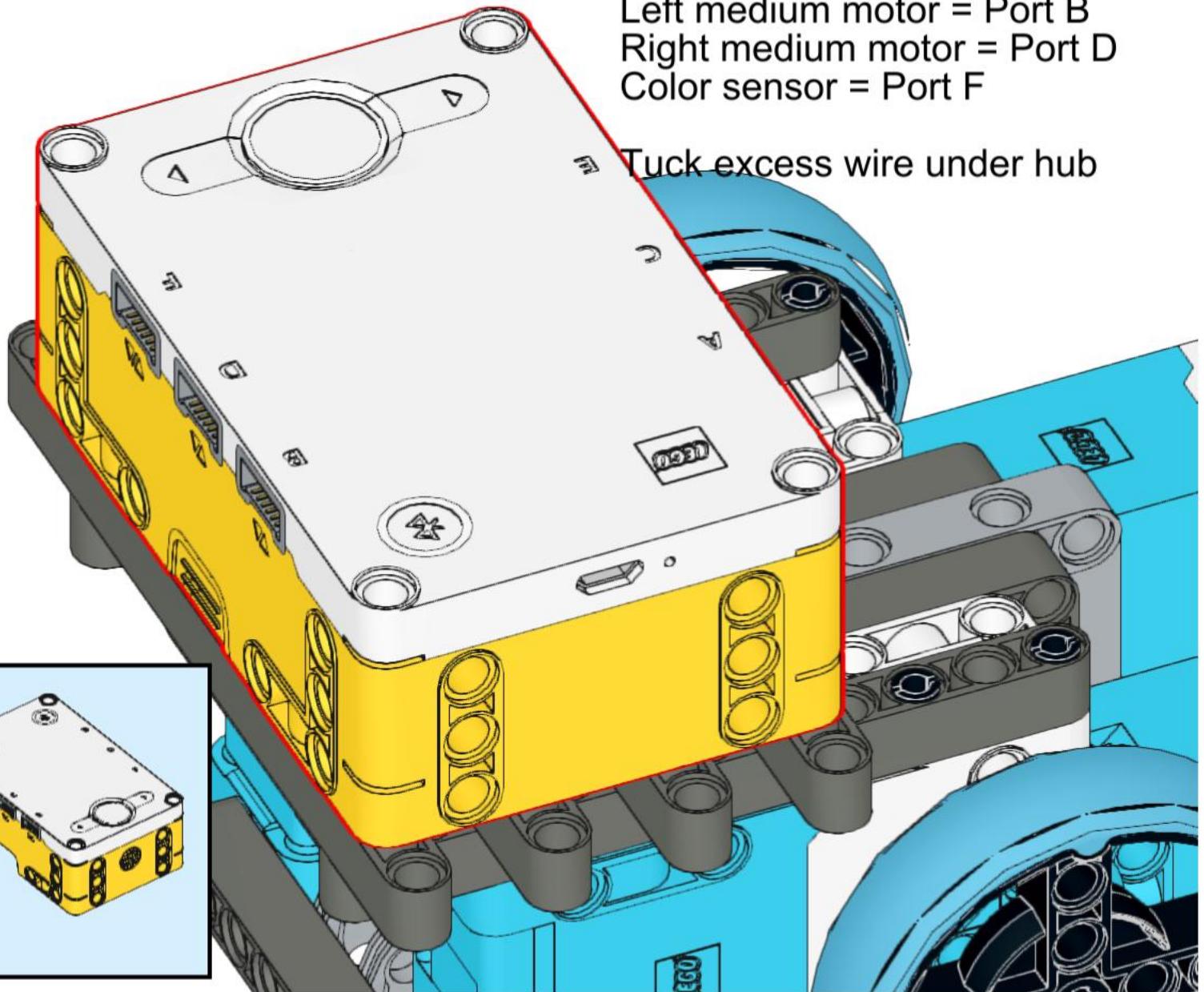
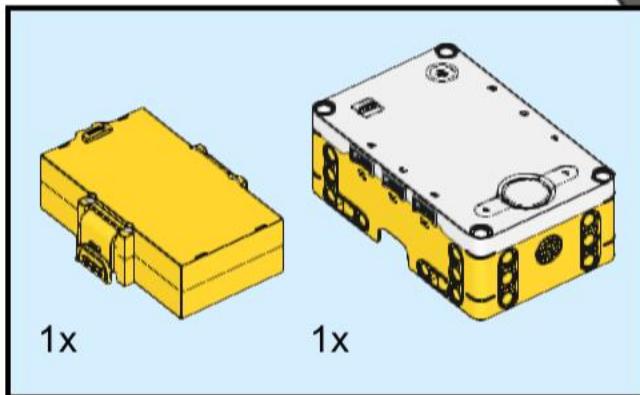
# 35



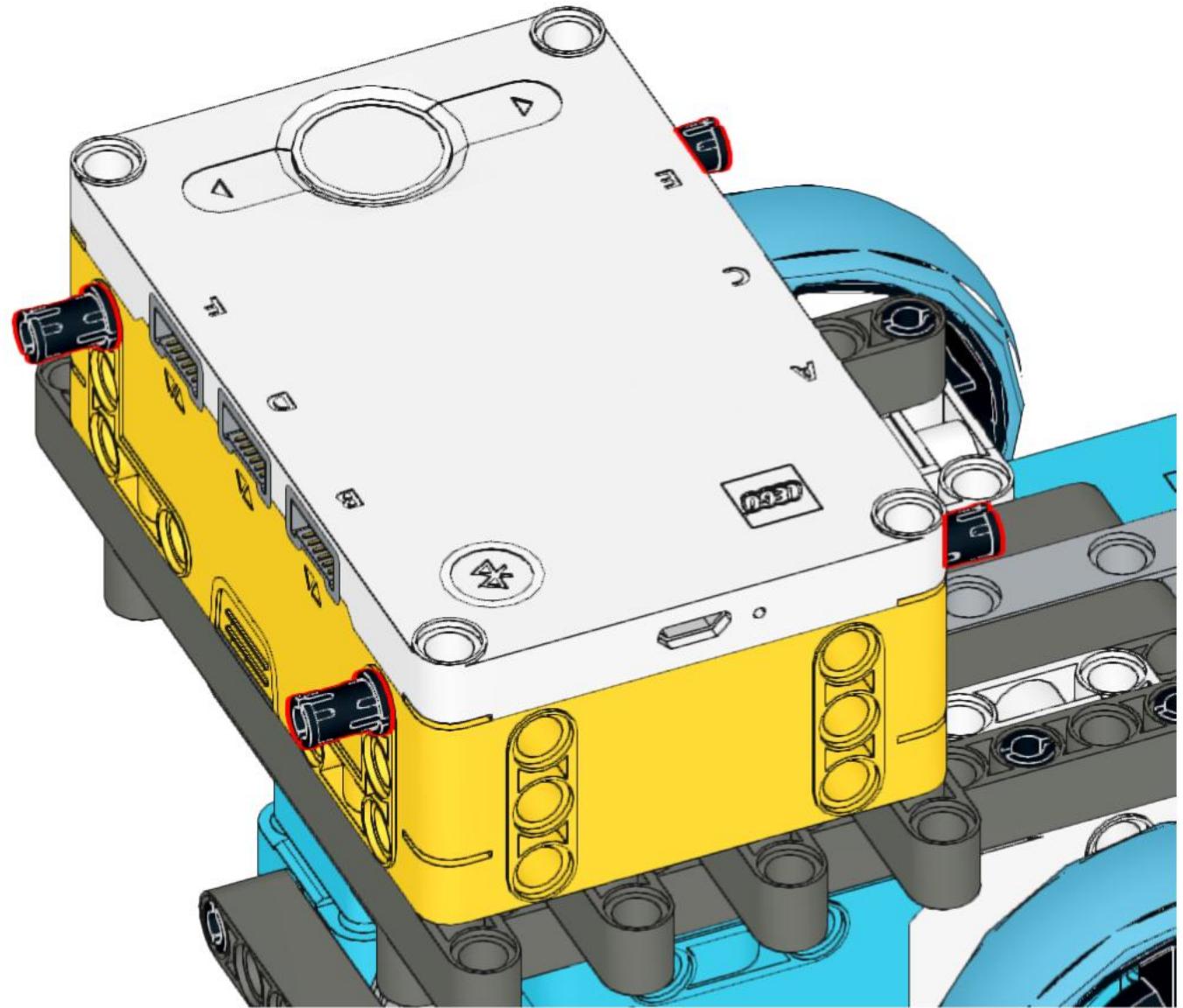
# 36

Power button to the left  
Left drive motor = Port E  
Right drive motor = Port A  
Left medium motor = Port B  
Right medium motor = Port D  
Color sensor = Port F

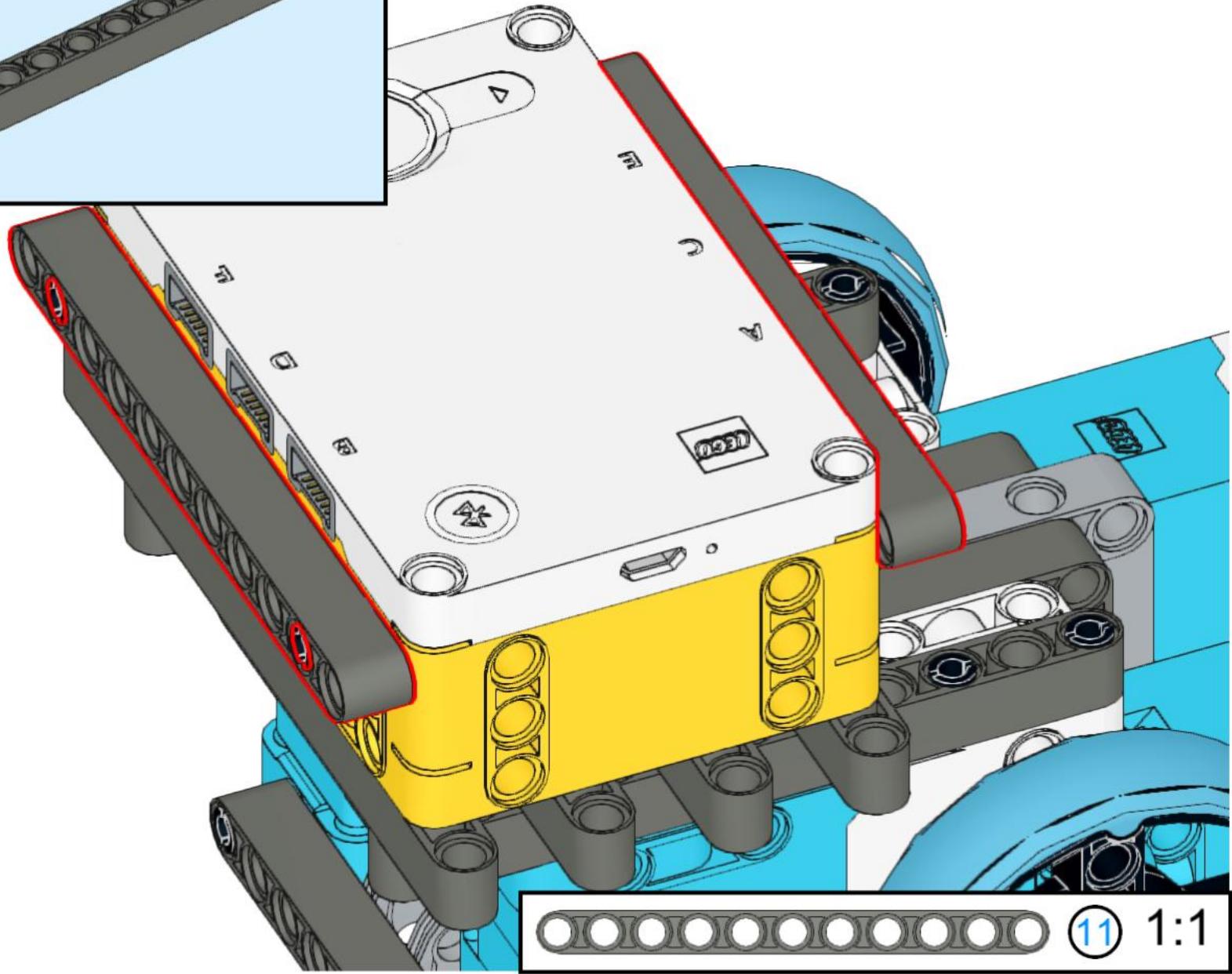
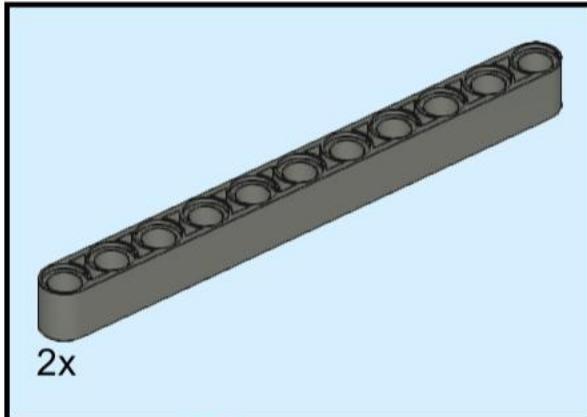
→ Tuck excess wire under hub



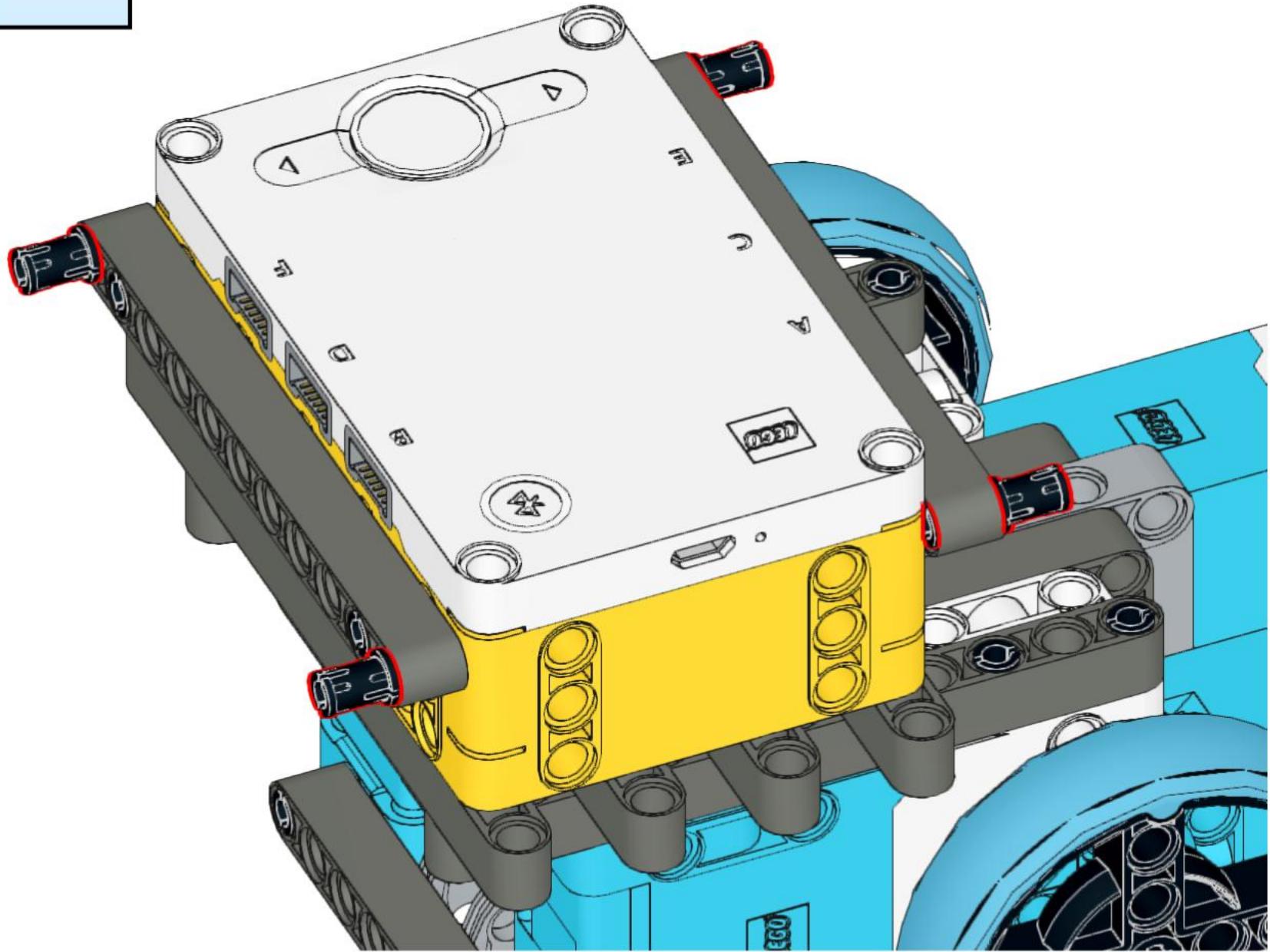
37



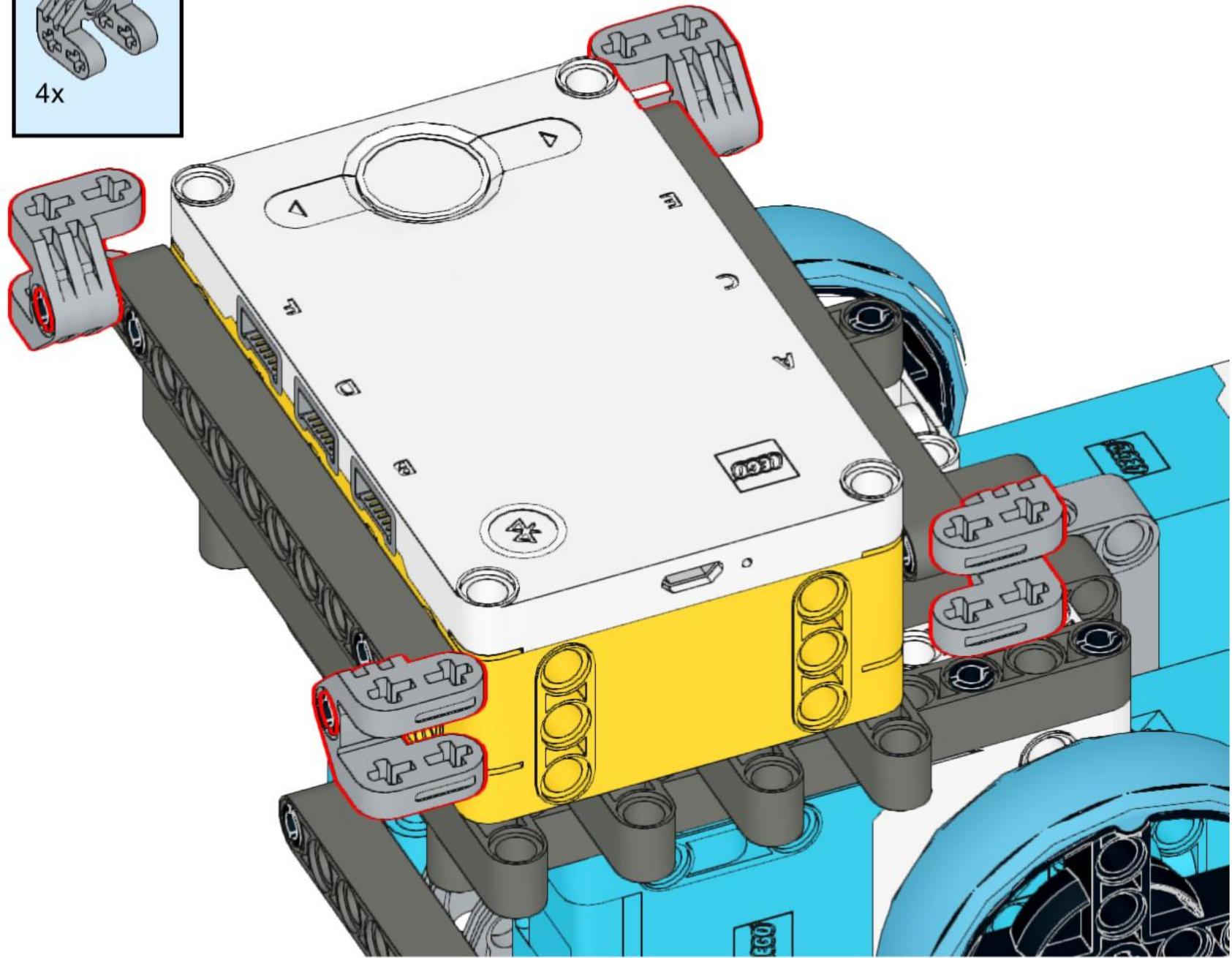
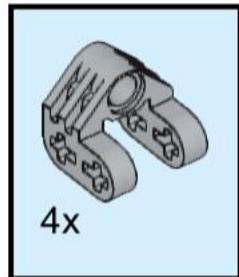
38



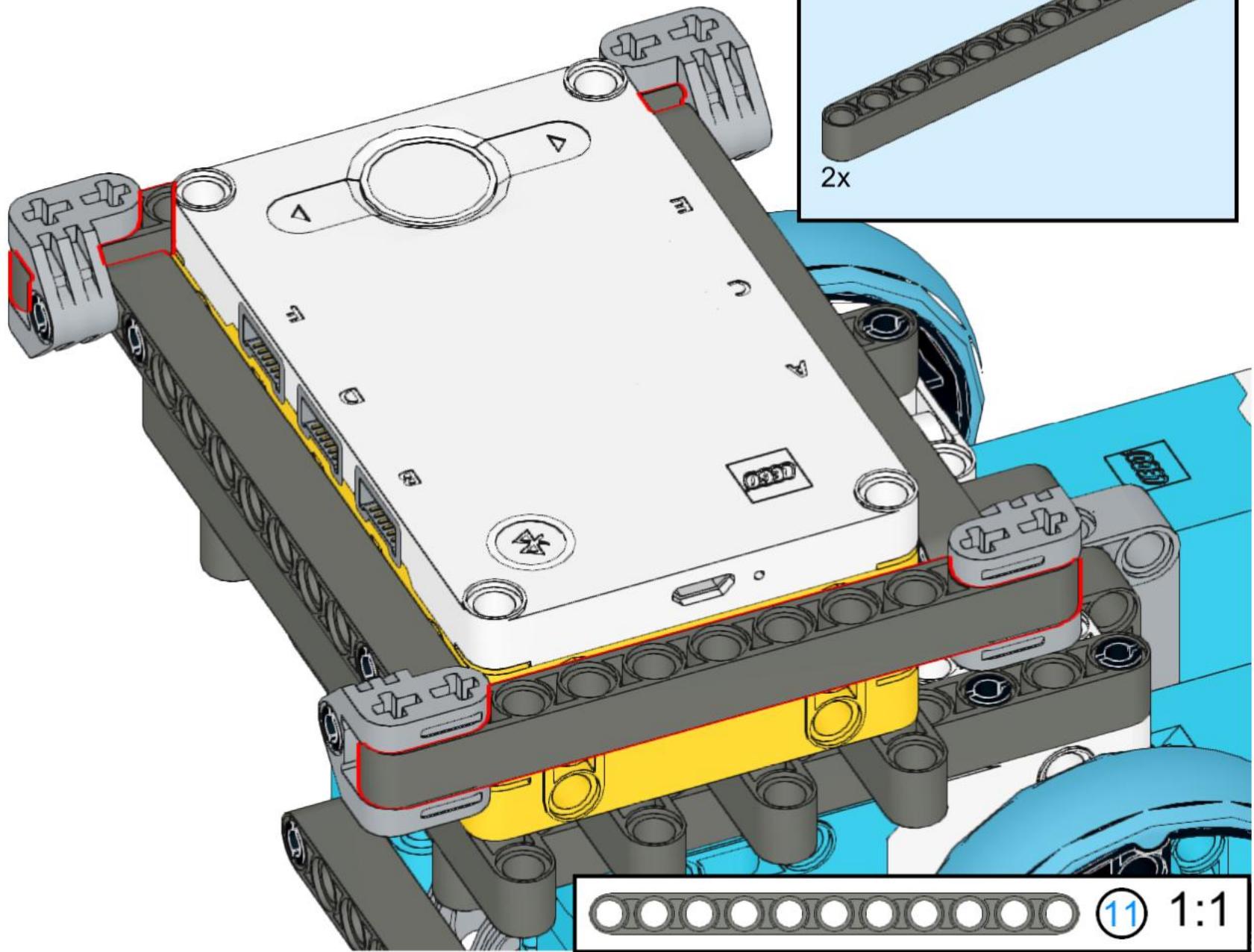
# 39



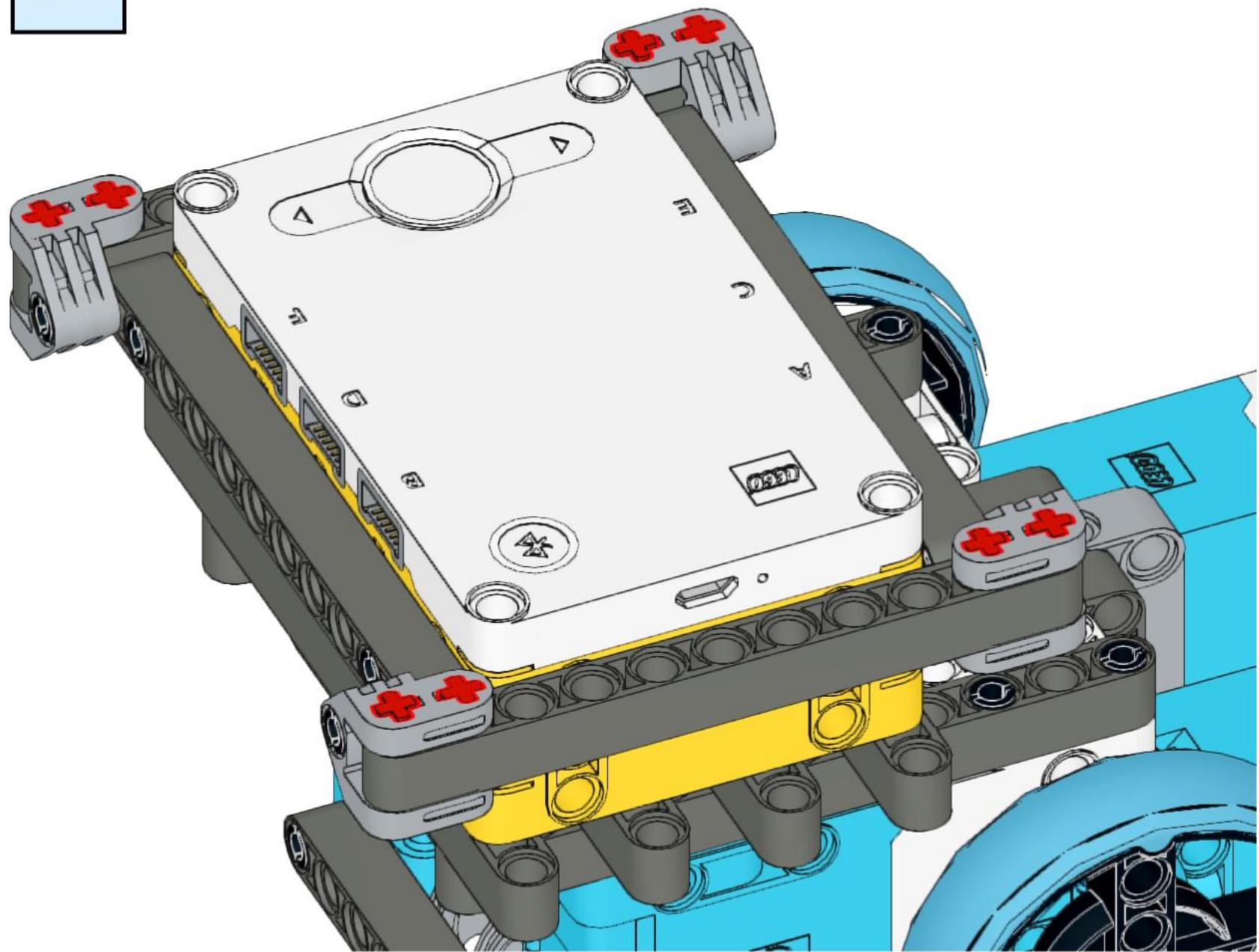
**40**



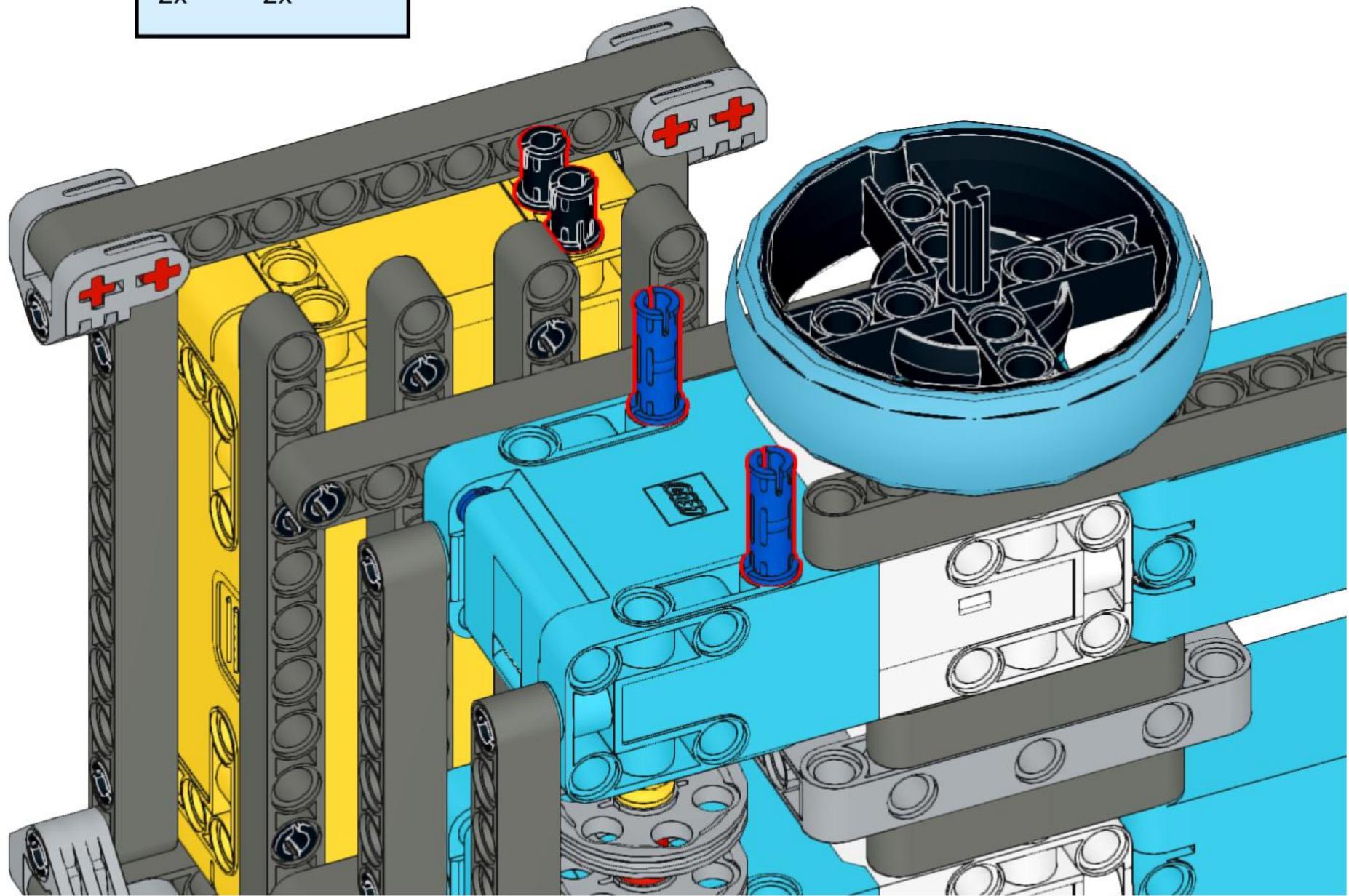
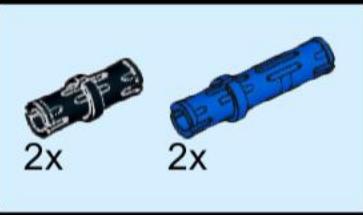
**41**



