



**NASA**  
Space Shuttle Discovery STS-31

Wingspan:	78.04 ft
Launches:	29
Active:	August 30, 1984 - March 9, 2011
Orbital Velocity:	17,500 mph
Max Altitude:	350 miles
Earth Orbits:	6,830
Time in Space:	1 year, 22 hours, 29 minutes, 33 seconds



**NASA** **esa**  
Hubble Space Telescope

Launch:	April 24, 1990
Launch Mass:	24,290 lbs
Velocity:	6.72 miles
Deploy Altitude:	350 miles

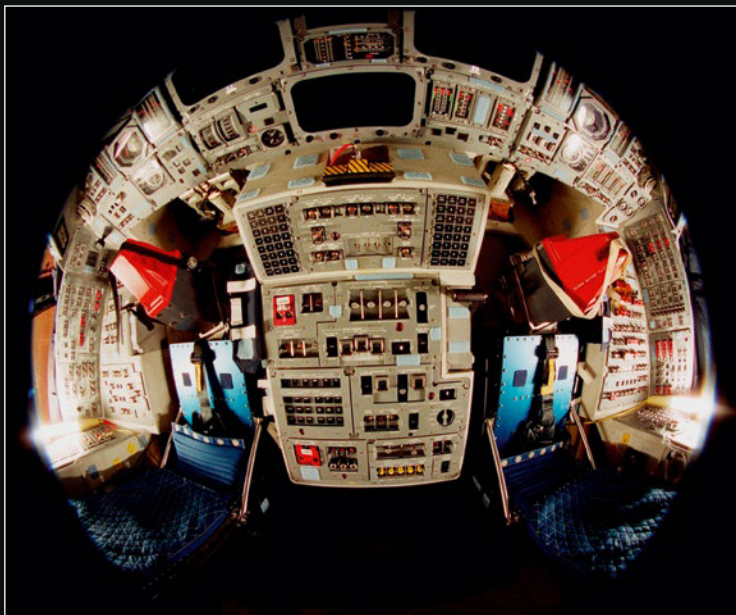


## 太空飞行的标杆

哥伦比亚号、挑战者号、发现号、亚特兰蒂斯号和奋进号航天飞机构成了美国宇航局太空运输系统 (STS) 的航天编队。它们共执行了 135 次飞行任务，将 355 人载入太空。发现号执行任务的次数和载客人数最多，并且比其它的轨道飞行器飞得更高更远。作为 STS-31 任务的一部分，发现号还于 1990 年 4 月完成发射和部署哈勃太空望远镜的任务。2021 年是航天飞机计划实施 40 周年，我们特借此机会重温这一历史性任务。

## 太空望远镜发射和部署任务

1990年4月，哈勃太空望远镜的发射和部署标志着自伽利略望远镜以来天文学领域所取得的最重要进步。这是第一架放置在太空中的大型光学望远镜，也是一座难以逾越的高峰。哈勃太空望远镜位于大气层之上，不受折射、云层和光污染的影响，拥有畅通无阻的视野。科学家们利用哈勃望远镜观测最遥远的恒星和星系，以及太阳系中的行星。



## 设计团队感言

航天飞机是有史以来最复杂的飞行器之一，因此将其转化为乐高®套装有点令人望而却步。我们的设计需要平滑的外观，能够承载酬载 (payload) 的内部，但最大的挑战还是增加可工作的起落架。需要将航天飞机前部和主起落架组合在一起，同时还不得缩小载舱的空间，不能影响模型的结构，这是一个很大的谜题！许多人很容易被这些飞行器的复杂工程和强大动力所震撼，但对我来说而言，太空飞行最吸引人的部分是人类元素。这就是为什么这款模型中我最喜欢的部分是承载 5 个人类执行特殊任务的小巧蓝色座位。我小时候曾将花了几个小时用乐高积木拼搭自己的月球着陆器和发现号航天飞机，所以被要求参与这个项目时，感到非常激动和荣幸。

乐高®设计师 Milan Madge



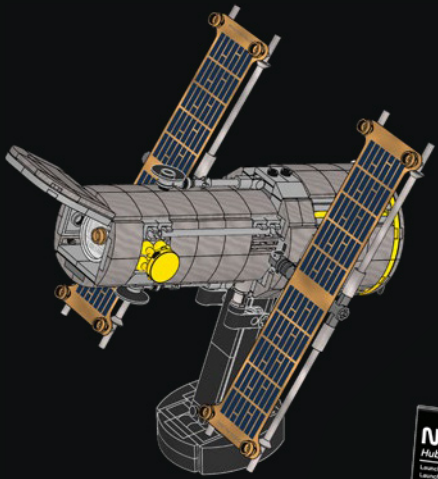
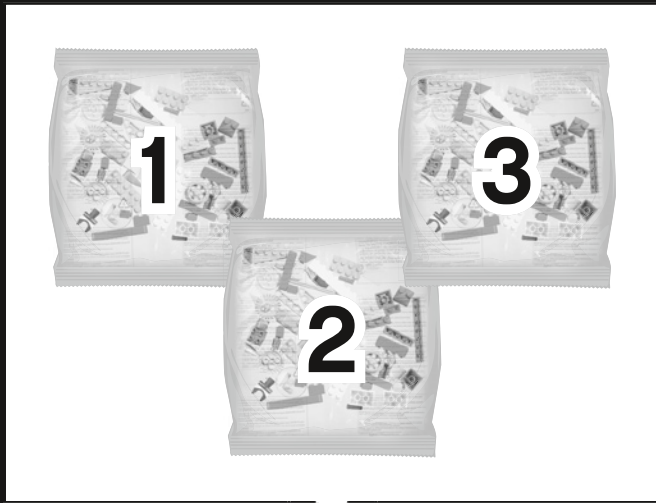


