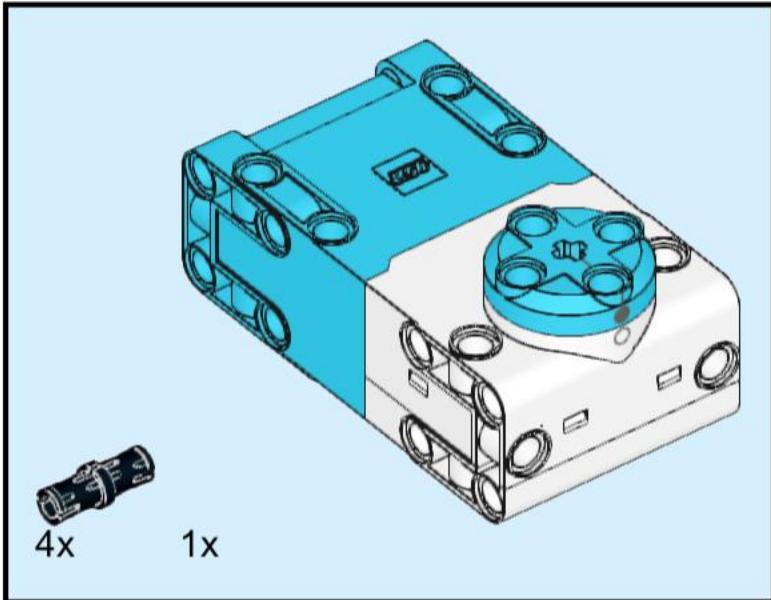
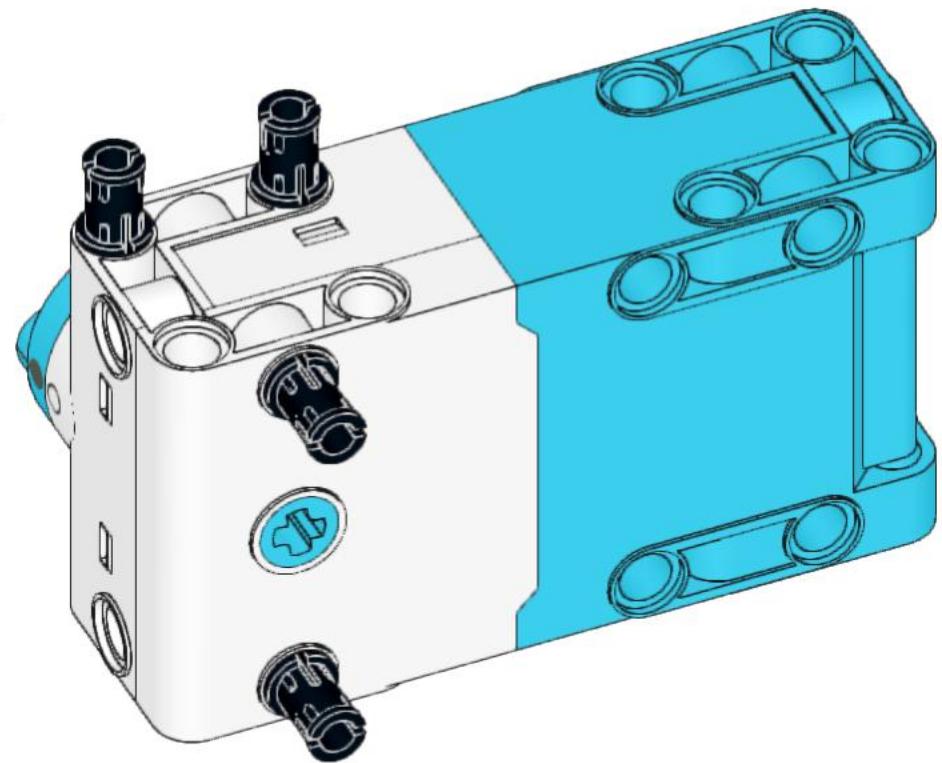


**1**

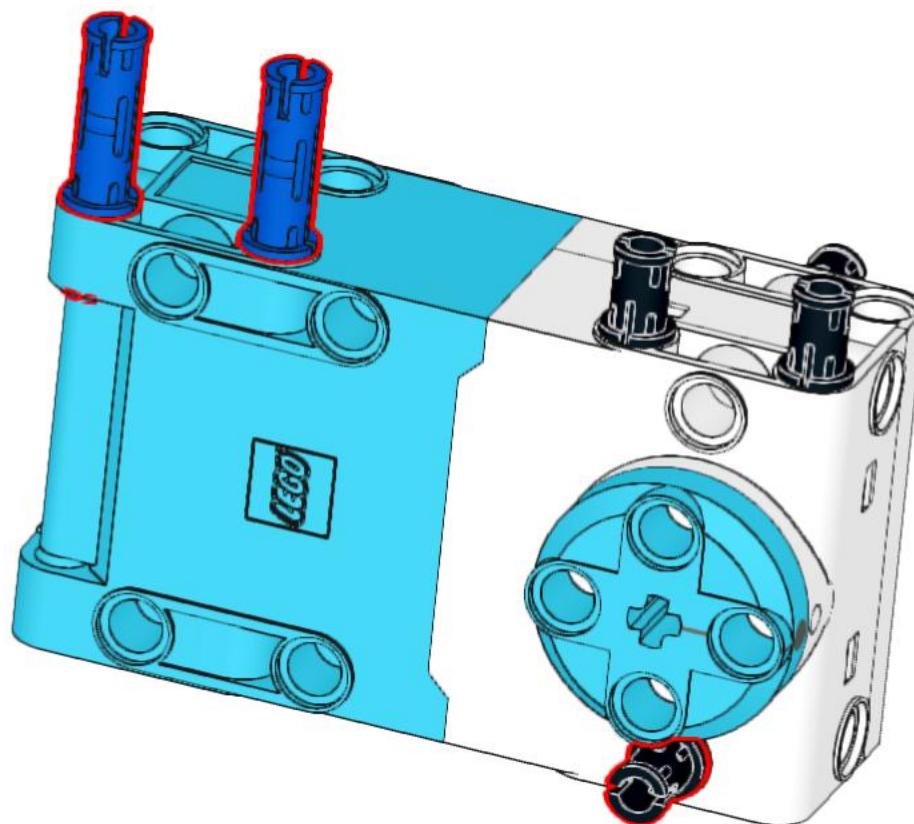
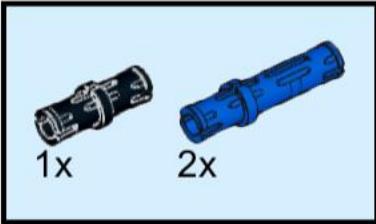


Save some colored beams  
for robot identification:  
(2) nine hole beams  
(2) right-angle 3x5 beams

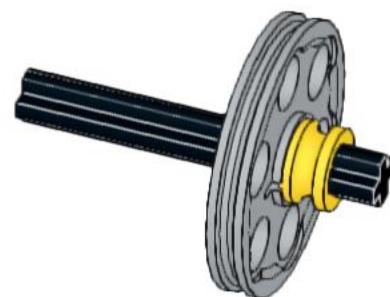
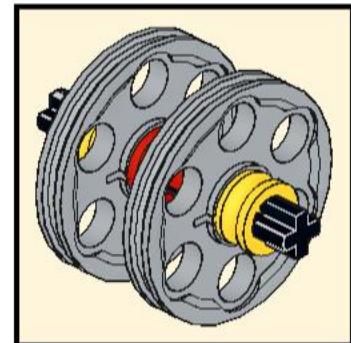
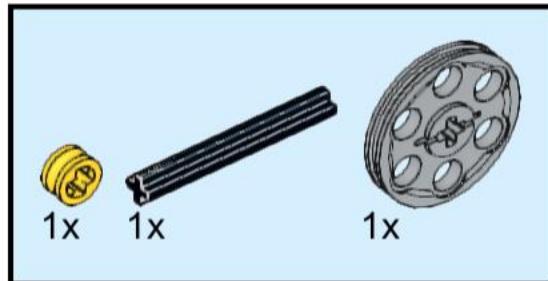
These will go on the top  
layer of the wall surrounding  
the robot.



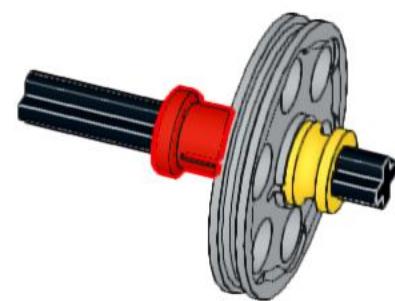
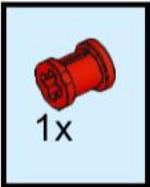
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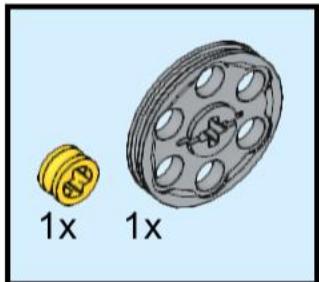
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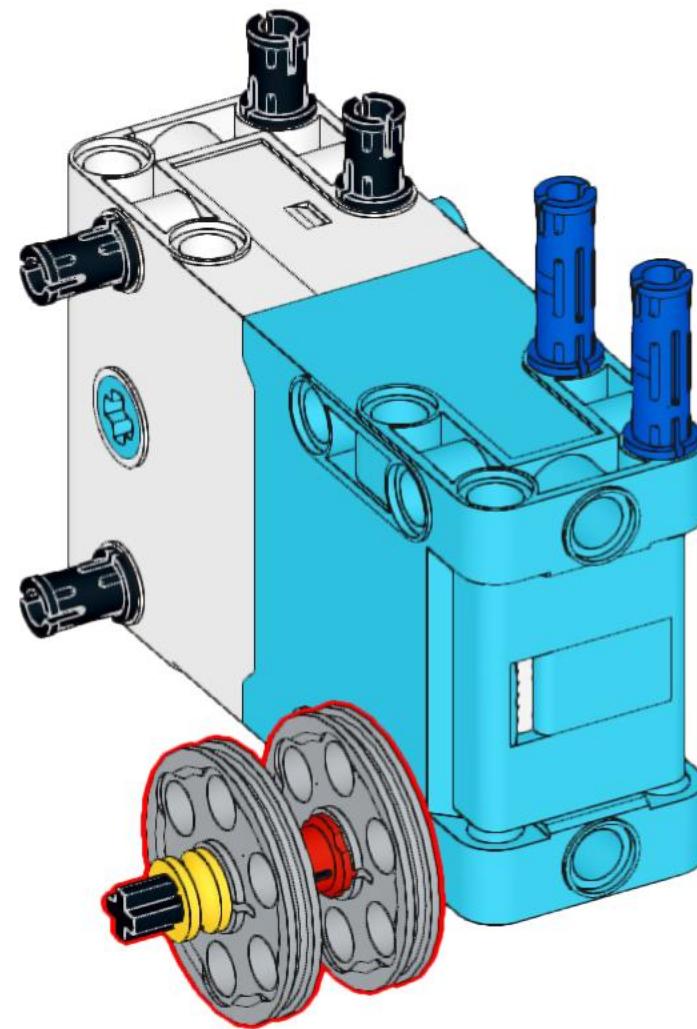
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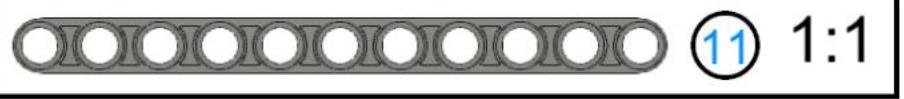
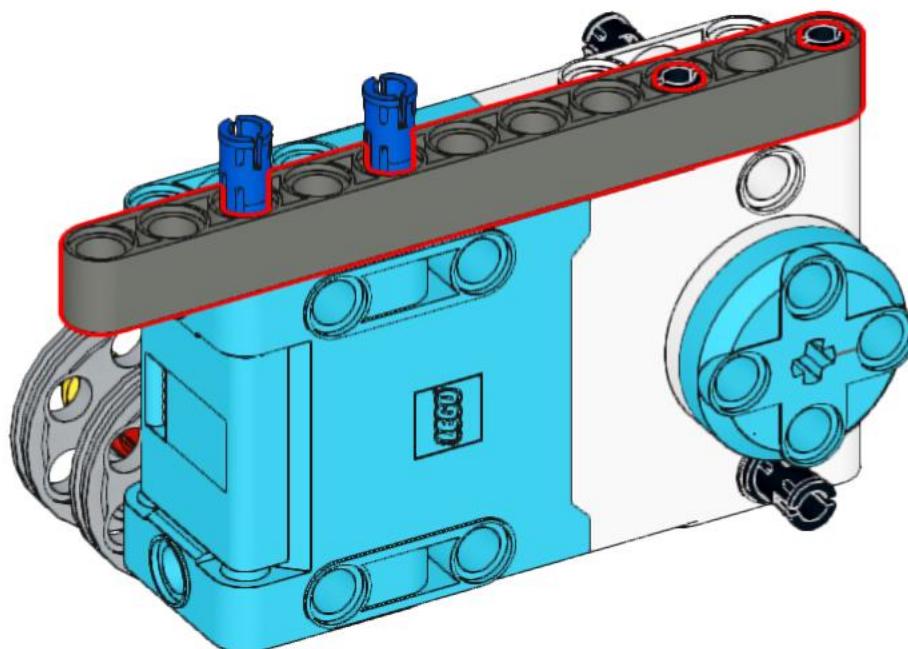
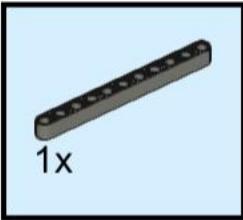
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6



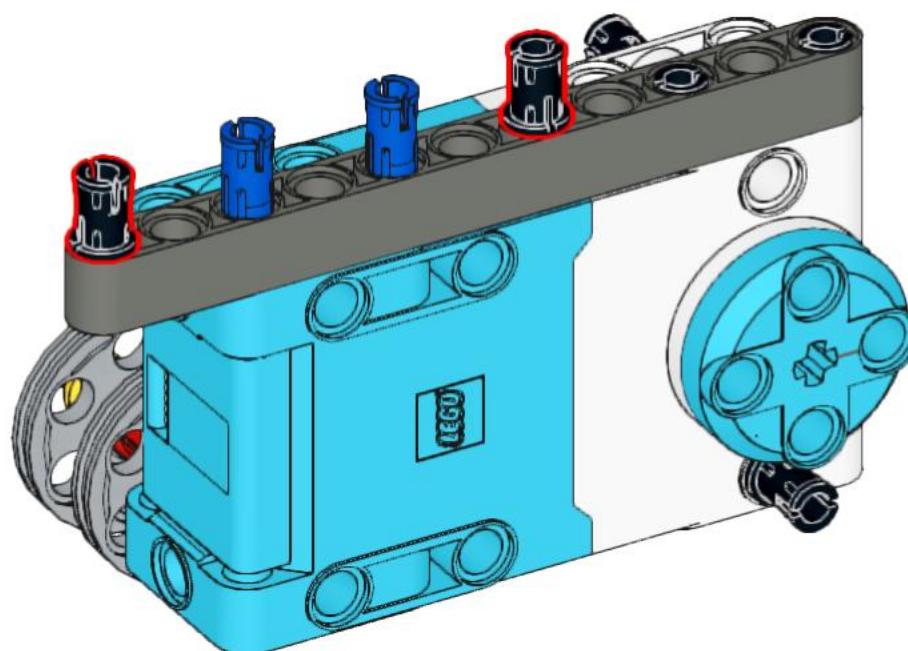
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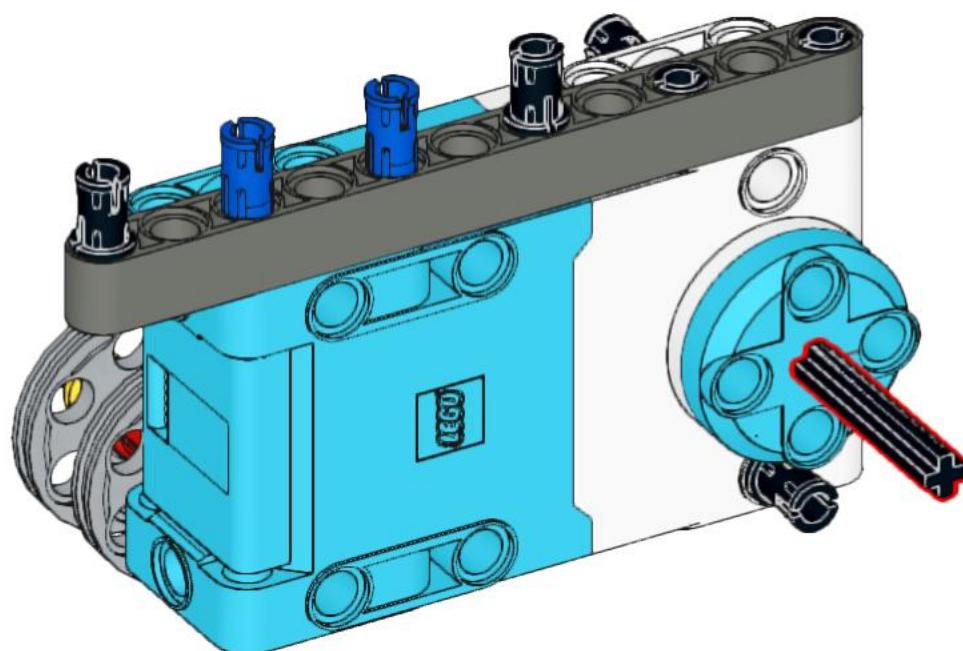
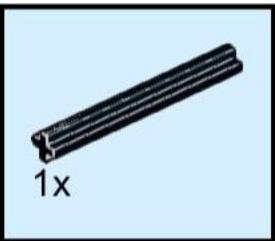
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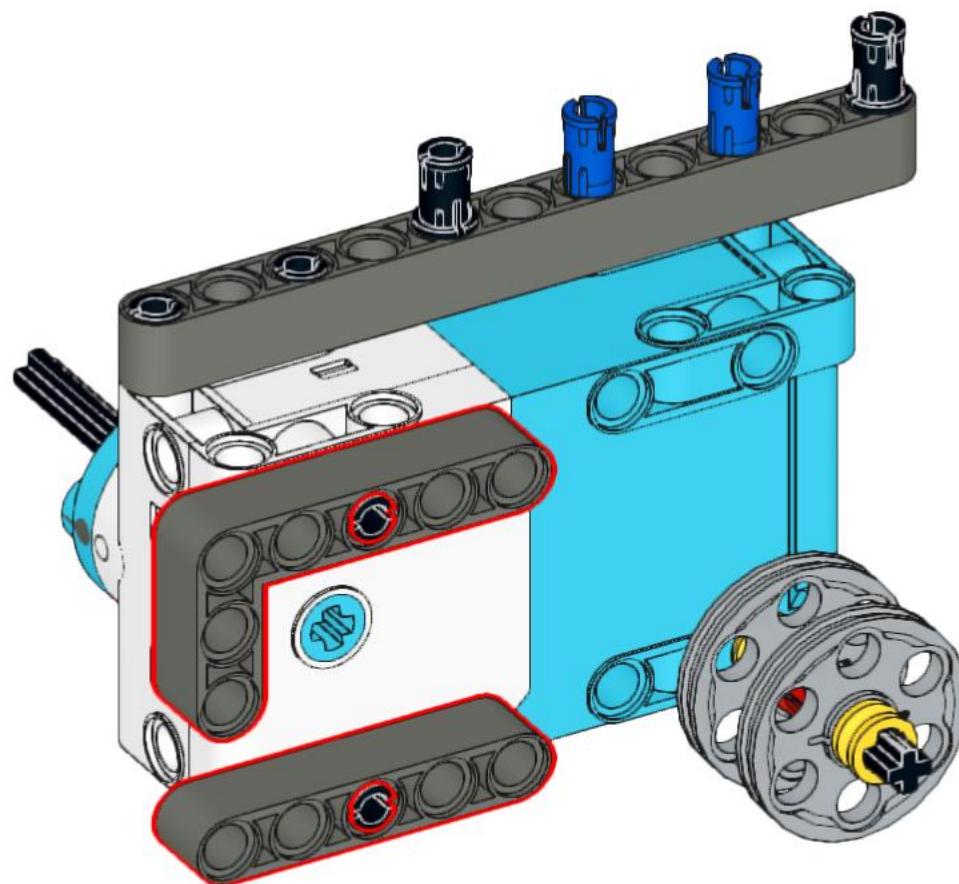
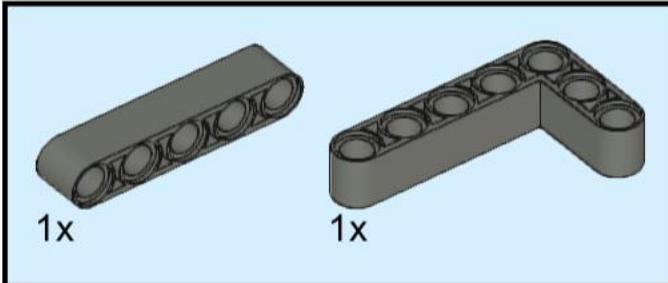
2x



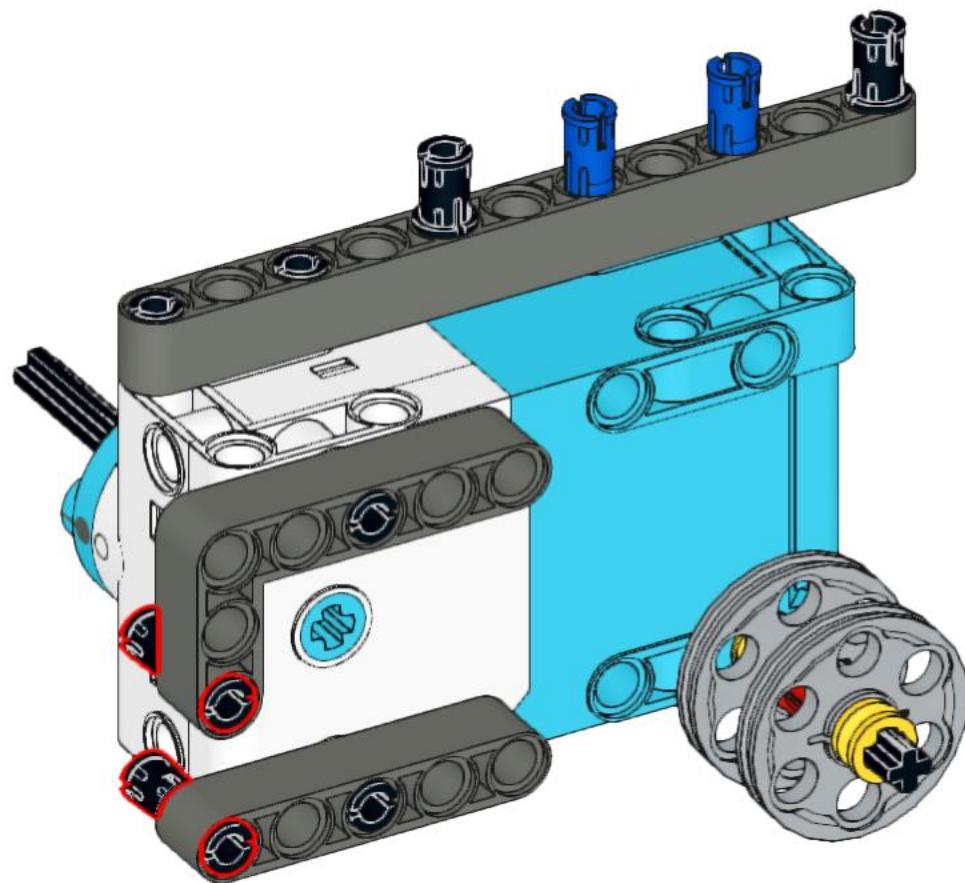
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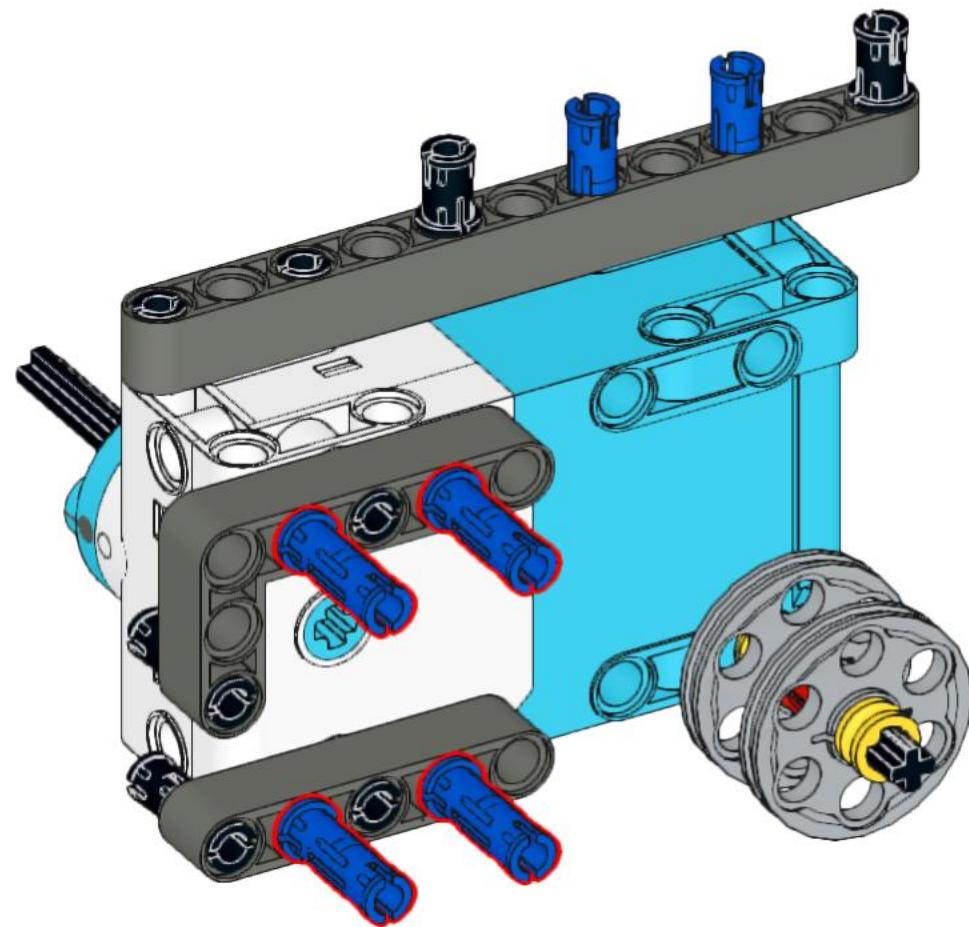
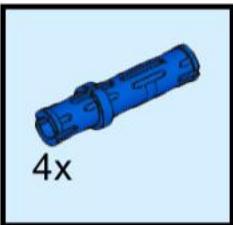
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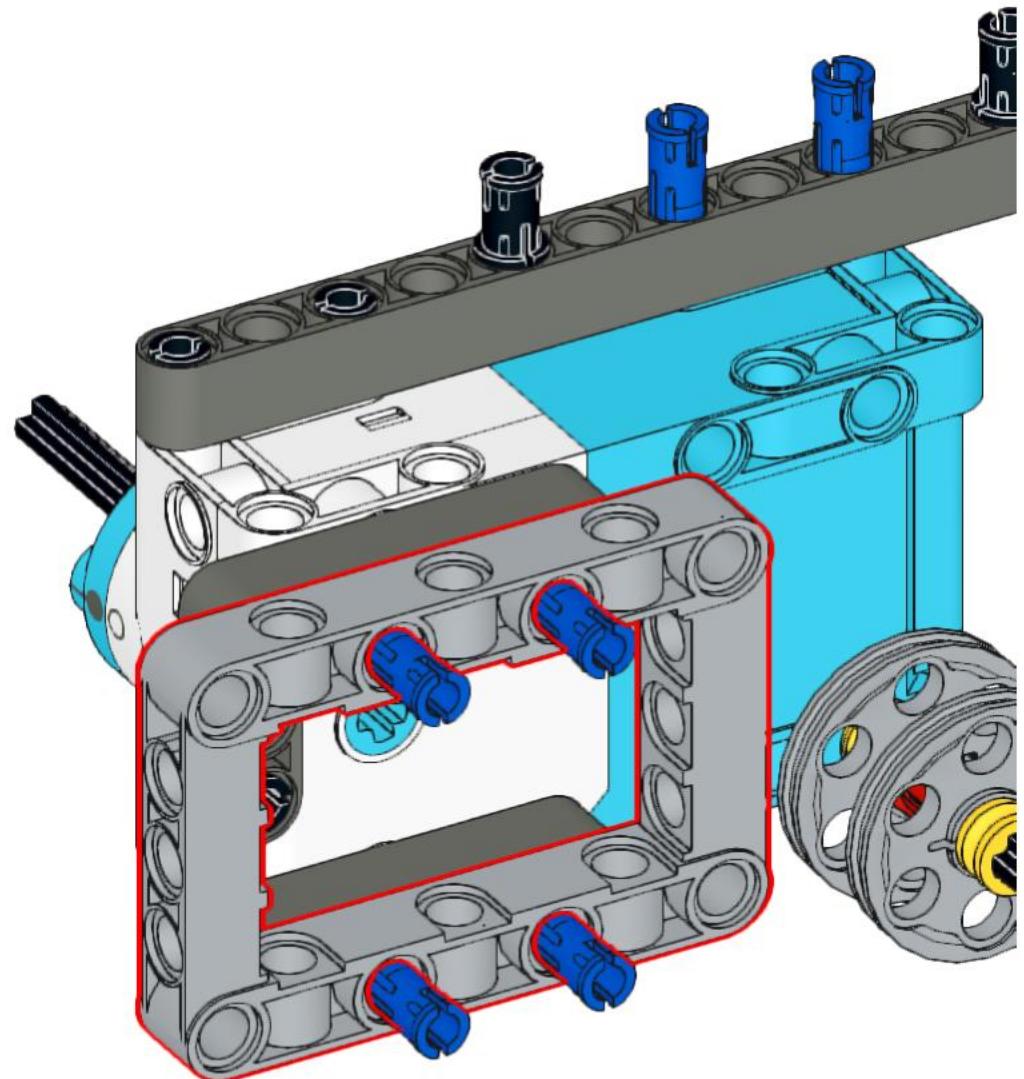
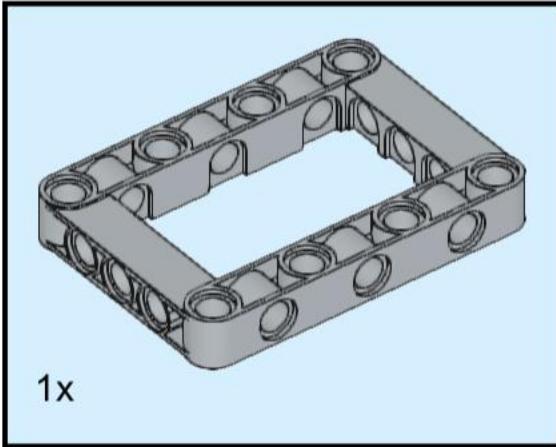
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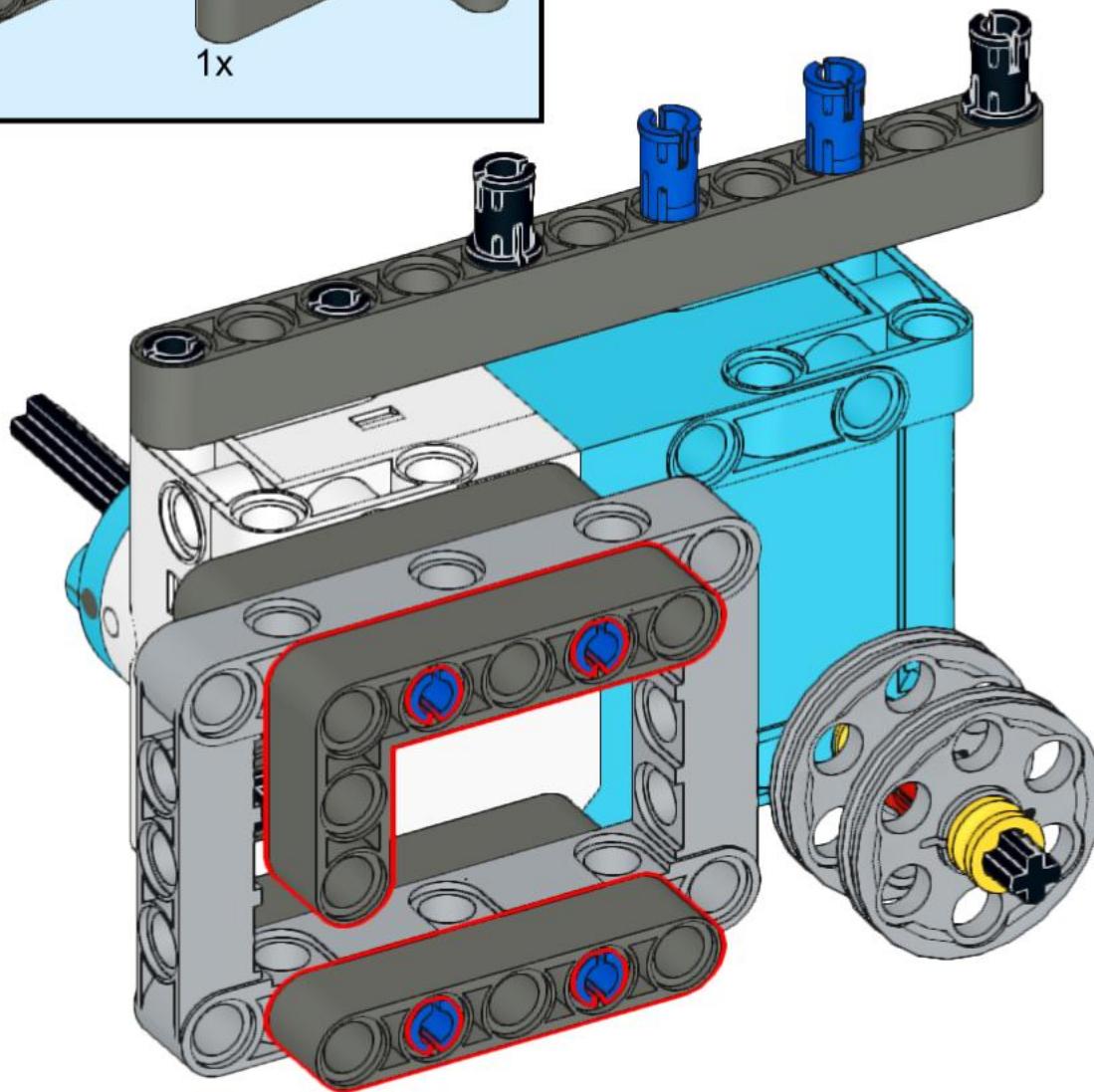
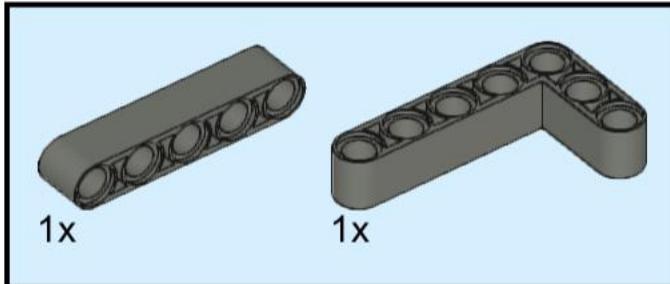
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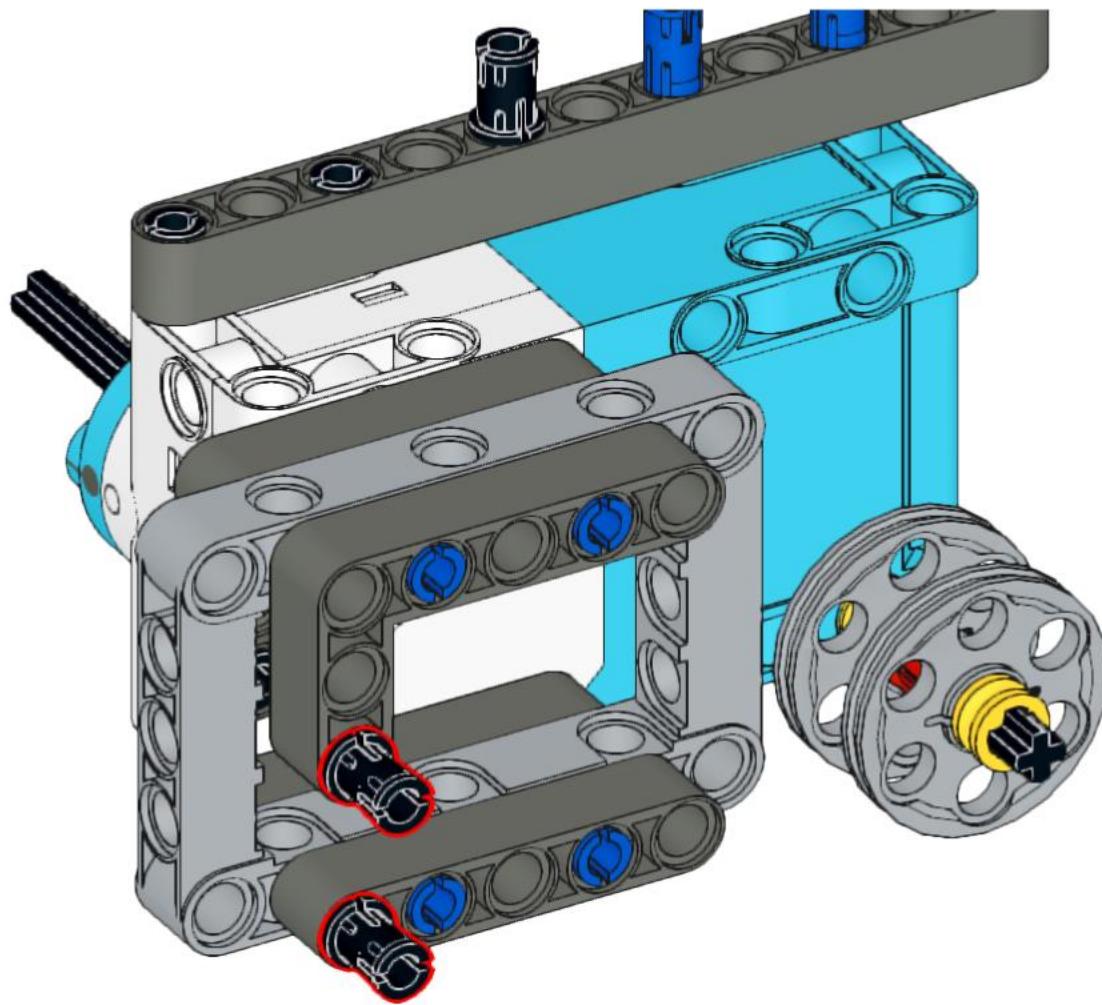
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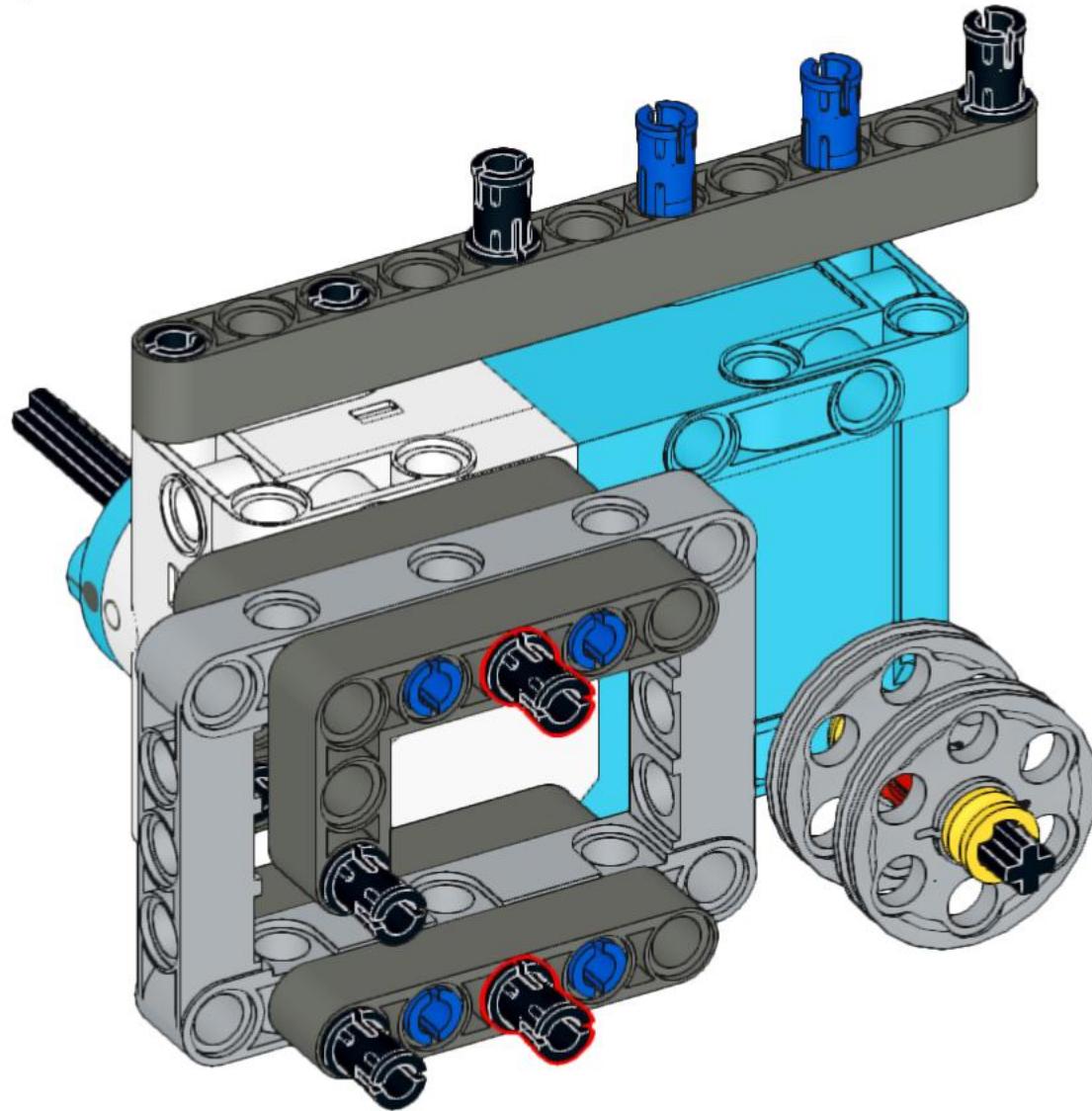
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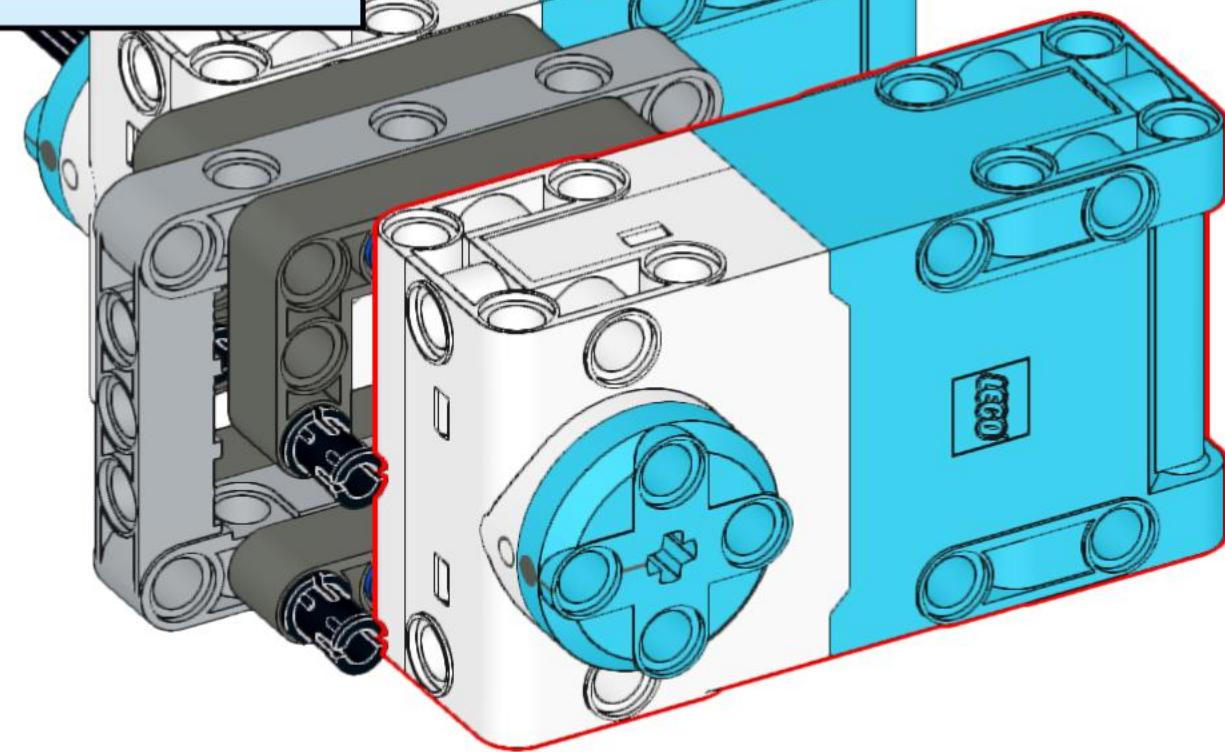
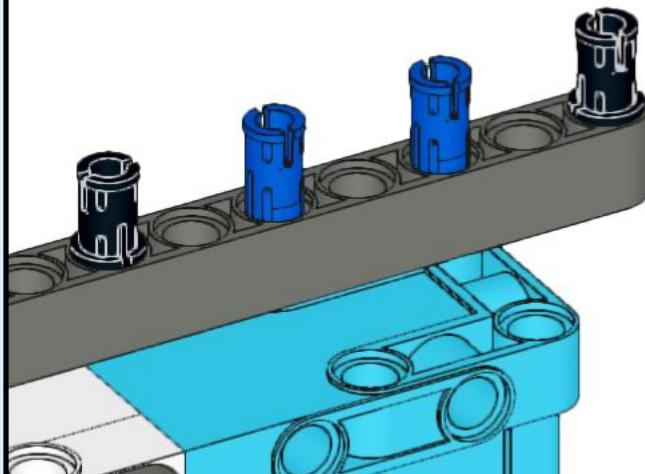
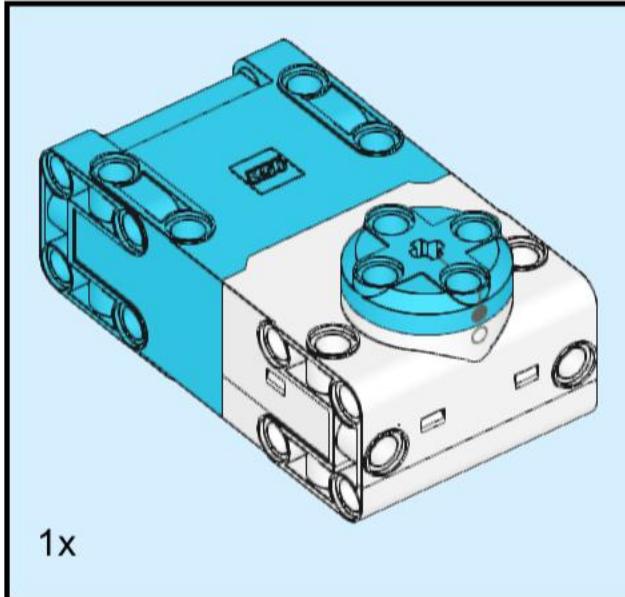
**15**