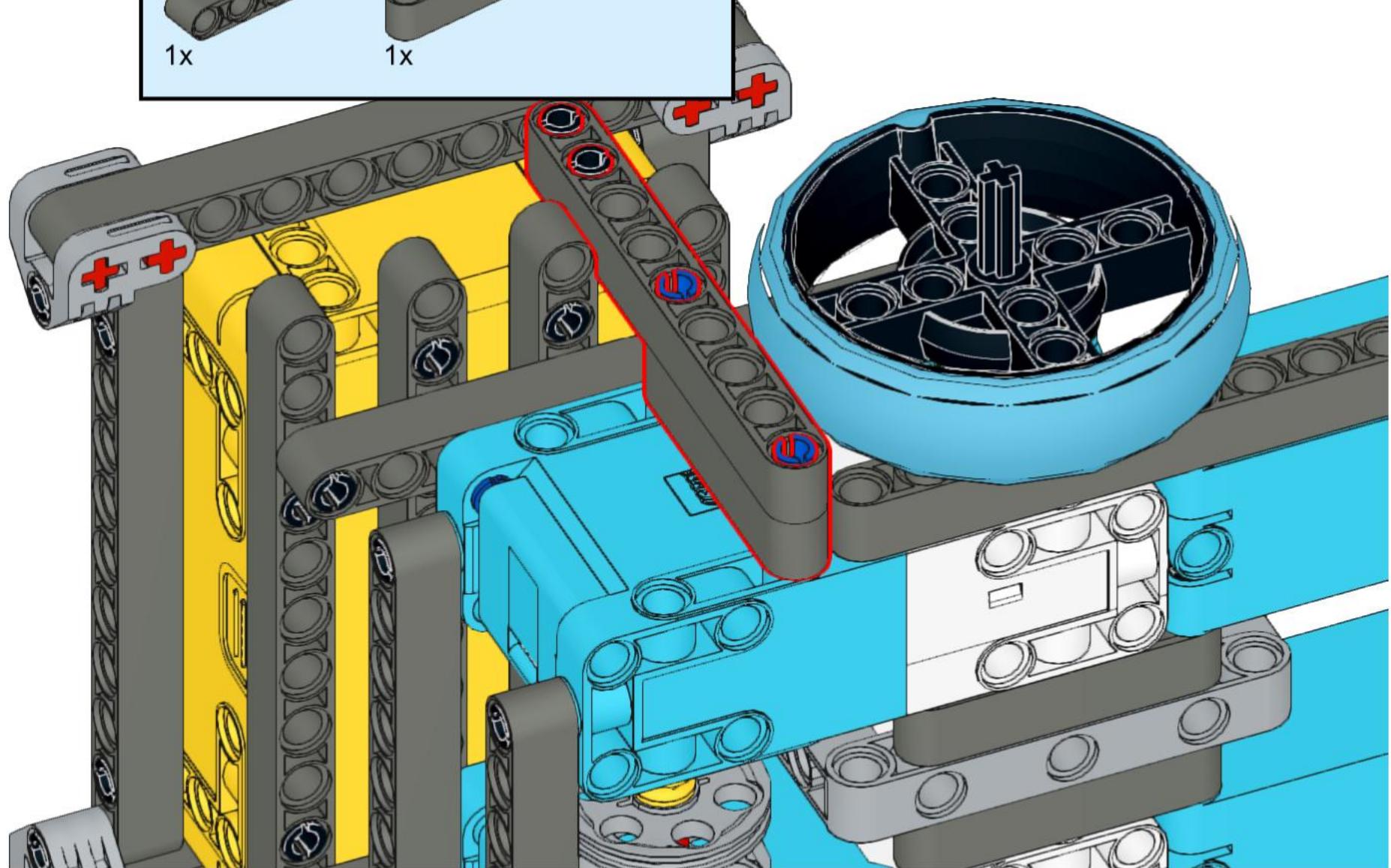
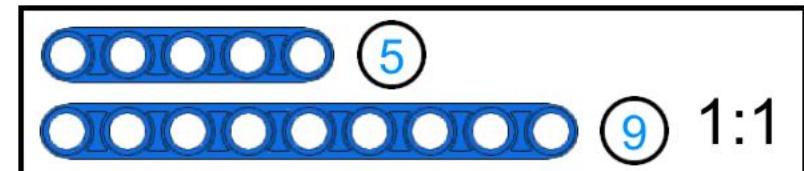
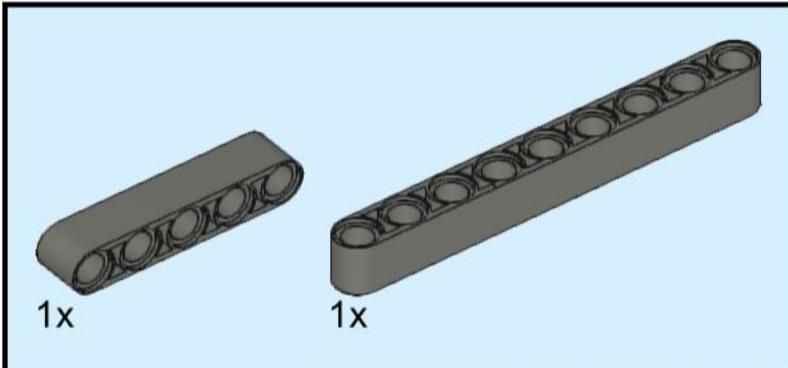
**42**

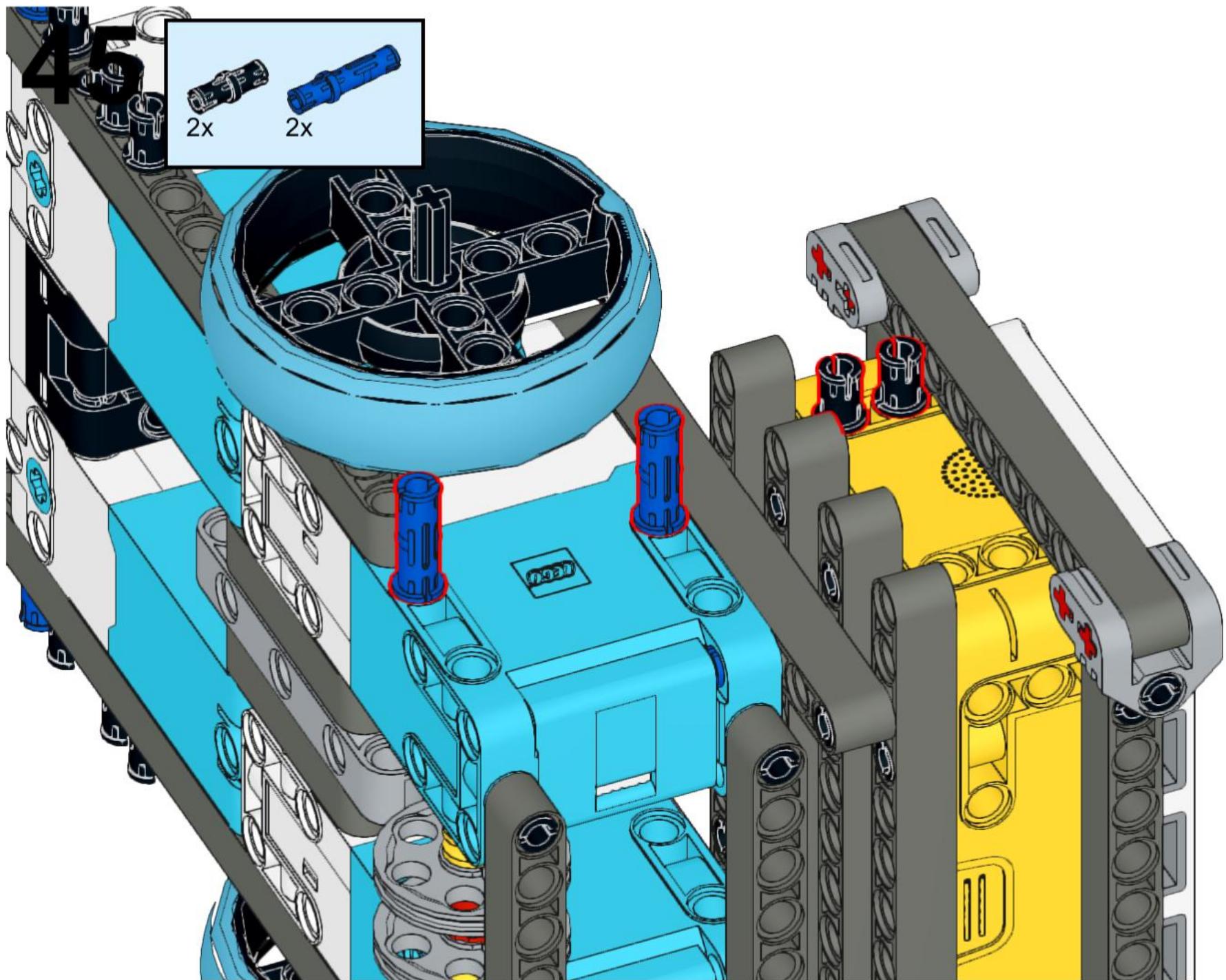


**43**

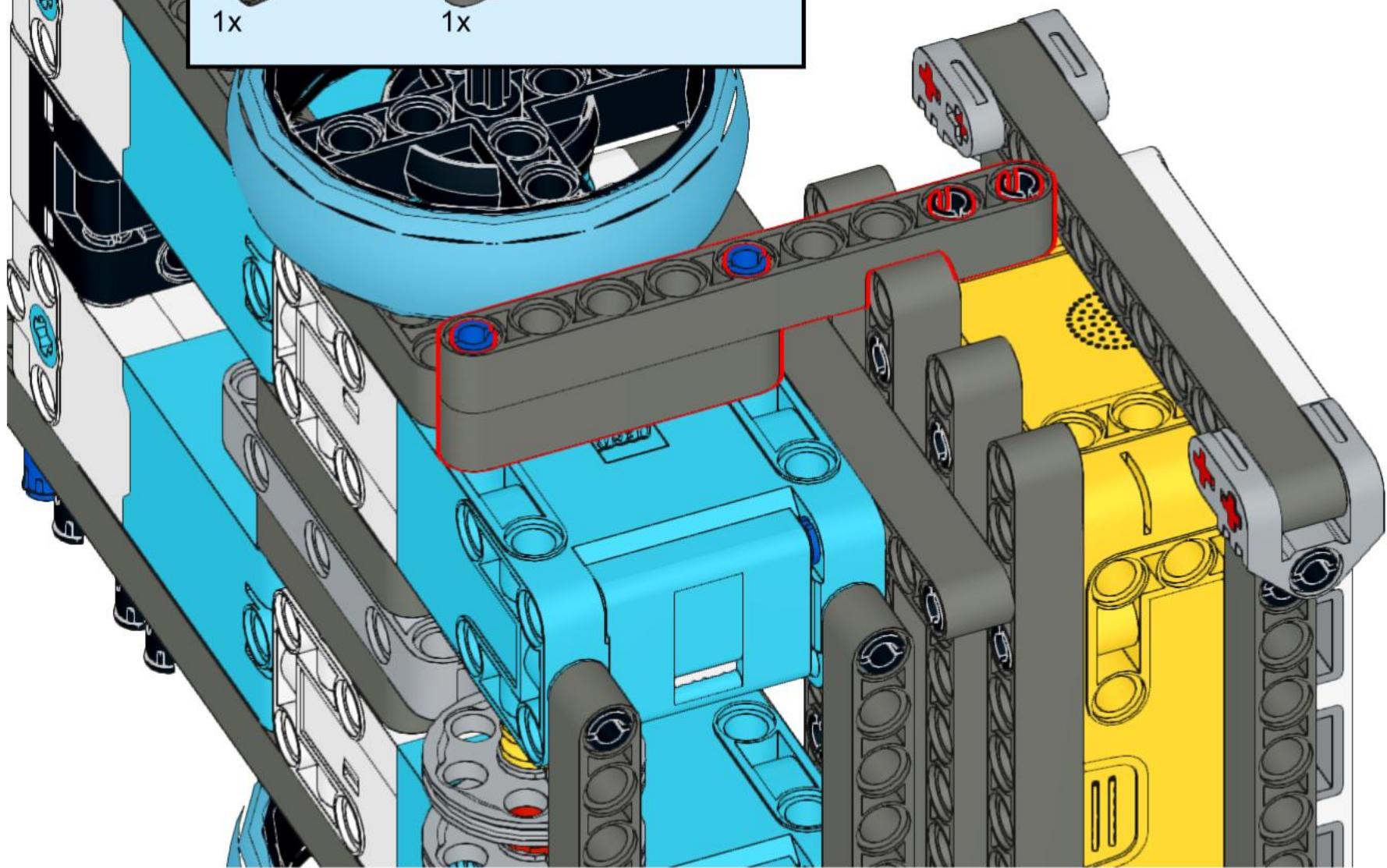
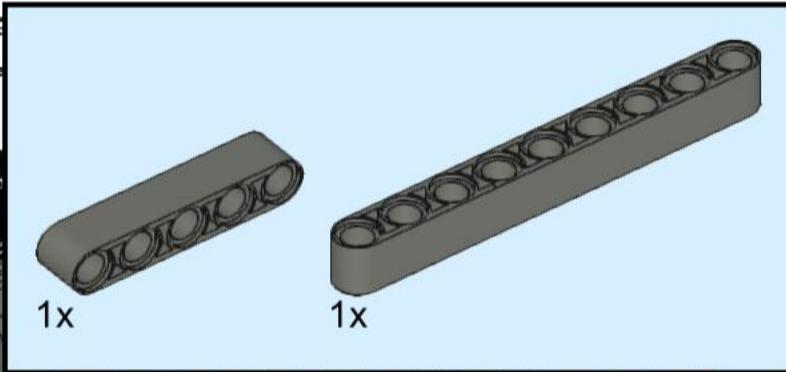


44

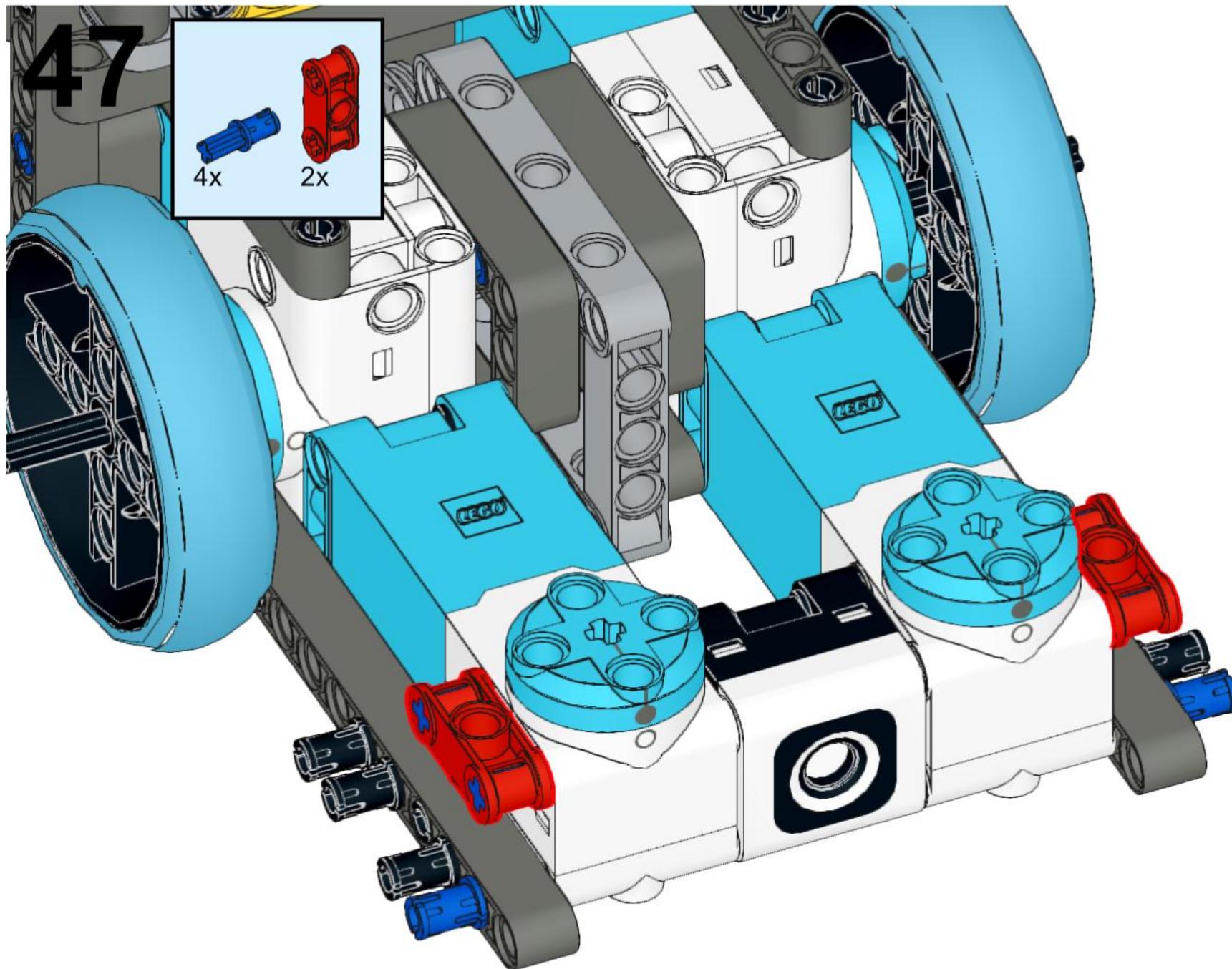
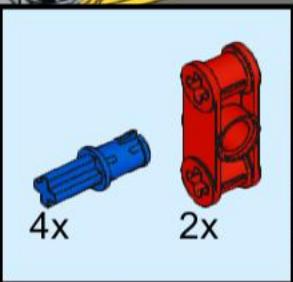




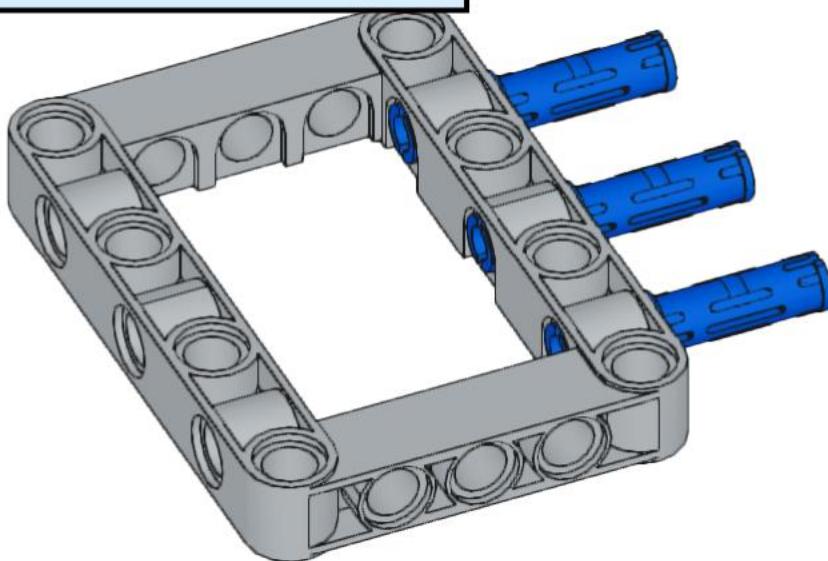
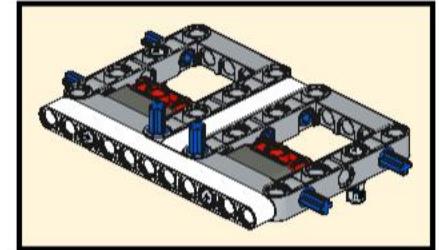
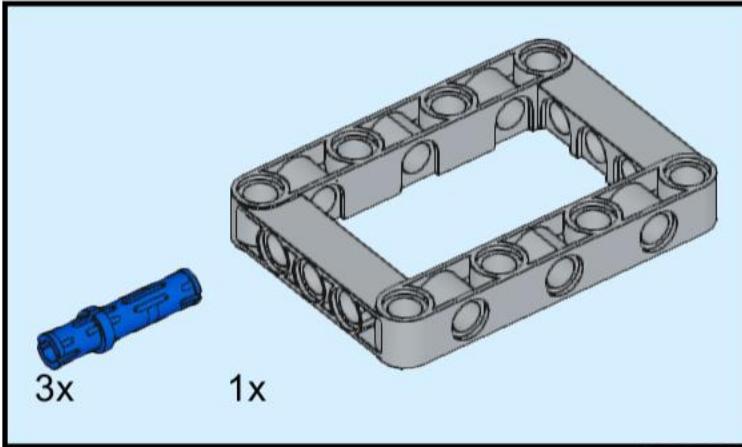
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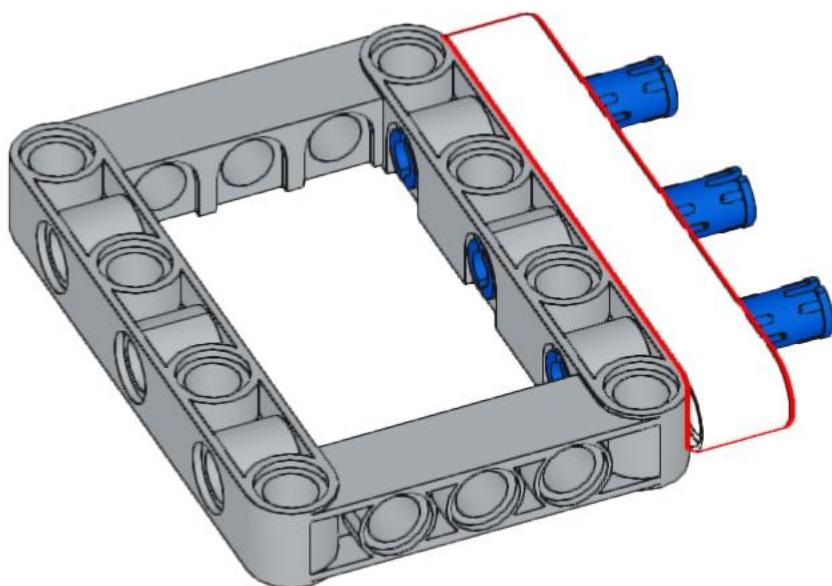
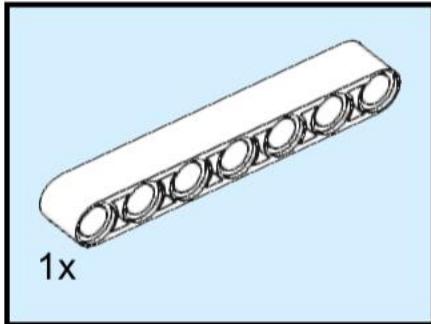
**47**



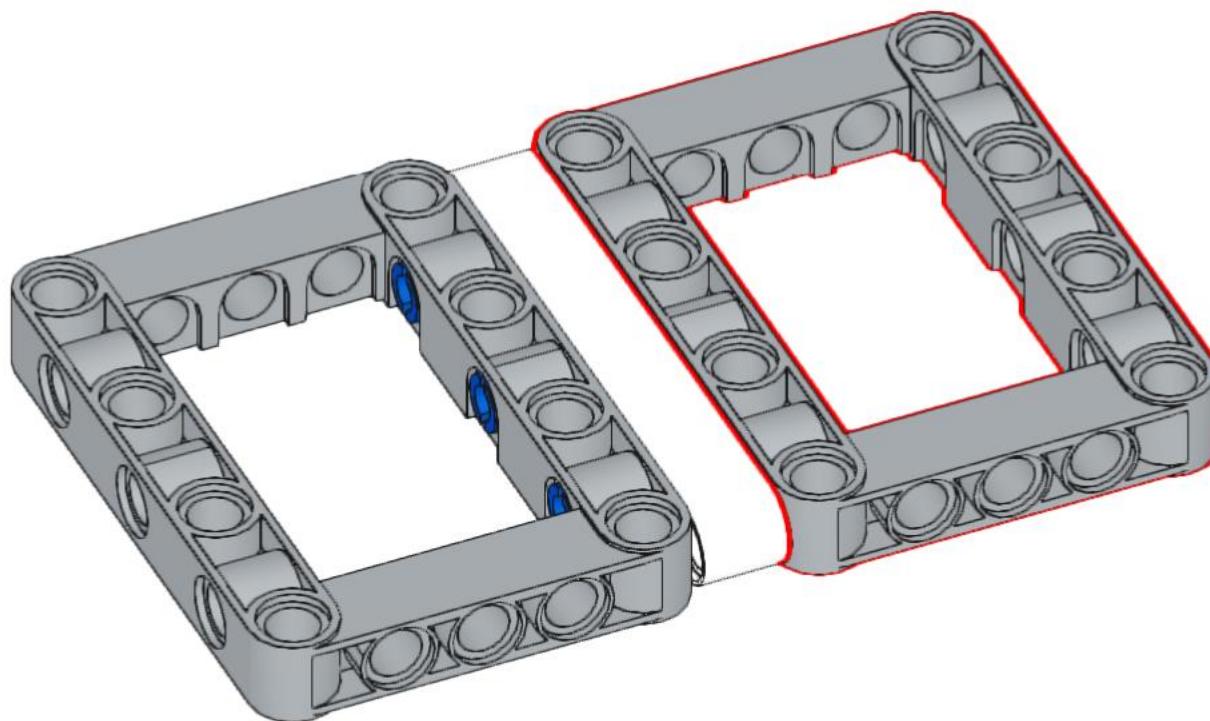
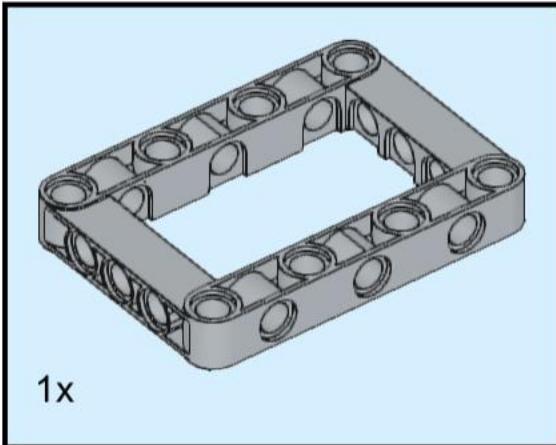
**48**



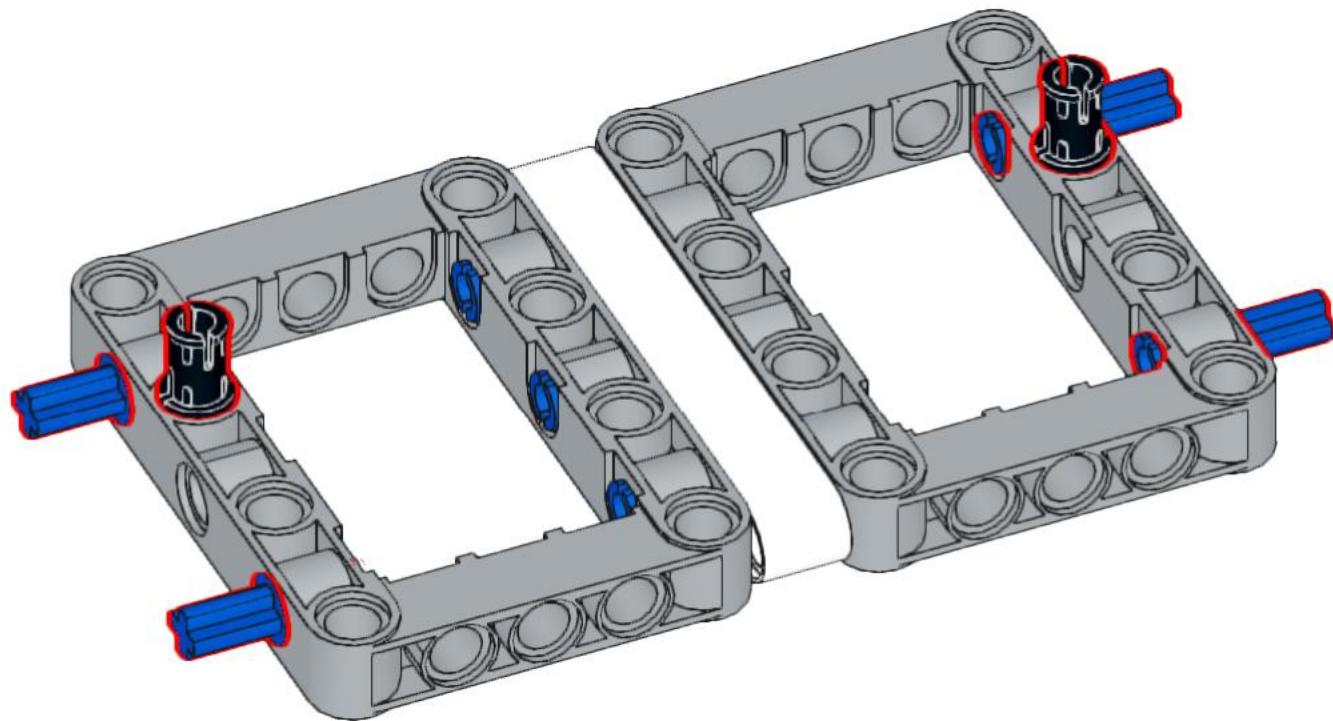
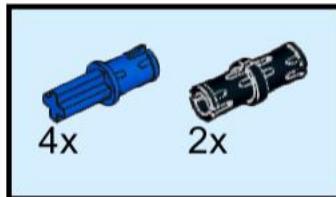
**49**



