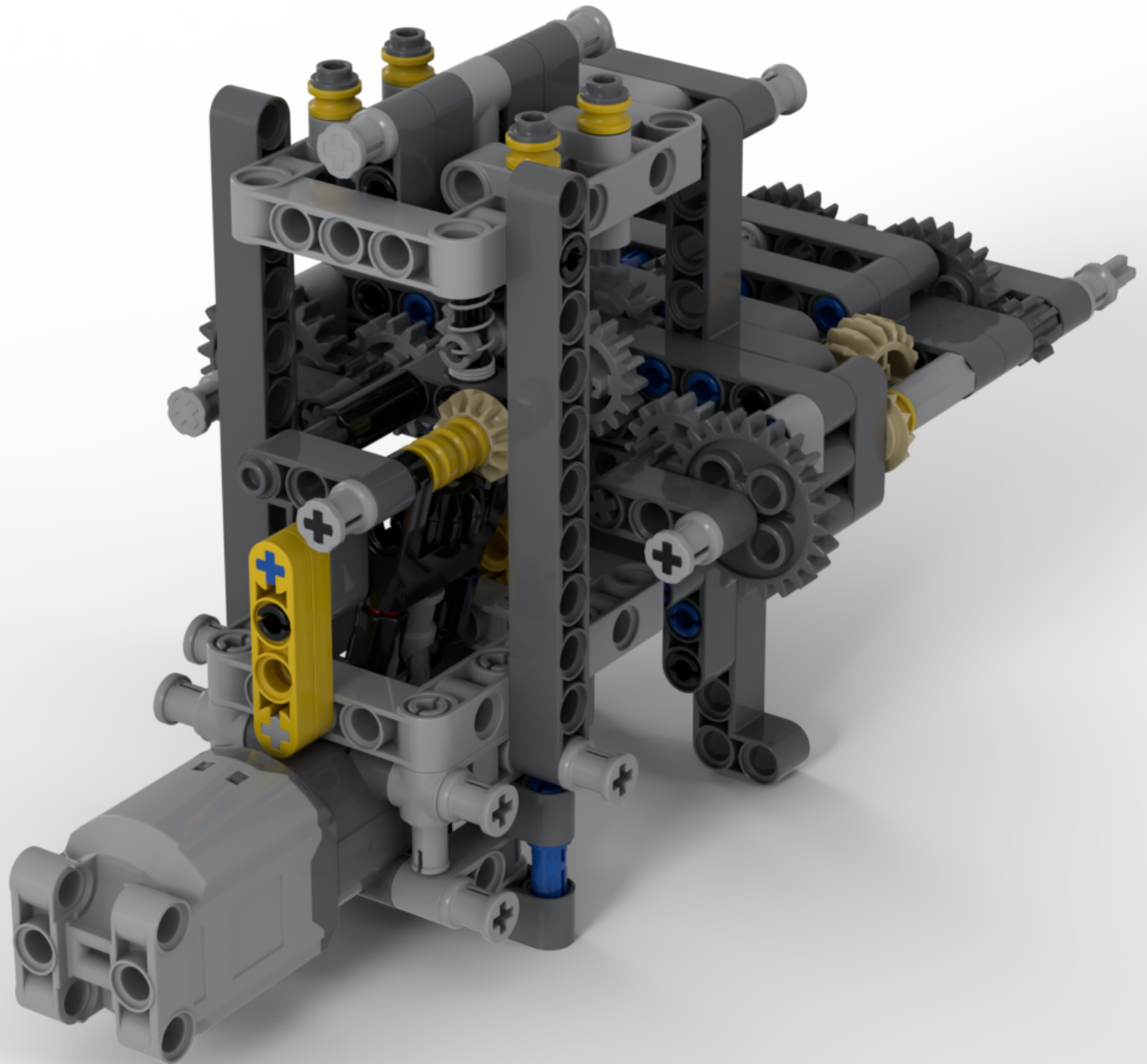


Symmetrical Periodic Auto-reverse switch

Frank van der Most

21 May 2022



BUILDING NOTES

Before attaching the engine, test the mechanism manually.

All gears should run smoothly.

Turn the black gear at the bottom. Notice the worm gear sliding. Continue turning until you the switch flips from one side to the other. Continue turning until it flips back.

If the worm gear reaches one end of its axle and the switch does not flip directly after, but instead you feel the resistance on the black gear increasing, then you are turning the black gear in the wrong direction.

MORE INFORMATION

For more information about this model see

<https://frankvandermost.com/lego/symmetrical-periodic-auto-reverse-switch/>

The page explains how the switch works and shows some videos of the switch in action.

If you have any questions, suggestions, criticism or praise, then please do leave them in the comments at the bottom of that page. You are also welcome to write me at frank_drv@icloud.com

This manual was made with the Studio design software for the instructions, and Keynote to put it all together into a .pdf.

Parts list



27x
2780
Black



2x
3705
Black



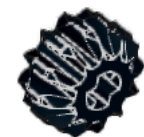
1x
6538c
Black



2x
32013
Black



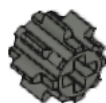
1x
87408
Black



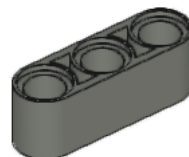
3x
32270
Black



3x
3707
Black



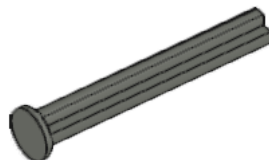
5x
10928
Dark Bluish Gray



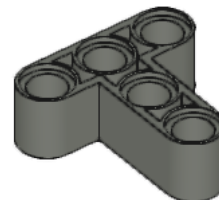
4x
32523
Dark Bluish Gray



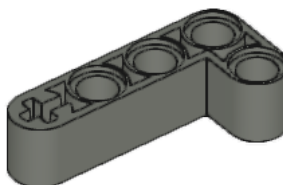
5x
6587
Dark Bluish Gray



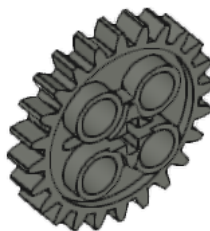
3x
87083
Dark Bluish Gray



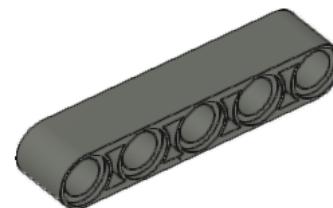
9x
60484
Dark Bluish Gray



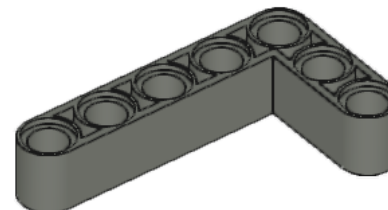
2x
32140
Dark Bluish Gray



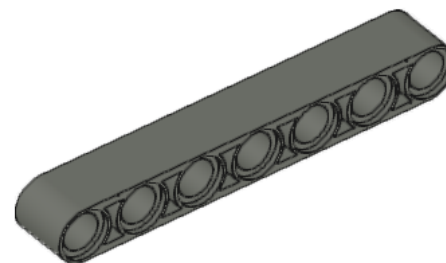
5x
3648
Dark Bluish Gray



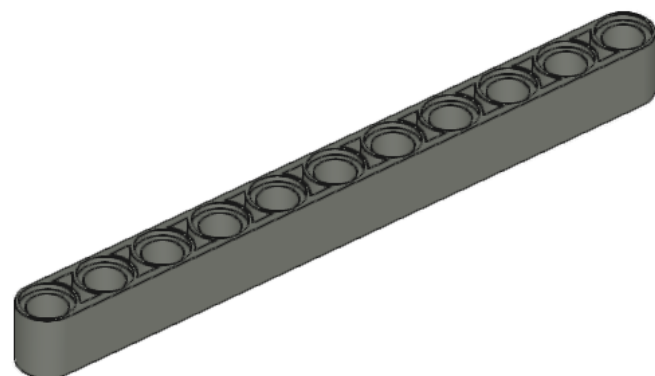
4x
32316
Dark Bluish Gray



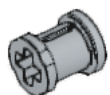
4x
32526
Dark Bluish Gray



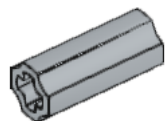
6x
32524
Dark Bluish Gray



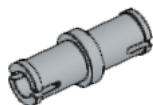
7x
32525
Dark Bluish Gray



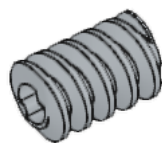
10x
3713
Light Bluish Gray



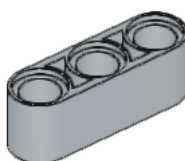
2x
6538c
Light Bluish Gray



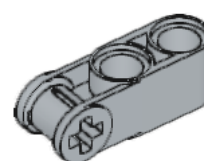
1x
3673
Light Bluish Gray



1x
32905
Light Bluish Gray



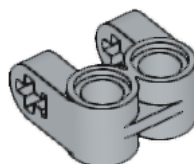
3x
32523
Light Bluish Gray



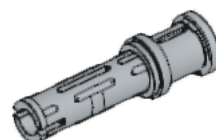
2x
42003
Light Bluish Gray



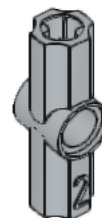
1x
731c06
Light Bluish Gray



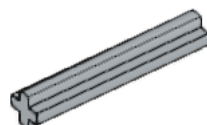
4x
41678
Light Bluish Gray



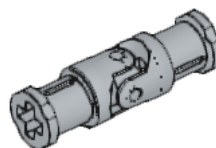
8x
32054
Light Bluish Gray



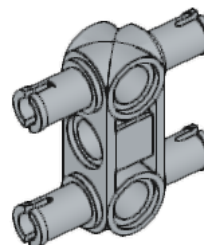
2x
32034
Light Bluish Gray



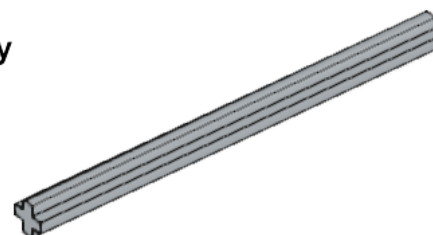
5x
4519
Light Bluish Gray



1x
62520c01
Light Bluish Gray



2x
48989
Light Bluish Gray



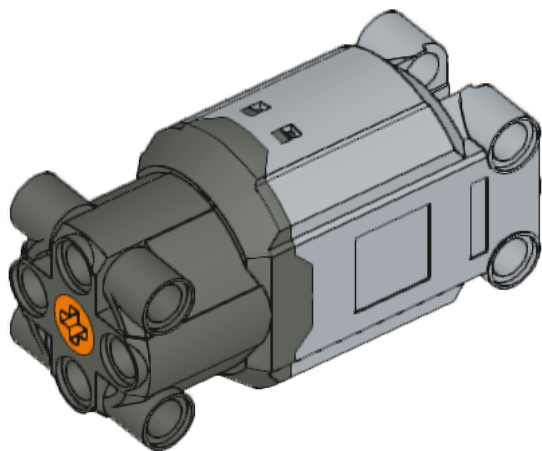
5x
44294
Light Bluish Gray



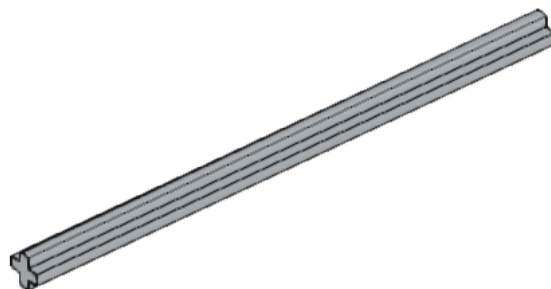
1x
32184
Light Bluish Gray



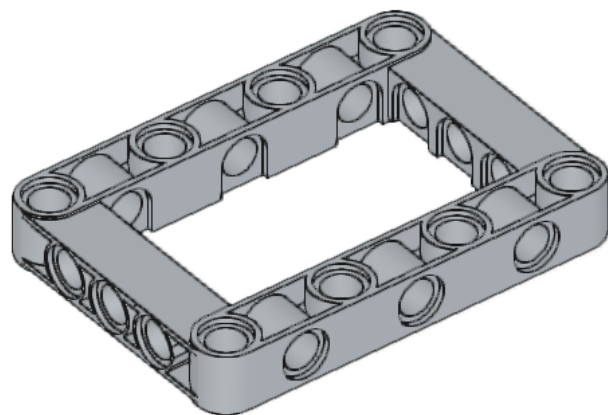
7x
94925
Light Bluish Gray



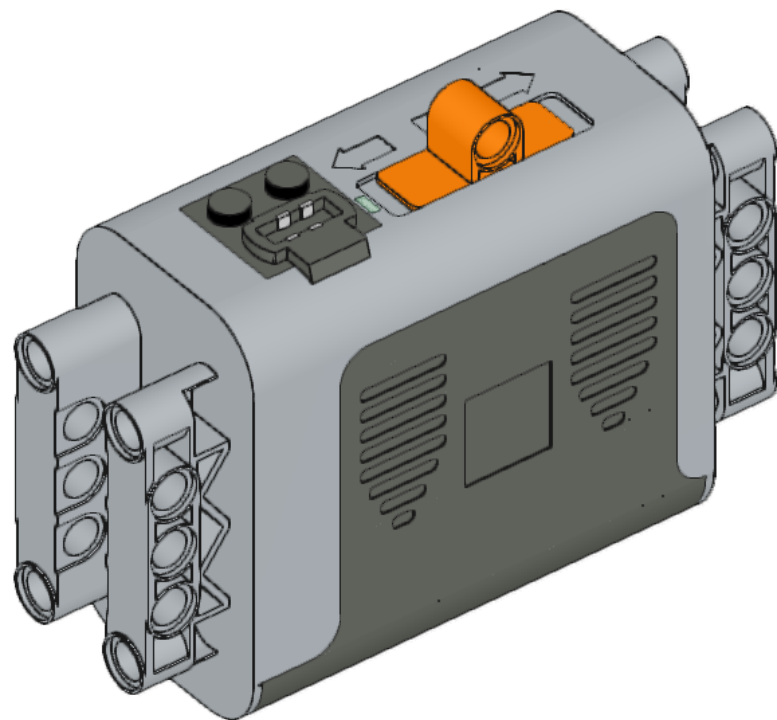
1x
99499c01
Light Bluish Gray



1x
60485
Light Bluish Gray



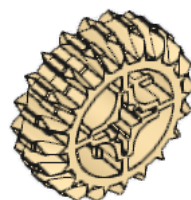
2x
64179
Light Bluish Gray



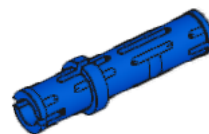
3x
6589
Tan



12x
43093
Blue



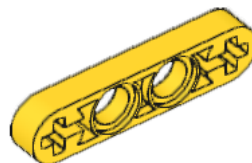
2x
32269
Tan



22x
6558
Blue

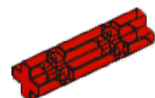


9x
4265c
Yellow



4x
32449
Yellow

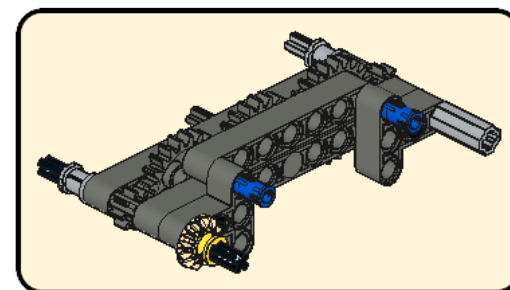
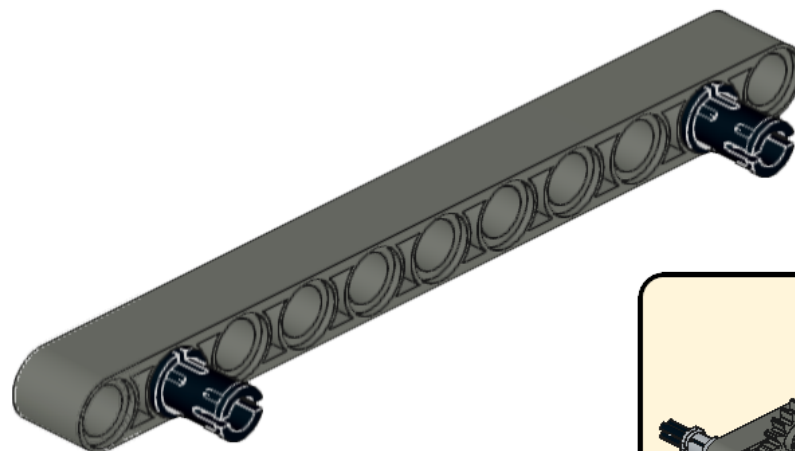
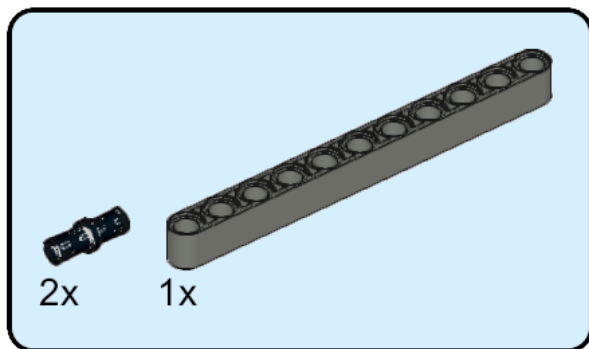
1x
59510c01
Light Bluish Gray



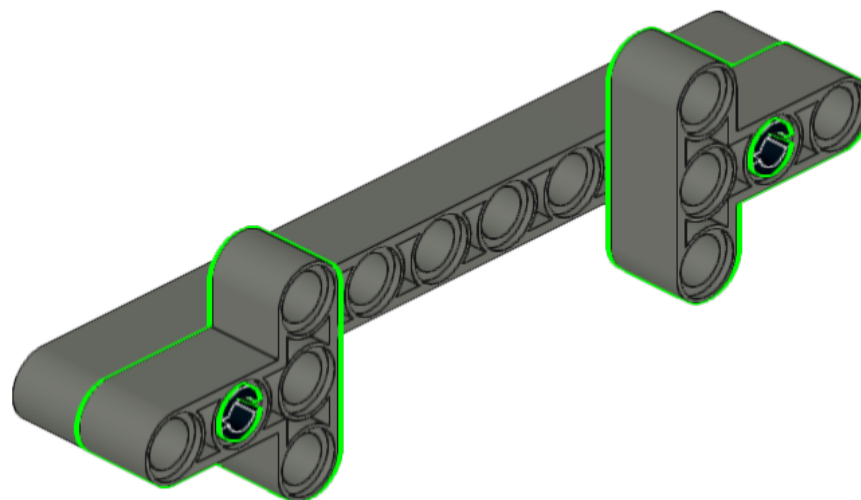
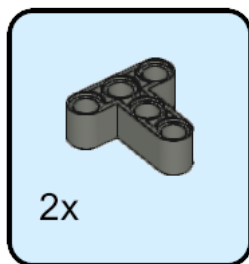
3x
32062
Red