## 未来计划

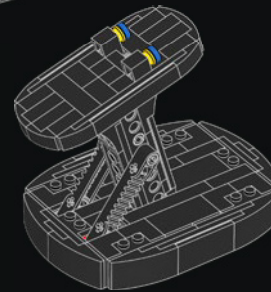
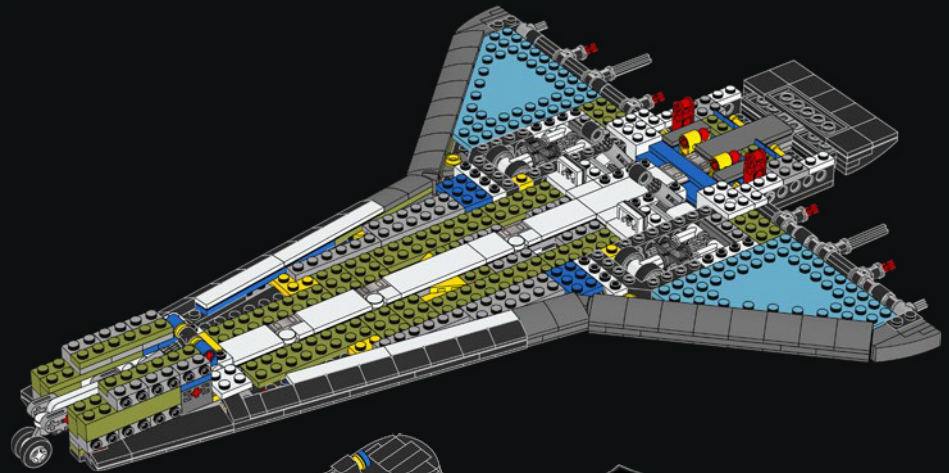
自 2011 年这架航天飞机退役以来，美国宇航局与波音公司和太空探索技术公司 (SpaceX) 建立了公私伙伴关系，以开发和运行新一代航天器和发射系统，将宇航员送入低地球轨道和国际空间站。鼓励企业提供往返低地轨道的人类运输服务，使得美国宇航局能够将更多力量用于建造航天器和火箭，以完成登上月球和火星的任务，实现下一个巨大的飞跃。



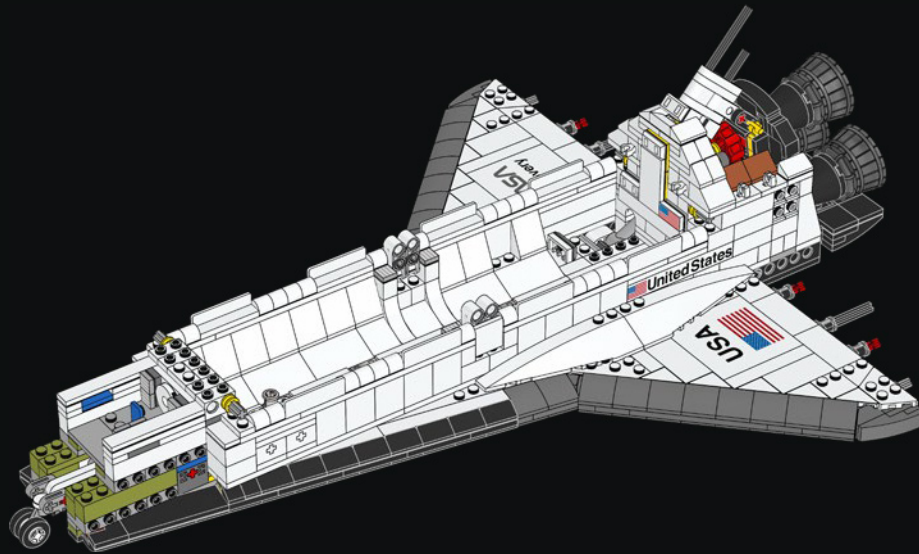
[LEGO.com/brickseparator](https://www.lego.com/brickseparator)



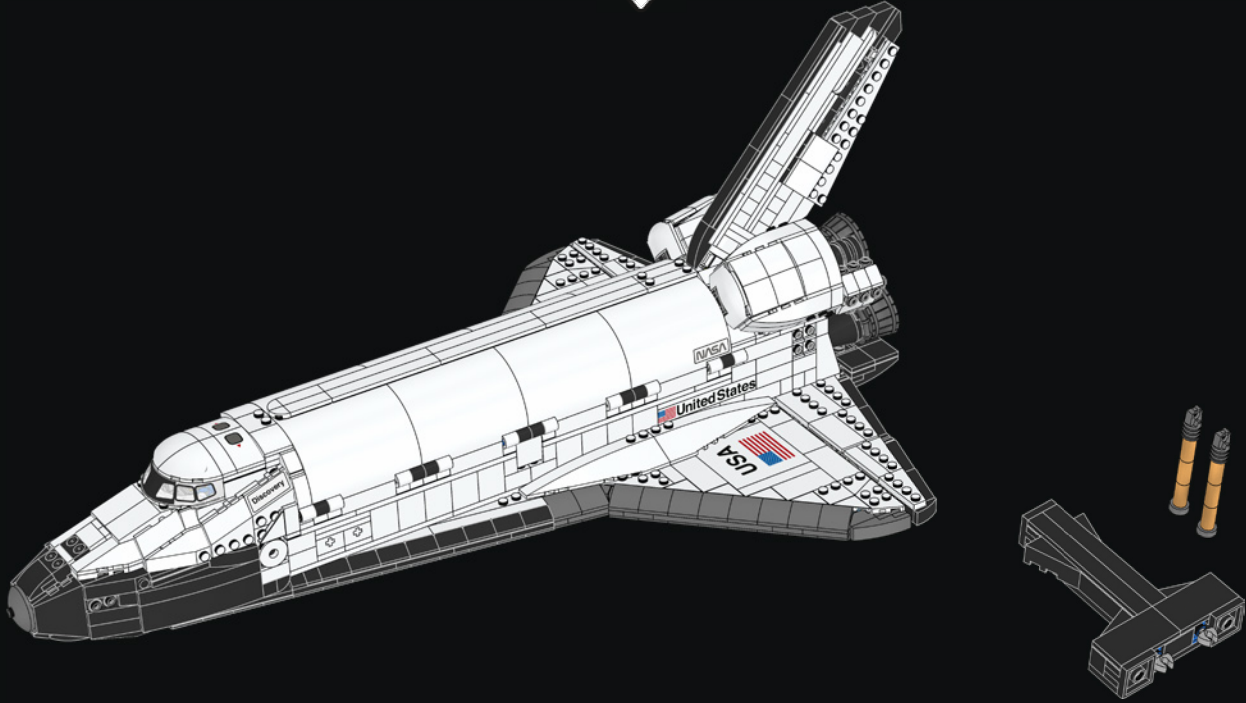
**NASA** **esa**  
**Hubble Space Telescope**  
Launch: April 24, 1990  
Launch Weight: 13,120 lbs  
Orbiting Altitude: 354 miles