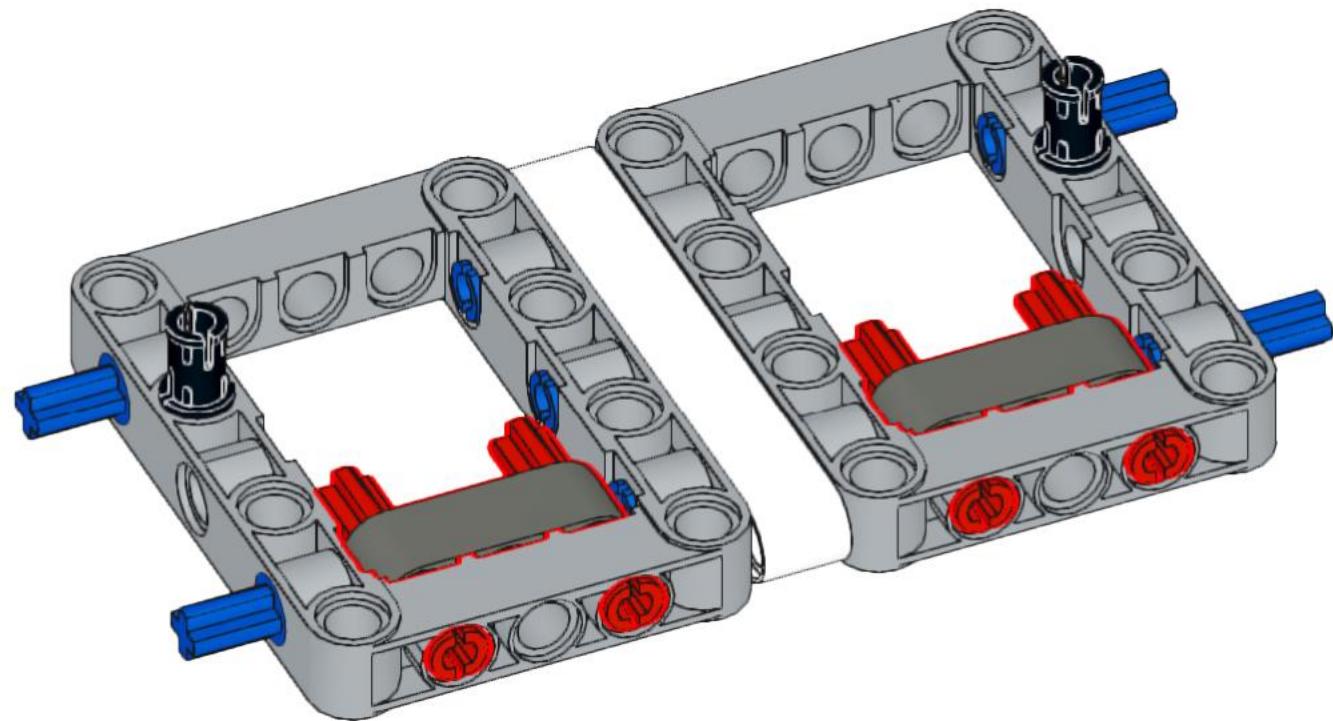
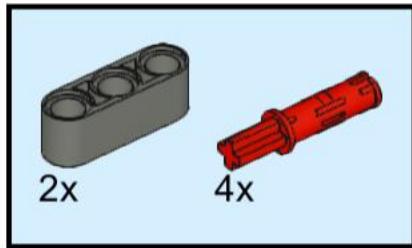
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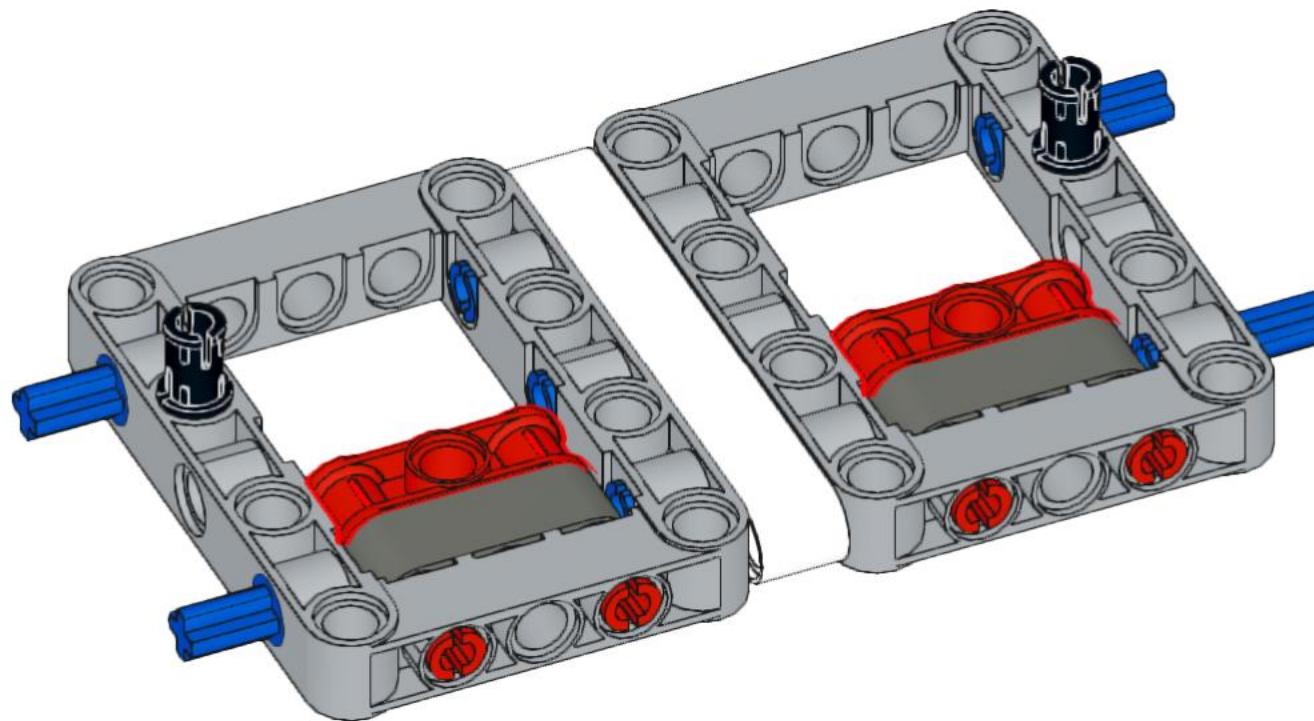
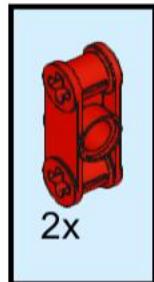
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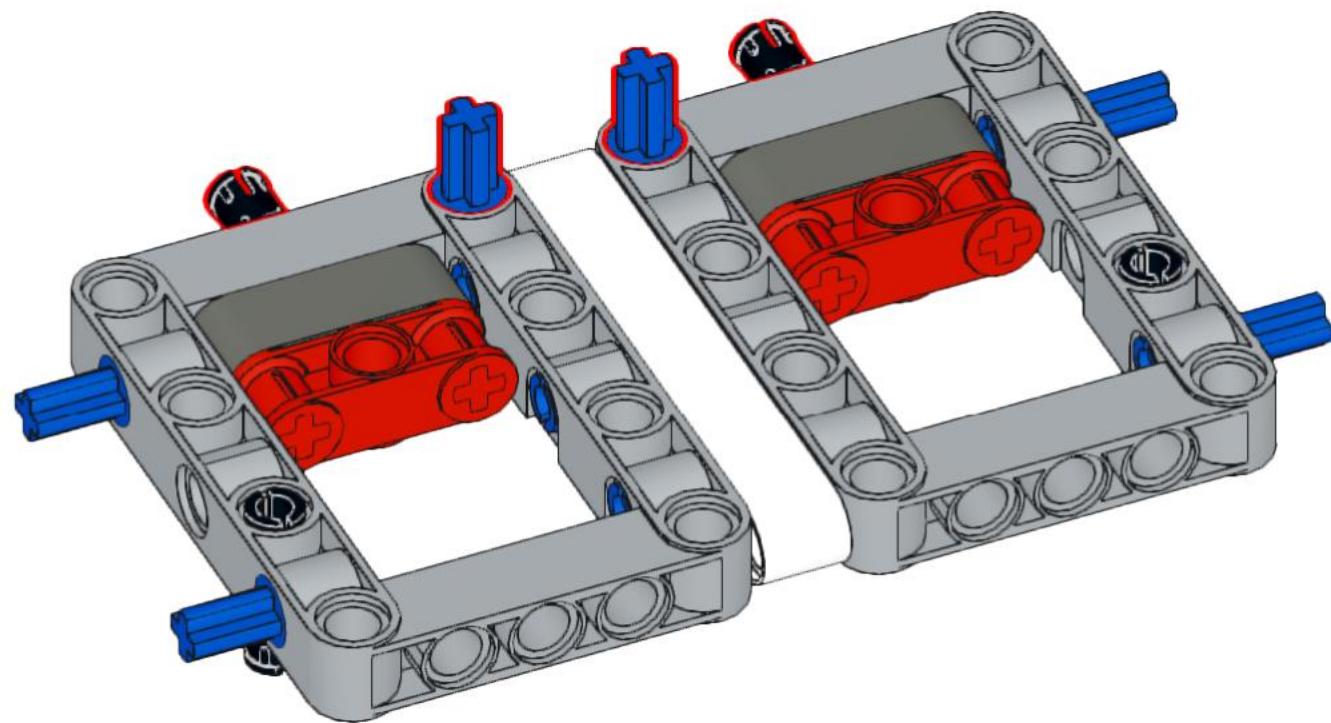
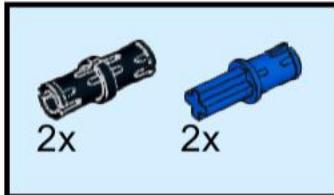
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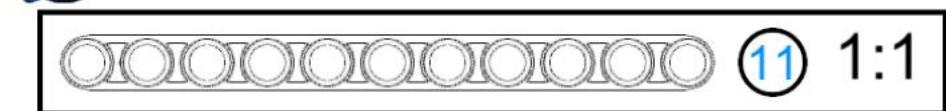
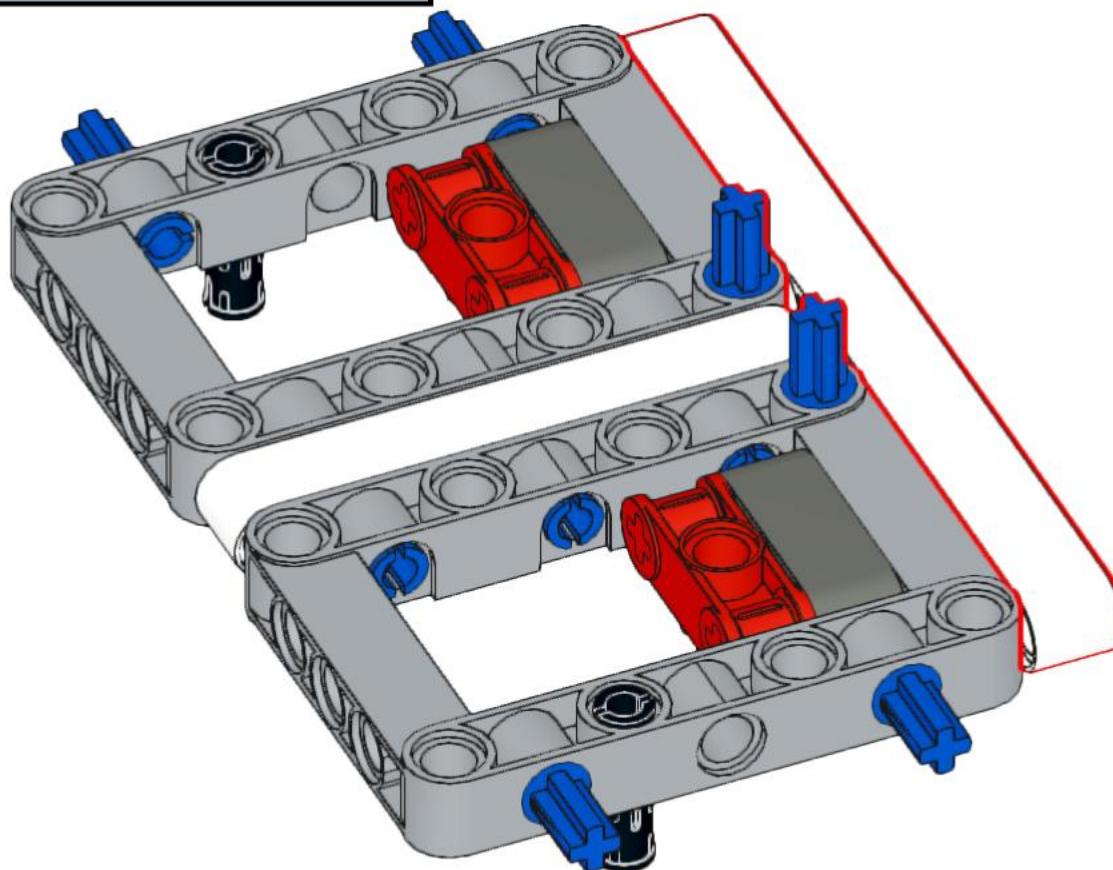
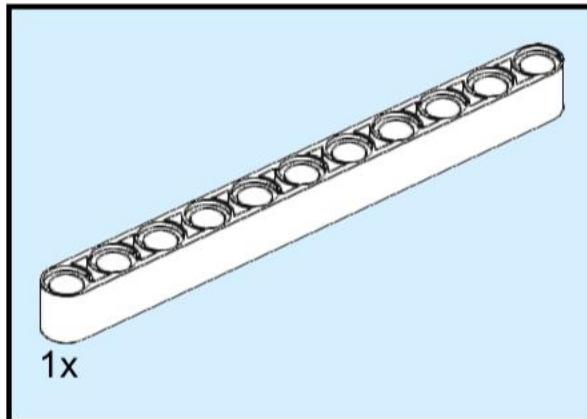
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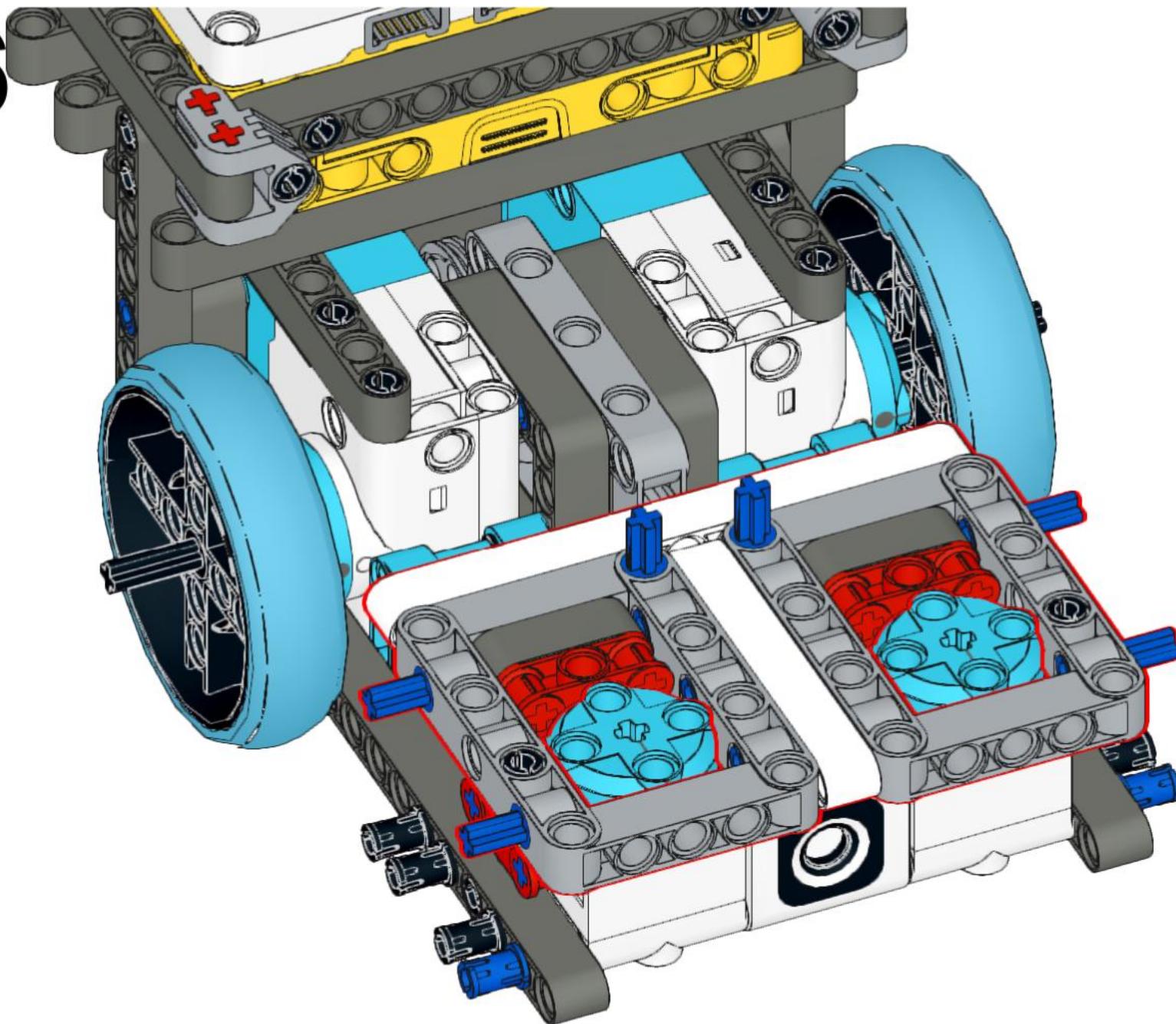
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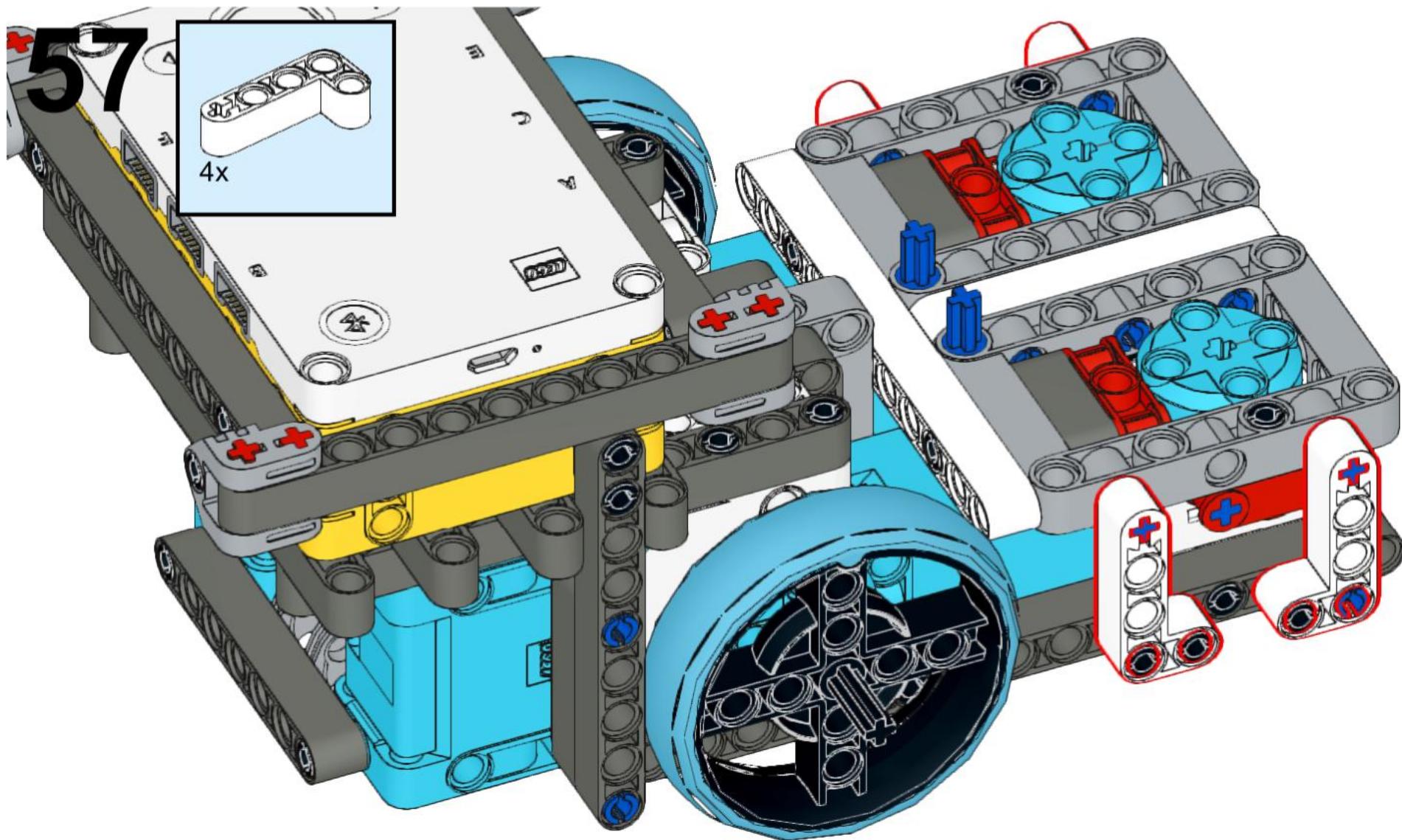
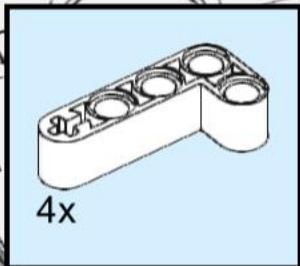
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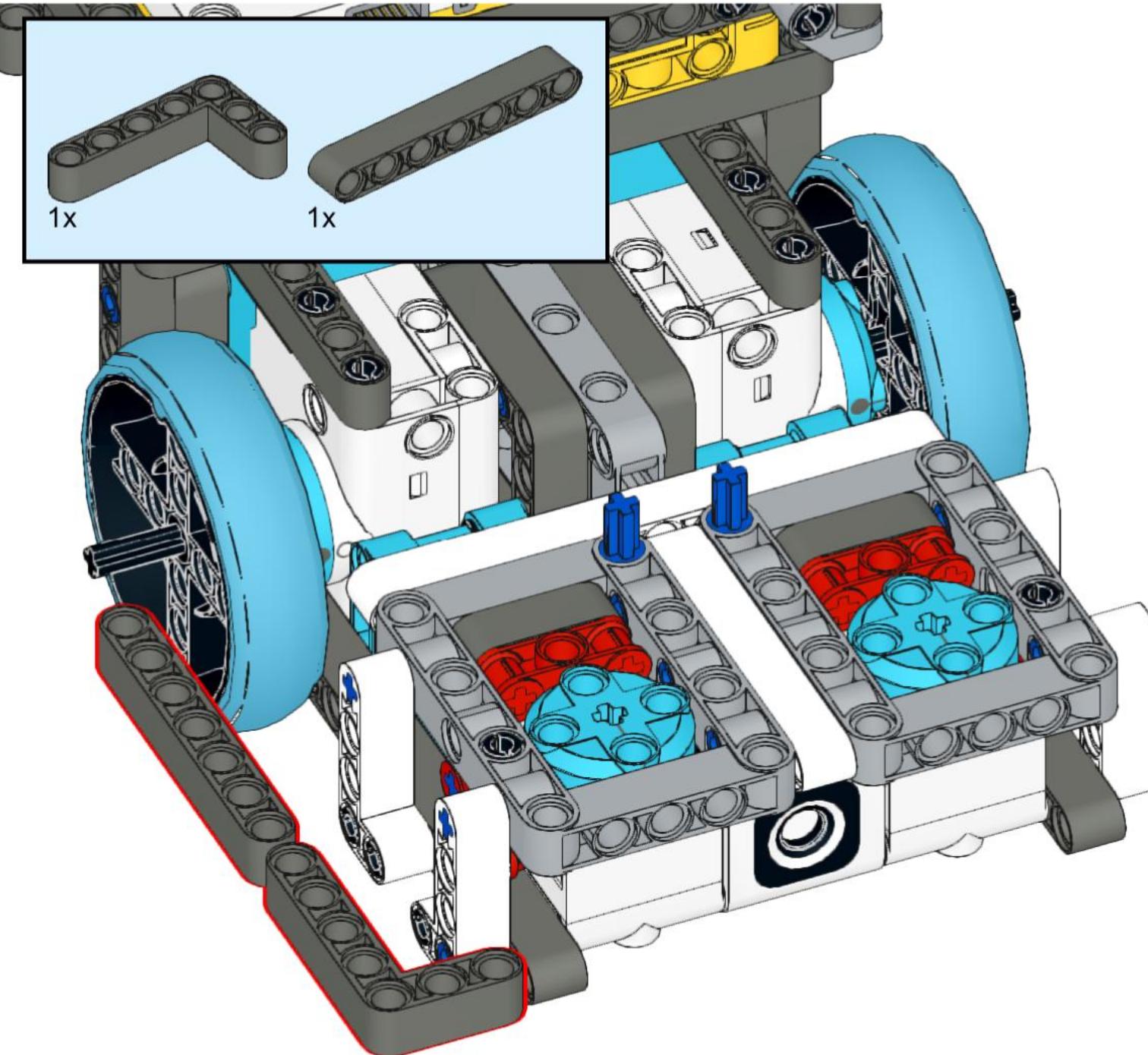
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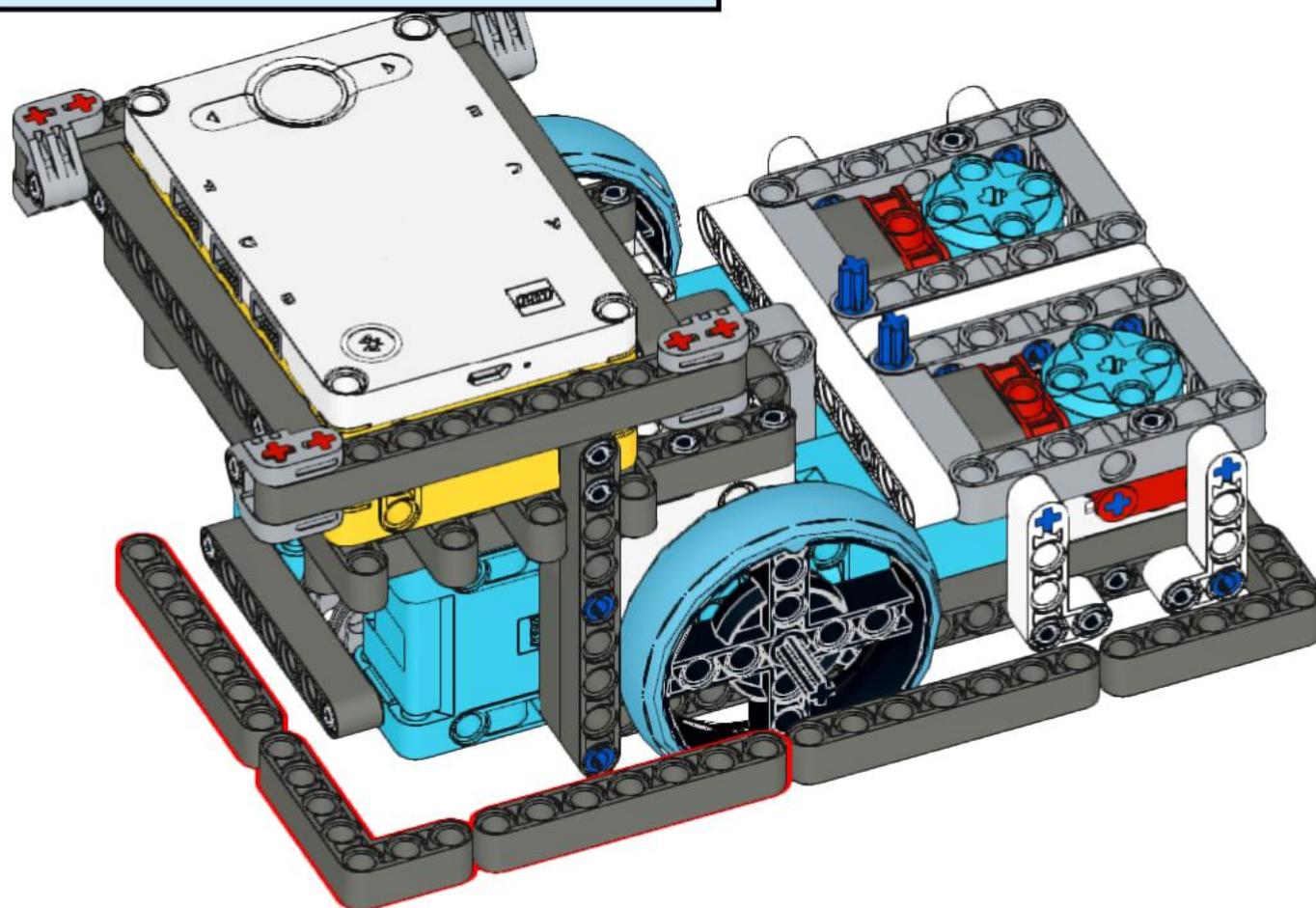
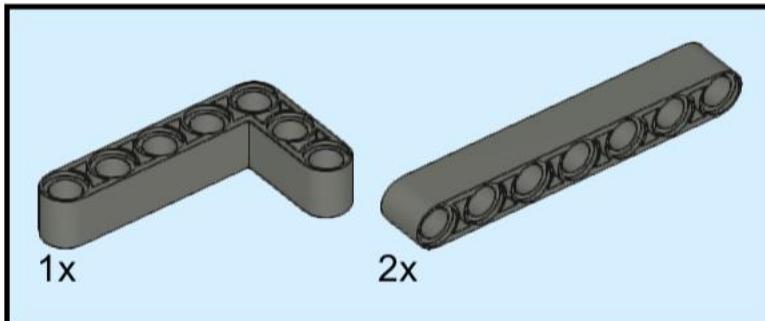
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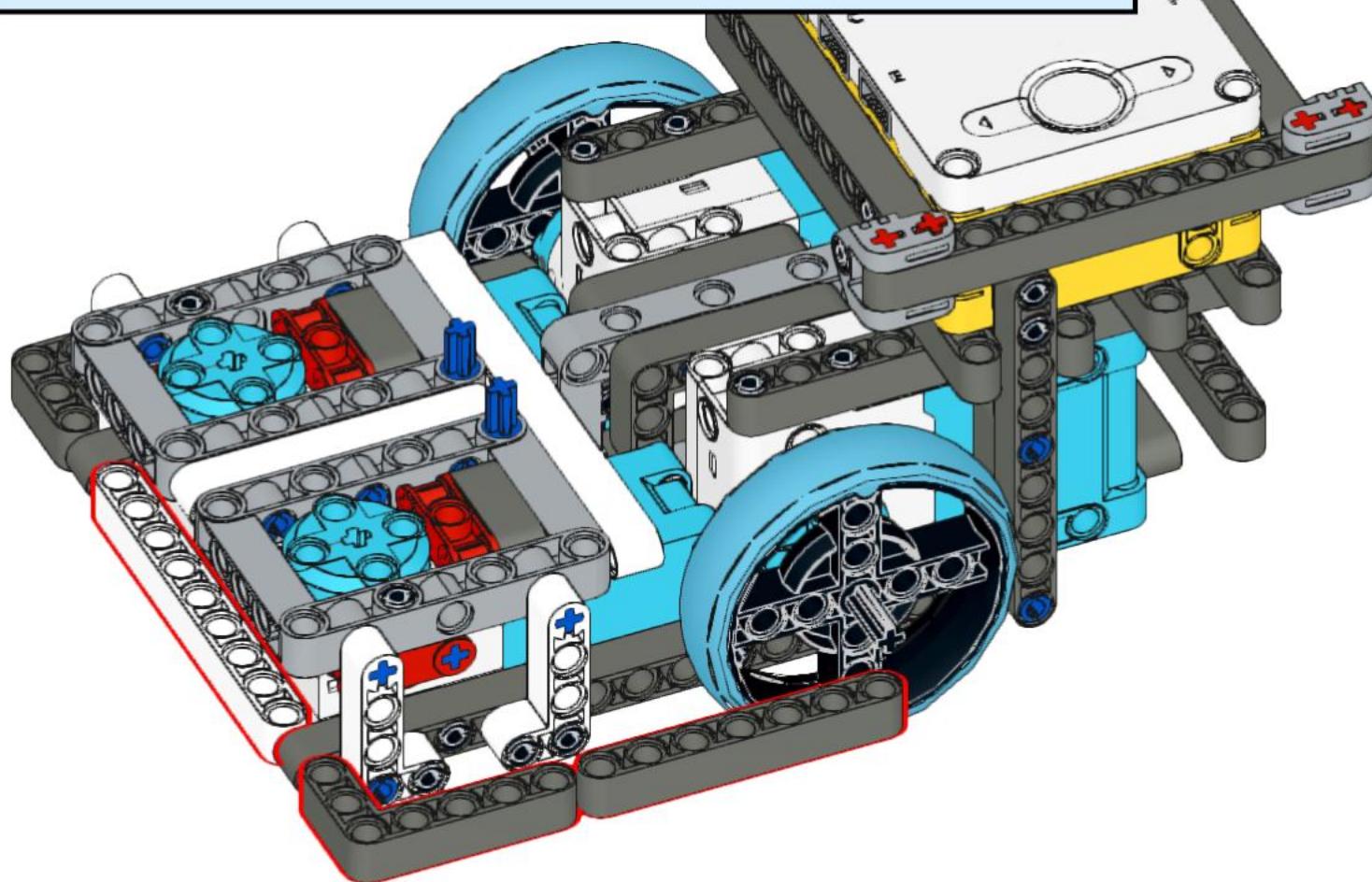
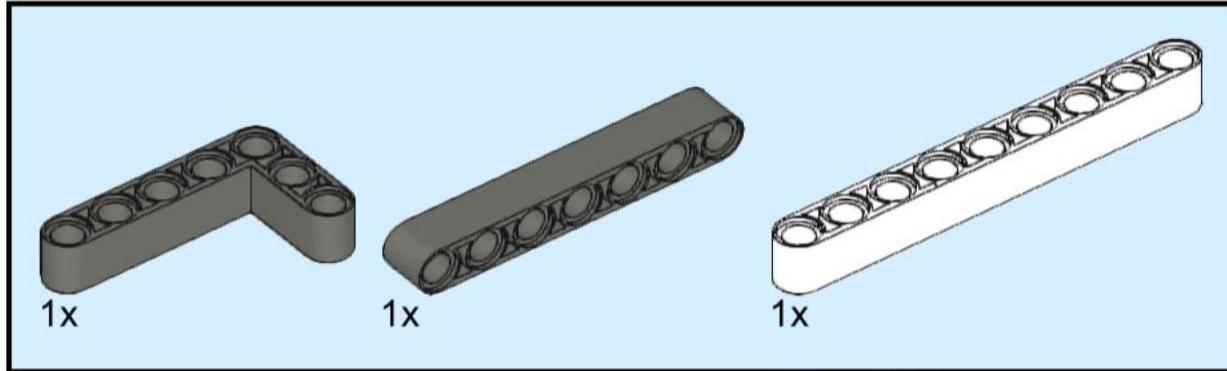
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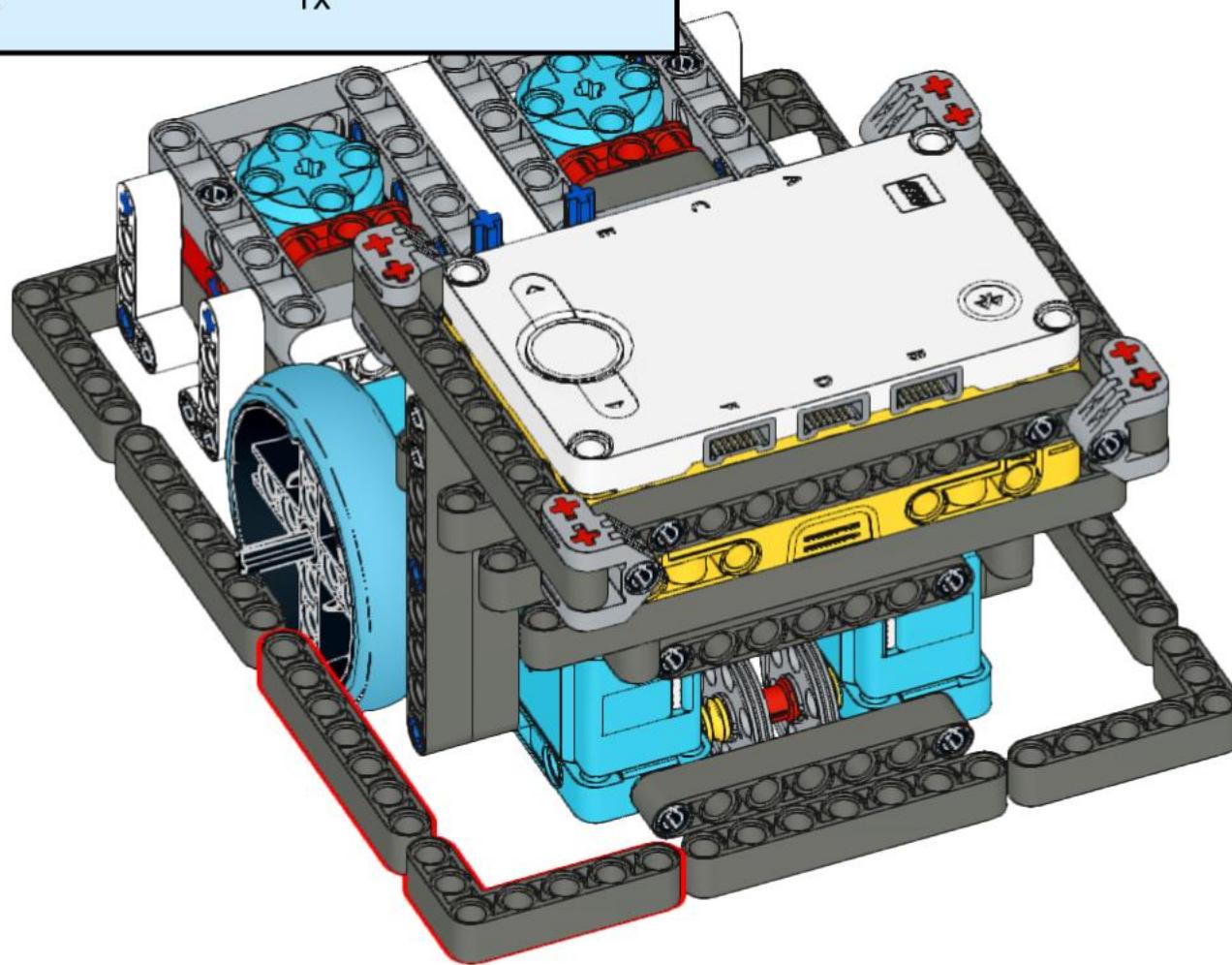
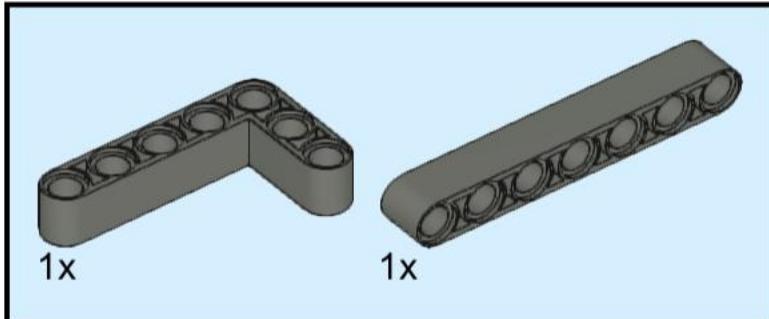
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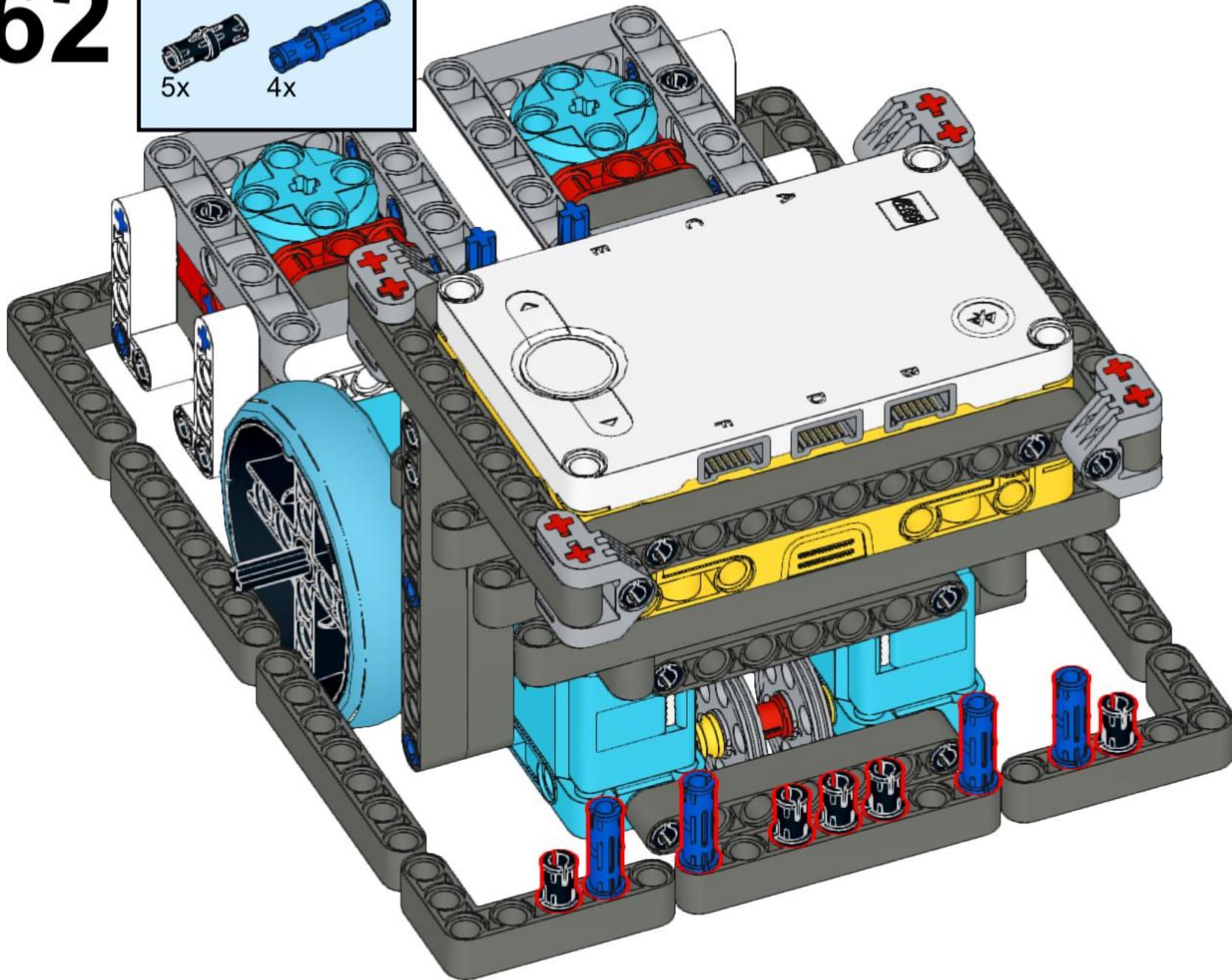
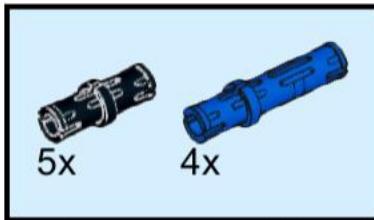
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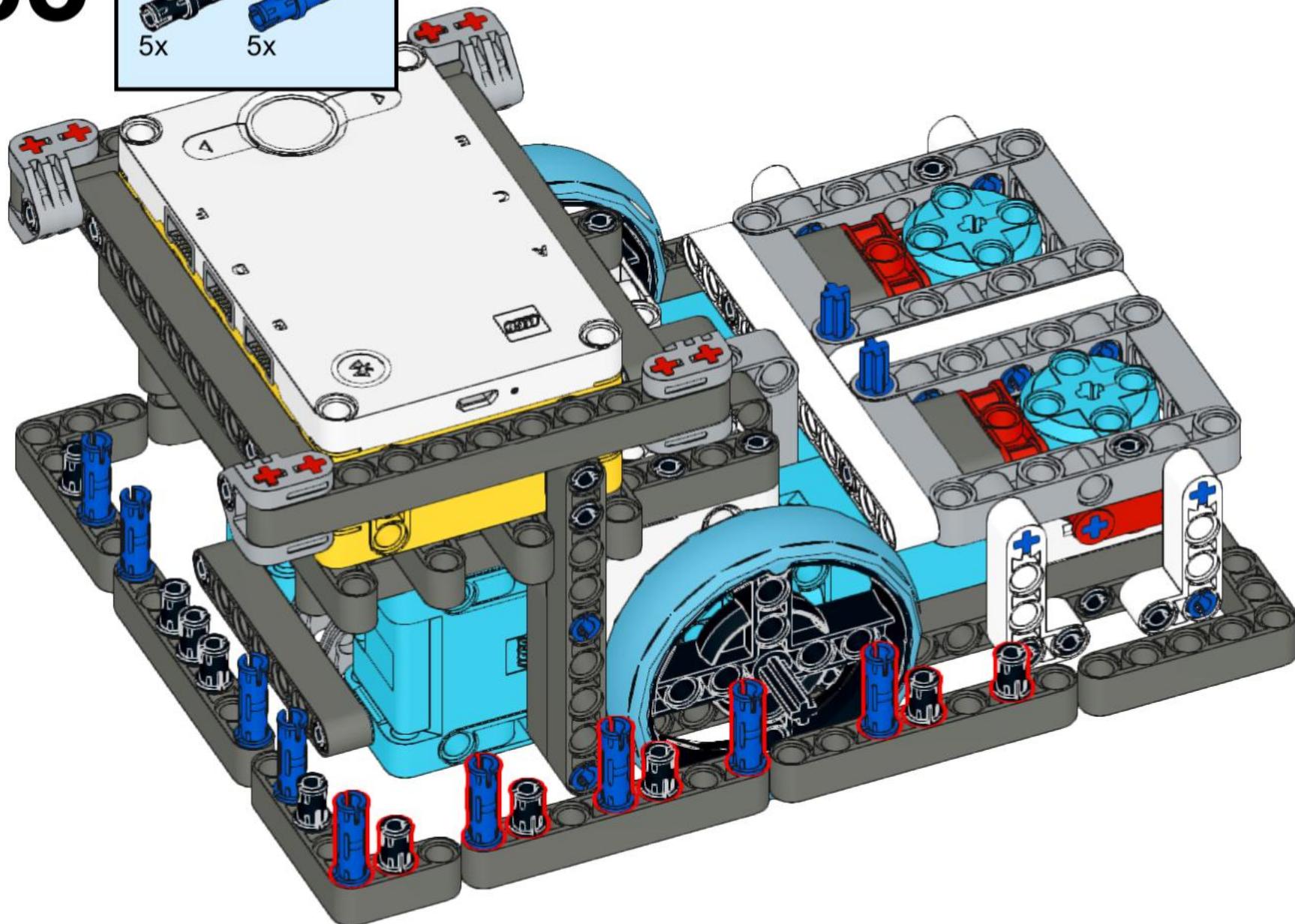
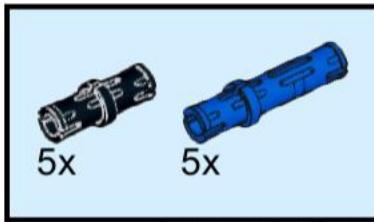
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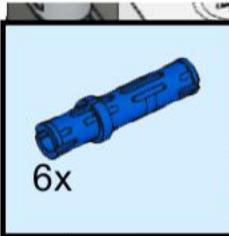
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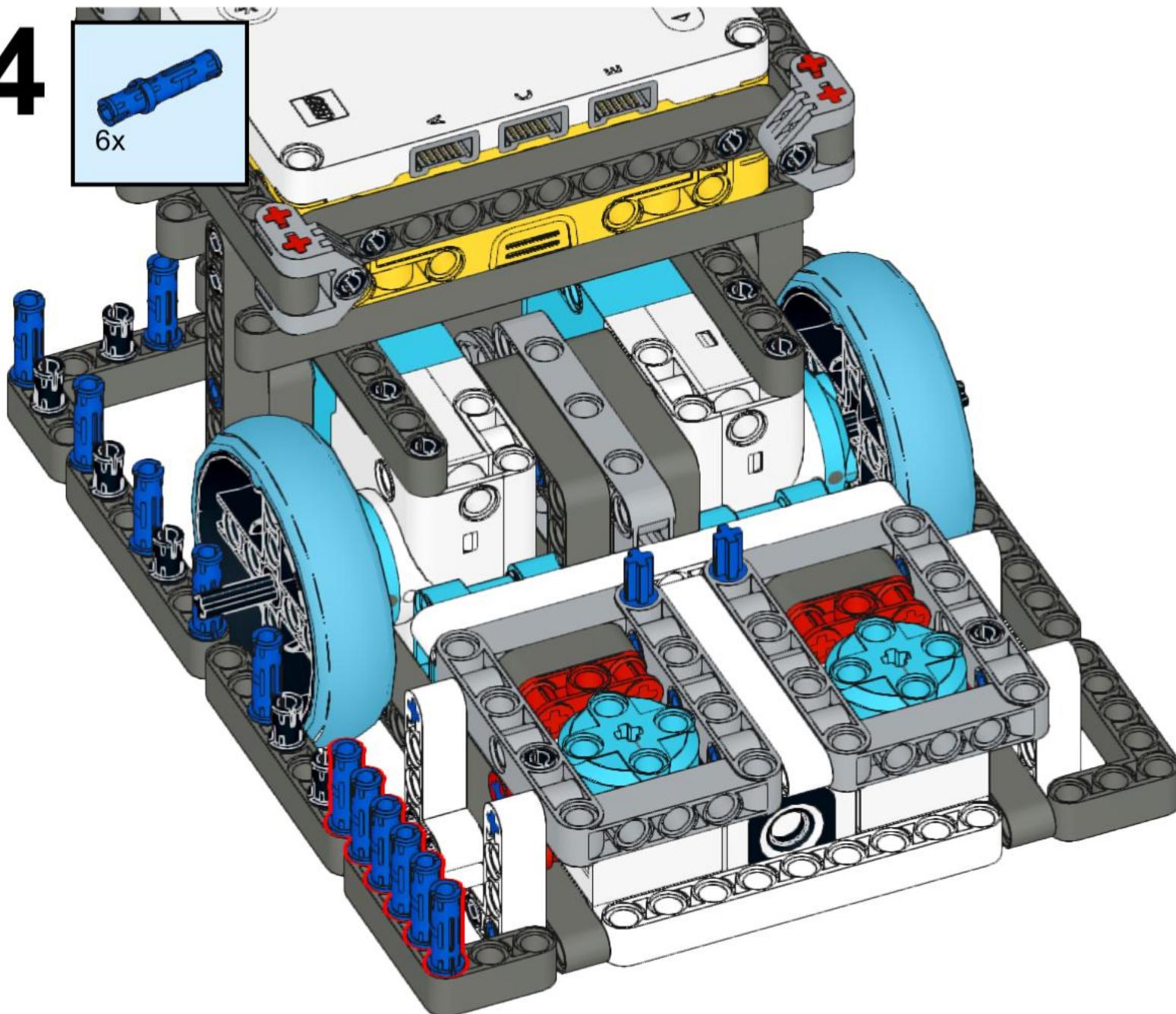
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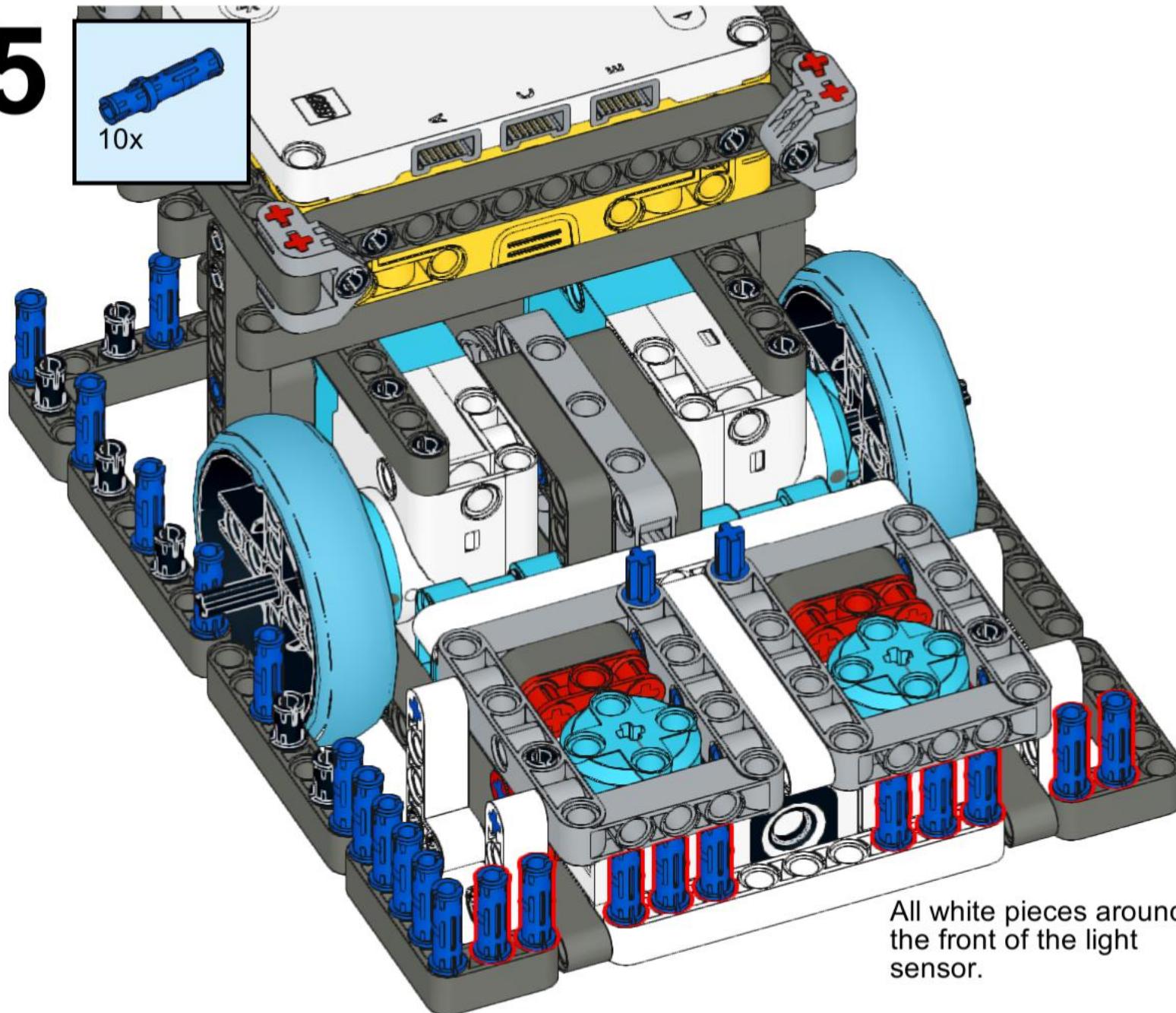
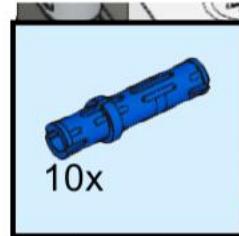
**64**