Building instructions

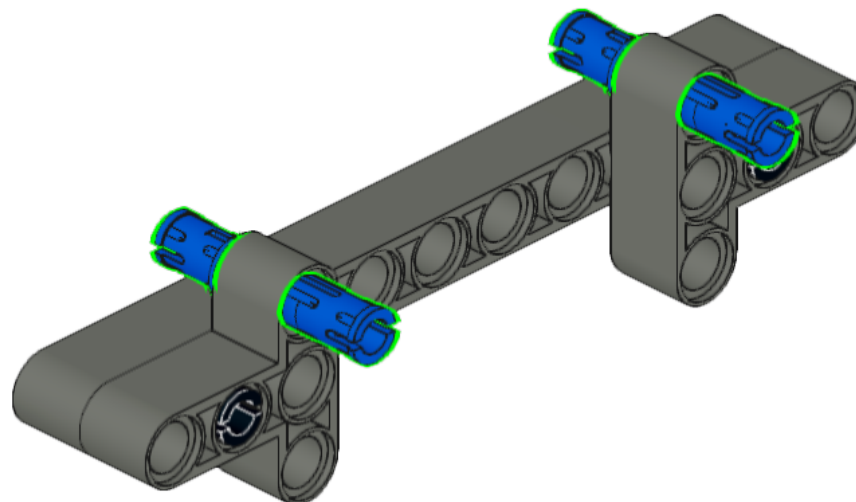
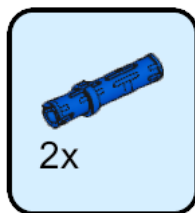
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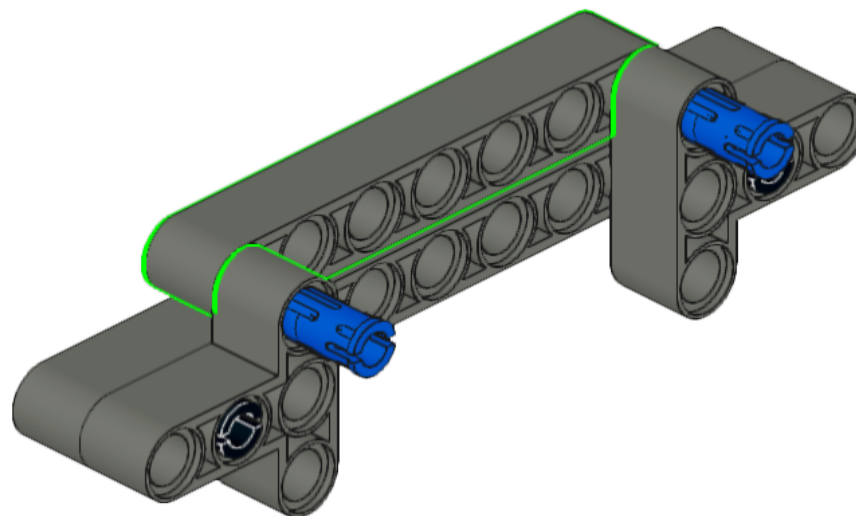
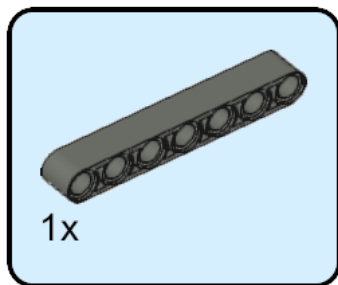
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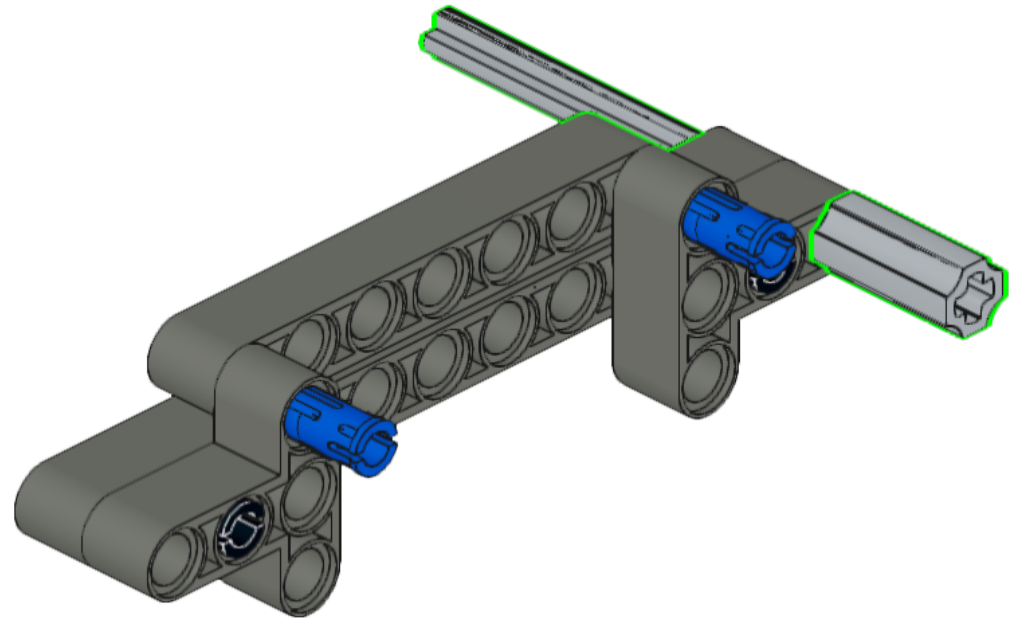
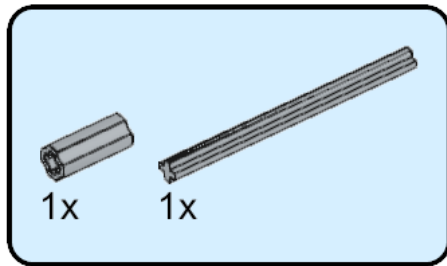
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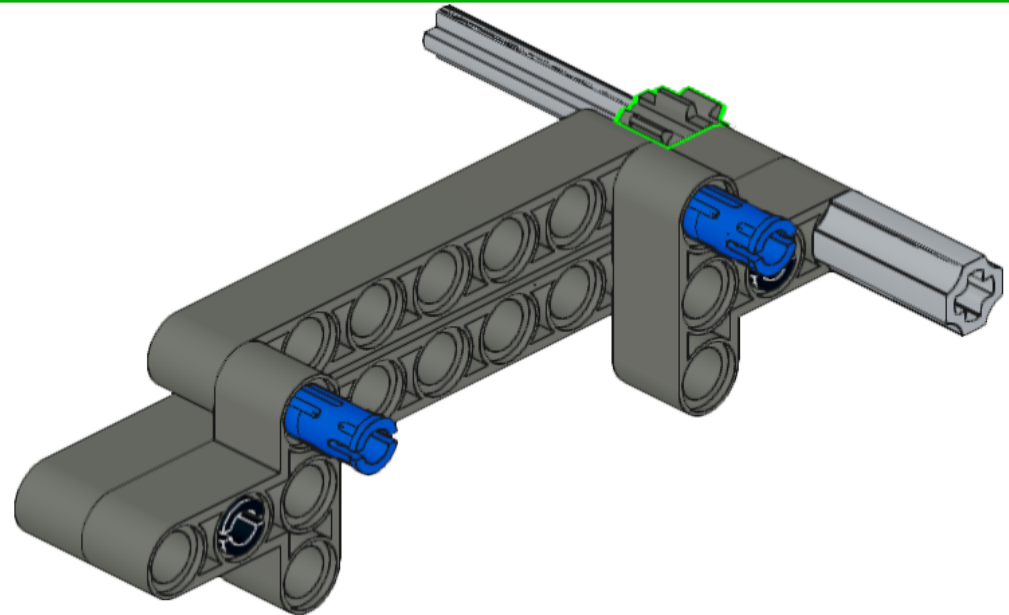
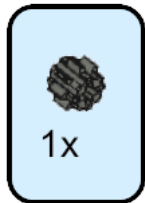
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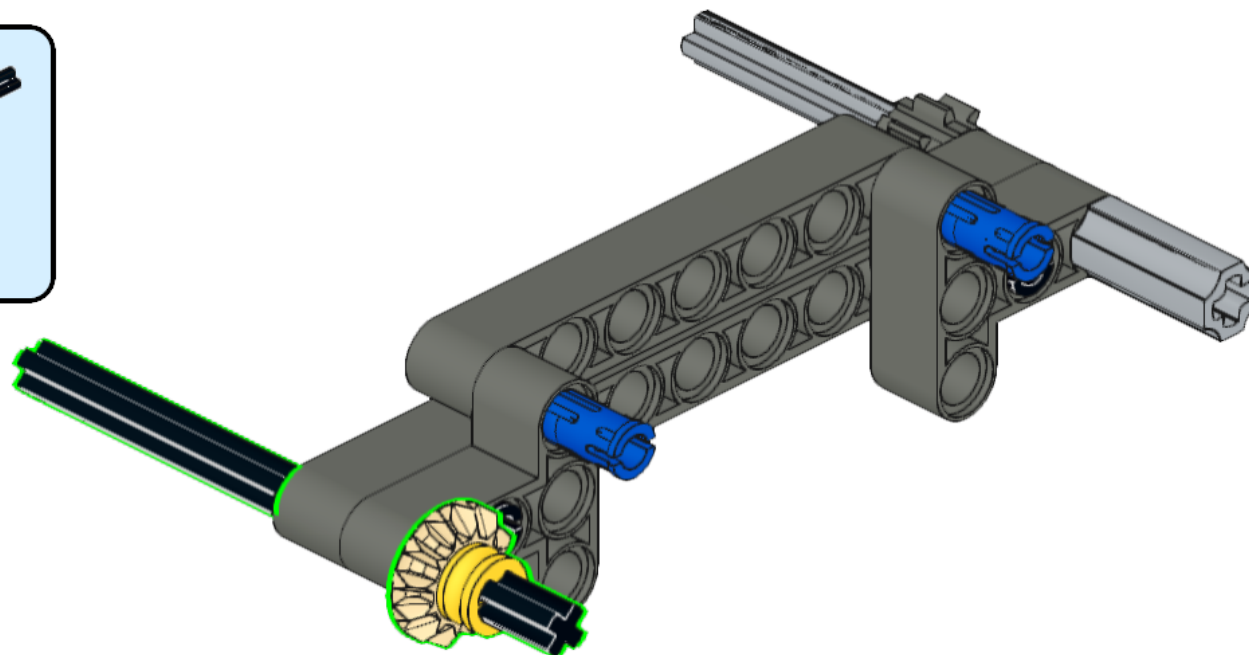
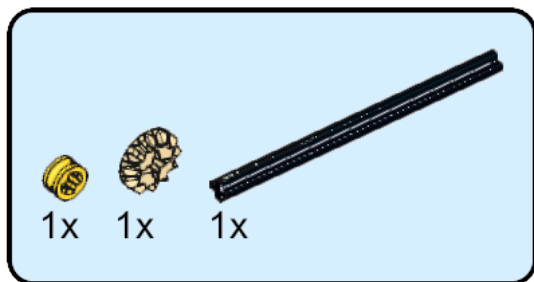
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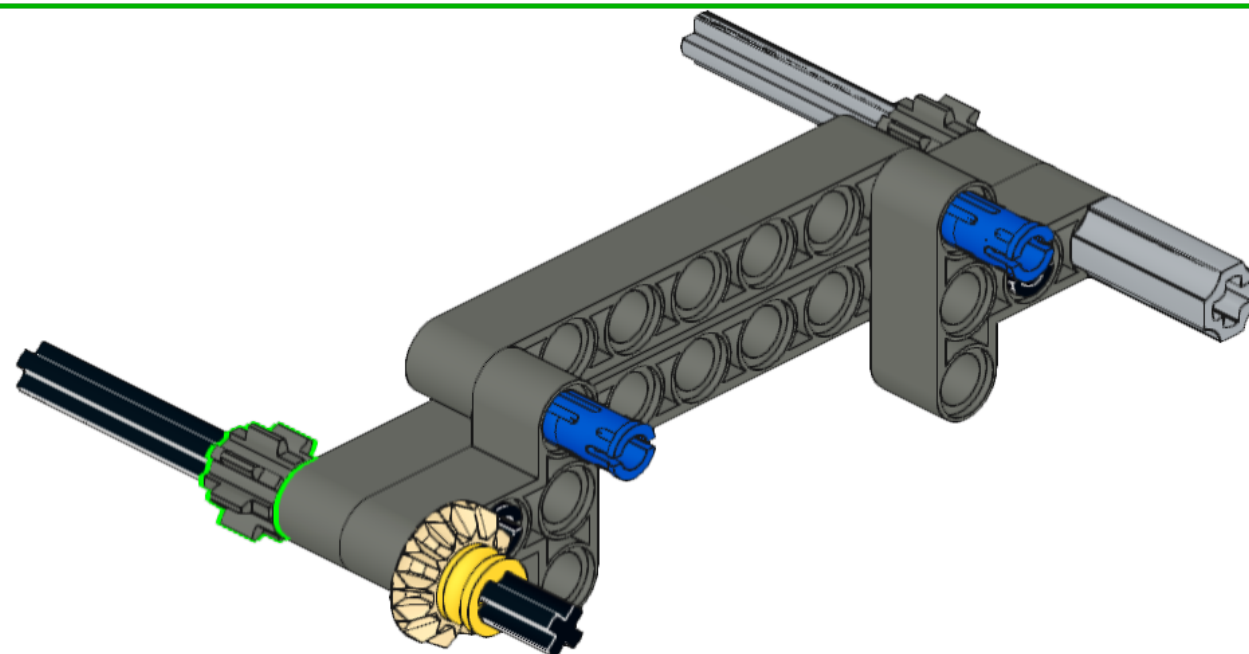
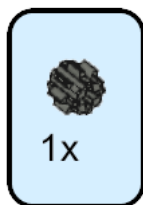
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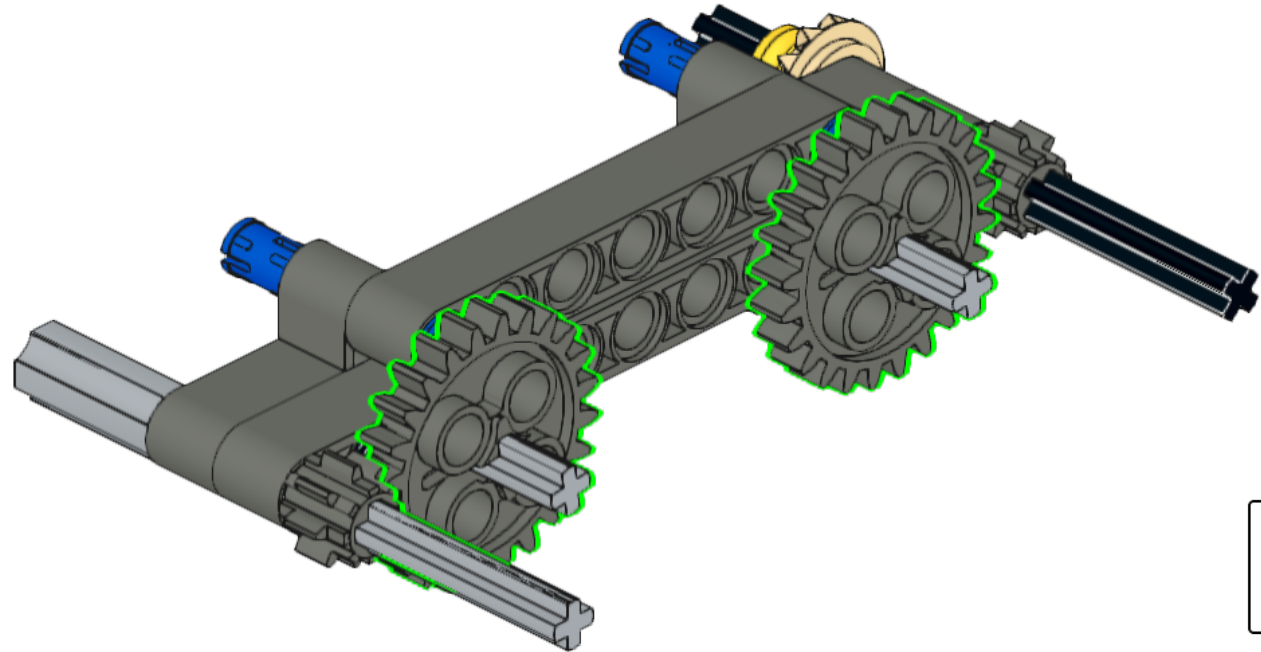
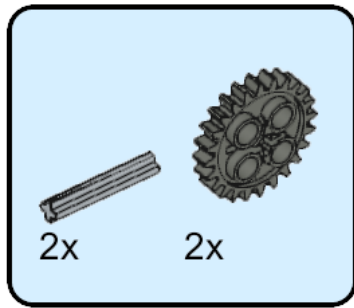
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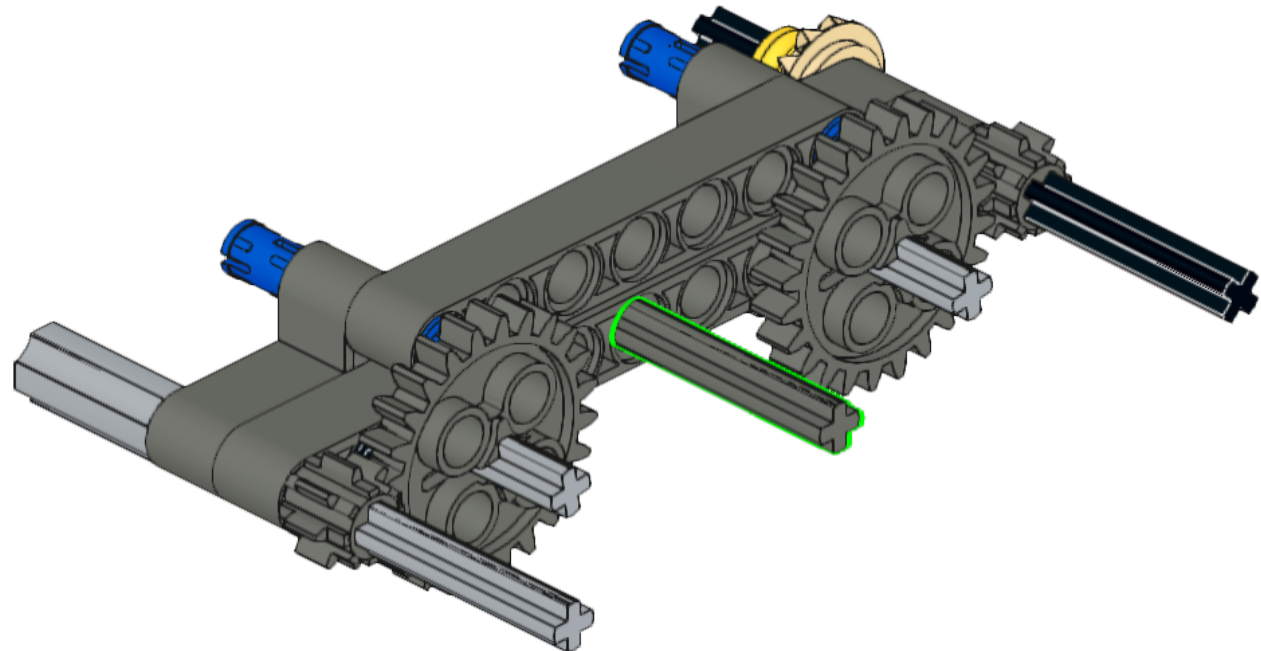
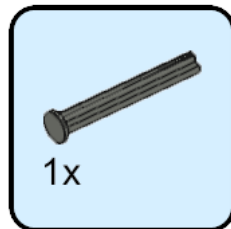
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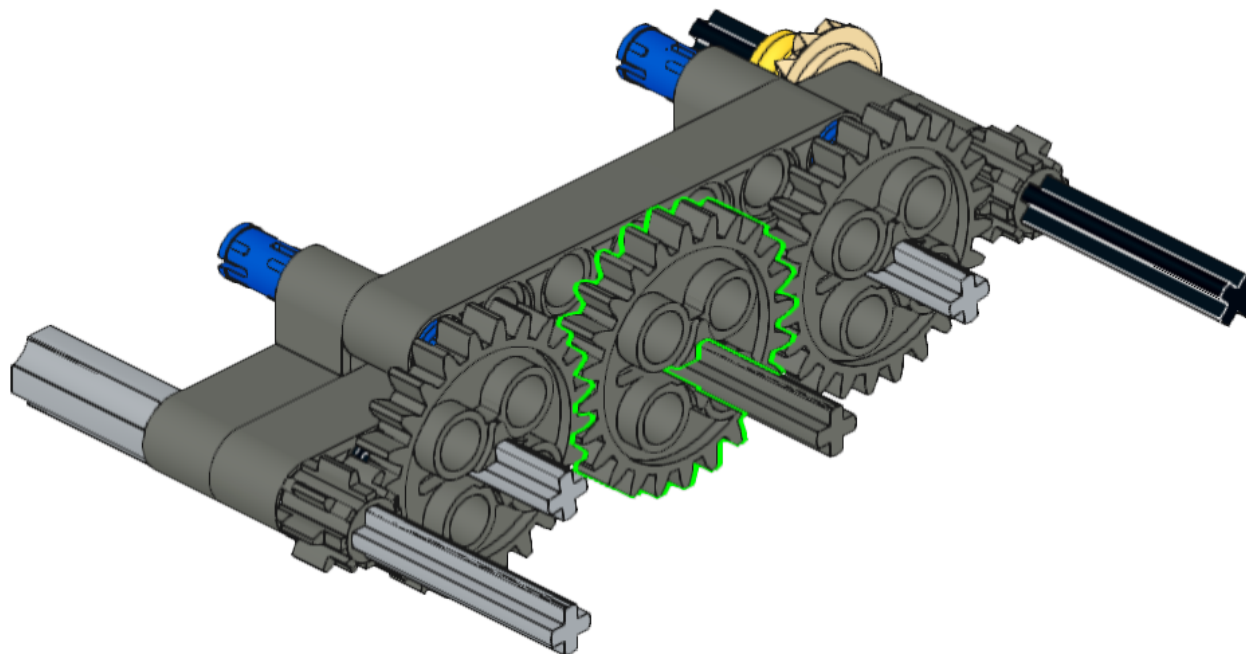
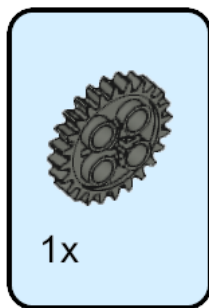
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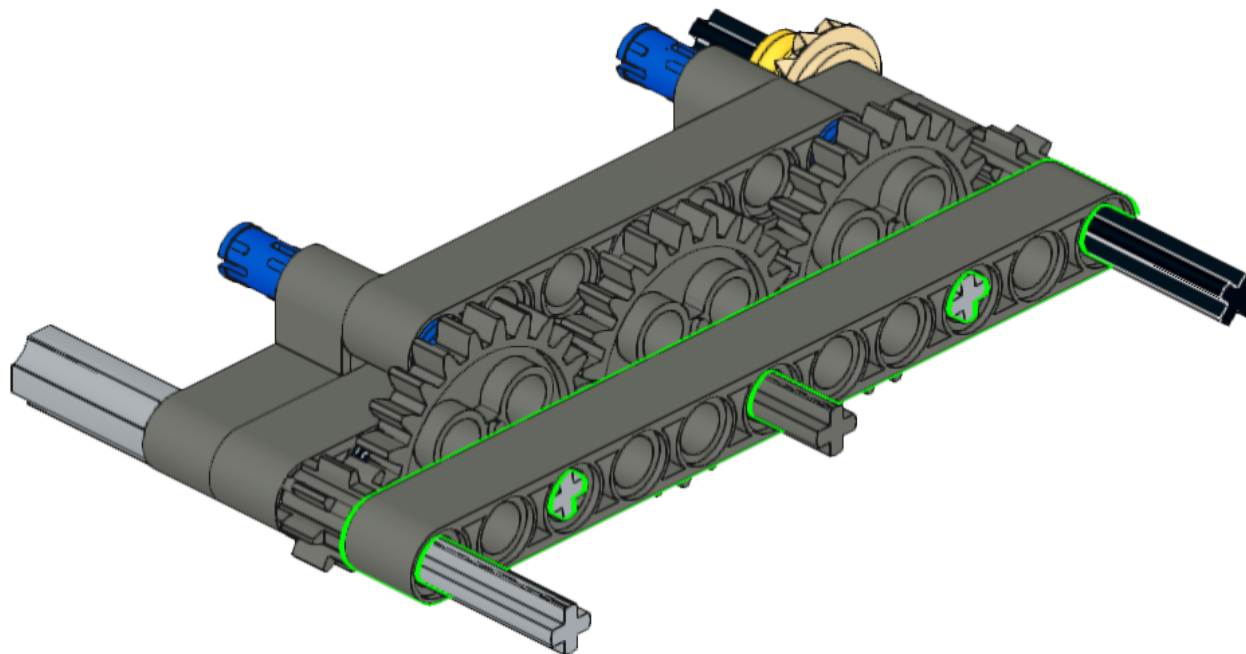
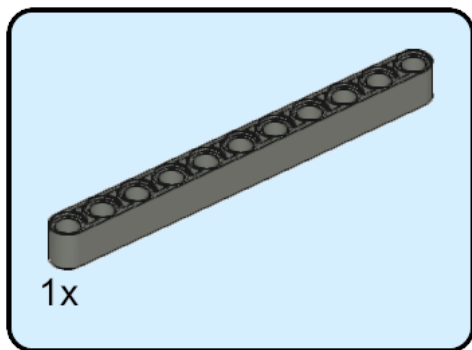
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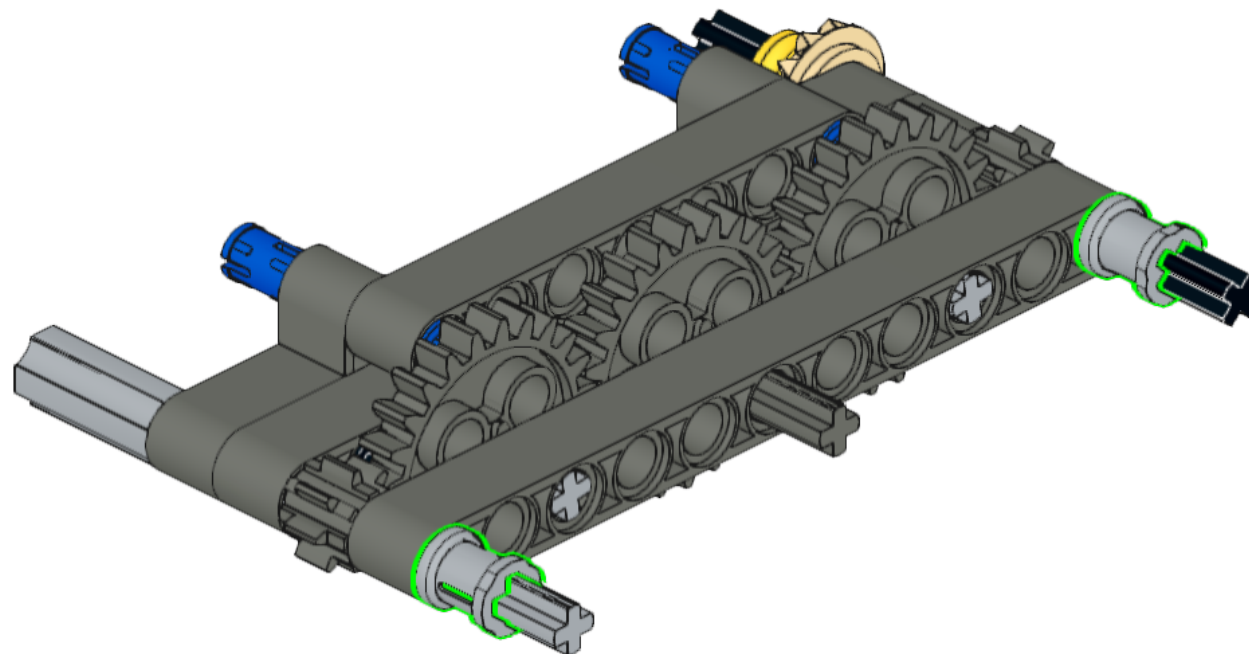
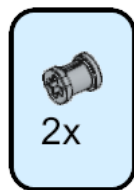
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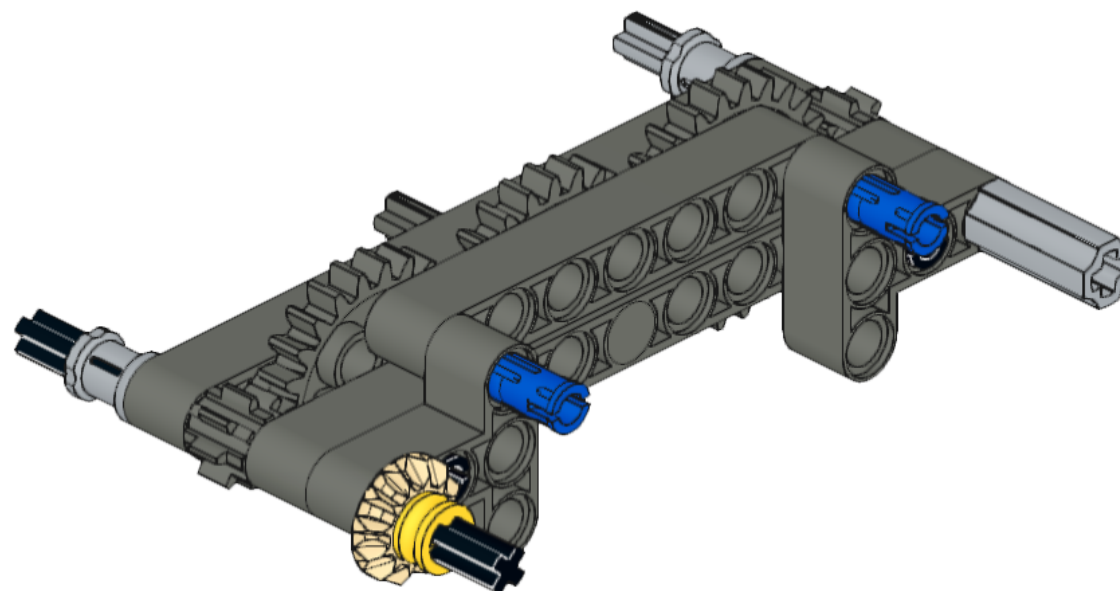
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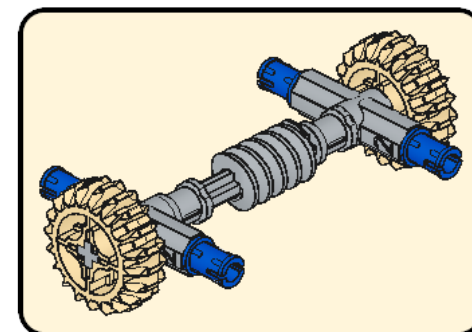
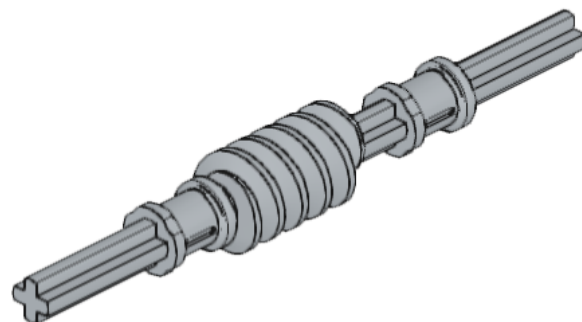
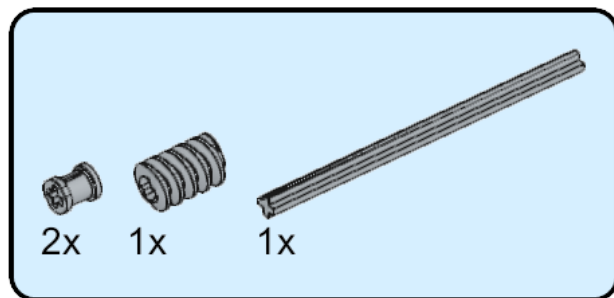
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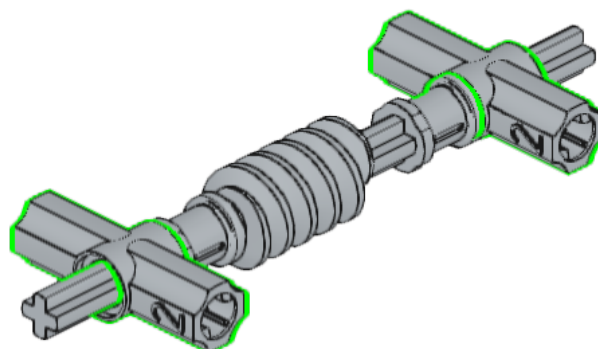
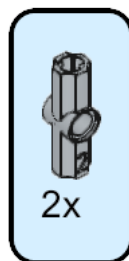
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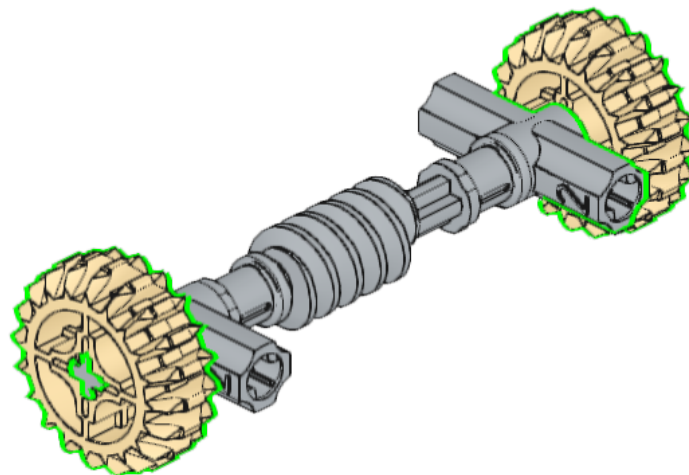
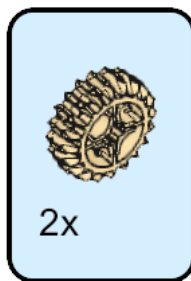
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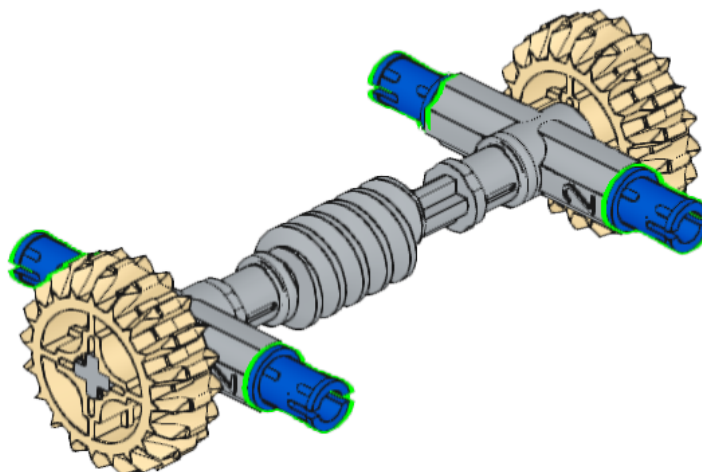
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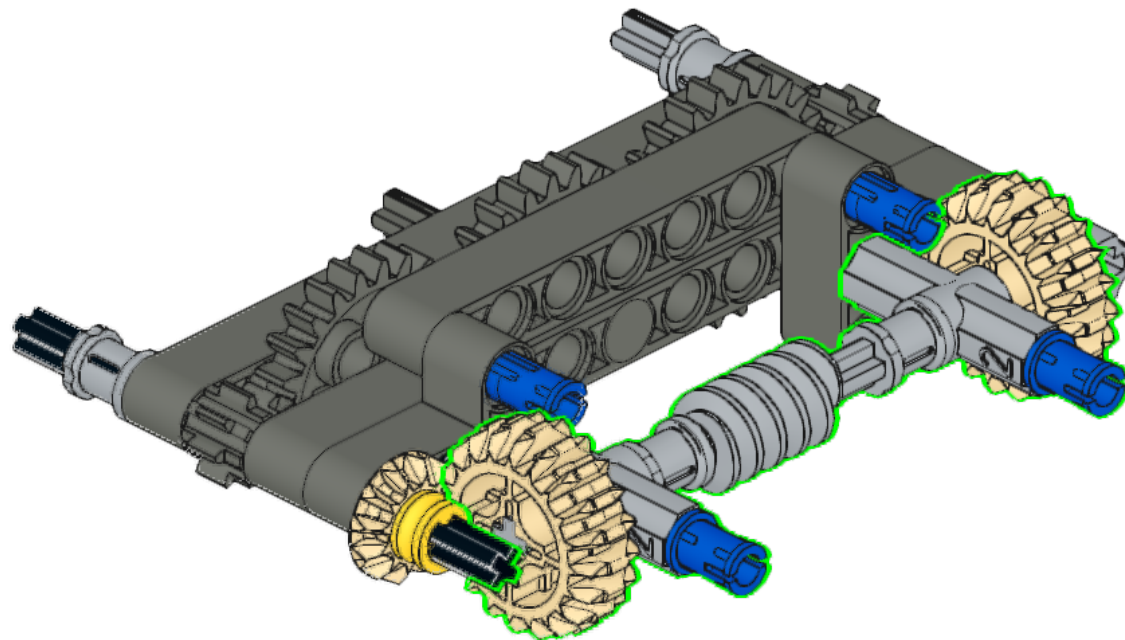
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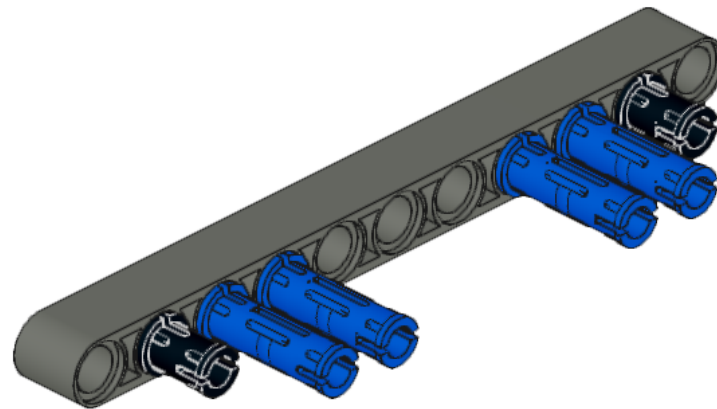
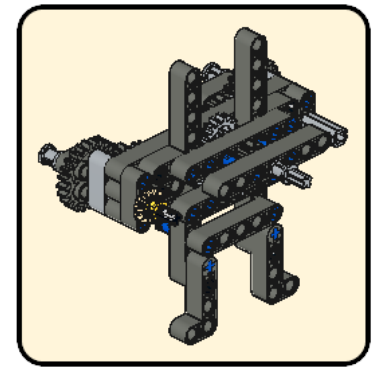
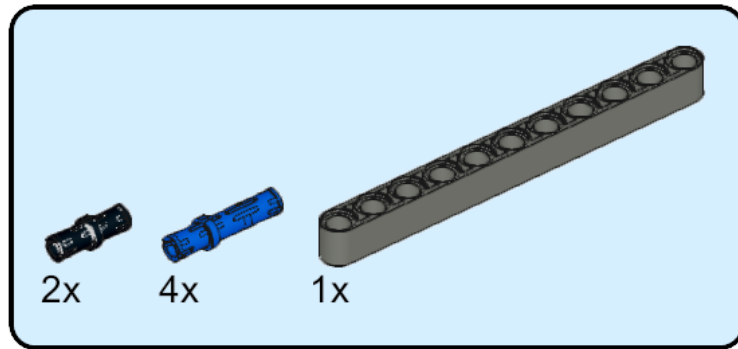
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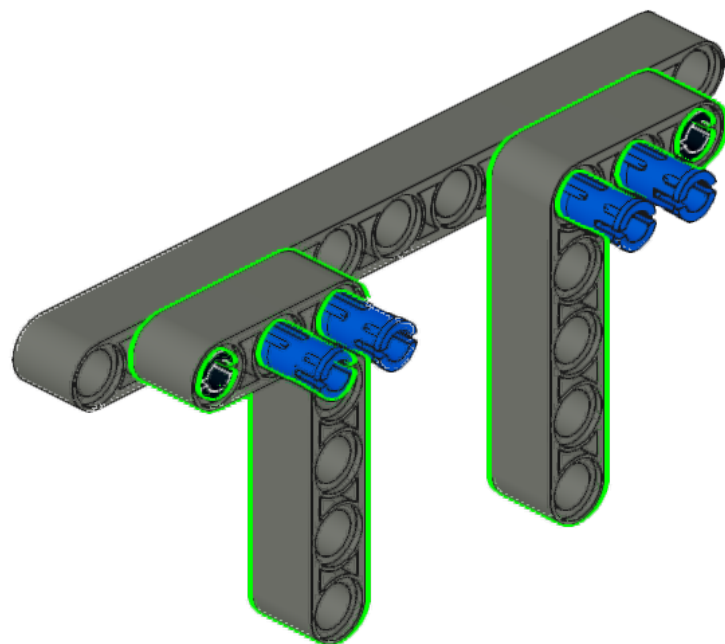
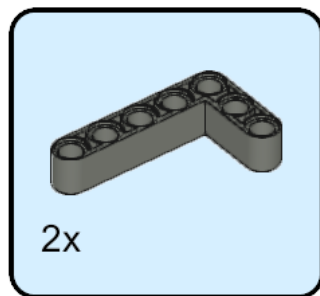
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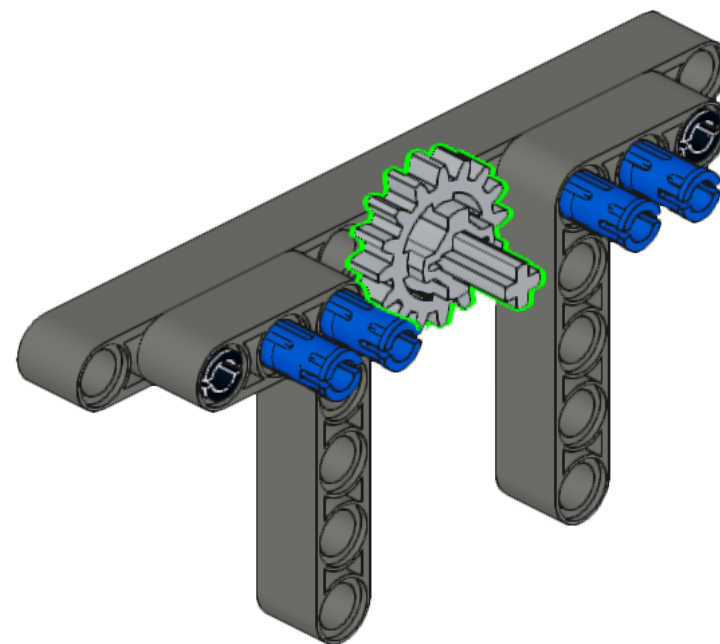
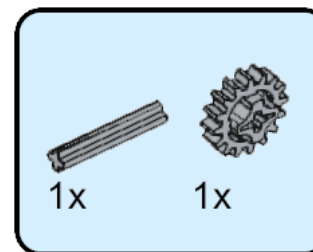
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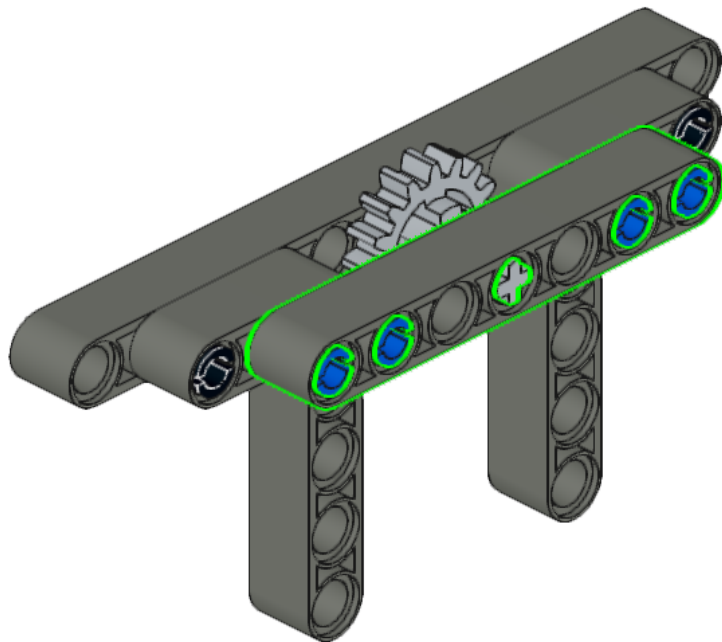
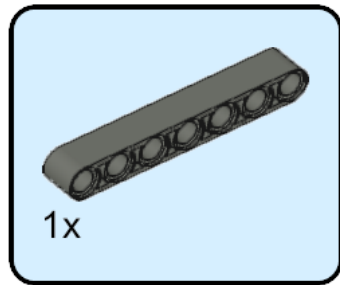
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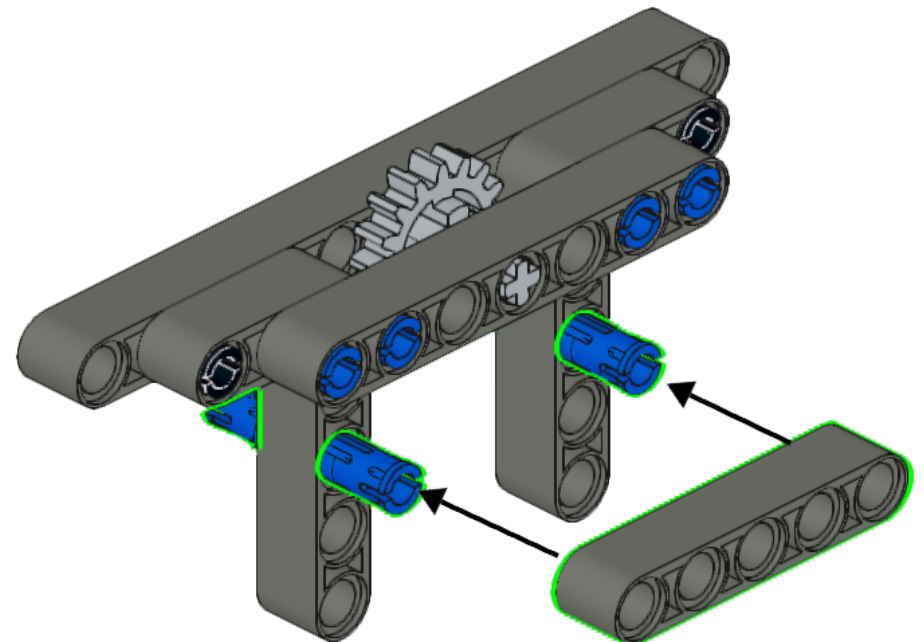
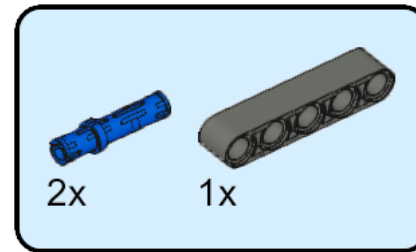
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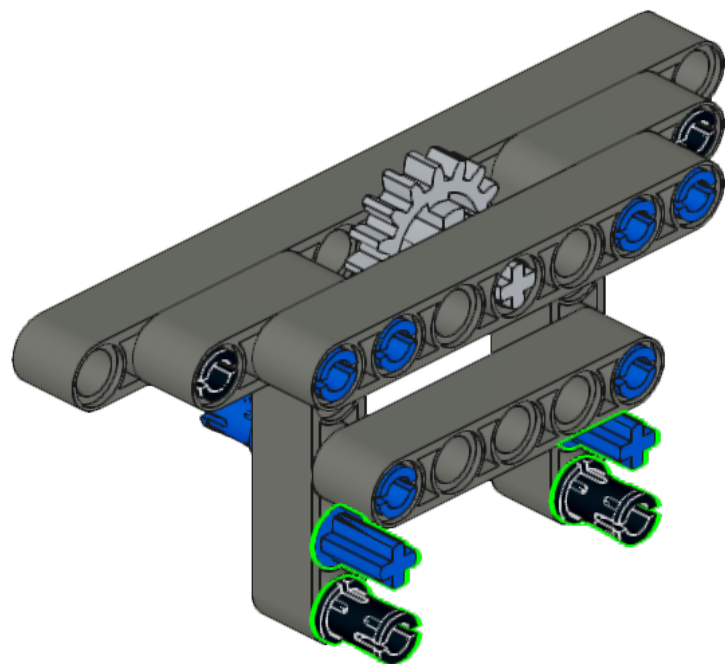
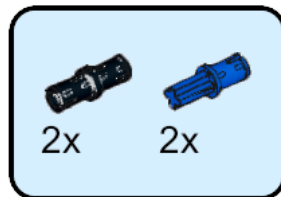
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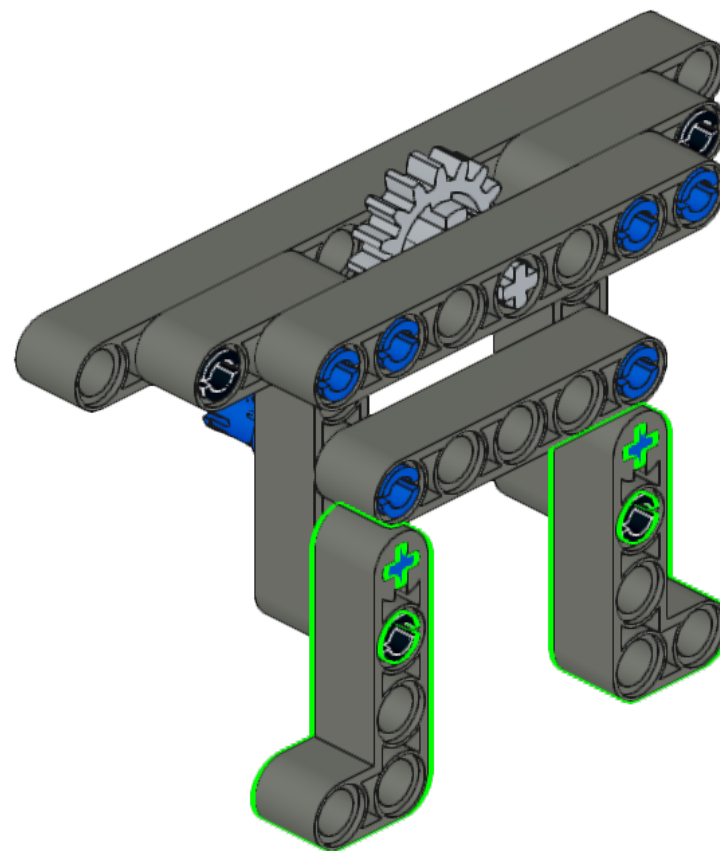
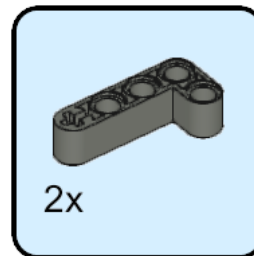
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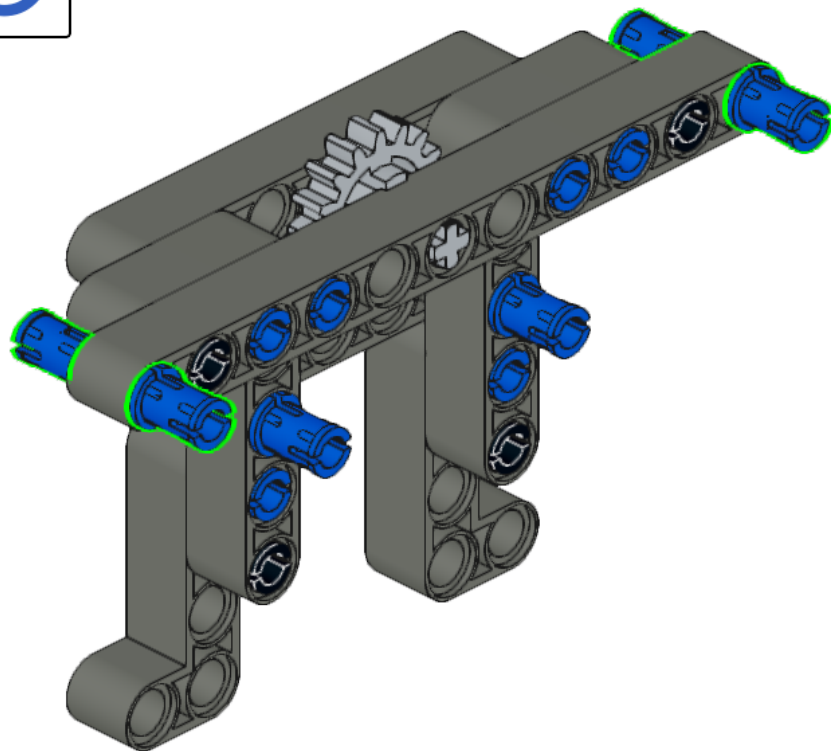
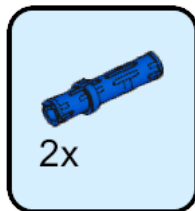
25