**NASA**  
**Space Shuttle Discovery STS-31**  
Launch: February 24, 1984  
Launch Weight: 24,000 lbs  
Orbiting Altitude: 200 miles







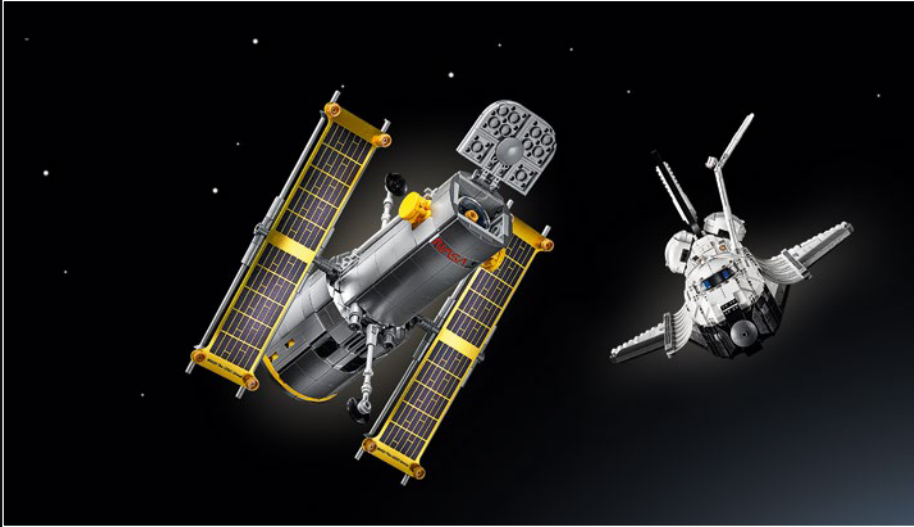
## 哈勃太空望远镜

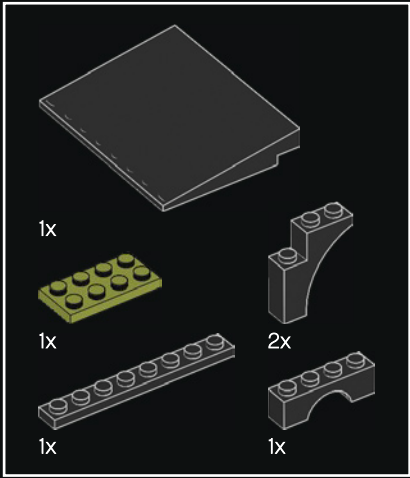
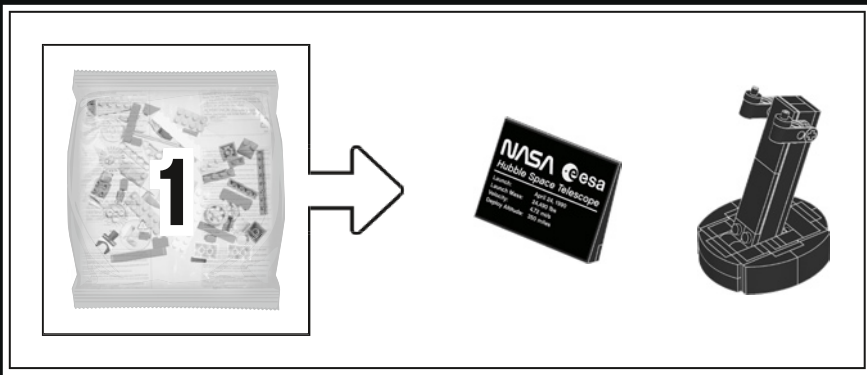
哈勃太空望远镜由美国宇航局与其欧洲合作伙伴——欧洲航天局 (ESA)——合作制造。这架 13.2 米 (43.5 英尺) 长、4.2 米 (14 英尺) 宽的望远镜位于距离地面约 550 公里 (342 英里) 的上空，对光线的探测灵敏度比目前最好的地基望远镜高 20 倍以上。



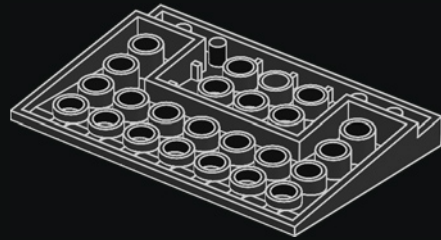
## 第一个重要的太空天文台

哈勃太空望远镜的任务是至少花 15 年时间探索宇宙最遥远、最暗淡的星系。由于在 1993 年至 2009 年期间展开了五次航天飞机维修任务，故此它的服役期限远远超过了这一目标，已运行和观测宇宙超过 30 年。在进入轨道期间，该望远镜观测 140 多万次，天文学家利用这些数据出版了 17000 多份涵盖广泛主题的科学出版物。

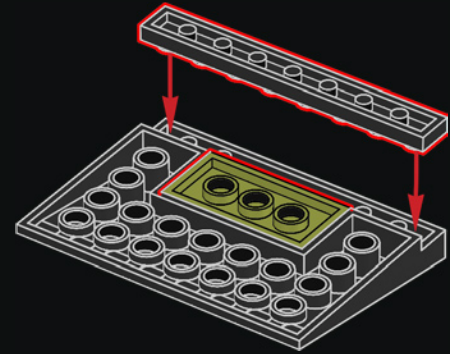




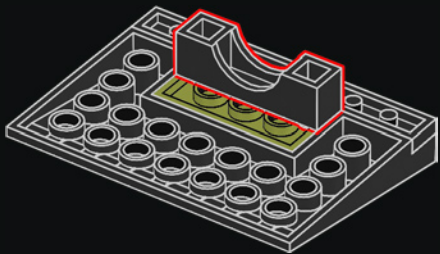
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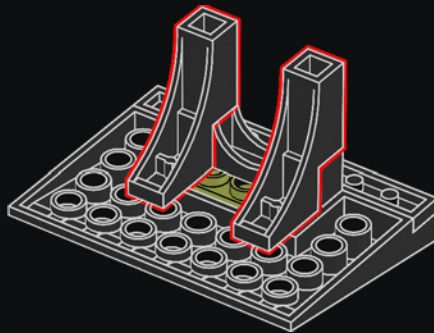
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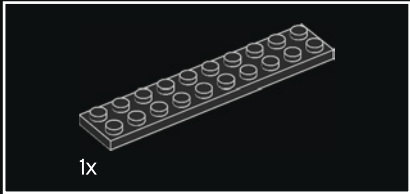
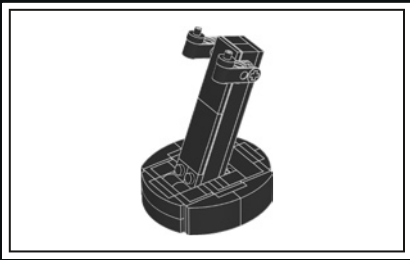