*6x*

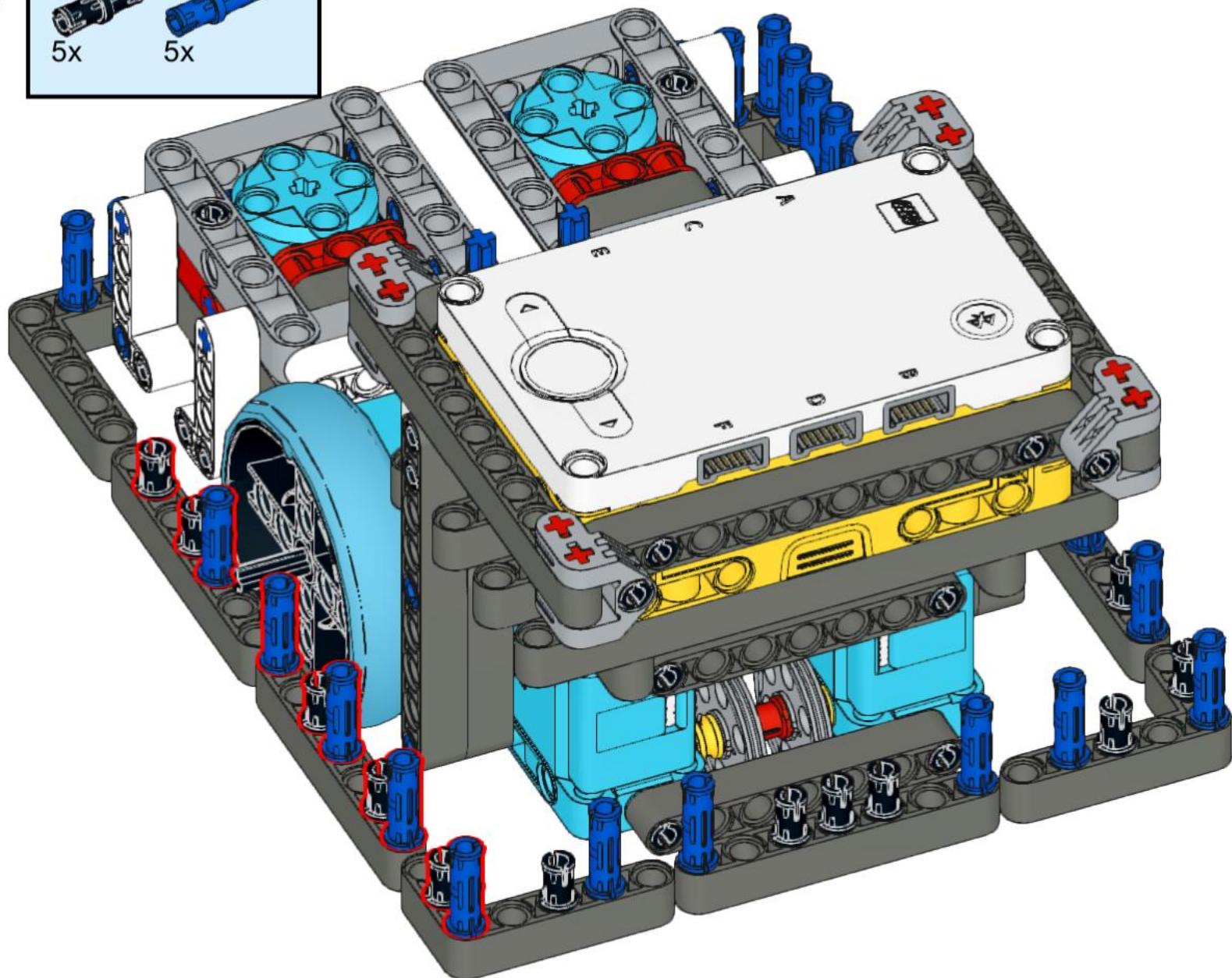
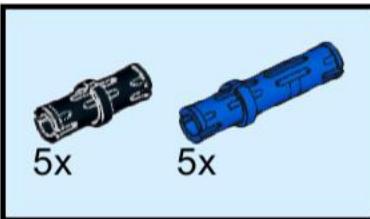


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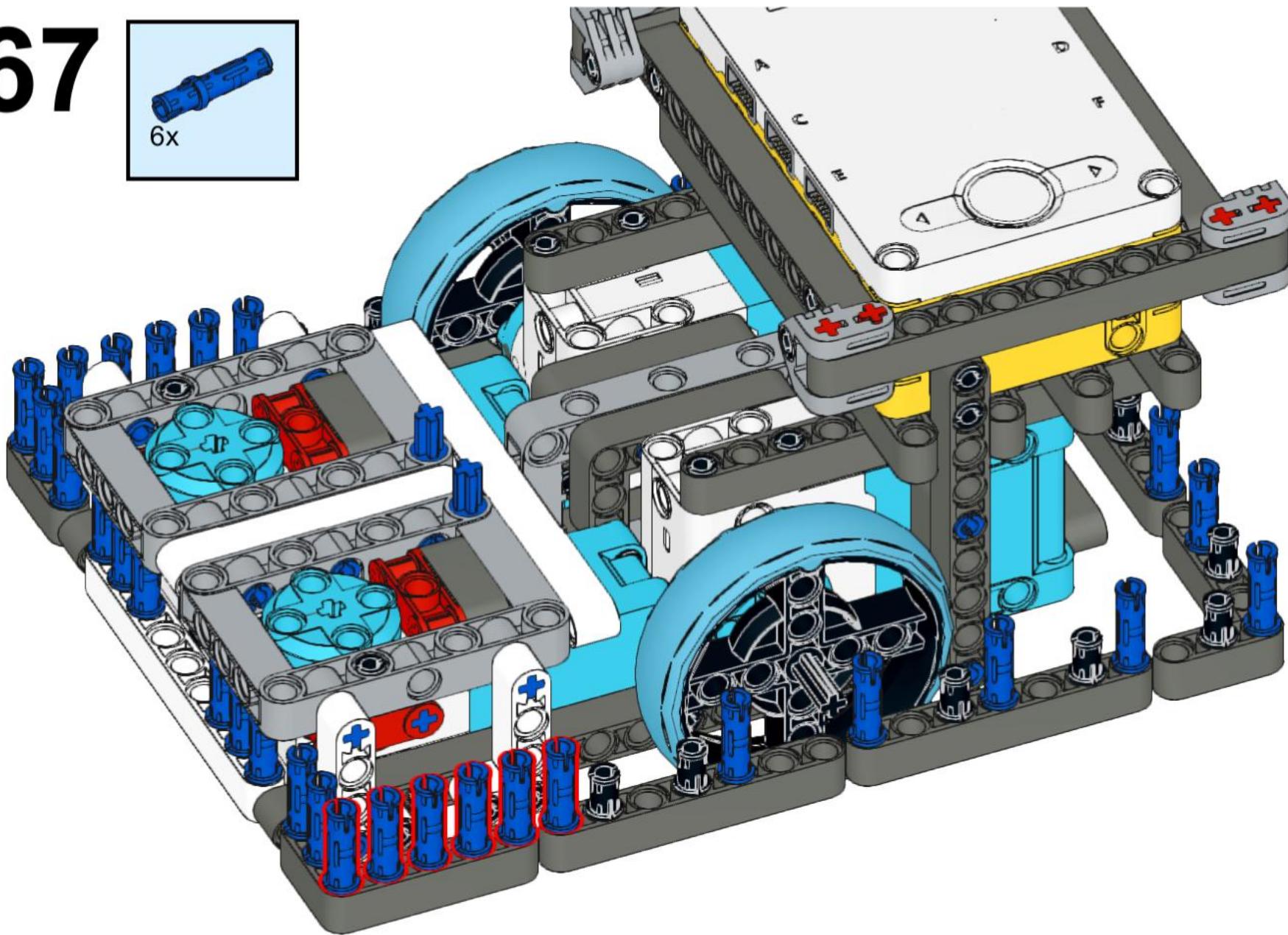
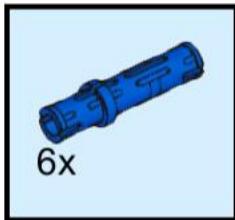


All white pieces around  
the front of the light  
sensor.