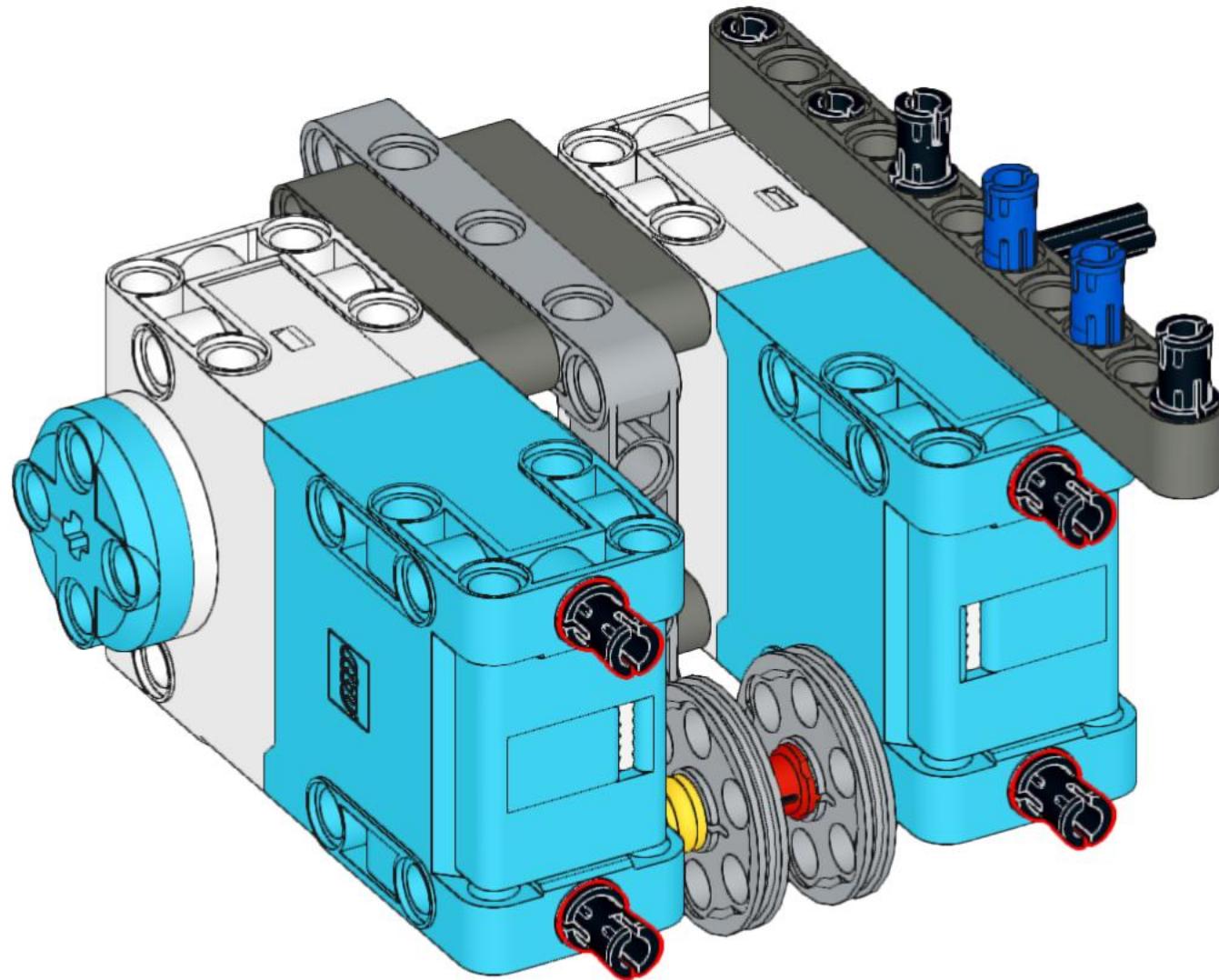
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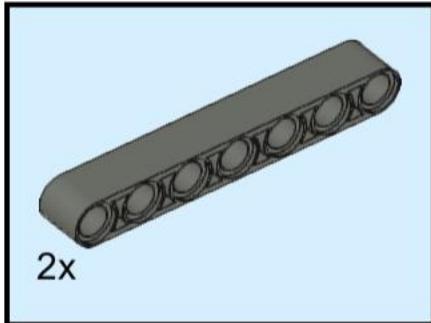
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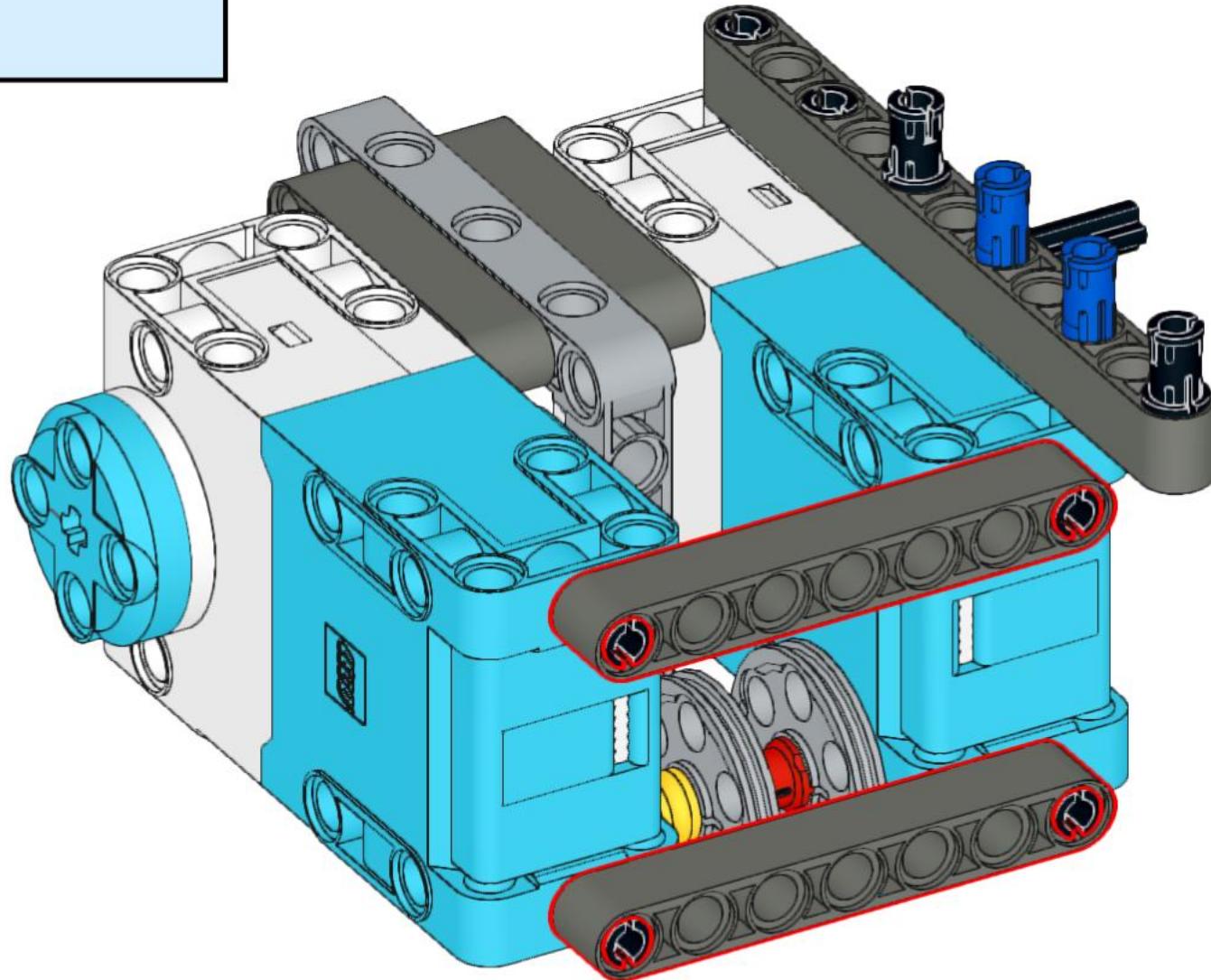
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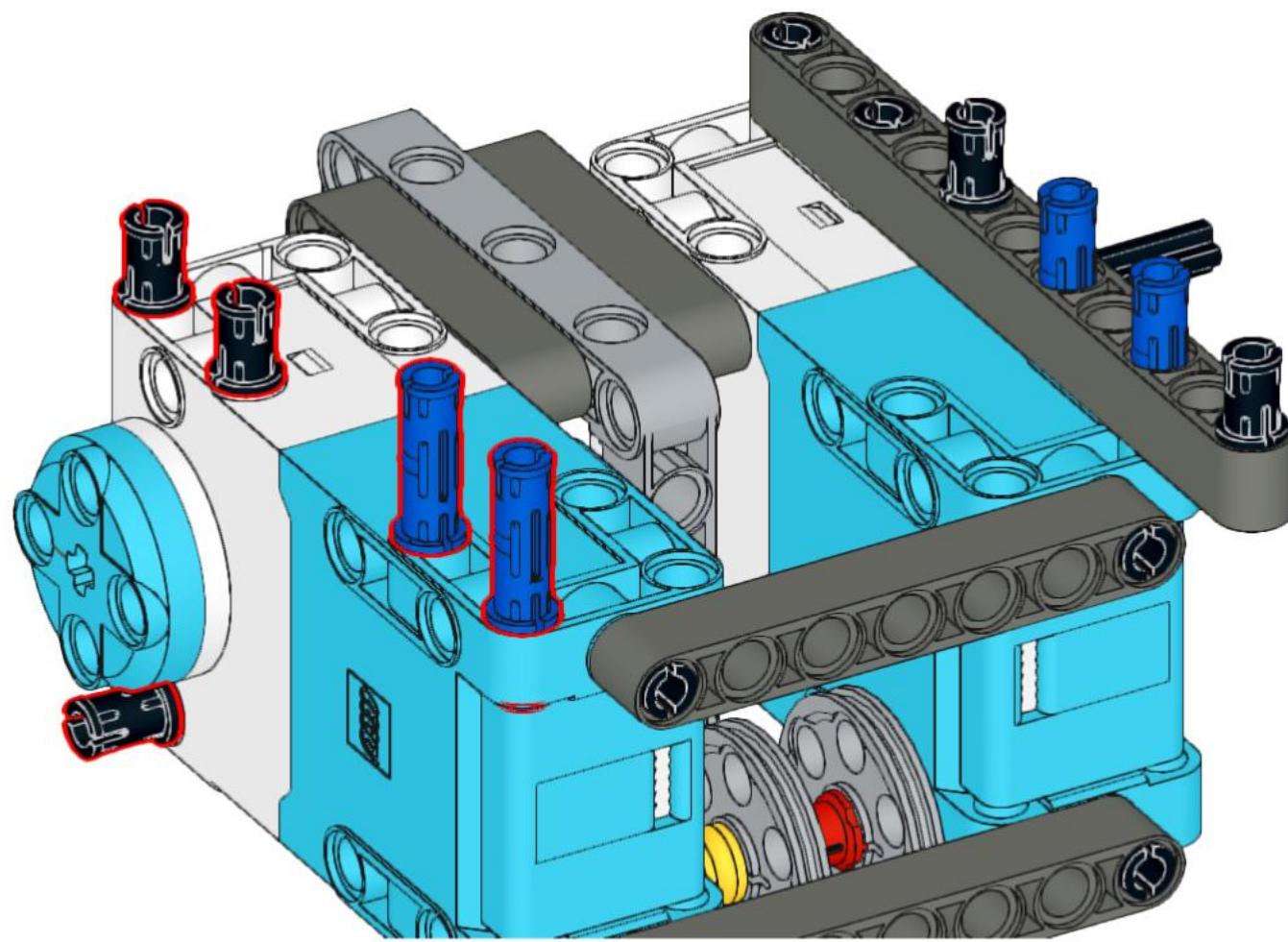
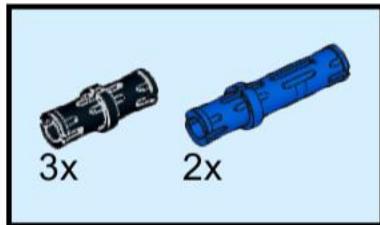
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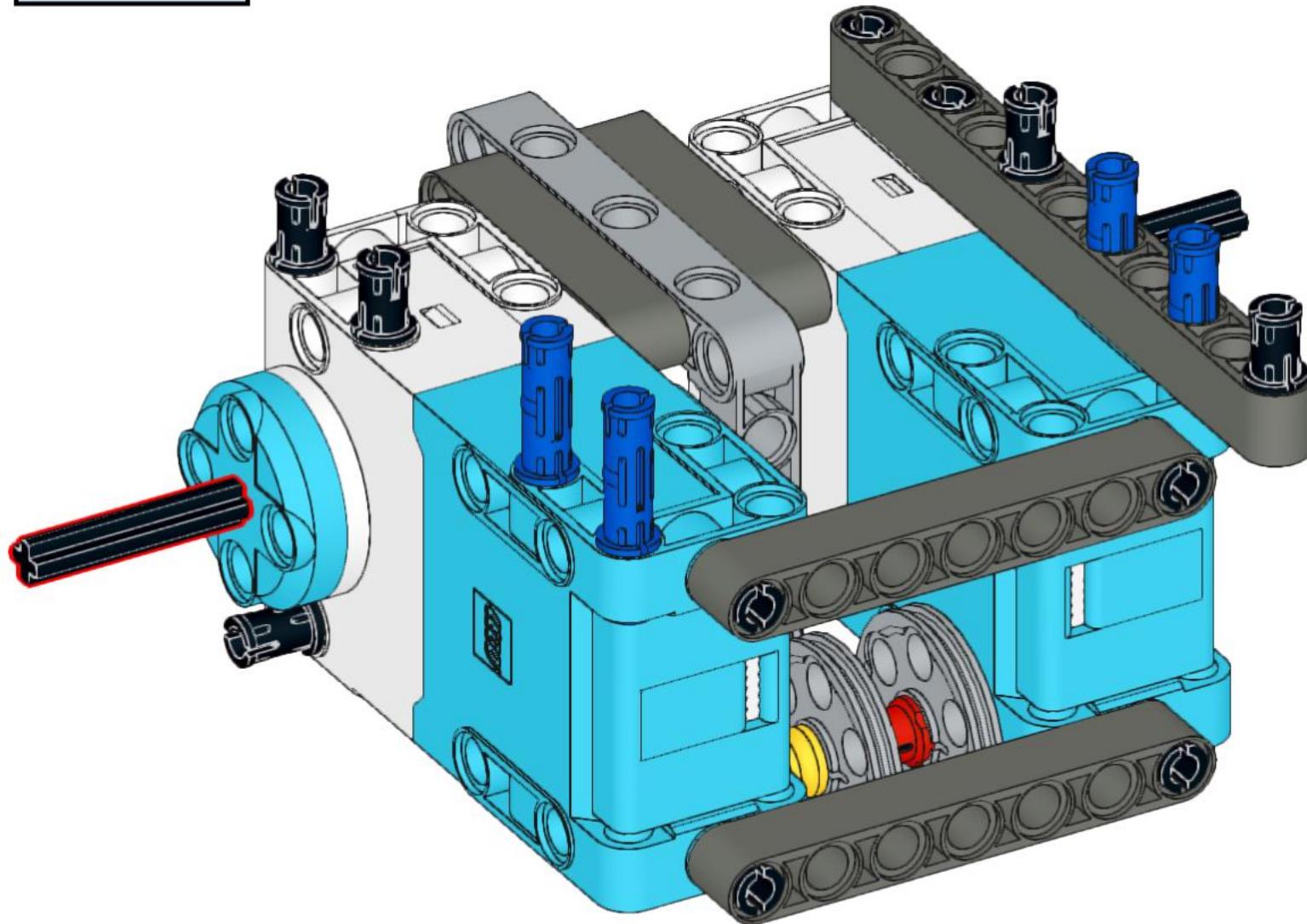
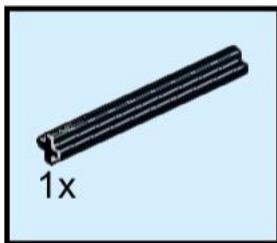
2x



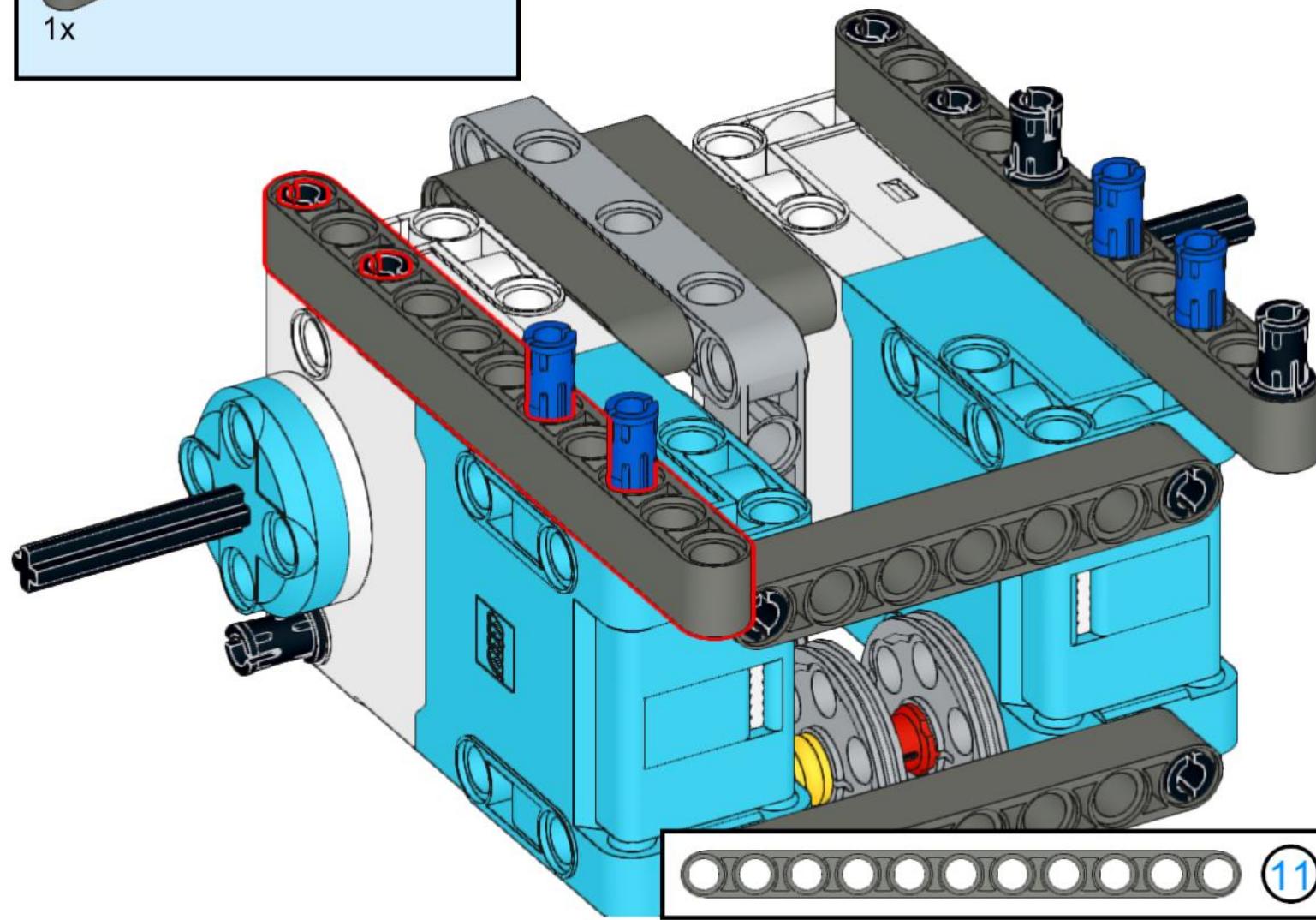
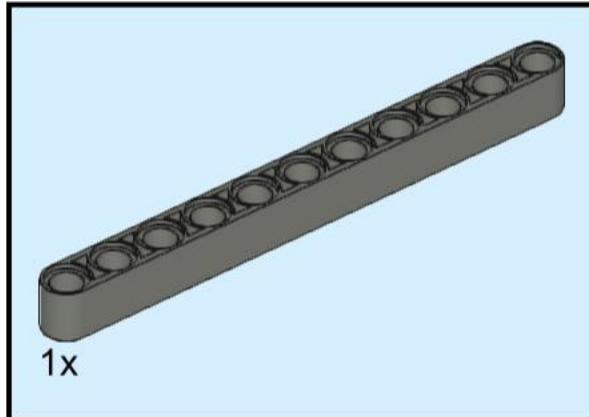
**20**



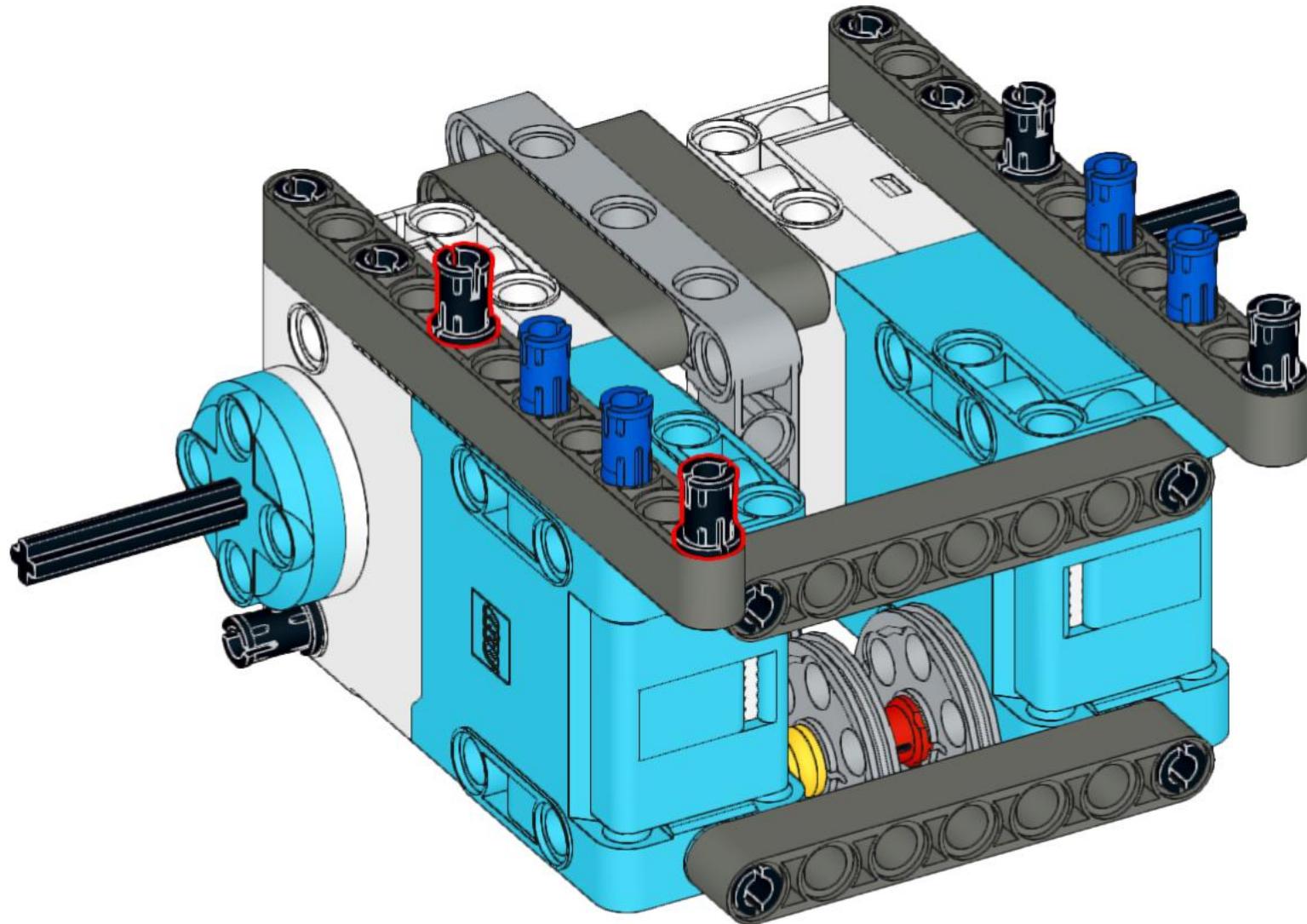
21



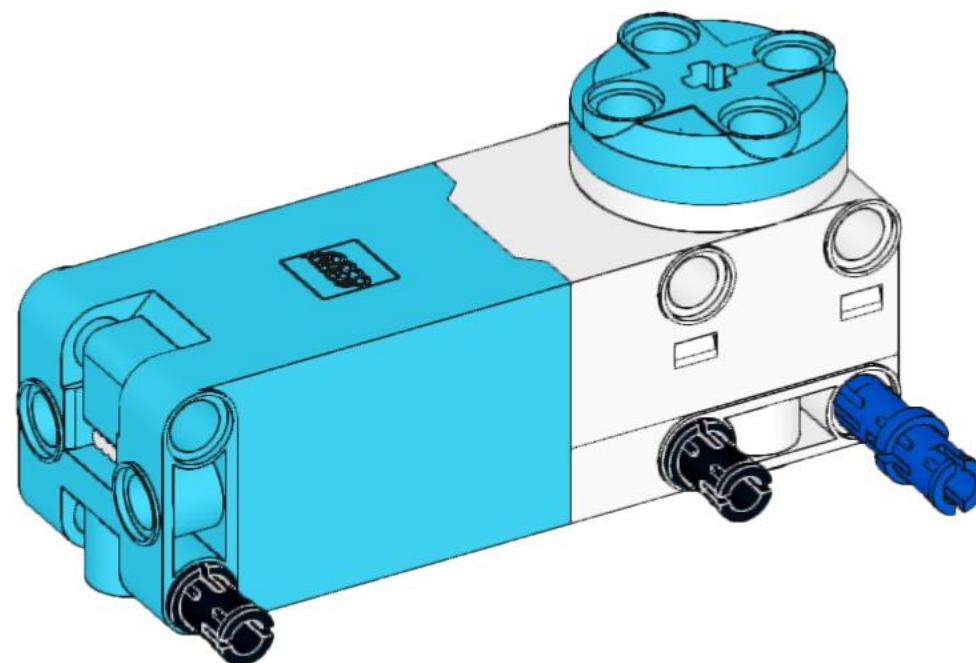
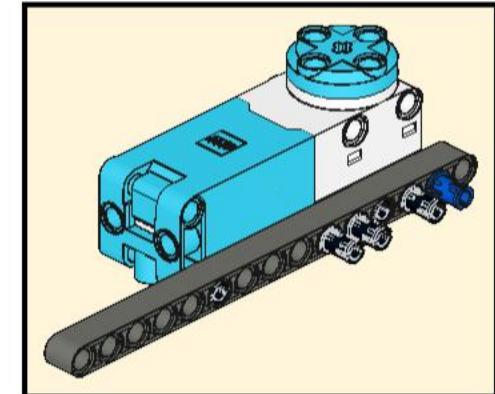
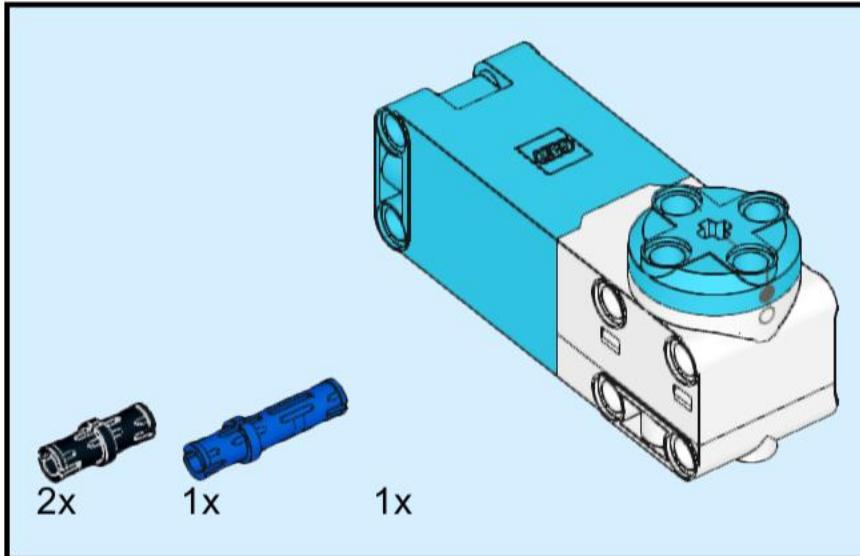
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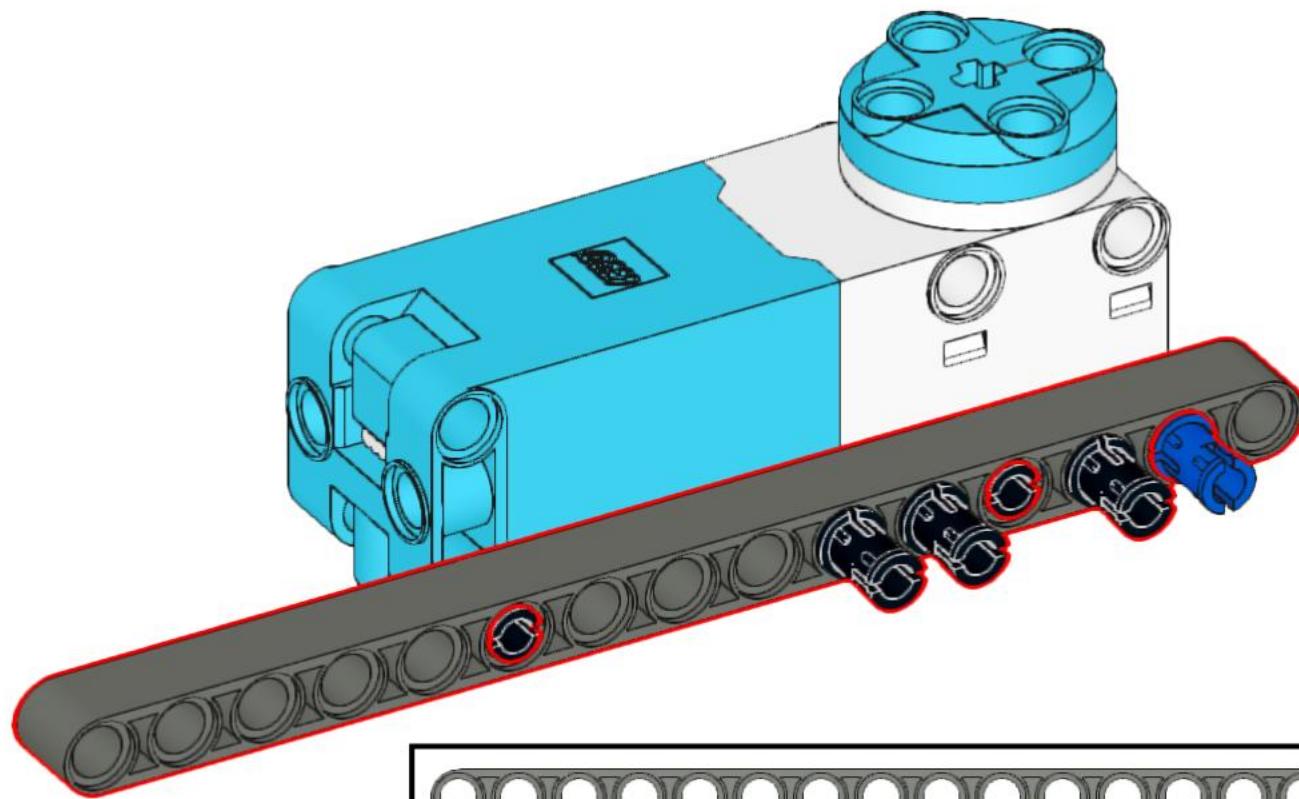
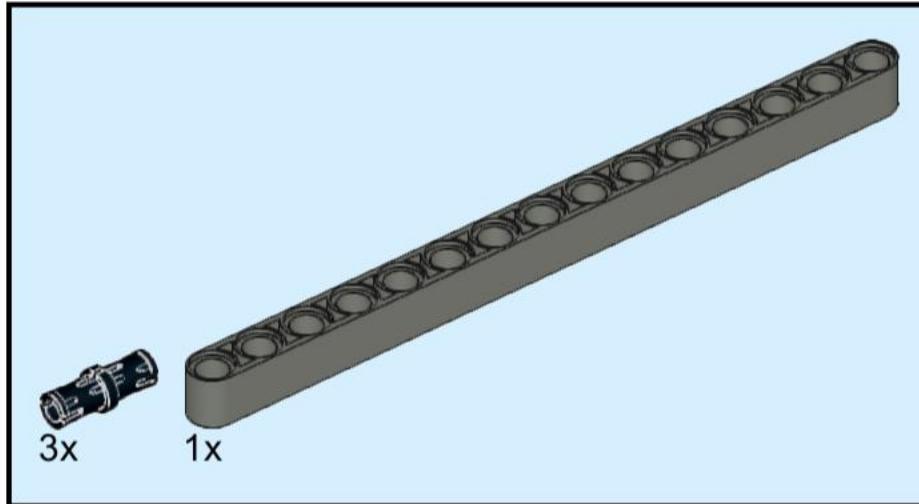
# 23



**24**



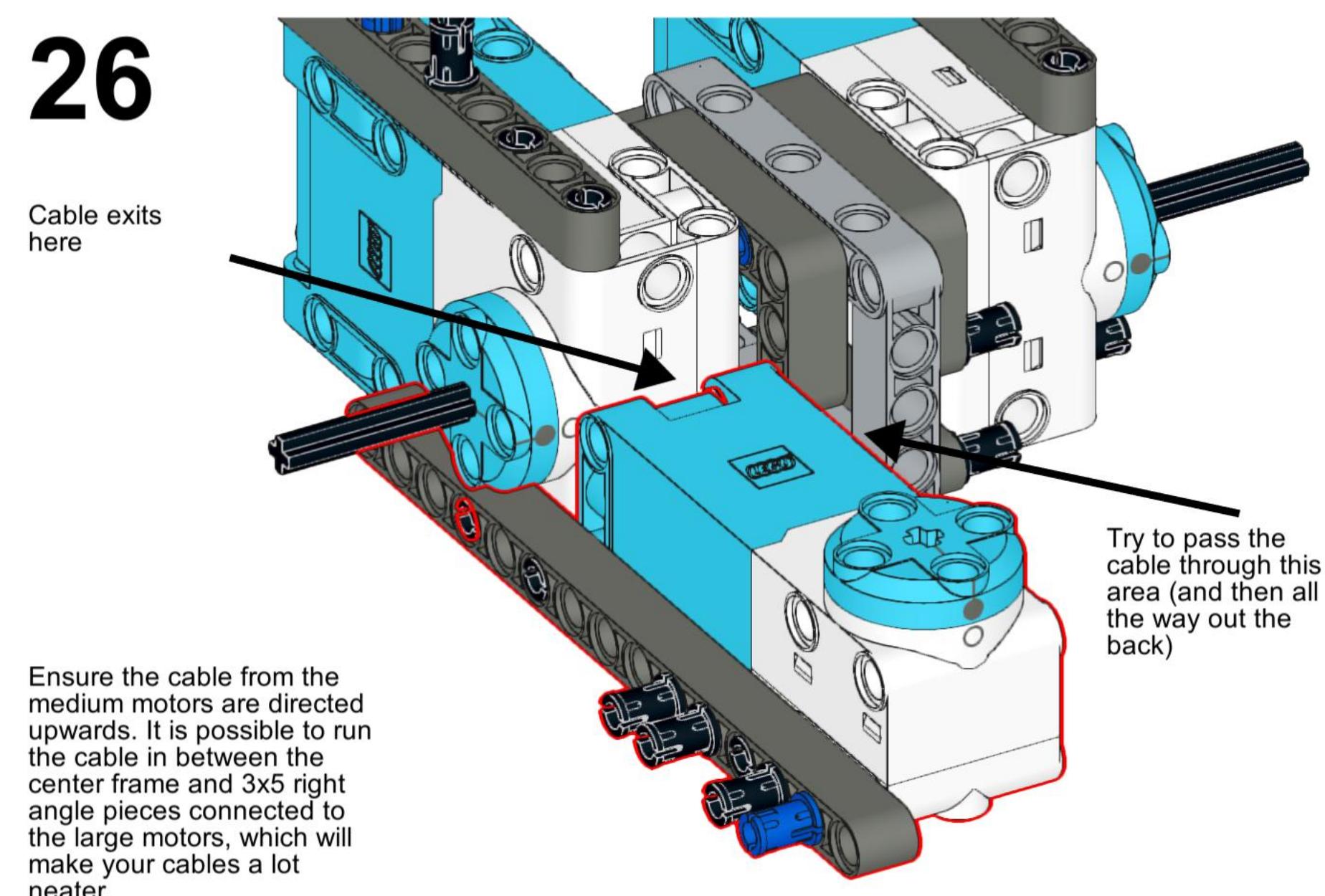
**25**



15 1:1

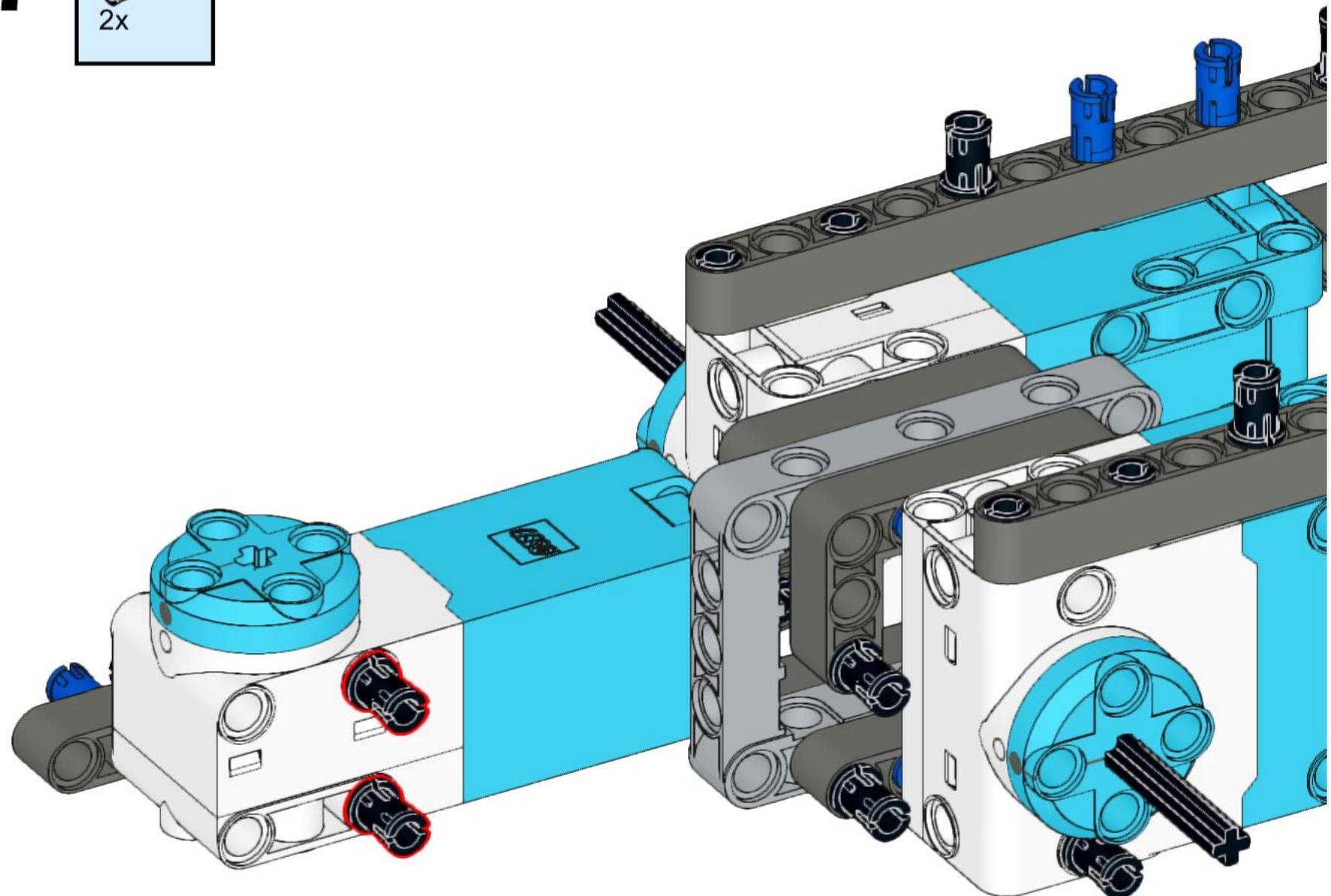
# 26

Cable exits here

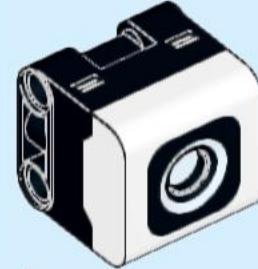
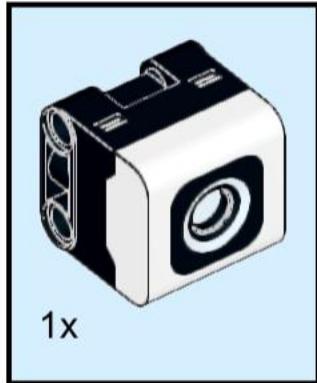


Ensure the cable from the medium motors are directed upwards. It is possible to run the cable in between the center frame and 3x5 right angle pieces connected to the large motors, which will make your cables a lot neater.

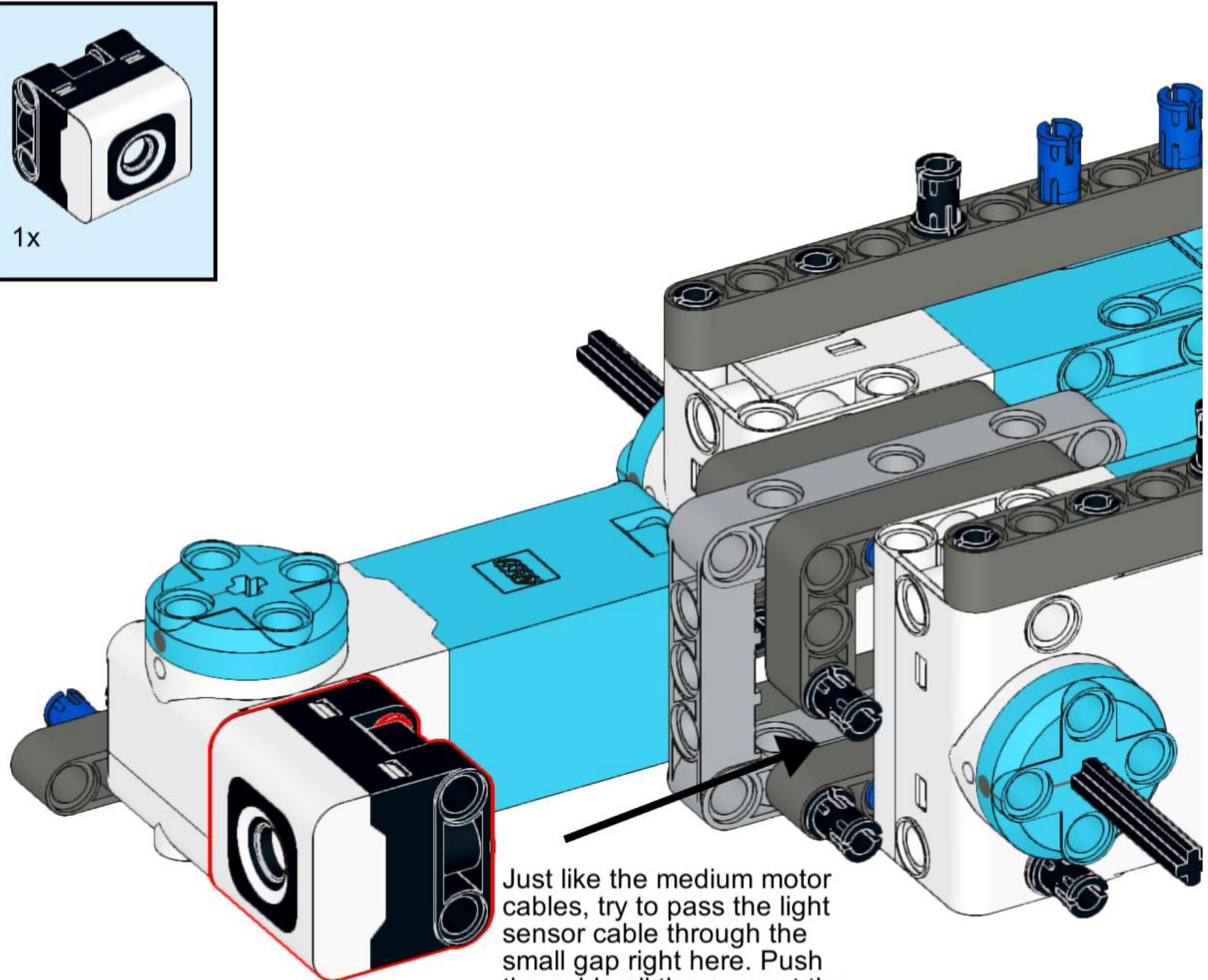
**27**



# 28

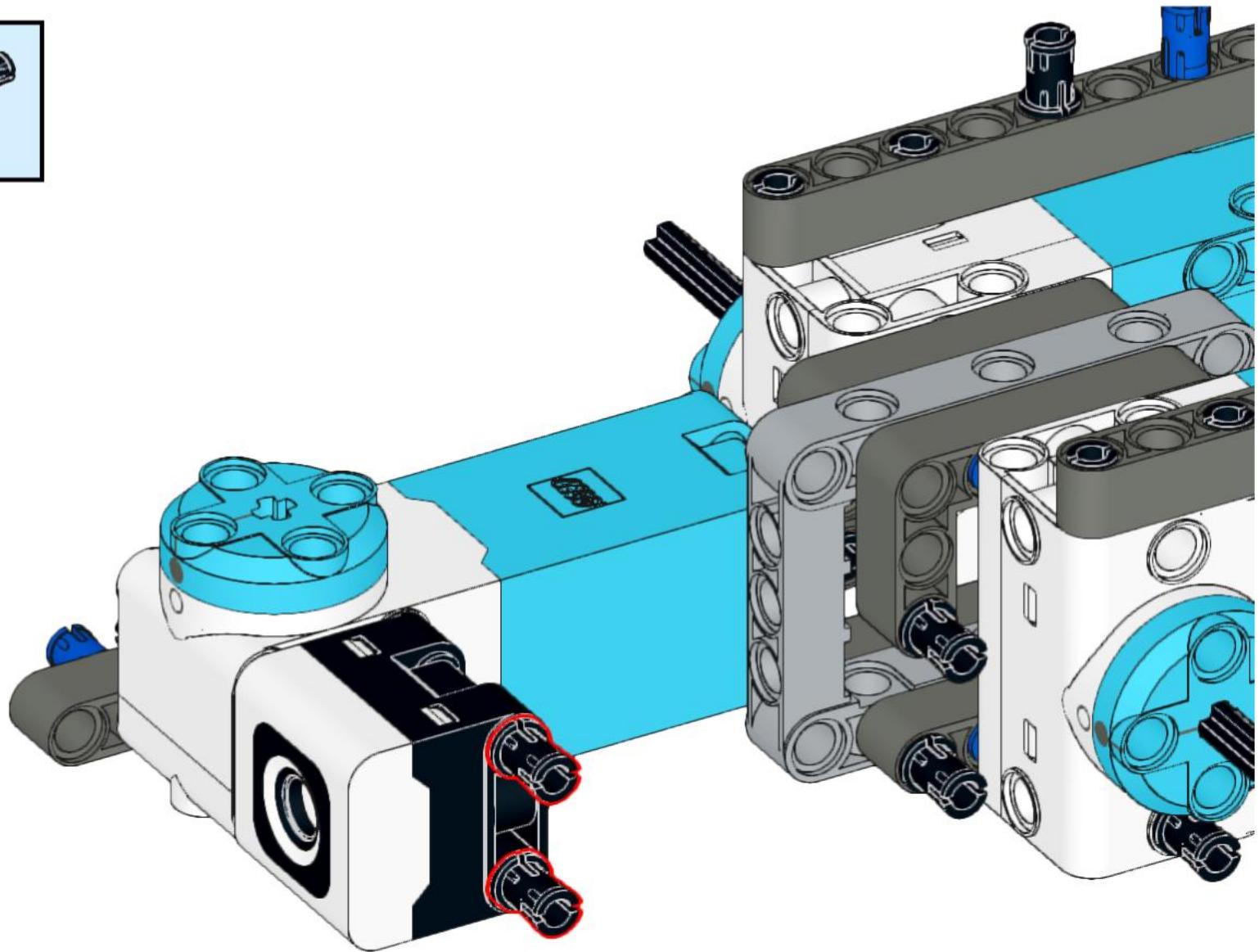


1x

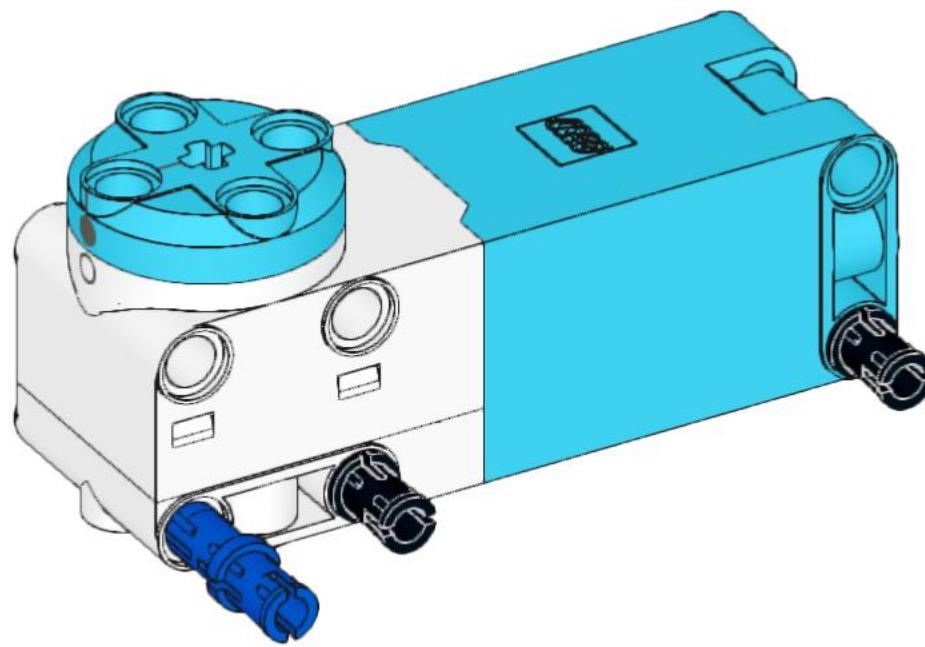
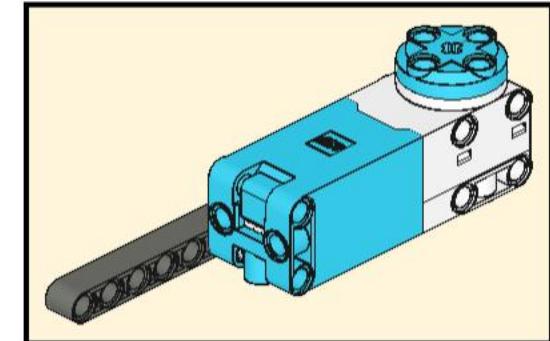
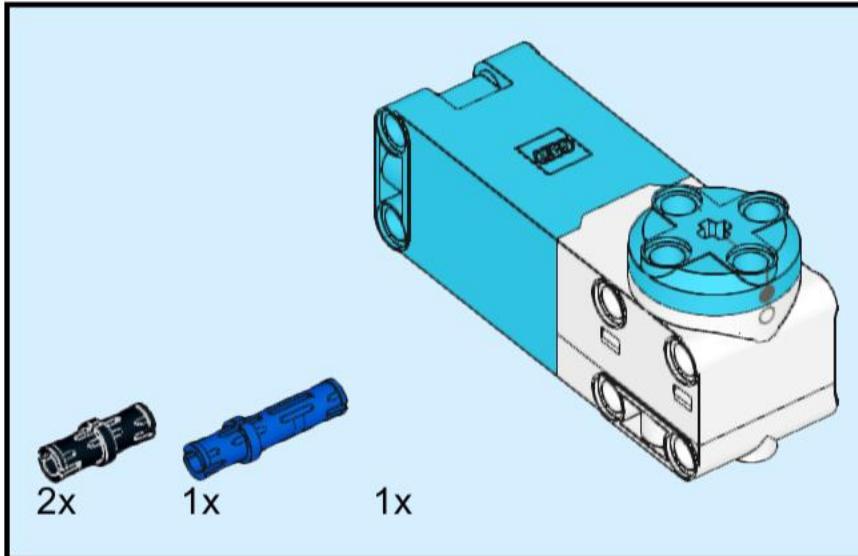


Just like the medium motor cables, try to pass the light sensor cable through the small gap right here. Push the cable all the way out the back of the robot.