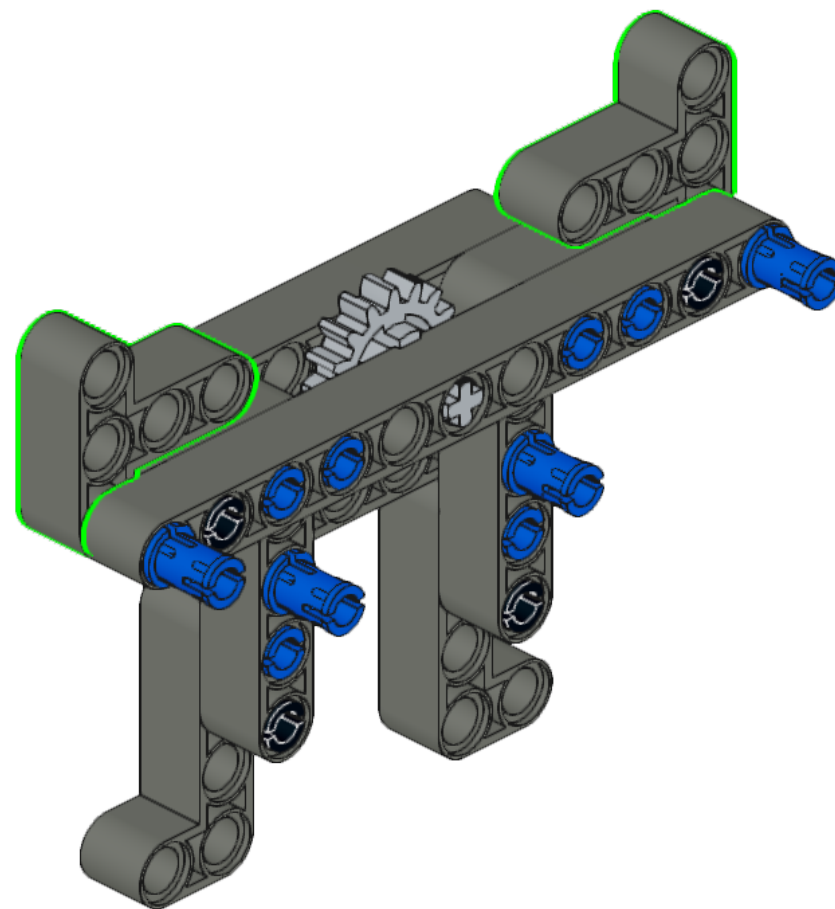
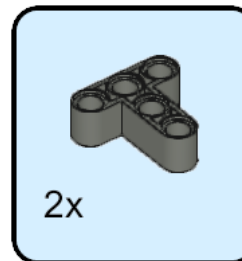
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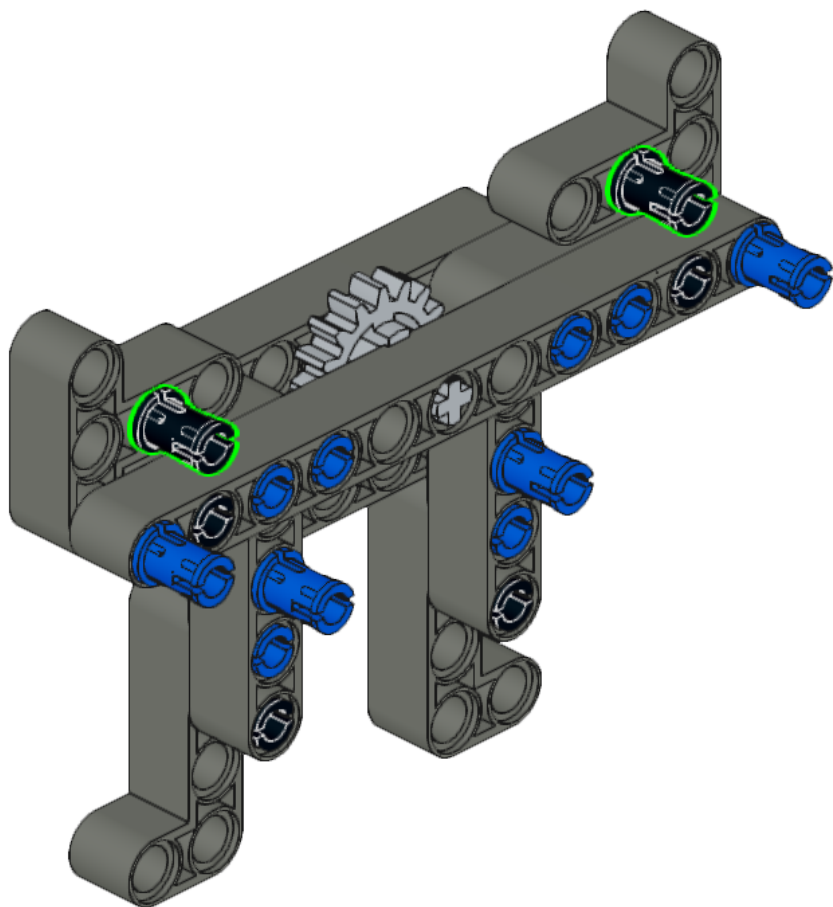
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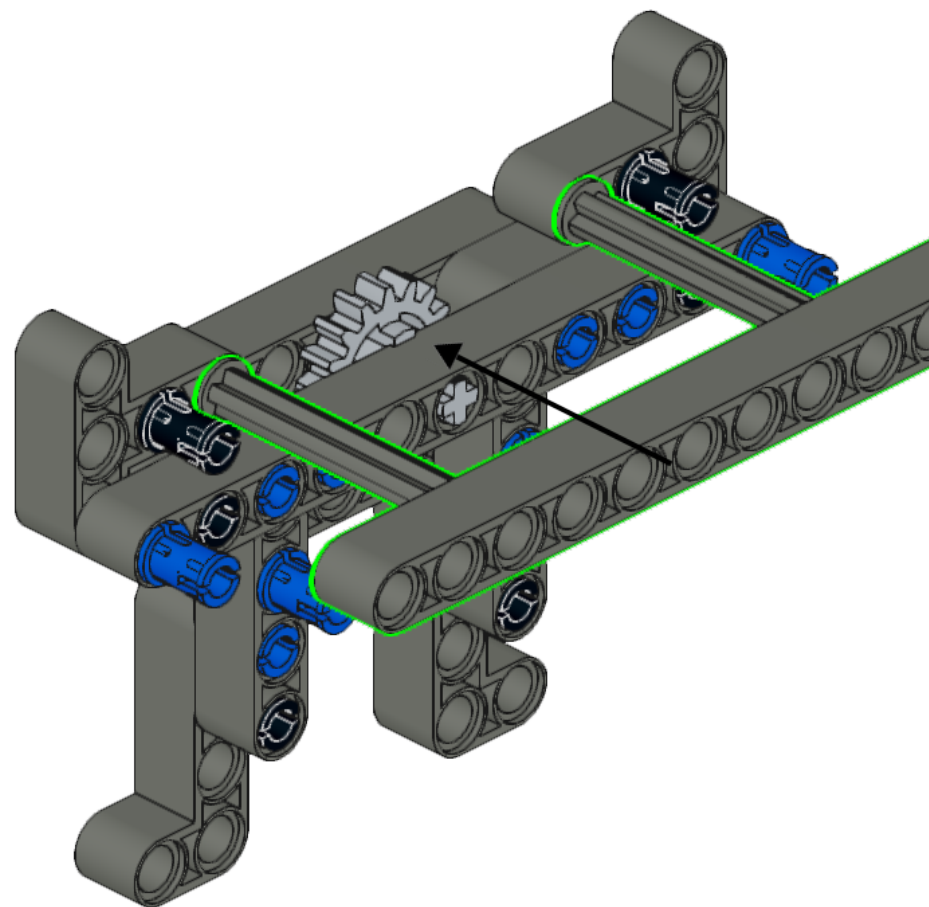
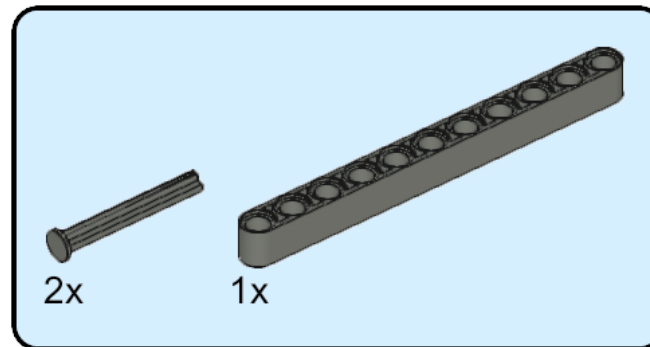
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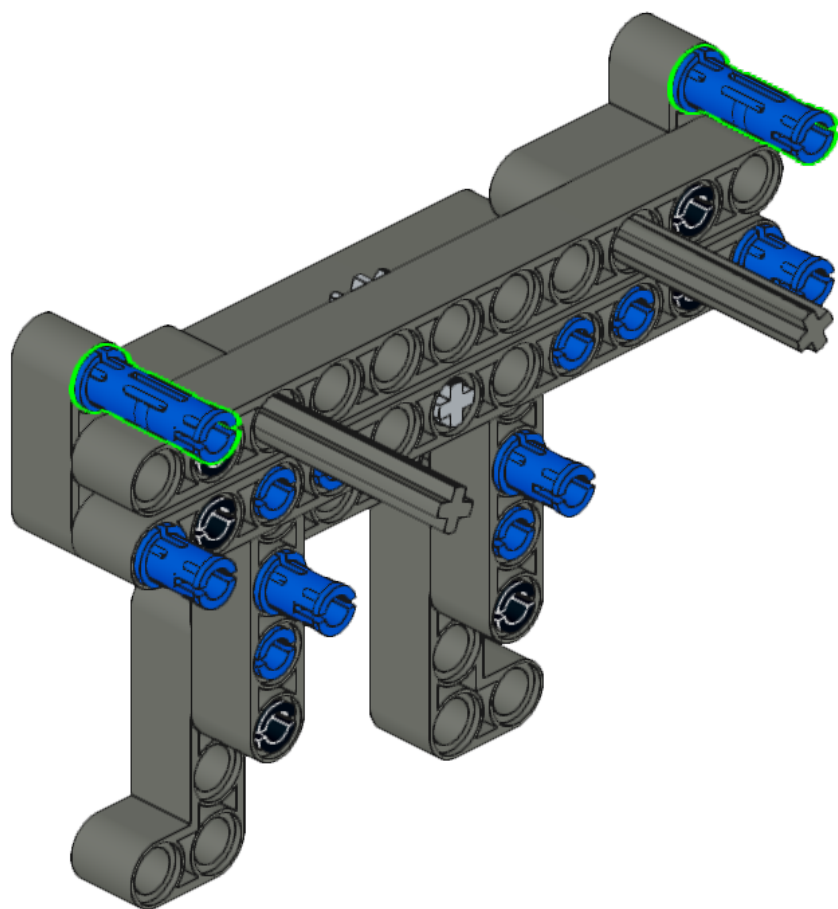
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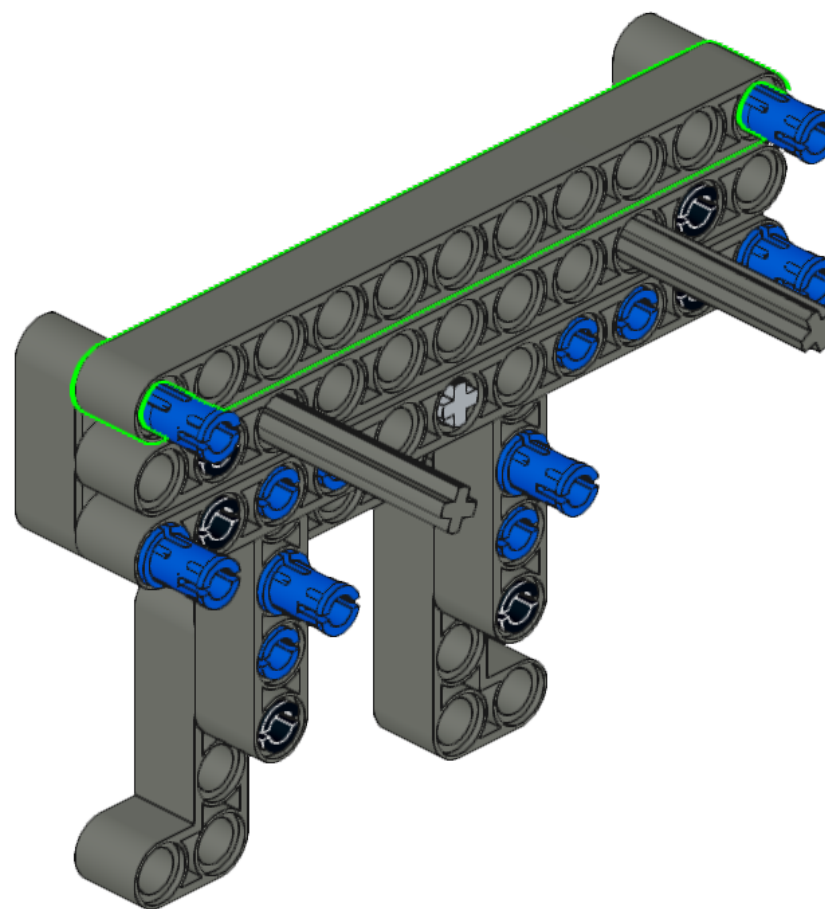
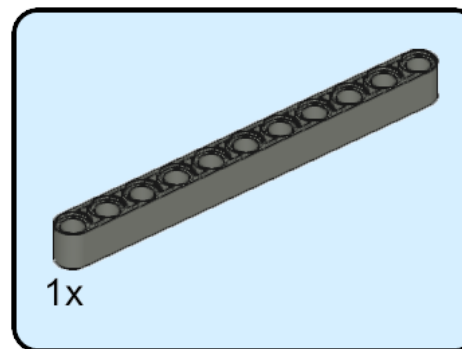
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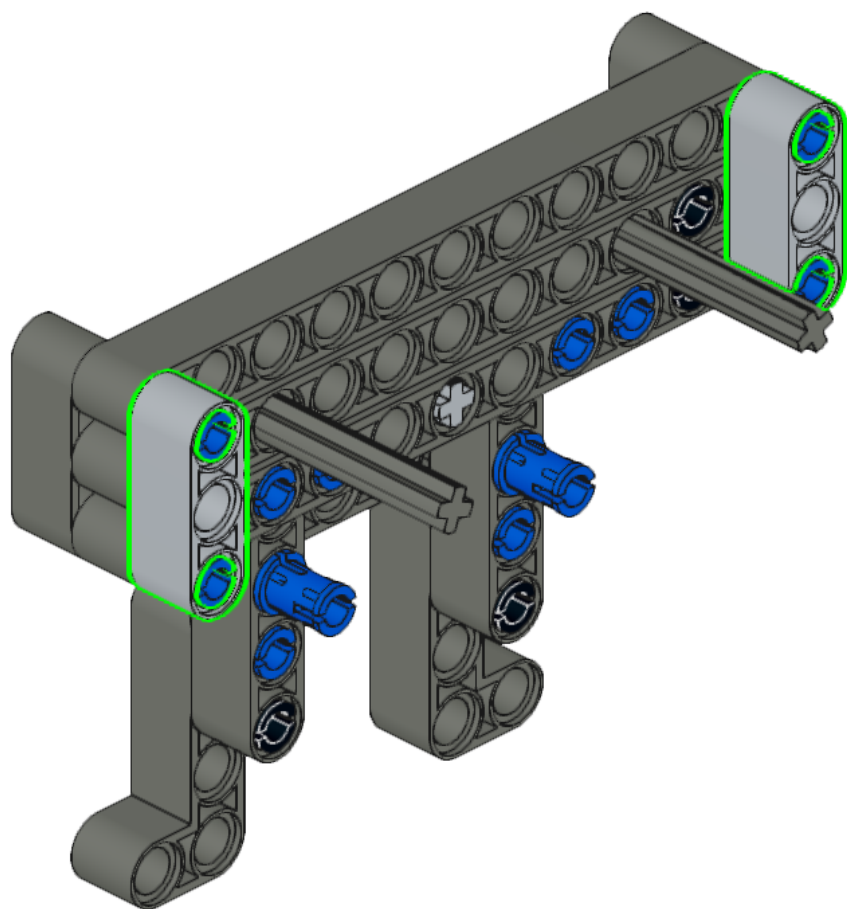
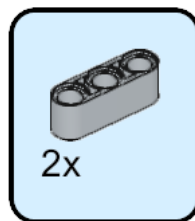
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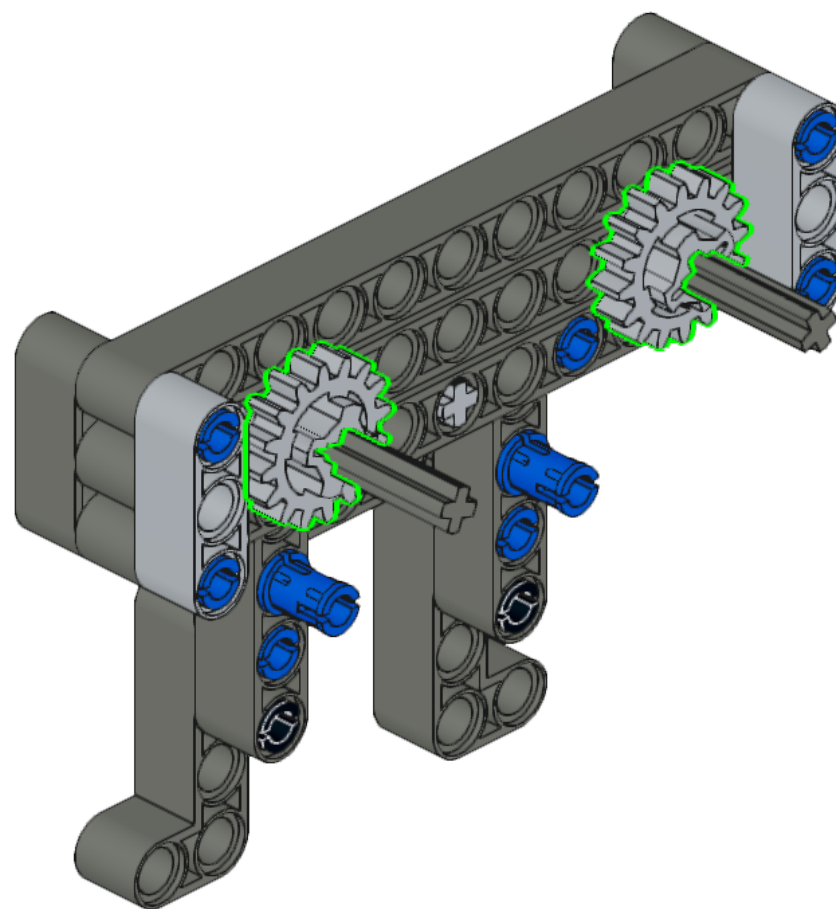
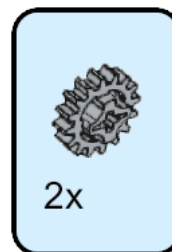
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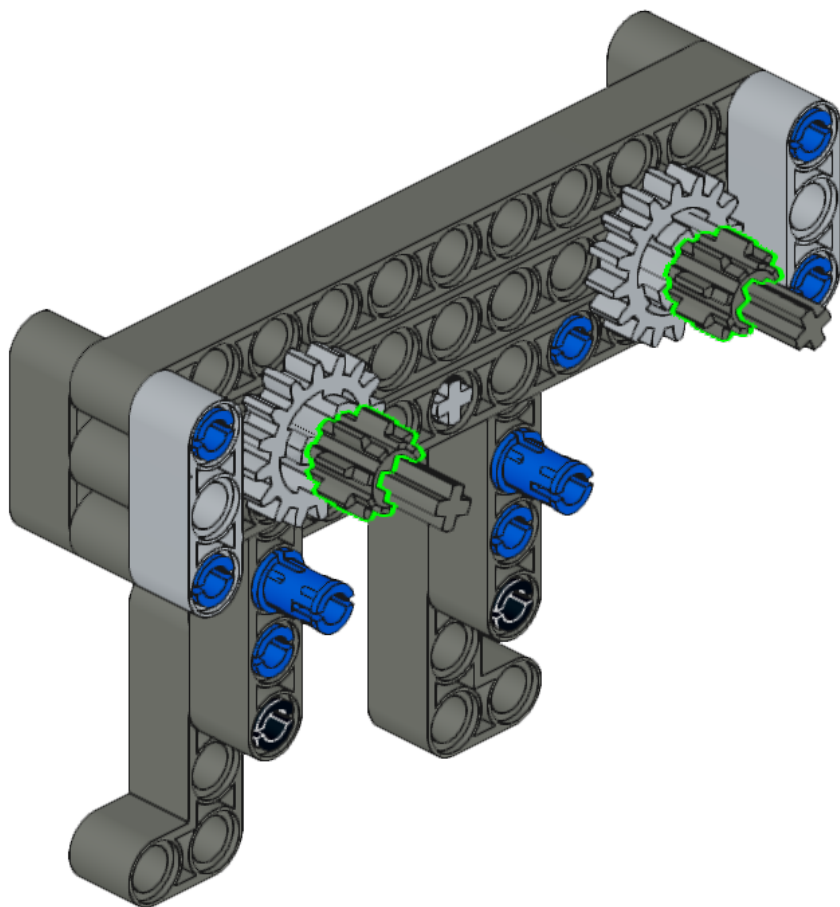
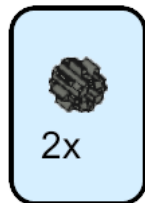
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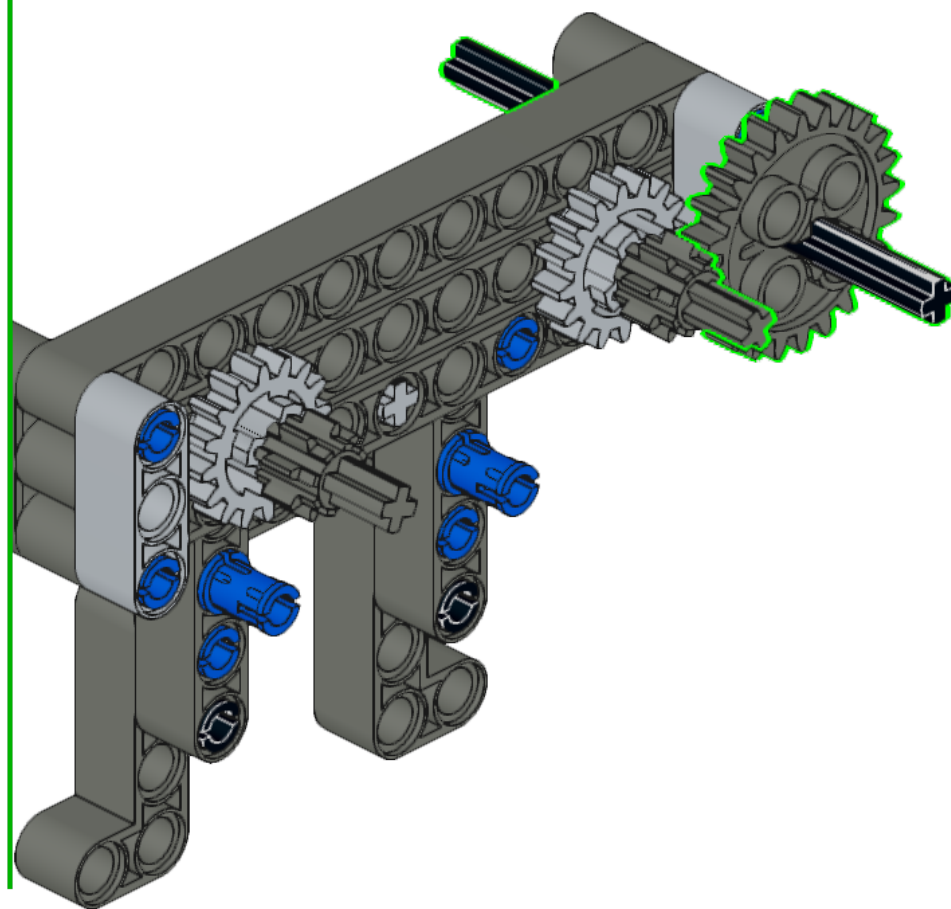
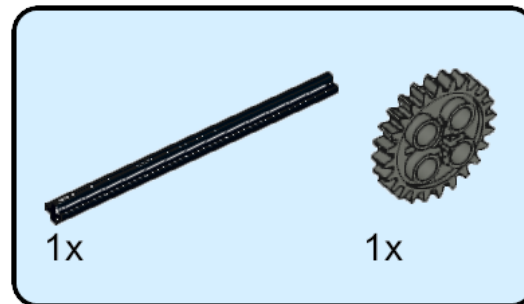
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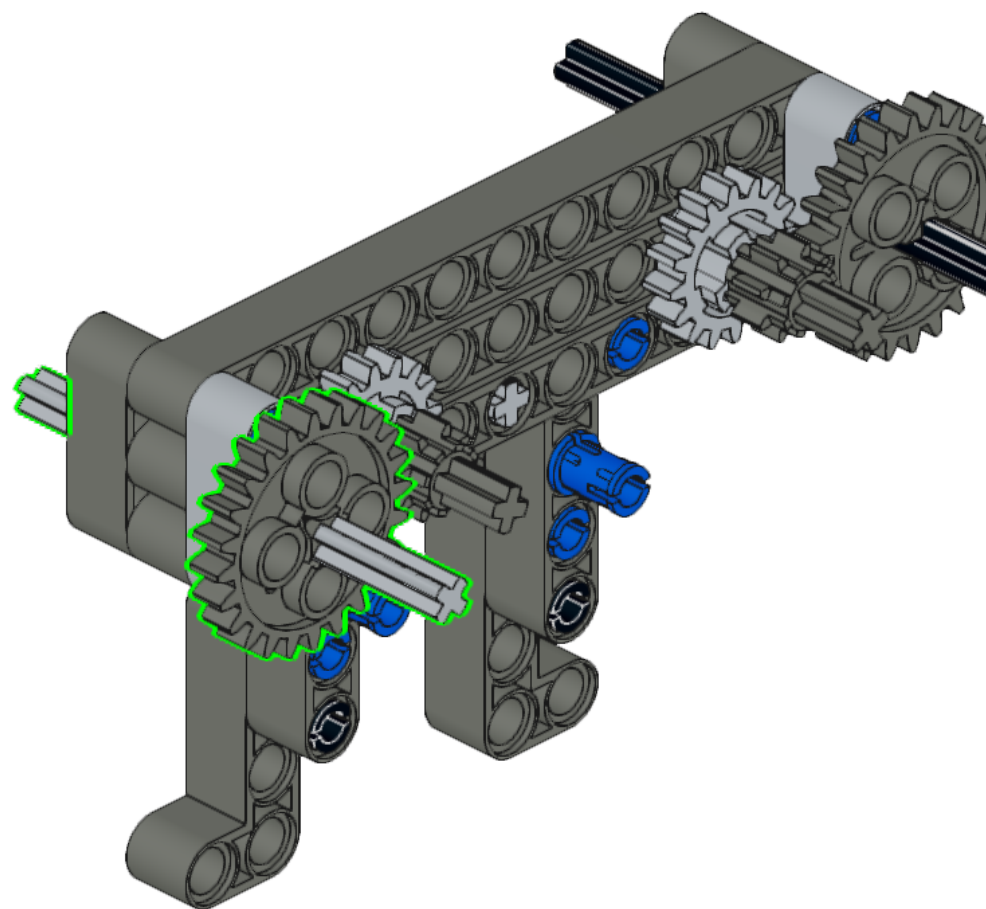
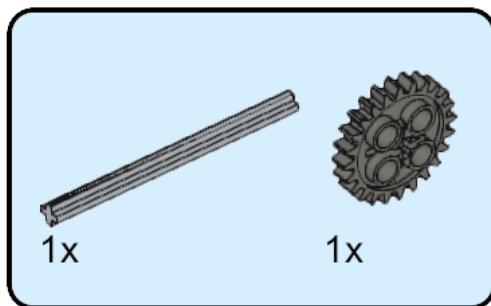
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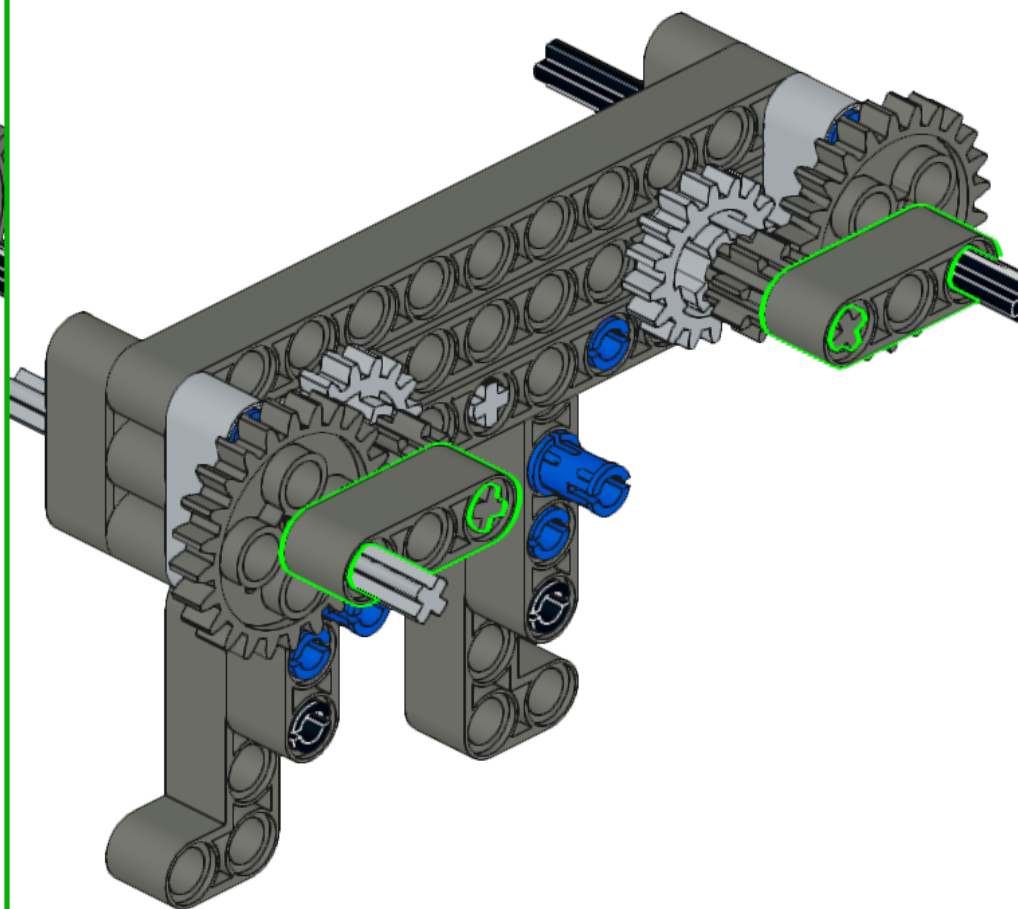
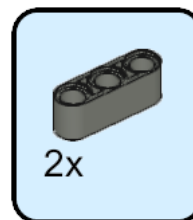
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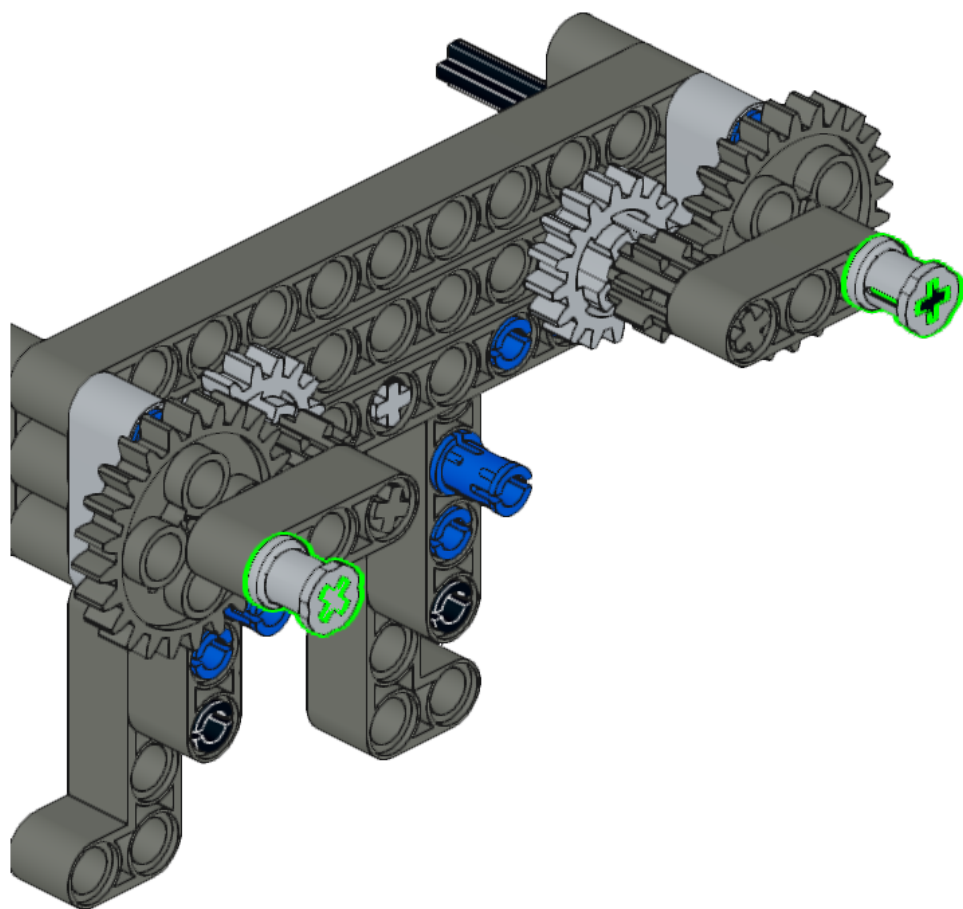
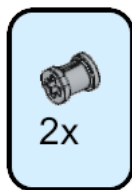
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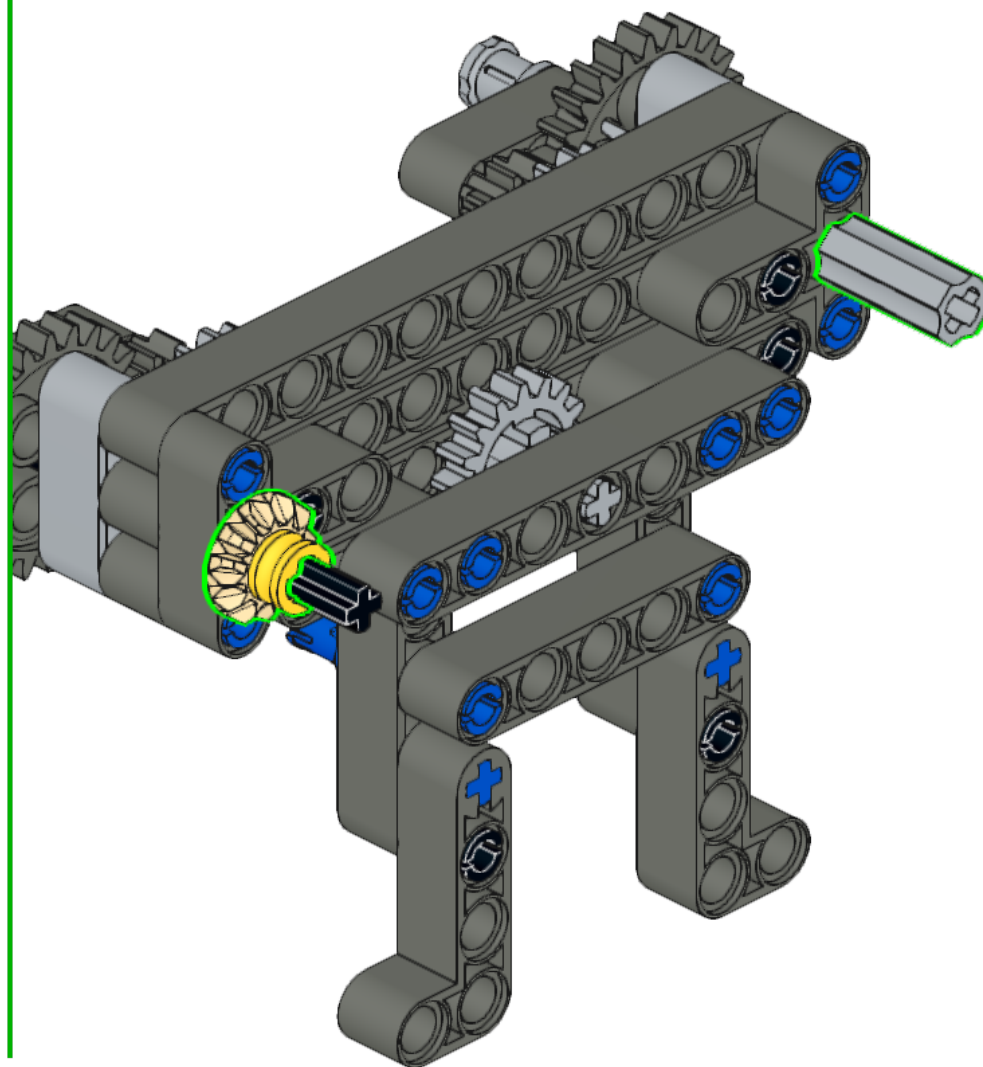
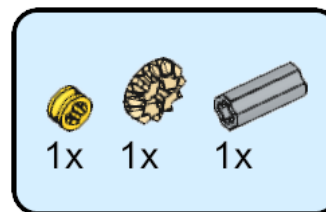
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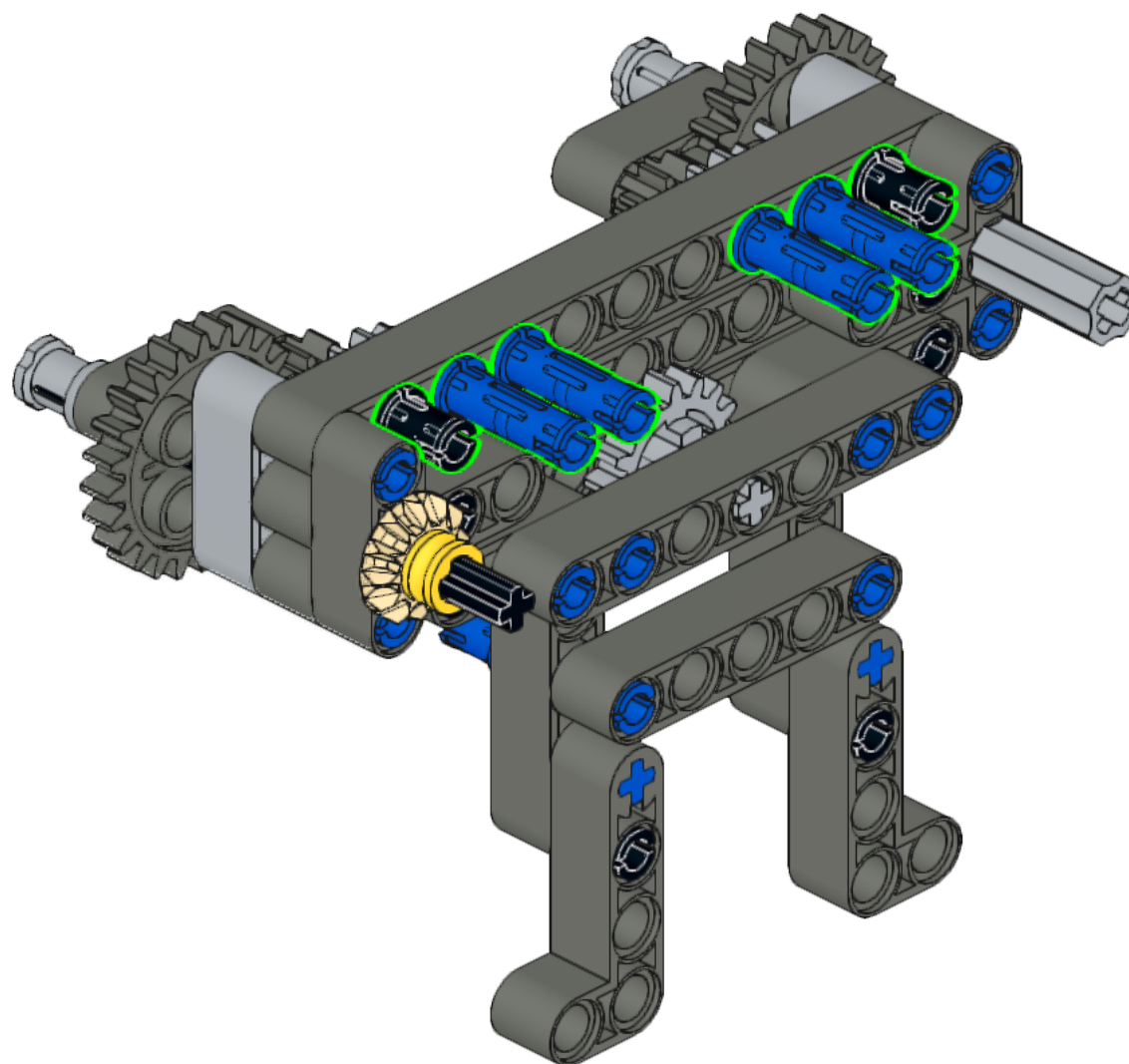
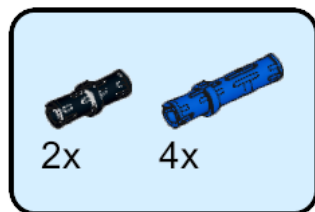