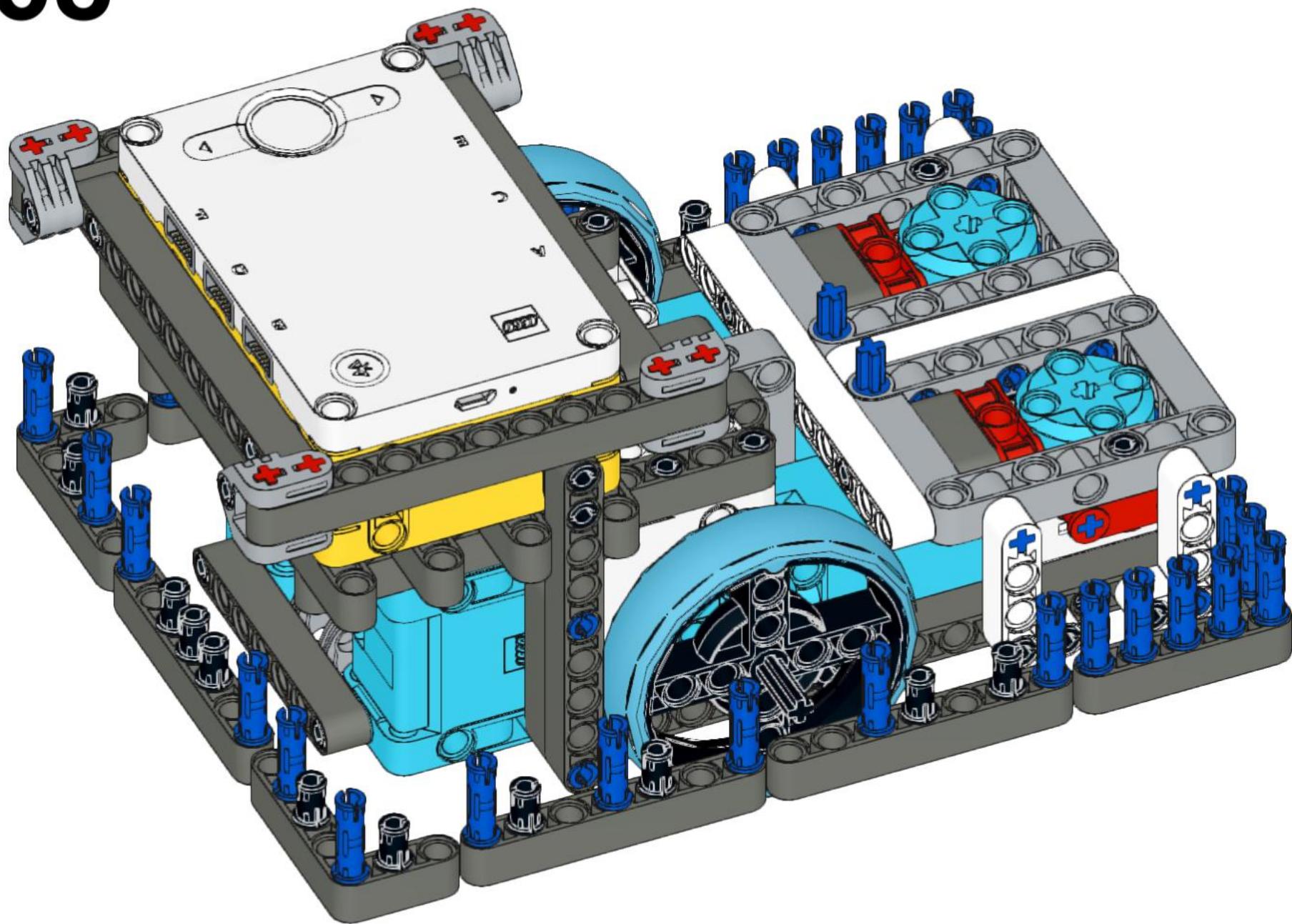
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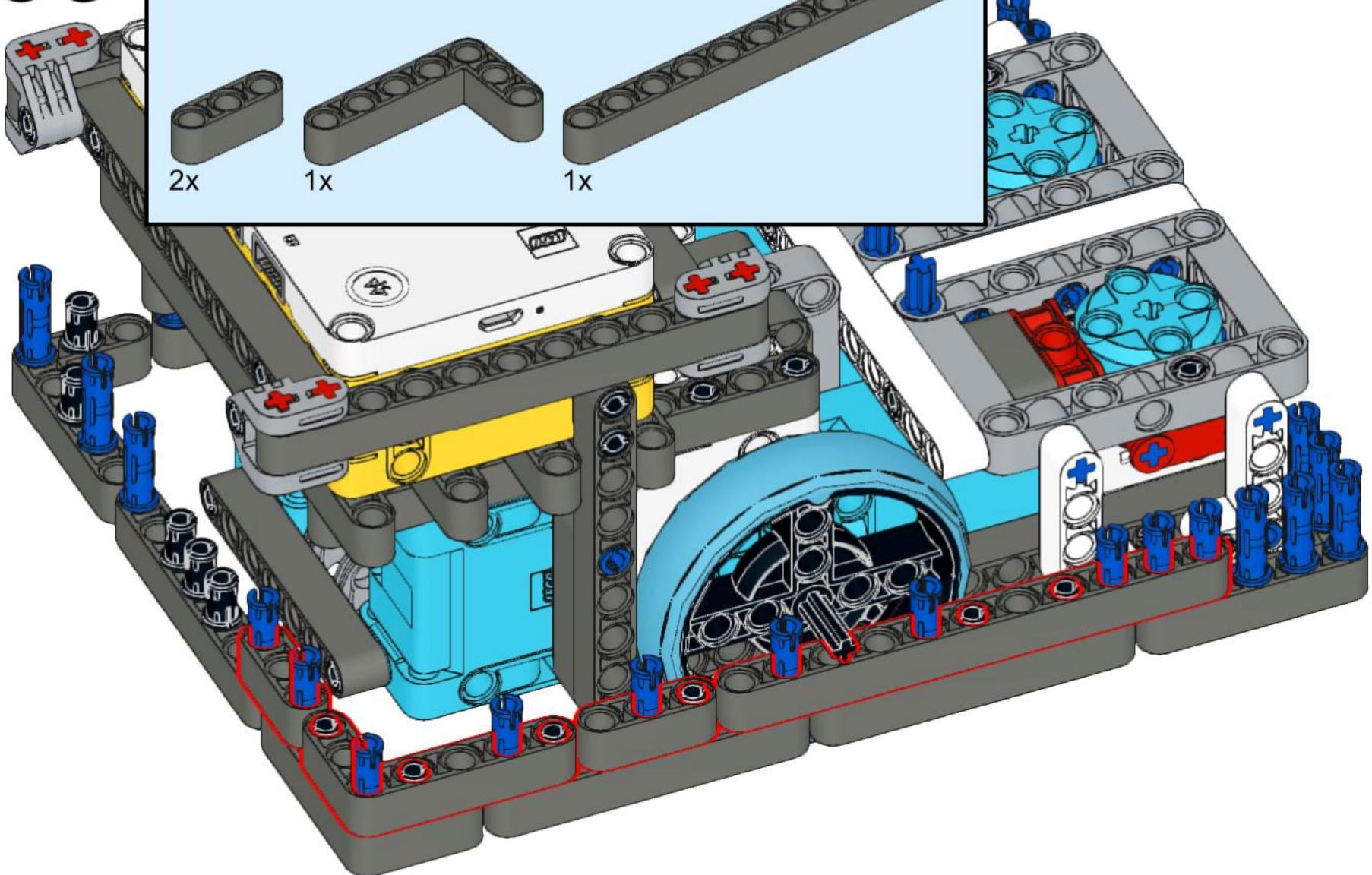
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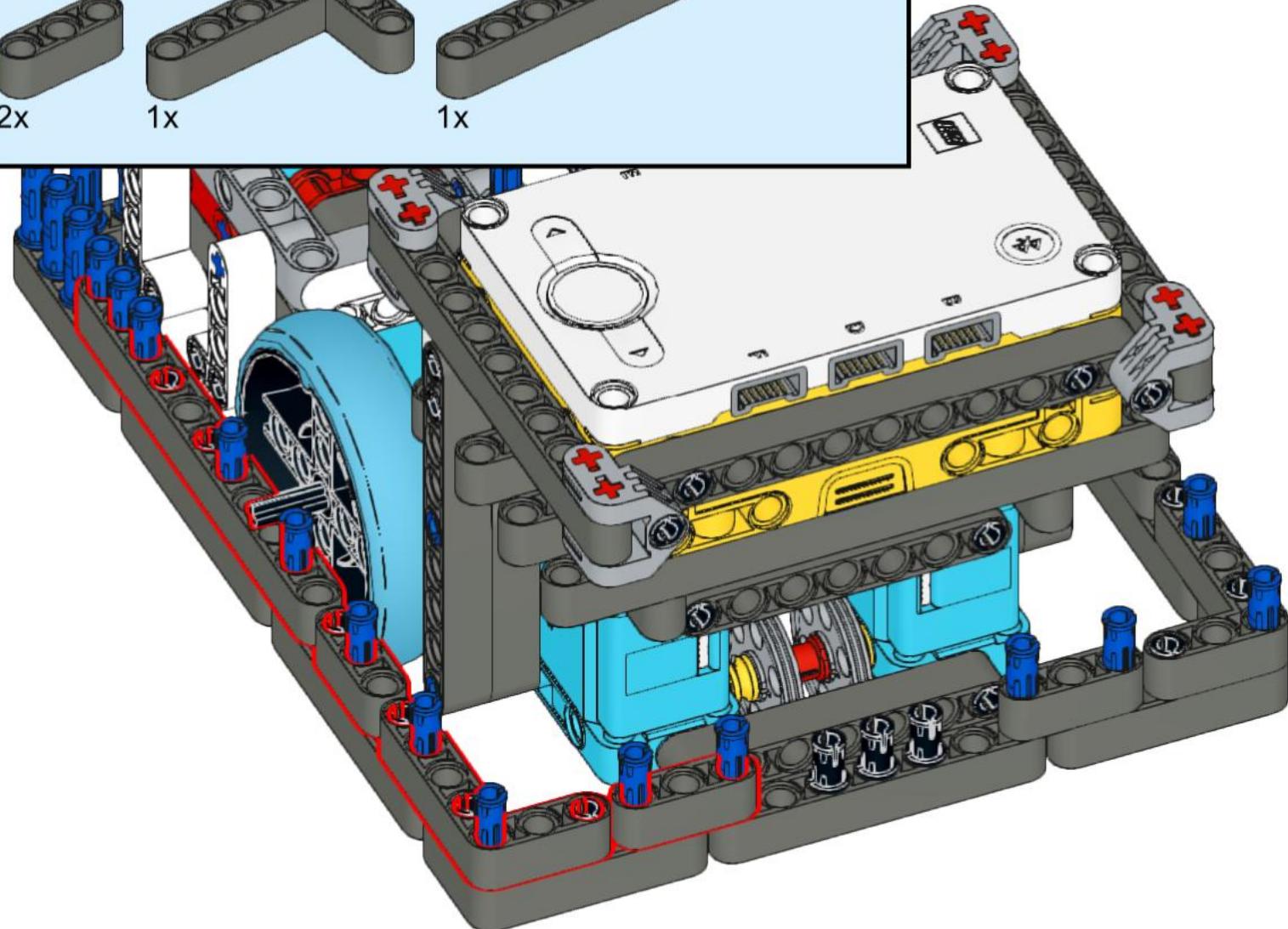
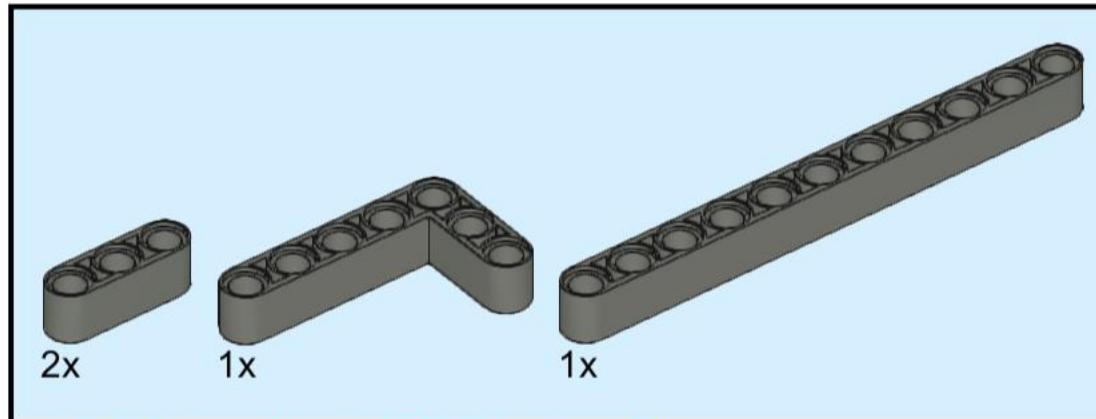
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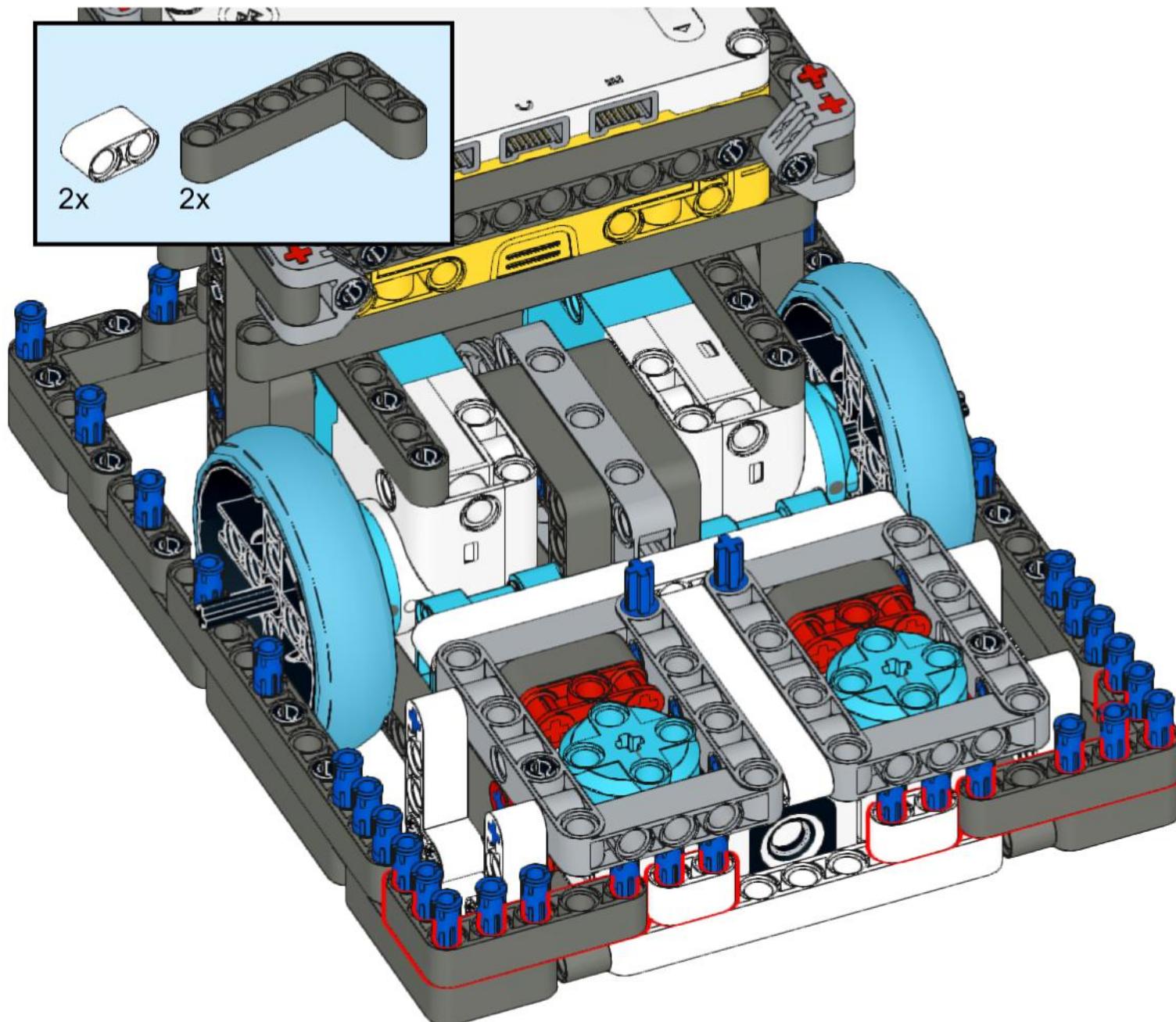
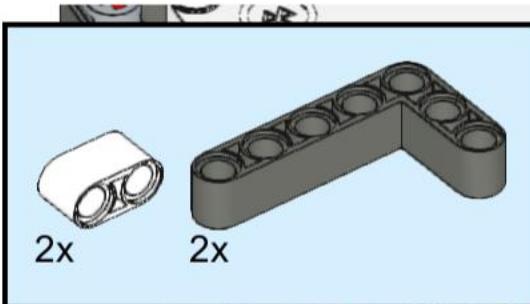
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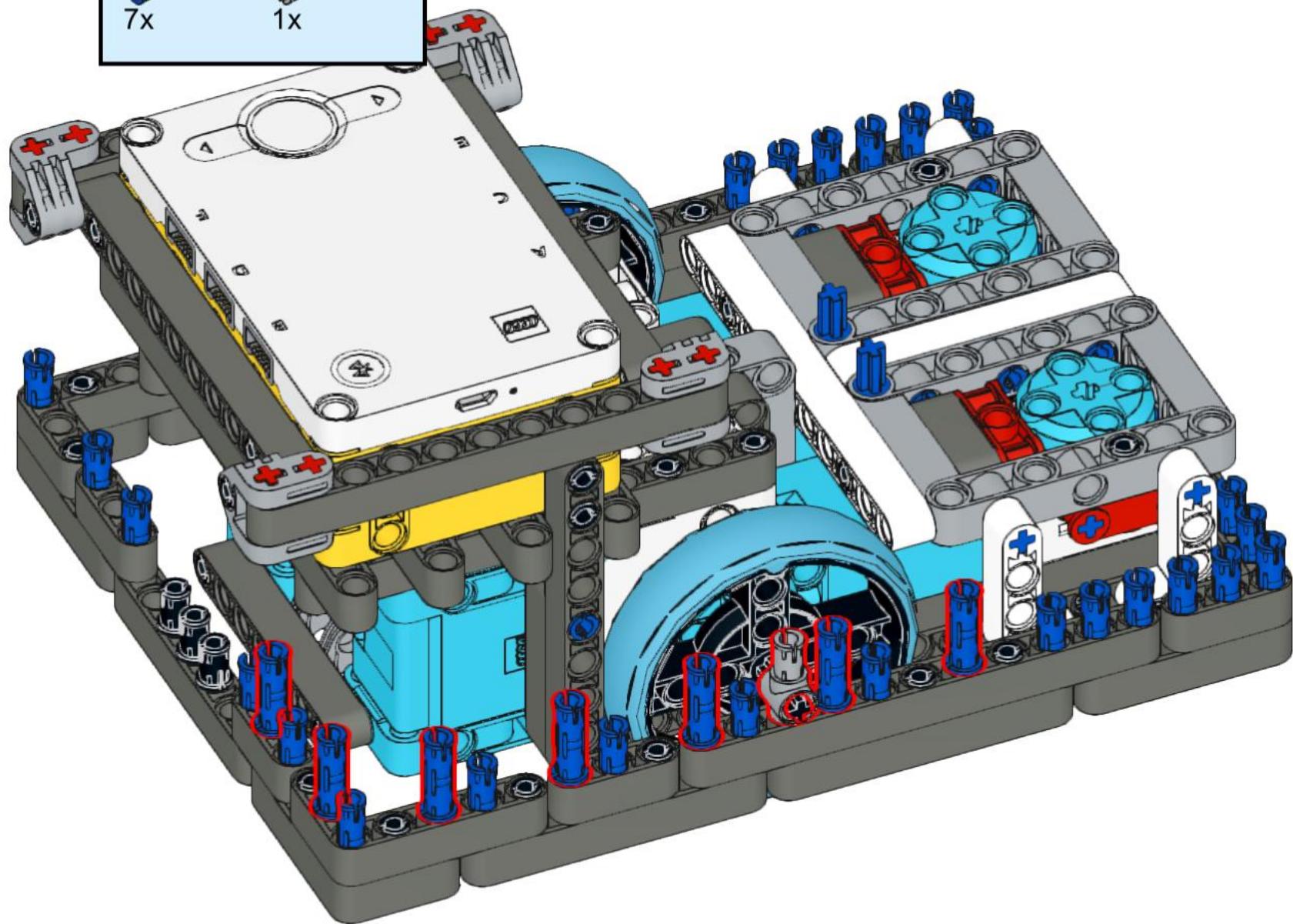
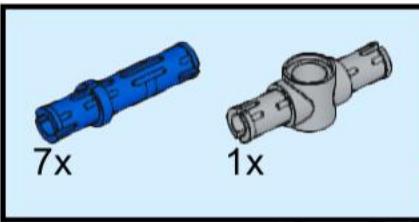
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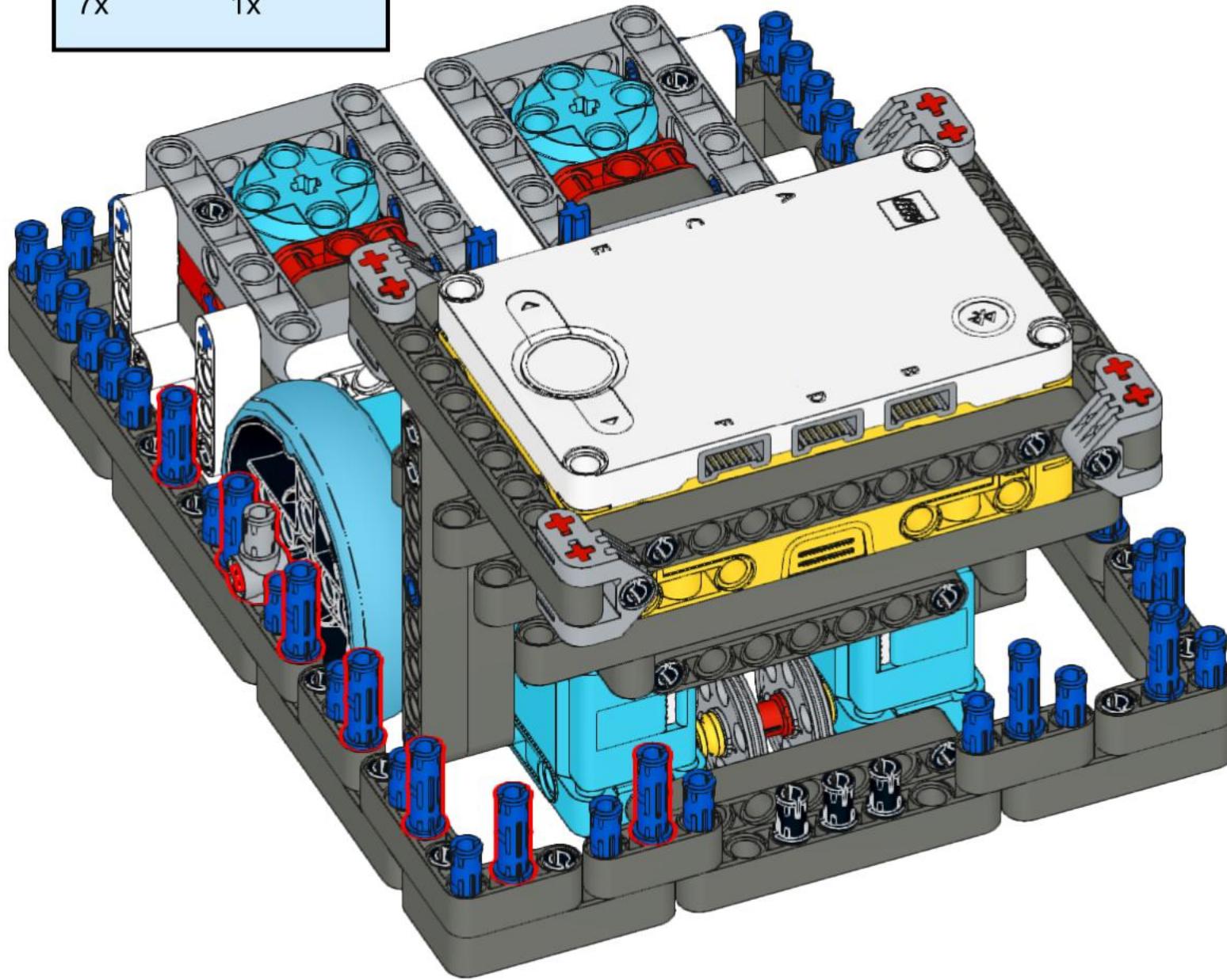
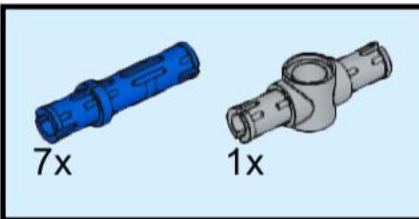
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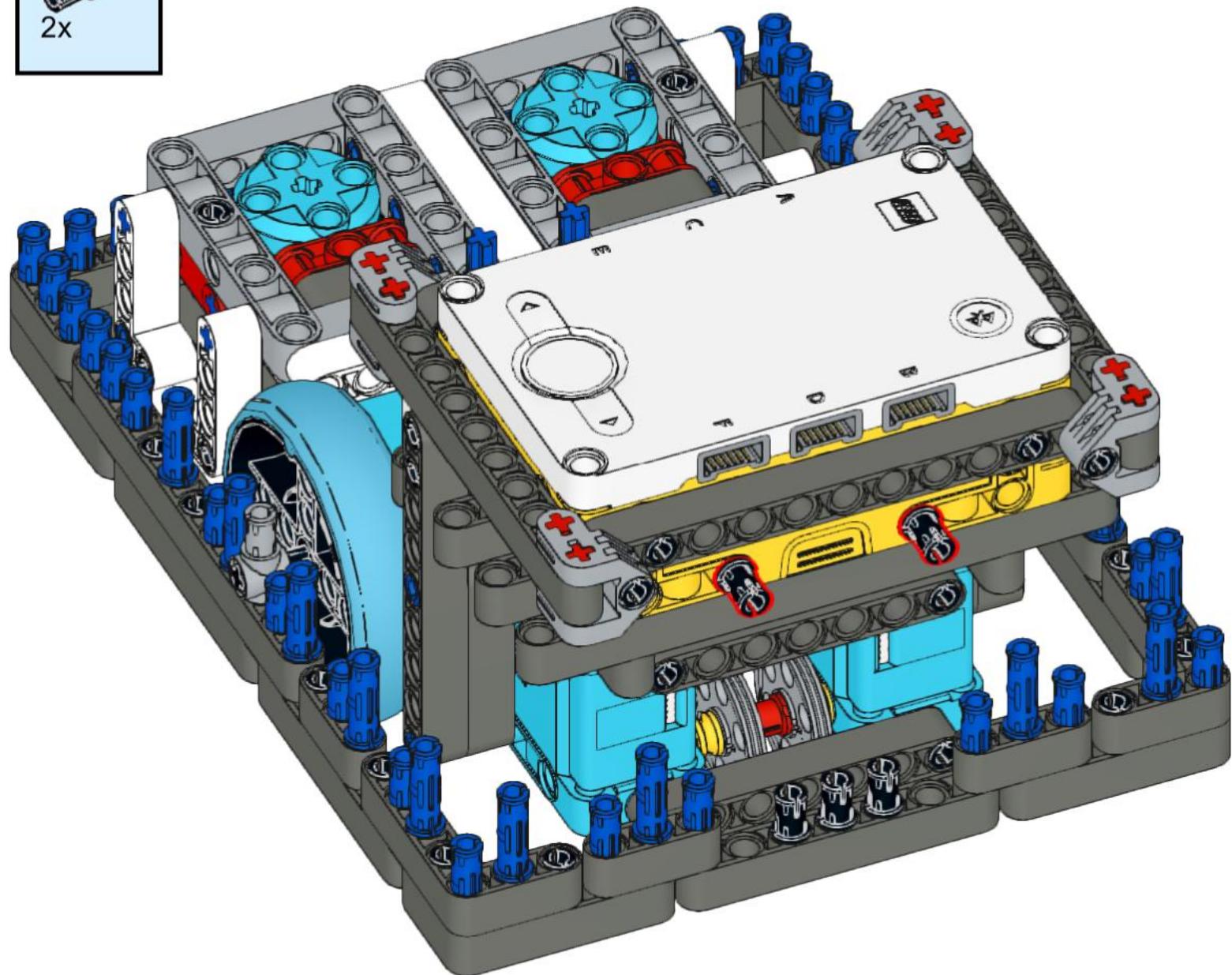
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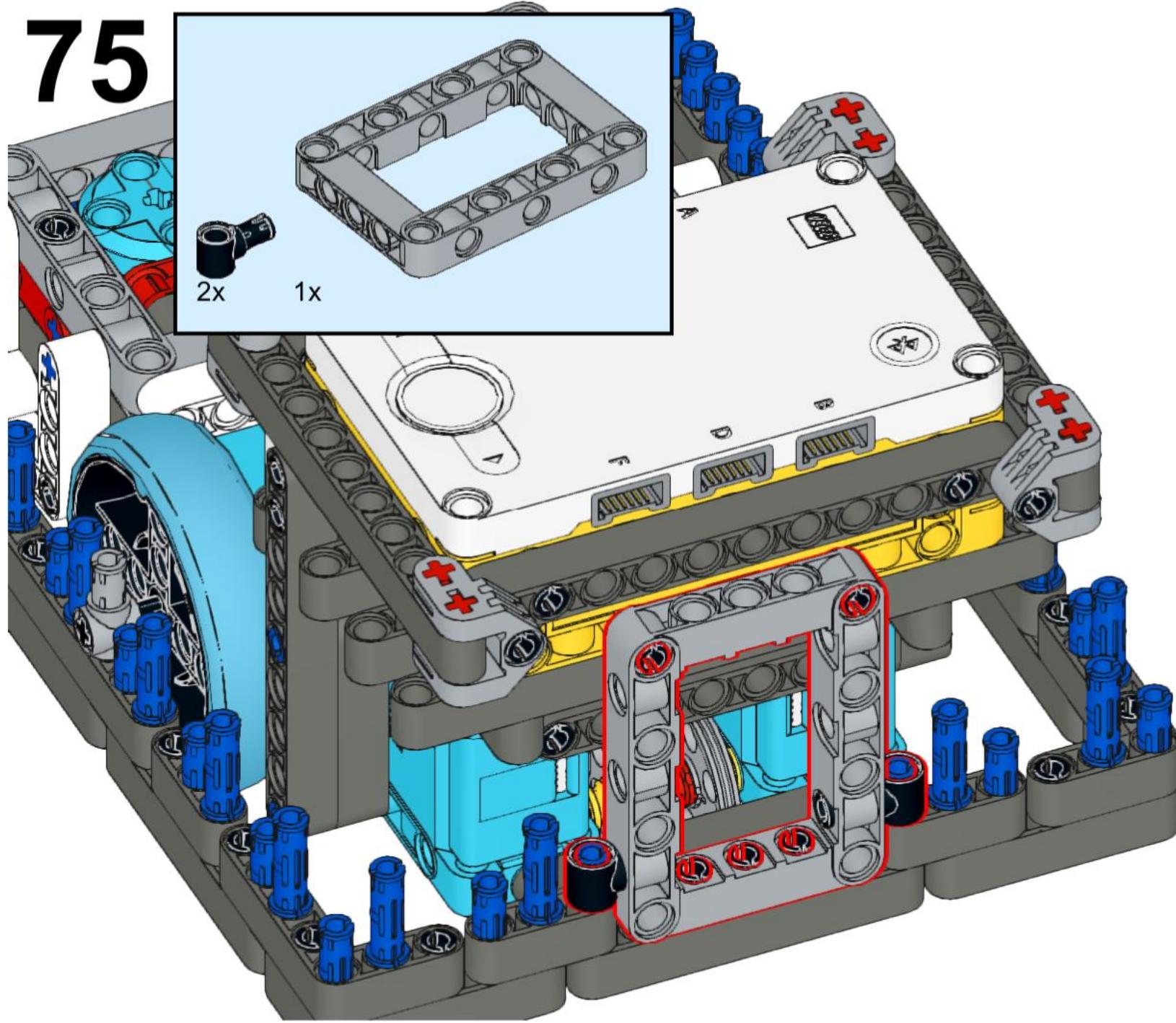
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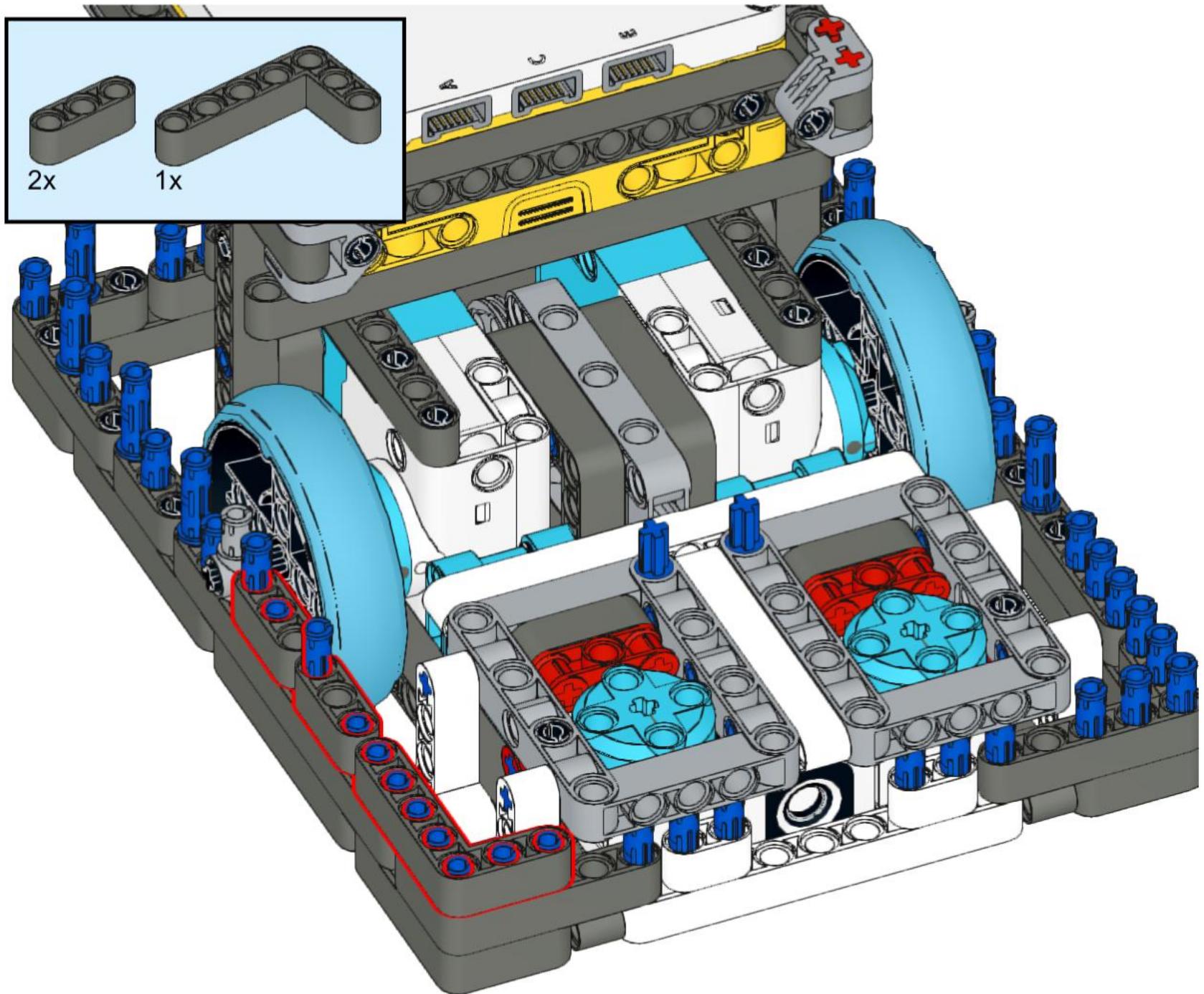
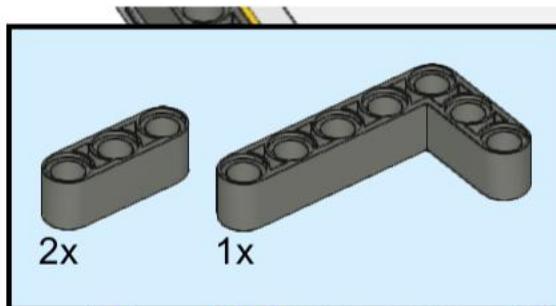
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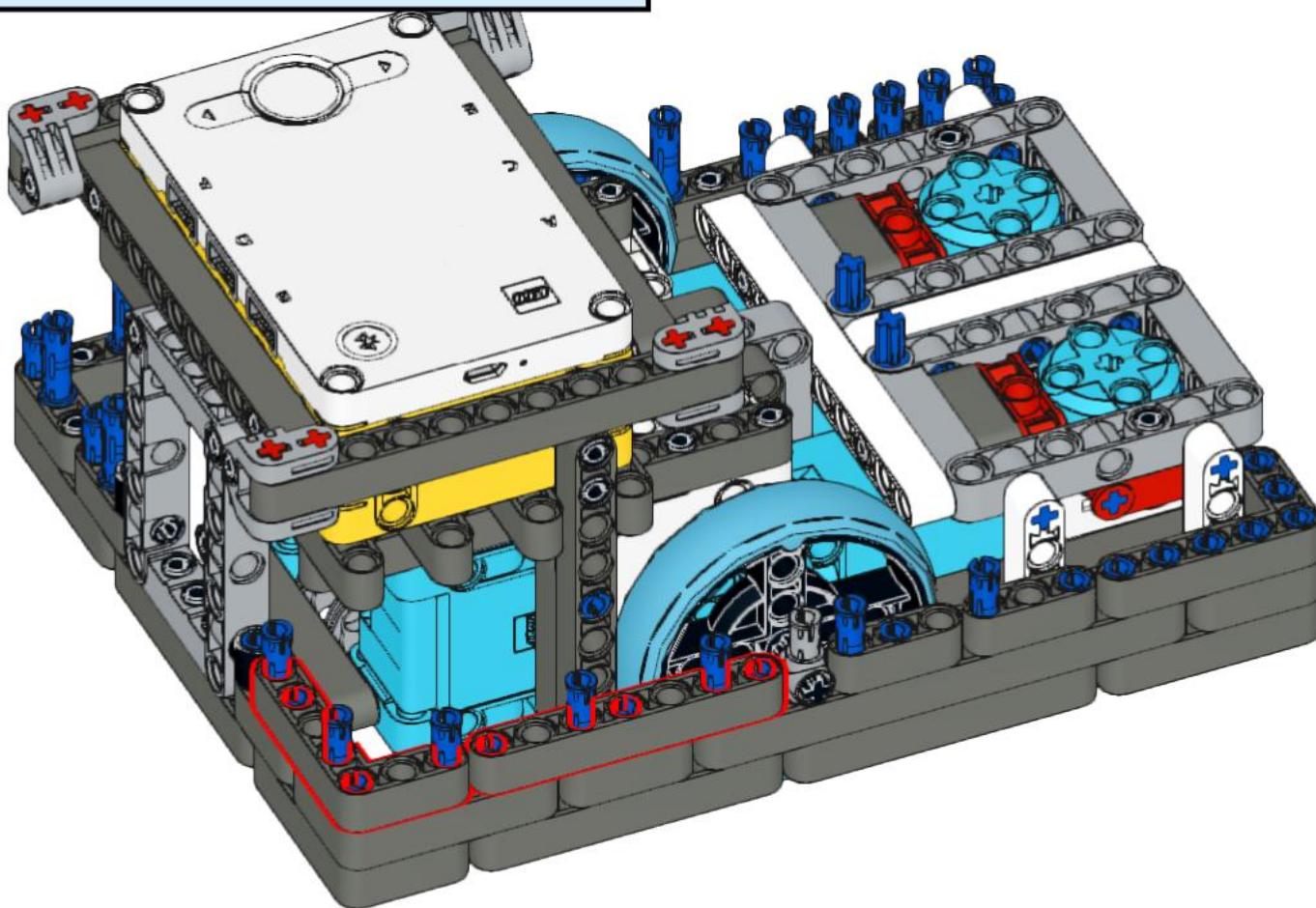
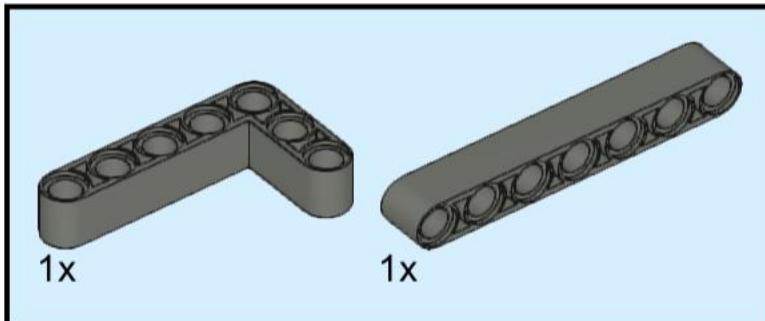
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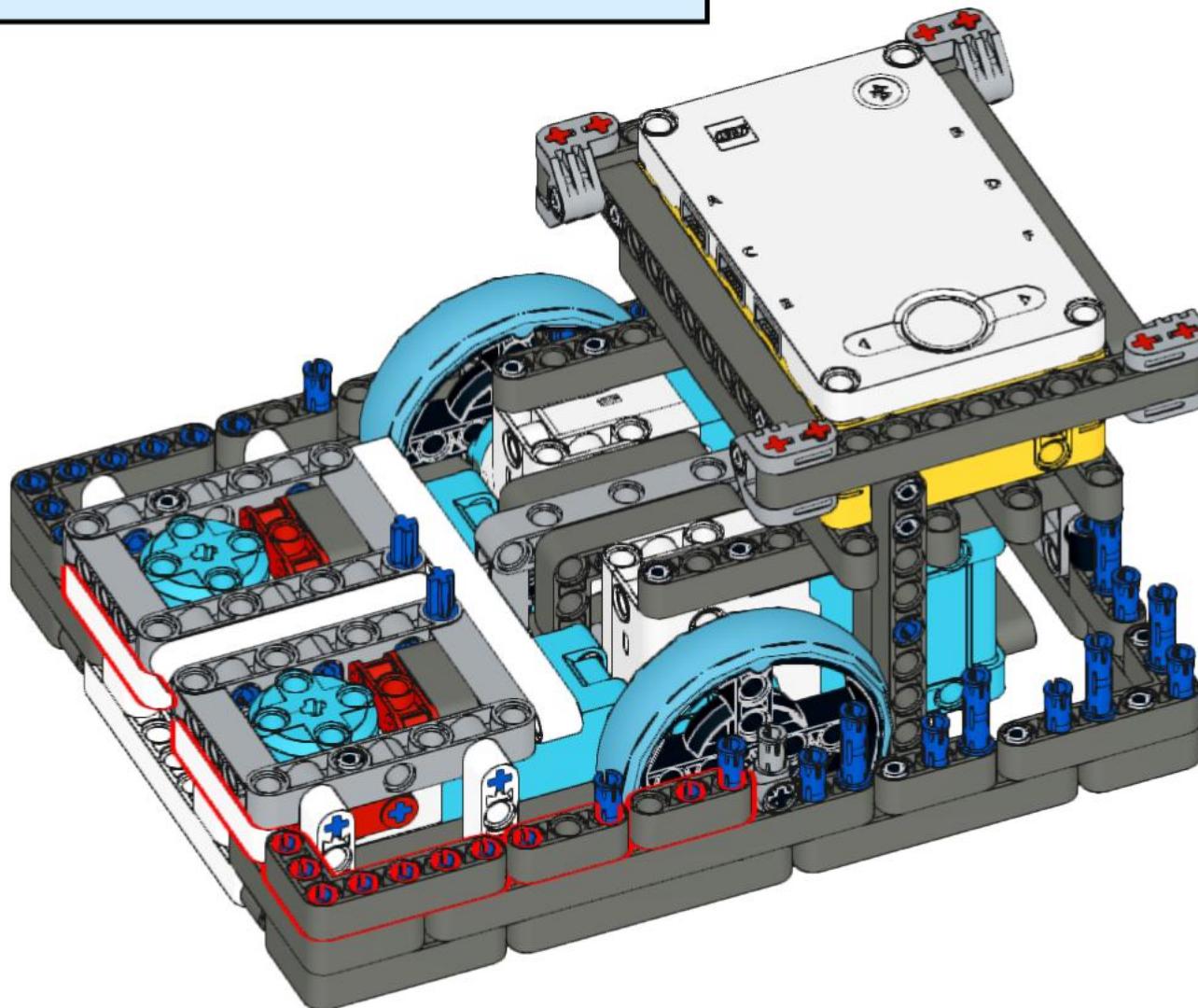
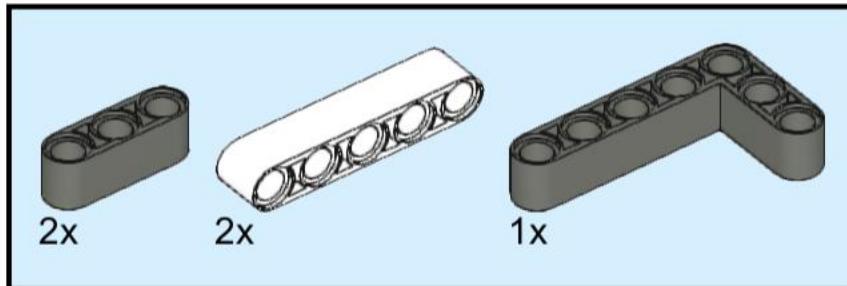
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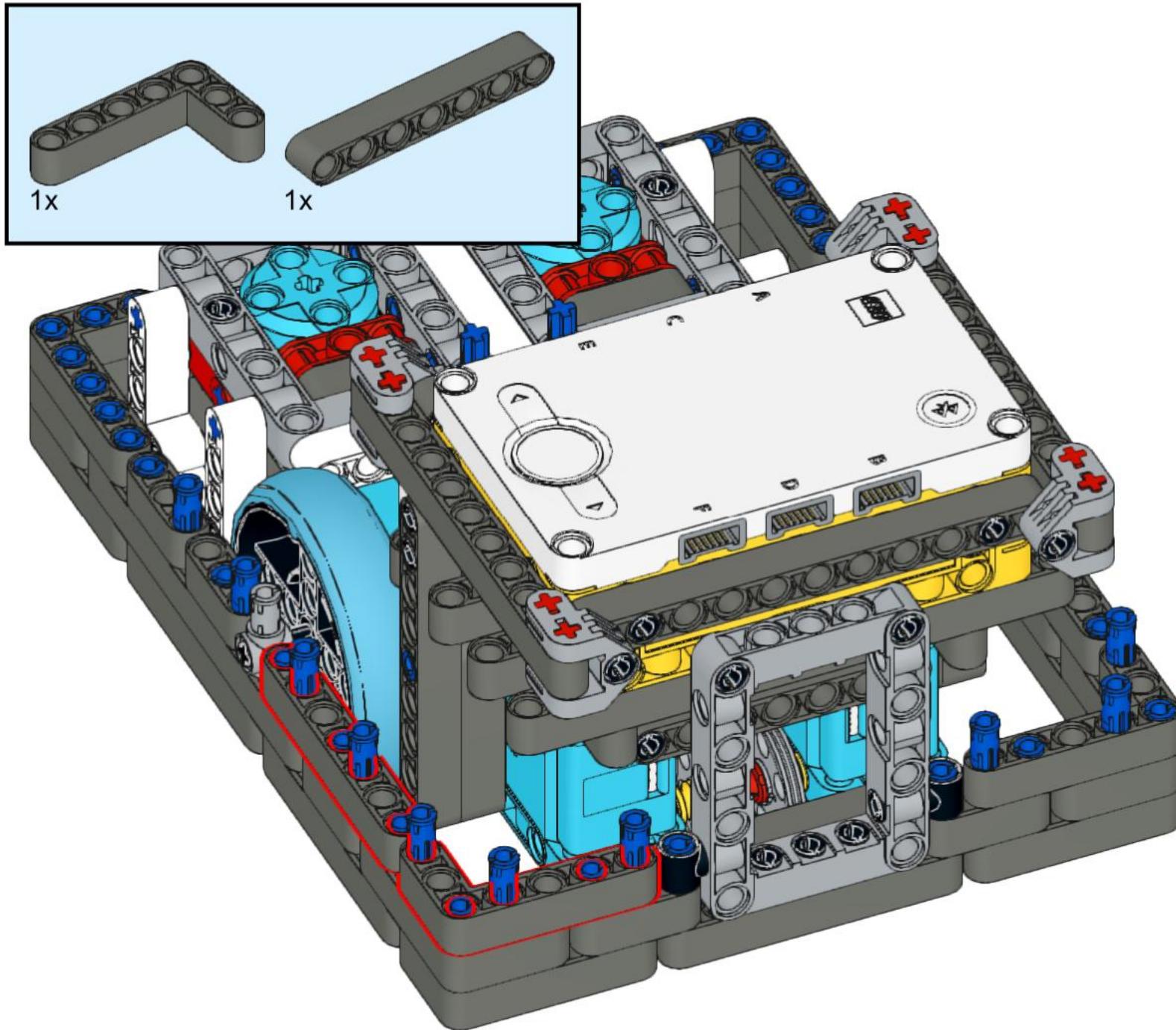
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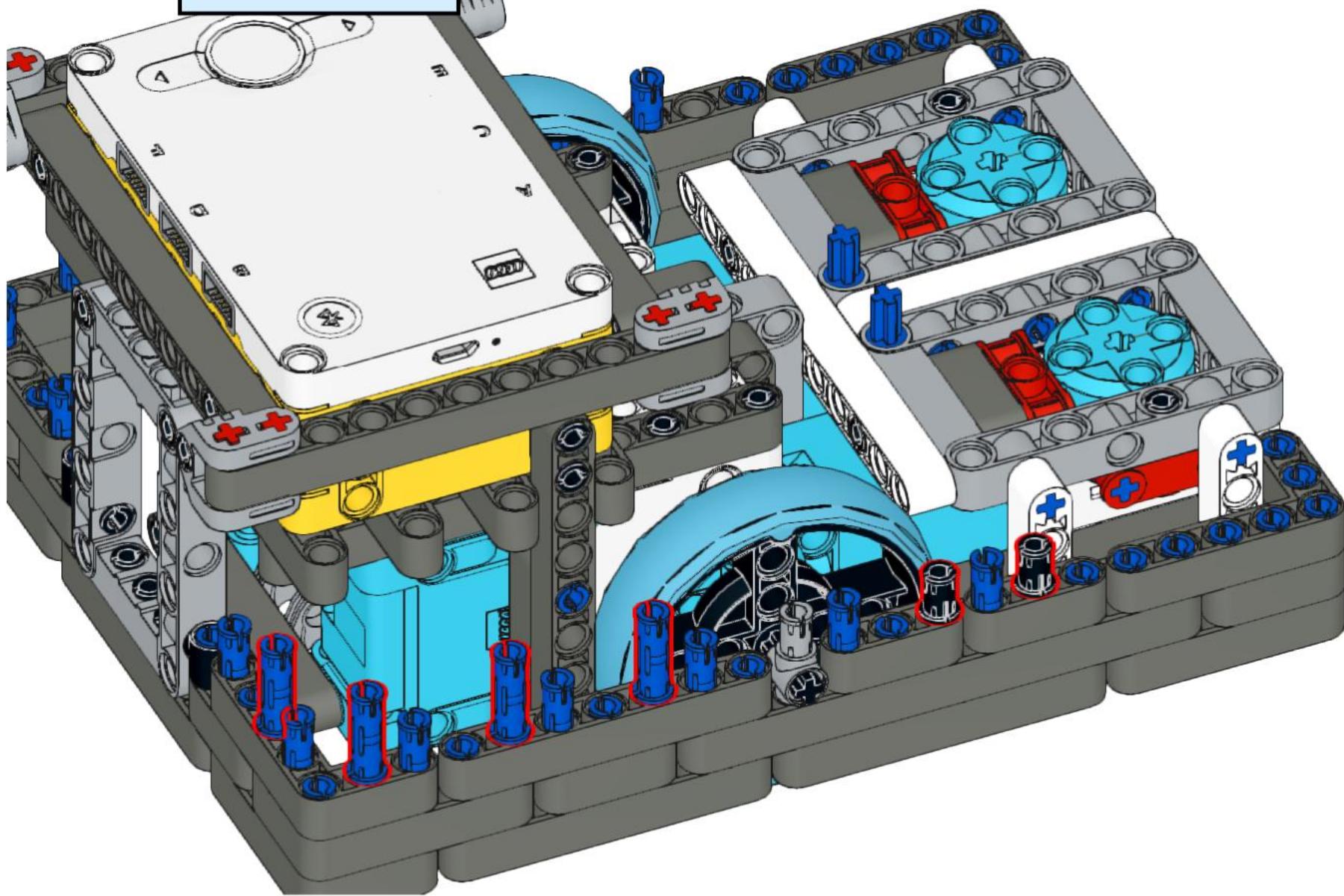
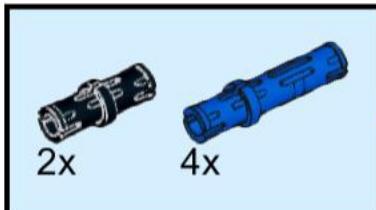
78