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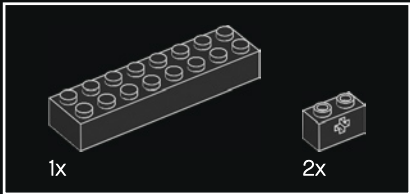
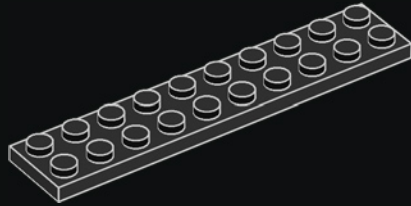
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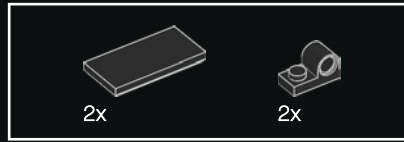
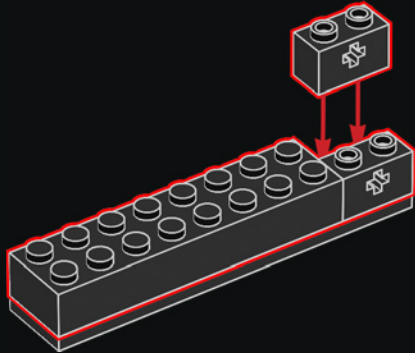
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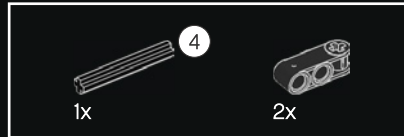
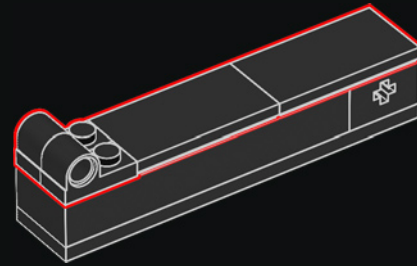


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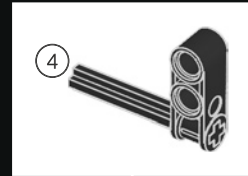
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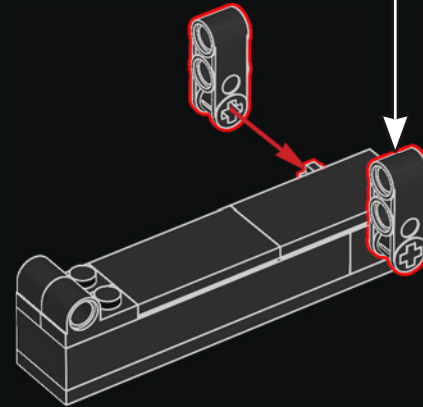
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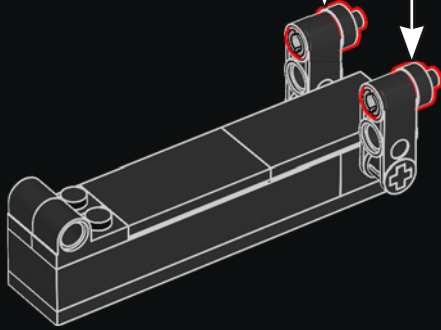
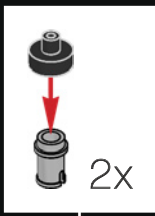


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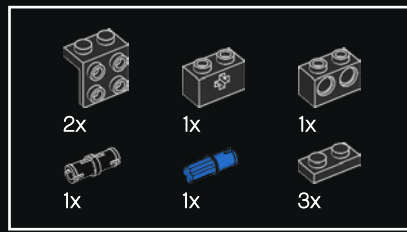
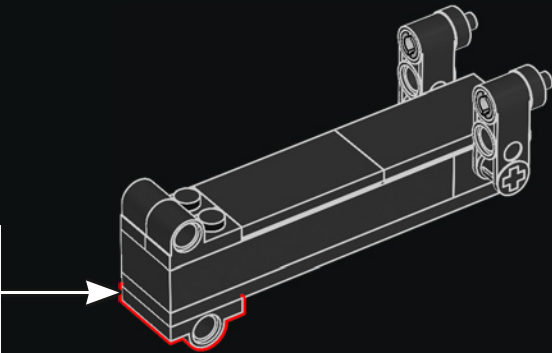




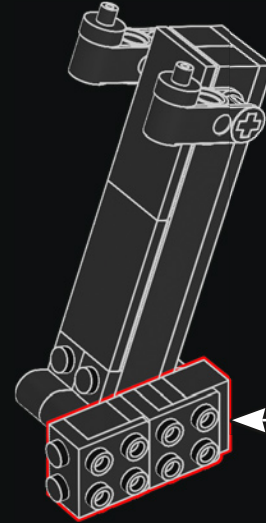
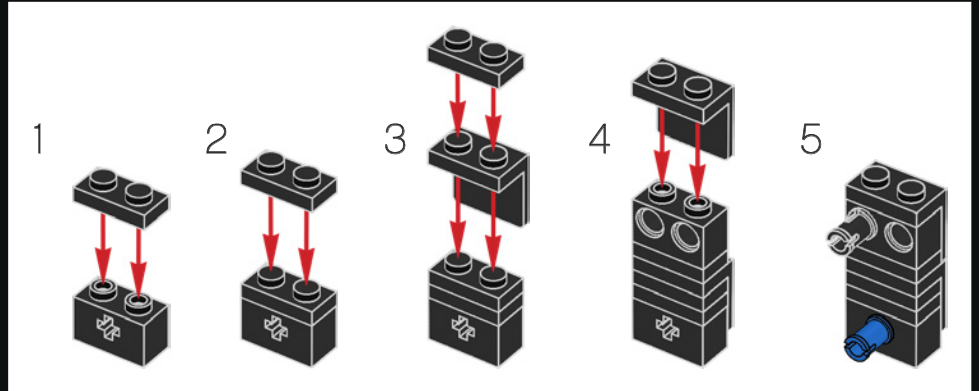
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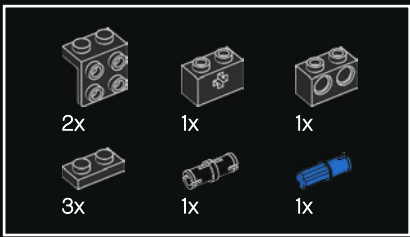