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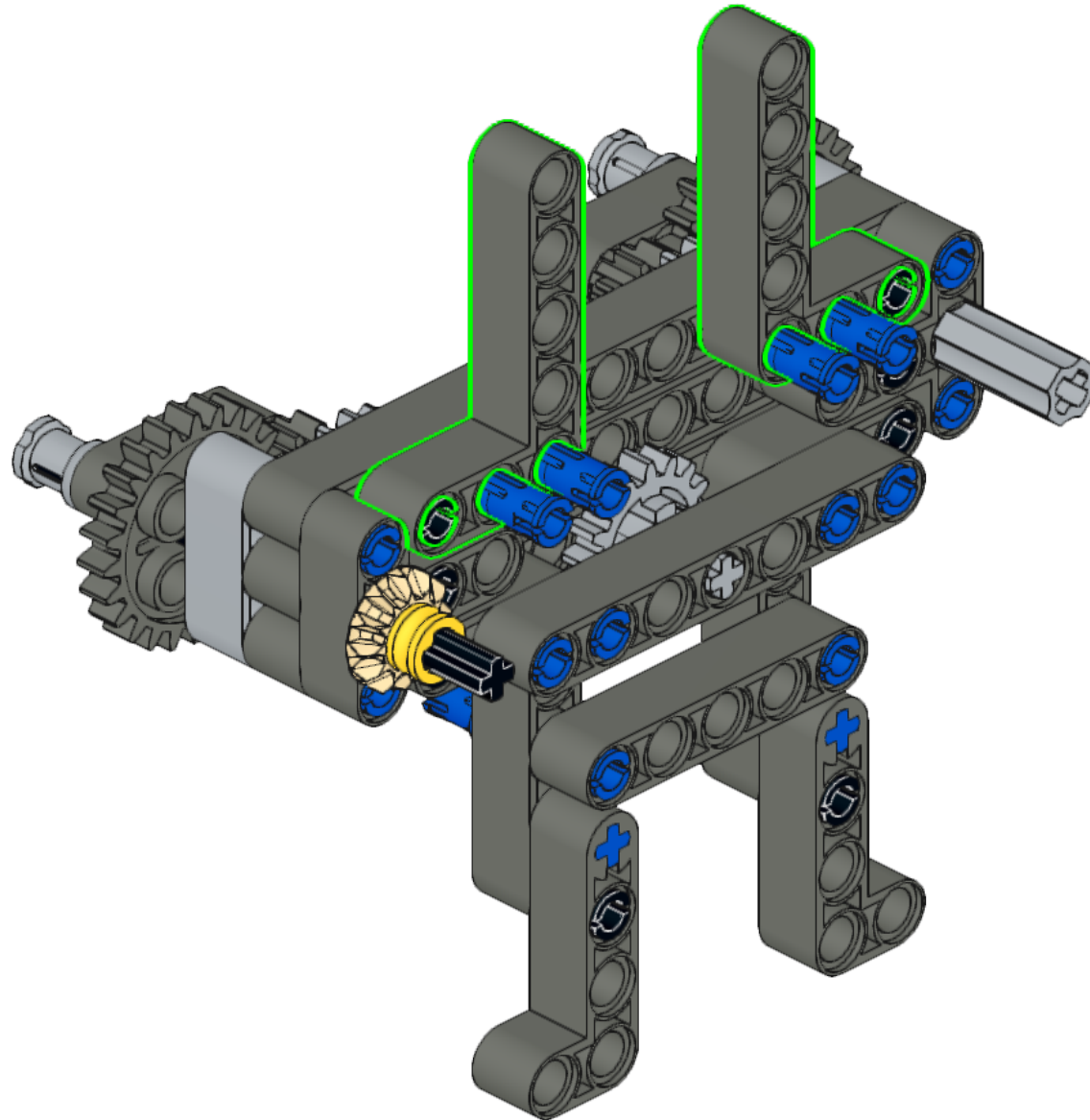
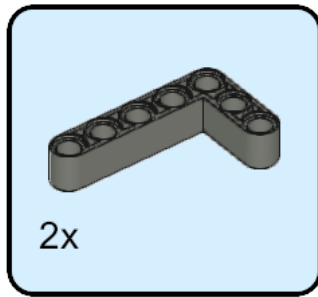
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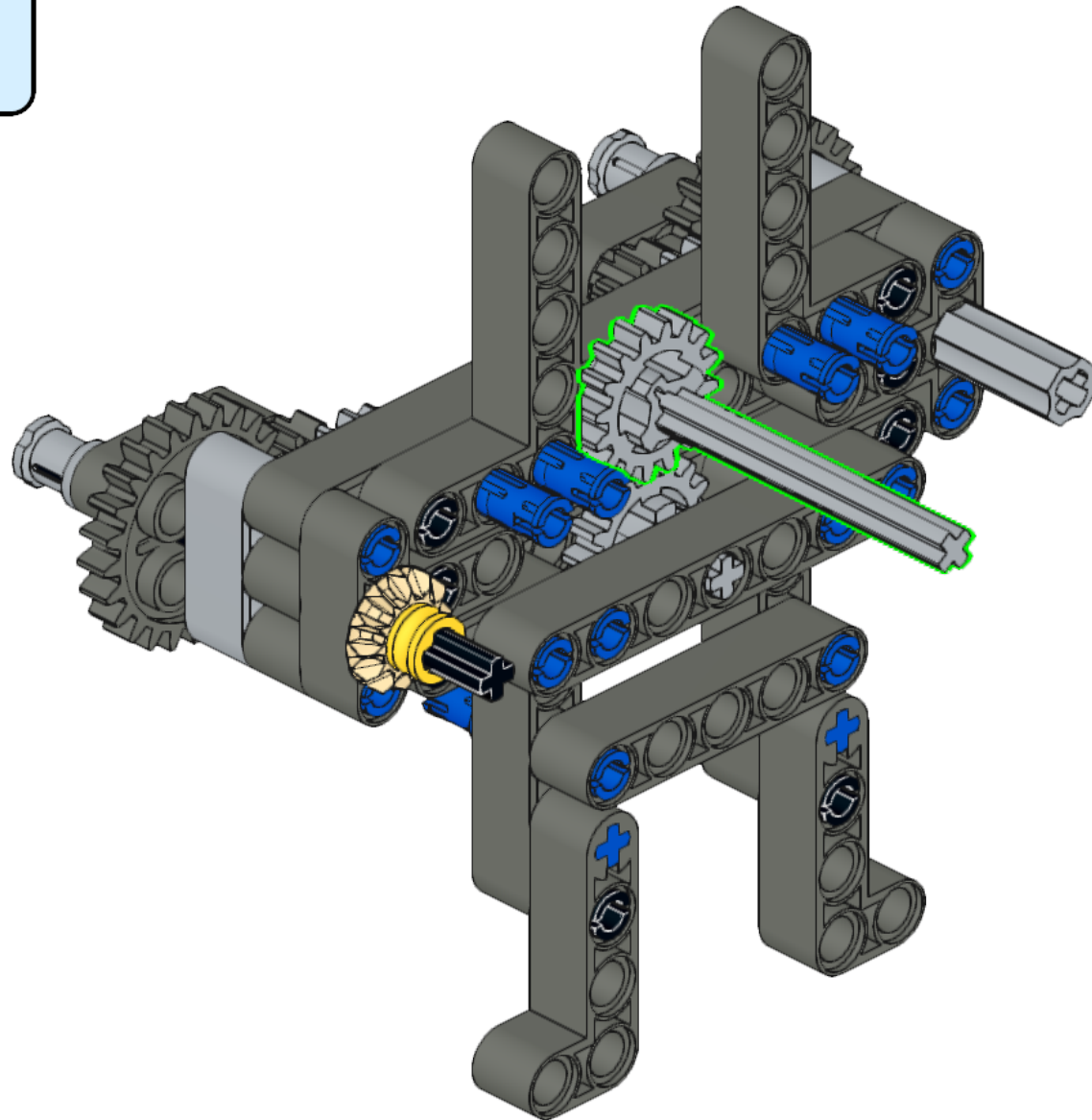
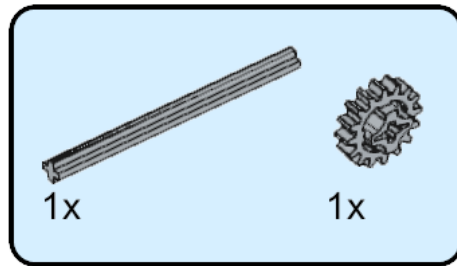
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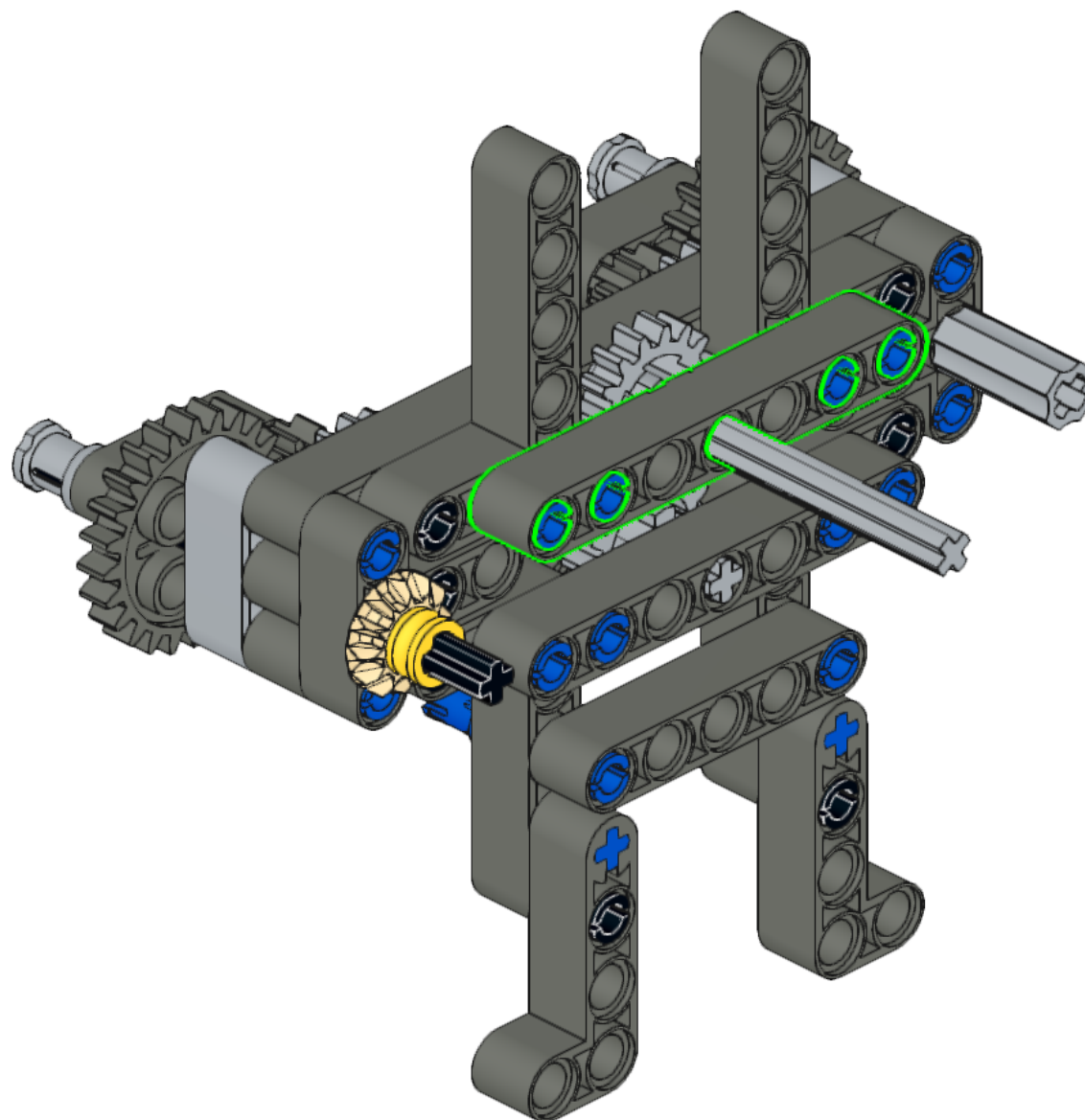
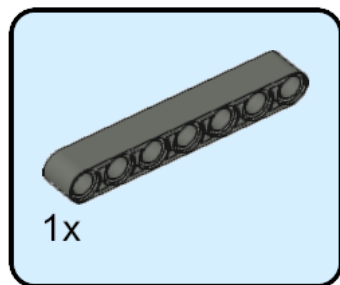
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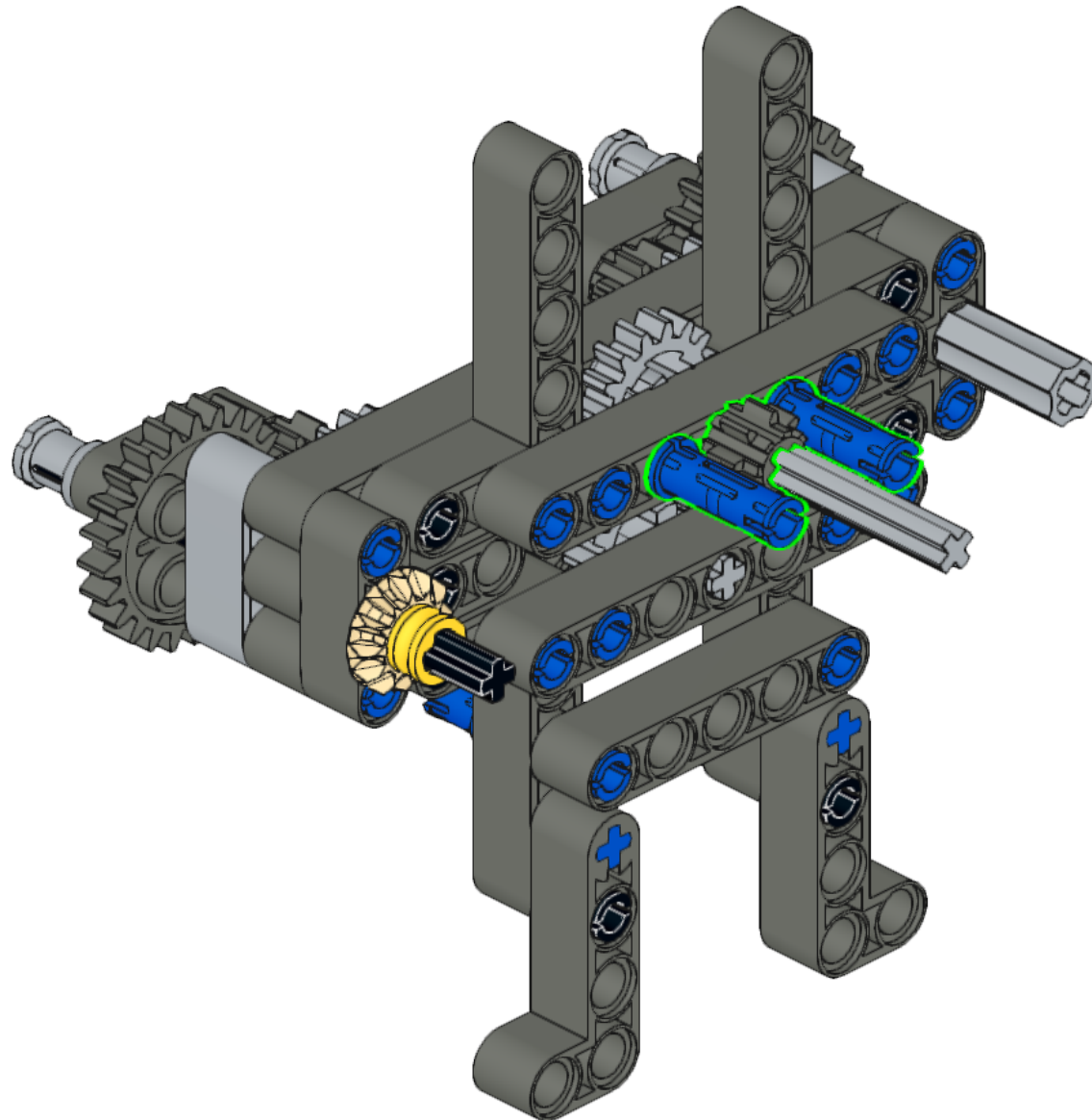
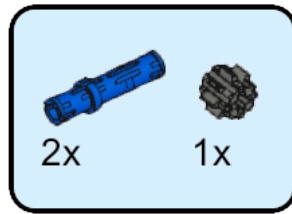
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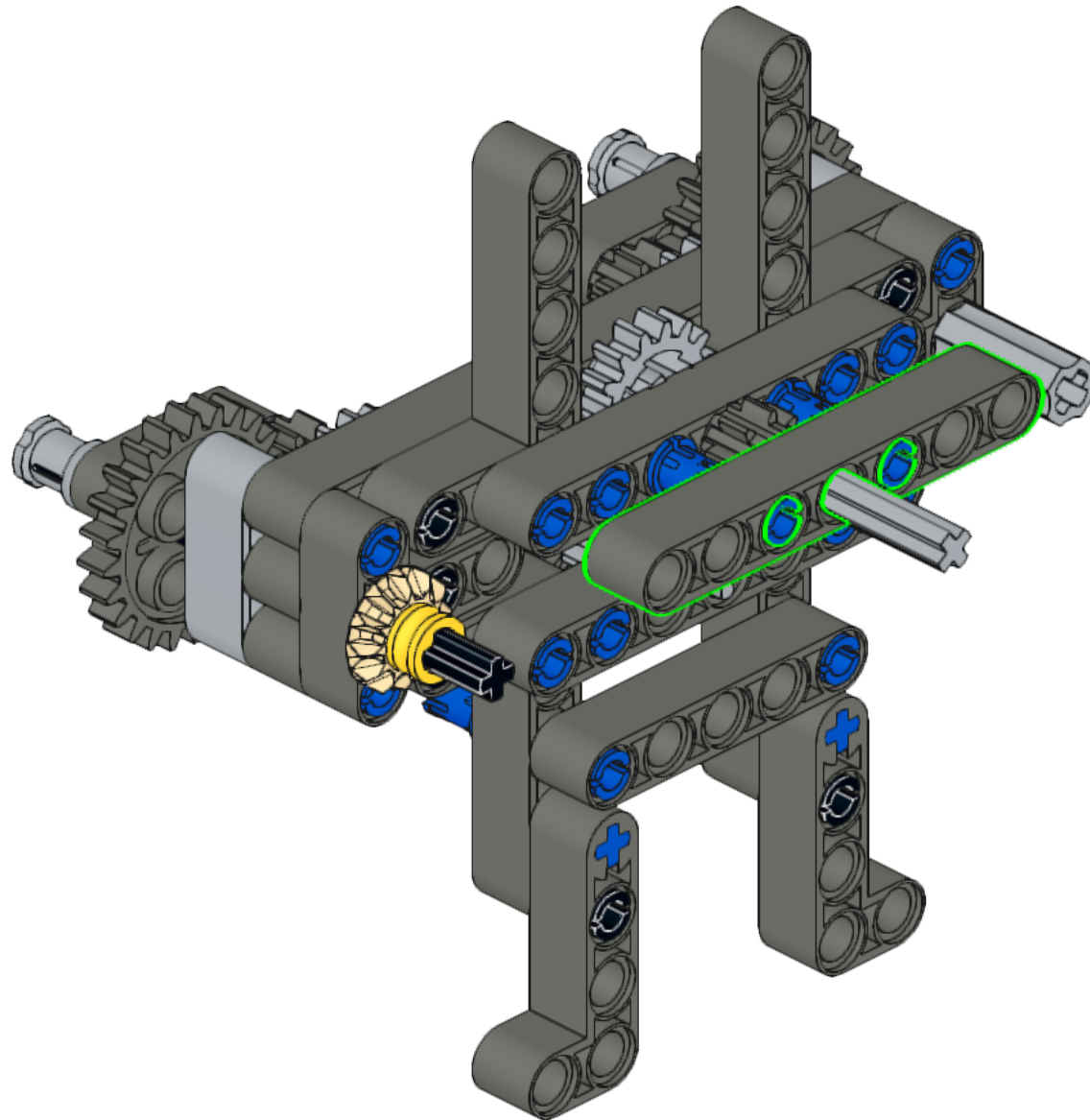
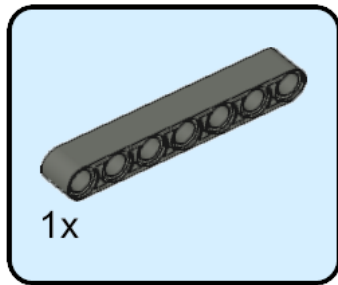
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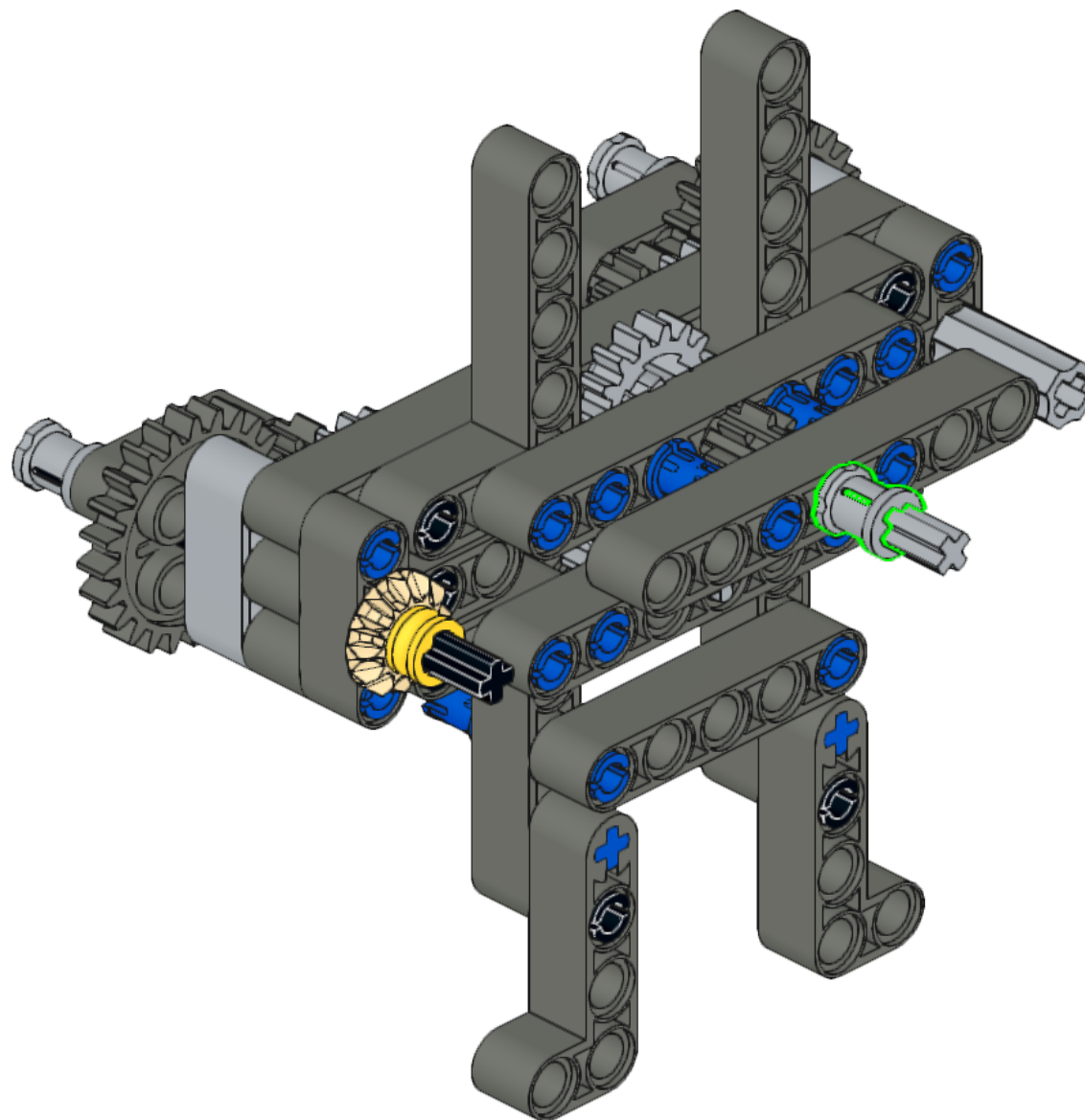
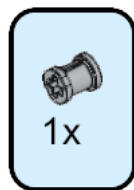
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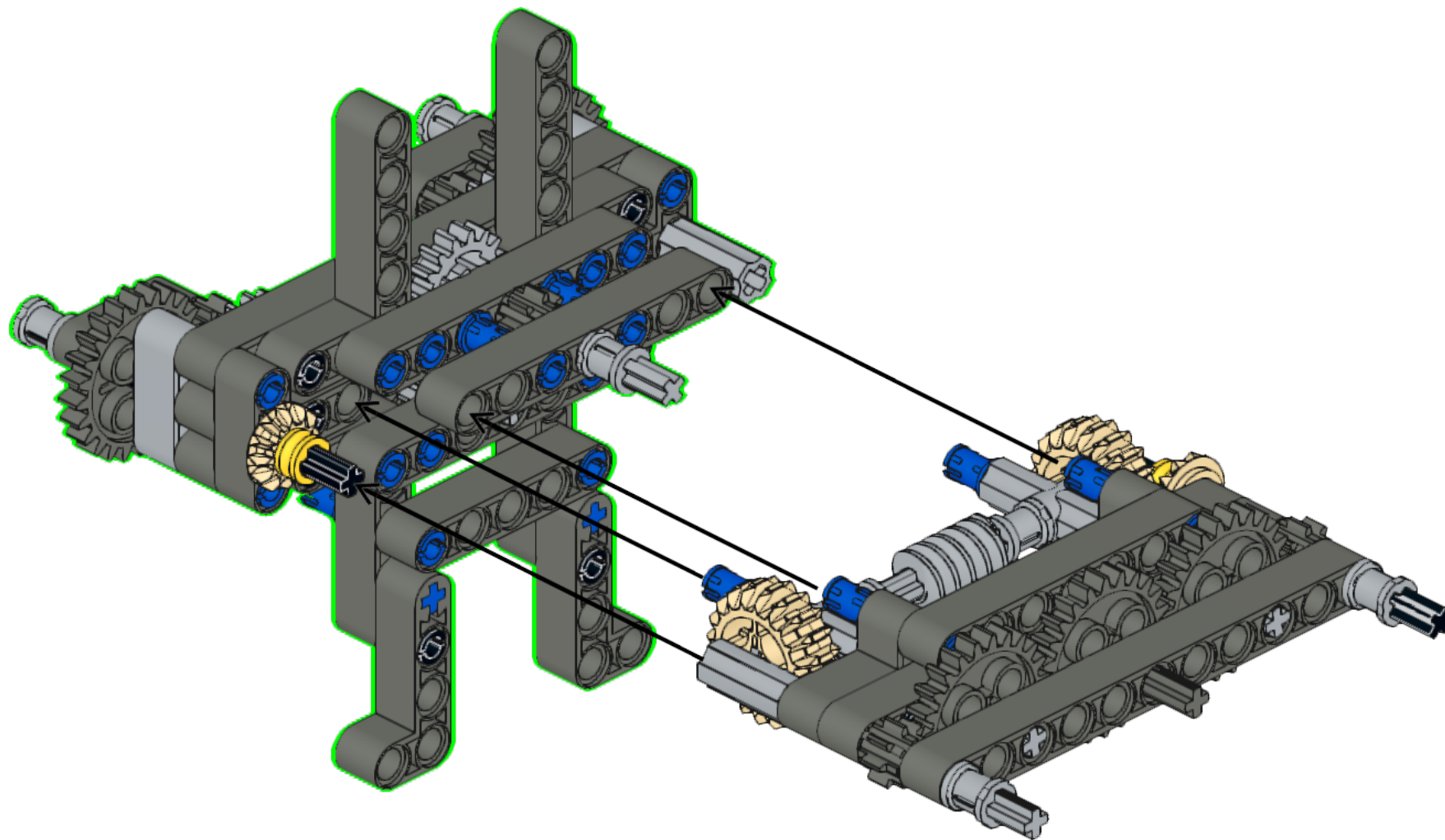
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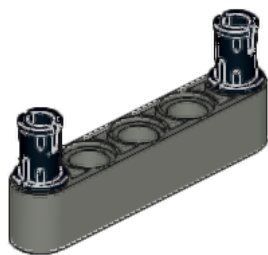
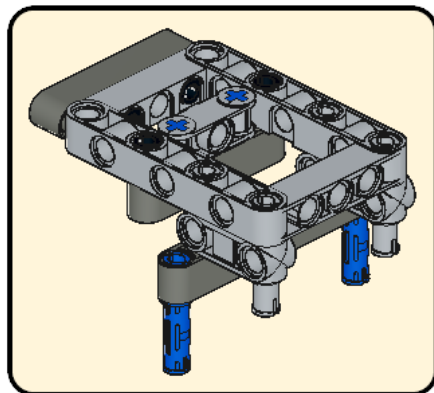
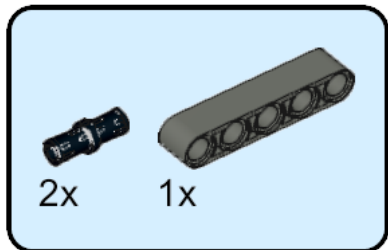
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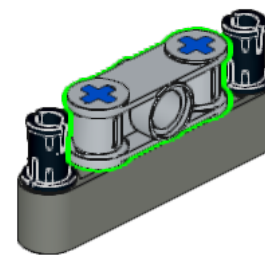
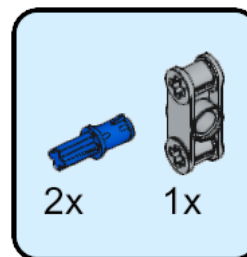
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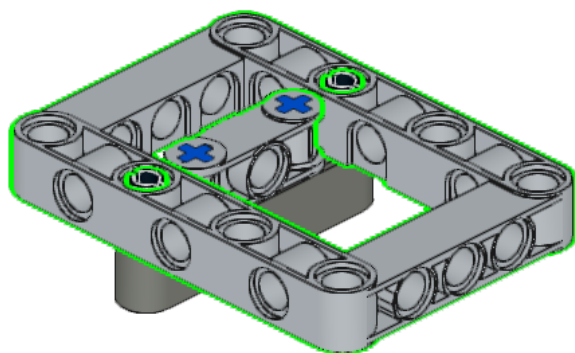
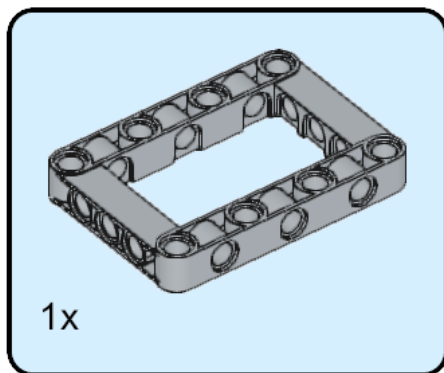
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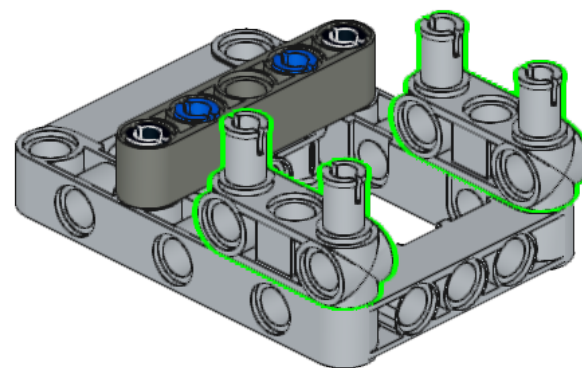
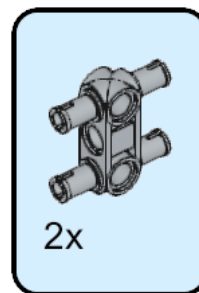
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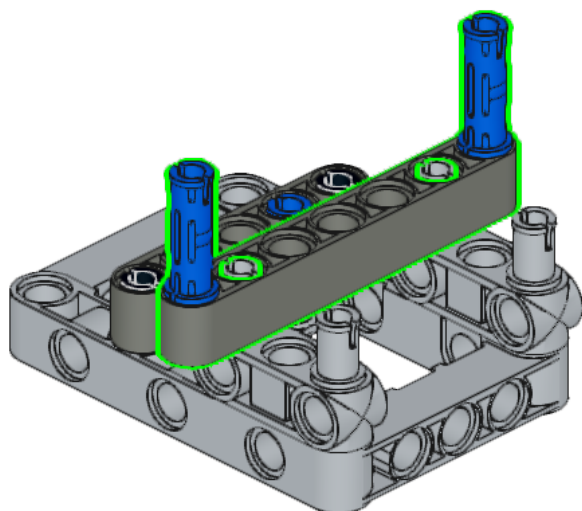
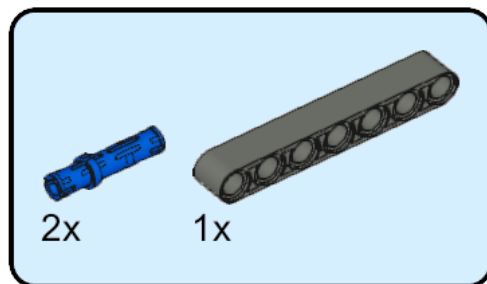
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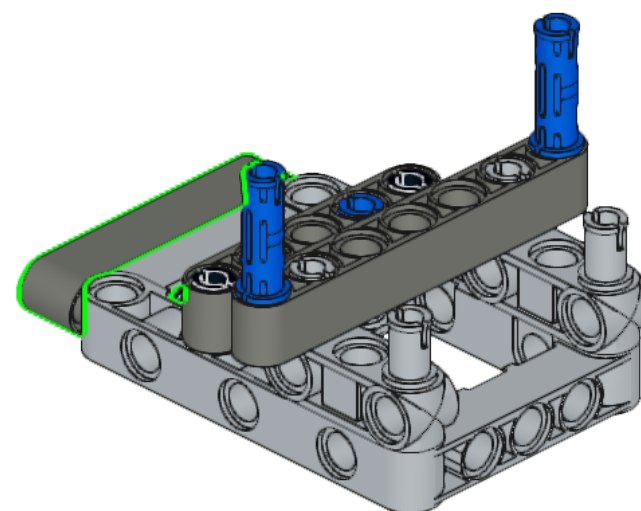
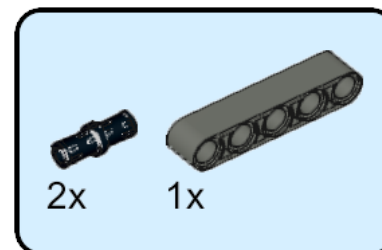