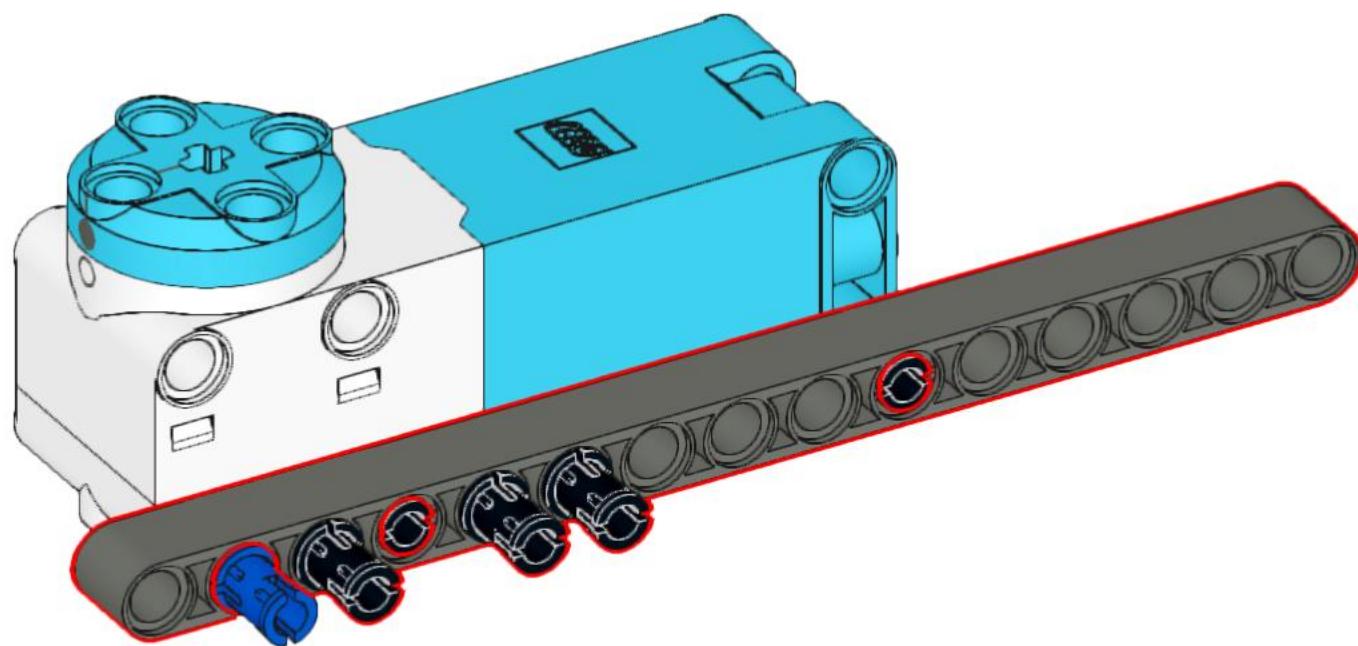
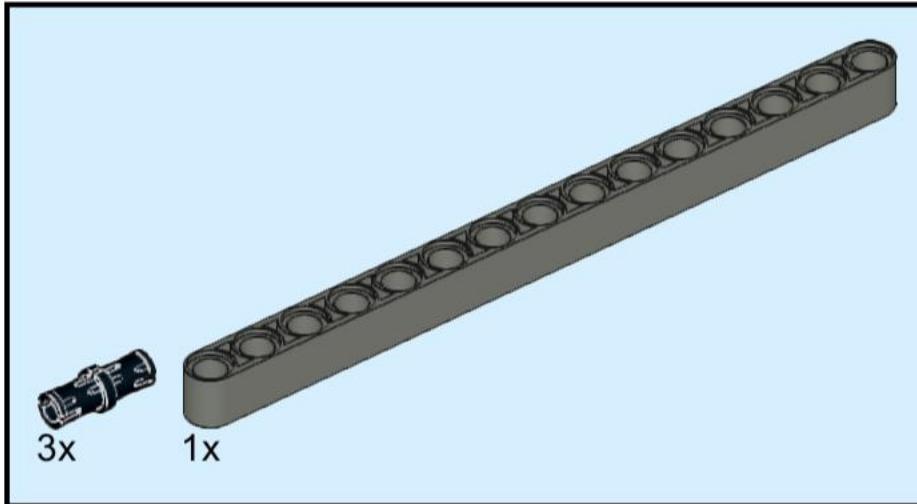
**29**



**30**

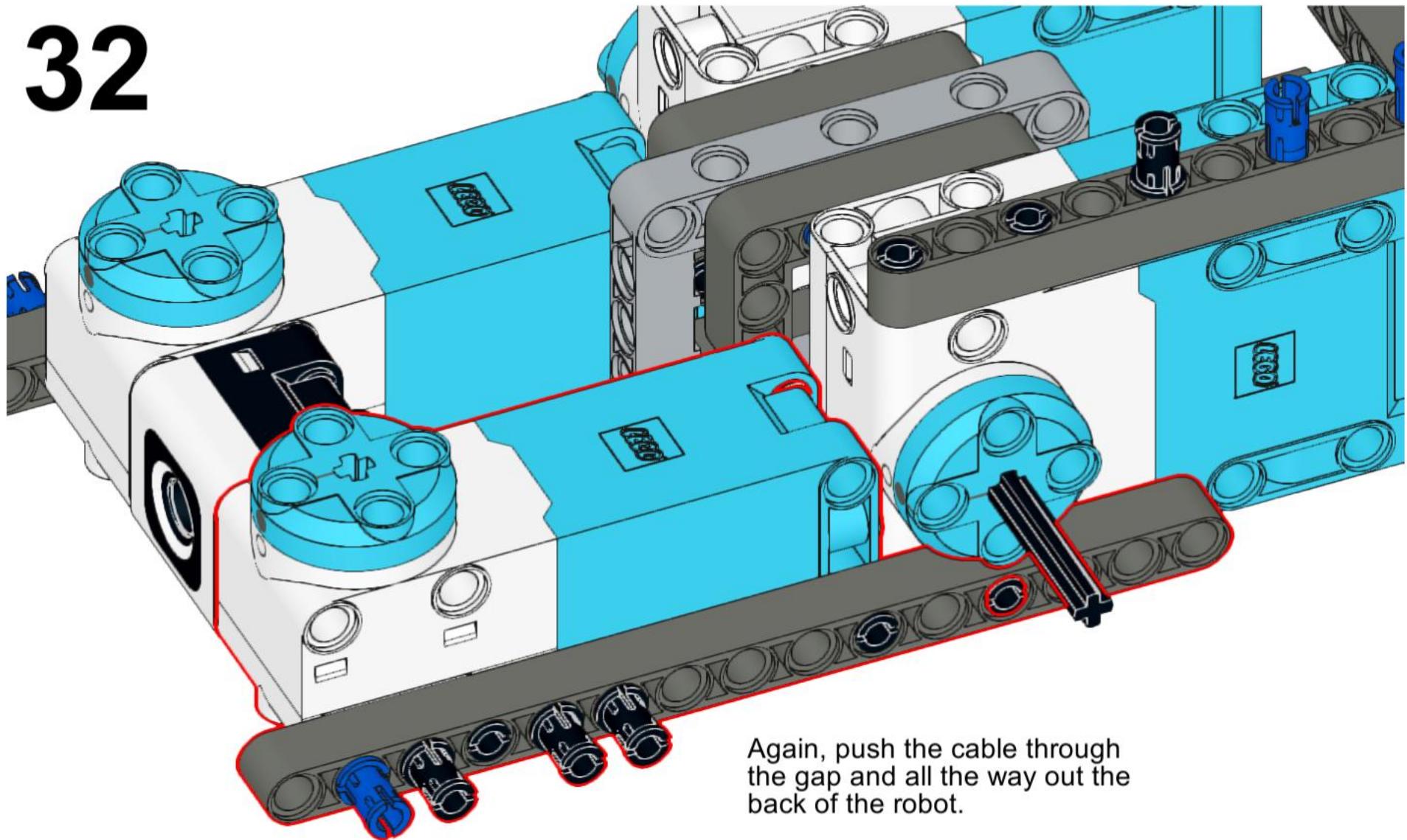


**31**



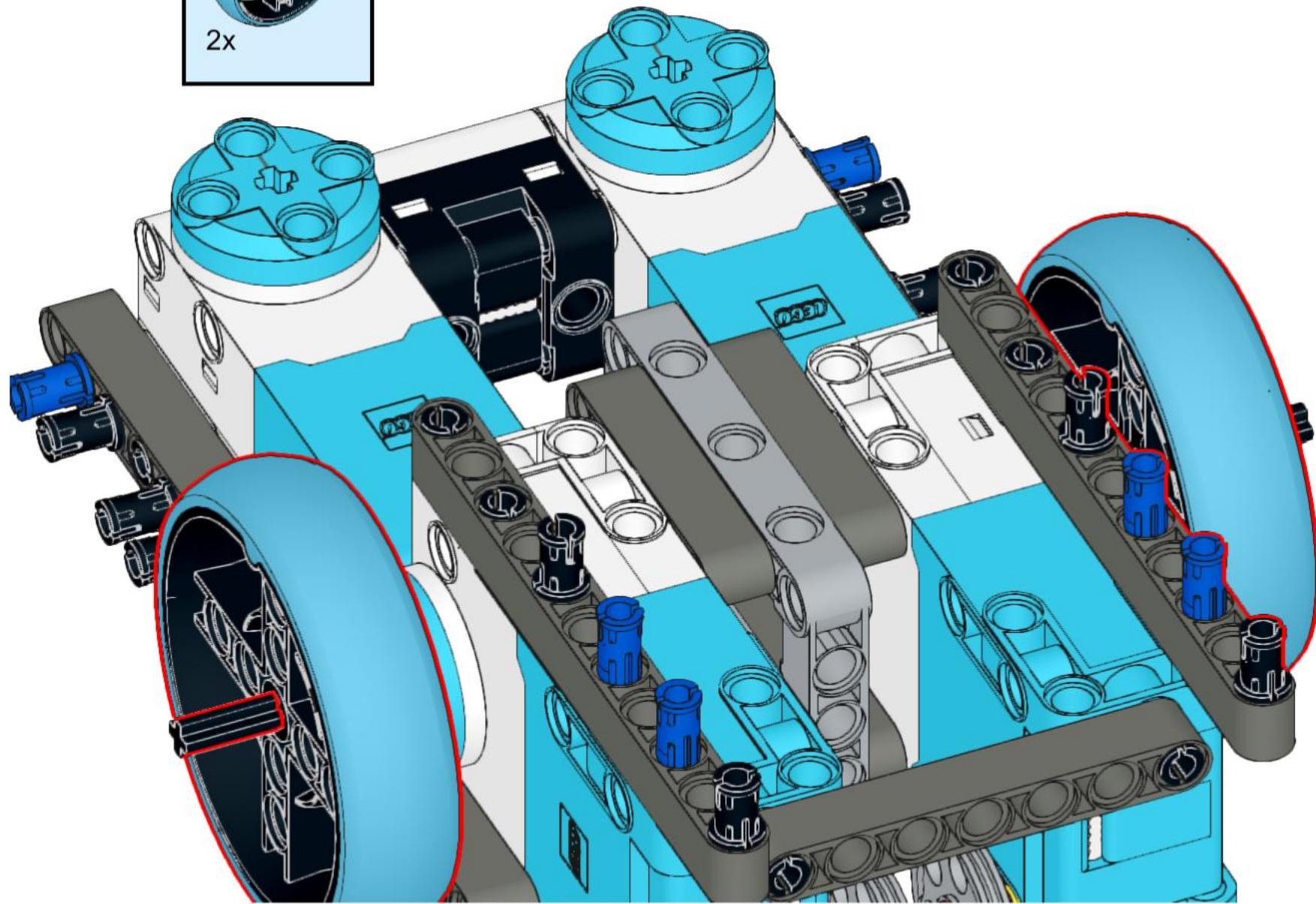
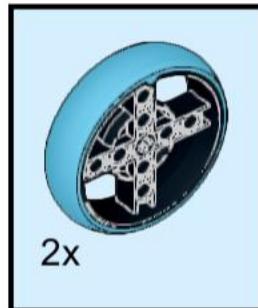
15 1:1

# 32

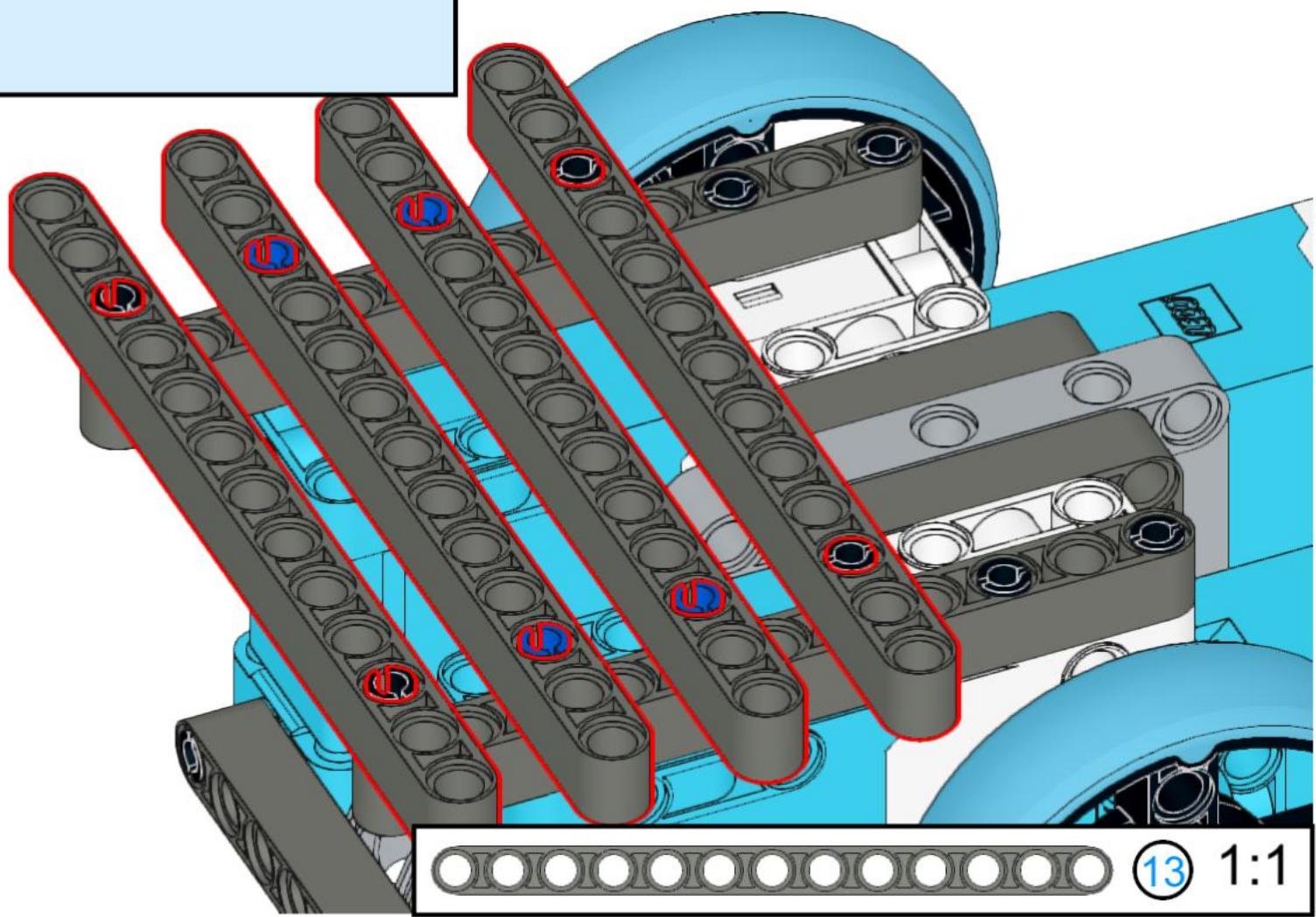
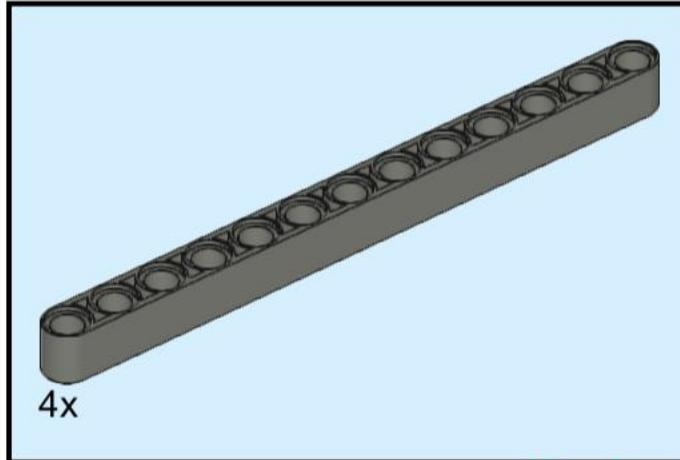


Again, push the cable through  
the gap and all the way out the  
back of the robot.

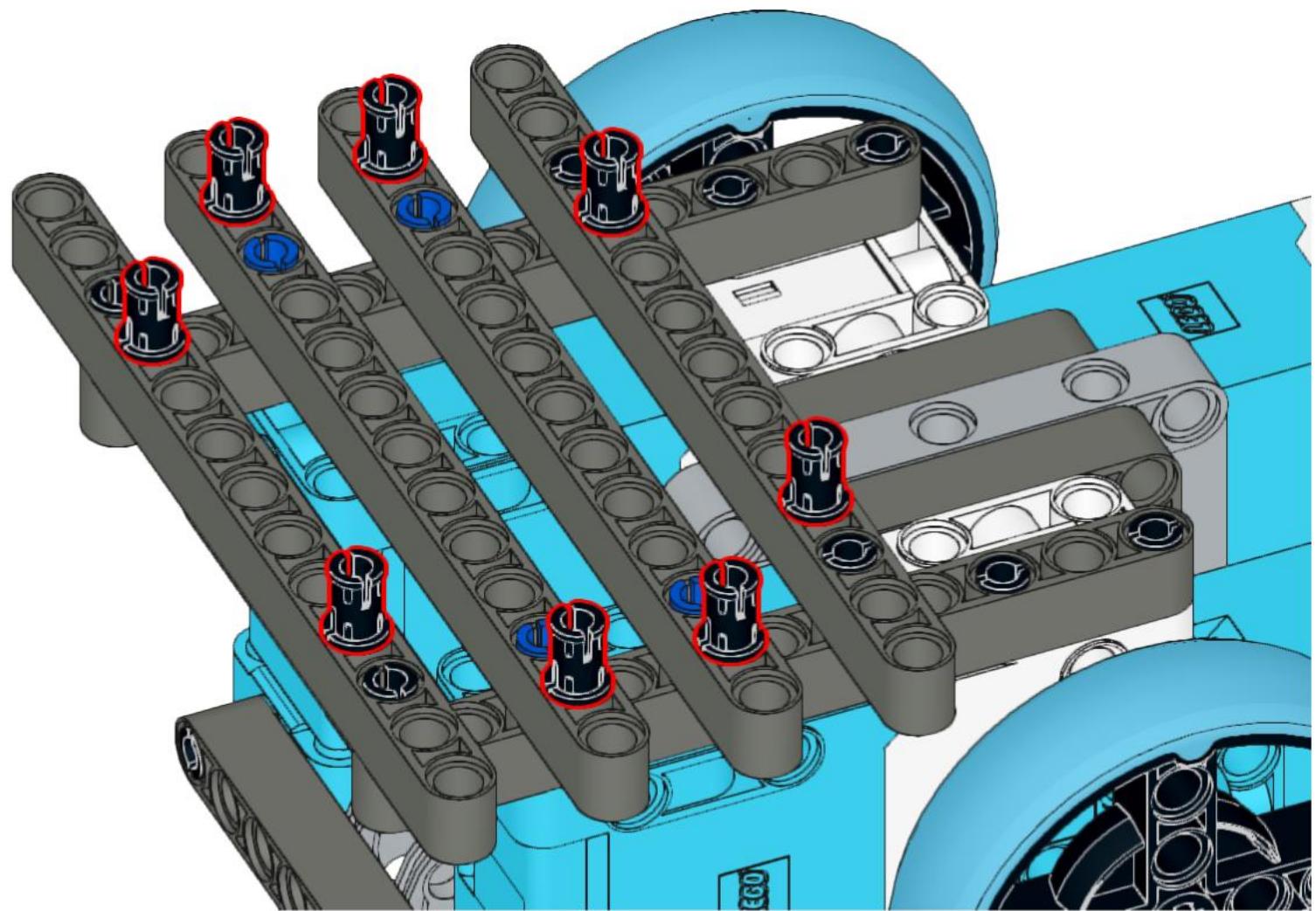
**33**



34



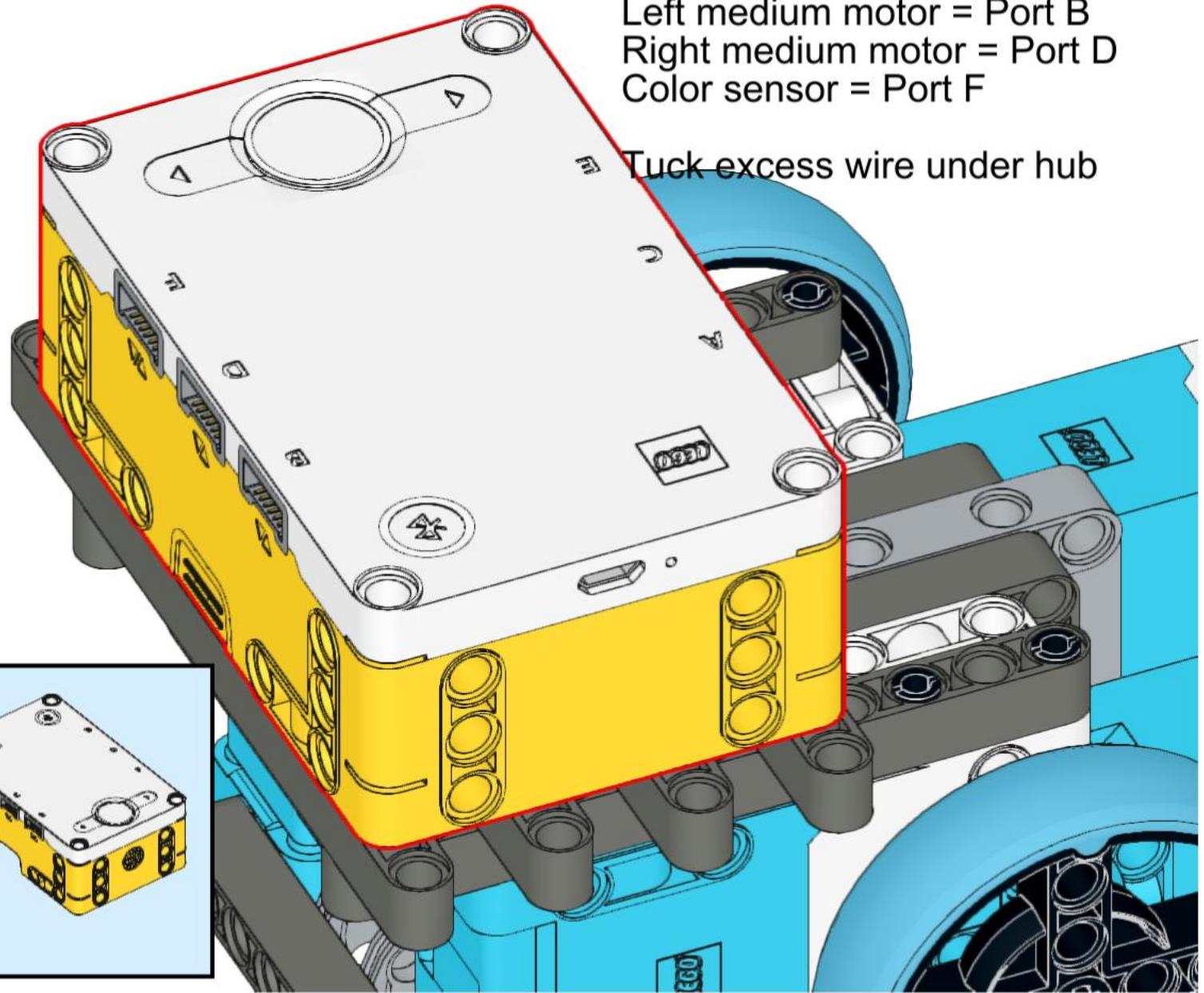
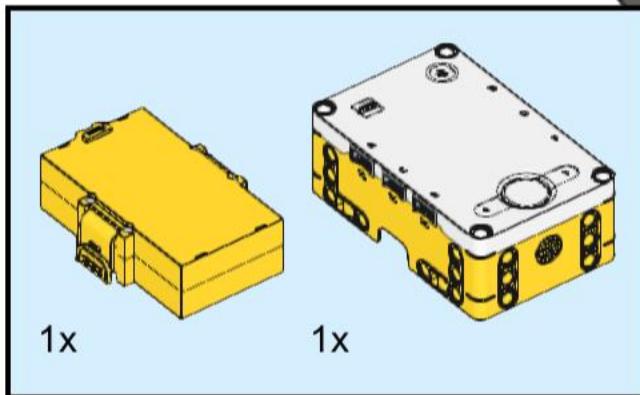
**35**



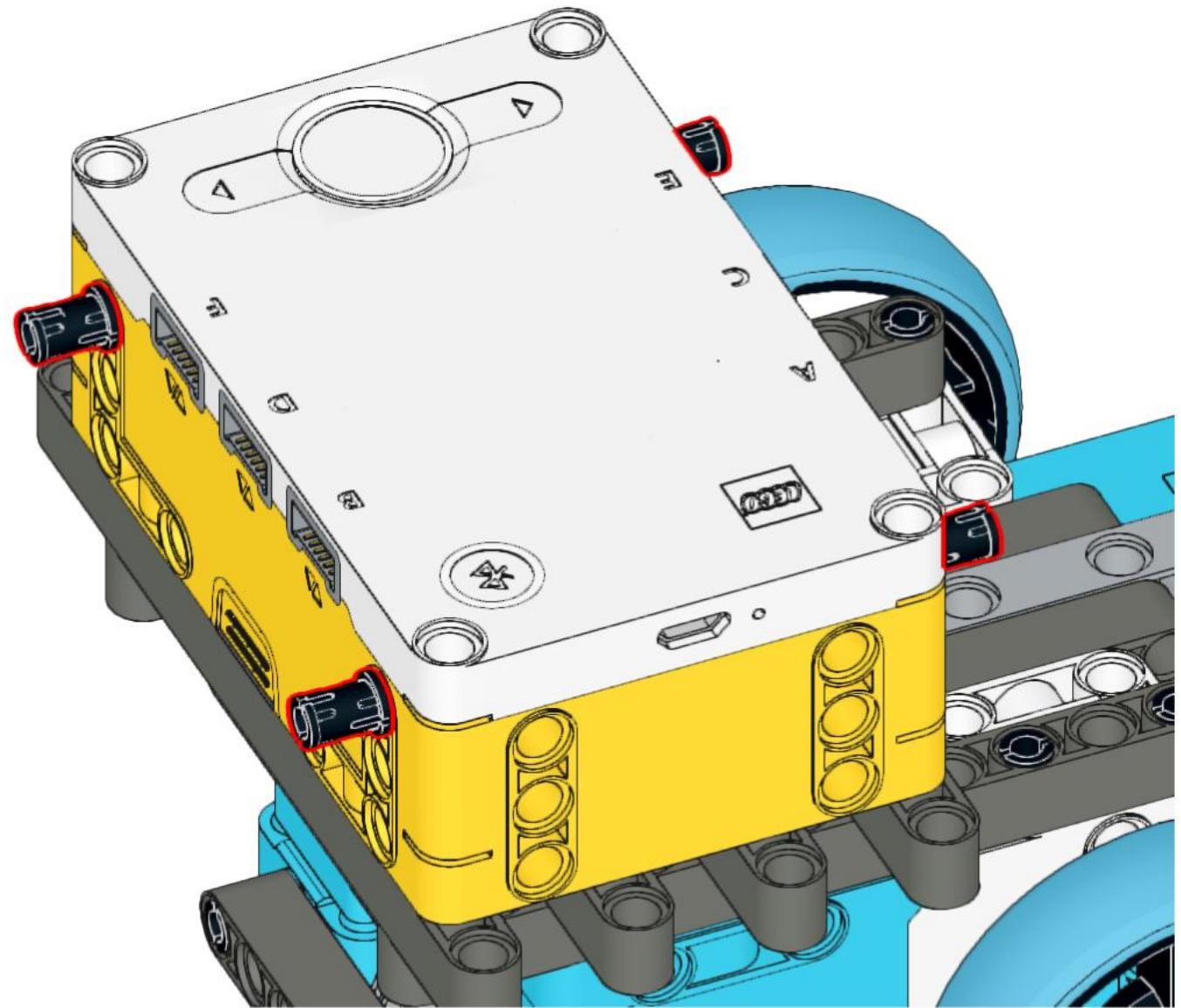
# 36

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

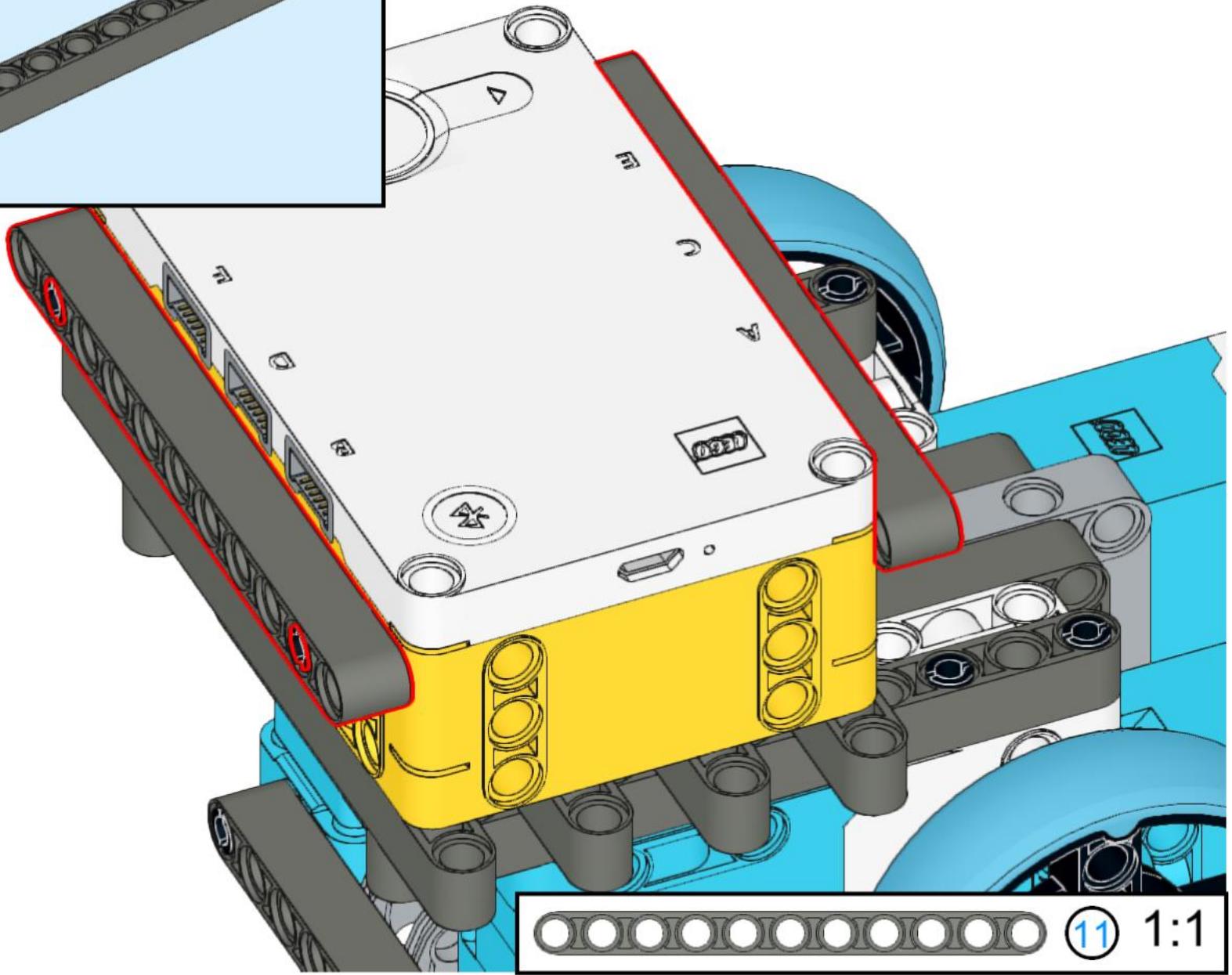
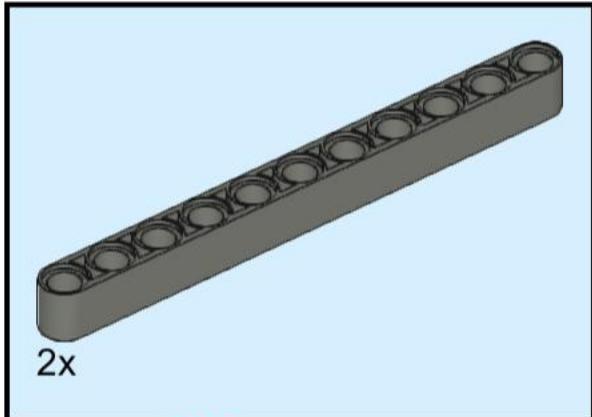
→ Tuck excess wire under hub



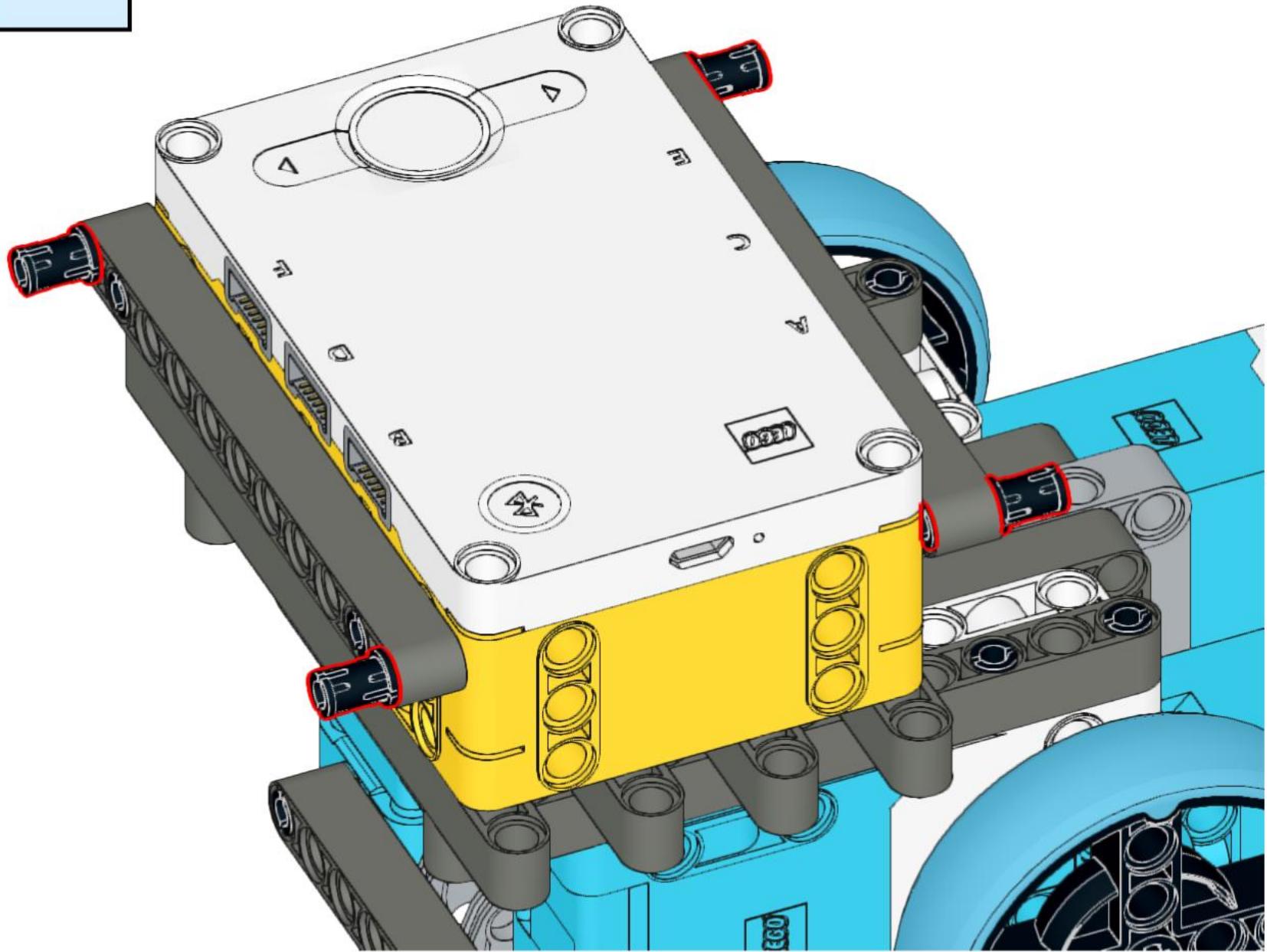
37



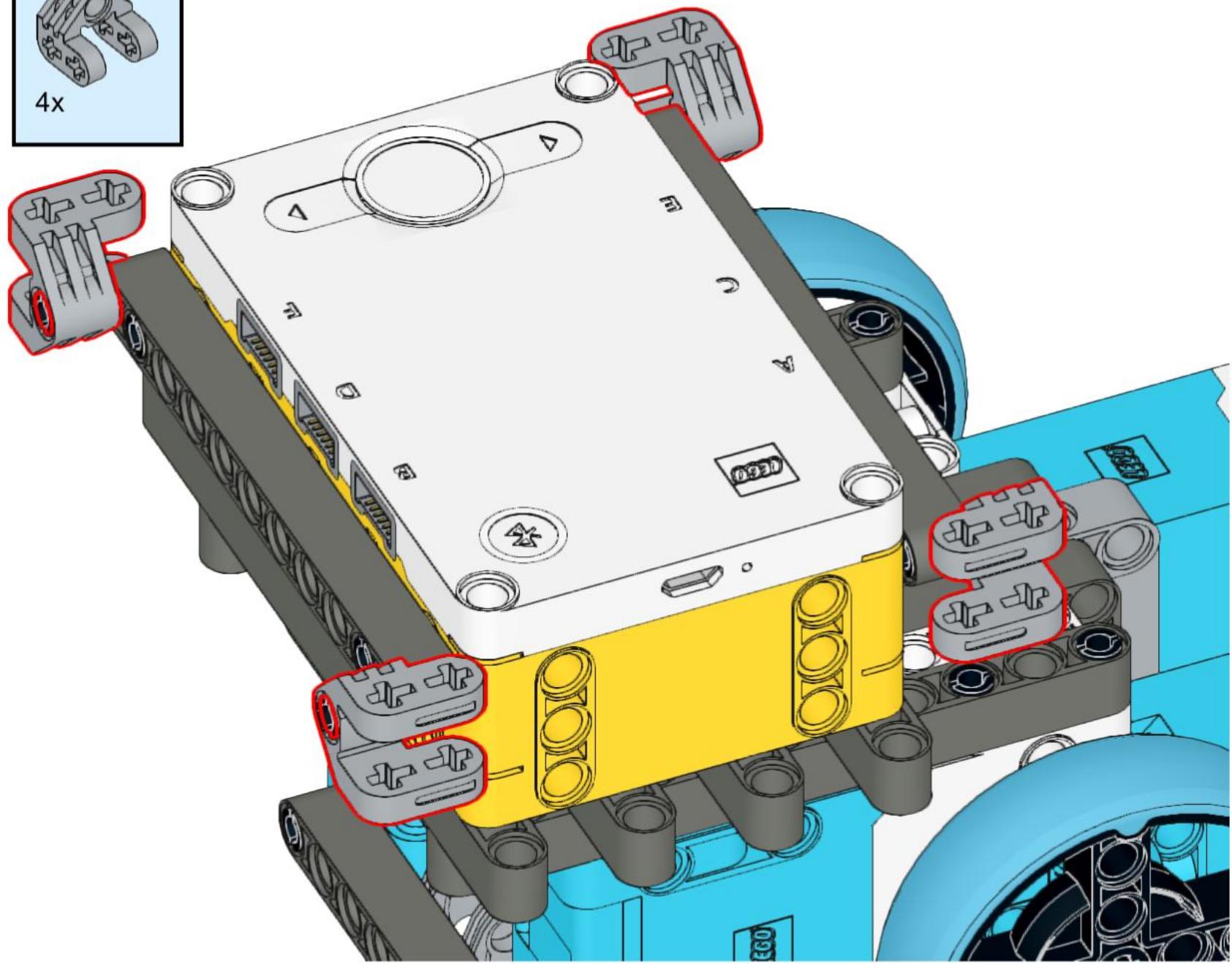
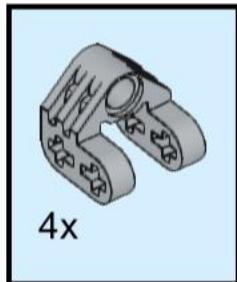
**38**