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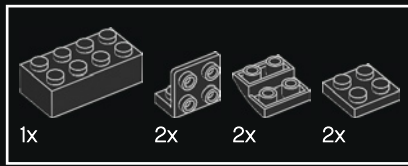
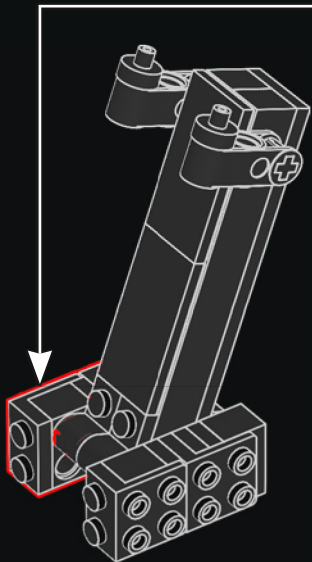
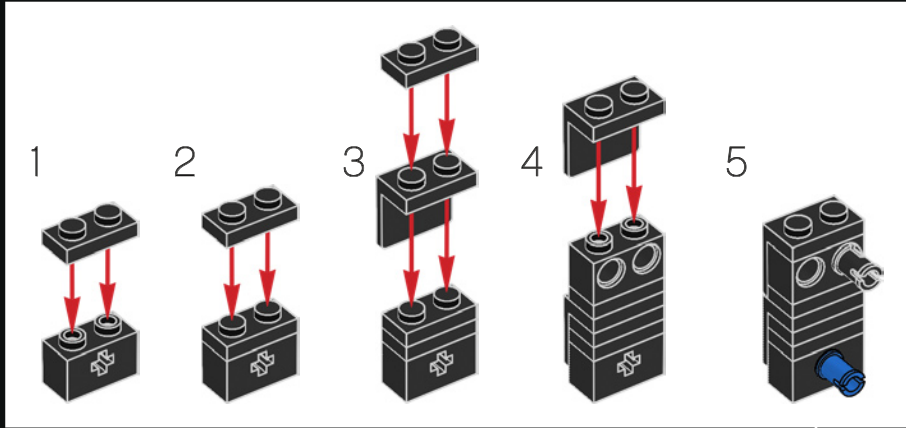


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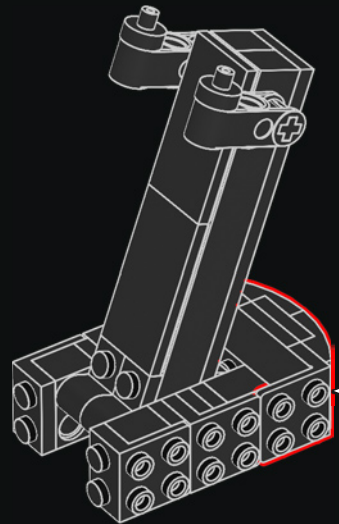
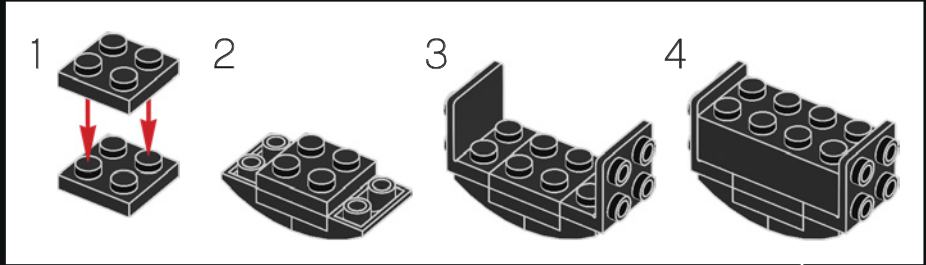




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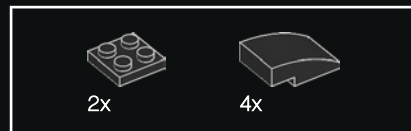
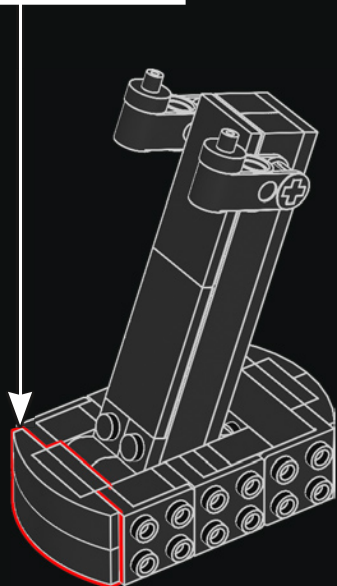
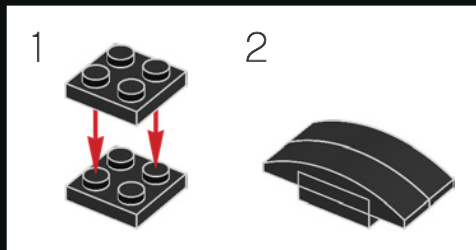
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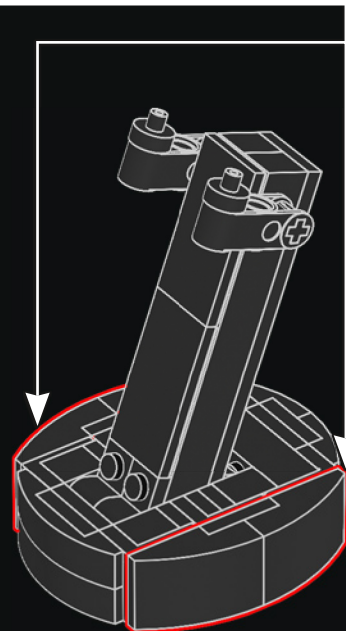
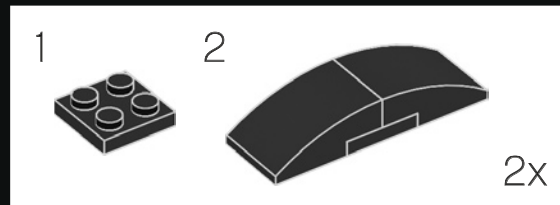