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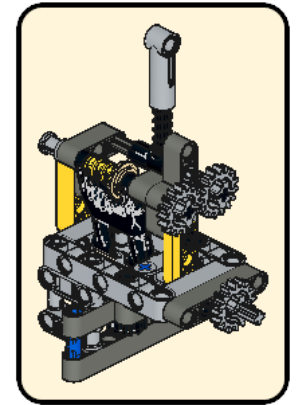
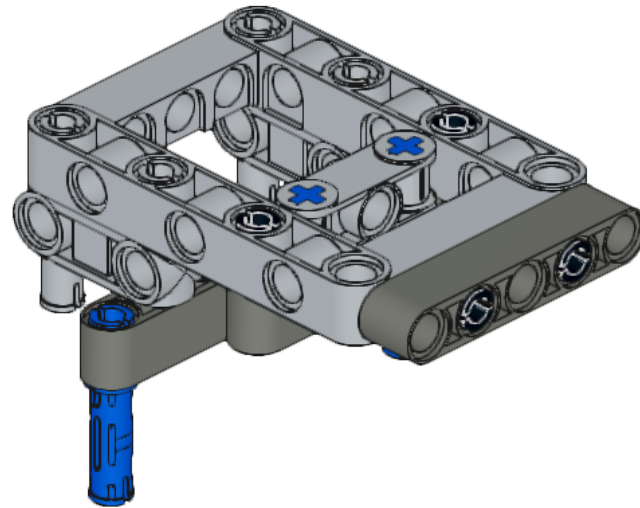
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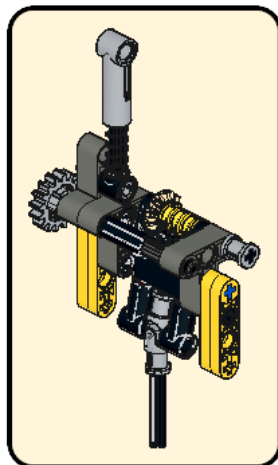
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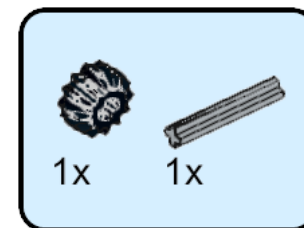
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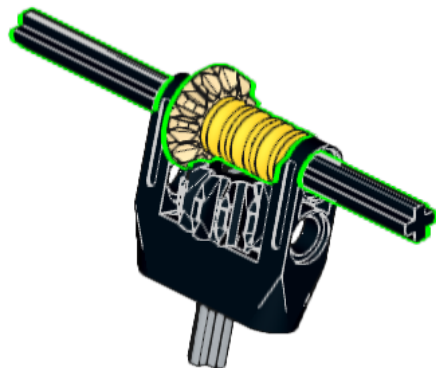
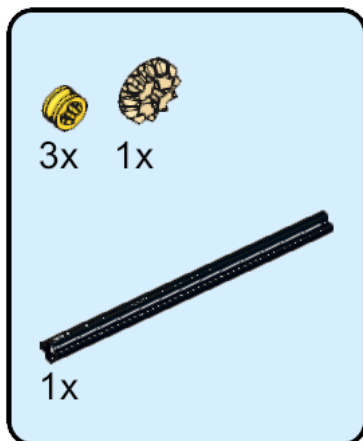
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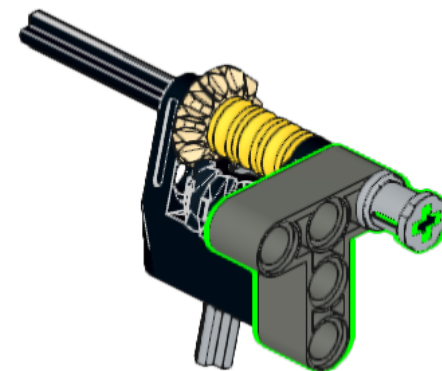
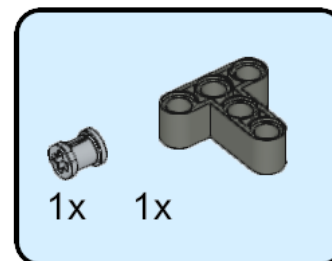
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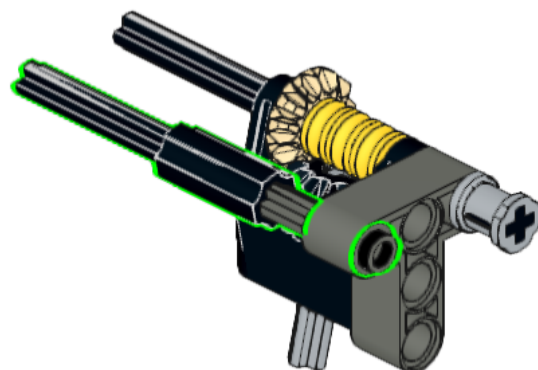
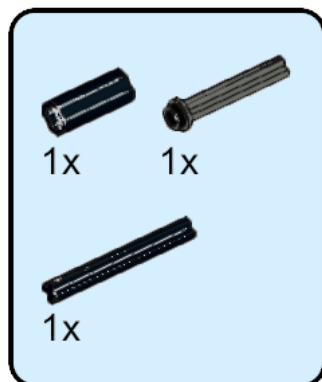
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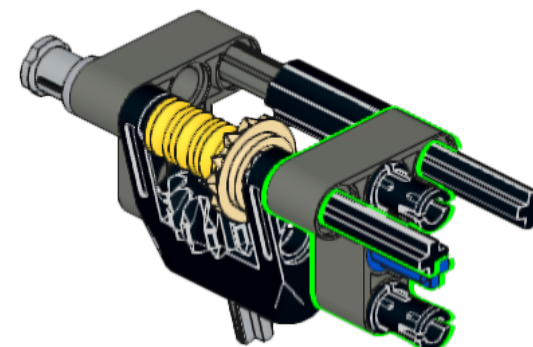
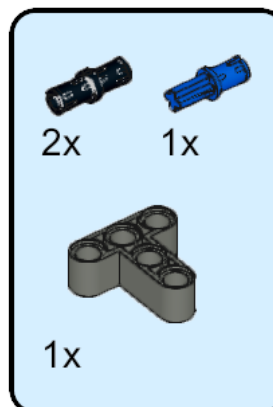
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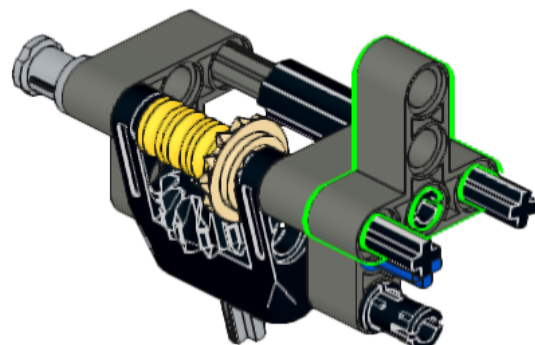
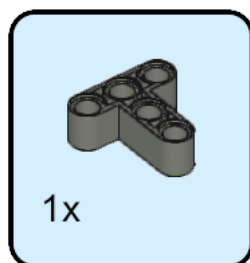
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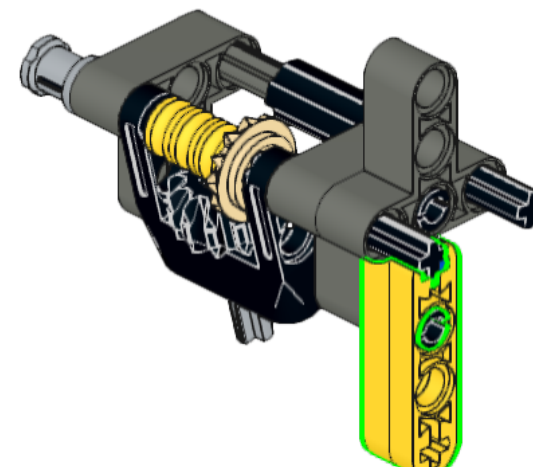
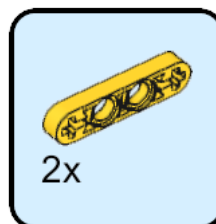
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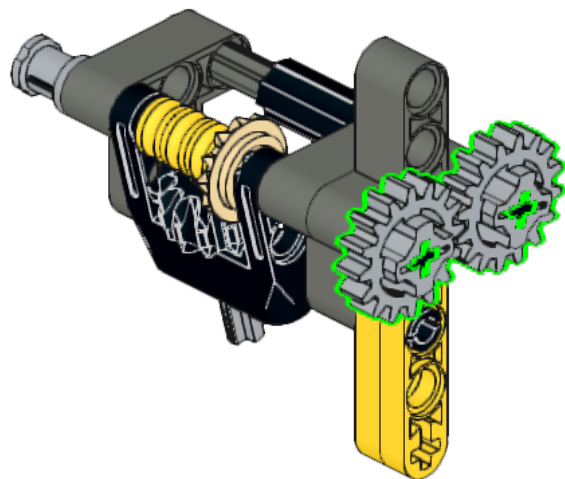
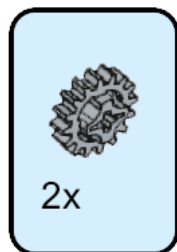
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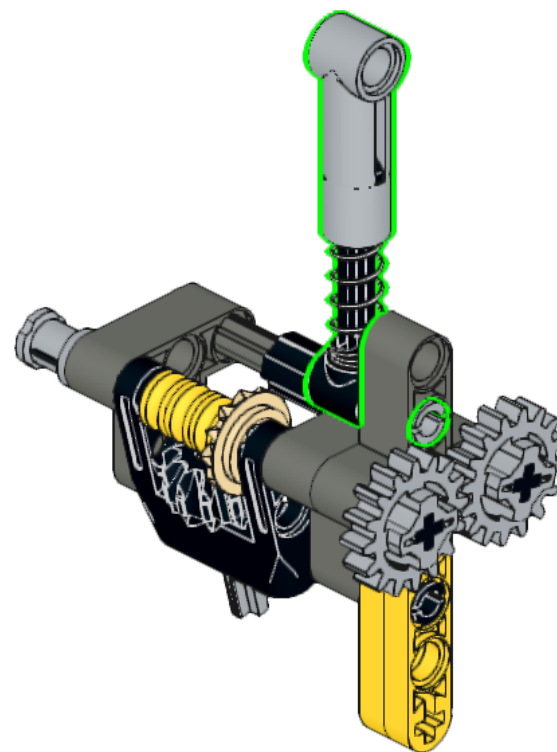
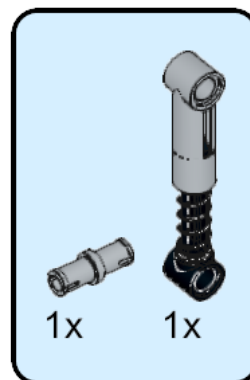
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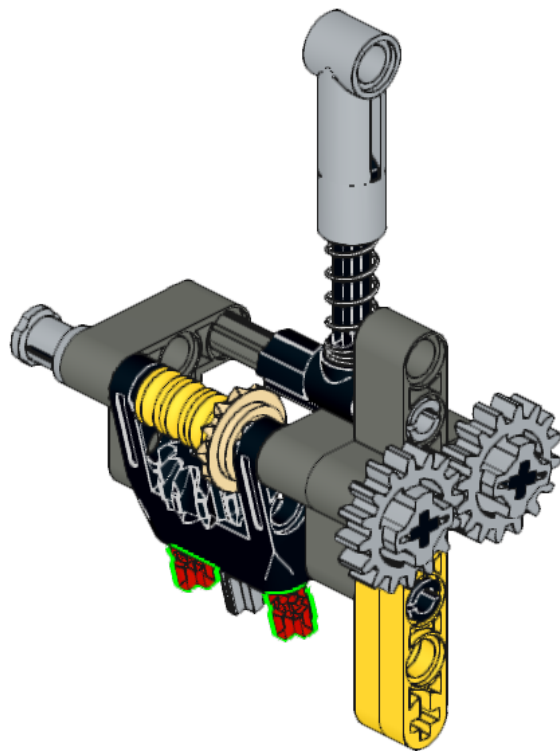
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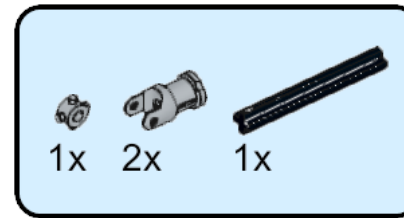
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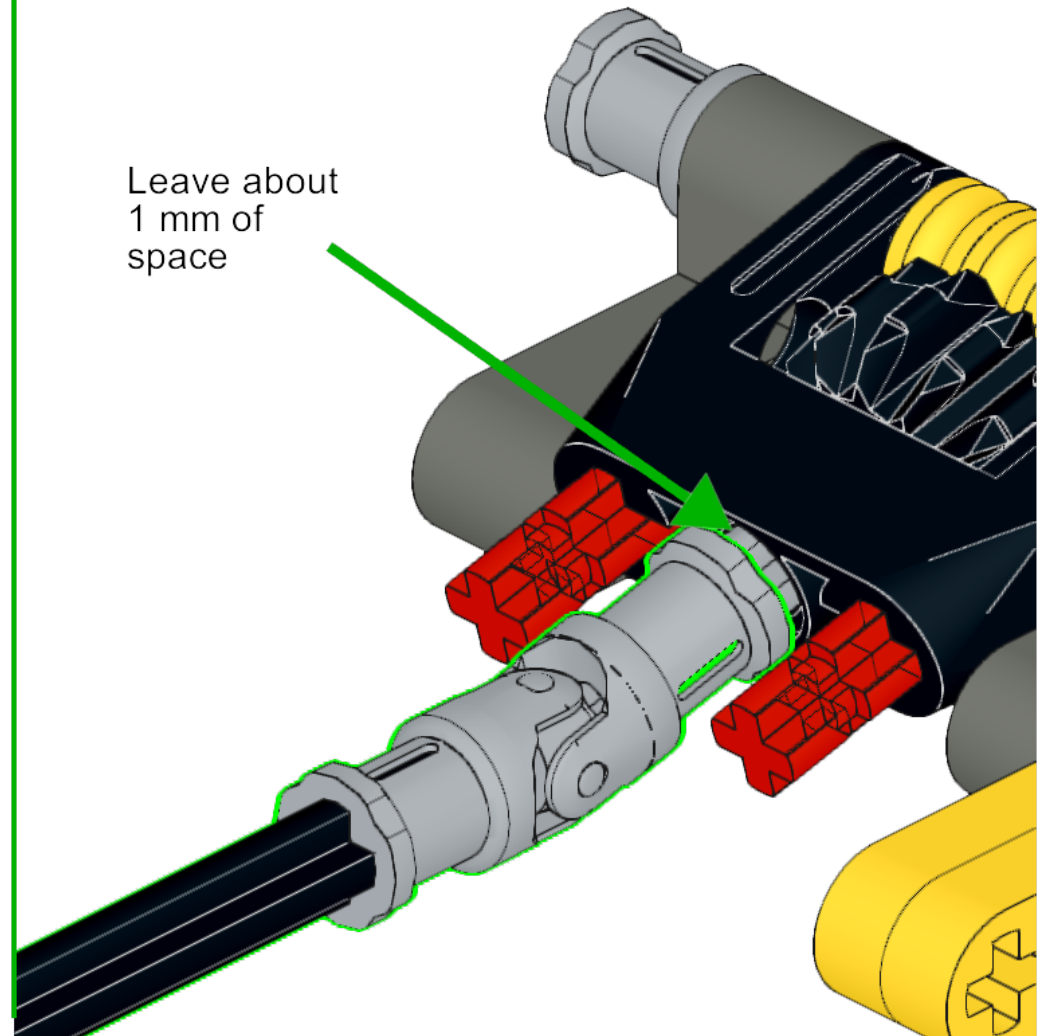
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67