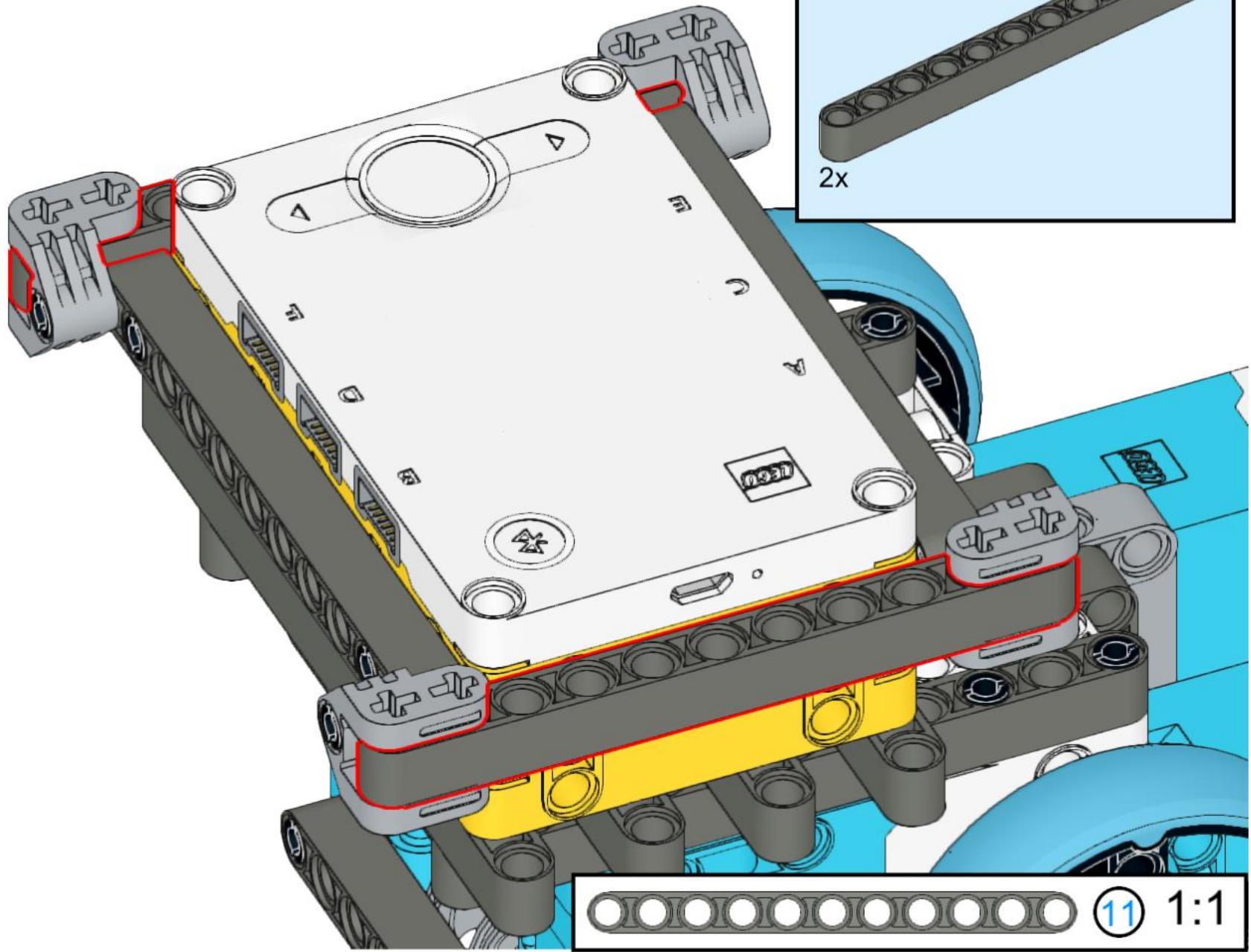
**39**



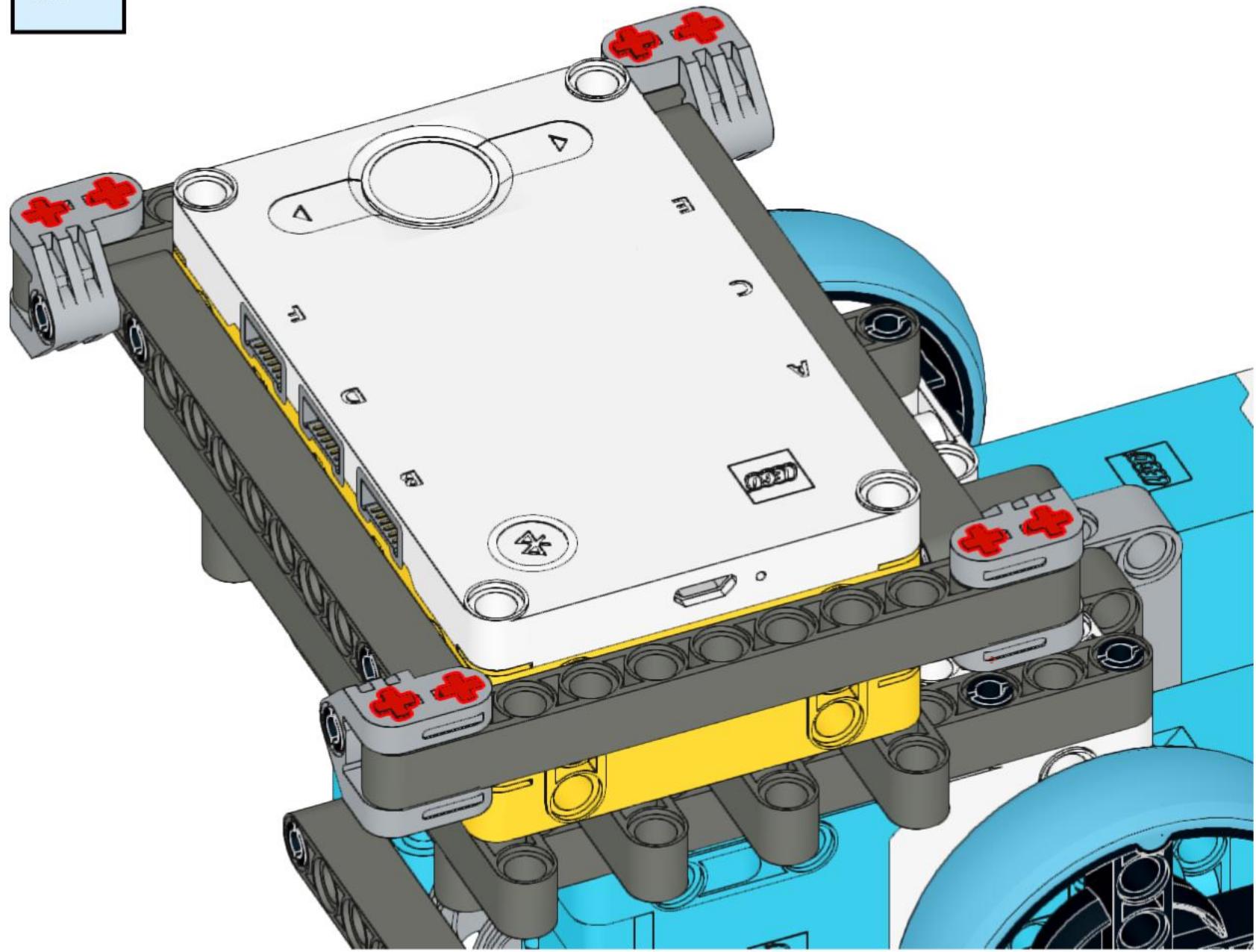
**40**



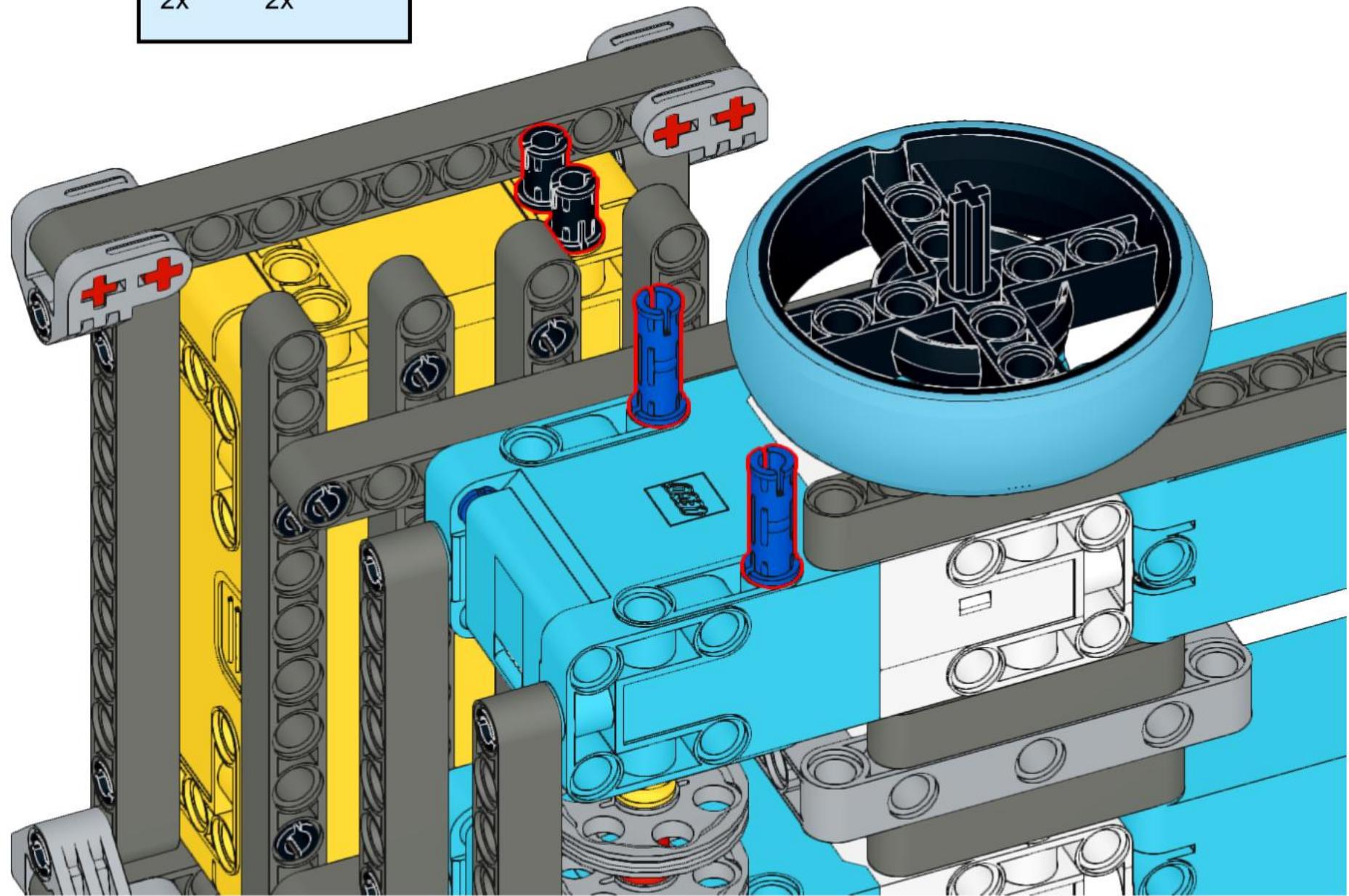
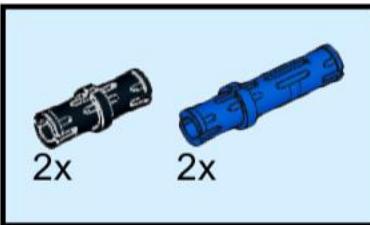
**41**



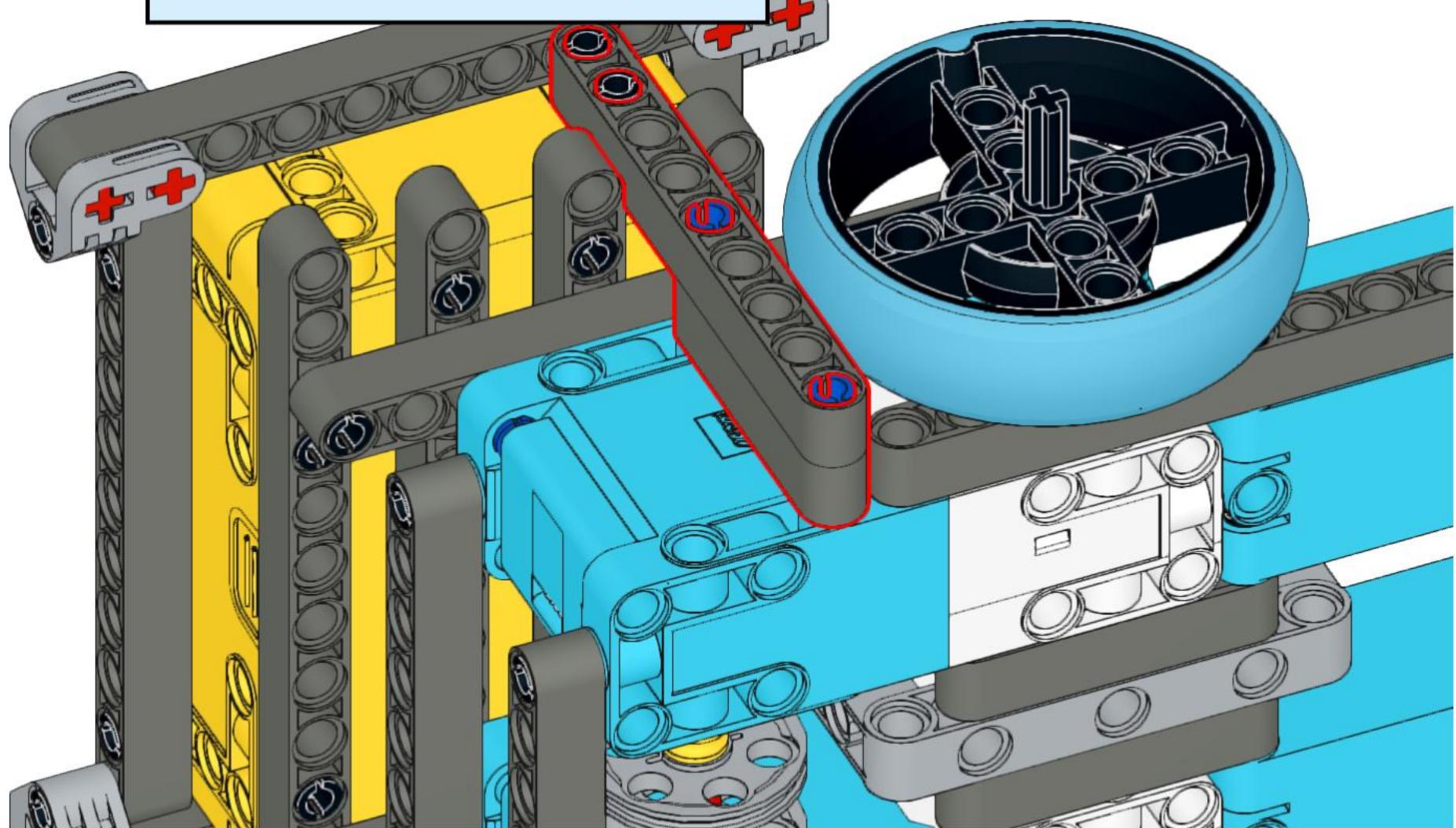
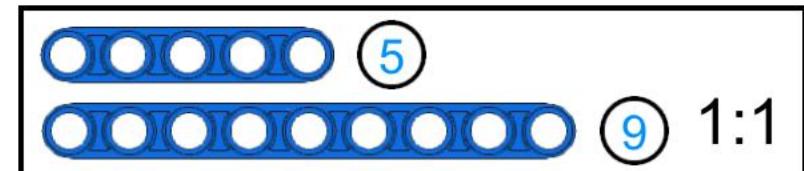
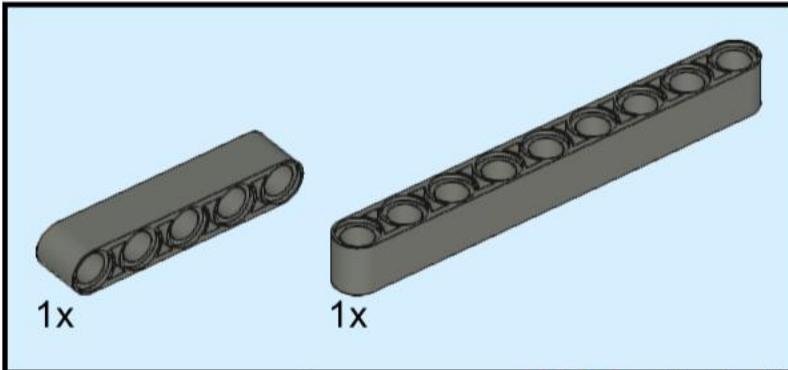
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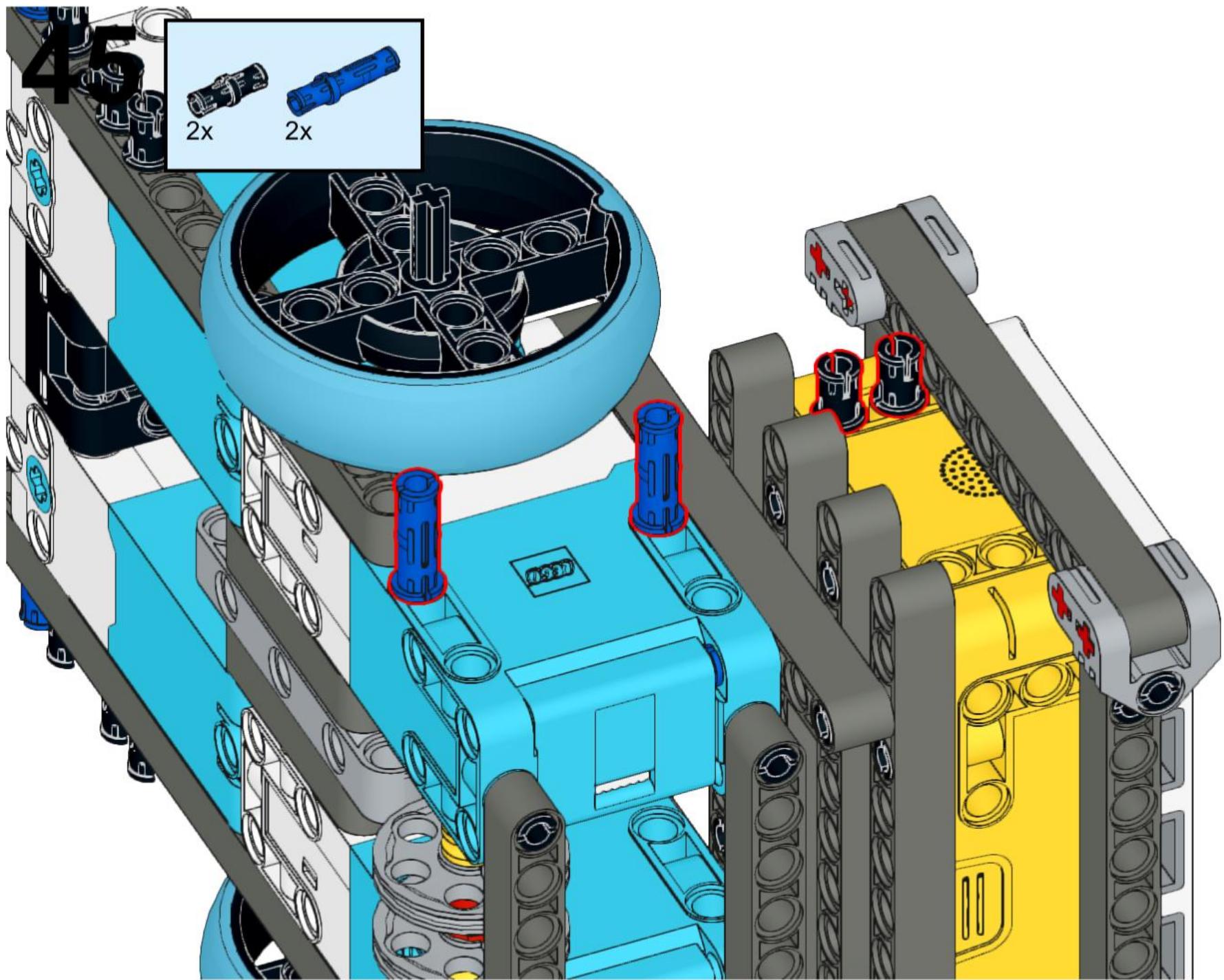


# 43

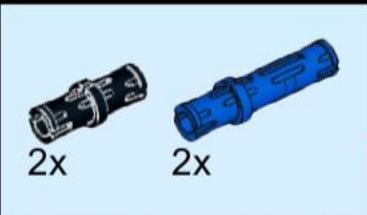


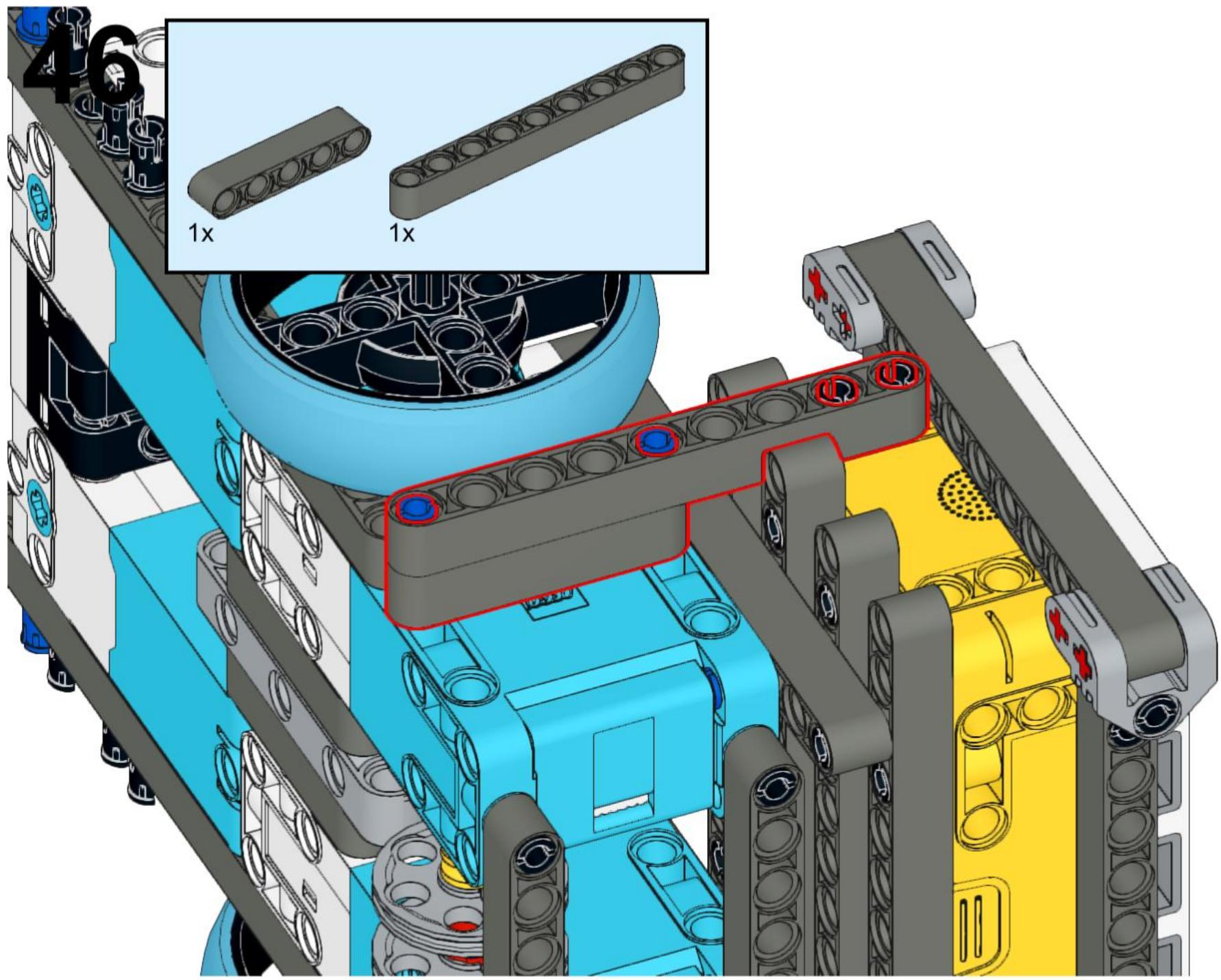
44





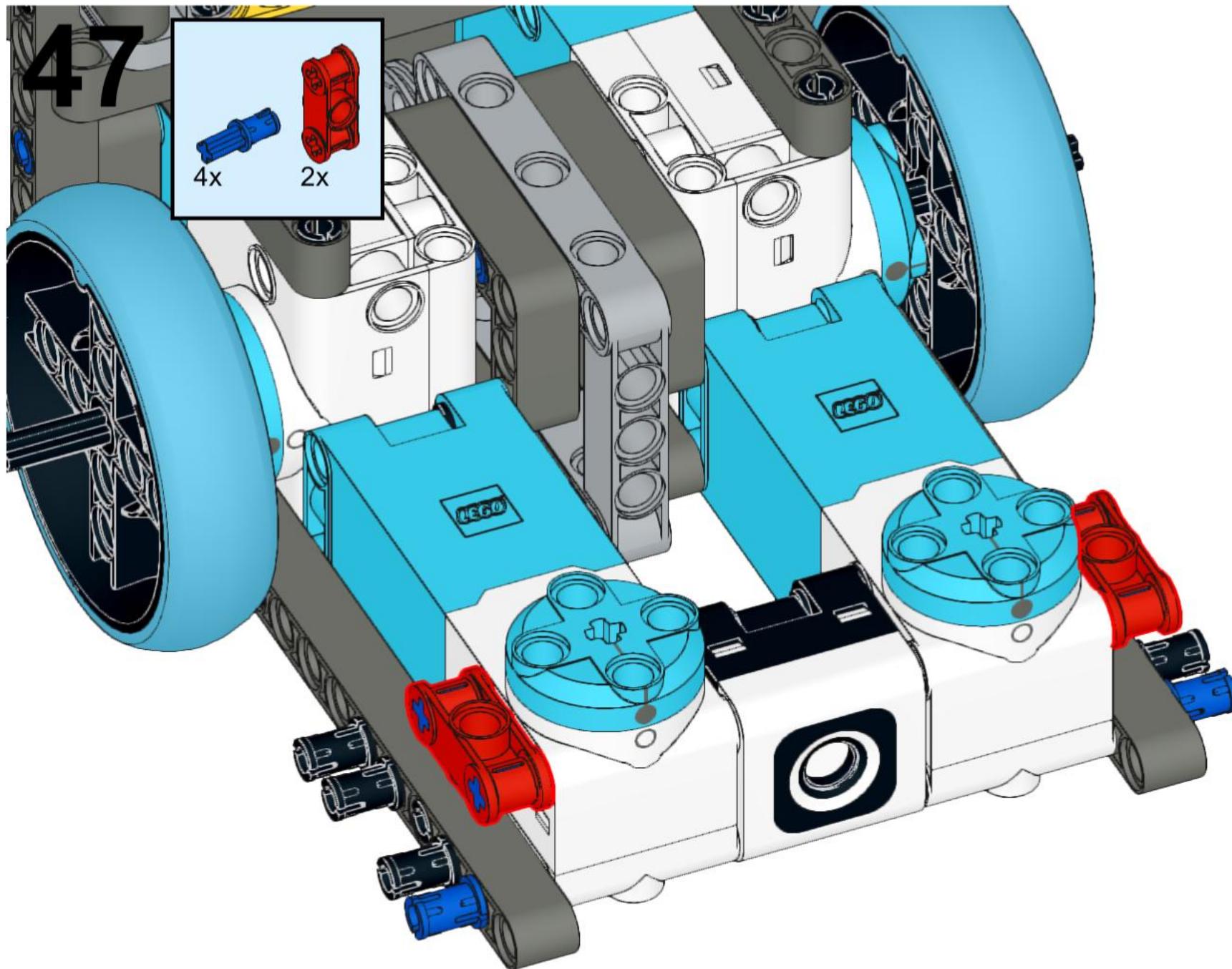
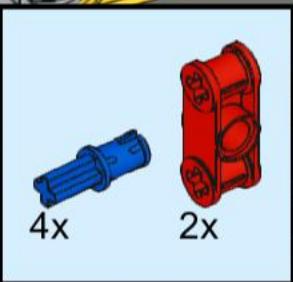
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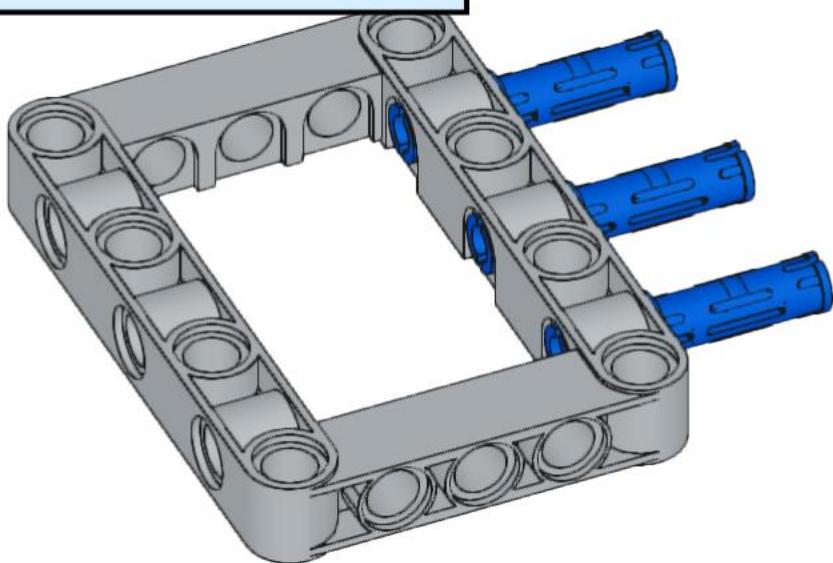
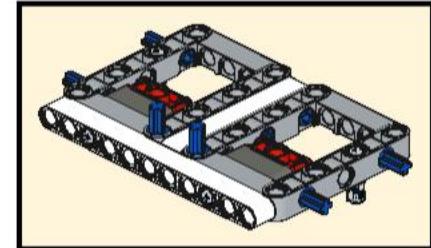
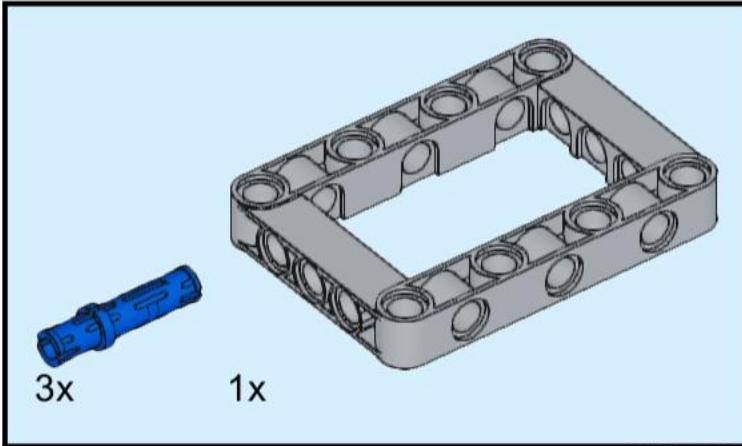


46

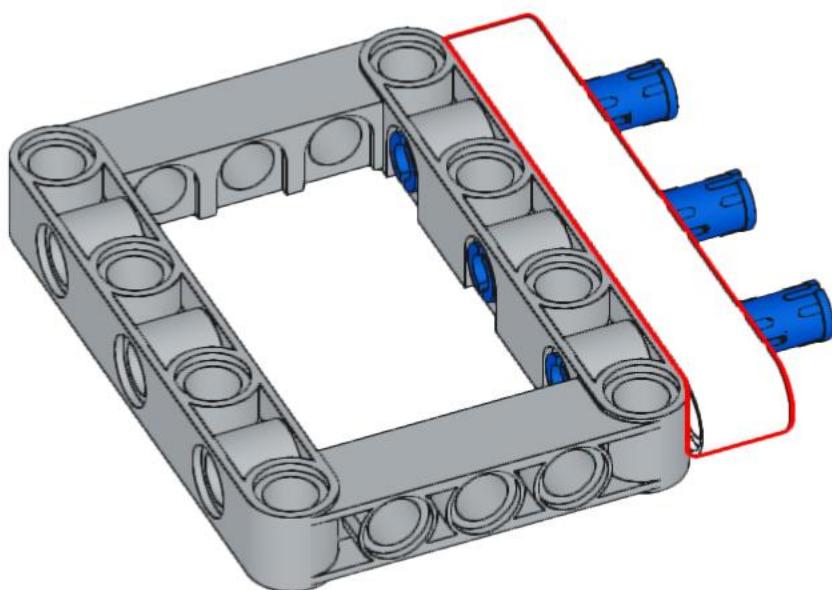
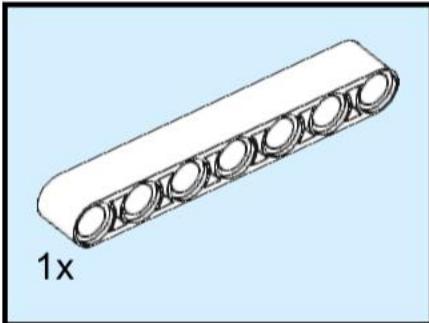
**47**



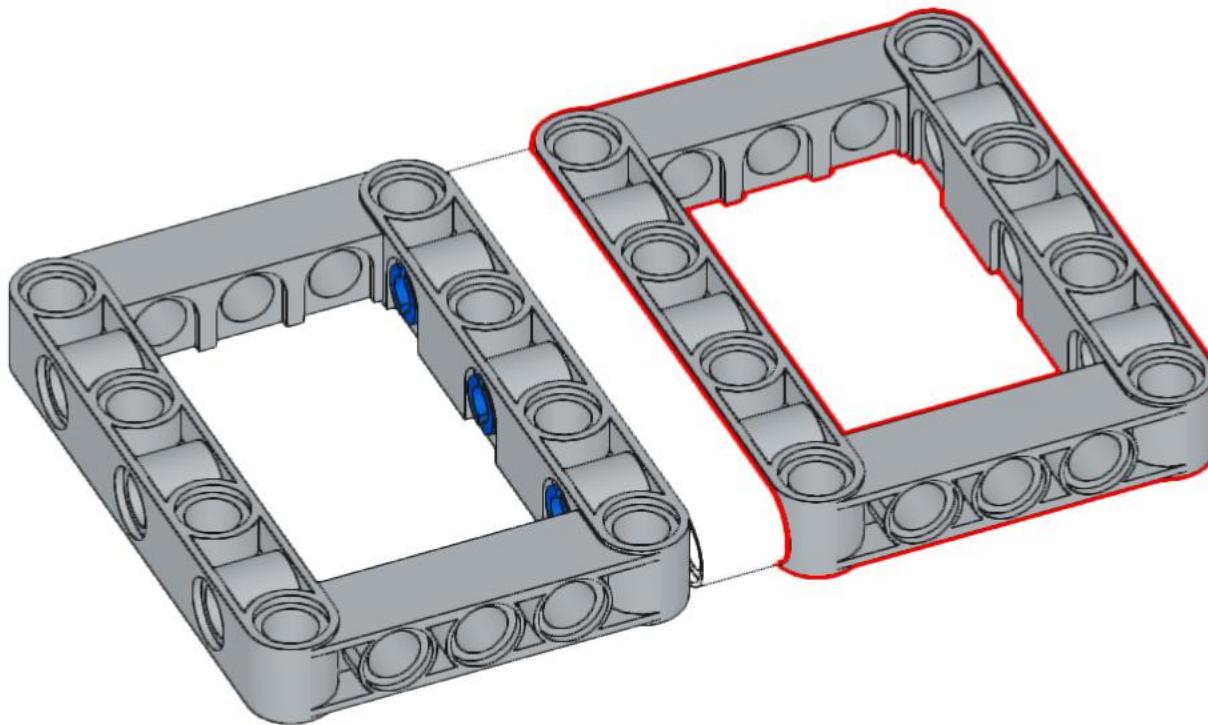
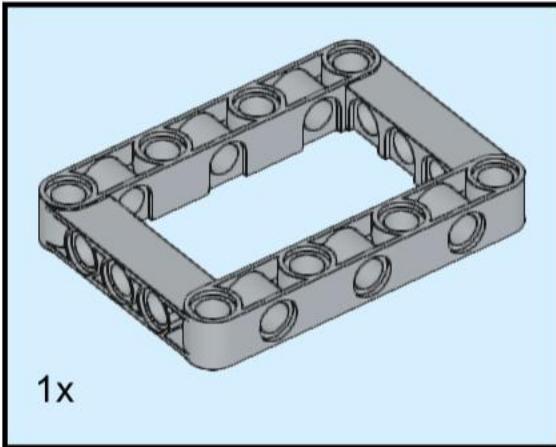
**48**



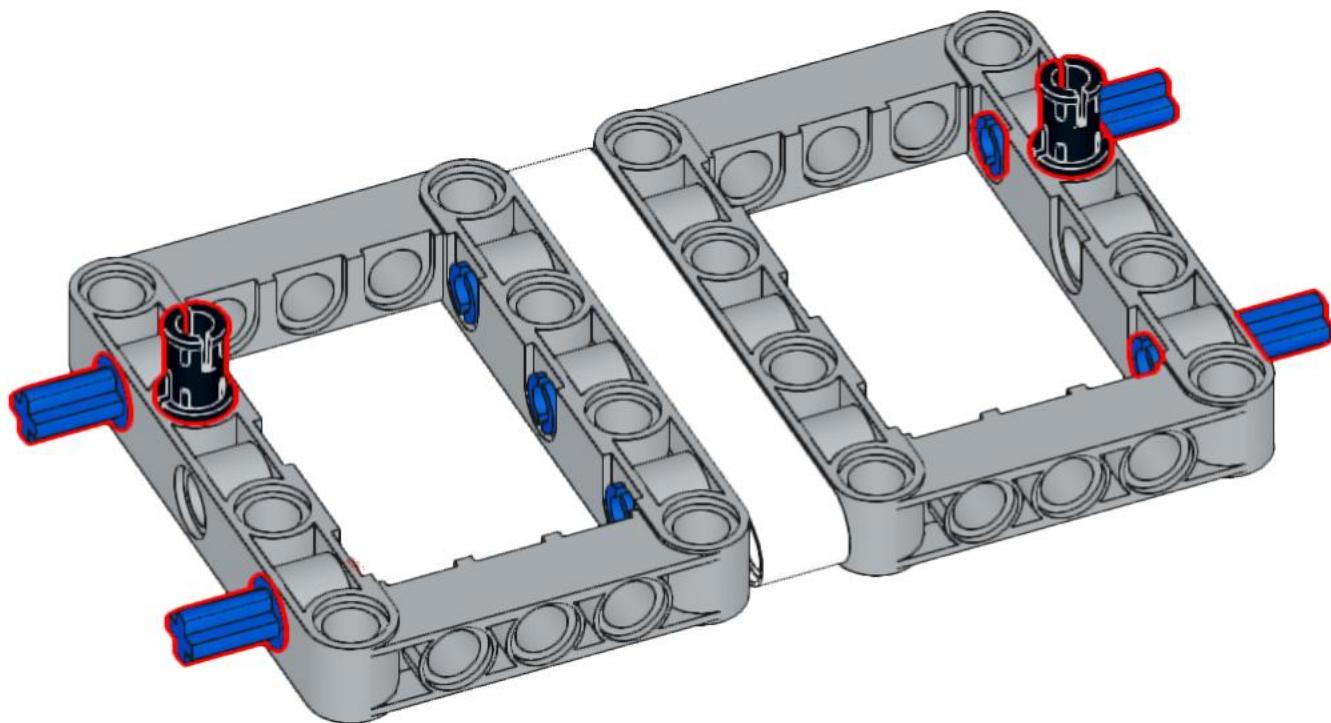
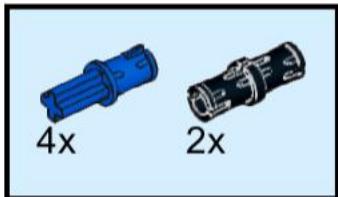
**49**



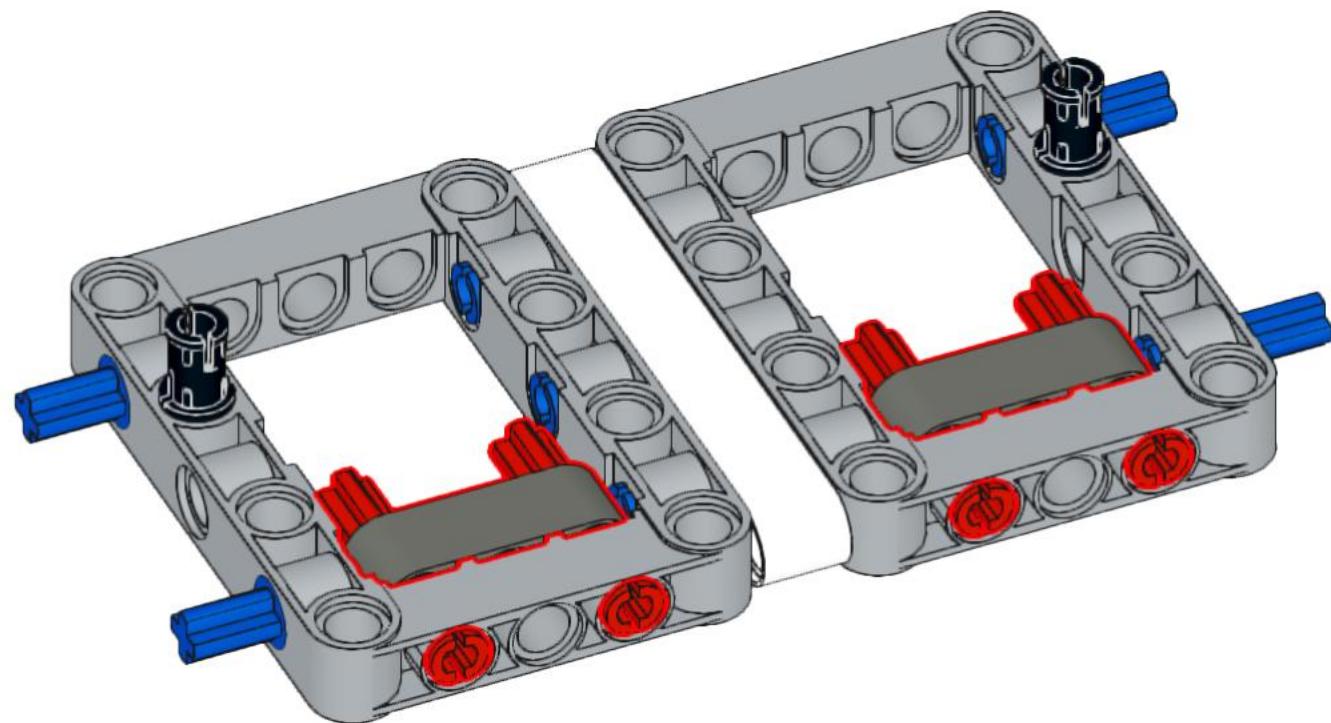
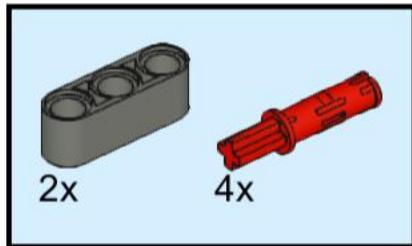
**50**



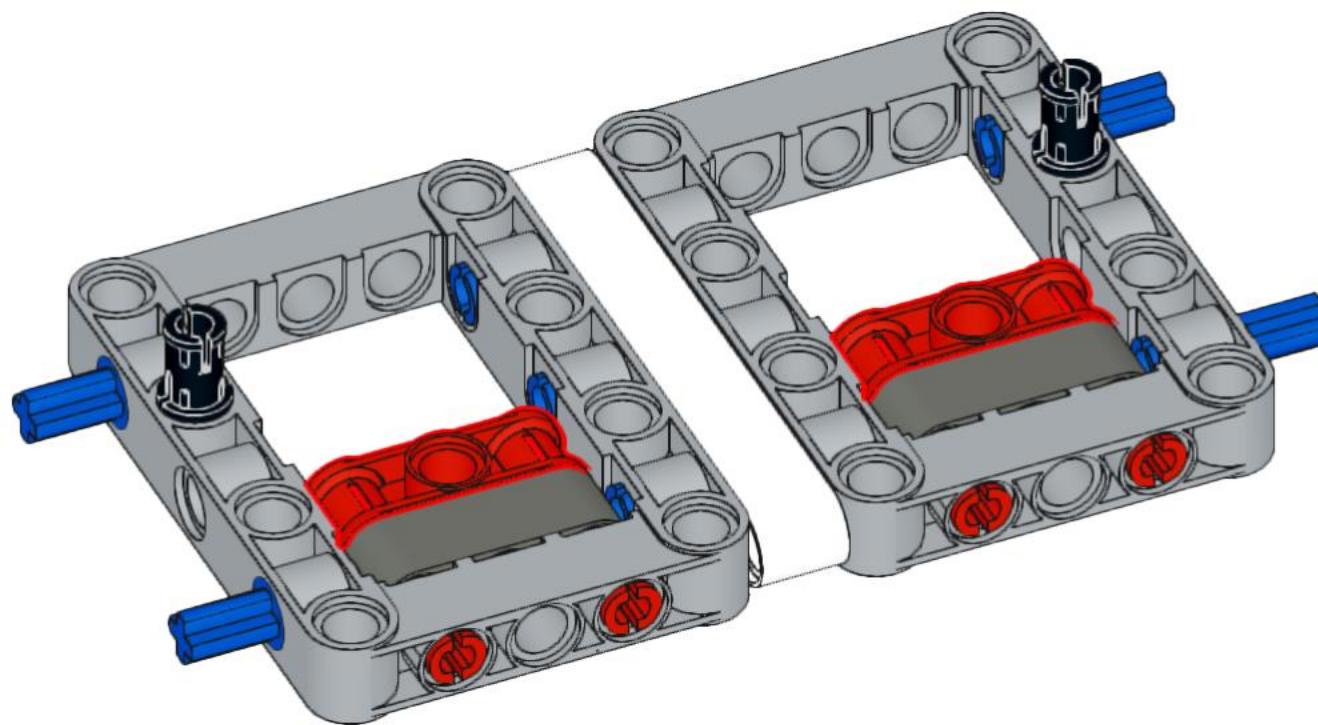
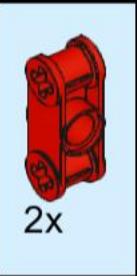
**51**