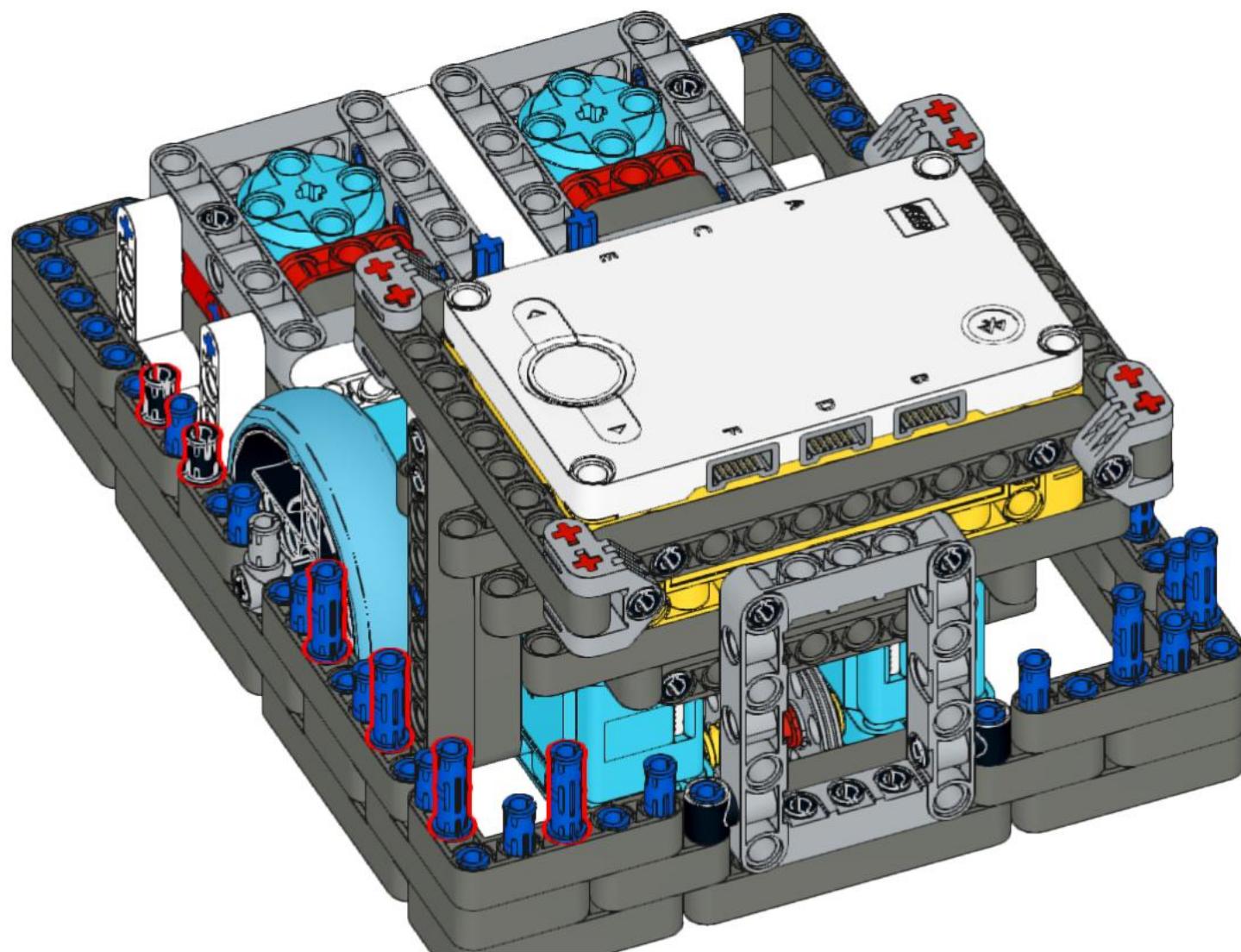
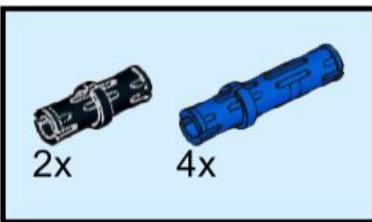
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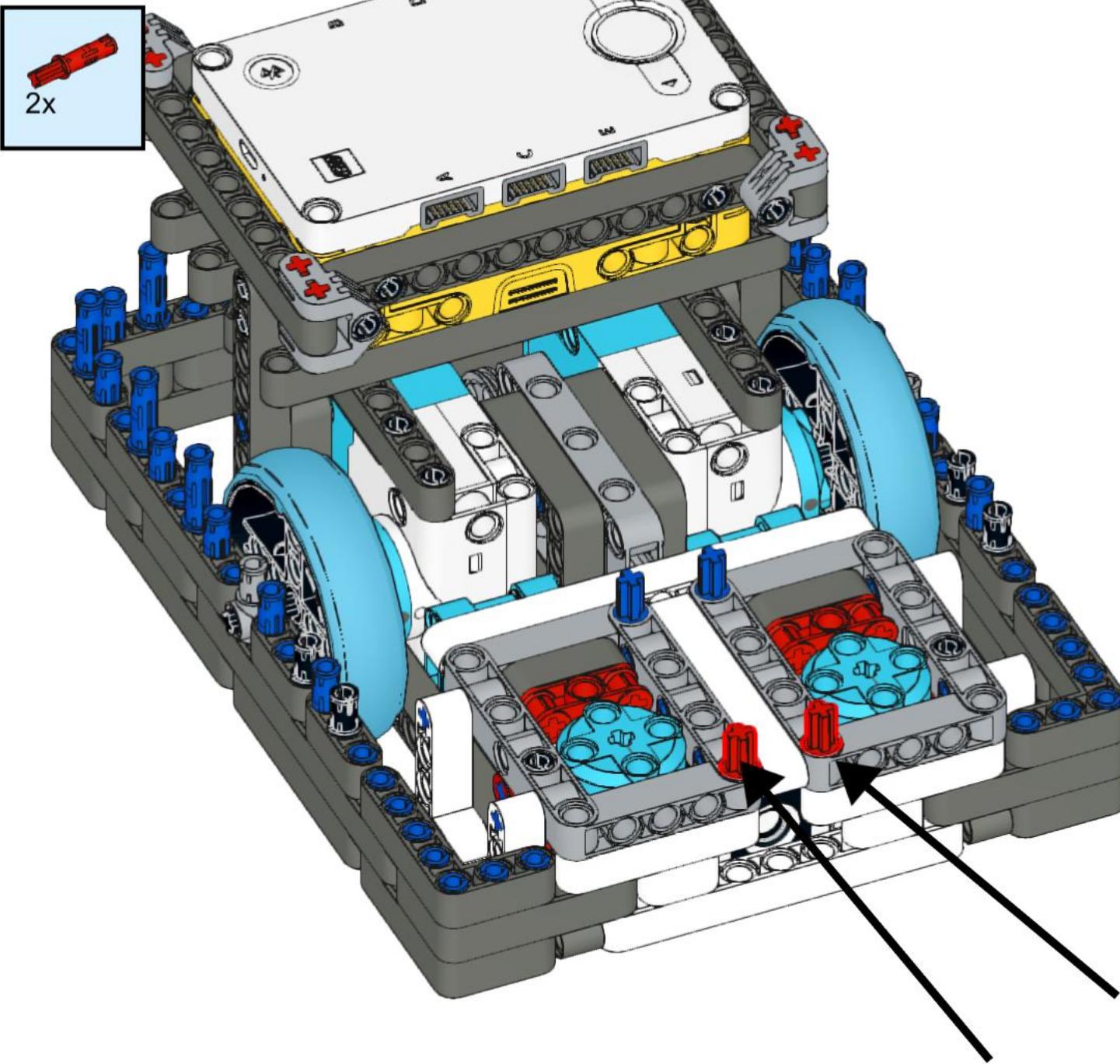
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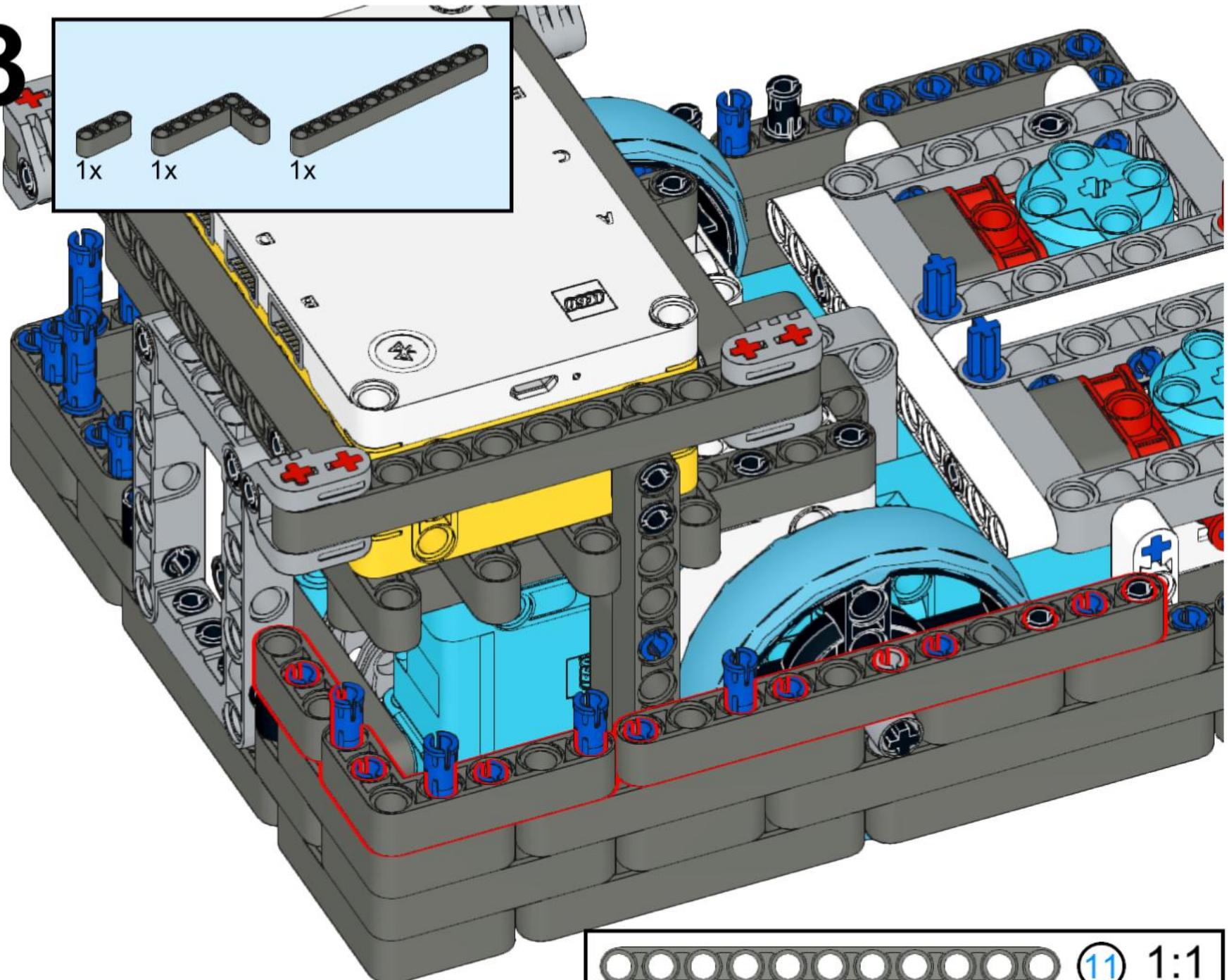
**81**