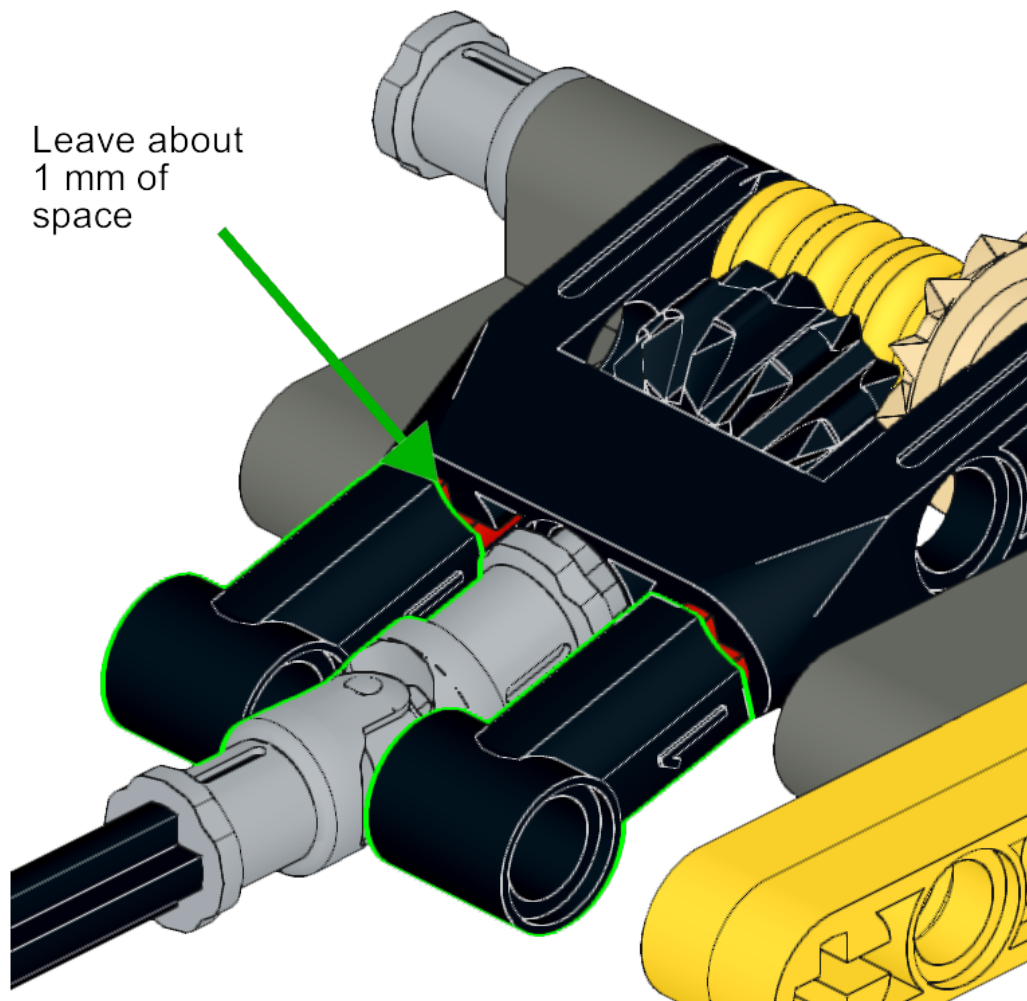
Leave about
1 mm of
space



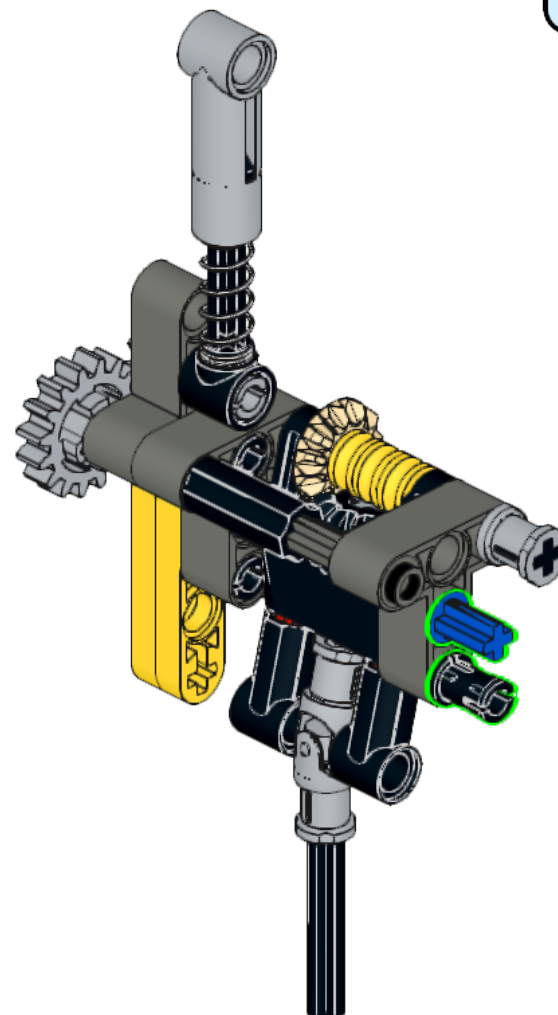
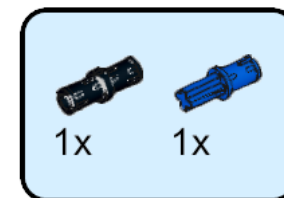
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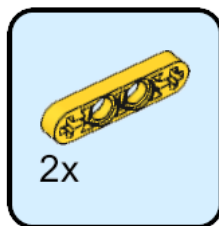
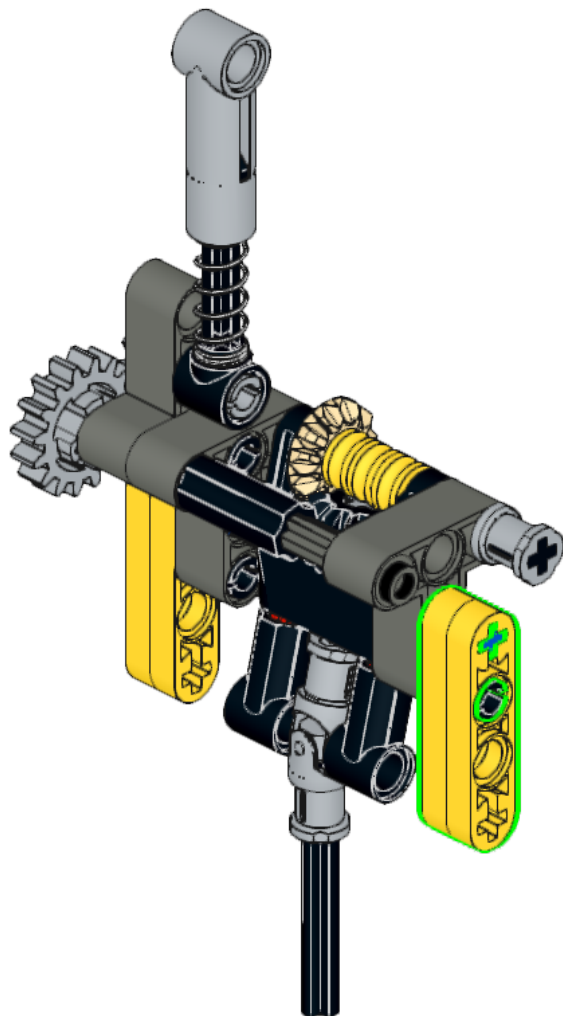
Leave about
1 mm of
space