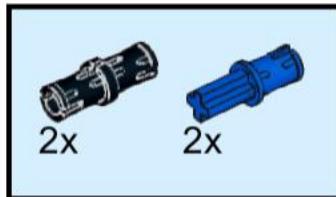
**52**



**53**

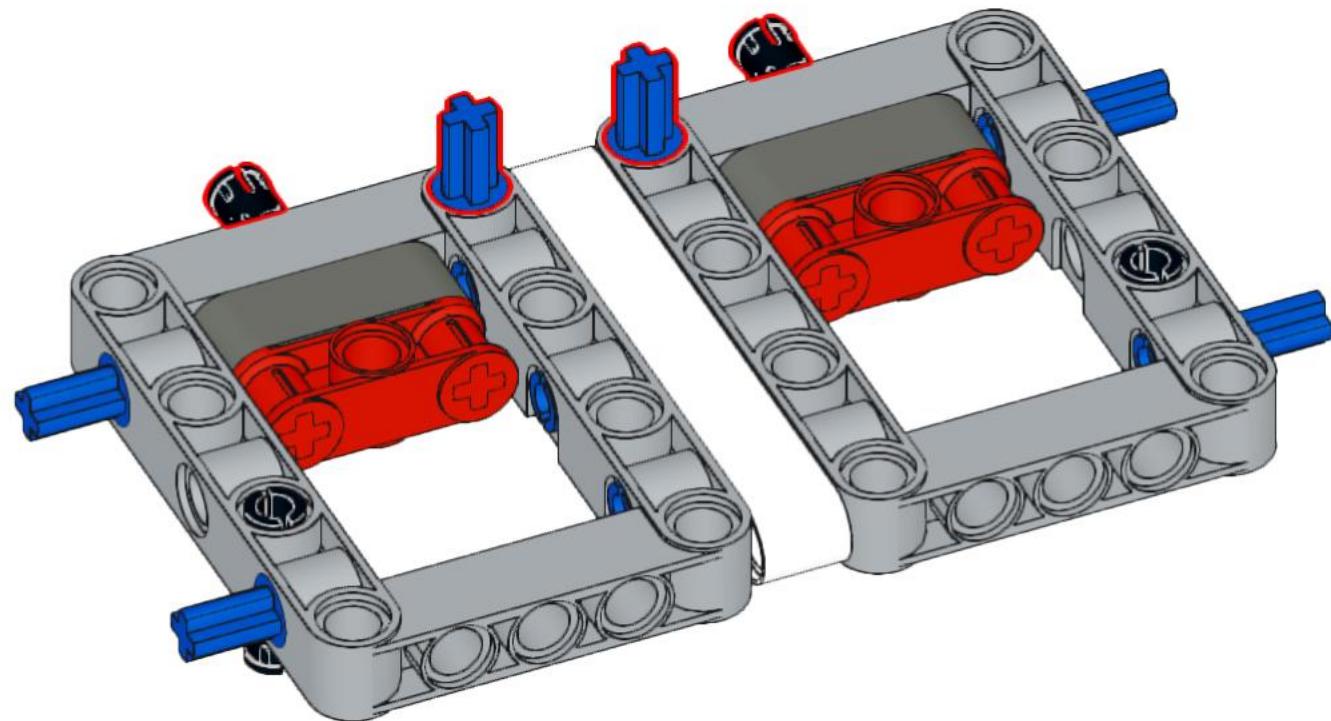


**54**

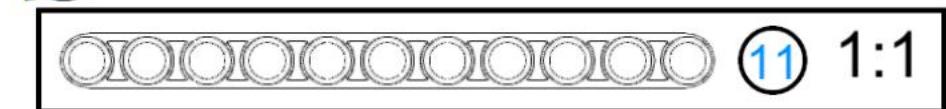
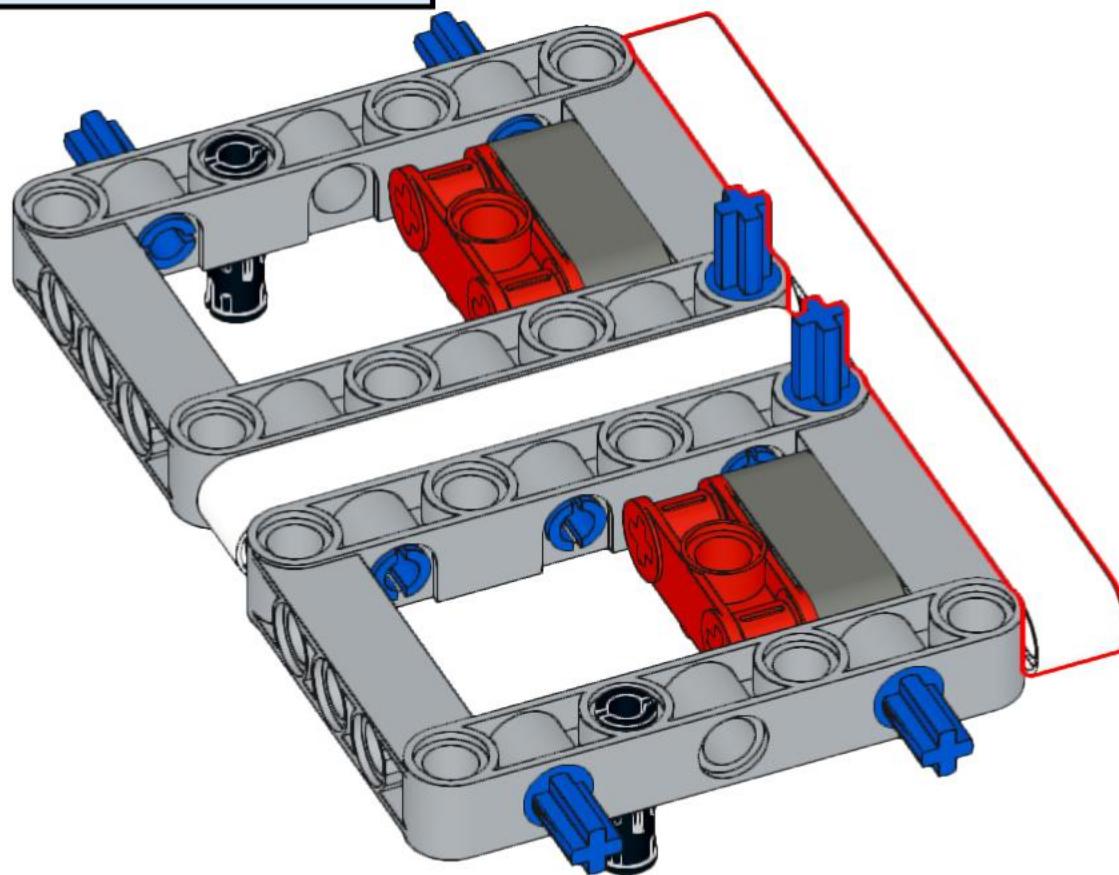
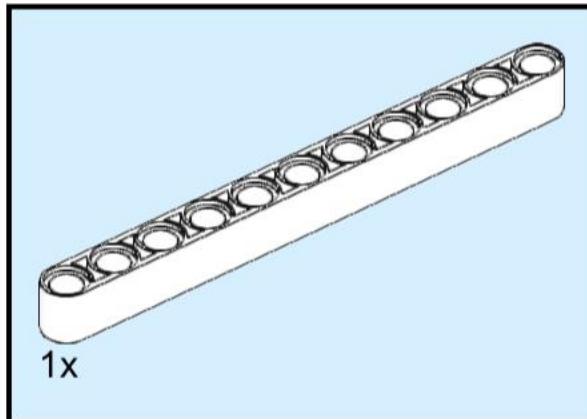


2x

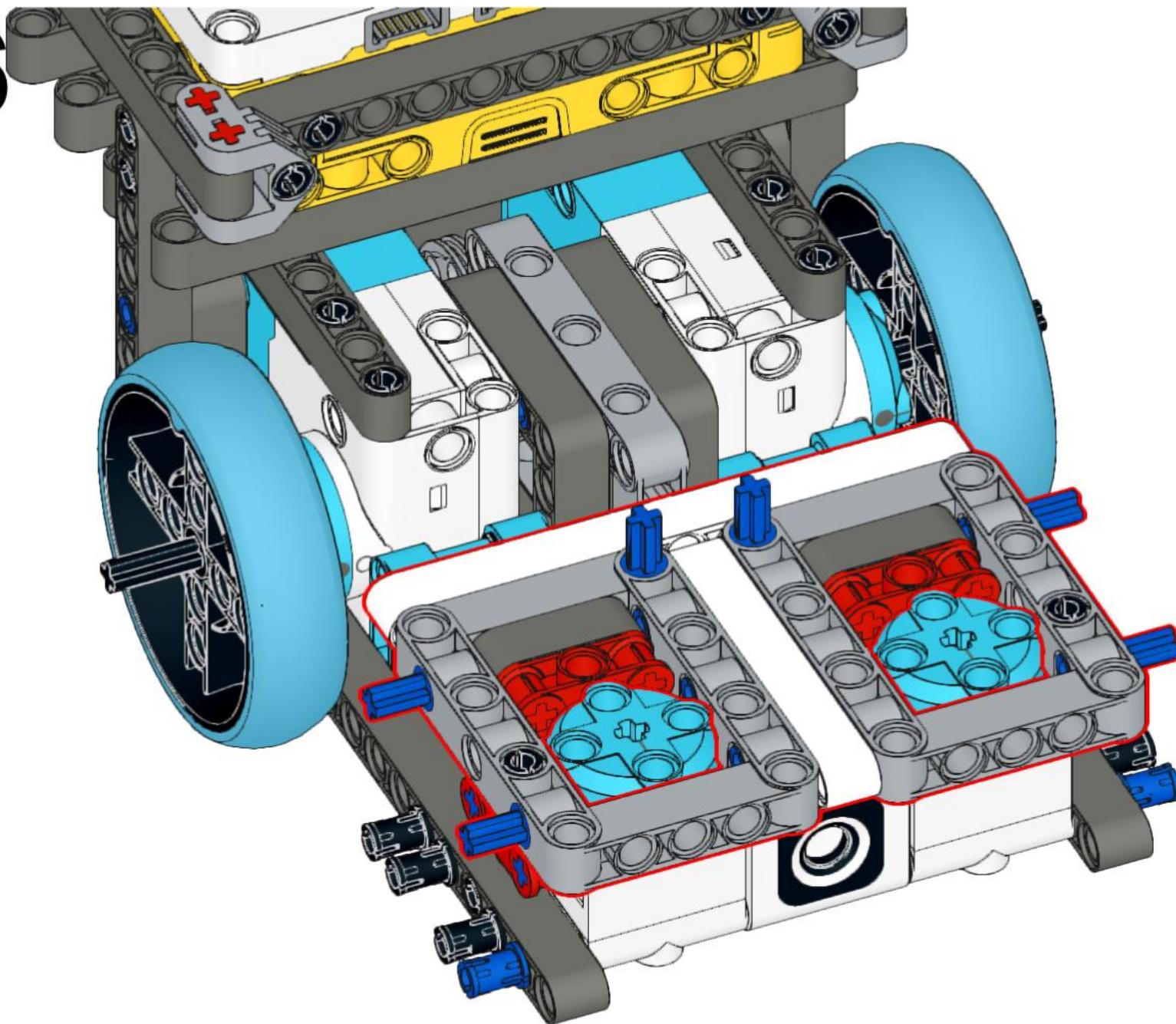
2x

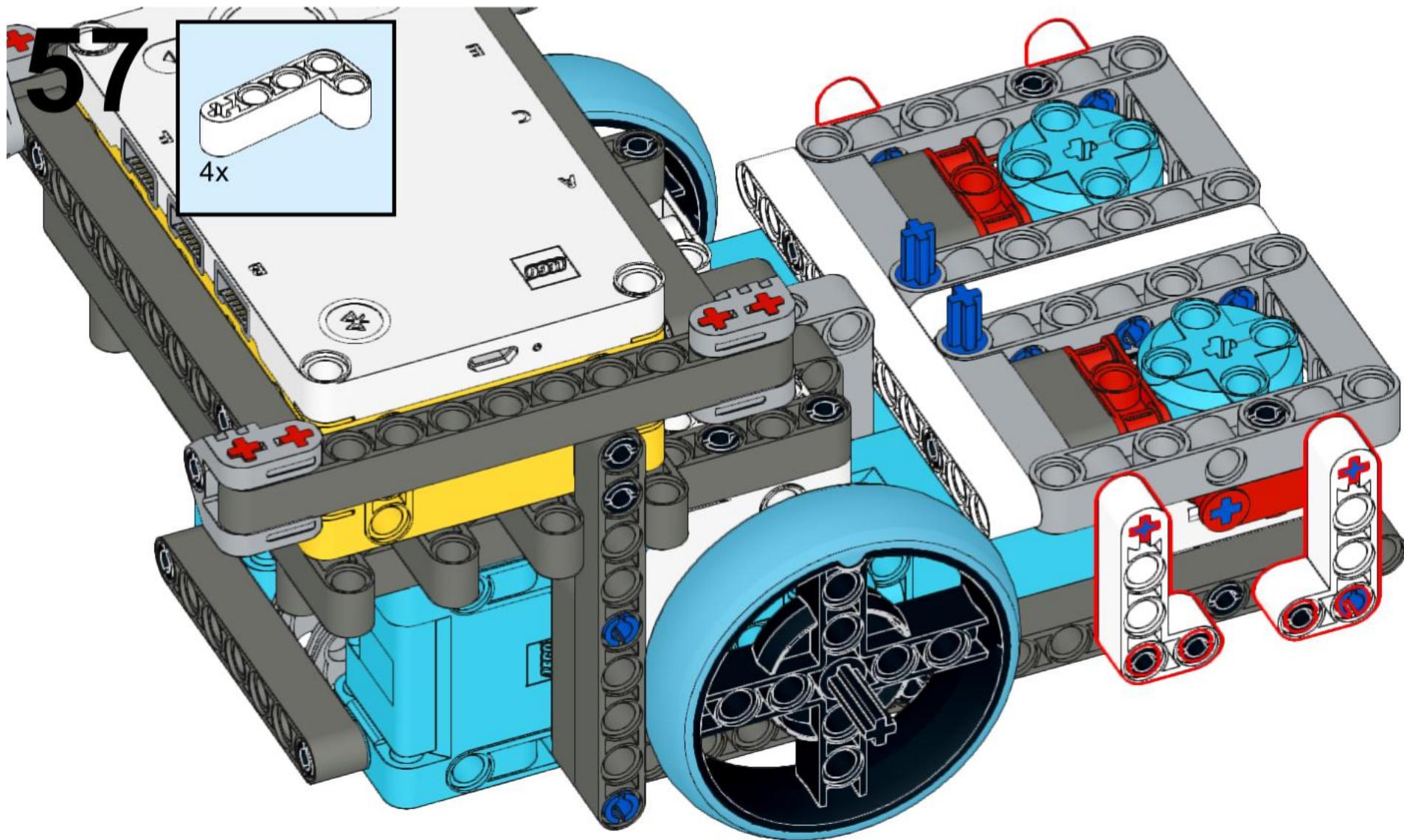


**55**

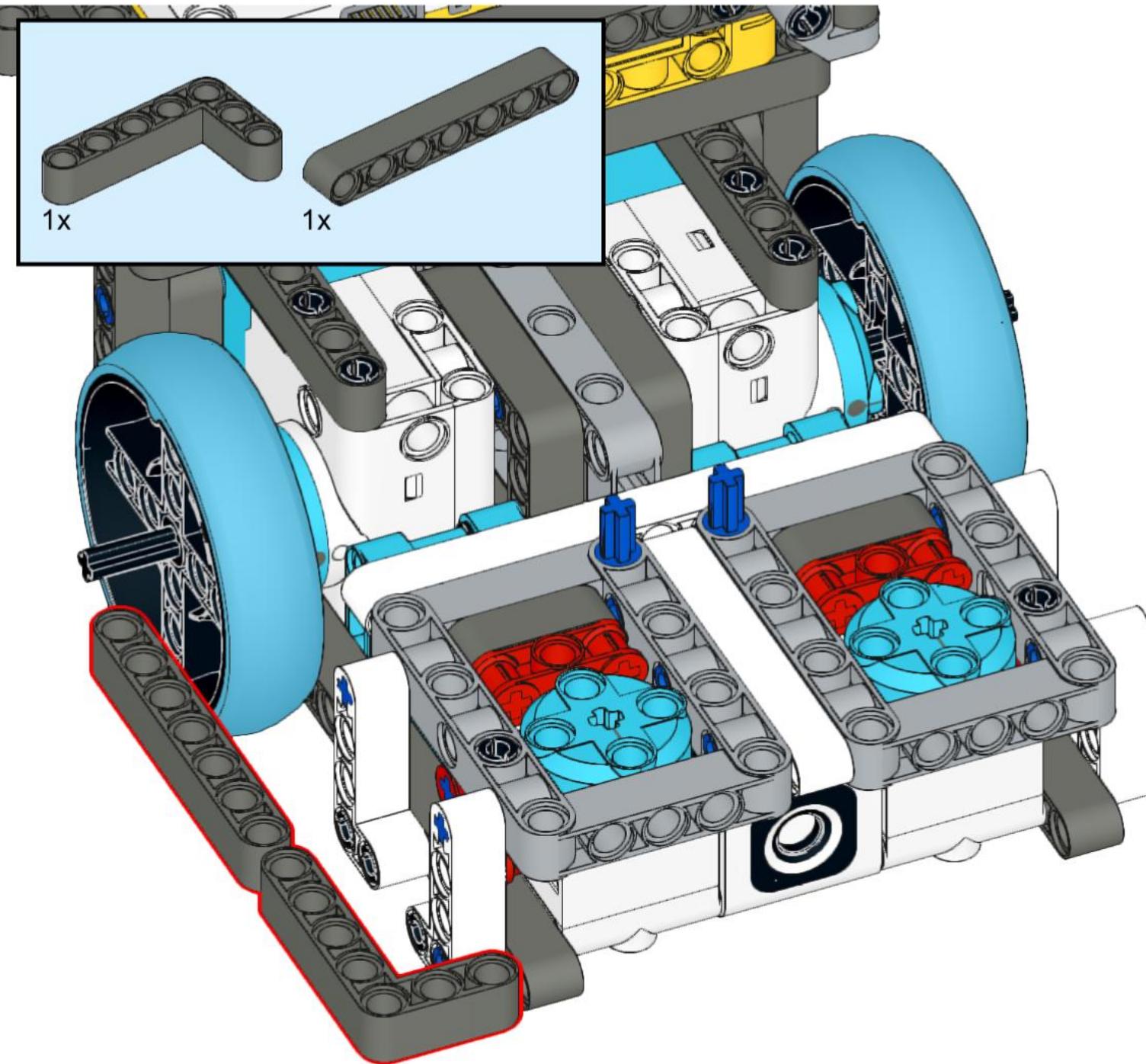


**56**

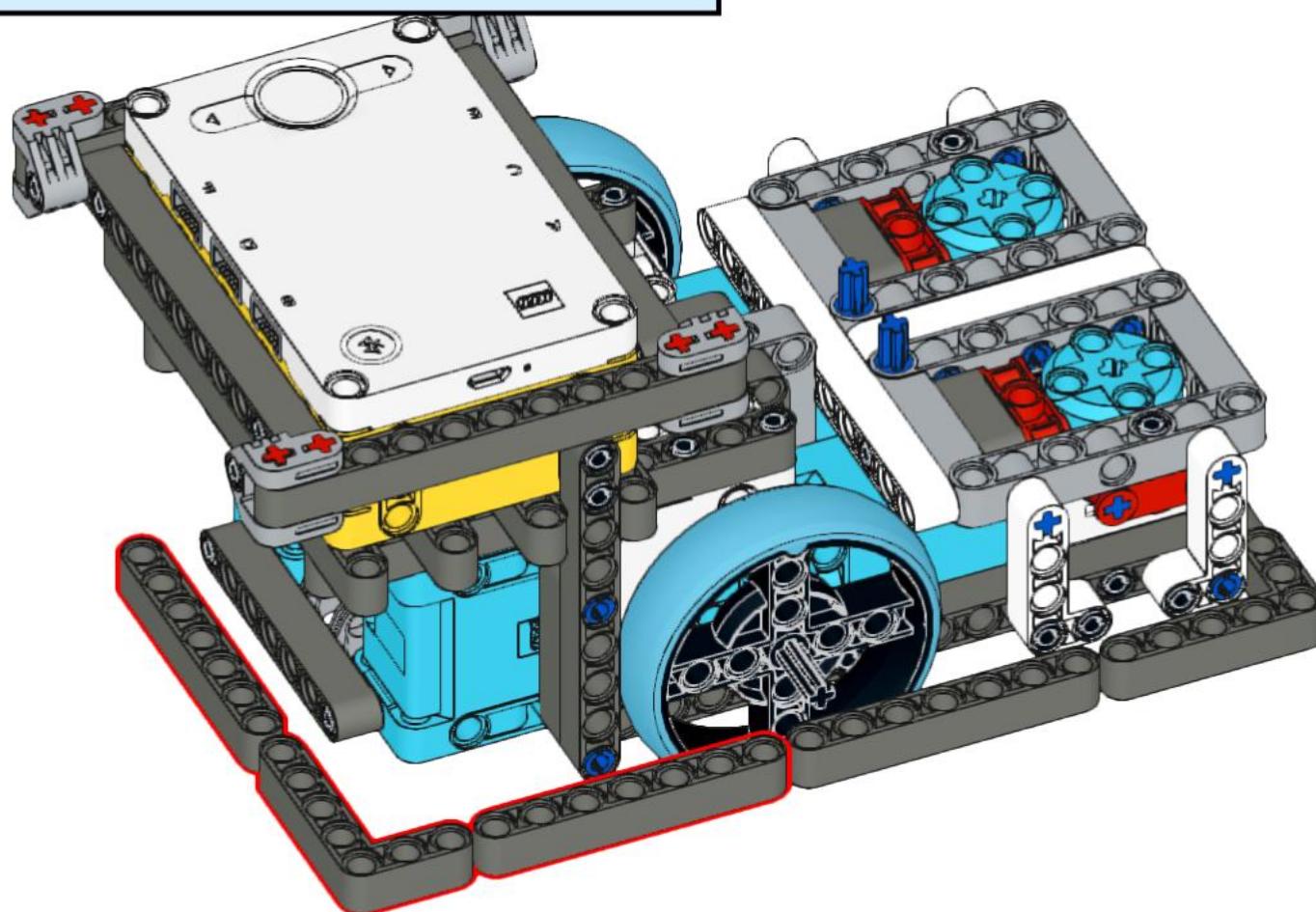
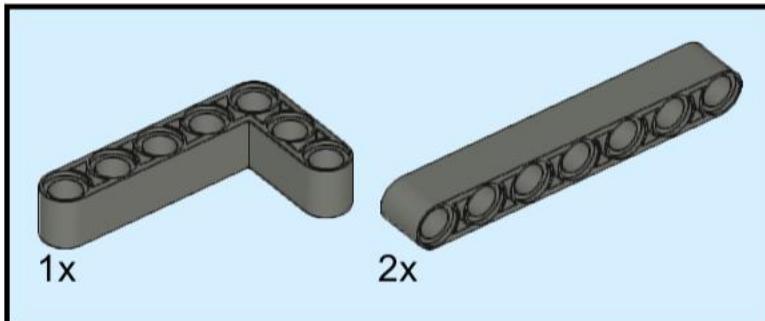




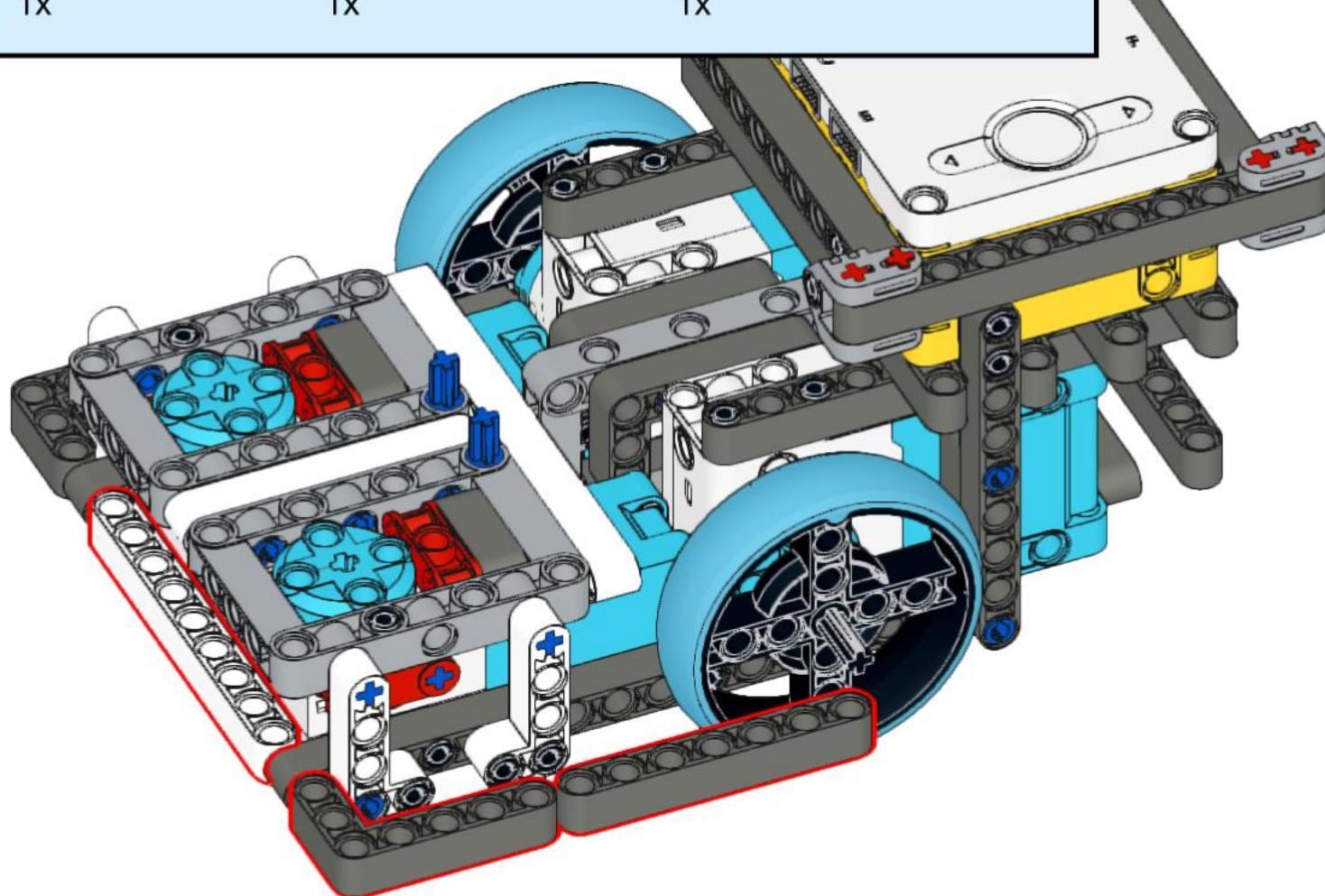
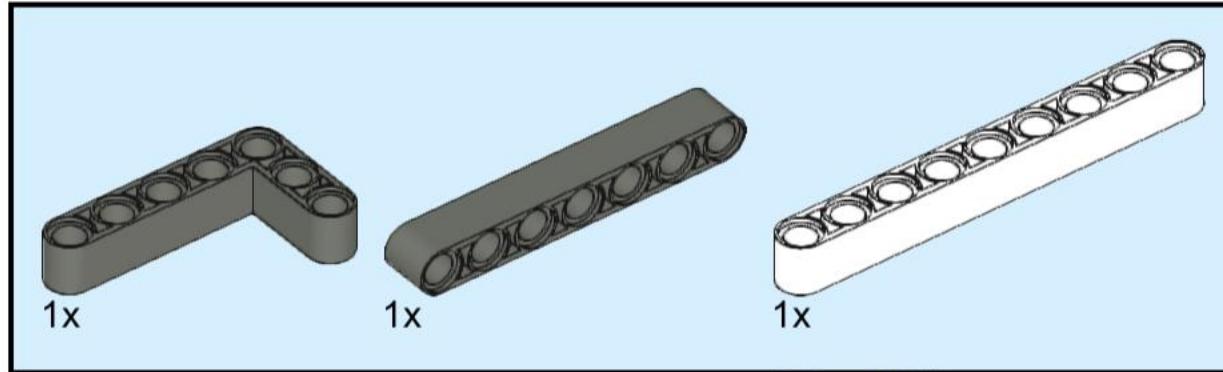
**58**



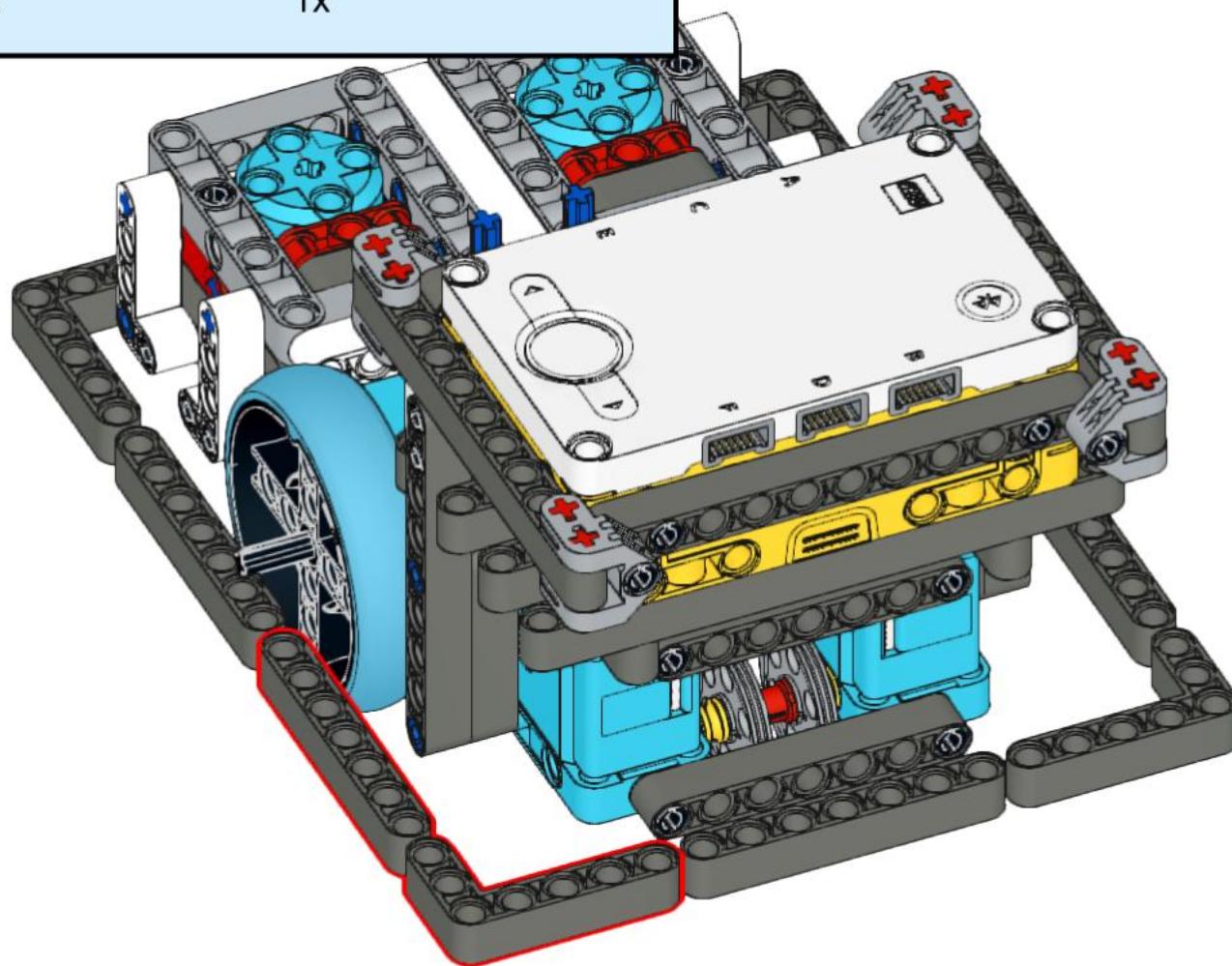
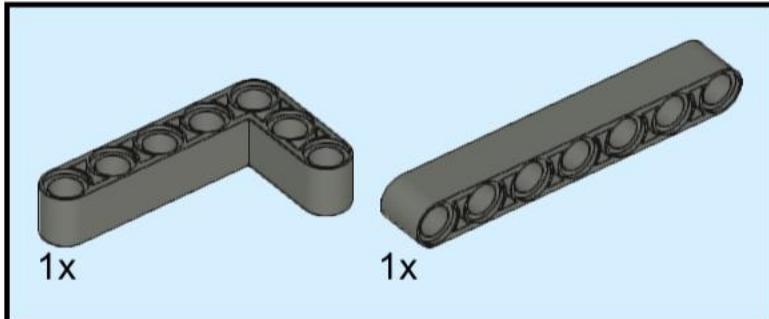
**59**



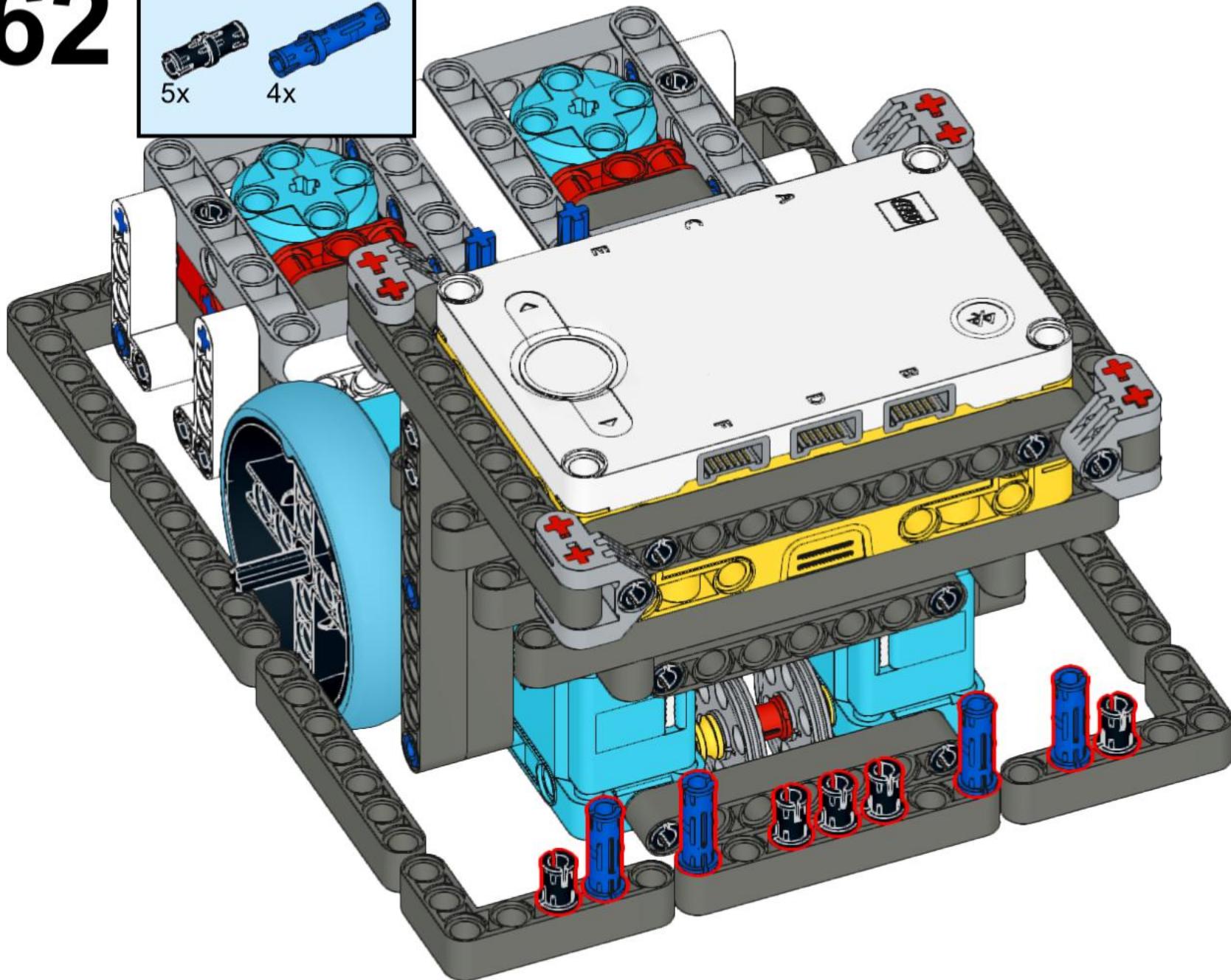
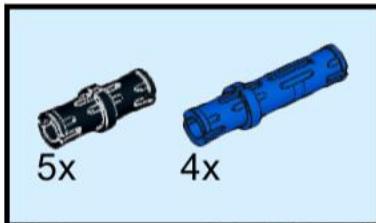
**60**



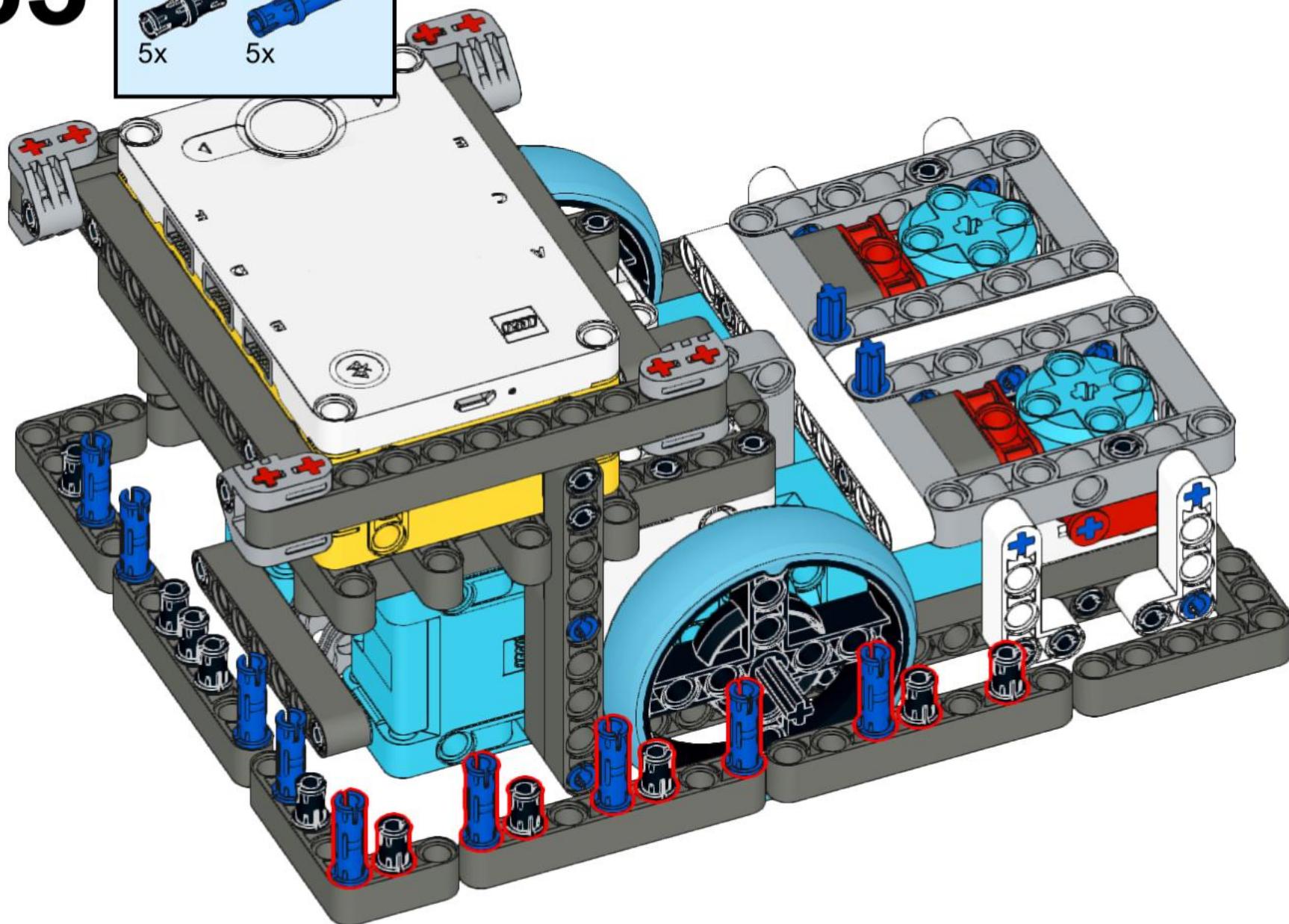
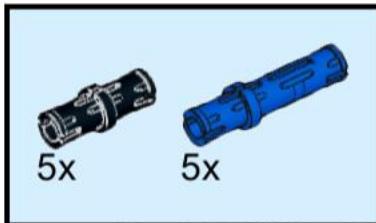
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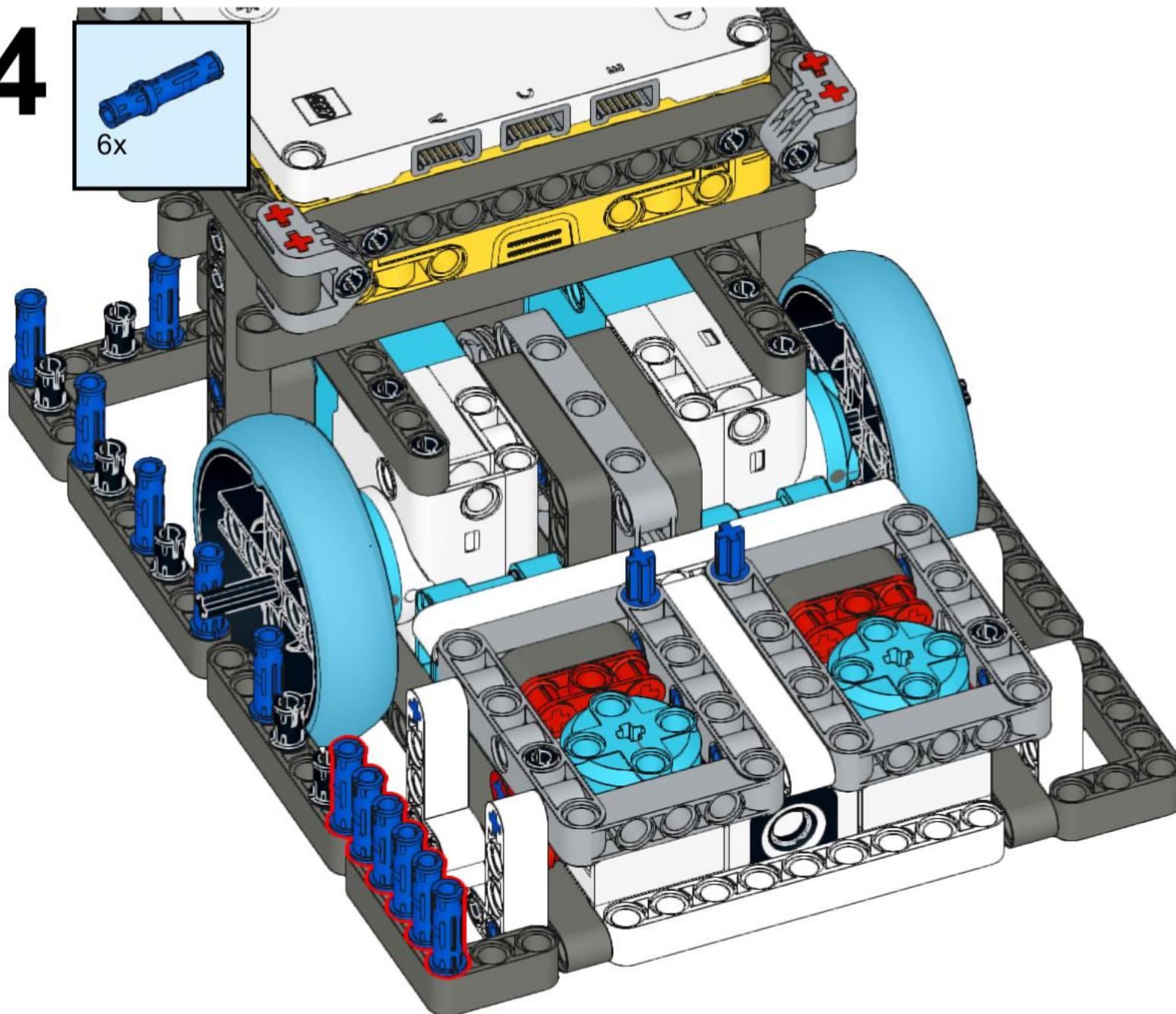
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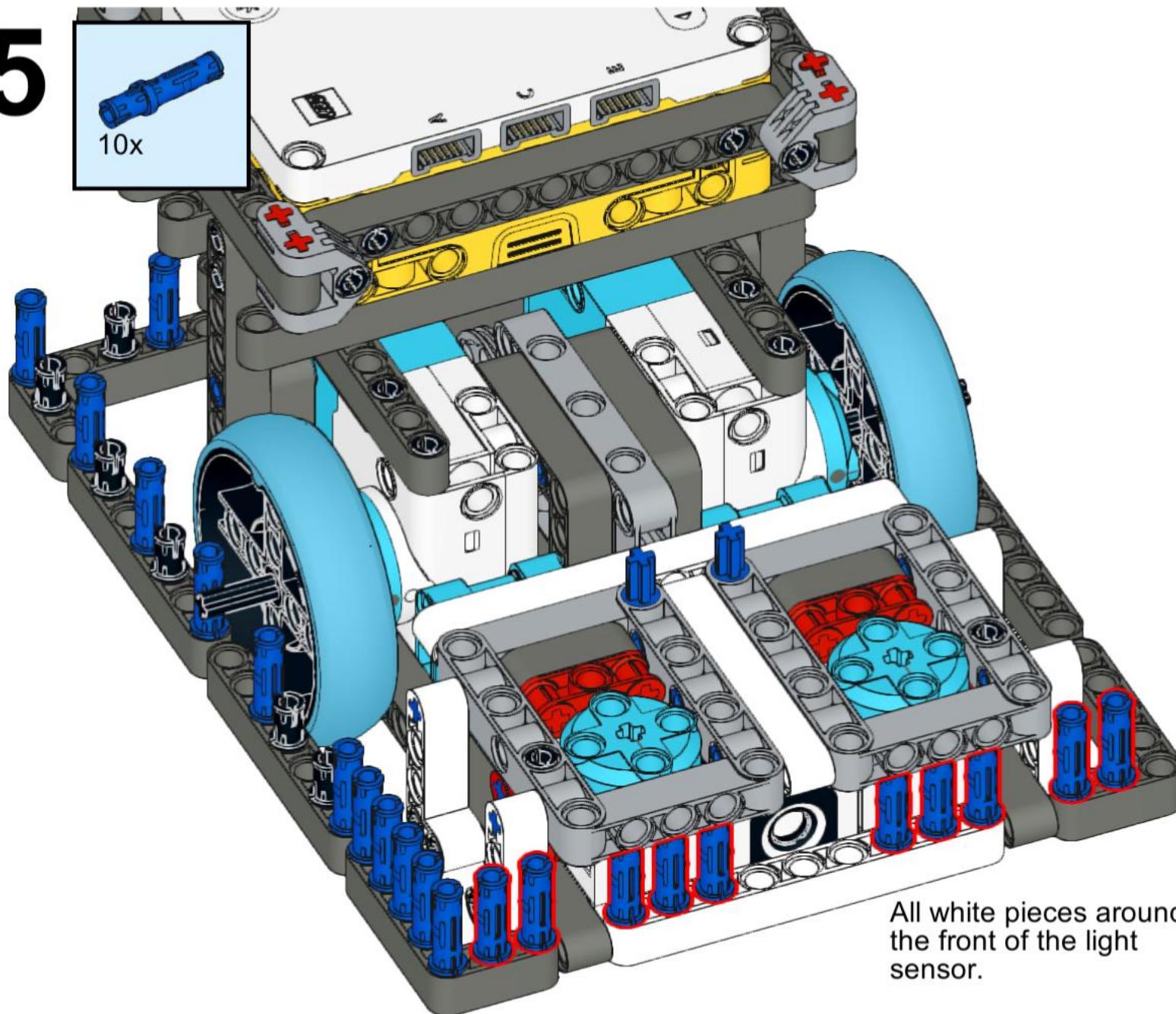
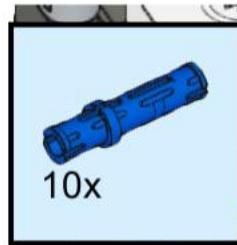
# 63



**64**

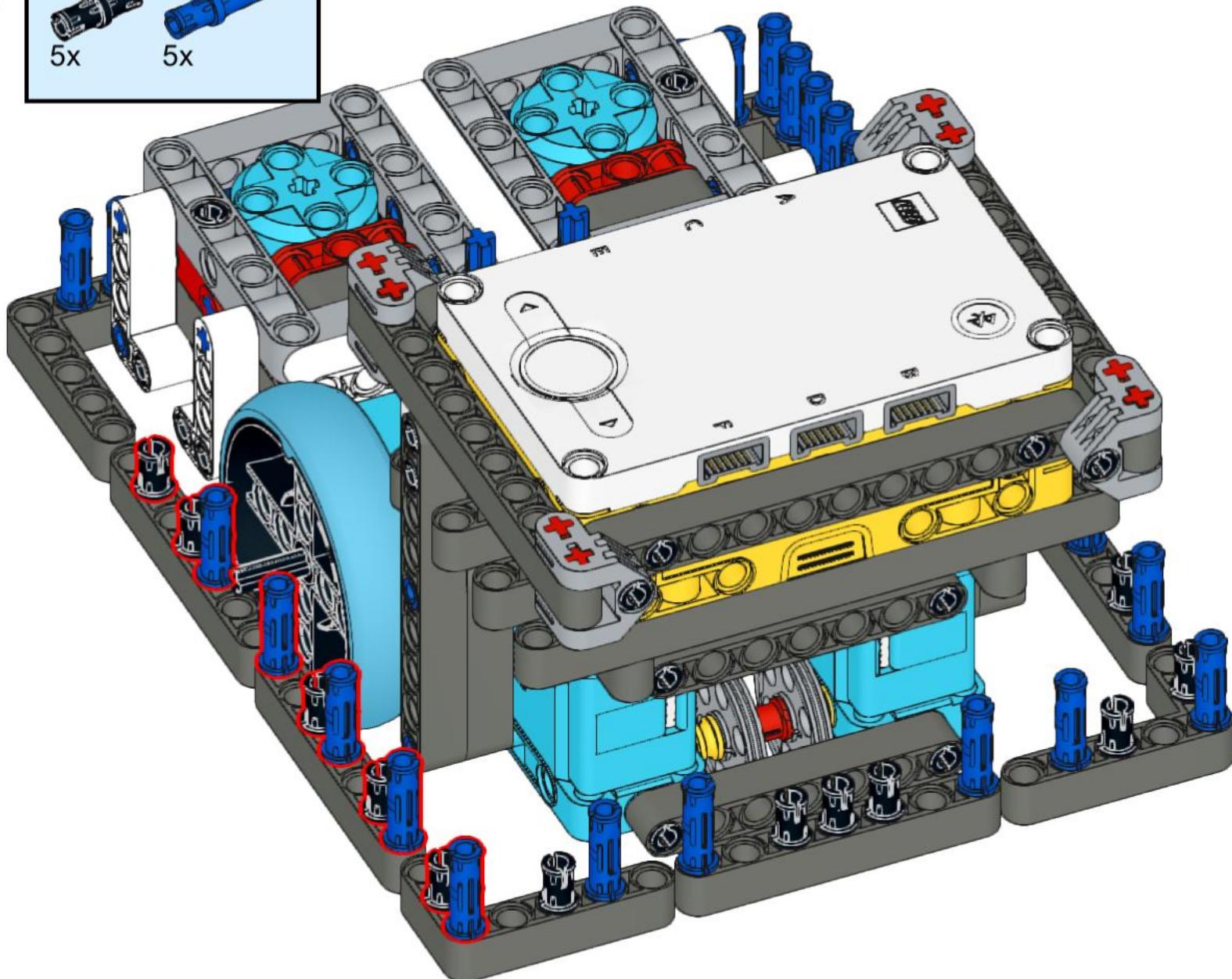
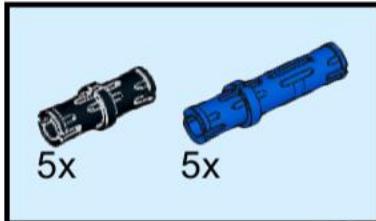


# 65

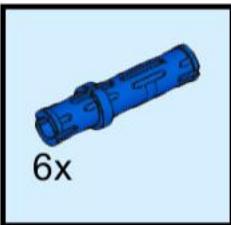


All white pieces around  
the front of the light  
sensor.