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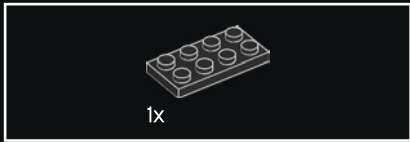
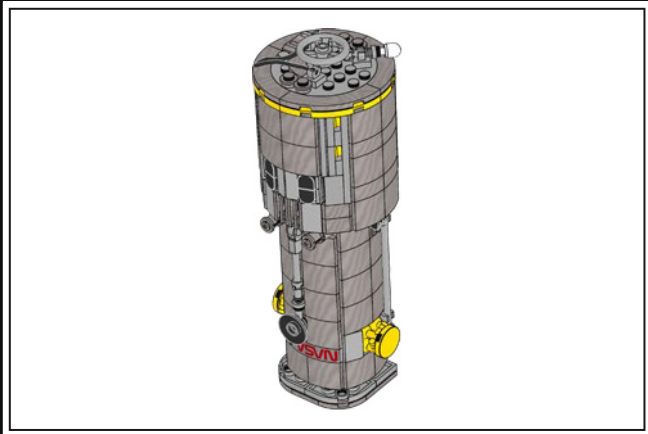
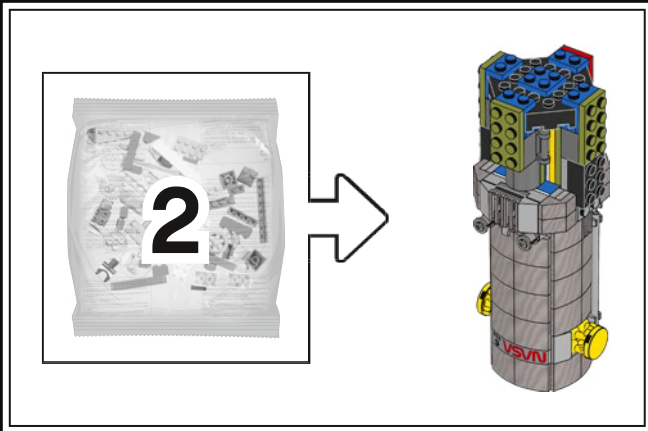


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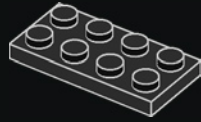


### 你知道吗？

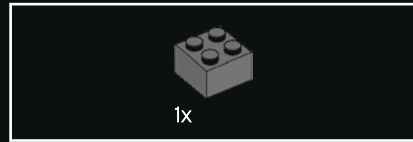
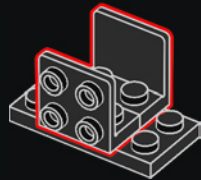
哈勃太空望远镜最初设想萌发于 20 世纪 40 年代，在 1990 年发射之前，筹划了几十年。



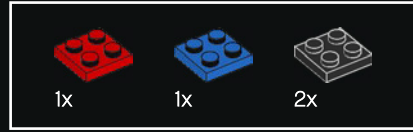
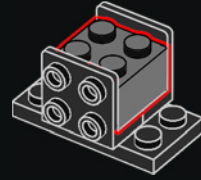
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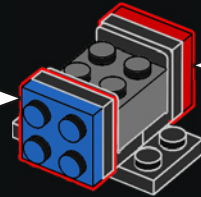
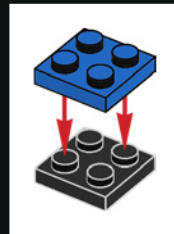
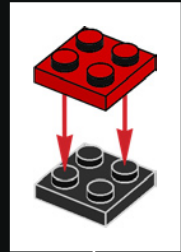
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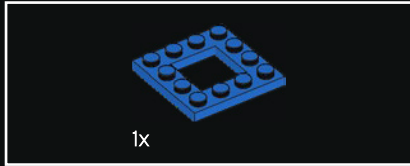
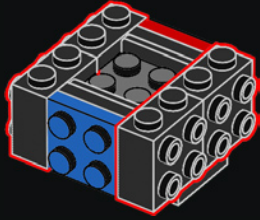


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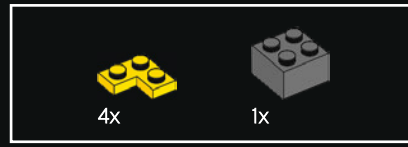
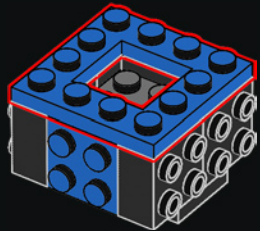




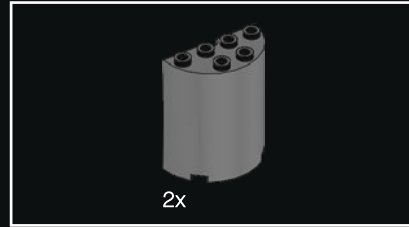
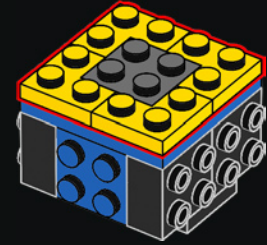
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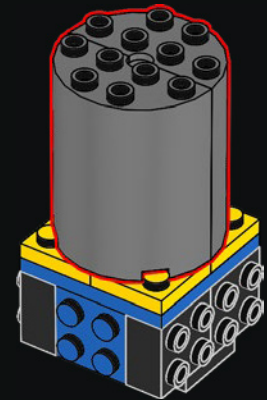
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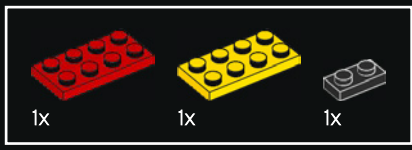


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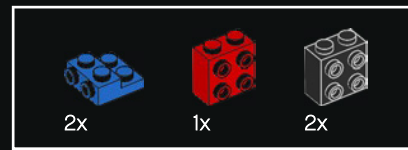
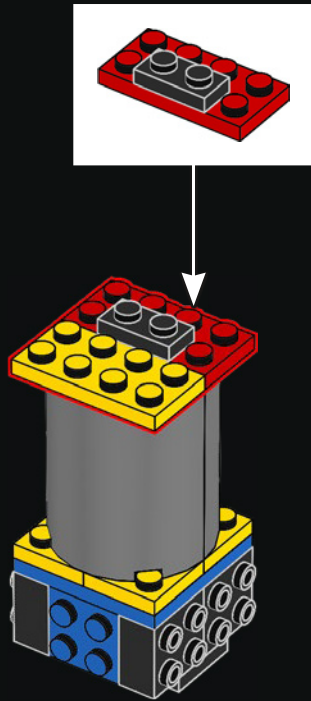