**82**

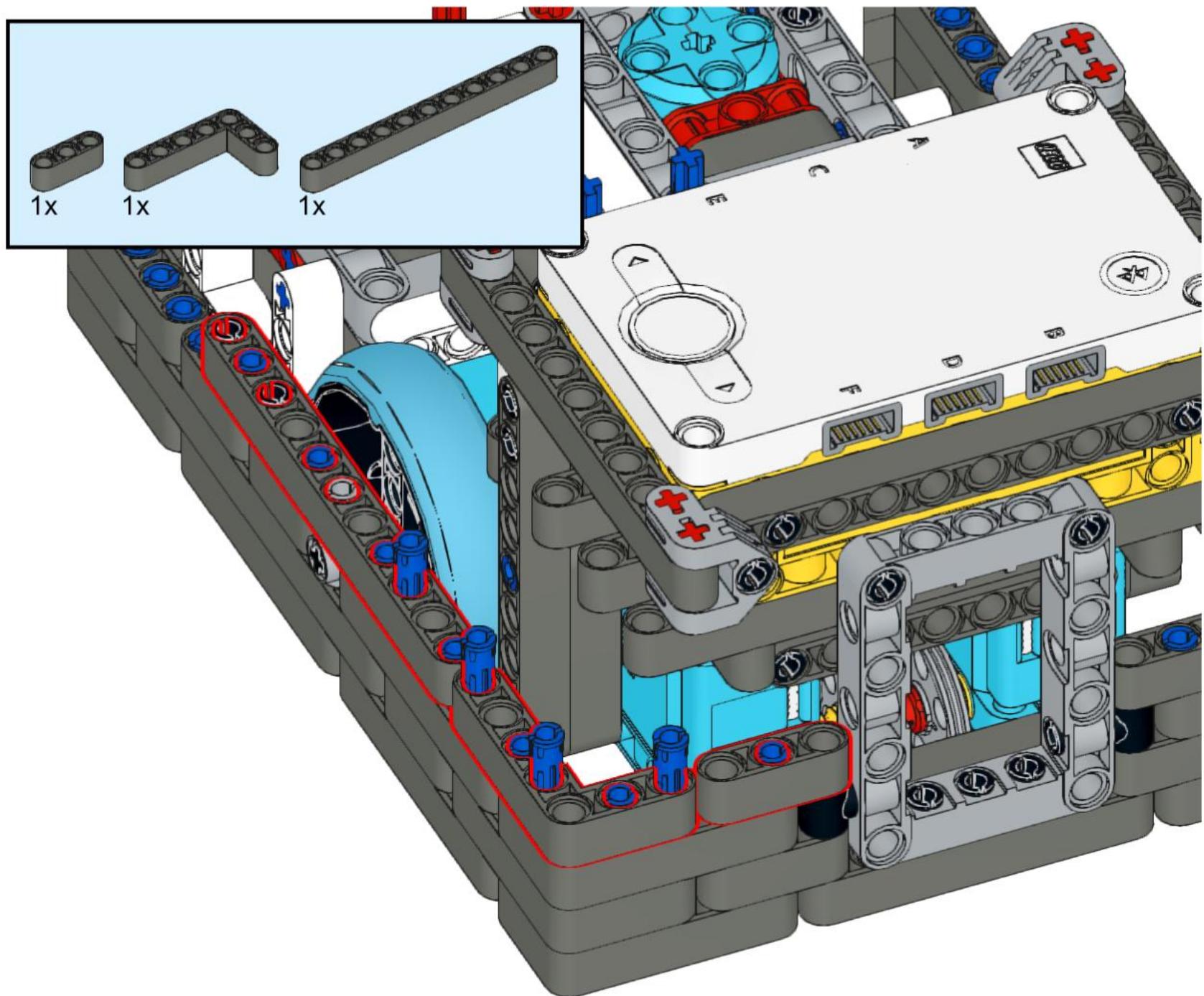


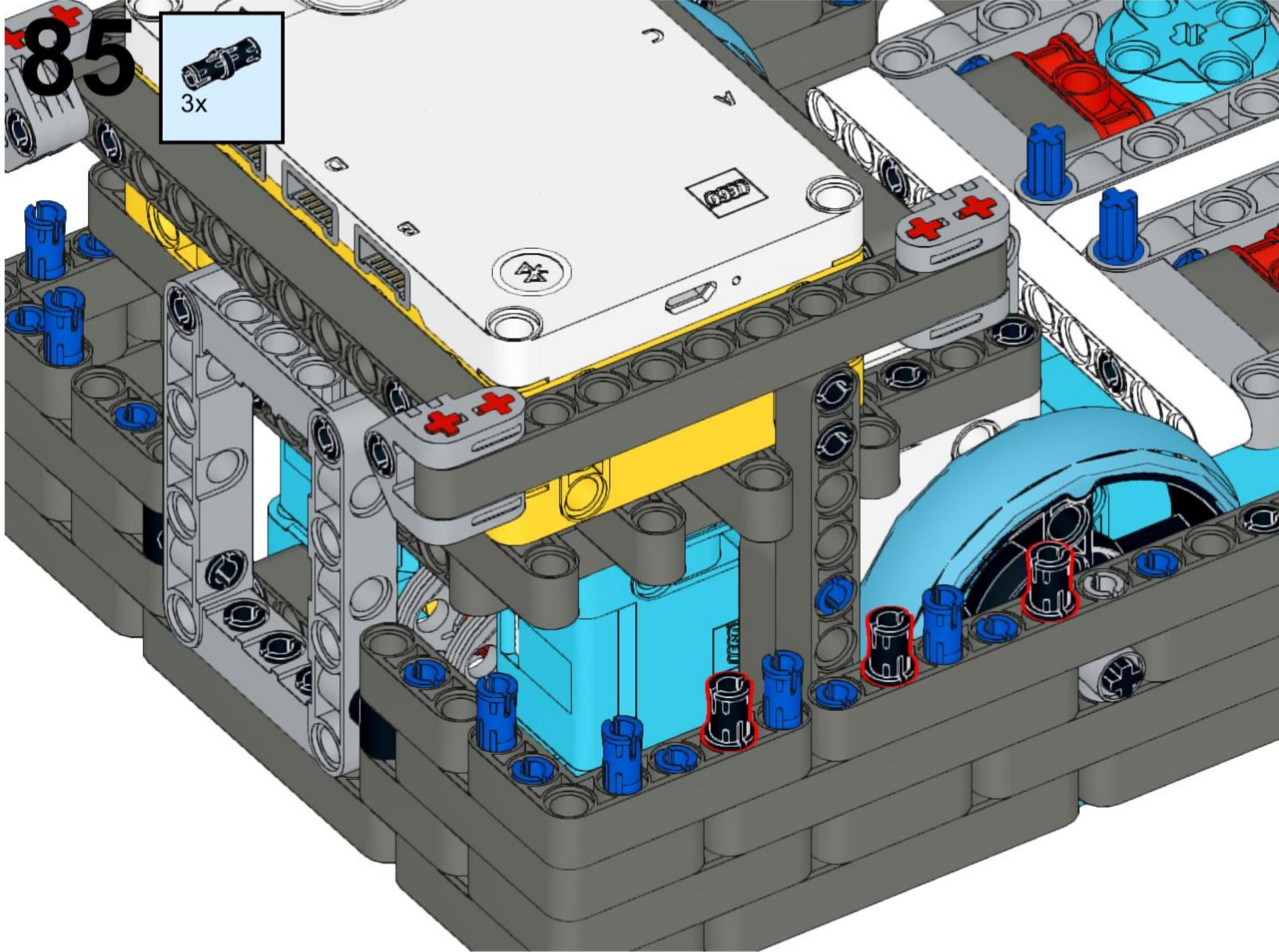
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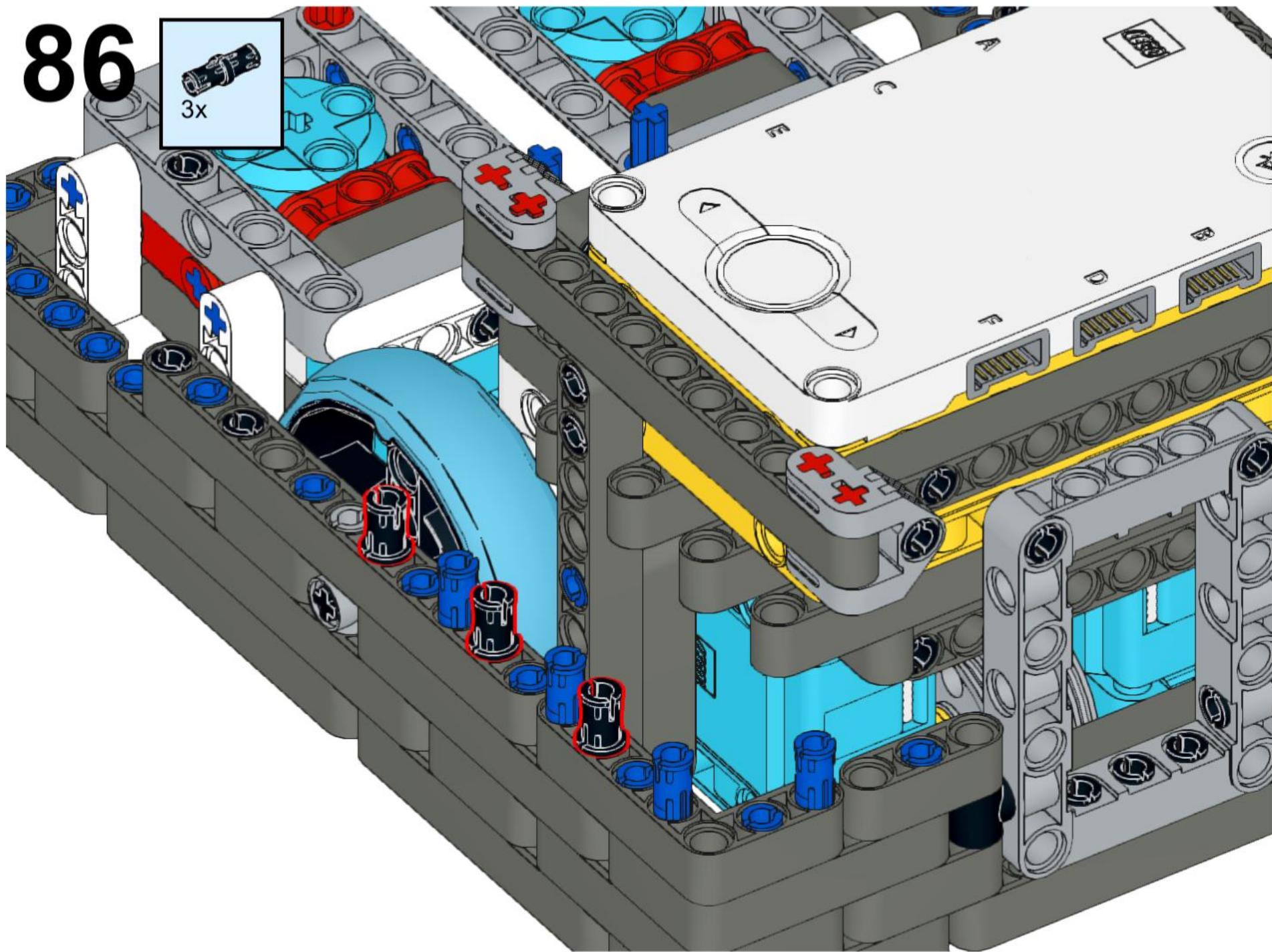
11 1:1

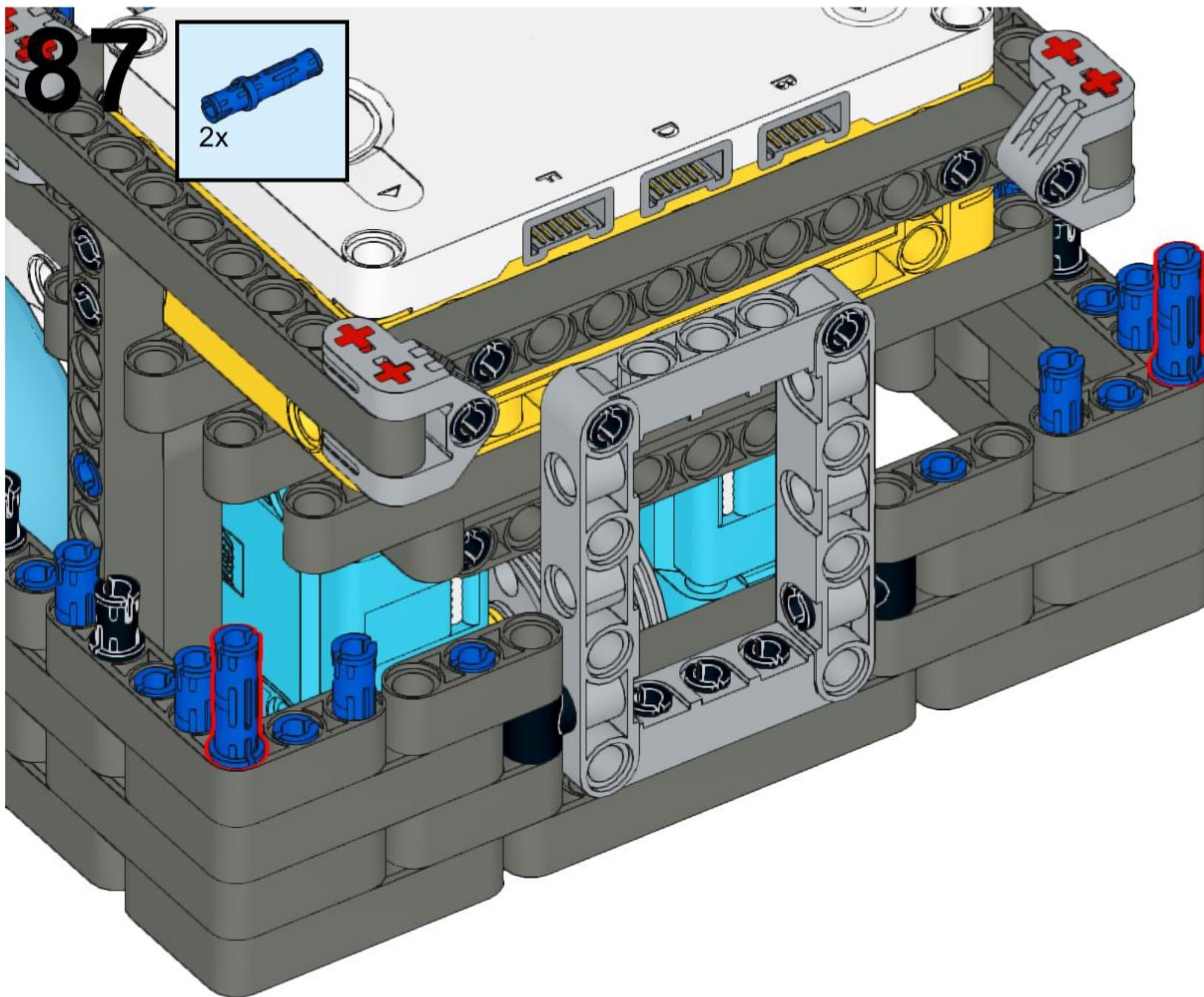
84





**86**

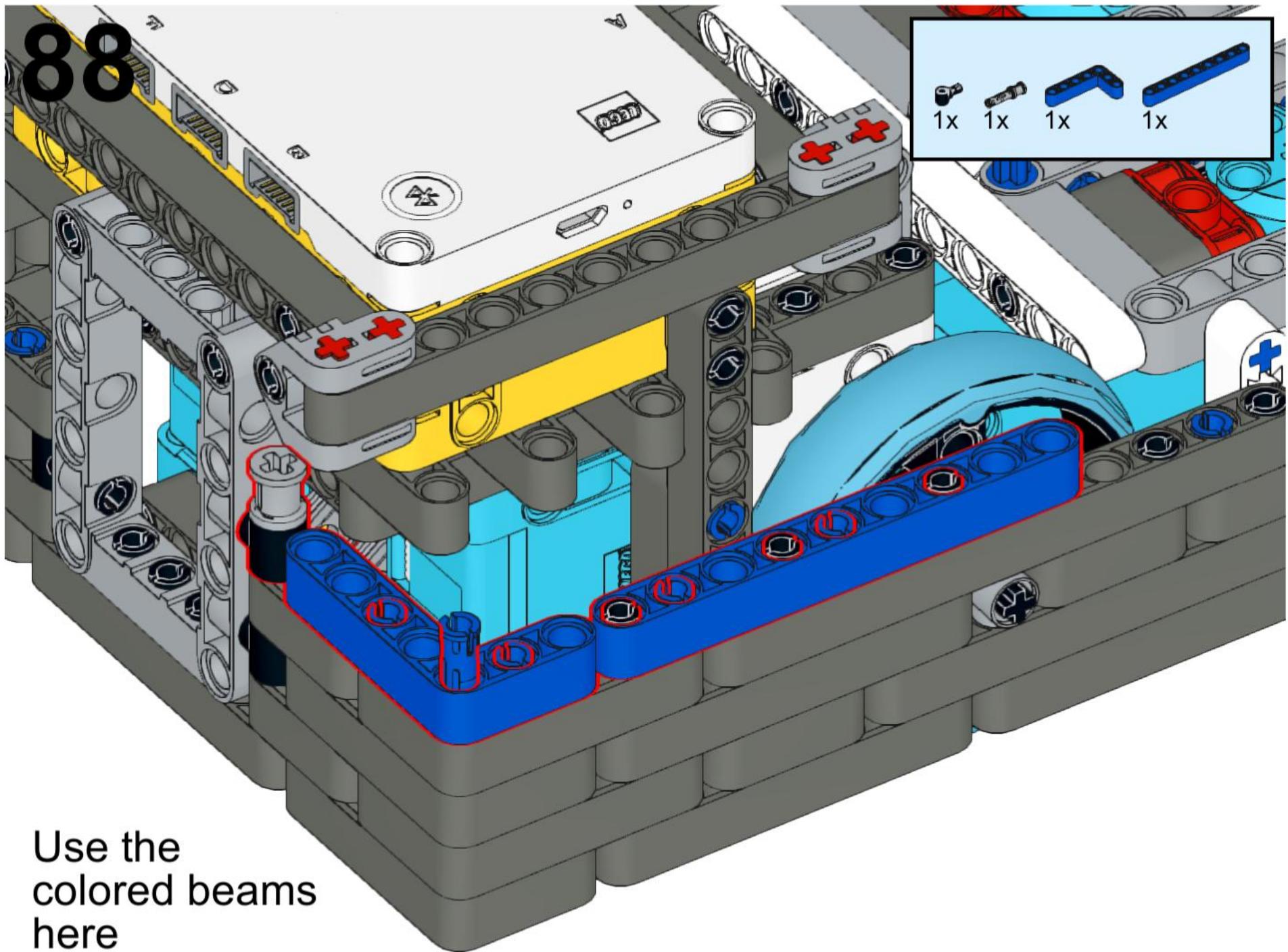




87

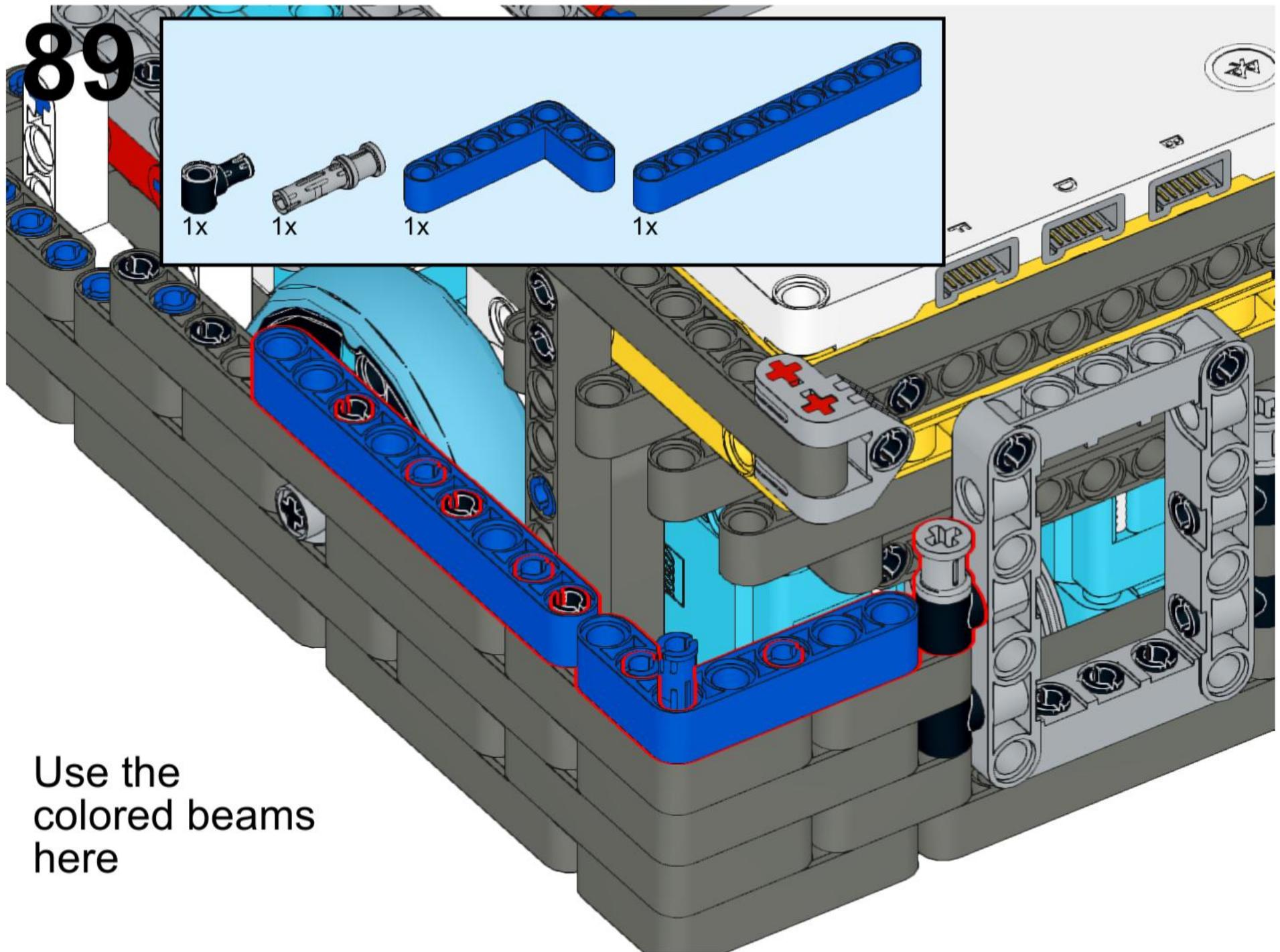
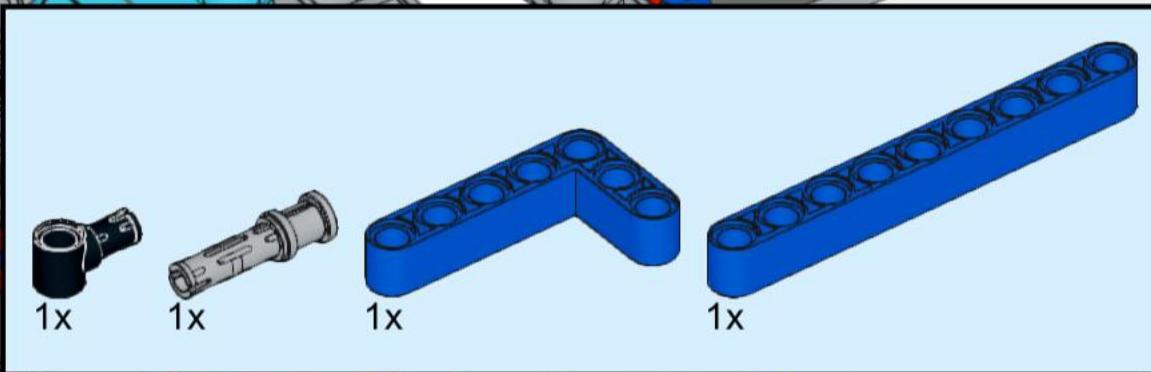
2x