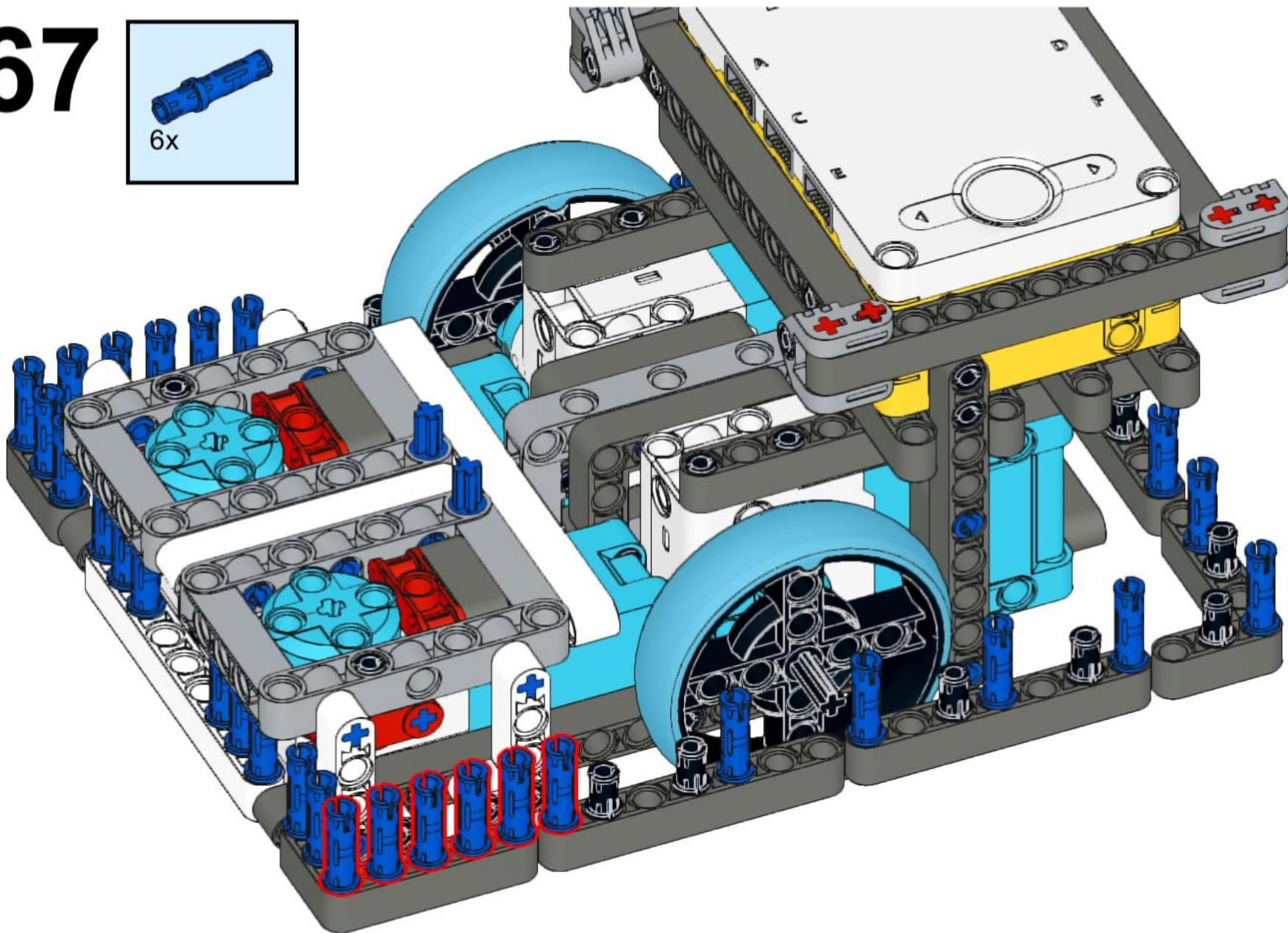
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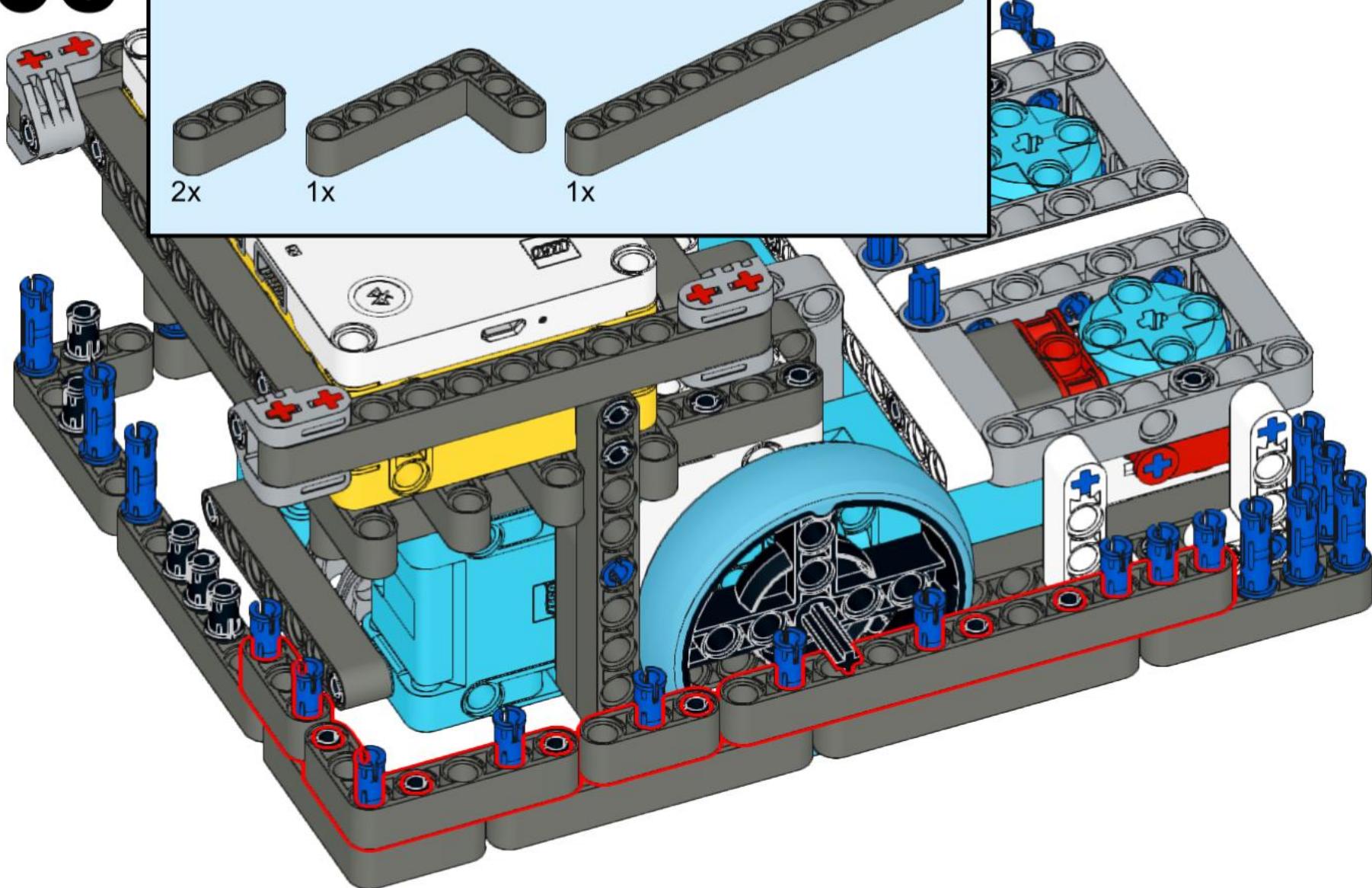
**67**



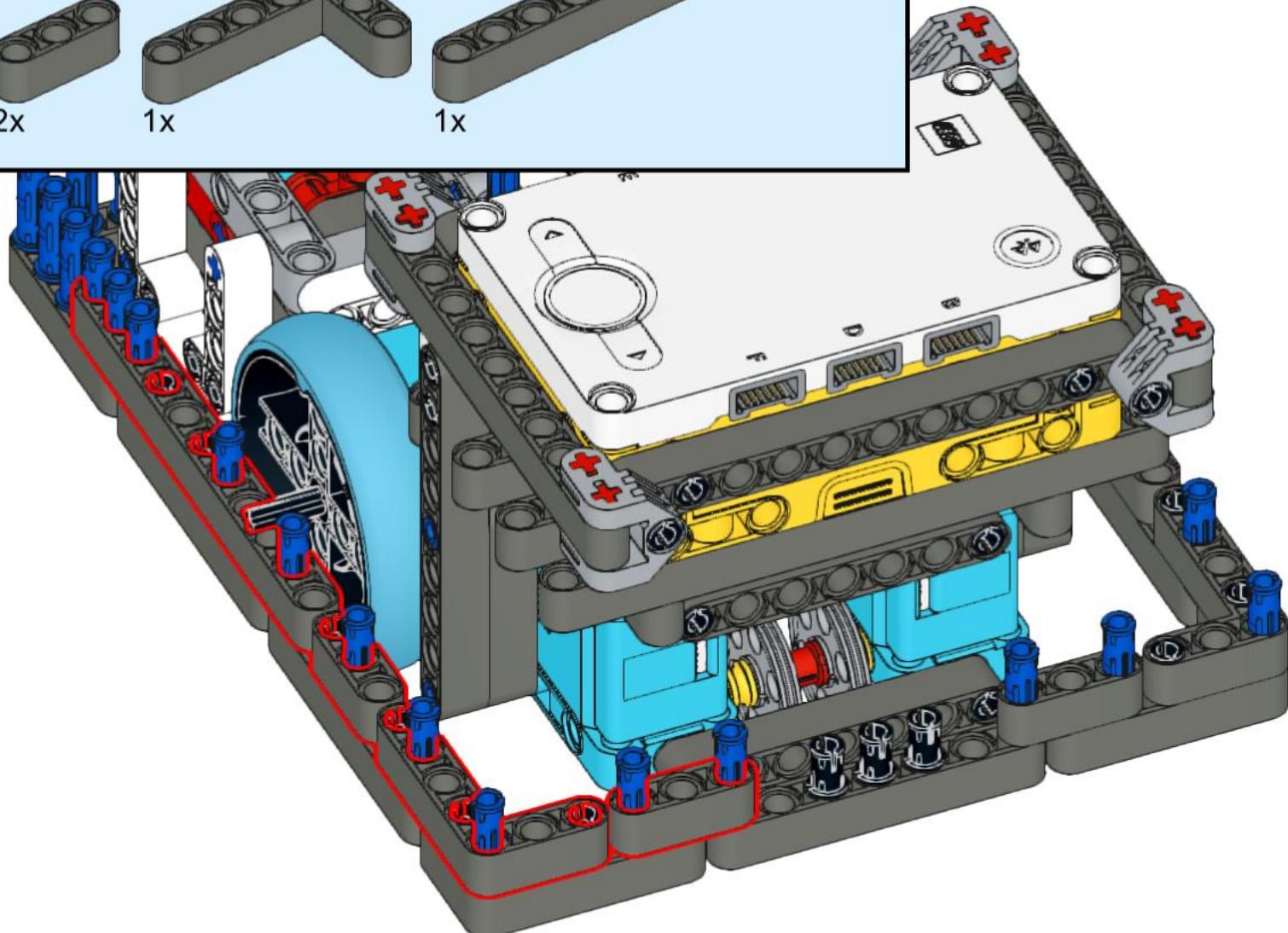
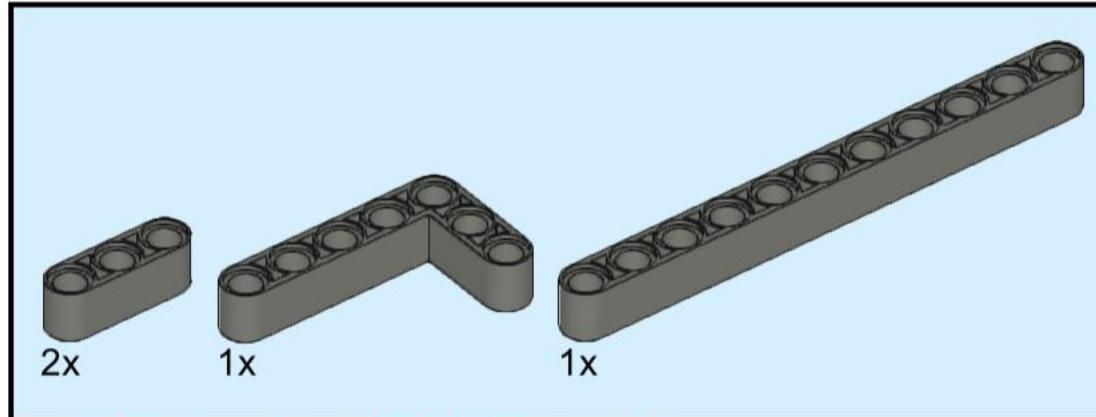
*6x*



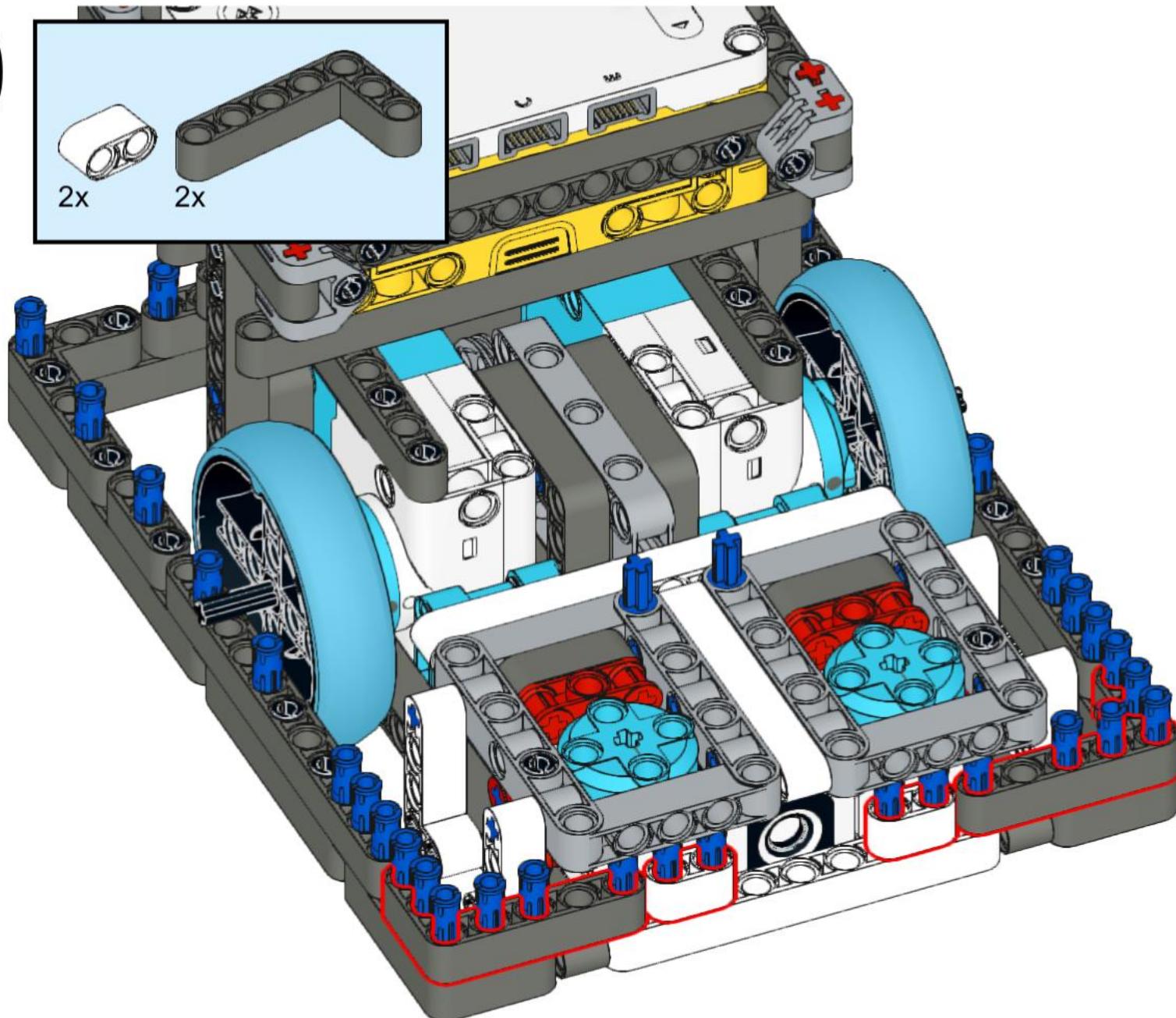
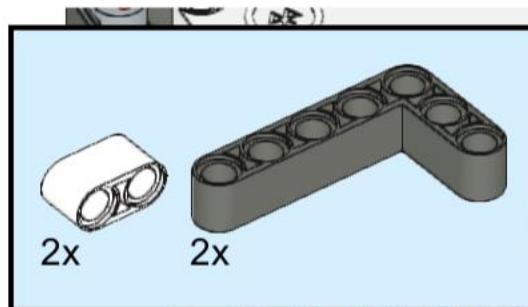
**68**



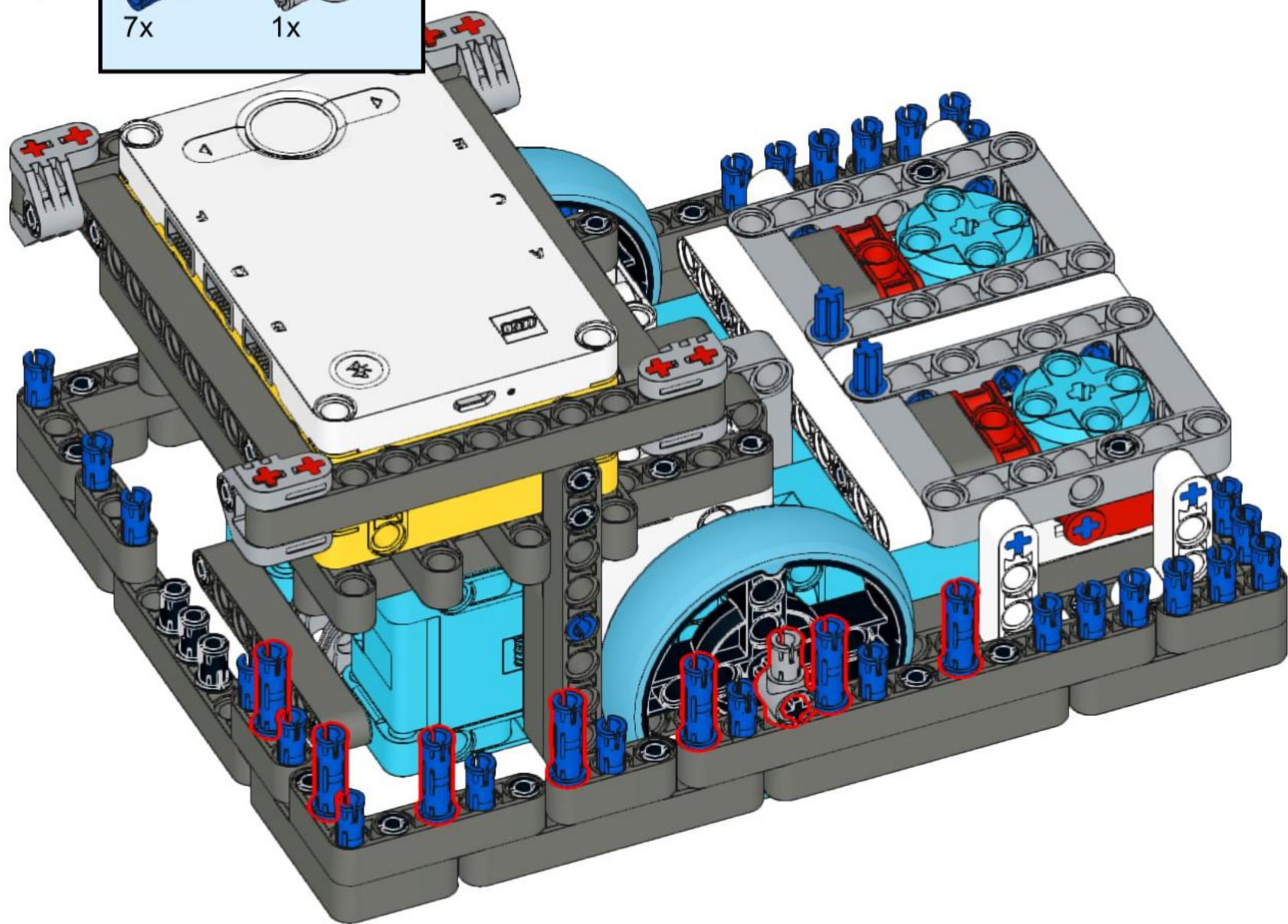
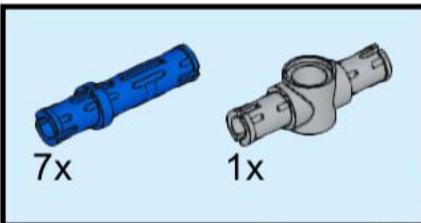
**69**



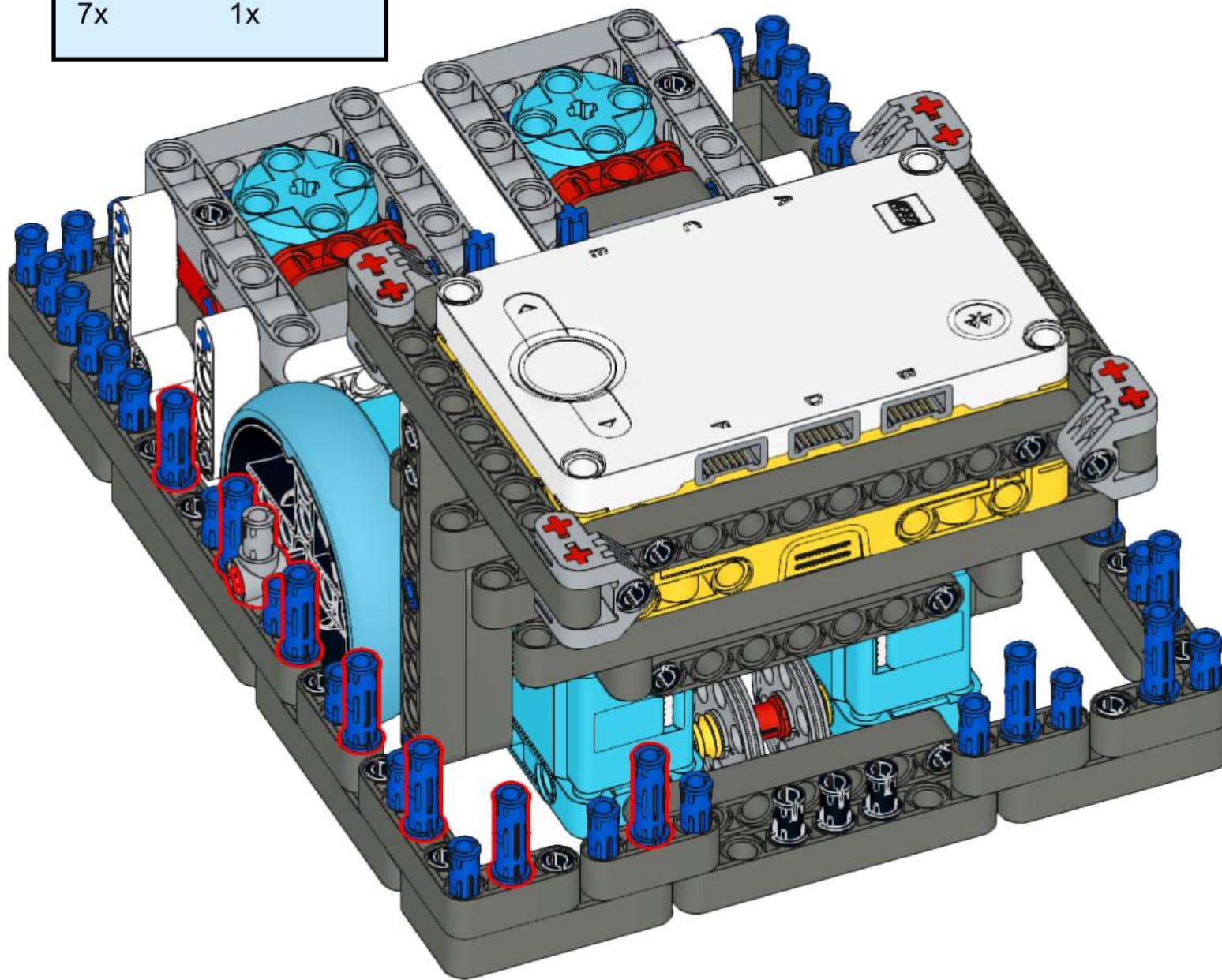
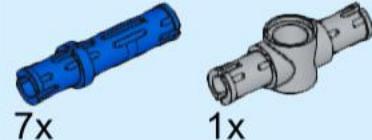
70



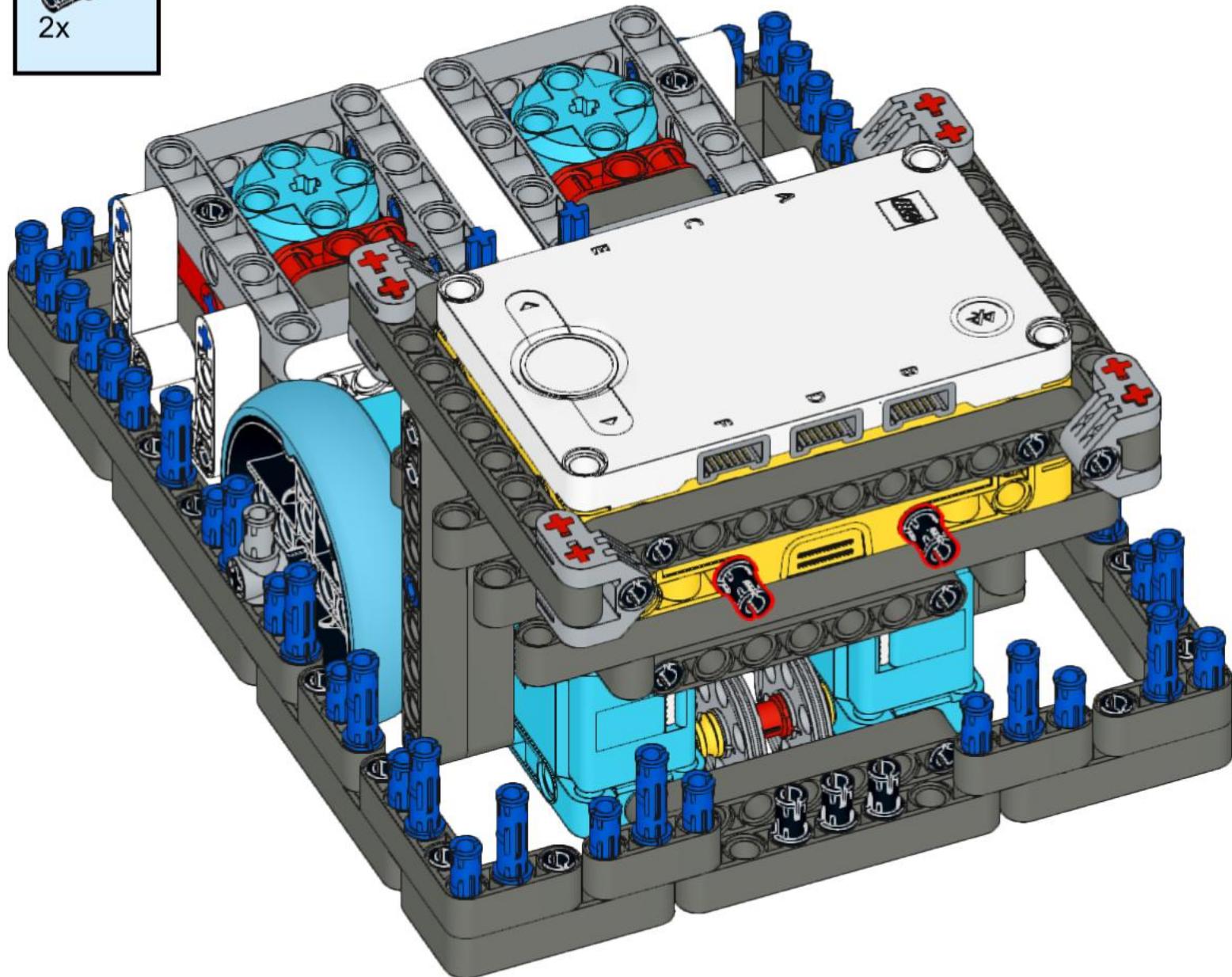
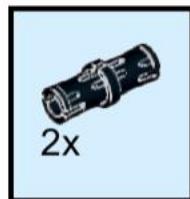
71



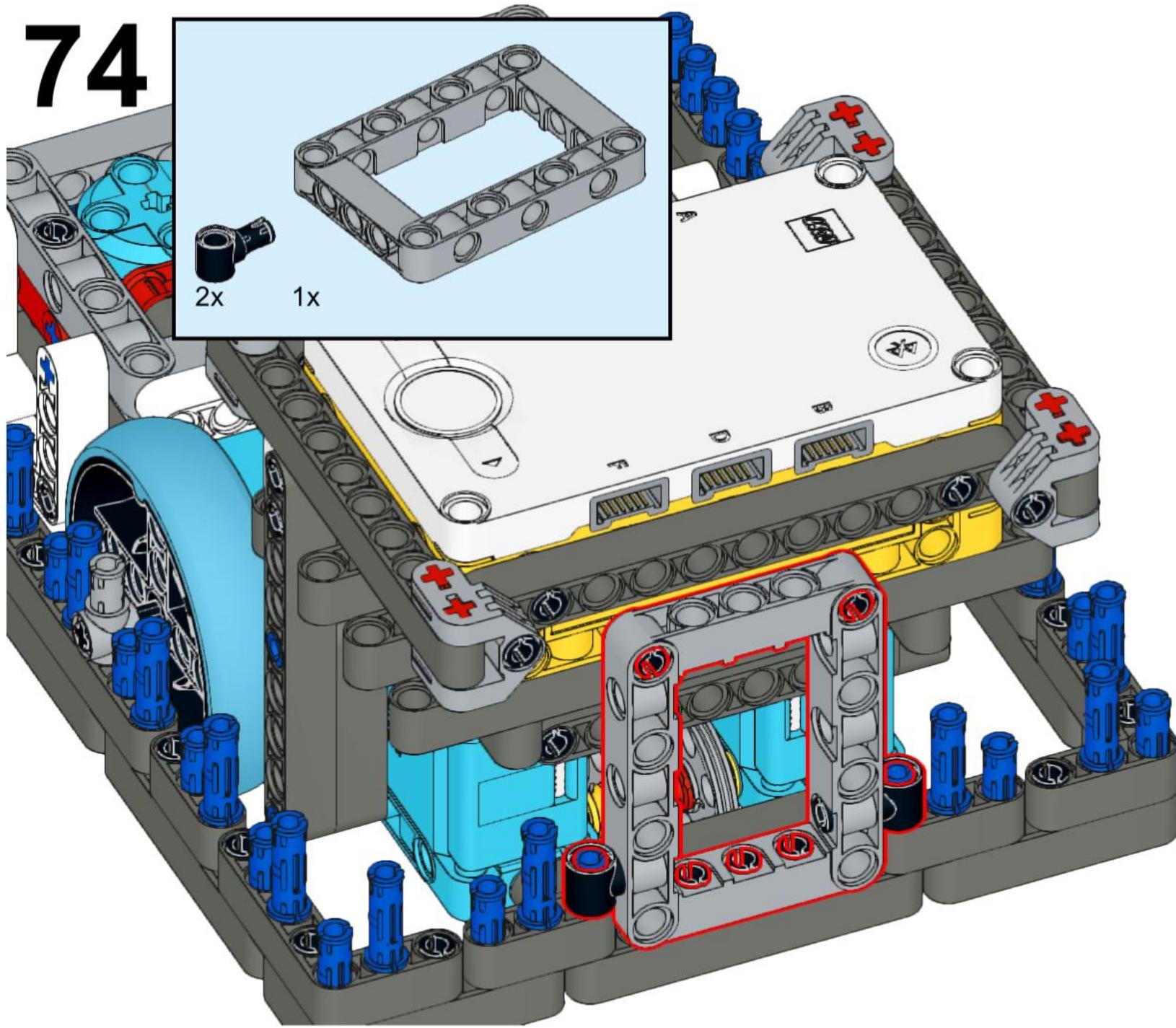
**72**



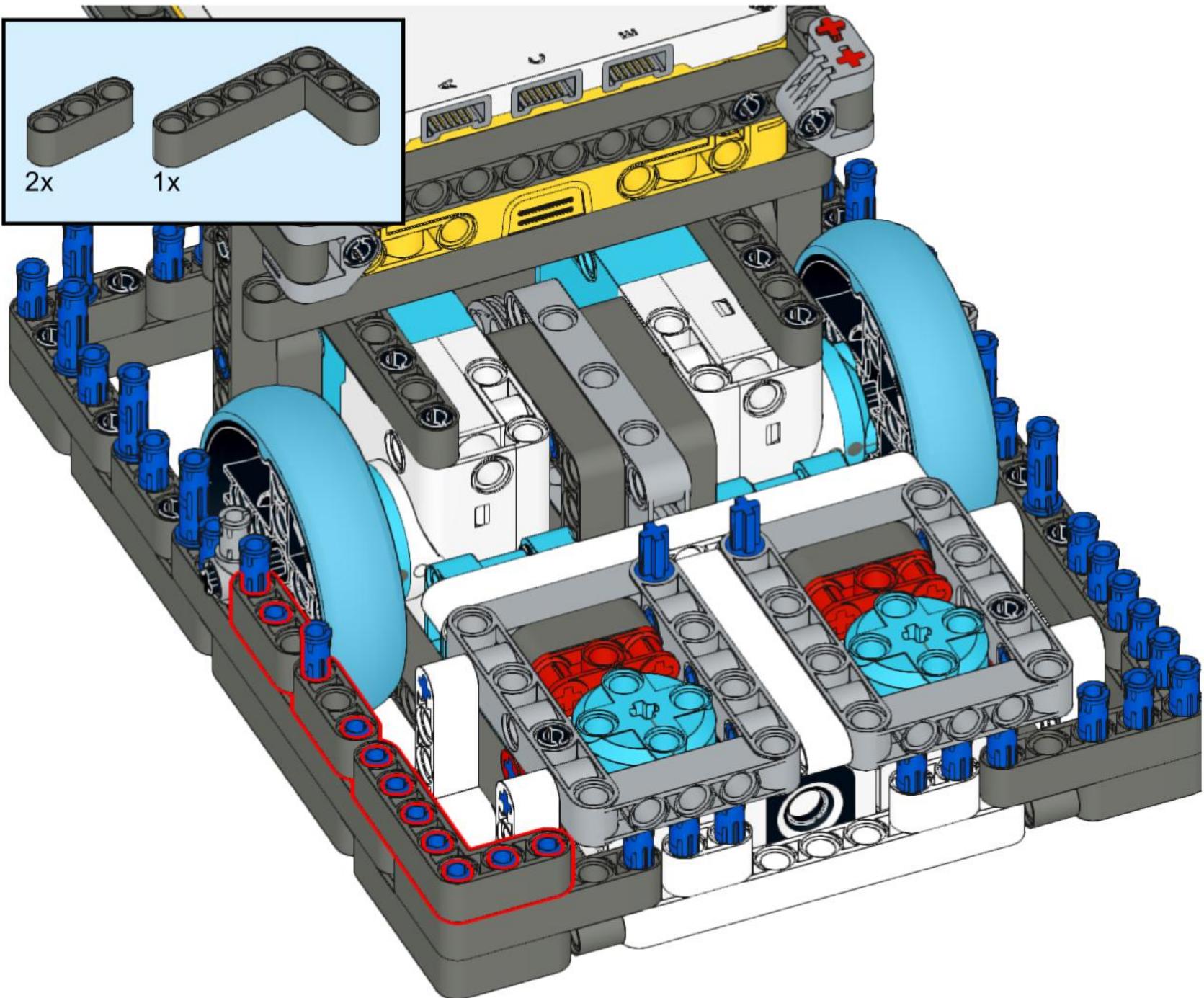
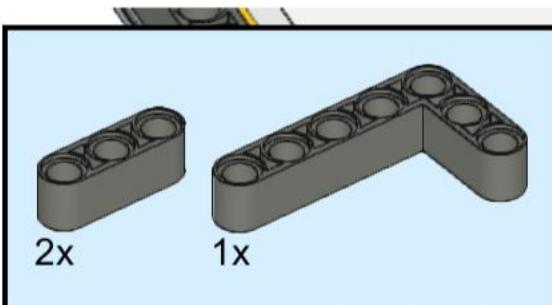
73



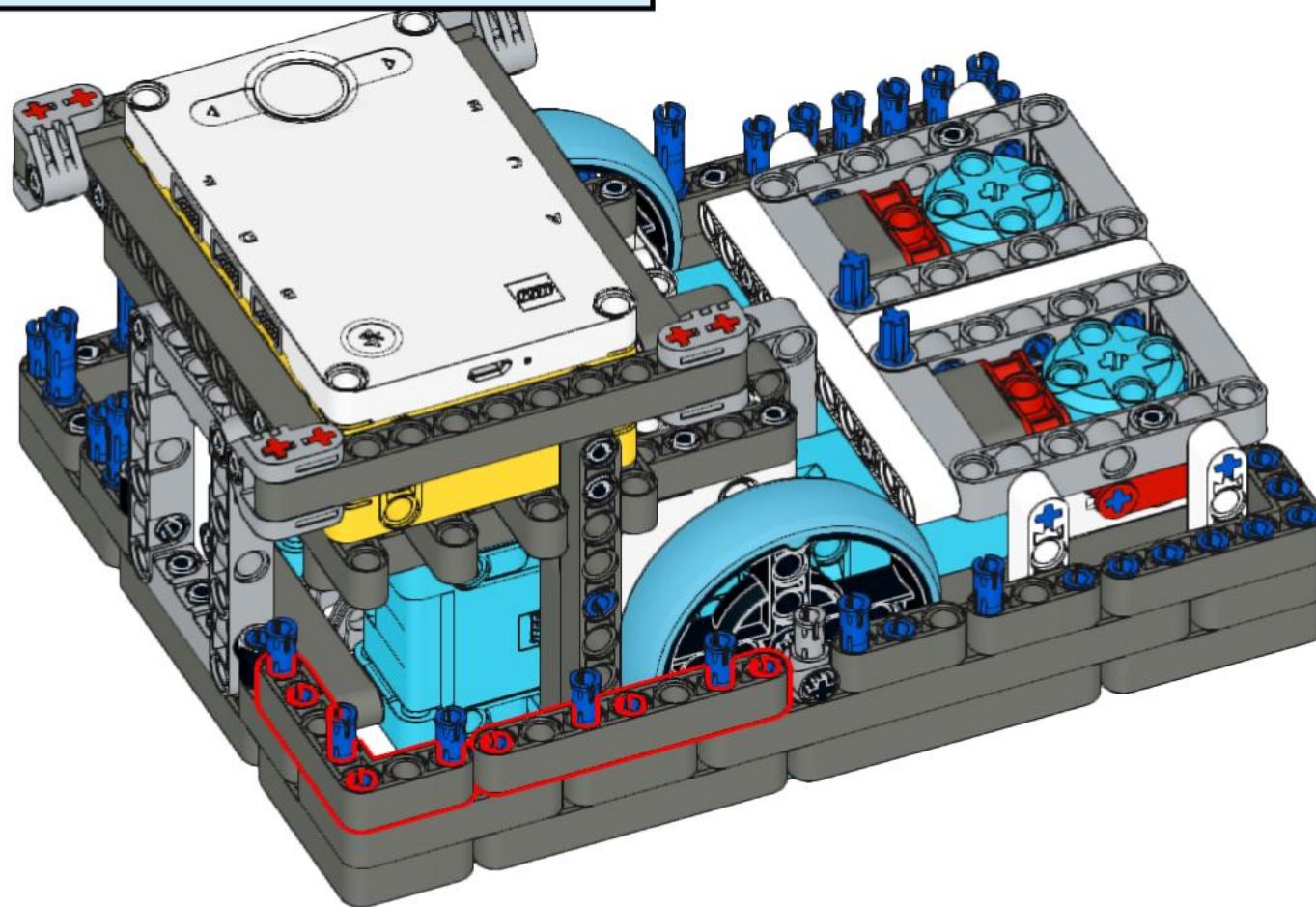
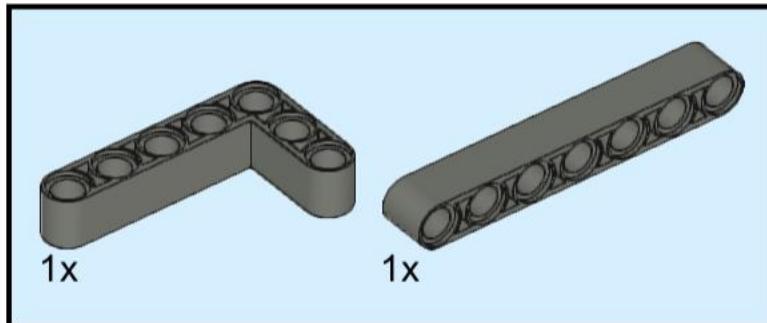
74



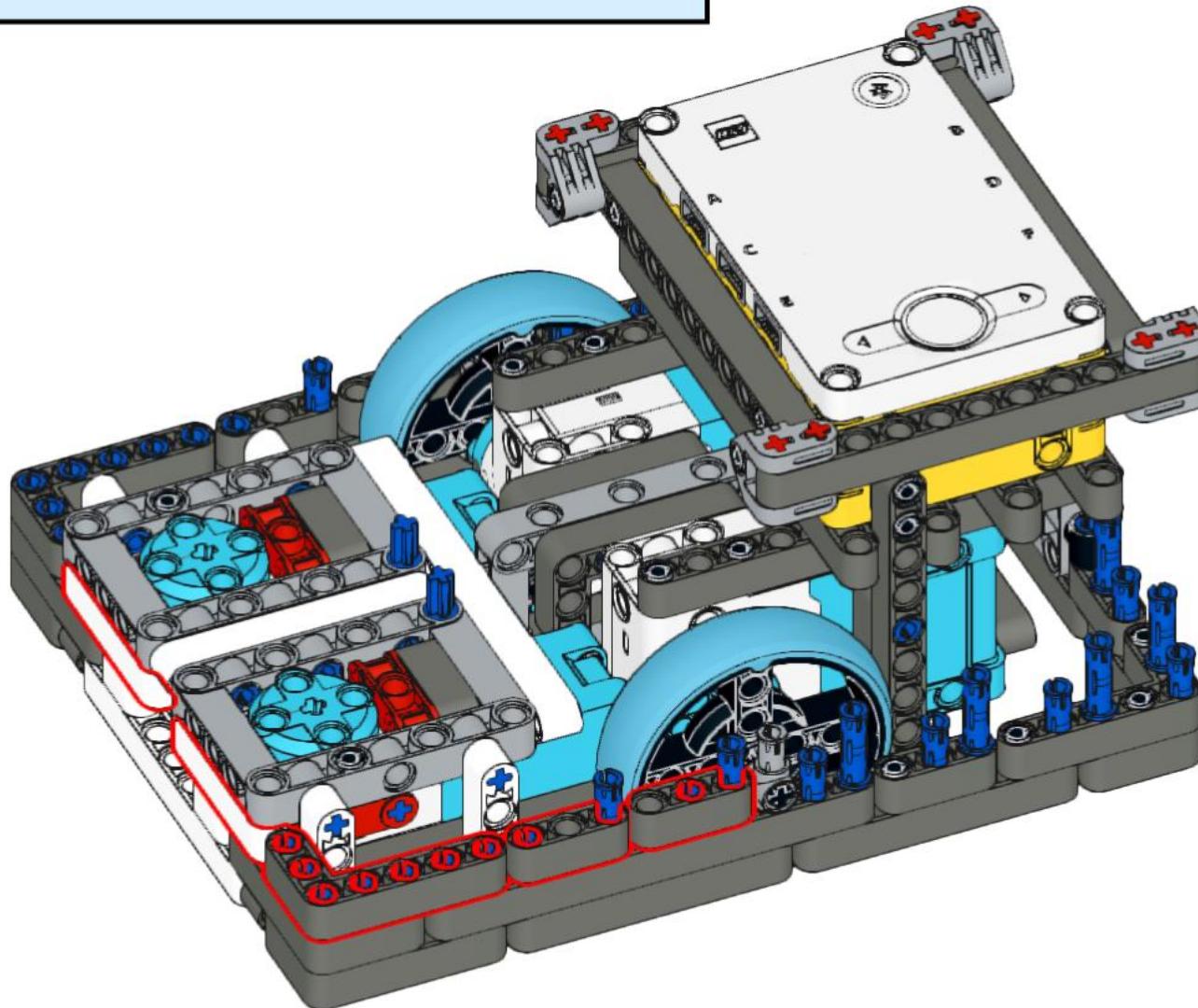
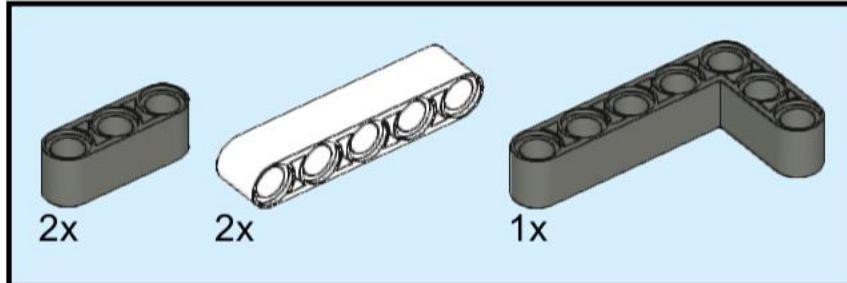
75