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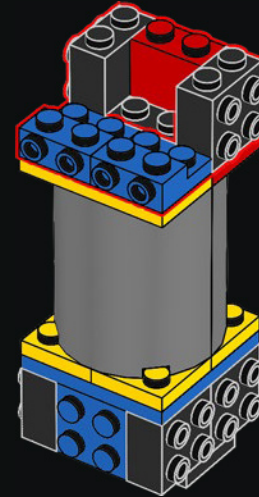




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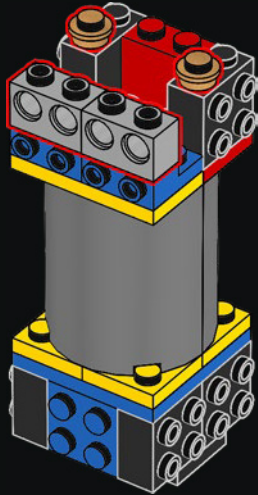


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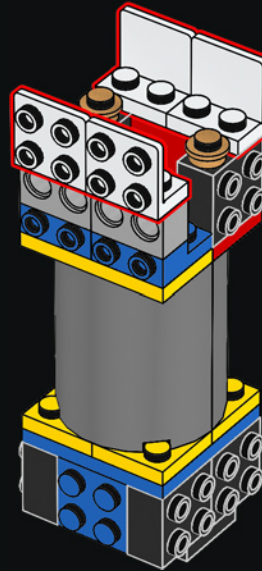


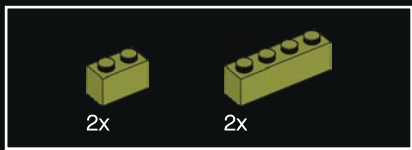


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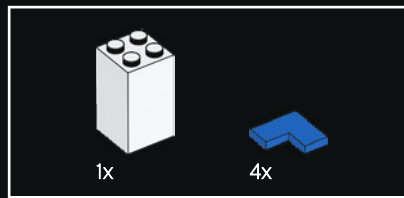
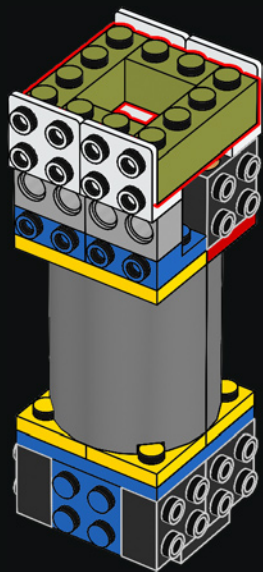


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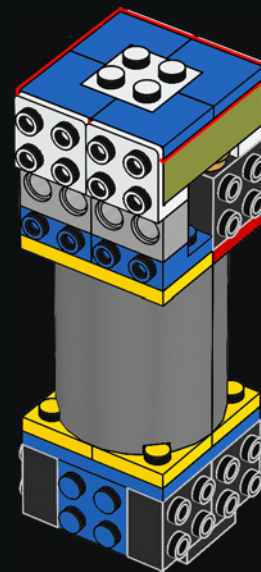


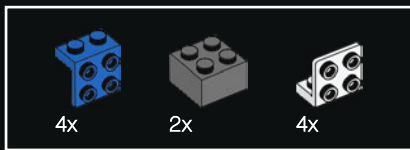


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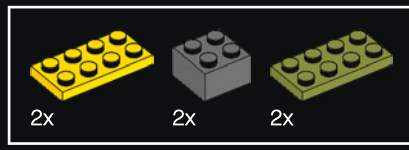
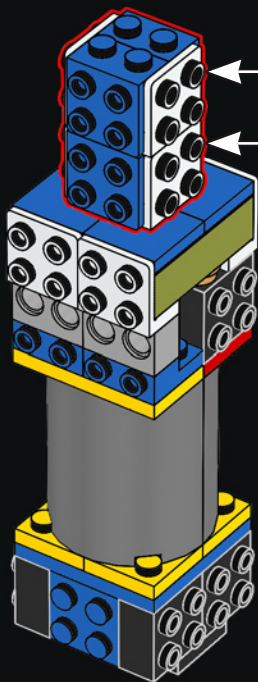
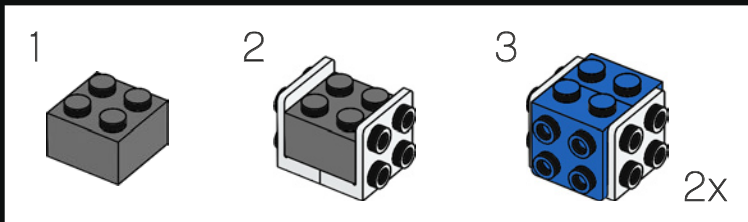


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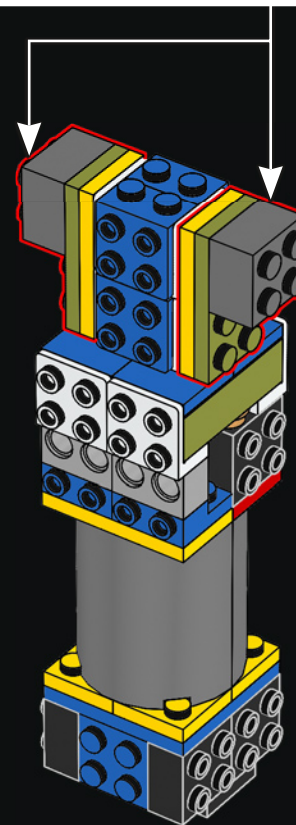
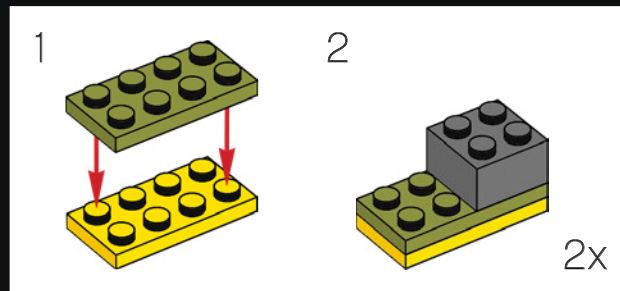