88



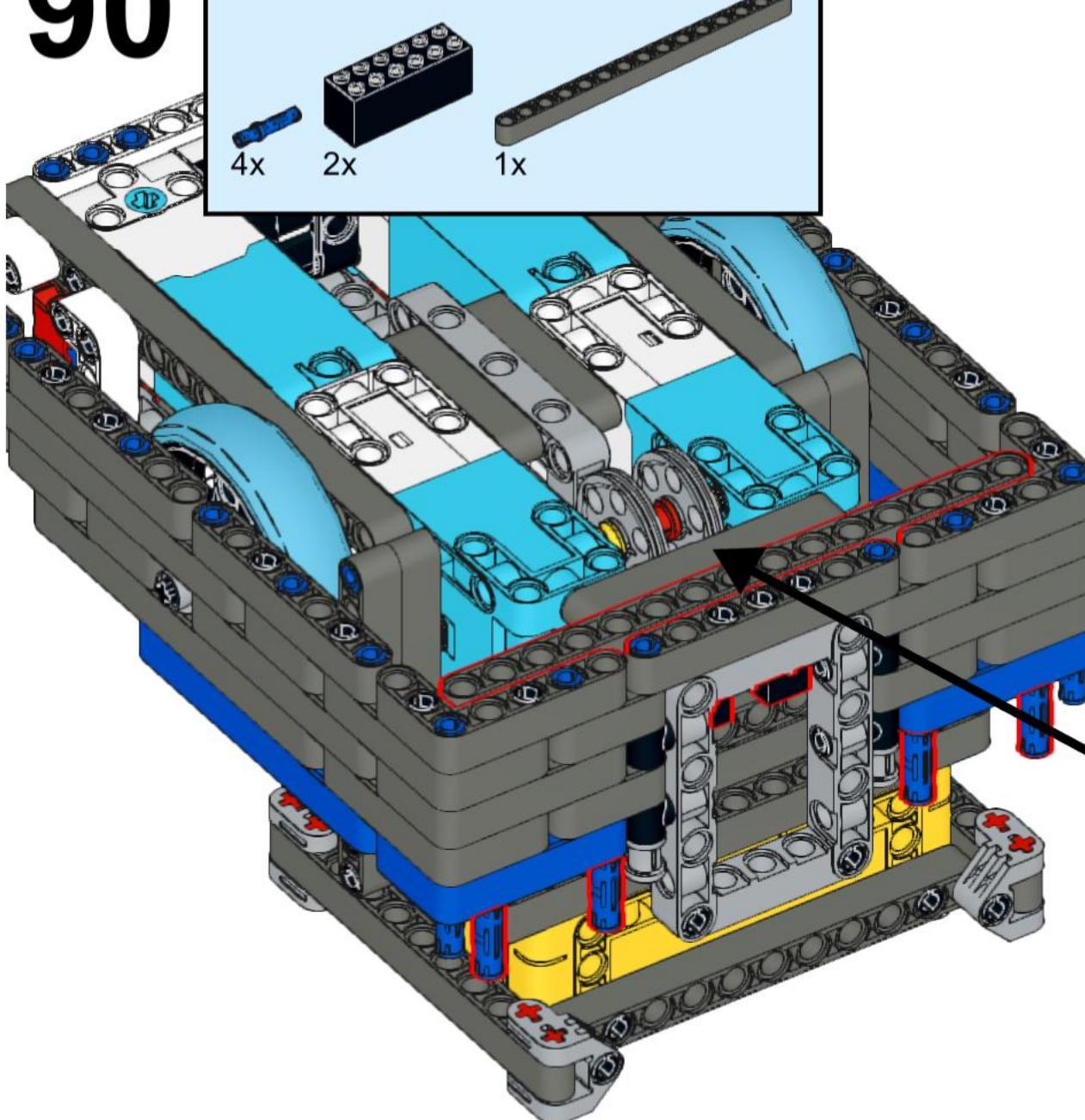
Use the  
colored beams  
here

**89**



Use the  
colored beams  
here

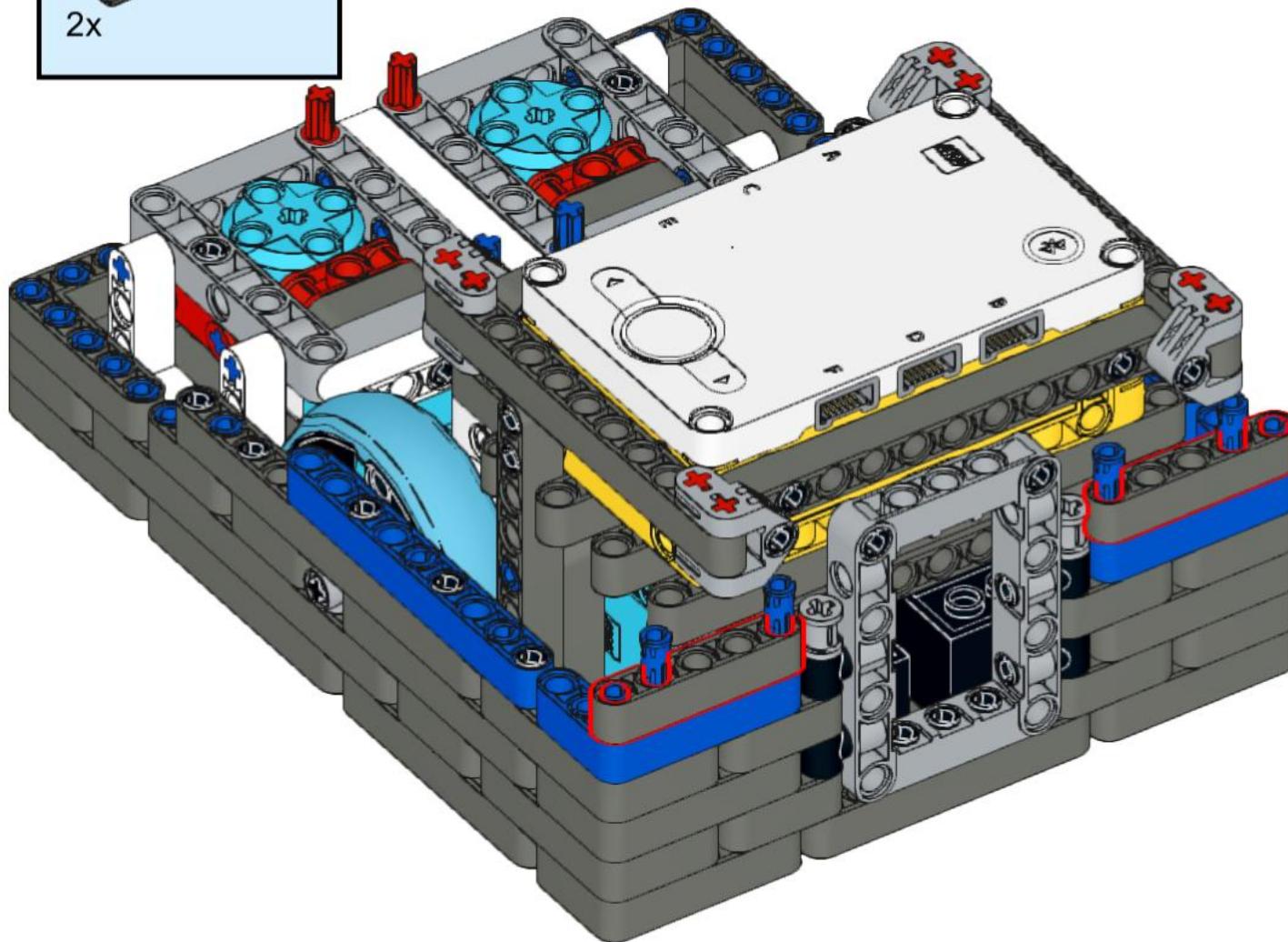
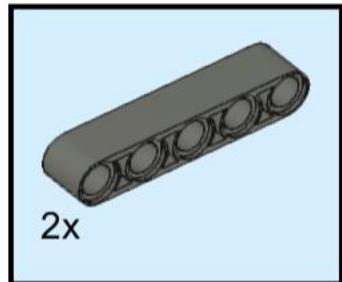
# 90



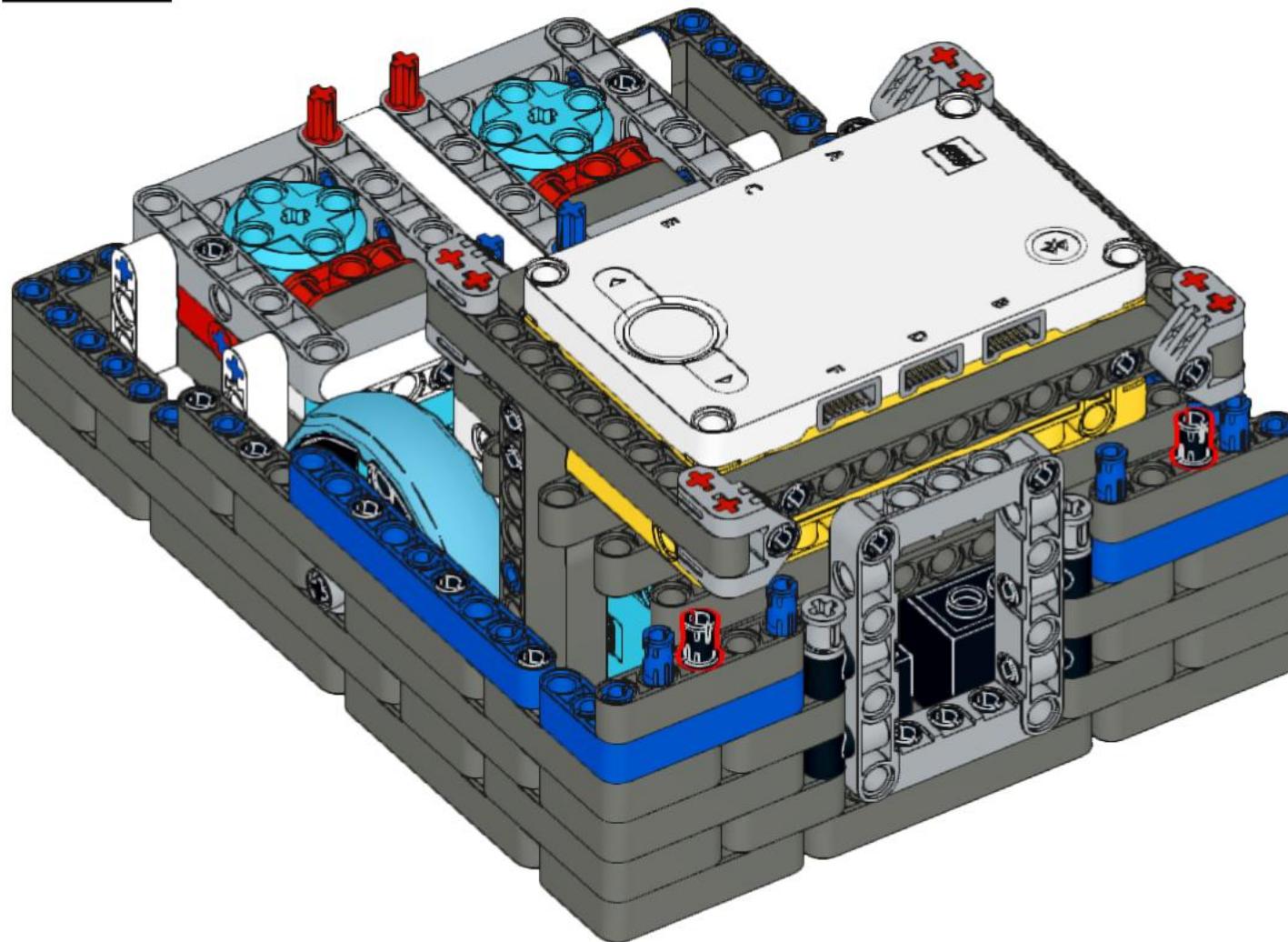
Connect the weighted bricks together using the "15" beam. Remove the "7" beam from the bottom back of the large drive motors. Drop the weighted bricks in and replace the "7" beam.

Temporarily remove this beam (and pins)

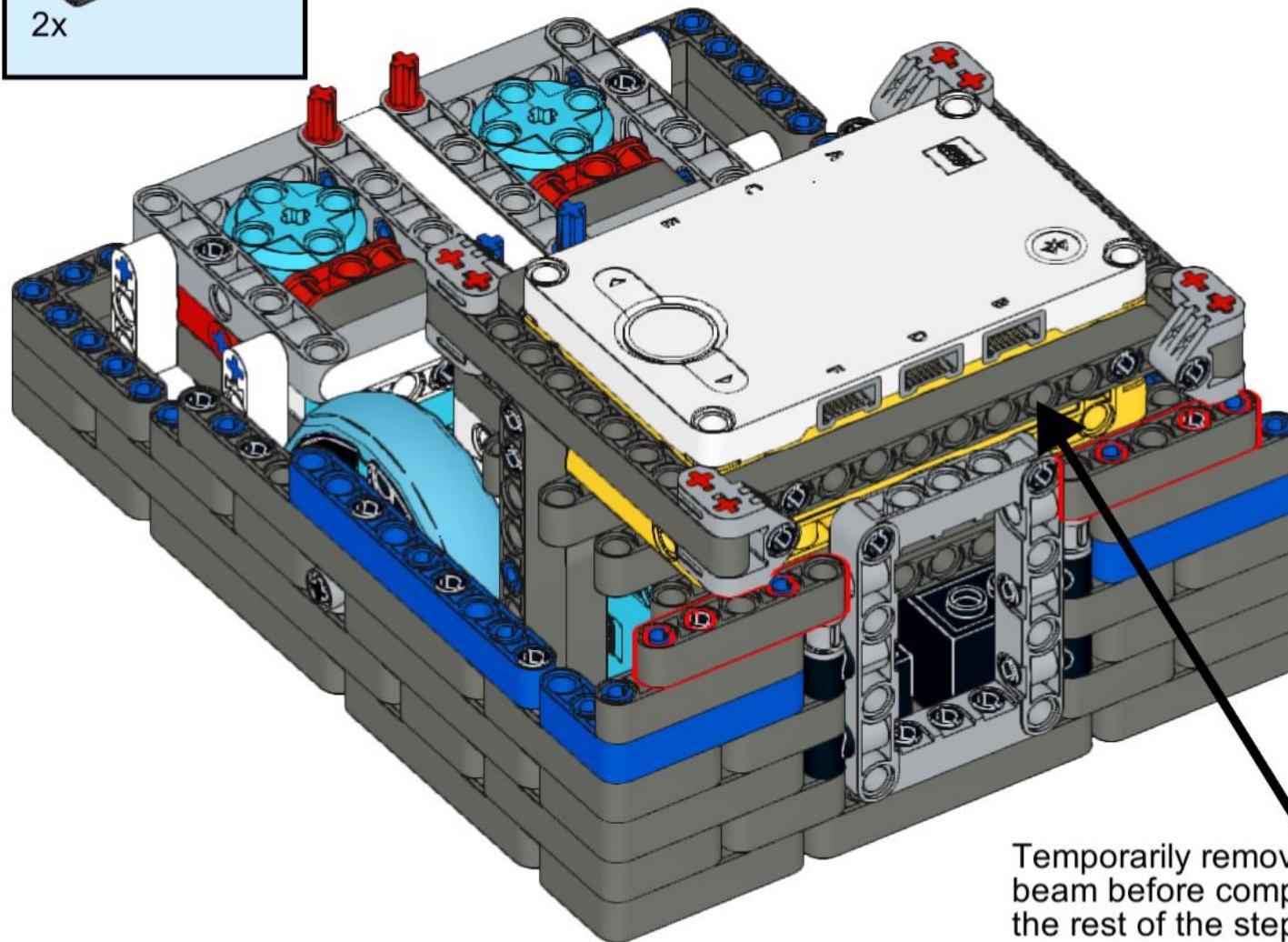
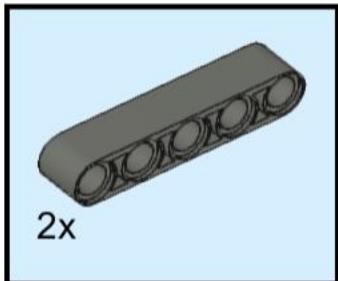
**91**



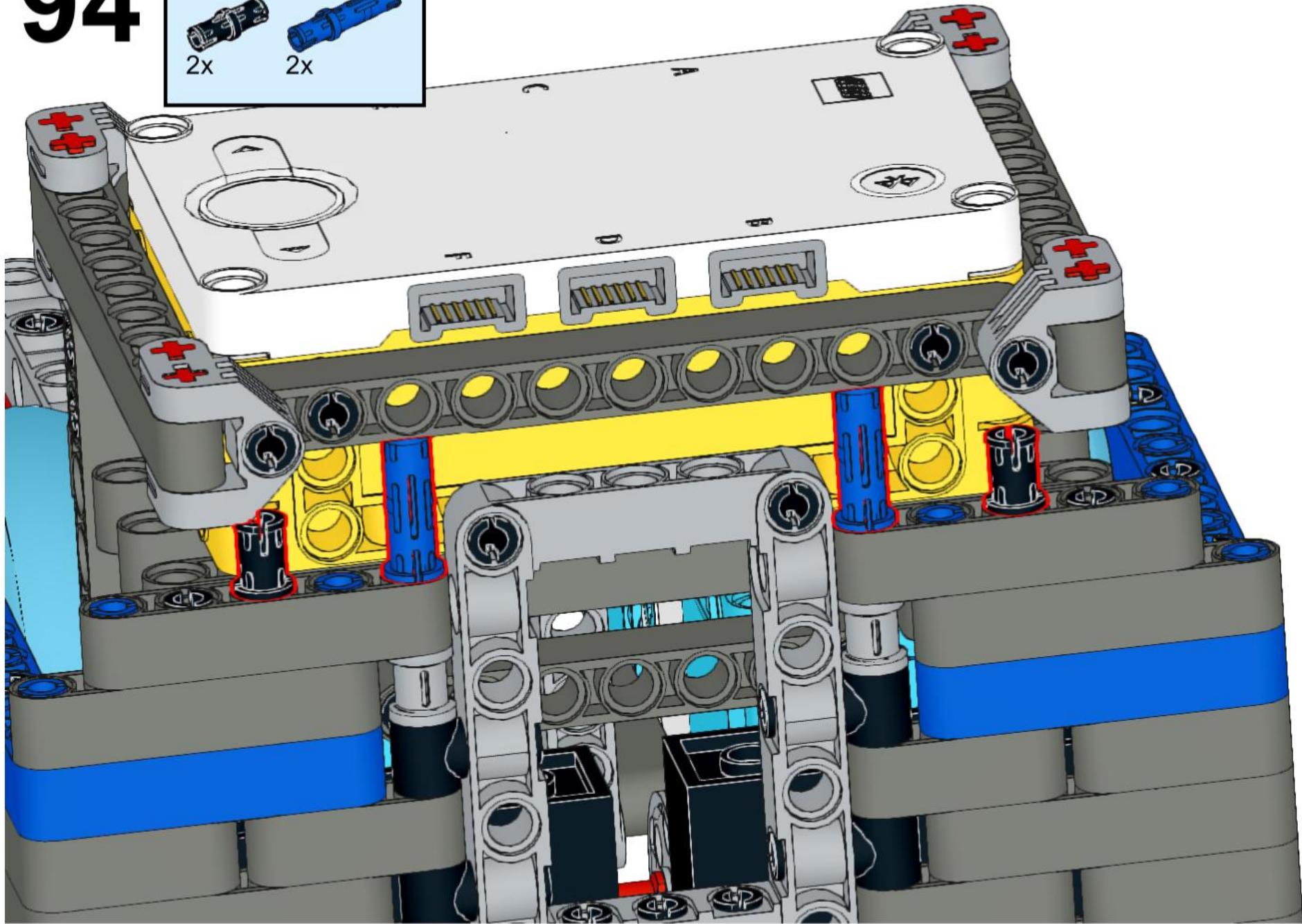
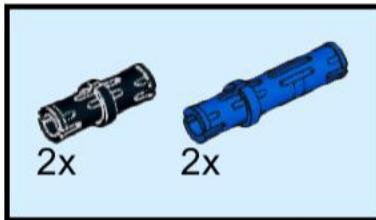
**92**



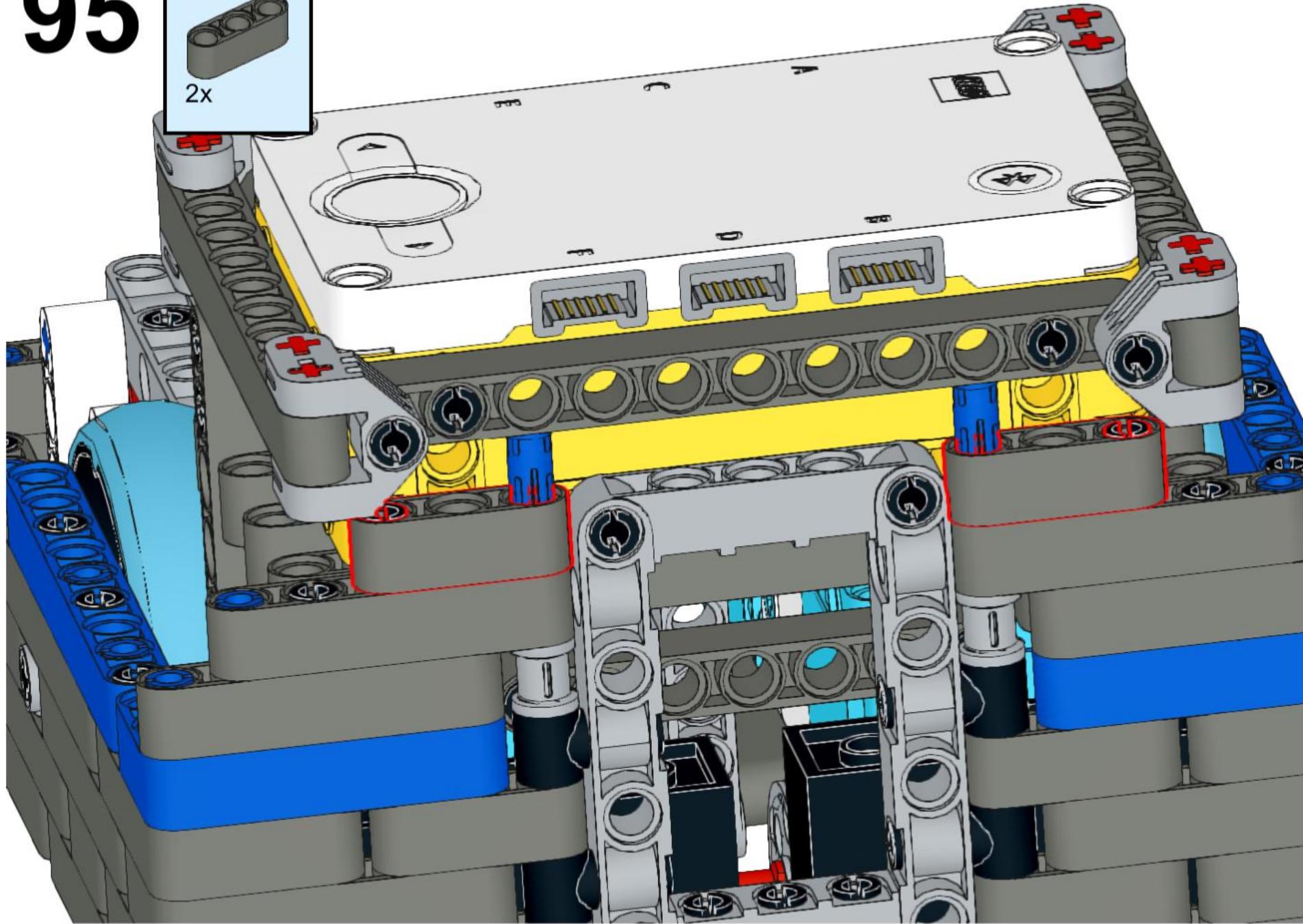
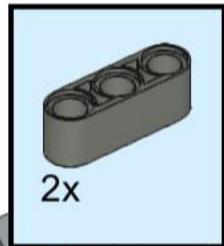
# 93



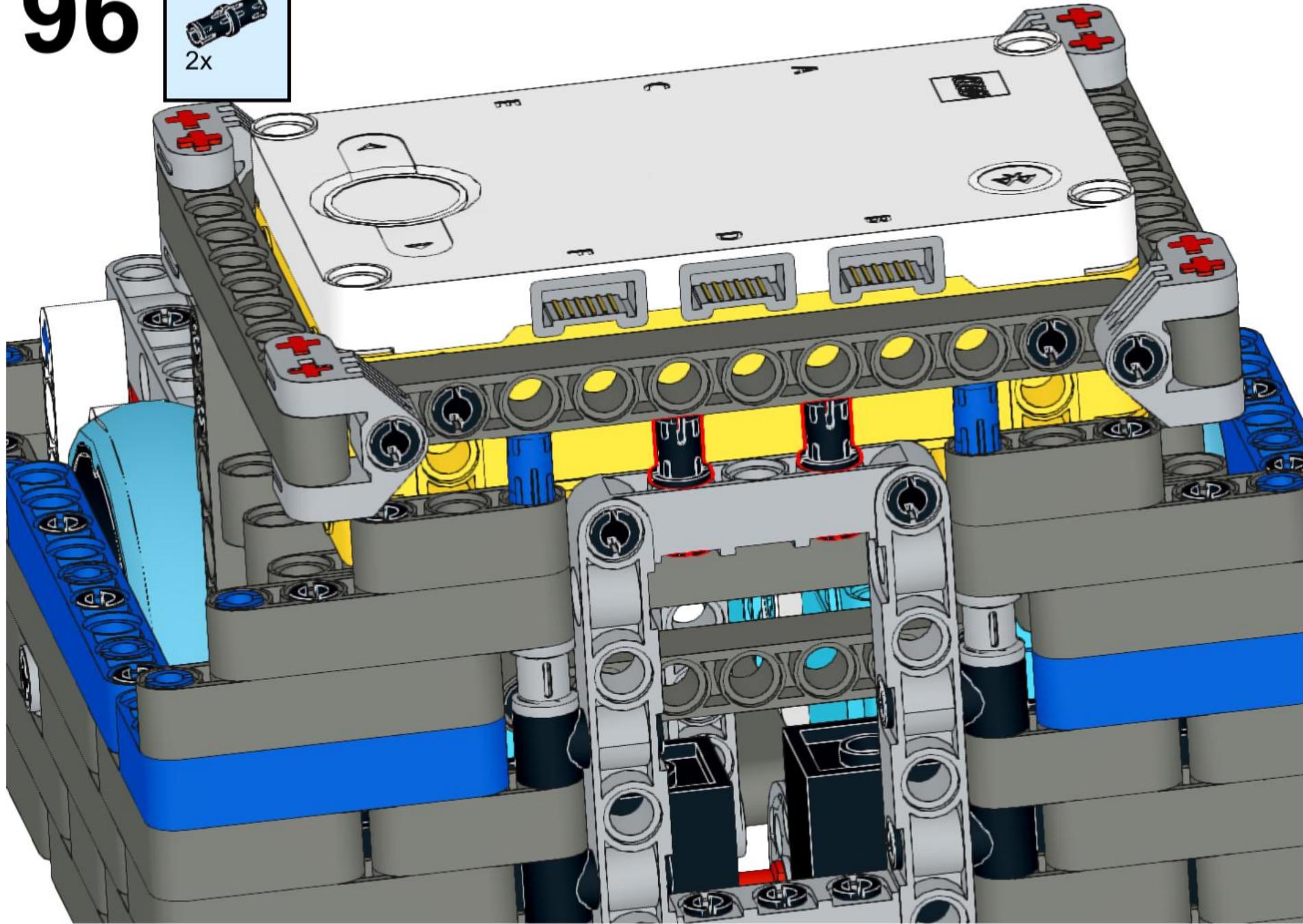
**94**



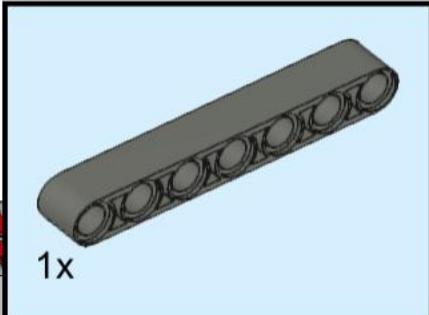
**95**



**96**



97



All done! You can replace  
the beam now