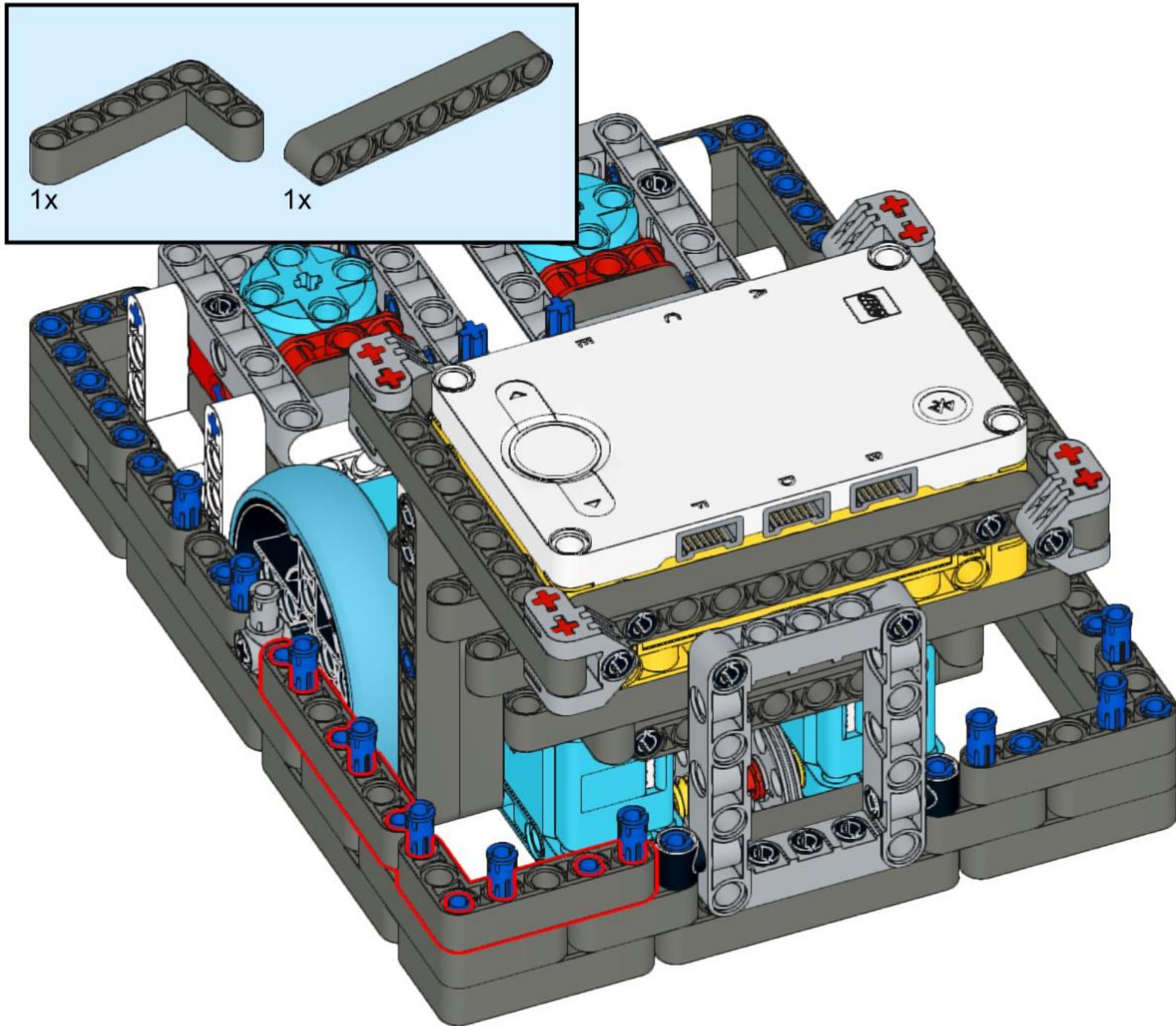
**76**



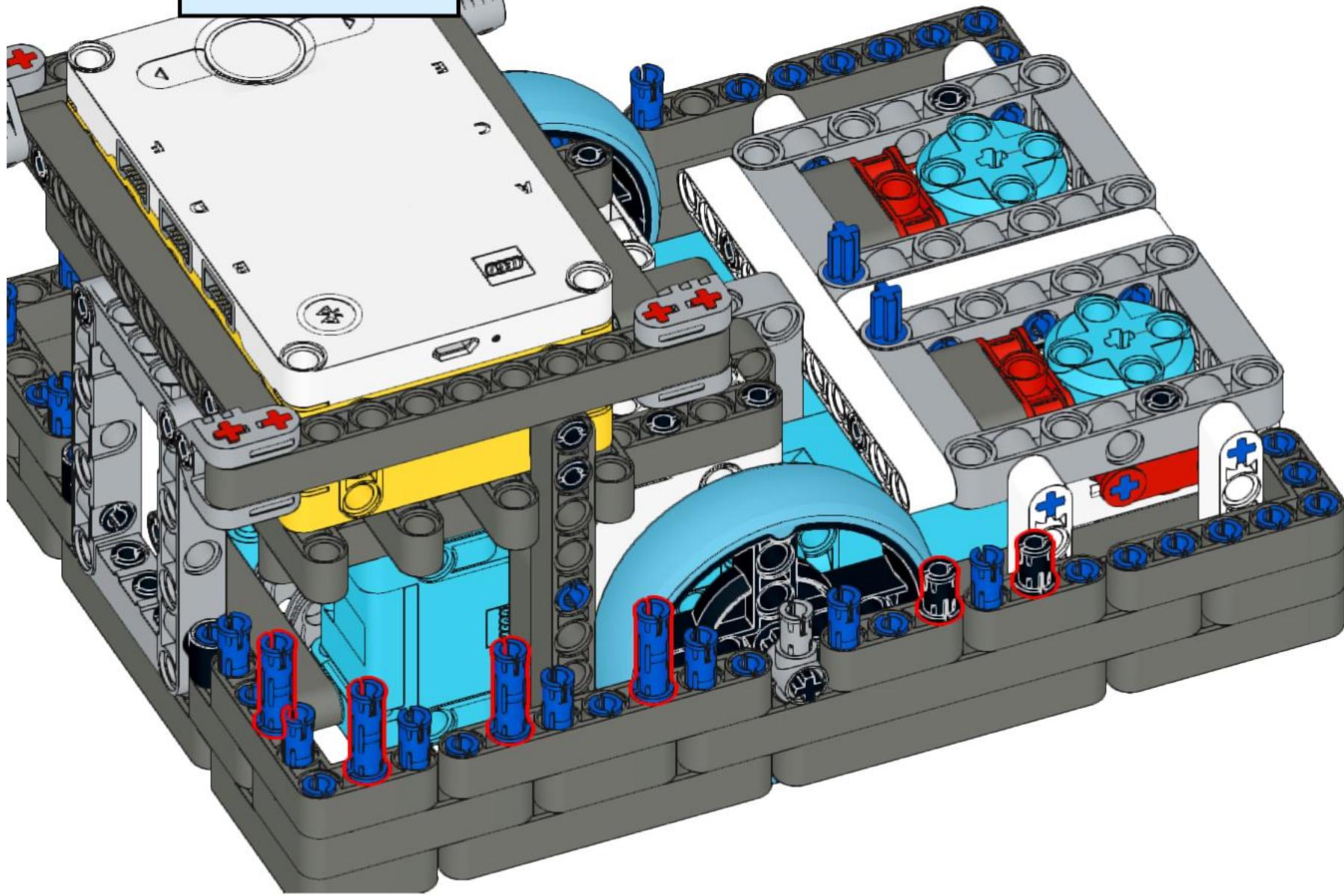
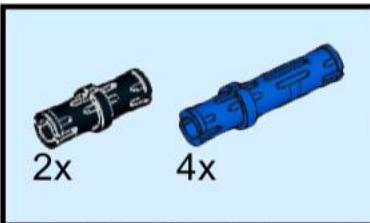
77



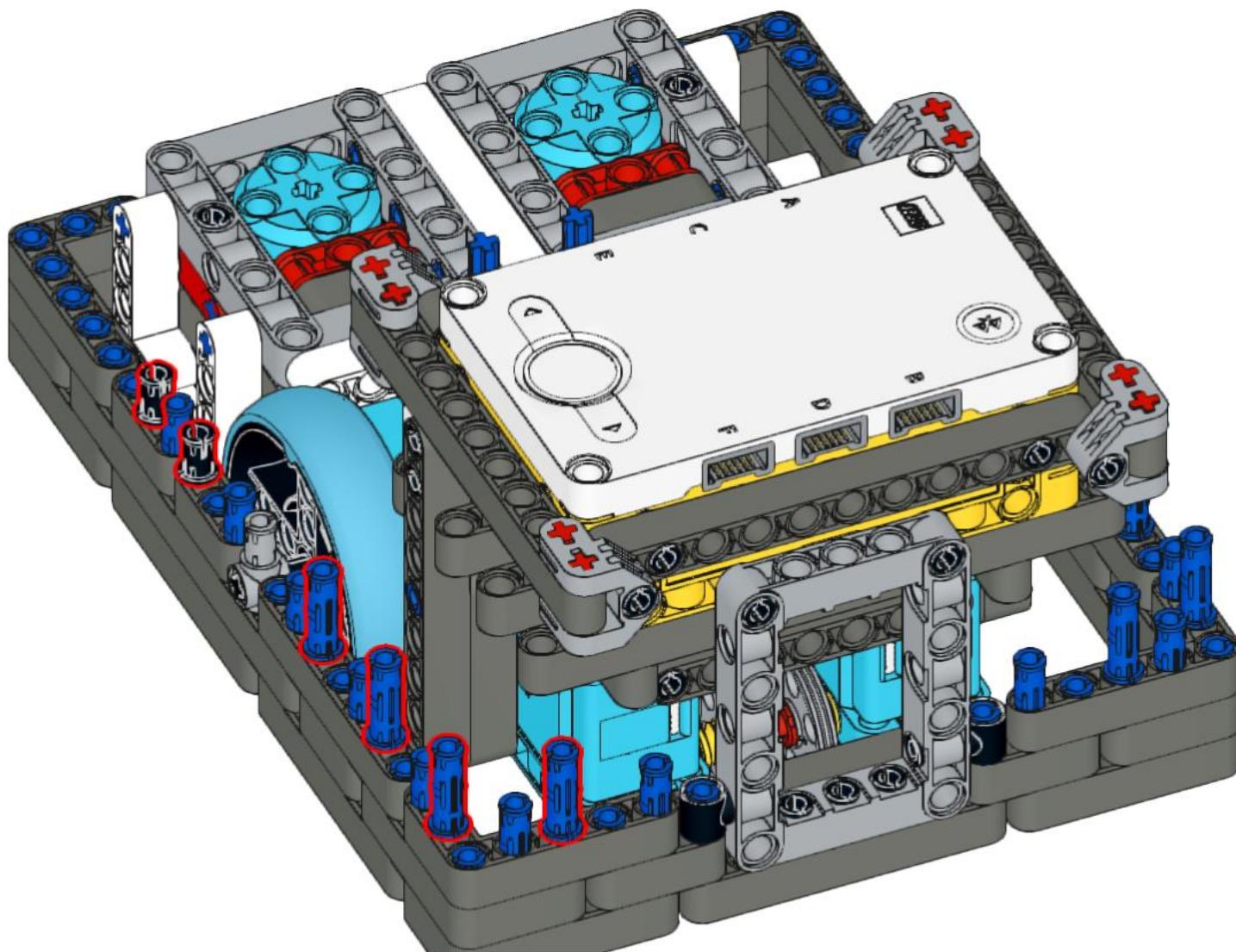
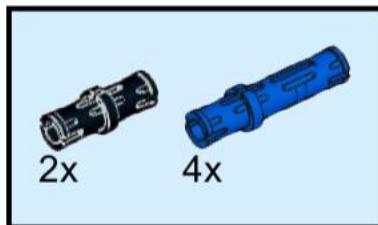
78



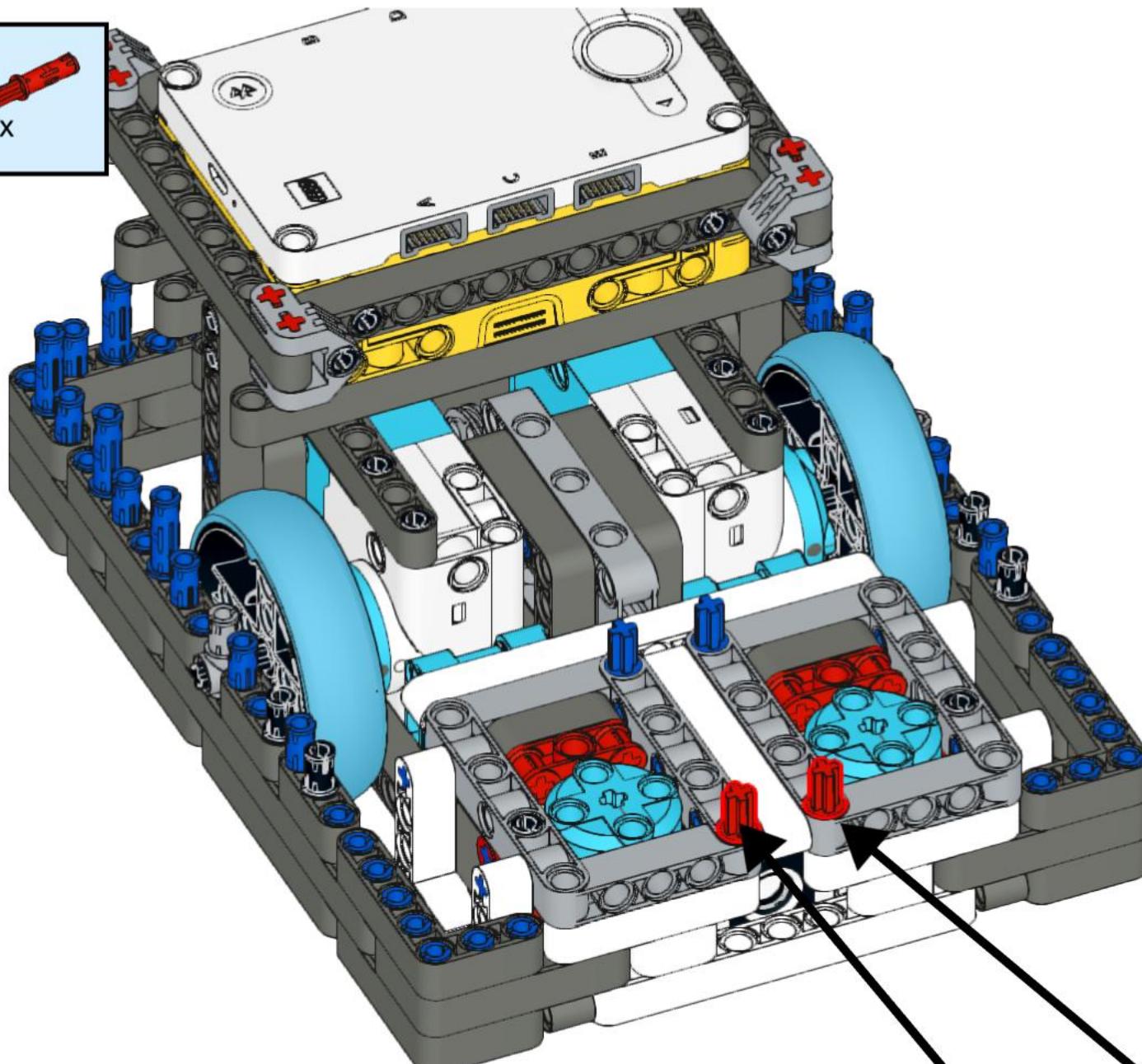
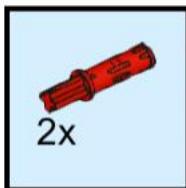
79



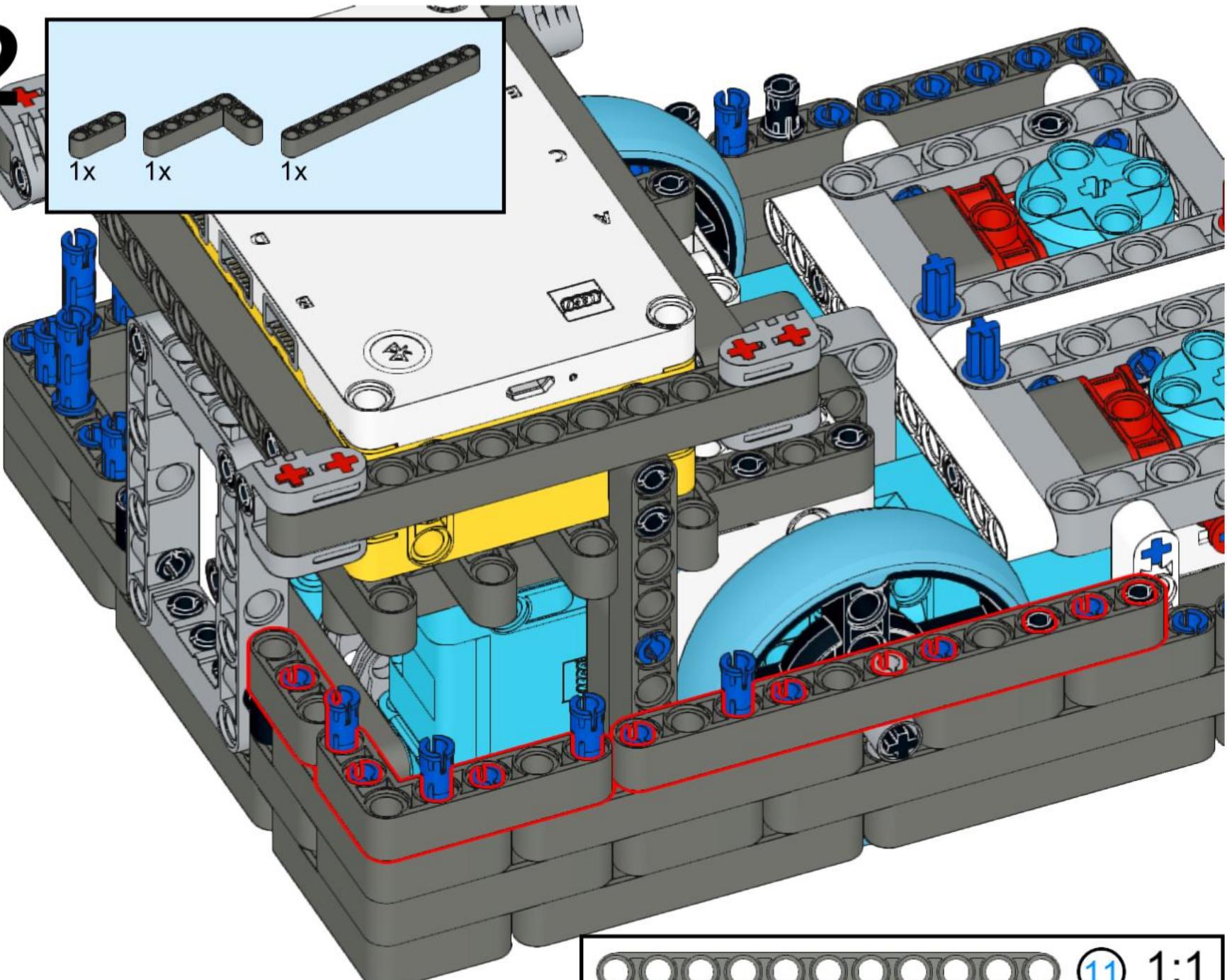
**80**



**81**

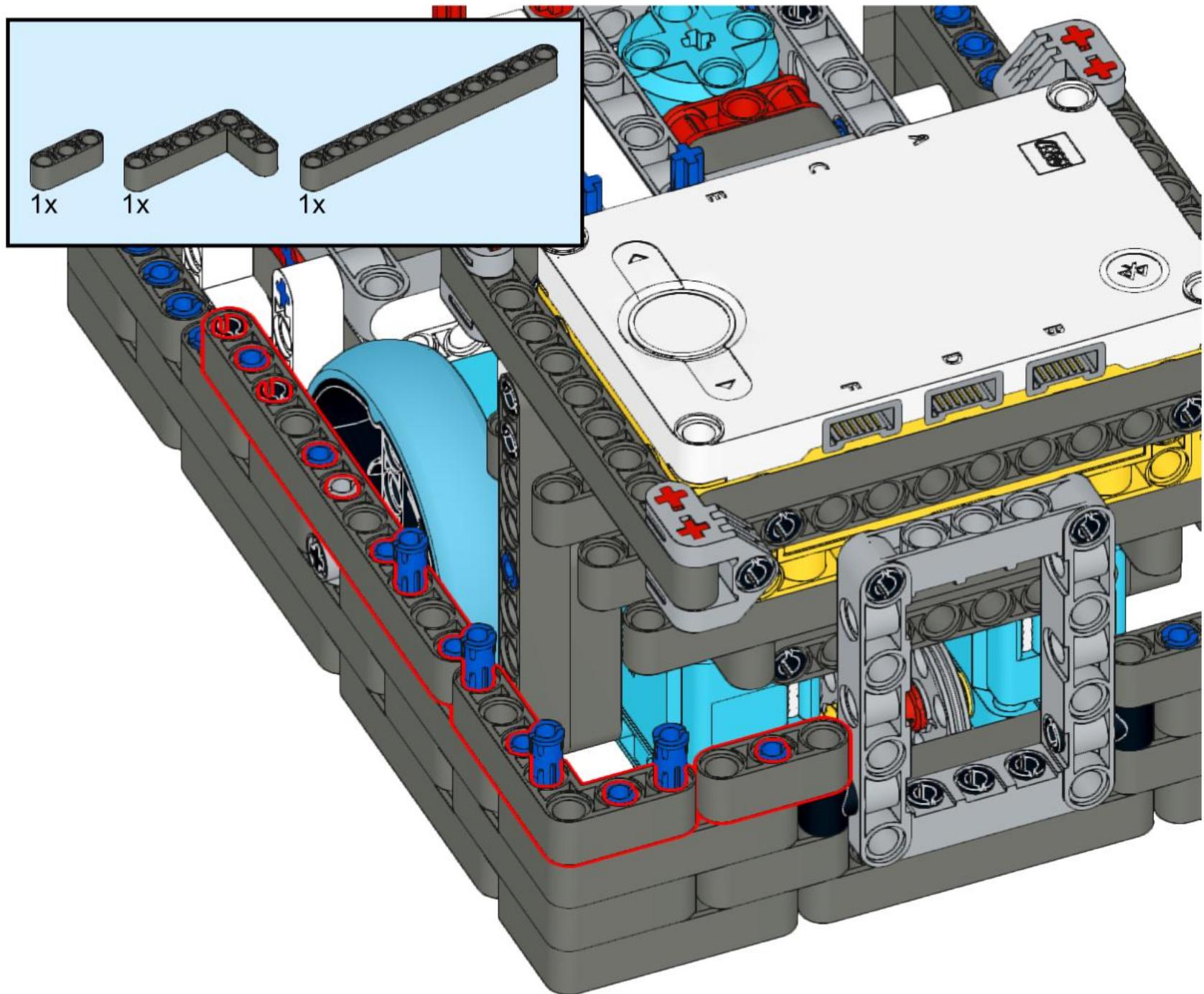


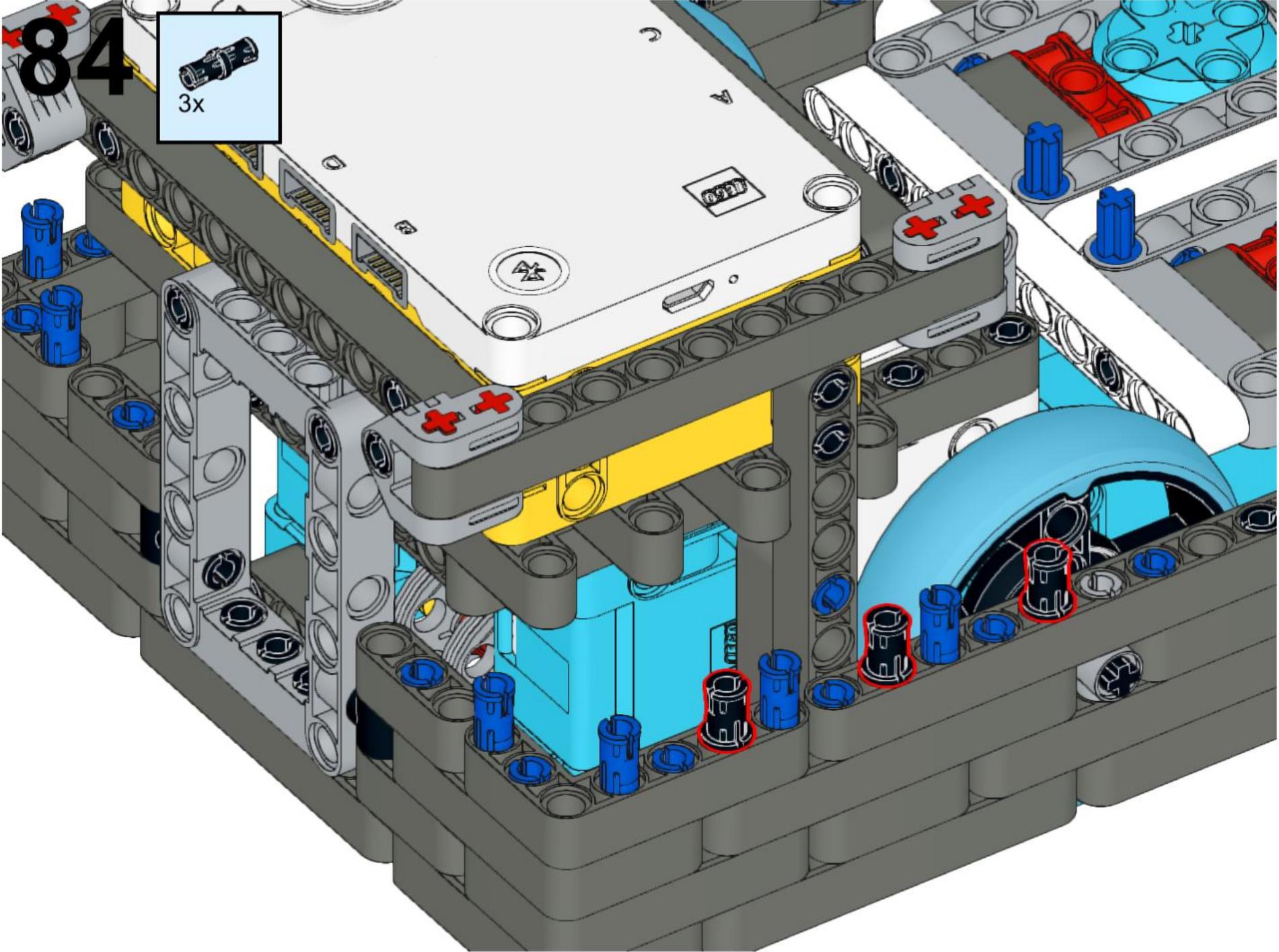
**82**



11 1:1

**83**

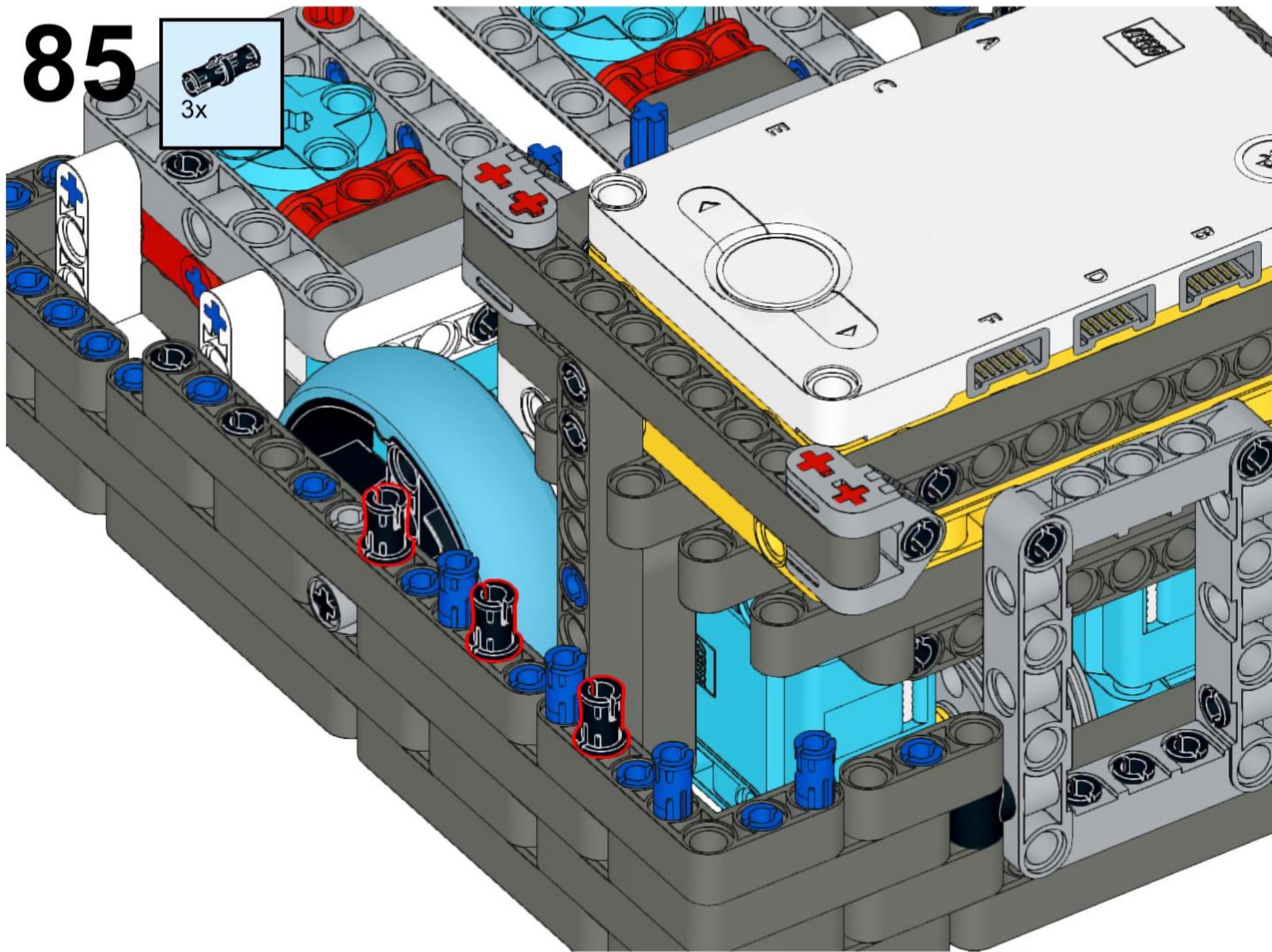


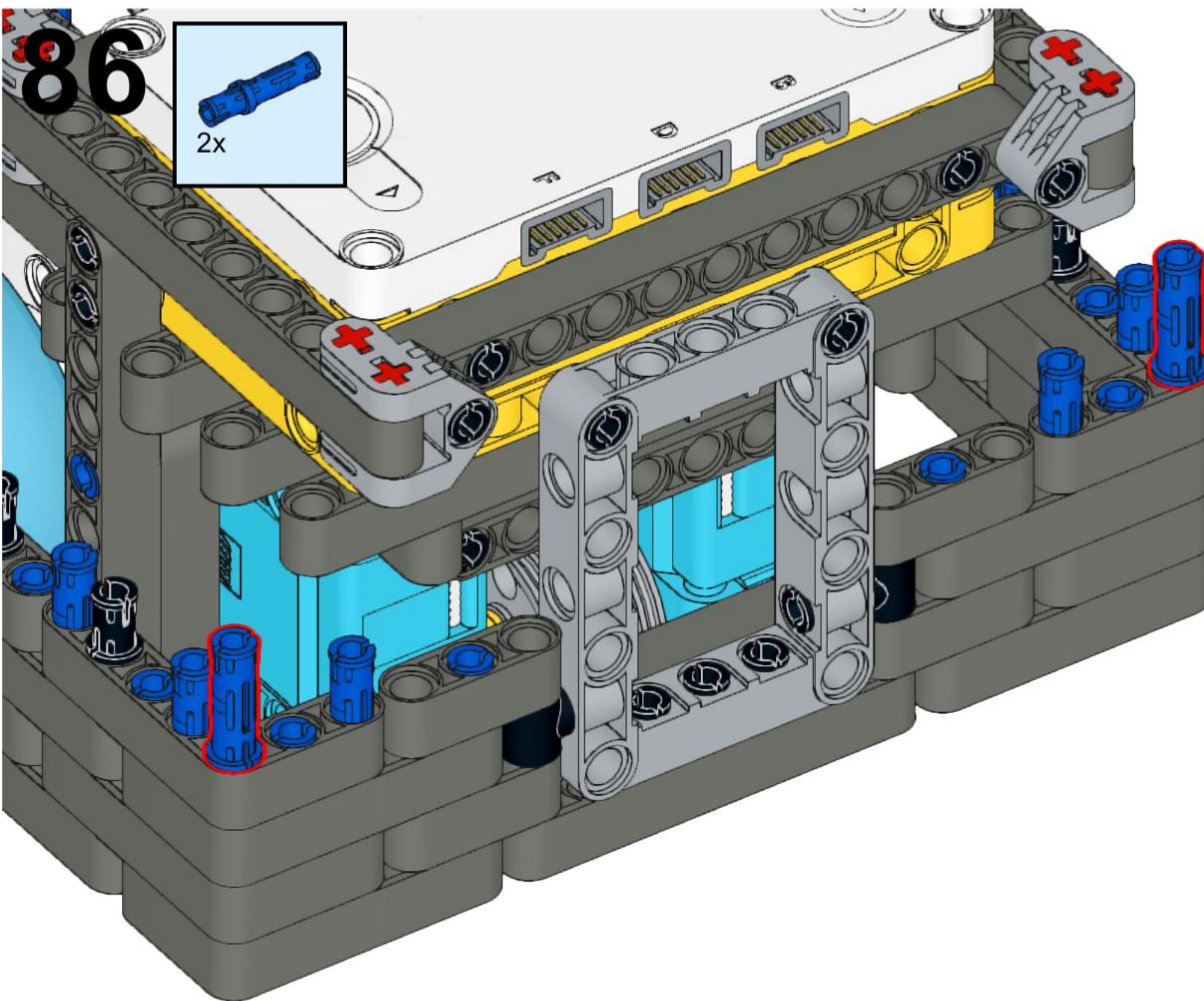


84

3x

**85**

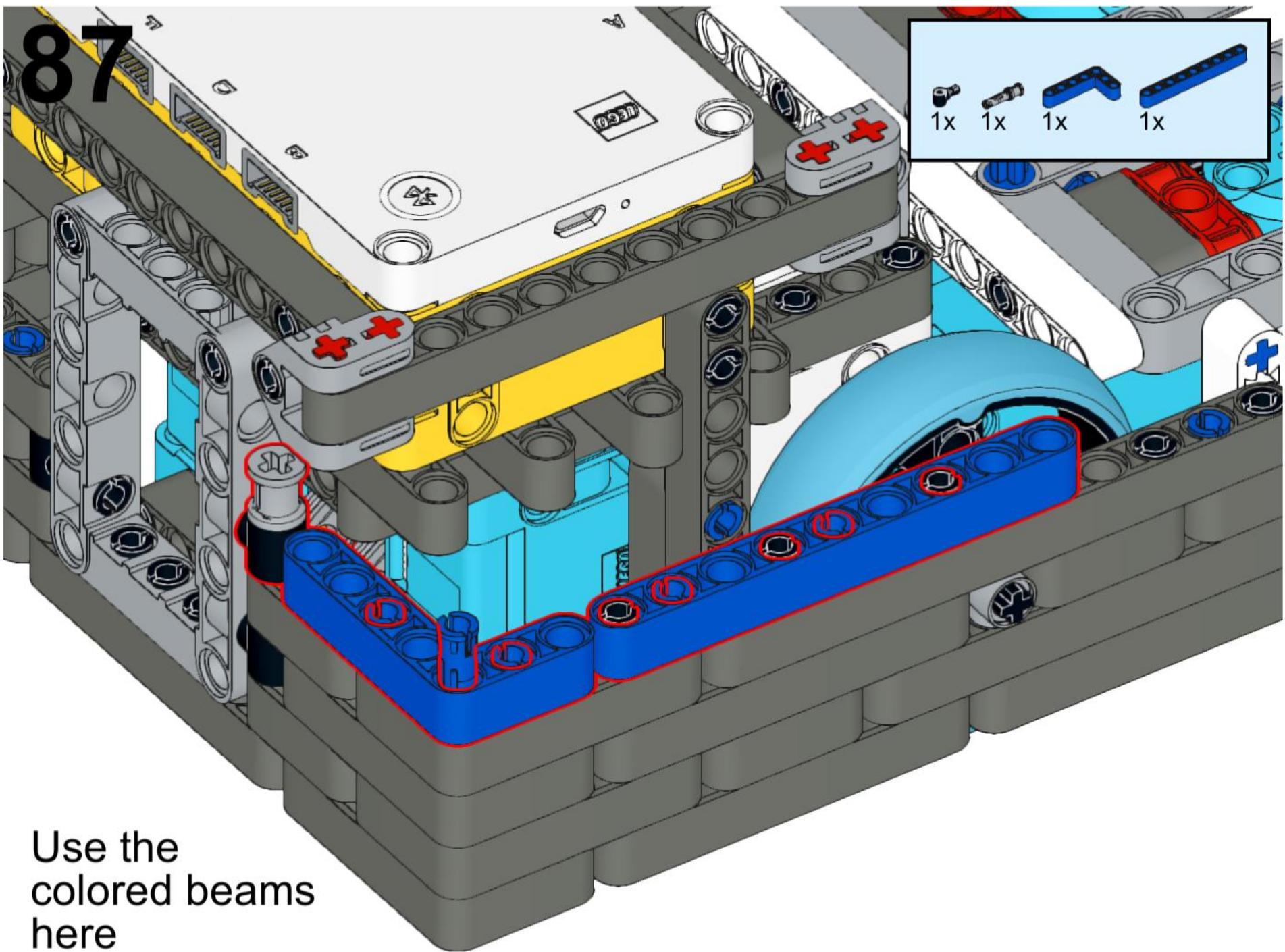




86

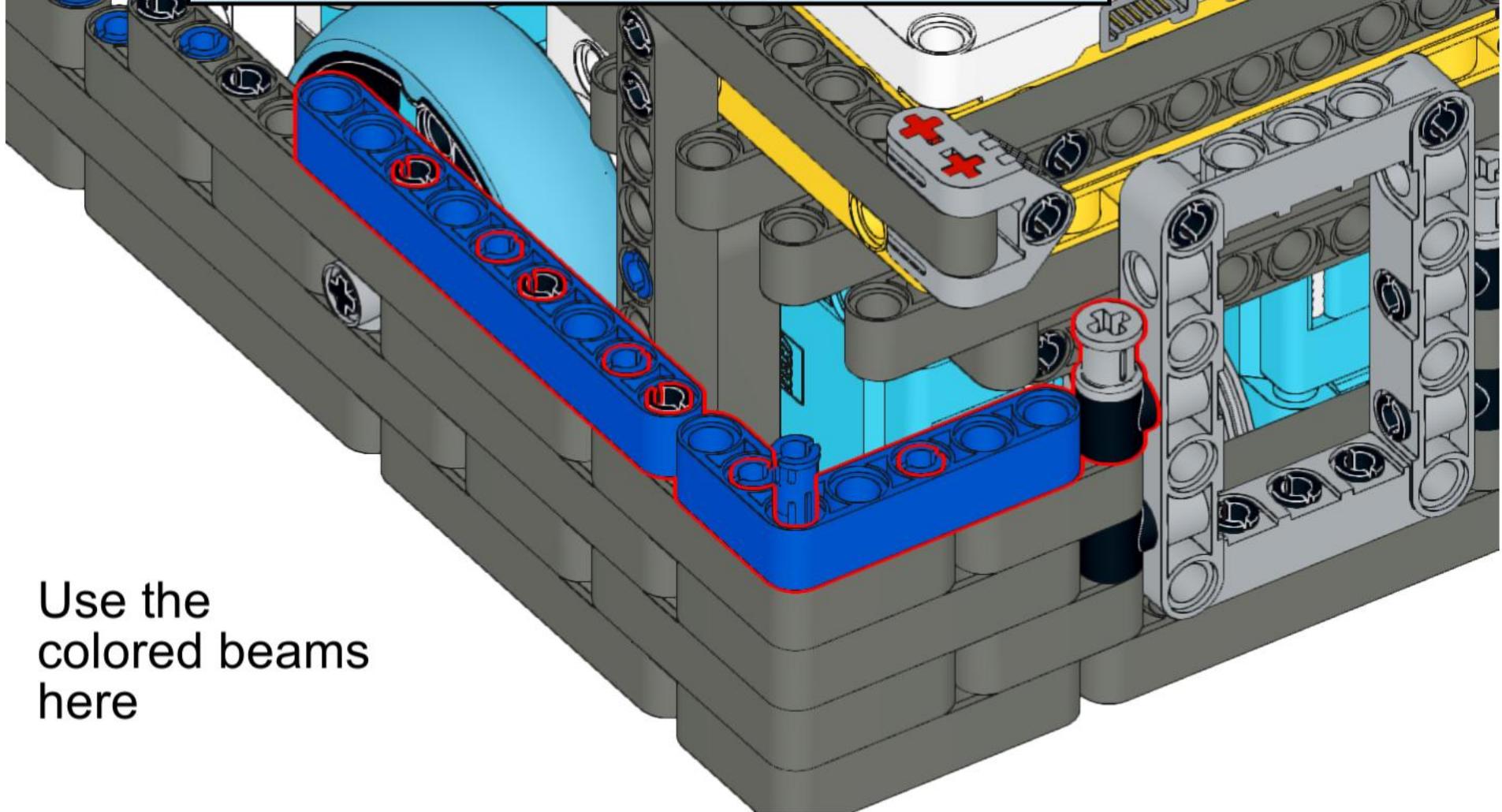
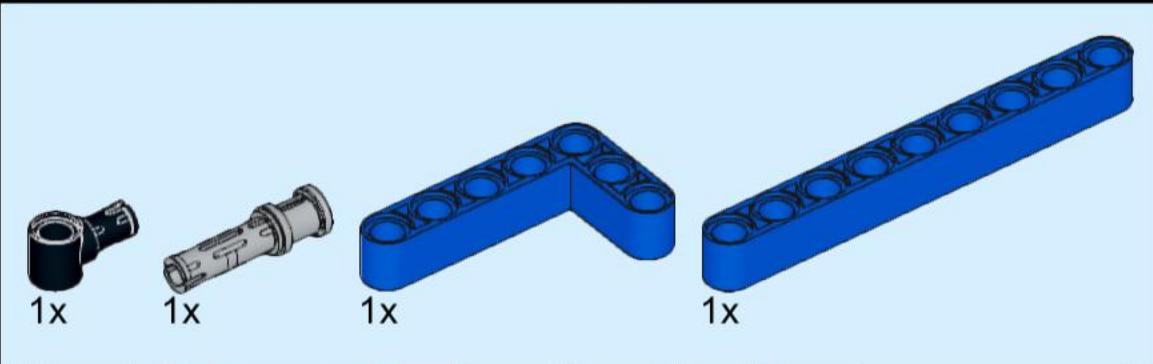


87



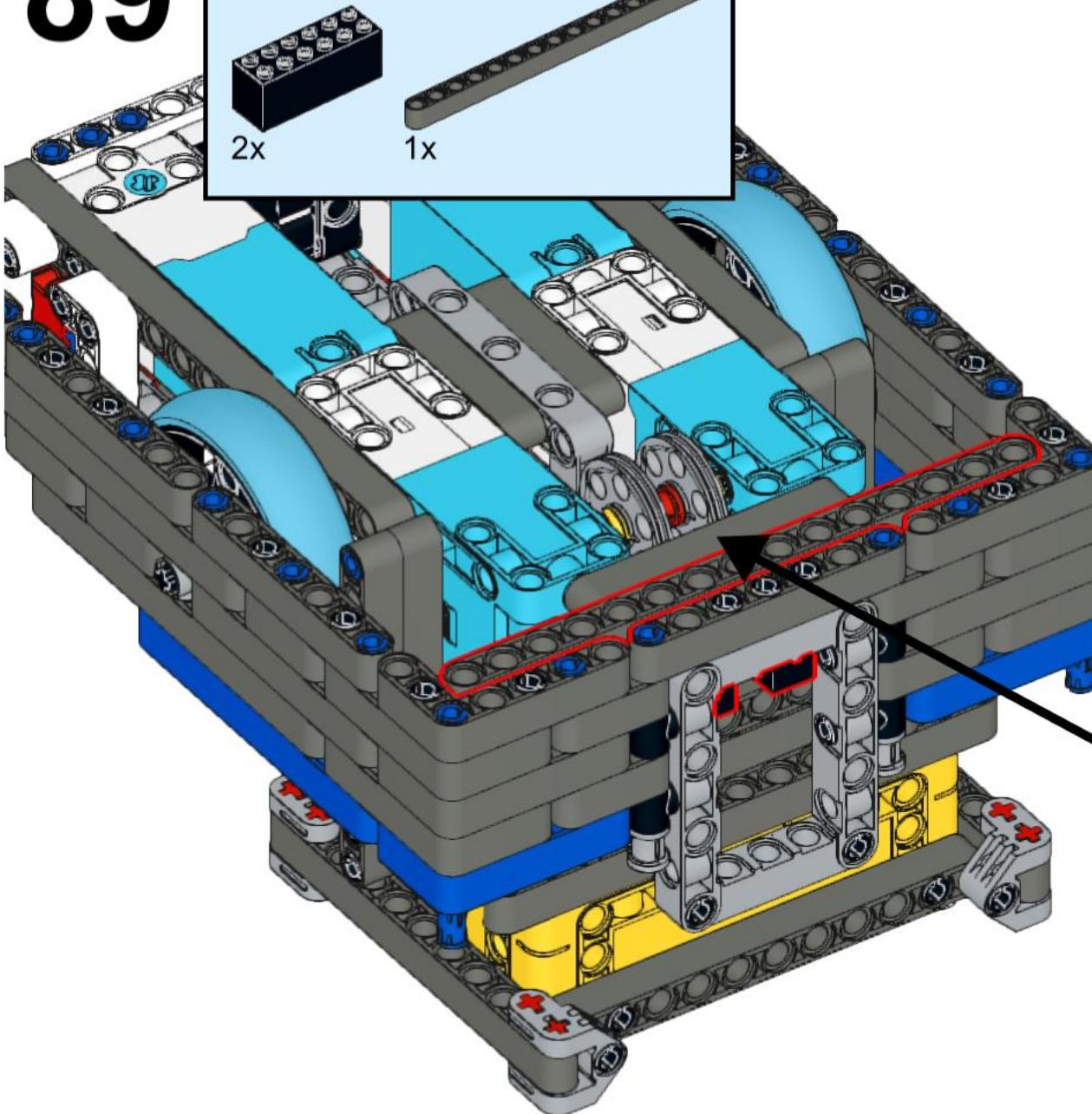
Use the  
colored beams  
here

**88**



Use the  
colored beams  
here

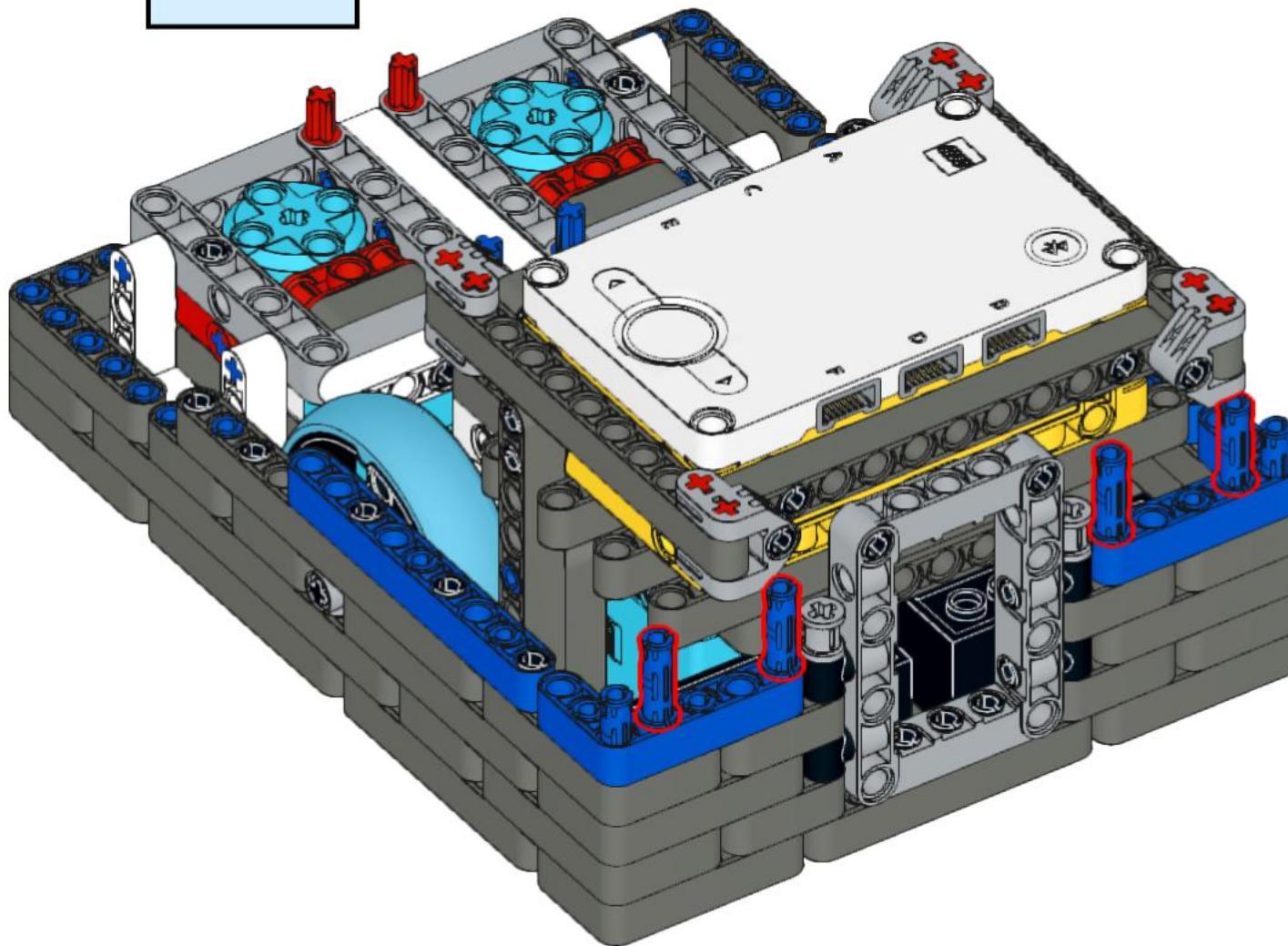
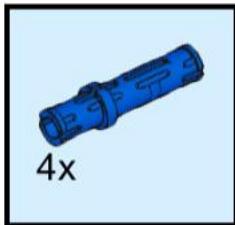
89



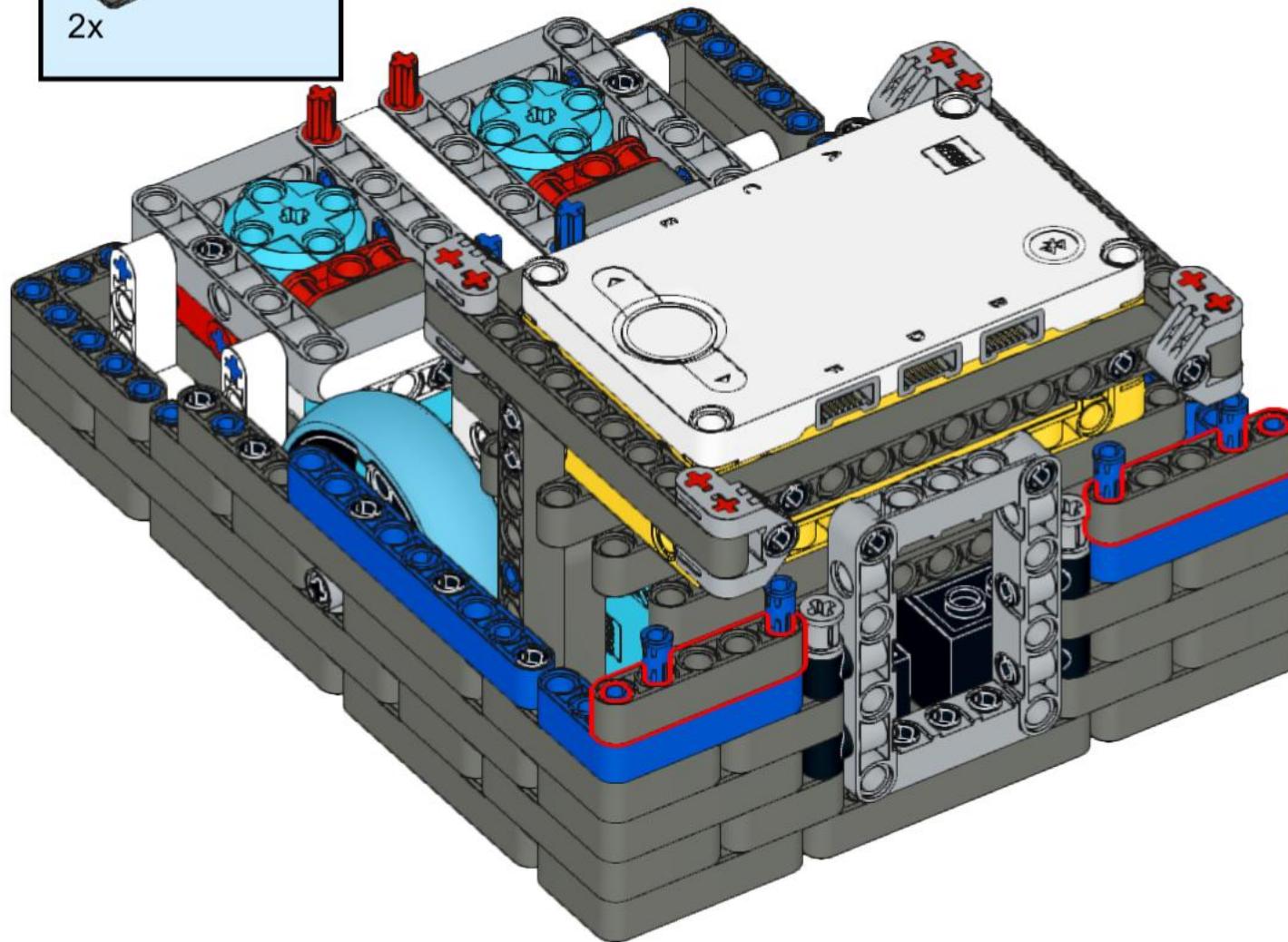
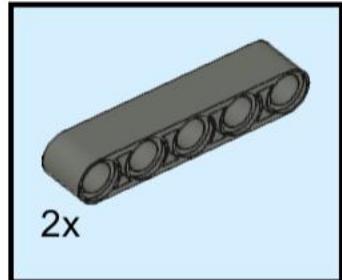
Connect the weighted bricks together using the "15" beam. Remove the "7" beam from the bottom back of the large drive motors. Drop the weighted bricks in and replace the "7" beam.