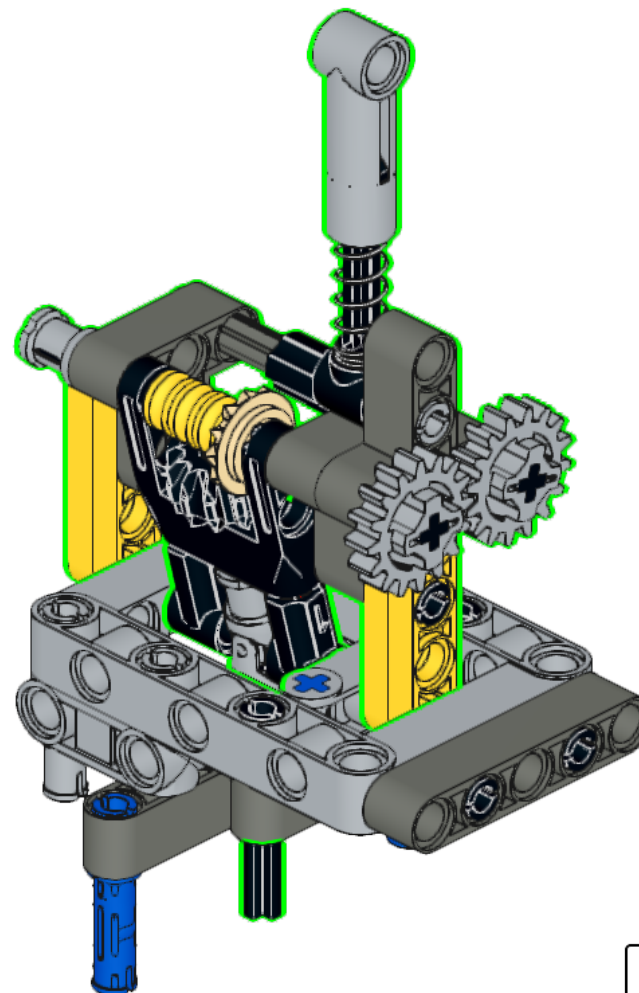
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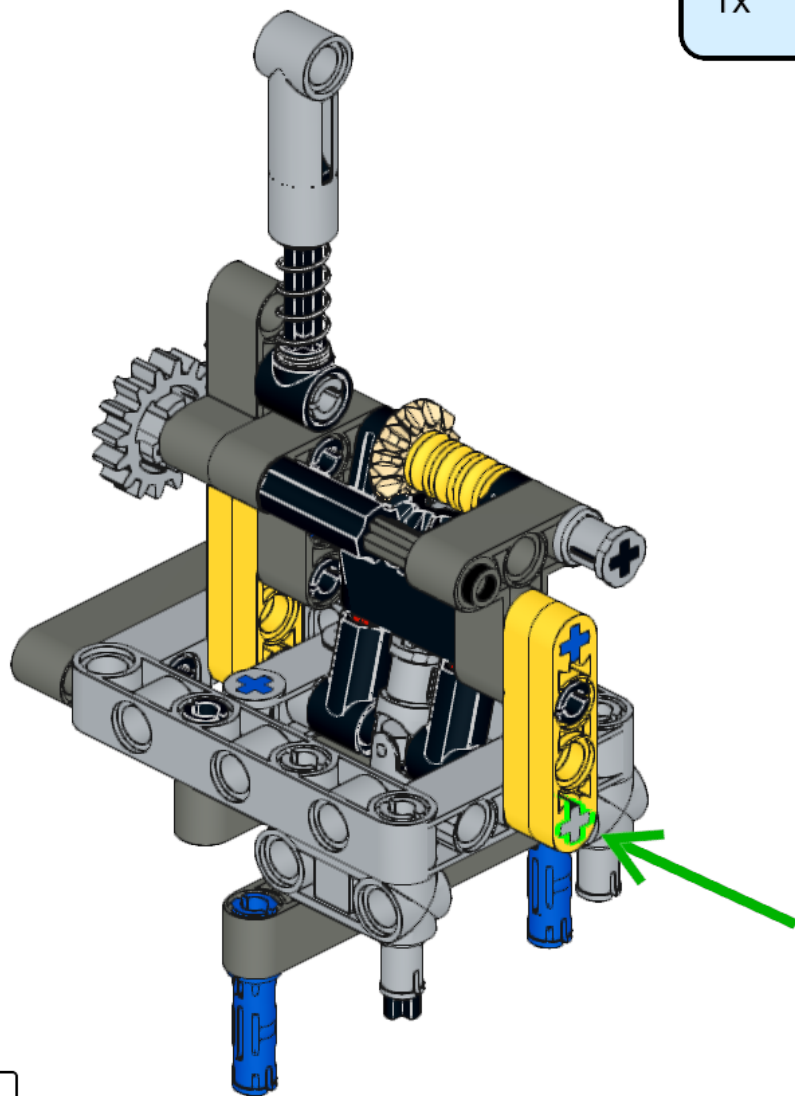
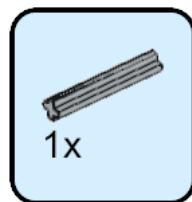
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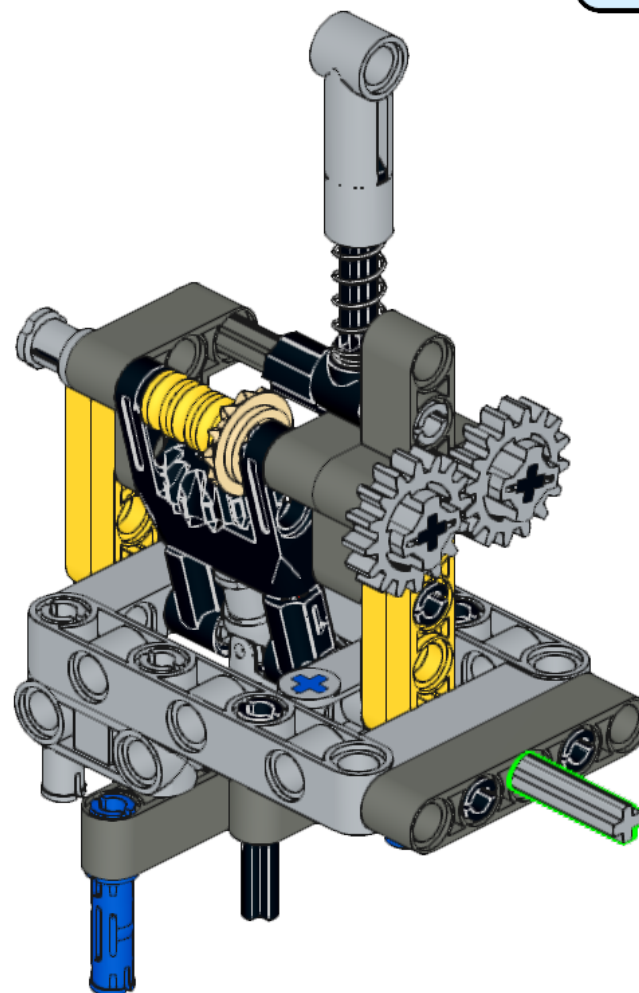
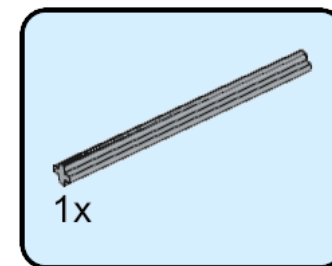
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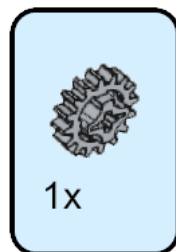
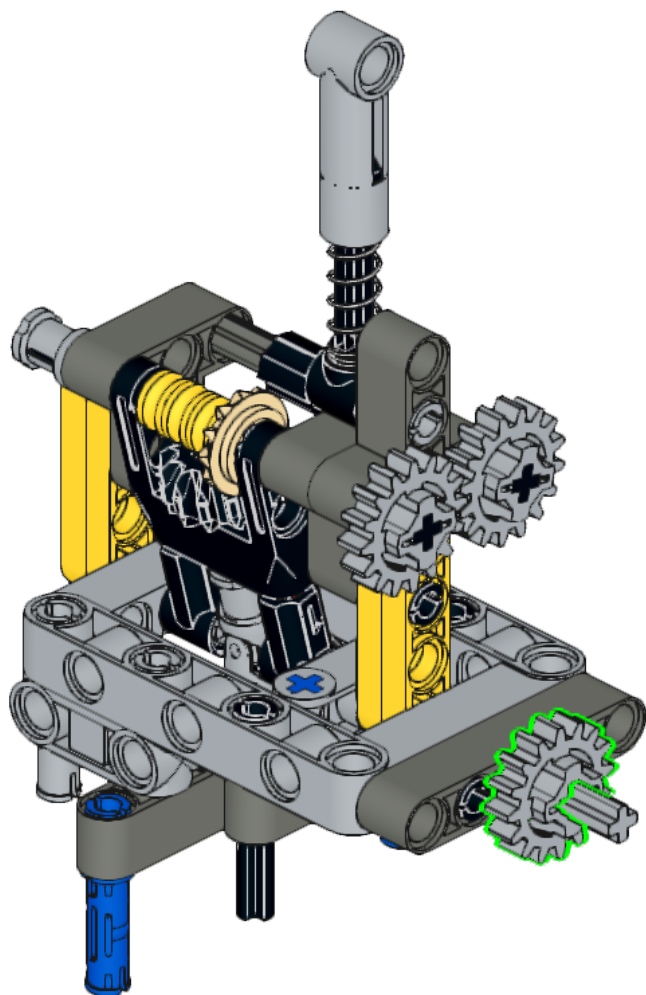
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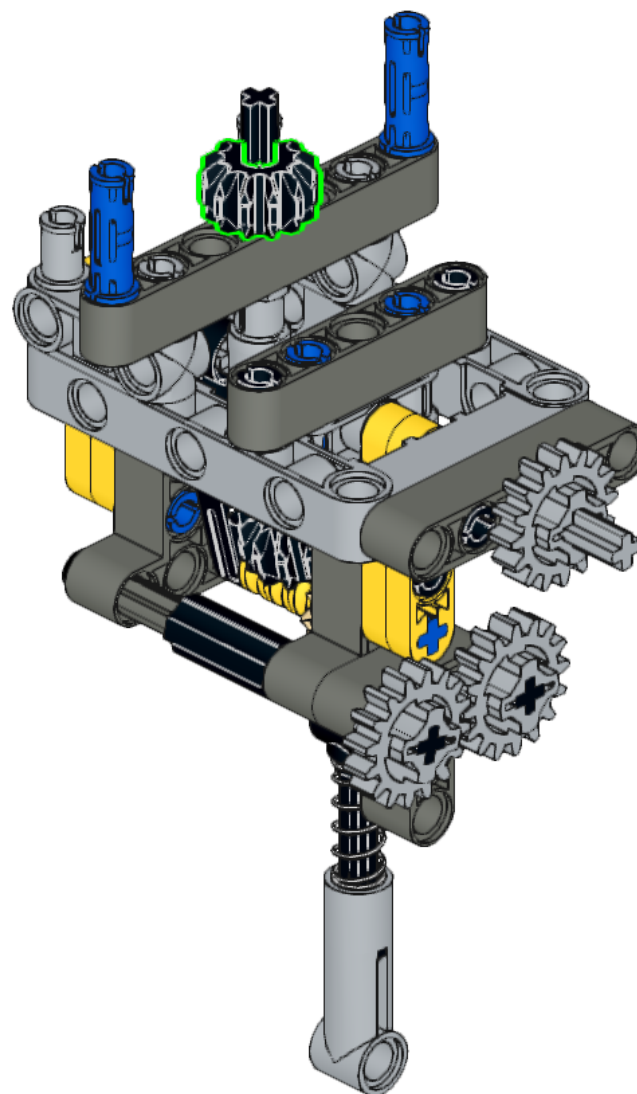
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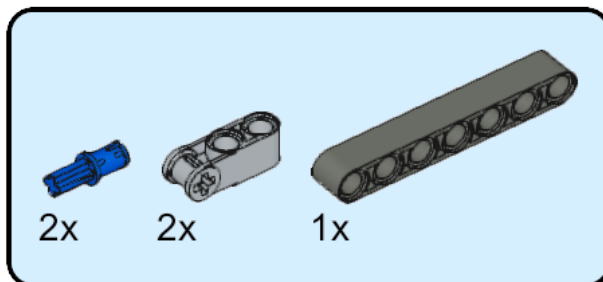
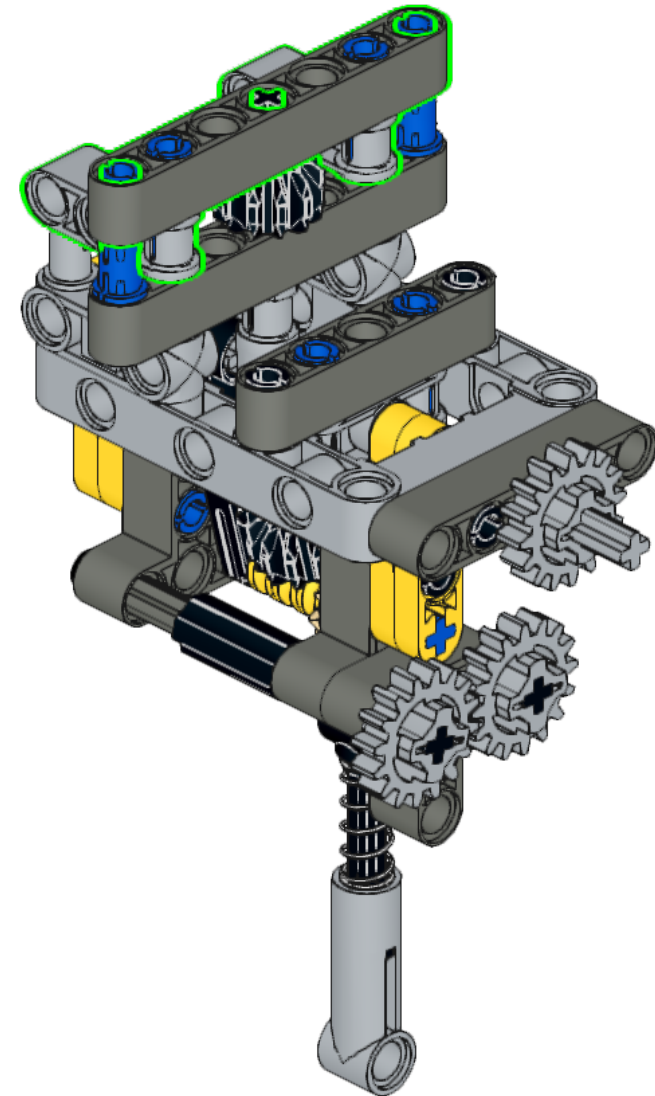
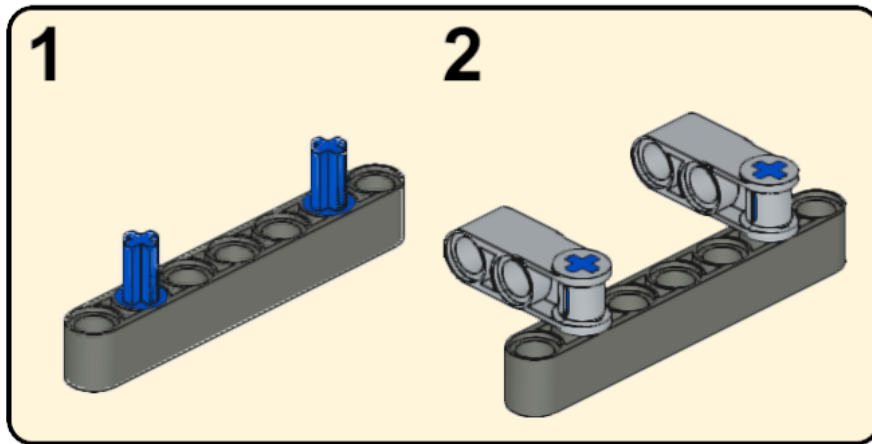
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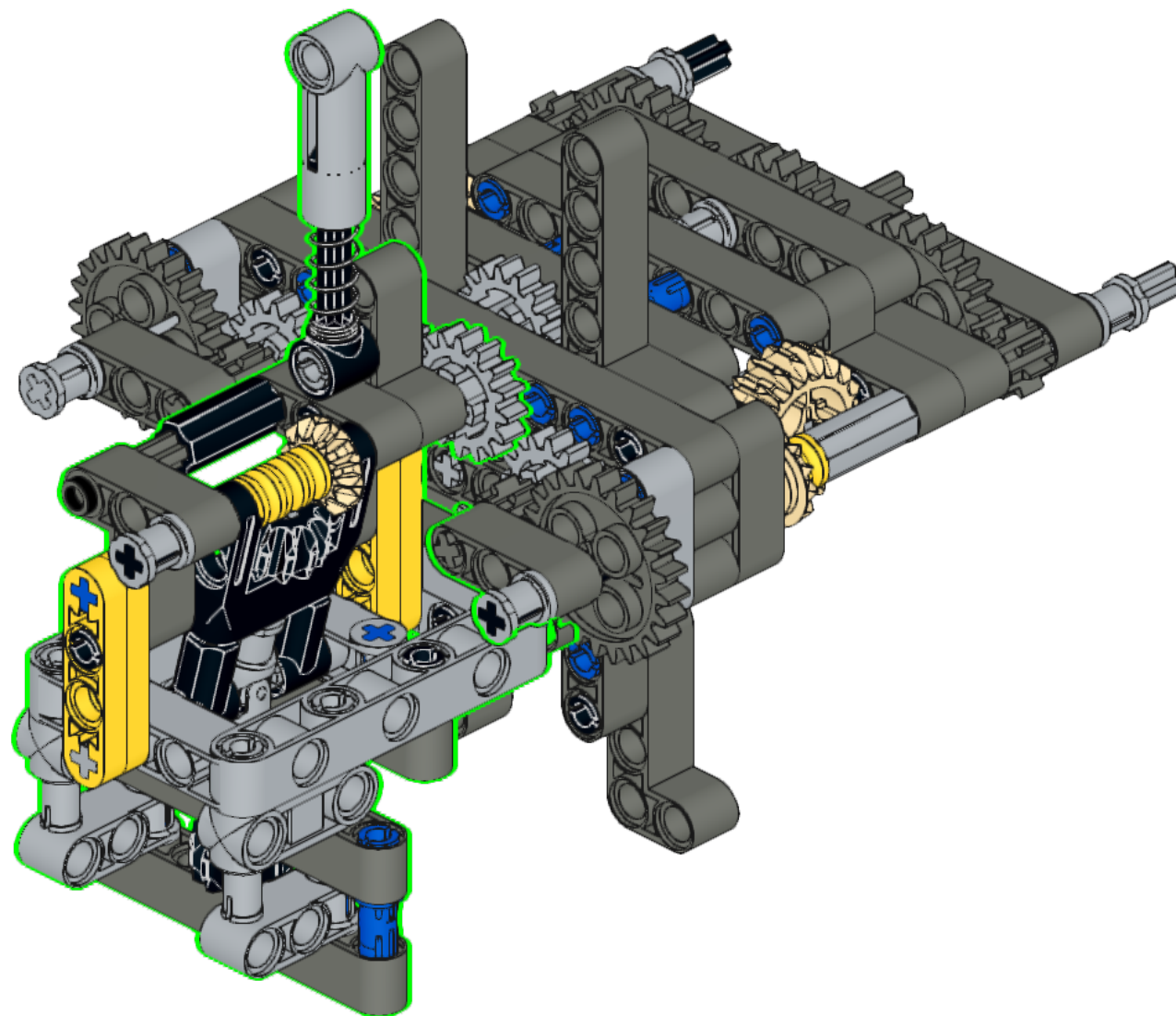
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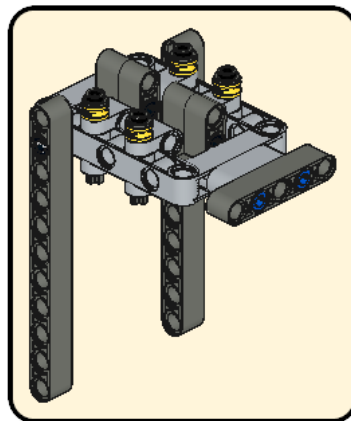
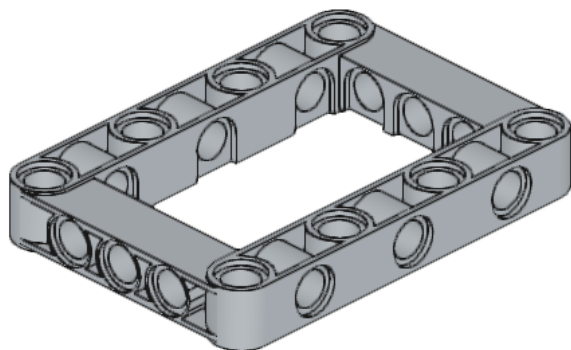
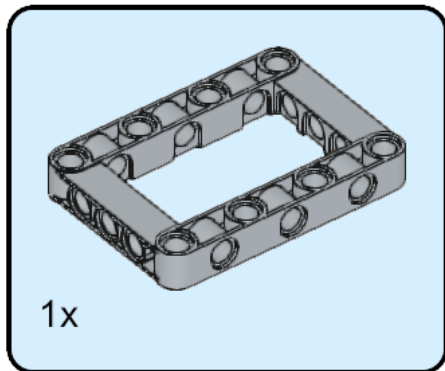
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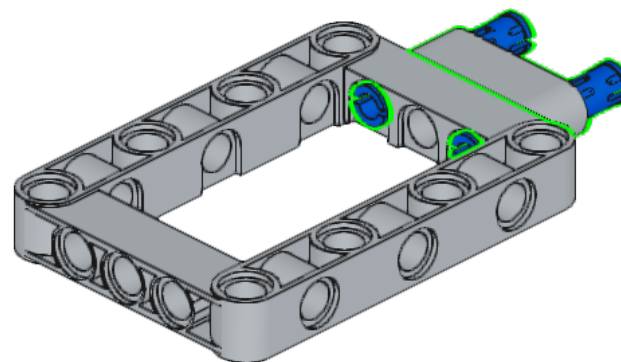
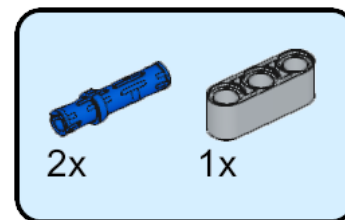
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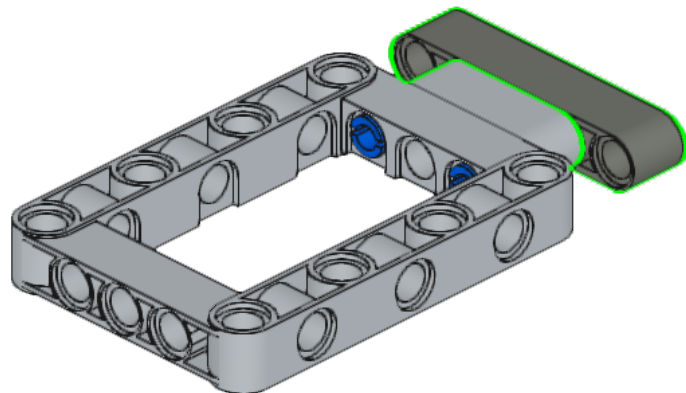
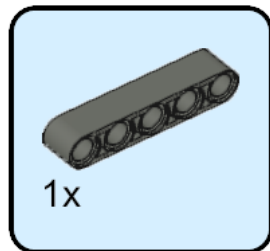
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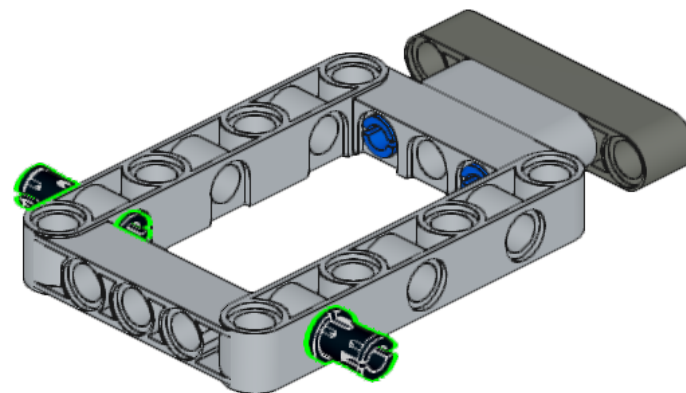
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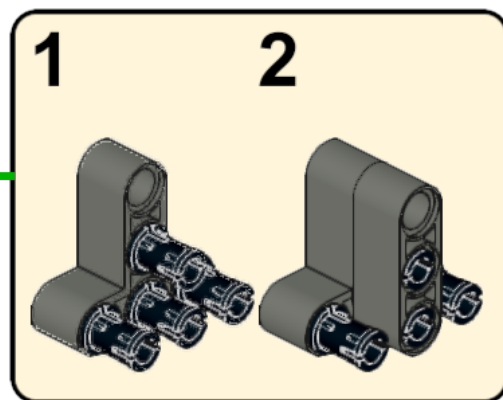
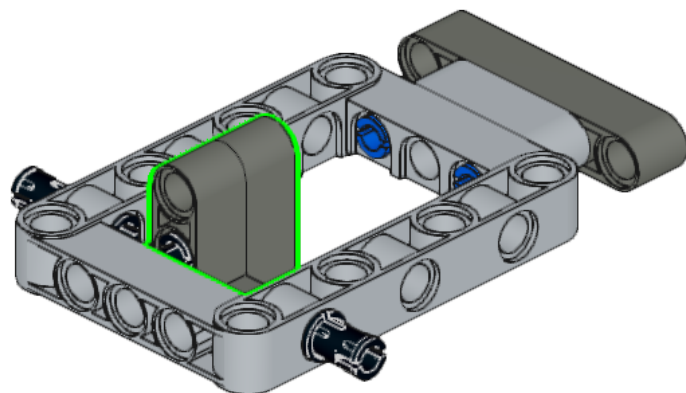
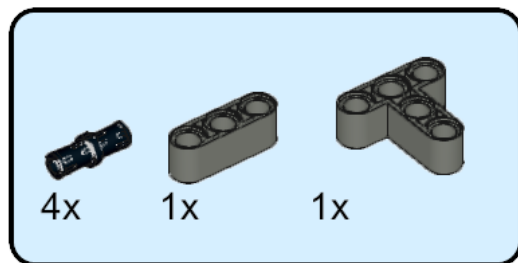
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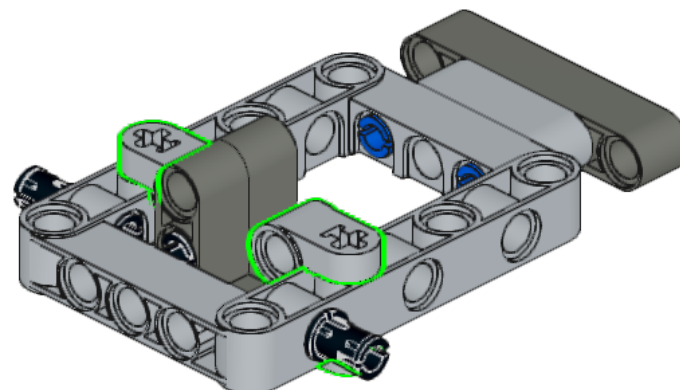
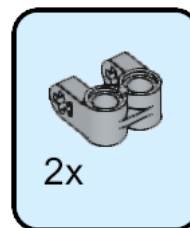
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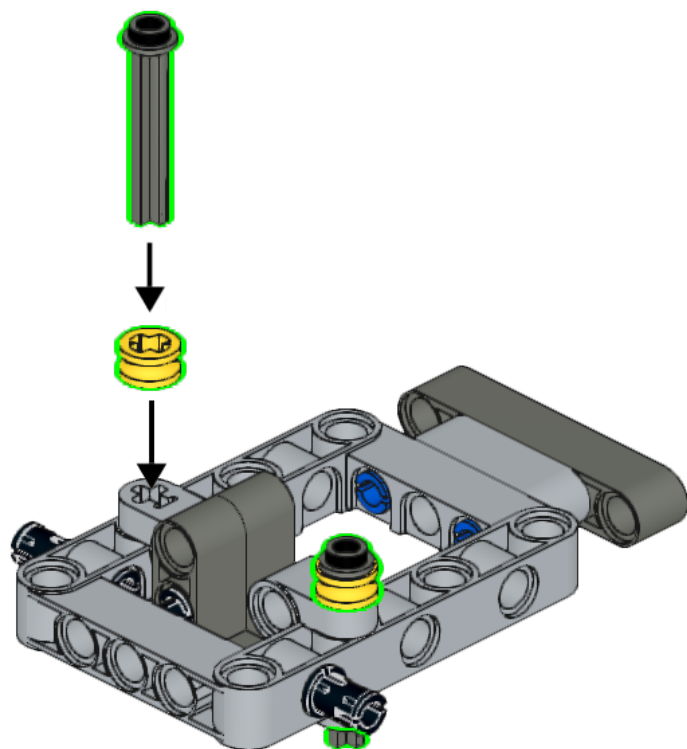
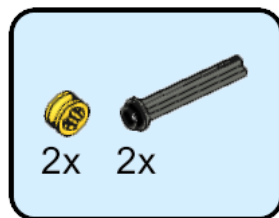
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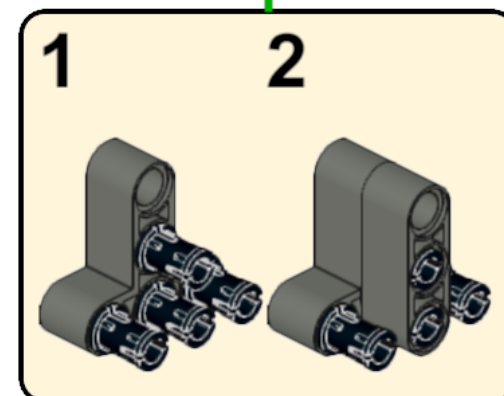
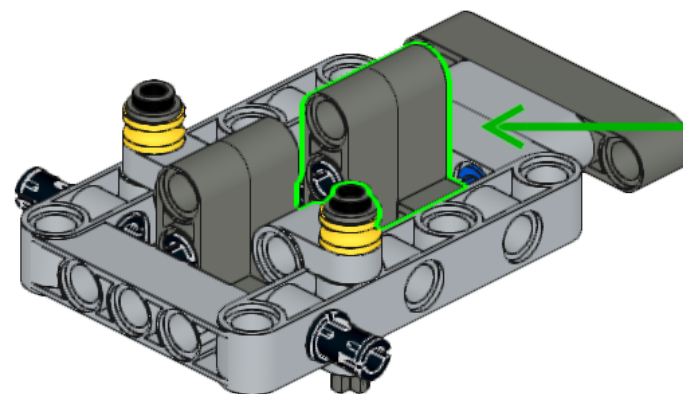
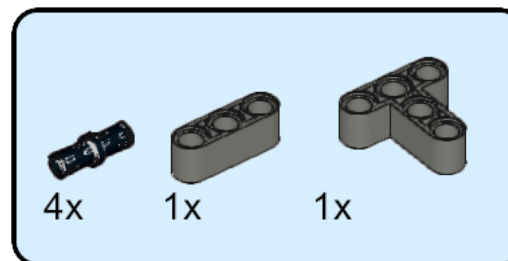
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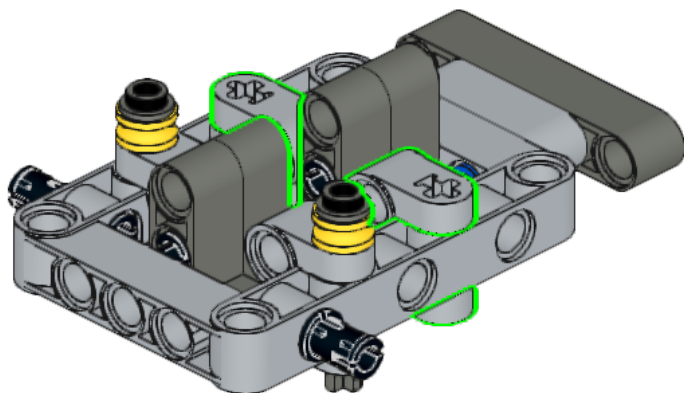
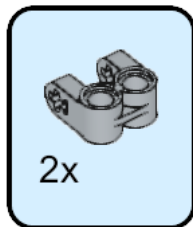
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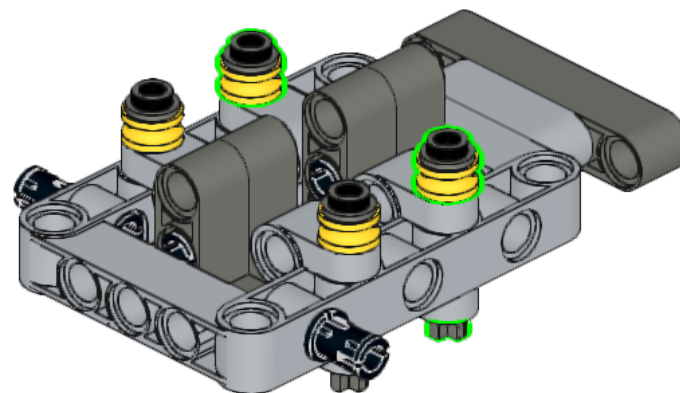
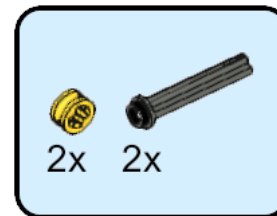
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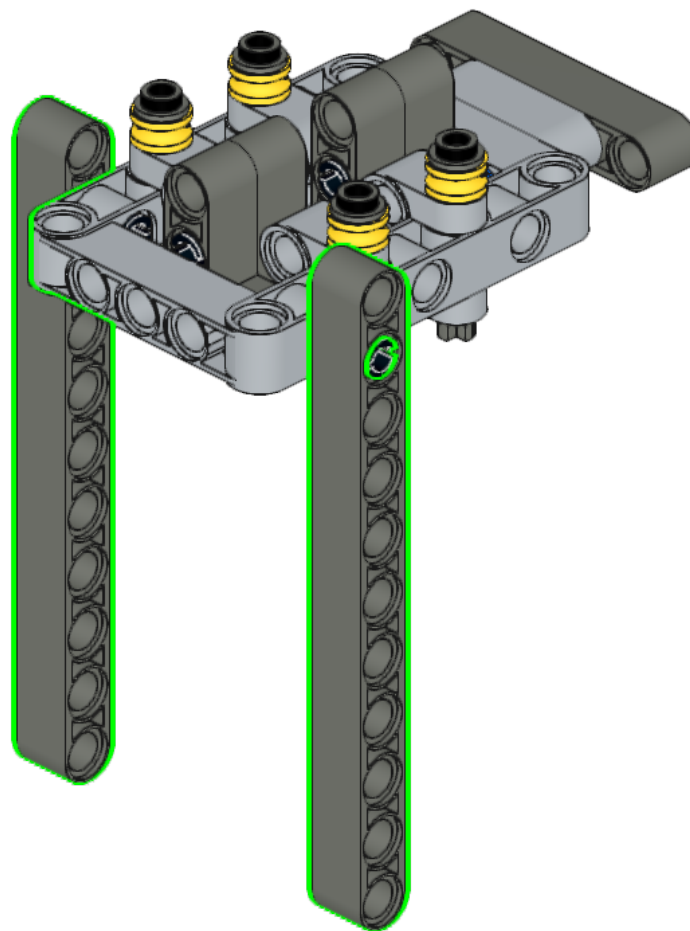
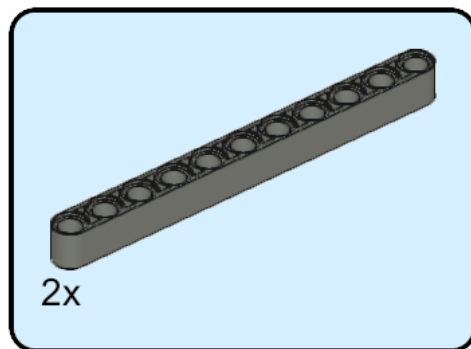
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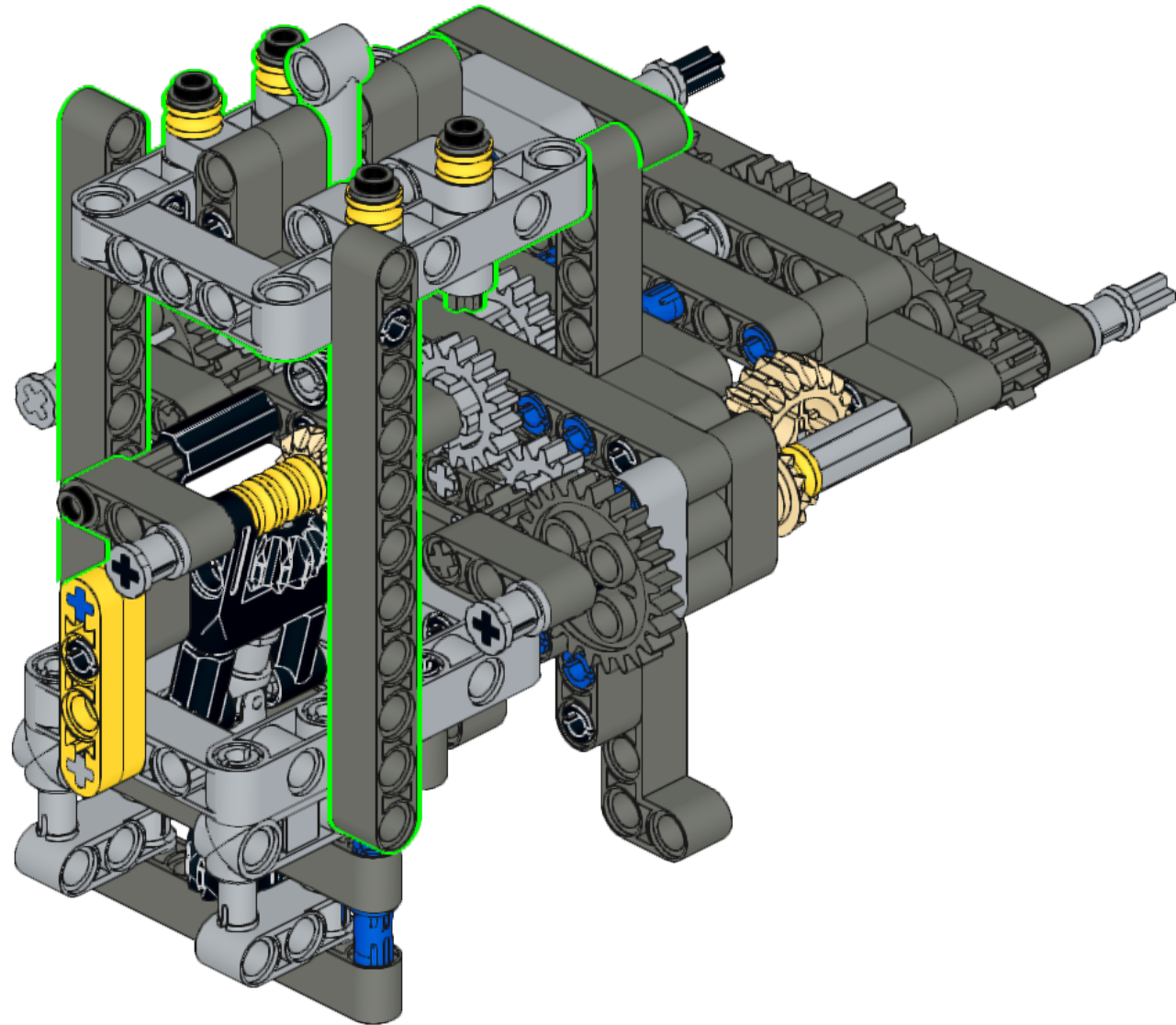
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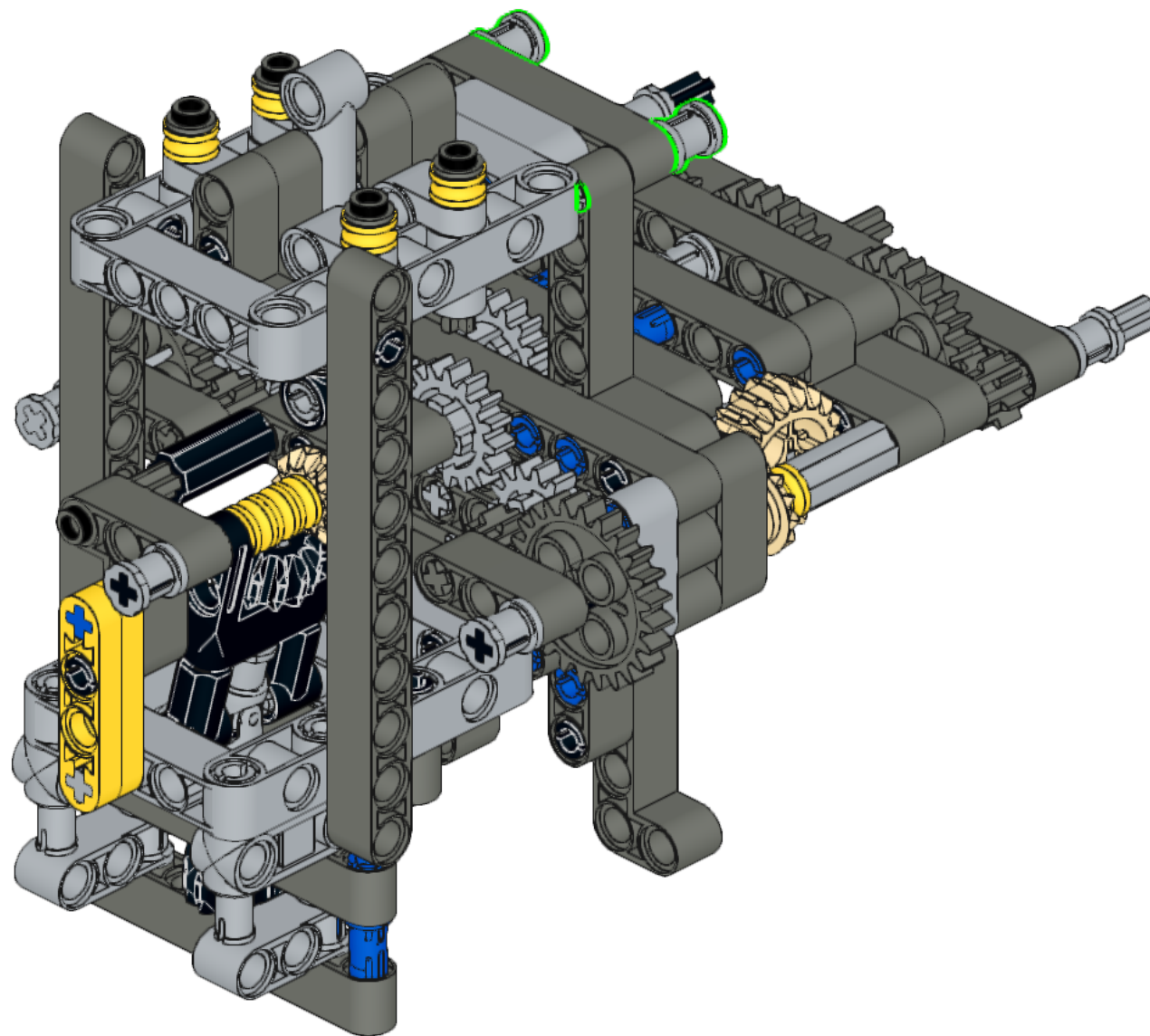
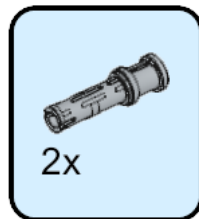
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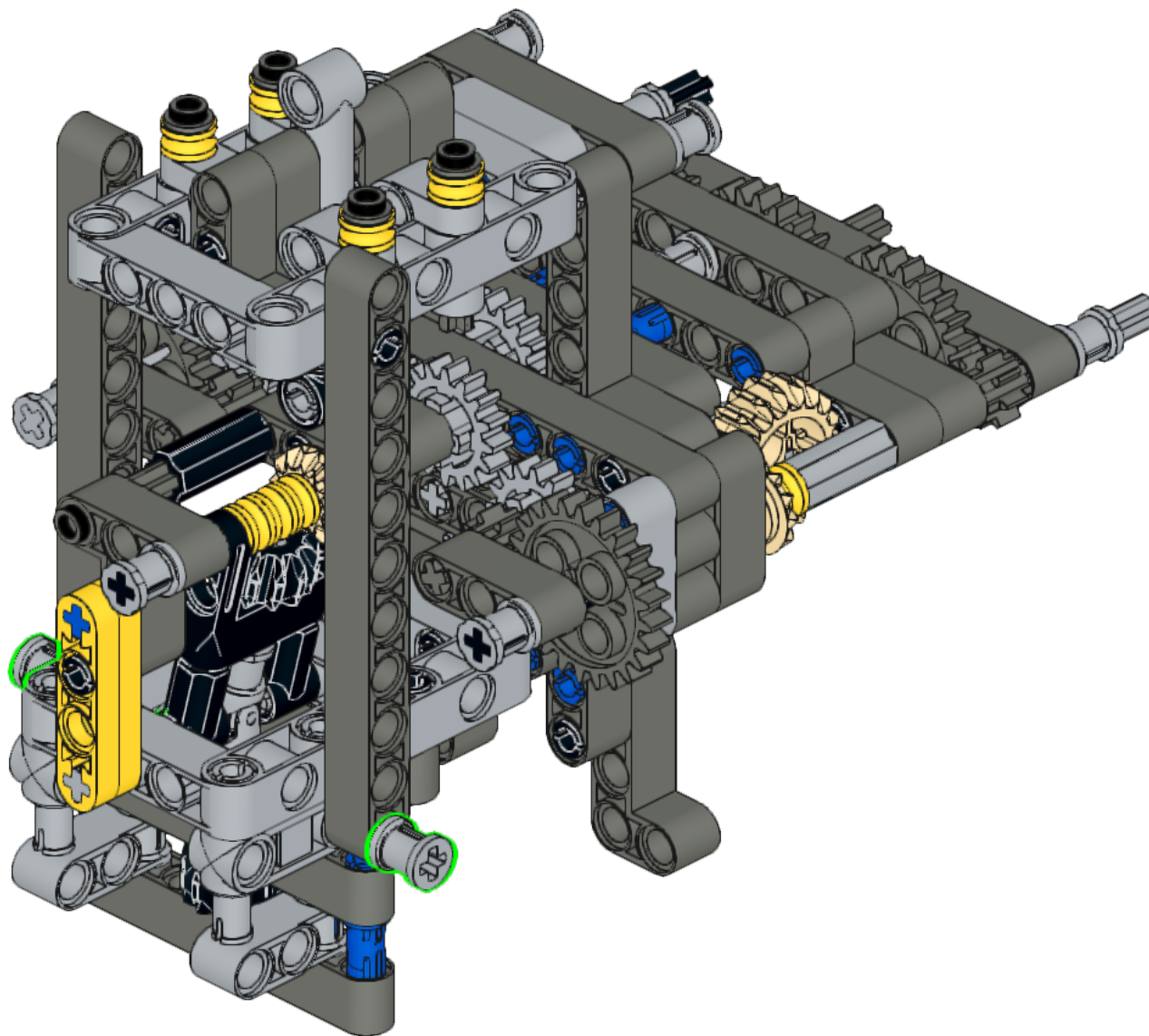
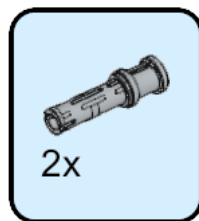
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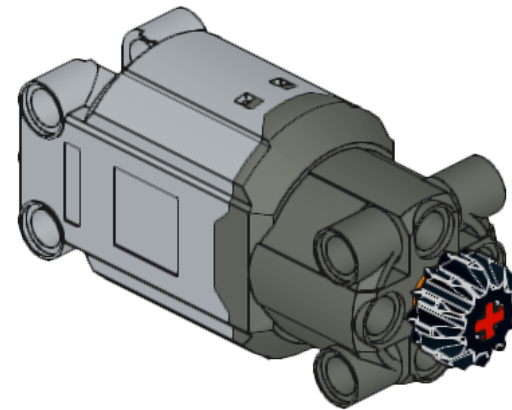
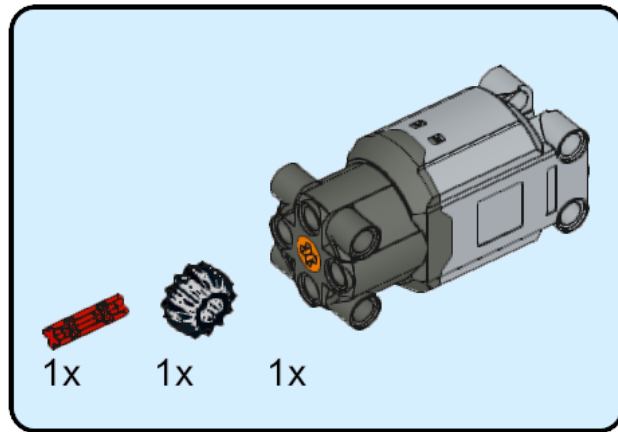
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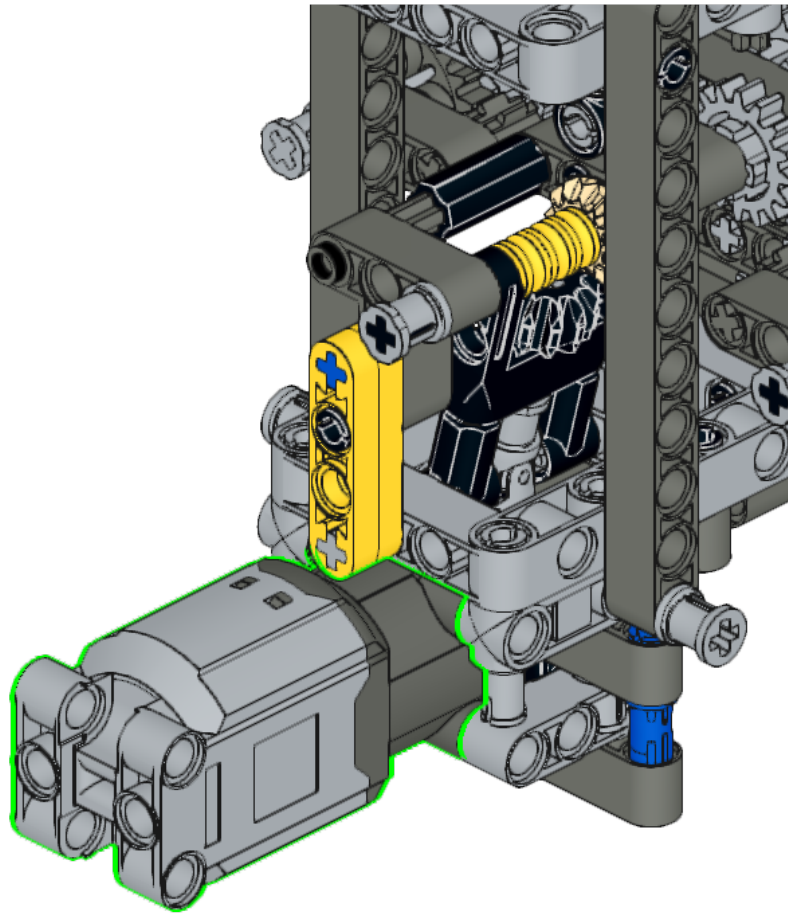
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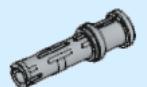
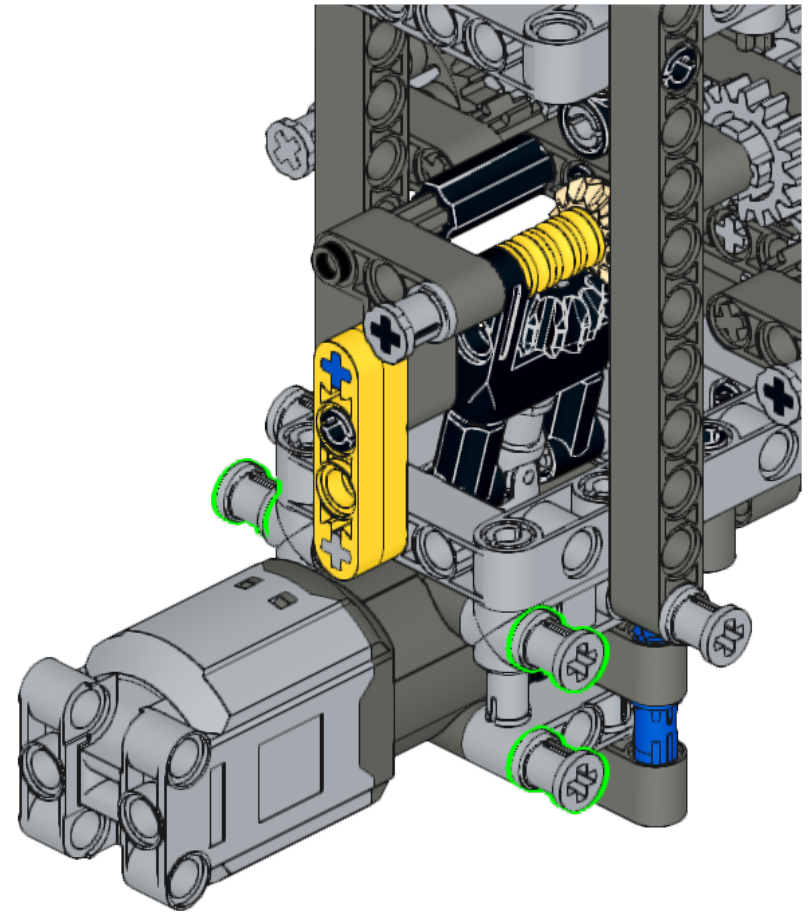
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93