Temporarily remove this beam (and pins)

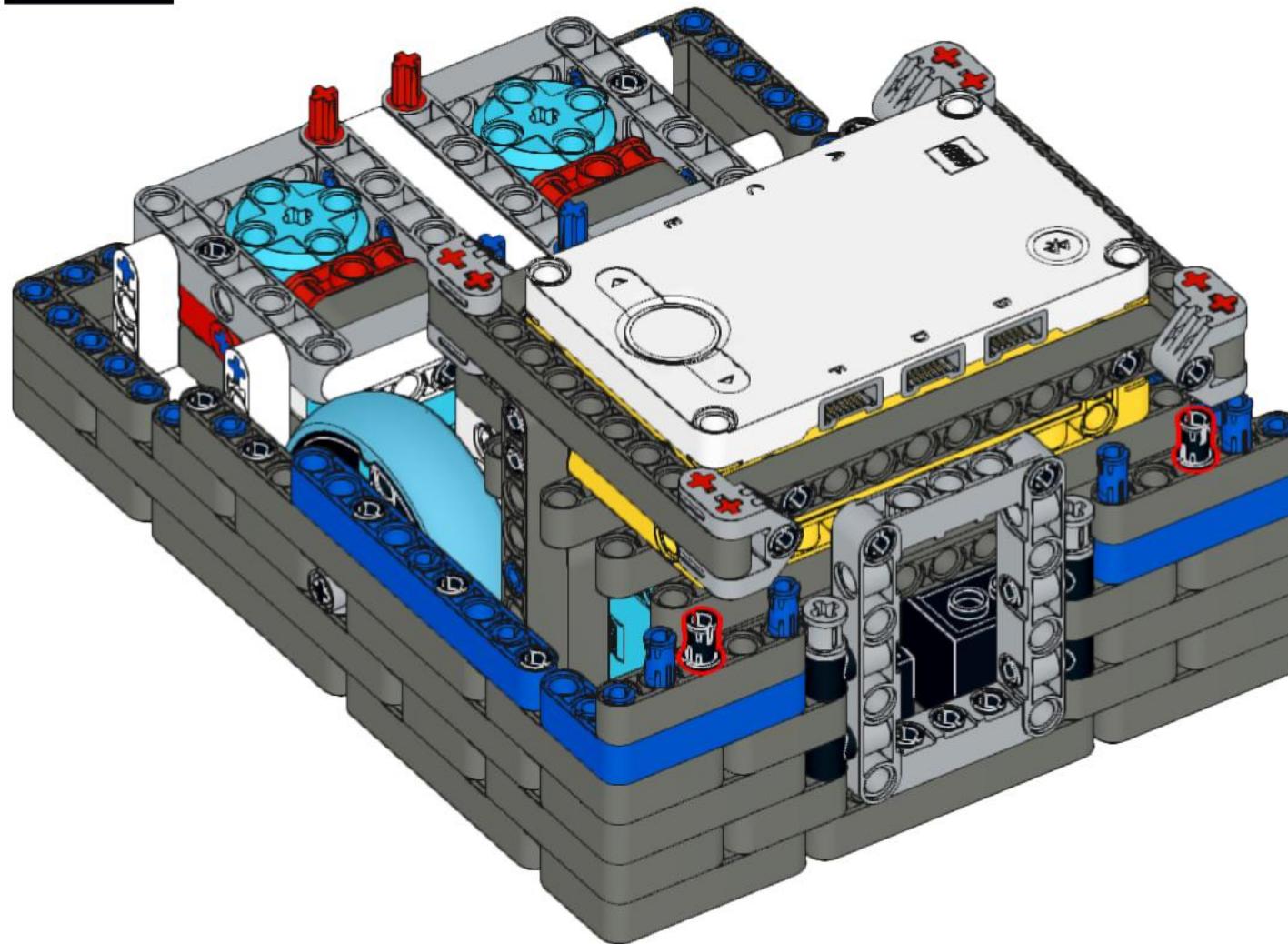
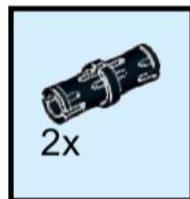
**90**



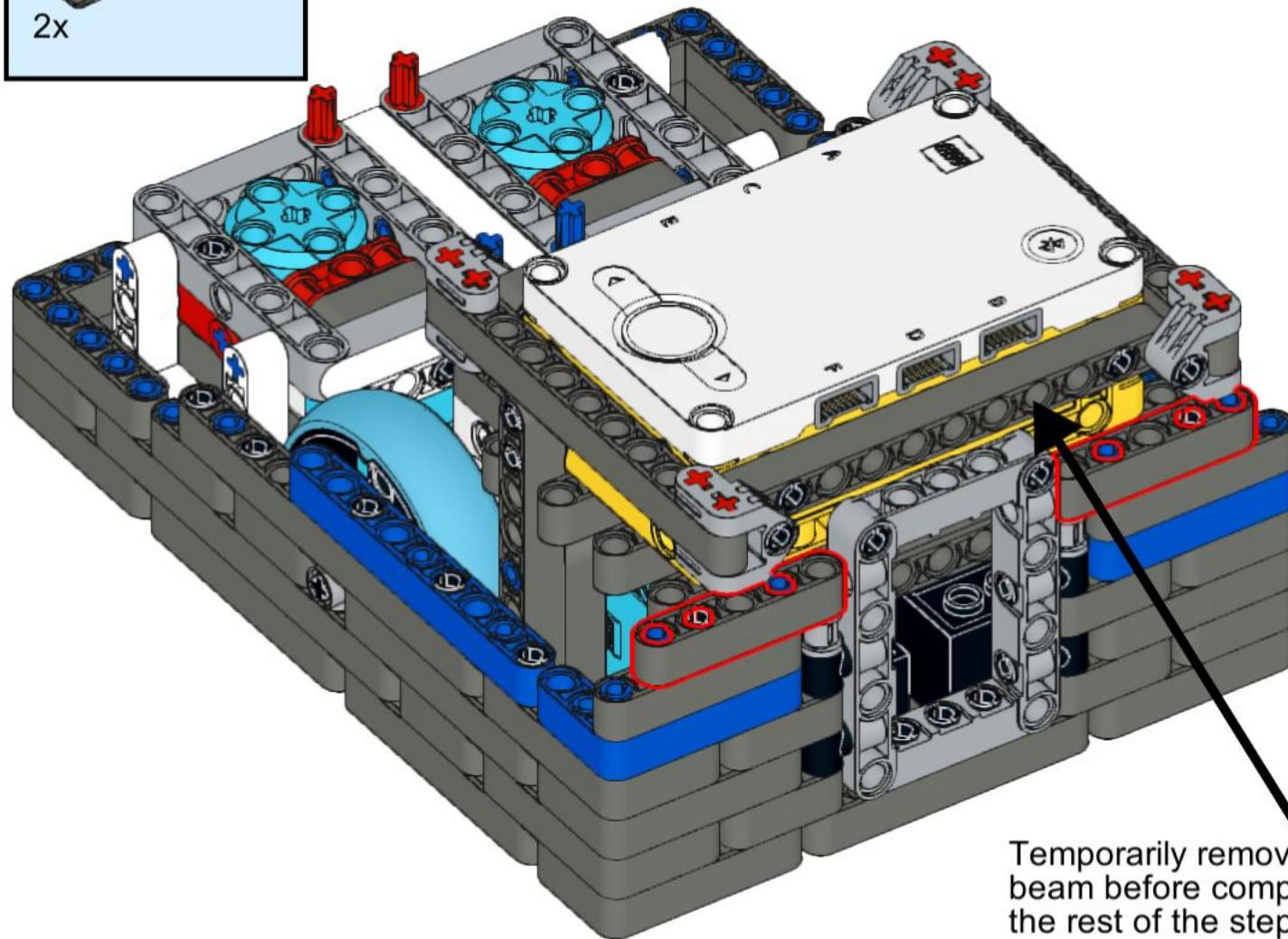
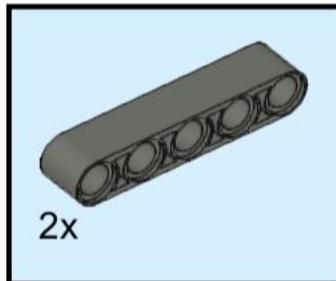
**91**



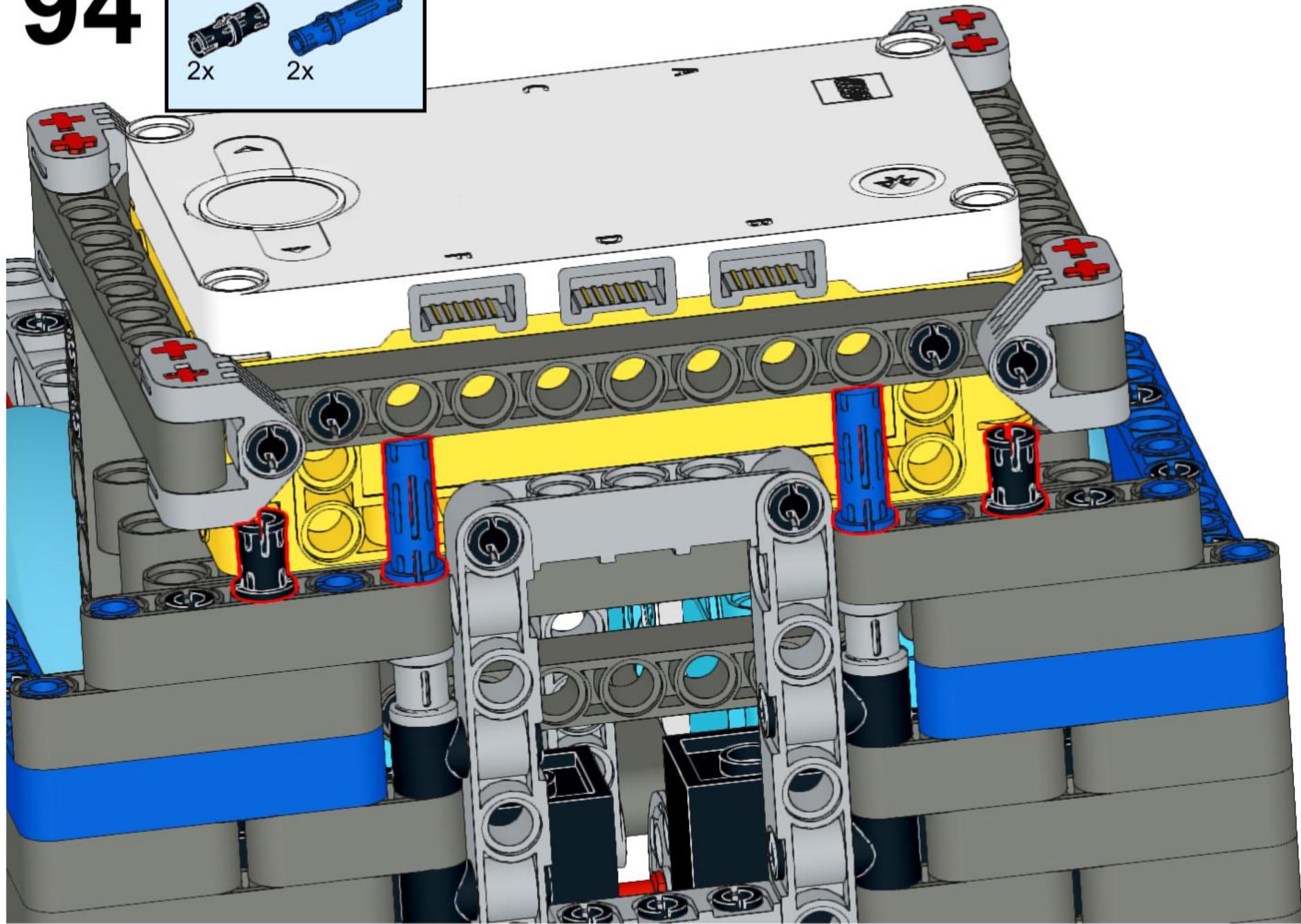
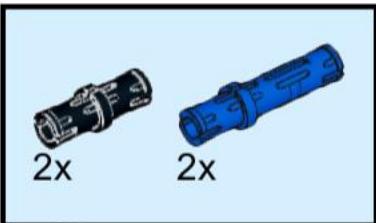
**92**



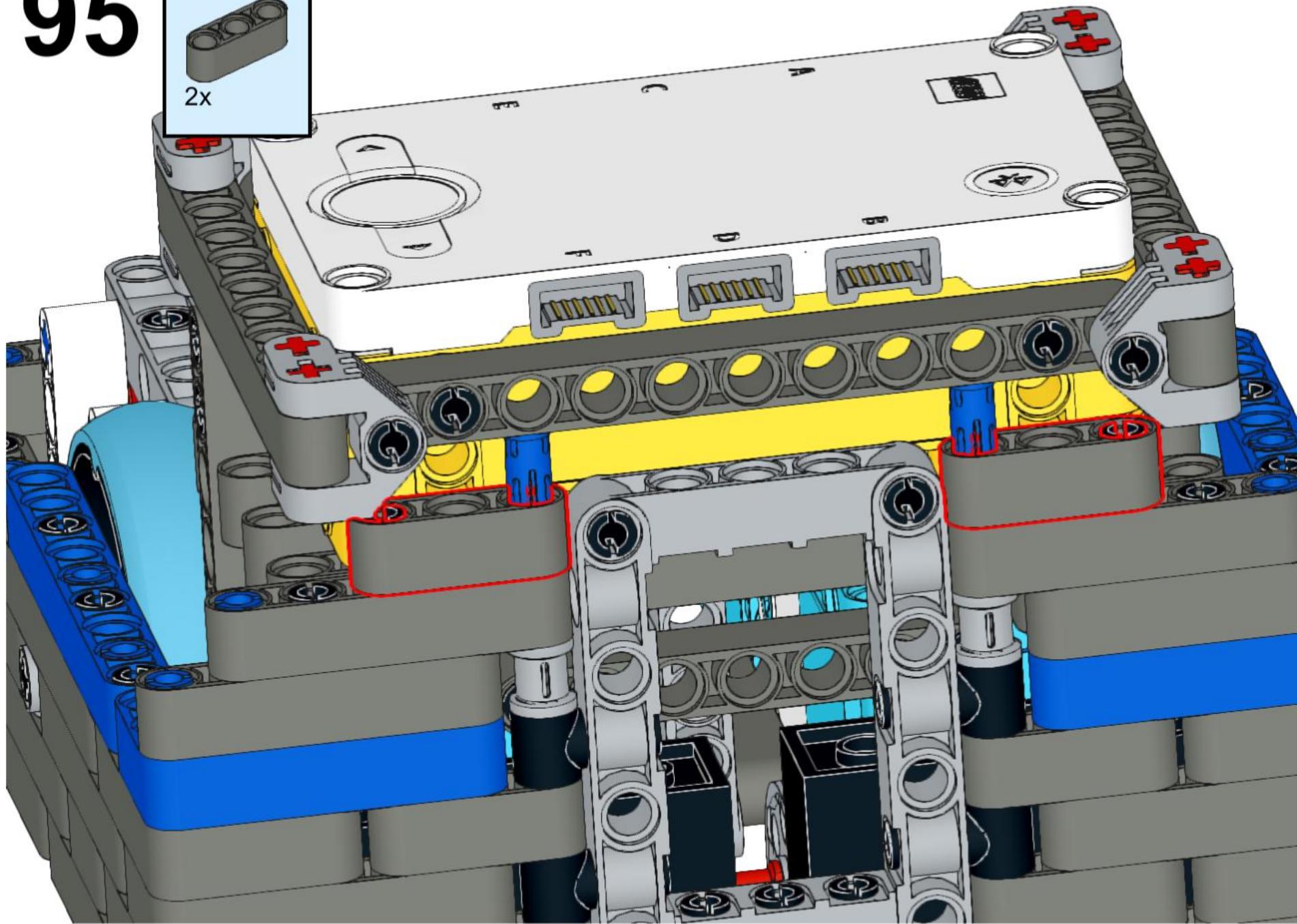
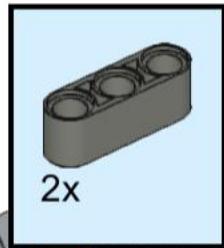
**93**



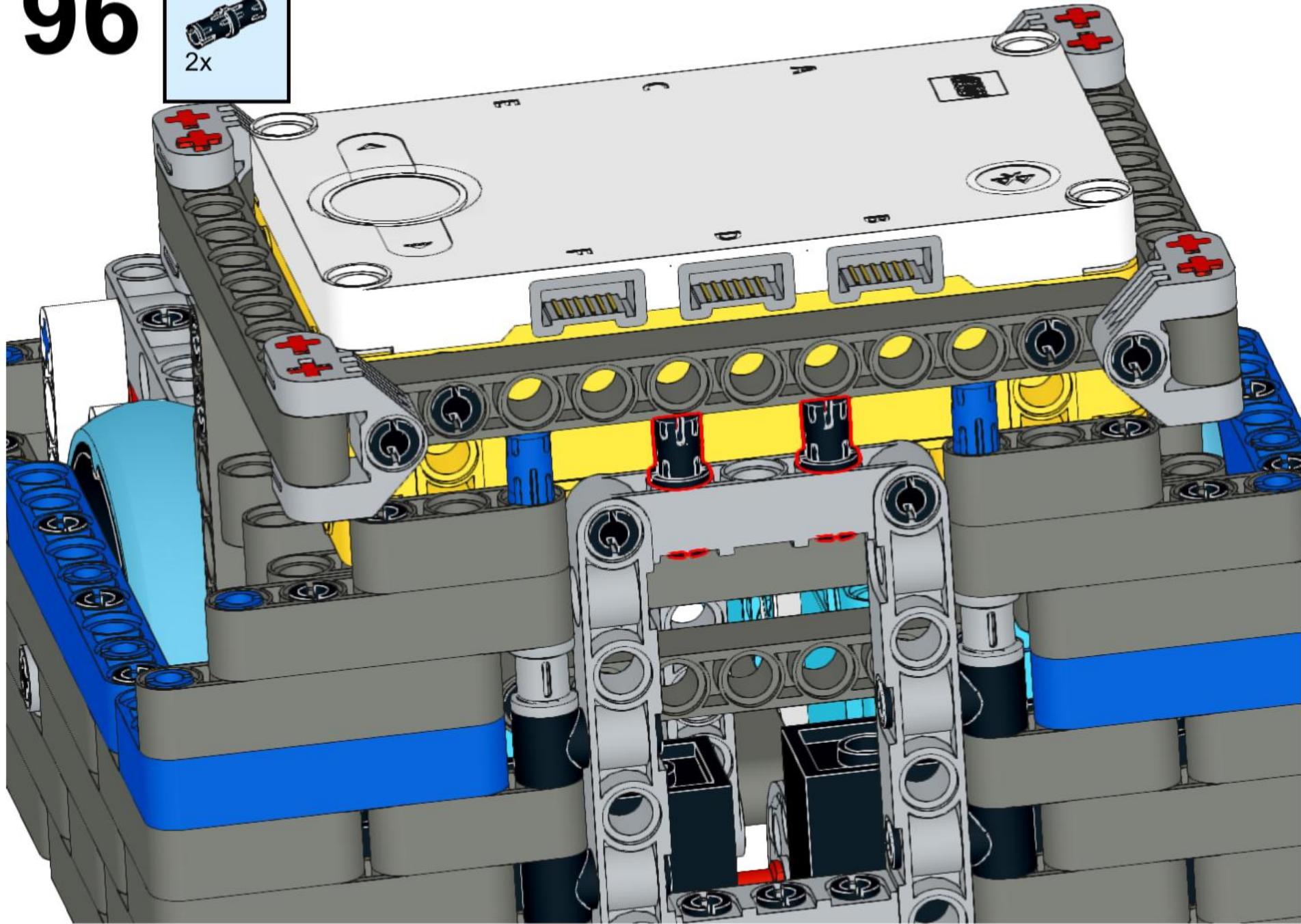
**94**



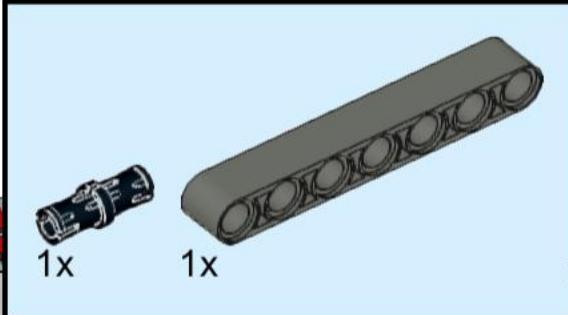
**95**



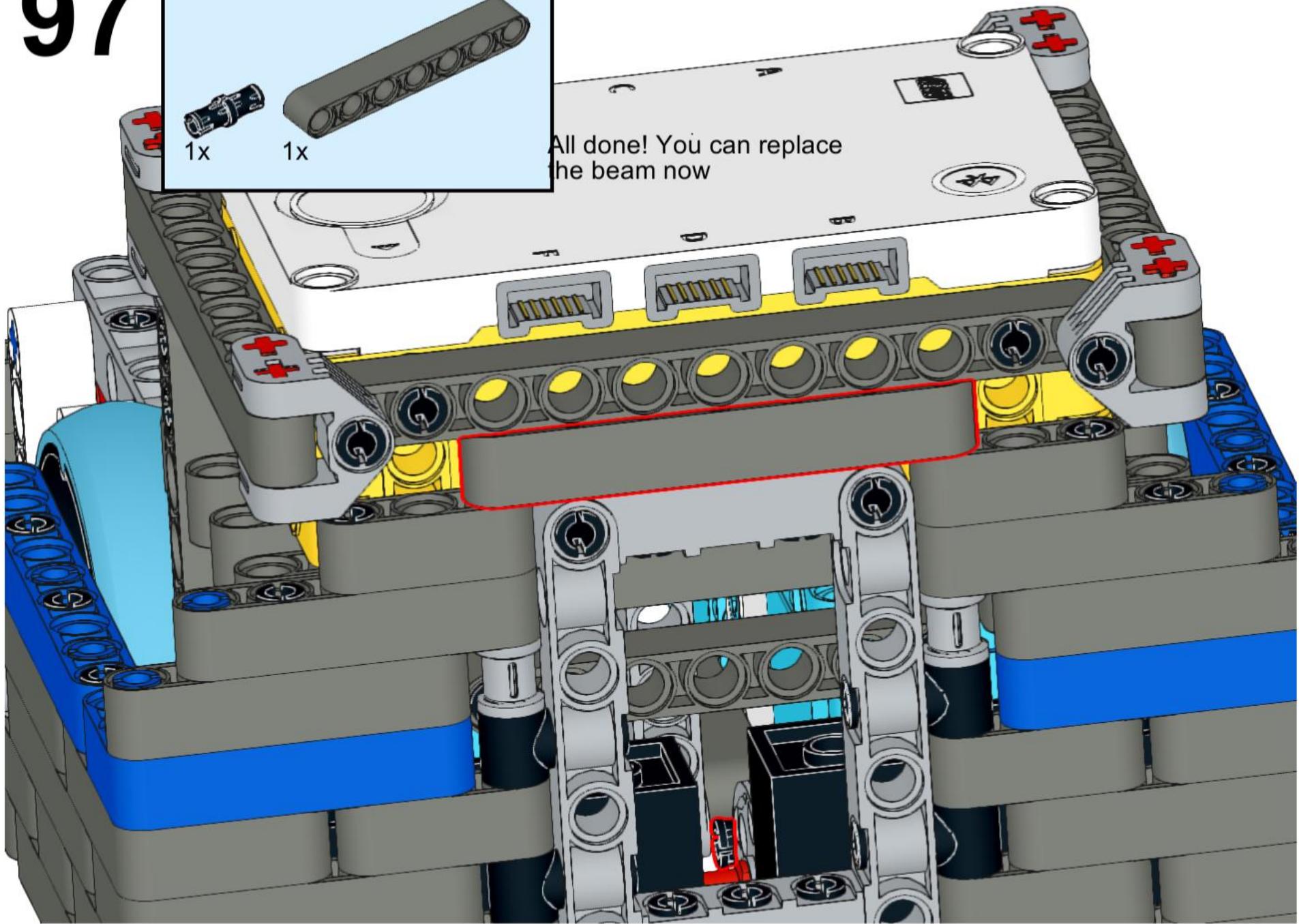
**96**



97



All done! You can replace  
the beam now





94x  
2780  
Black



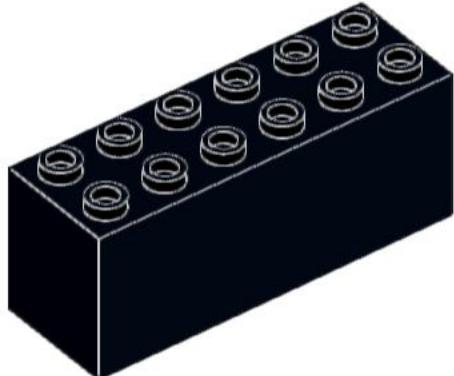
4x  
15100  
Black



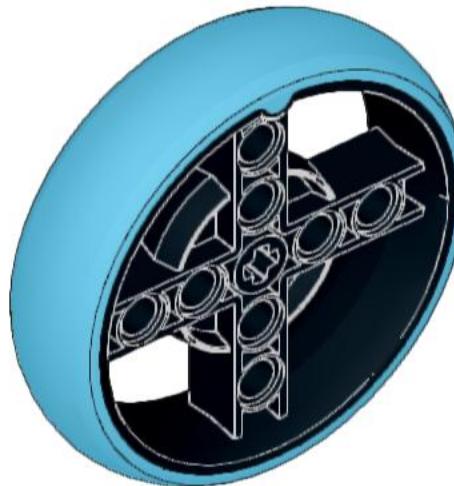
3x  
3705  
Black



1x  
37308c01  
Black



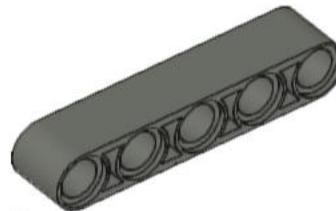
2x  
73090b  
Black



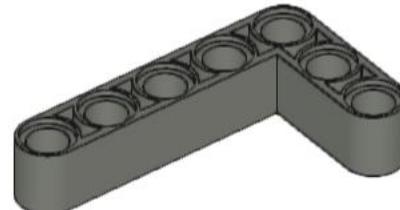
2x  
39367c01  
Black



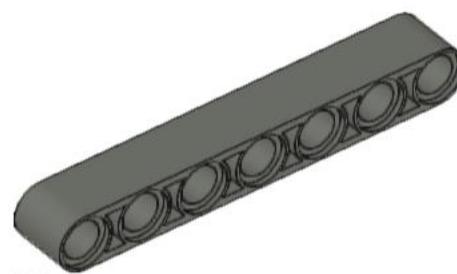
14x  
32523  
Dark Bluish Gray



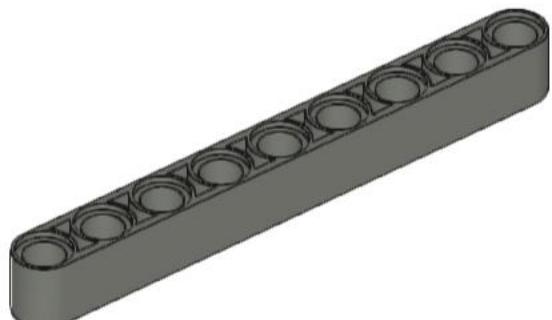
8x  
32316  
Dark Bluish Gray



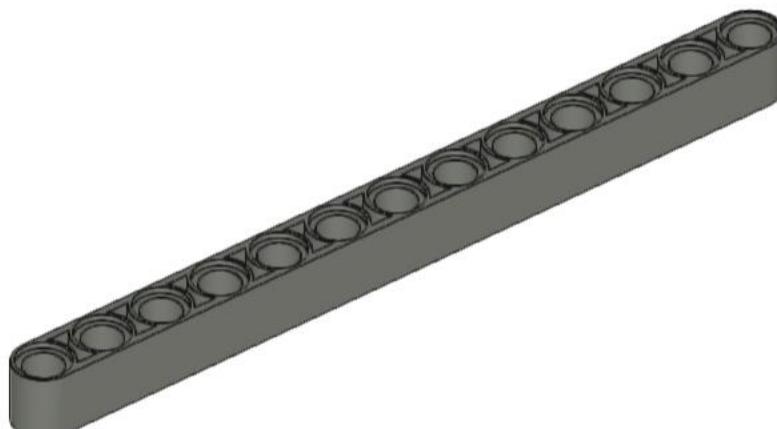
16x  
32526  
Dark Bluish Gray



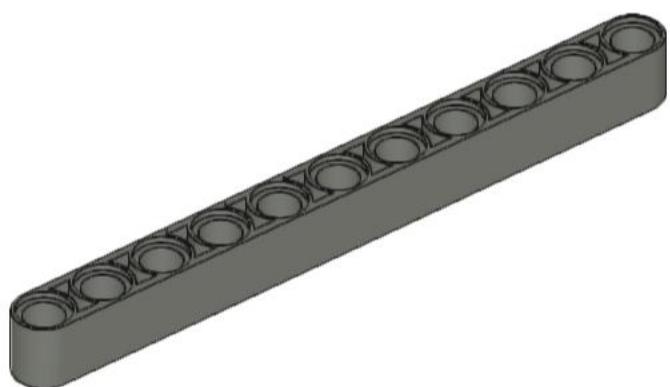
10x  
32524  
Dark Bluish Gray



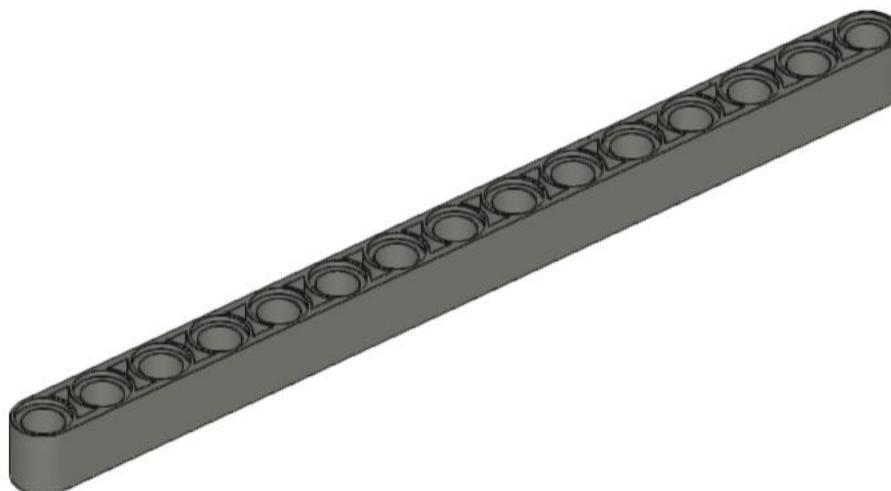
2x  
40490  
Dark Bluish Gray



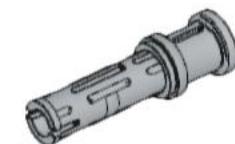
4x  
41239  
Dark Bluish Gray



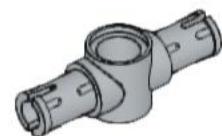
10x  
32525  
Dark Bluish Gray



3x  
32278  
Dark Bluish Gray



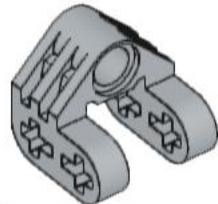
2x  
32054  
Light Bluish Gray



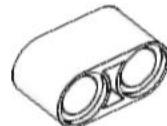
2x  
87082  
Light Bluish Gray

4x  
64179

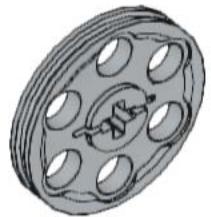
Light Bluish Gray



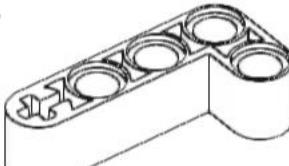
4x  
92907  
Light Bluish Gray



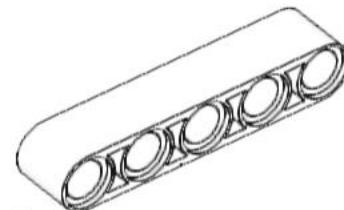
2x  
43857  
White



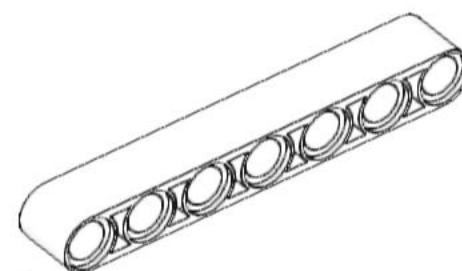
2x  
4185  
Light Bluish Gray



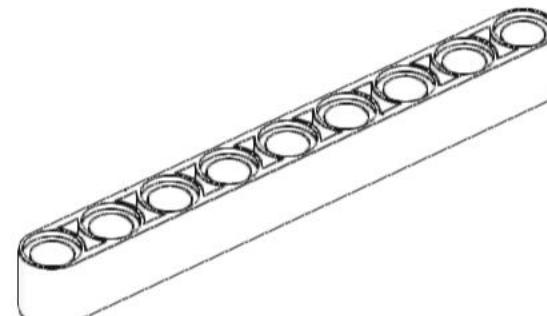
4x  
32140  
White



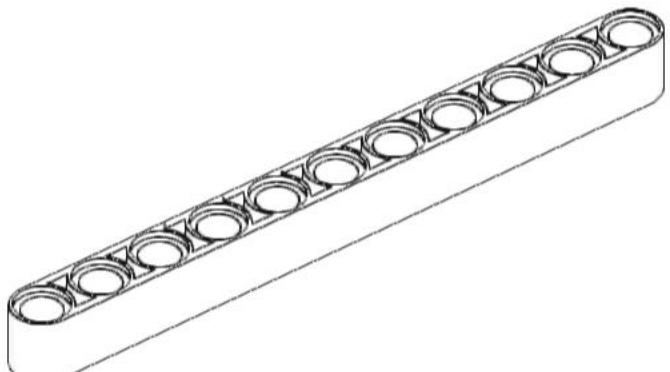
2x  
32316  
White



1x  
32524  
White



1x  
40490  
White



1x  
32525  
White



4x  
32184  
Red



2x  
4265c  
Yellow



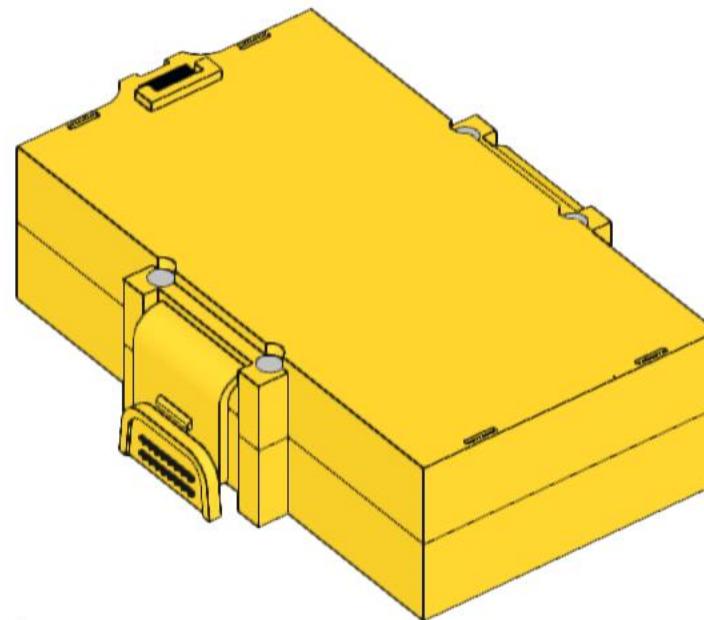
1x  
3713  
Red



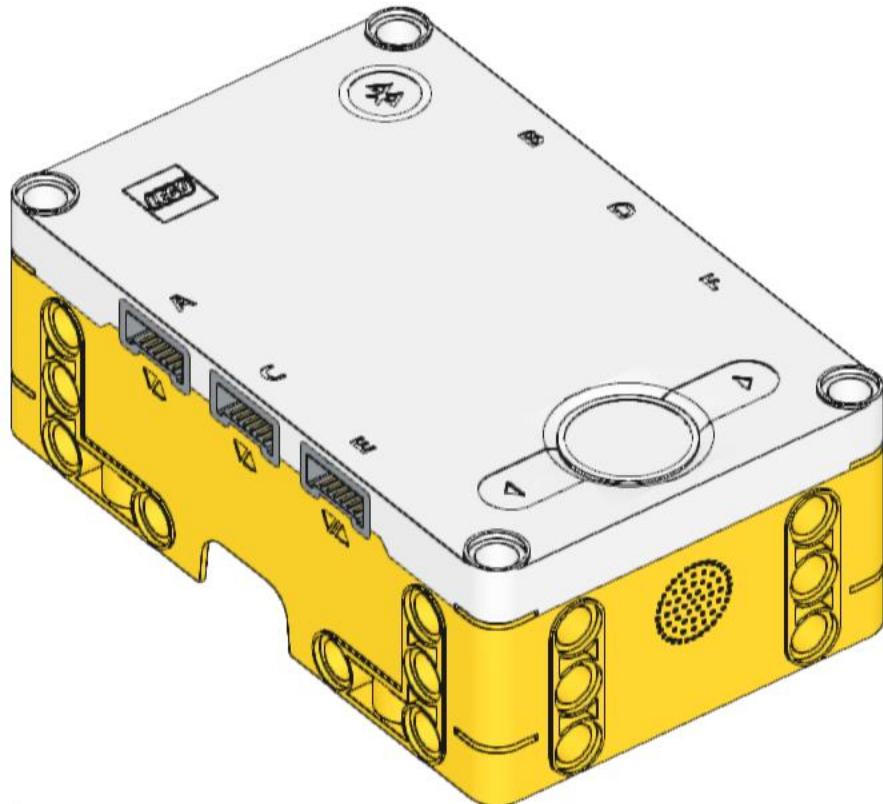
8x  
32062  
Red



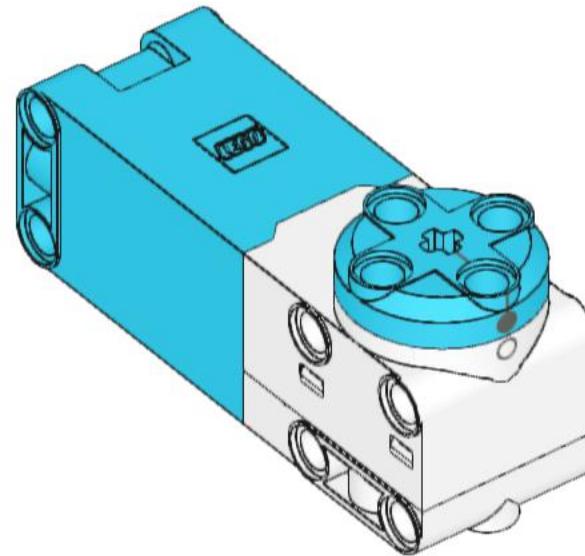
6x  
11214  
Red



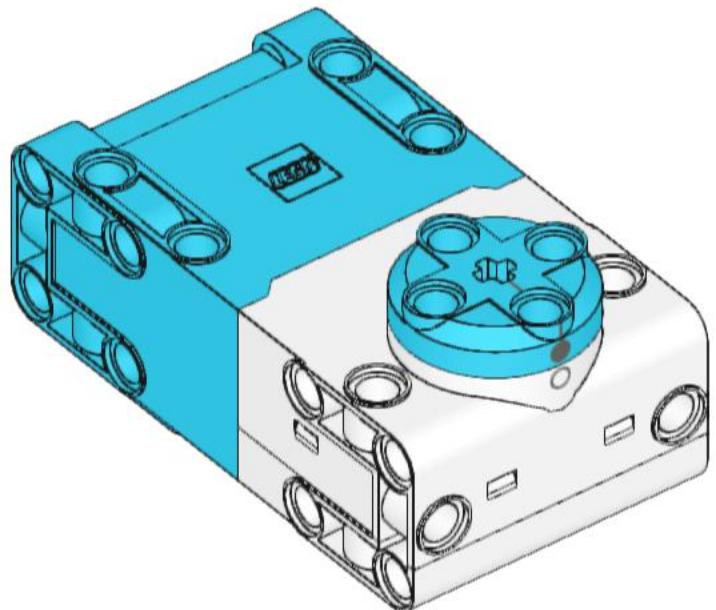
1x  
55422c01  
Yellow



1x  
bb1142c01  
Yellow



2x  
54696c01  
Medium Azure



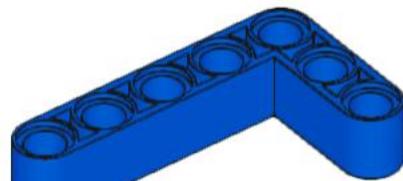
2x  
54675c01  
Medium Azure



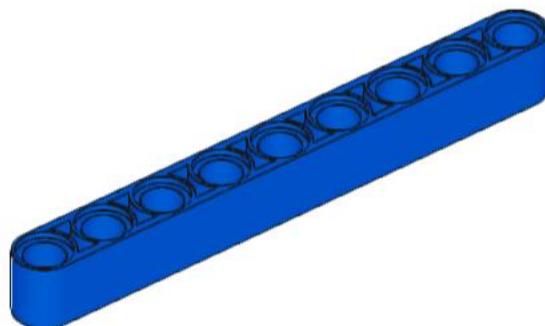
10x  
43093  
Blue



83x  
6558  
Blue



2x  
32526  
Blue



2x  
40490  
Blue