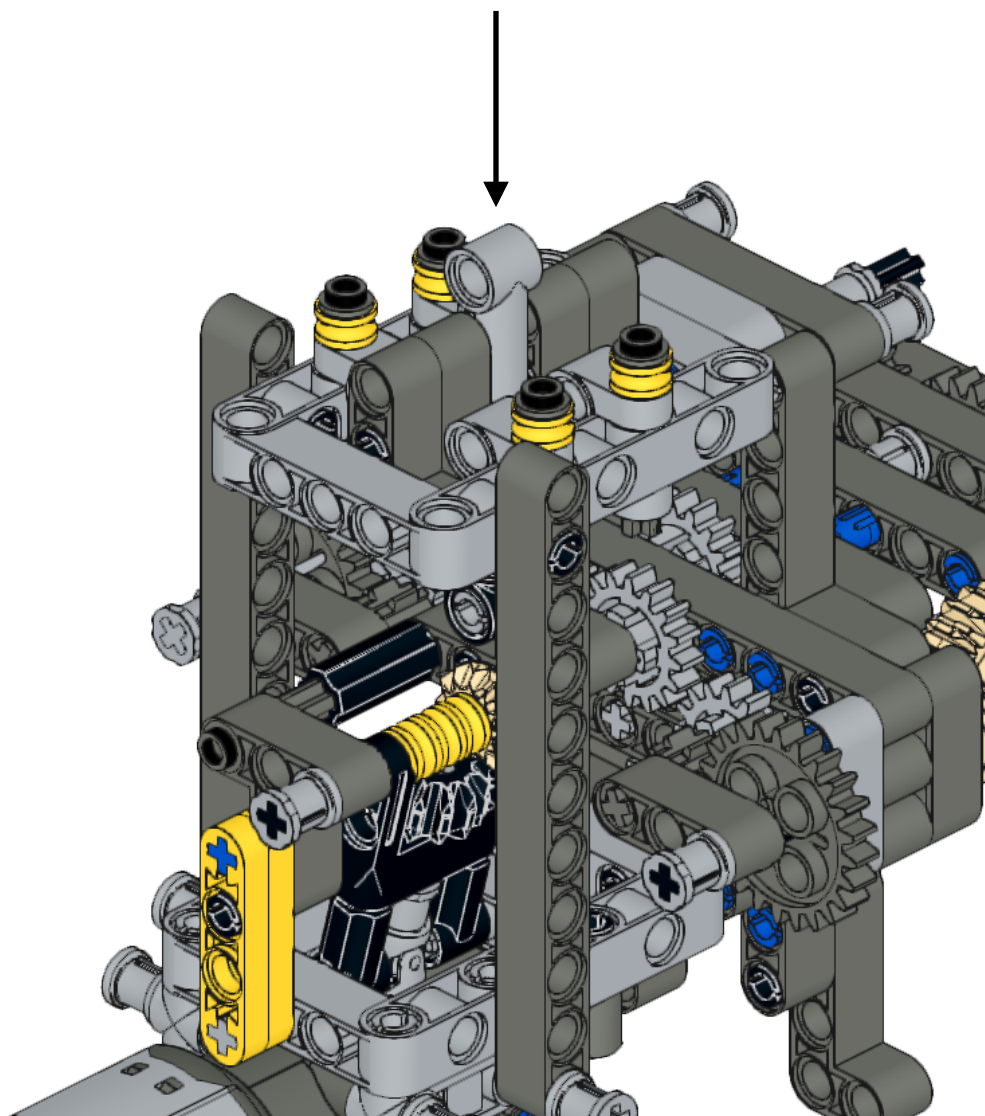


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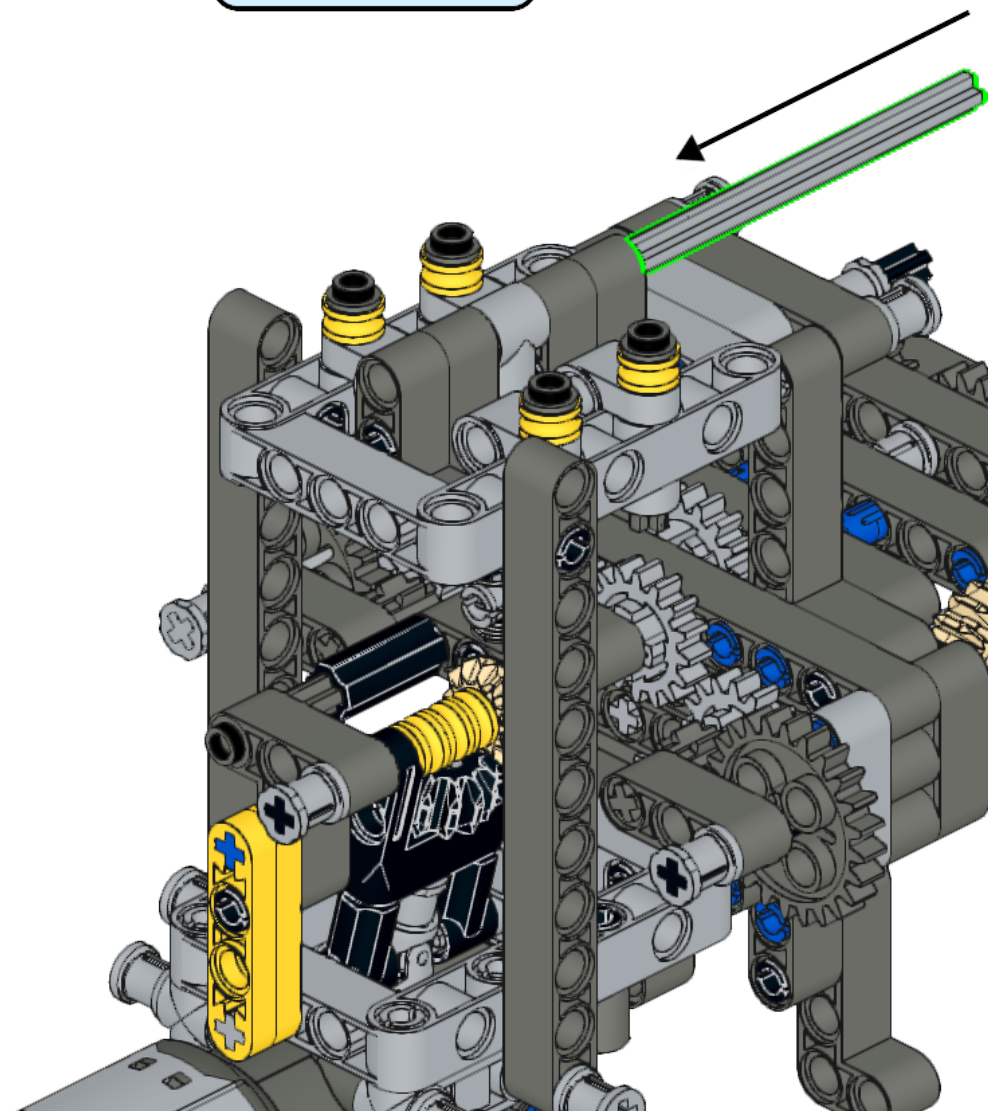
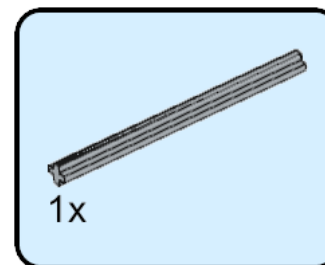


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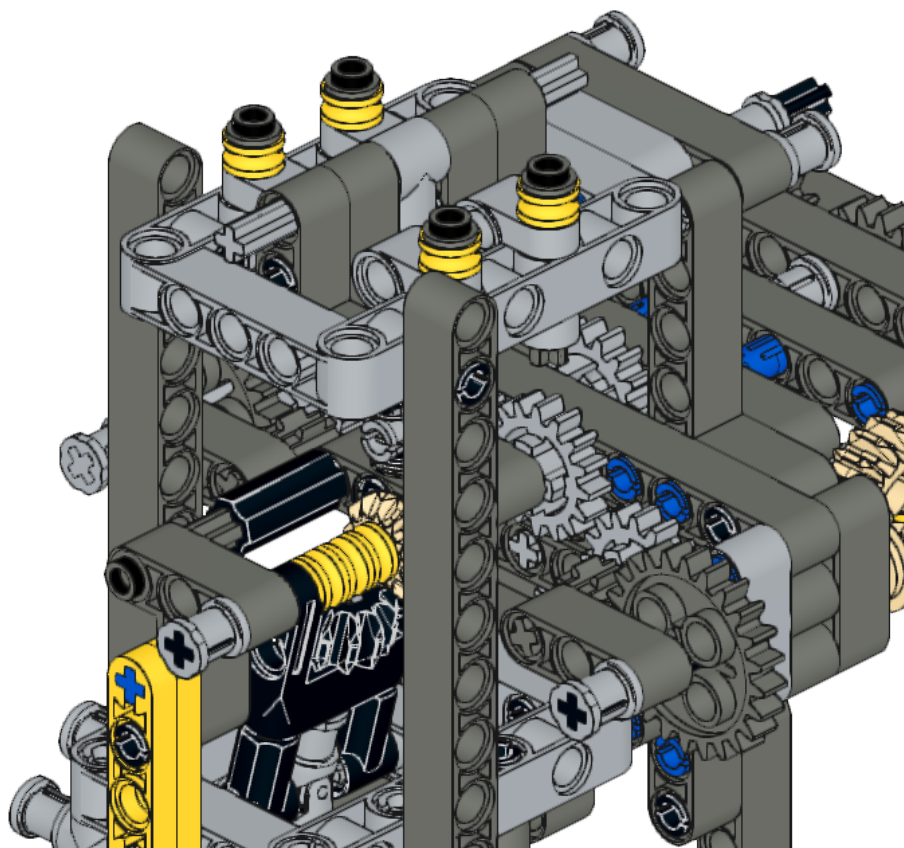
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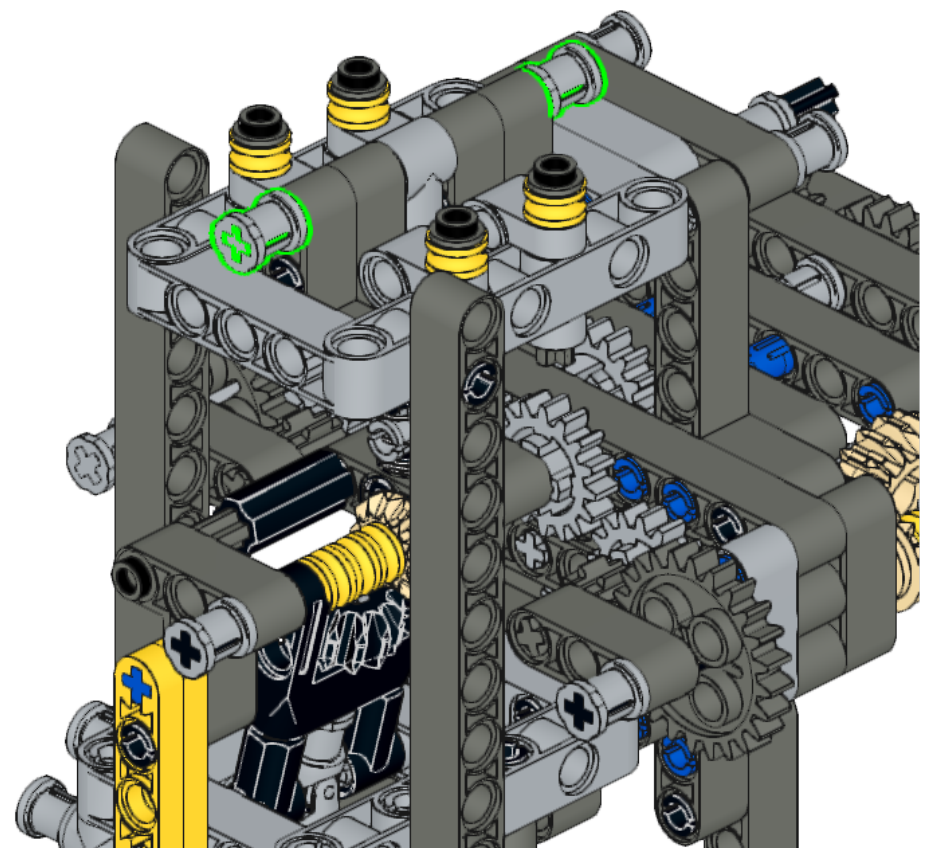
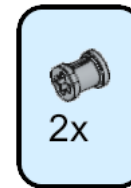
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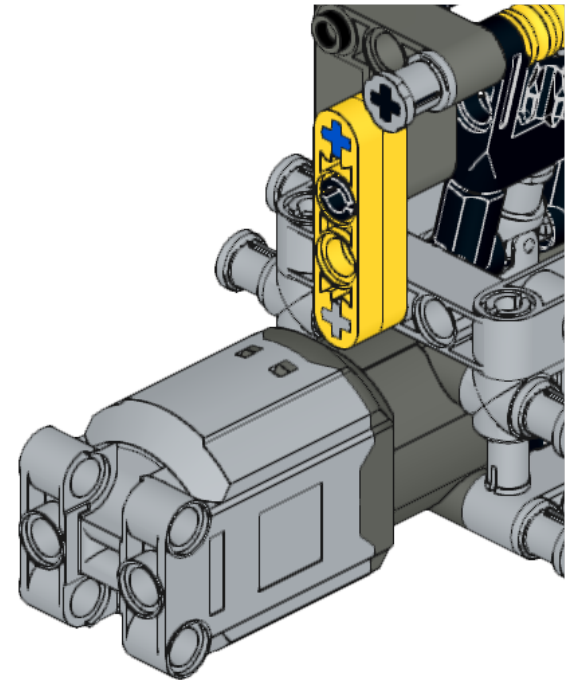
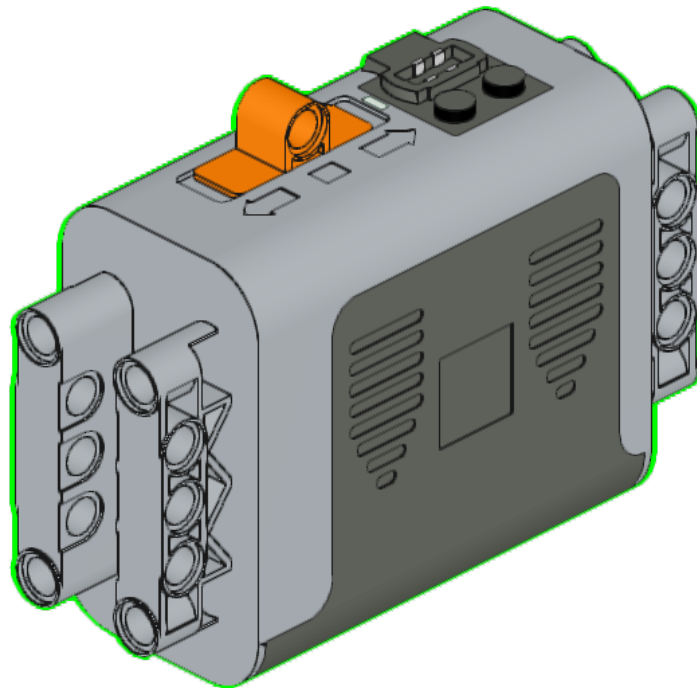
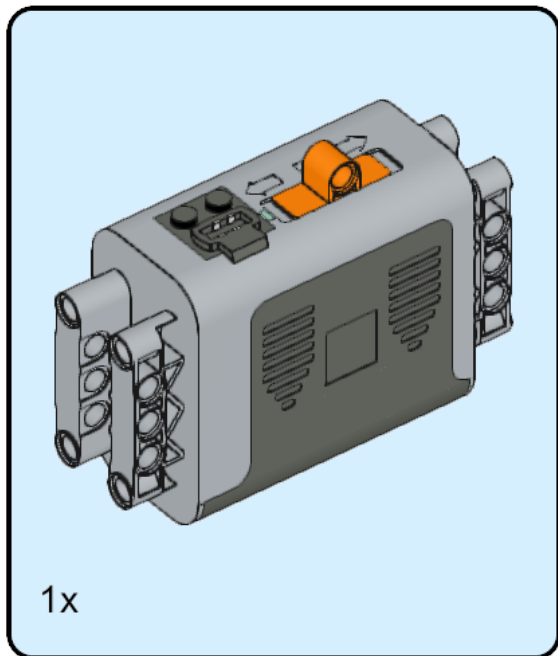
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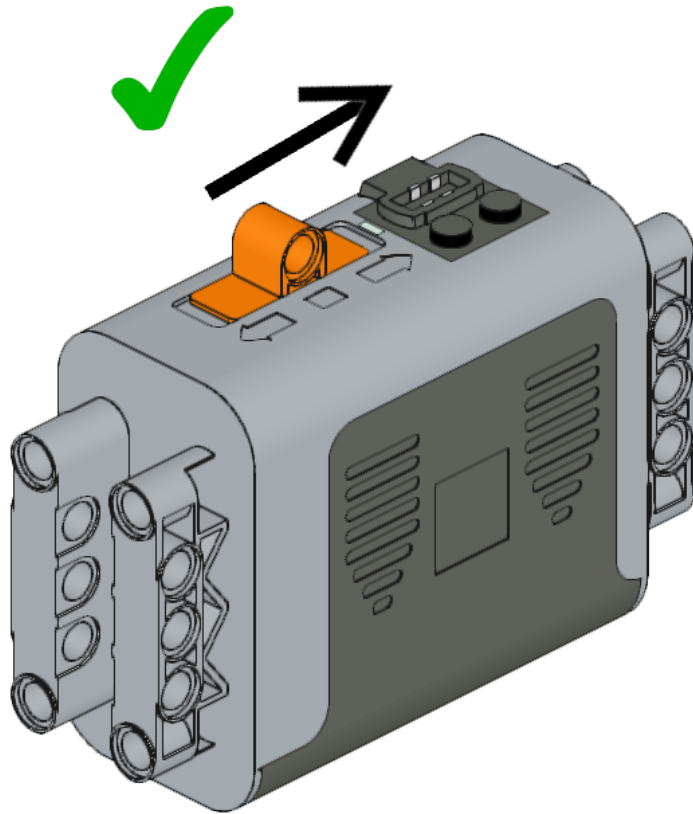
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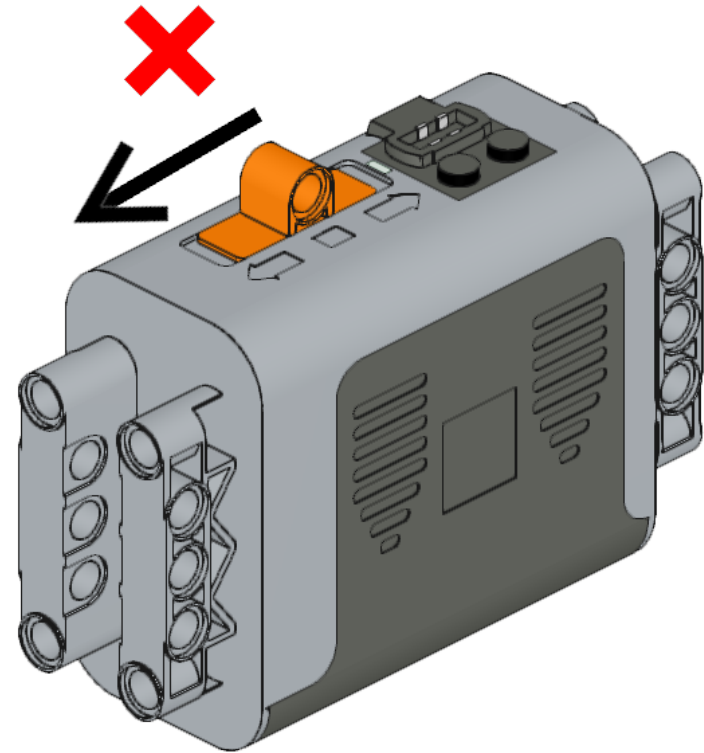
99



100



101



The gears will jam and things may break if you switch the engine on in the wrong direction.

102