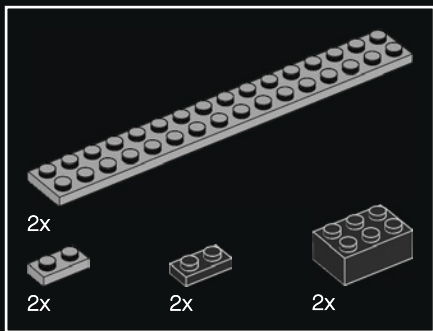


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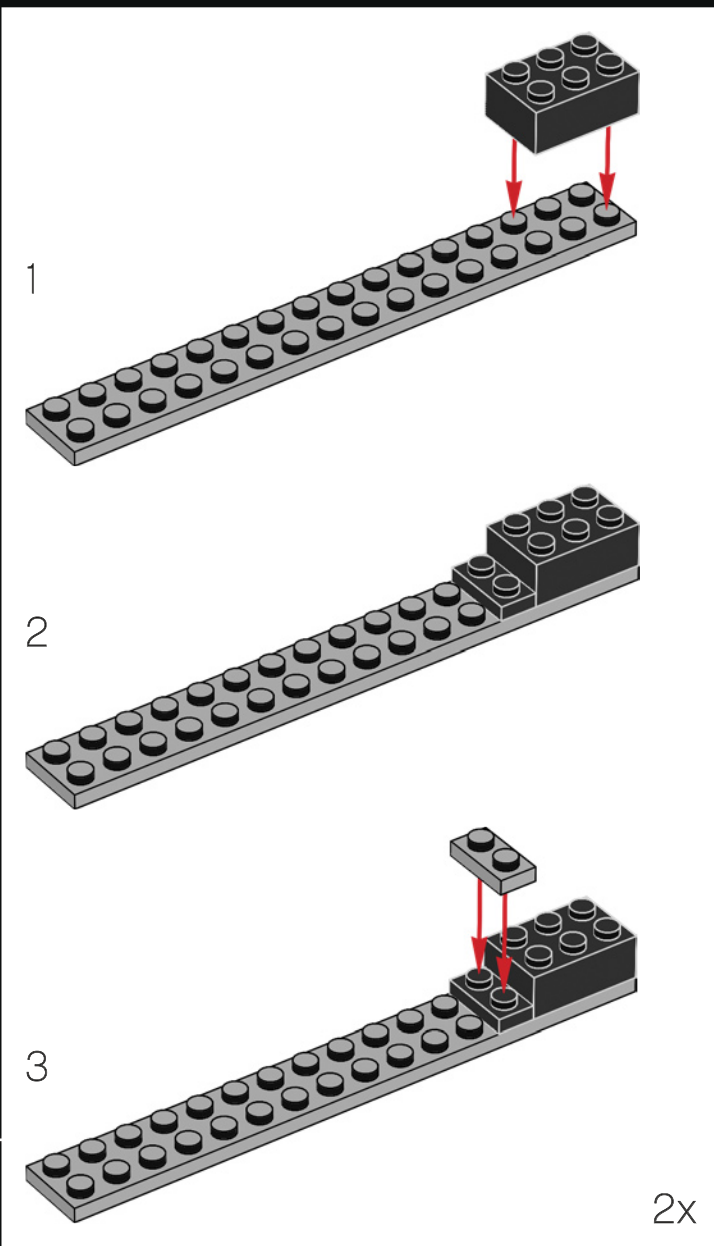
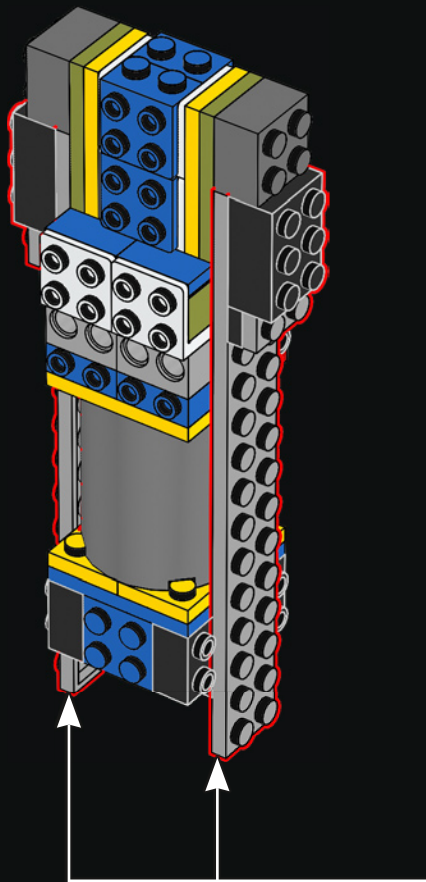


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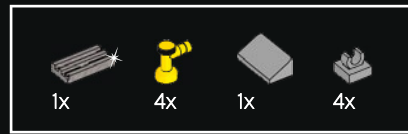
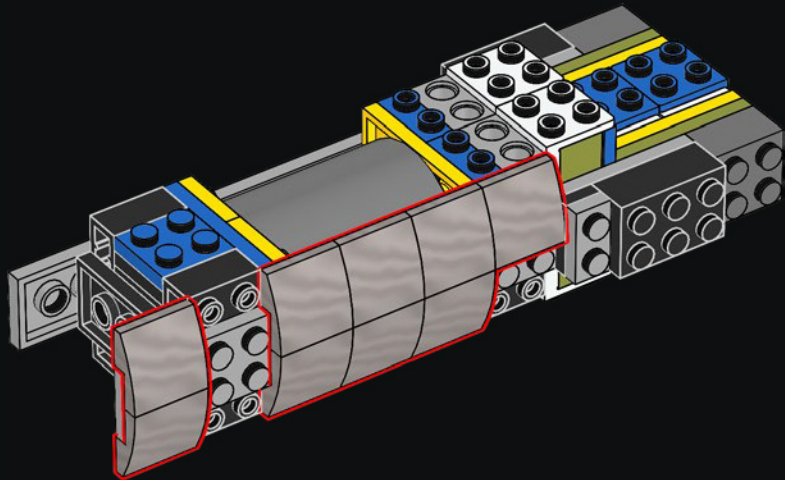
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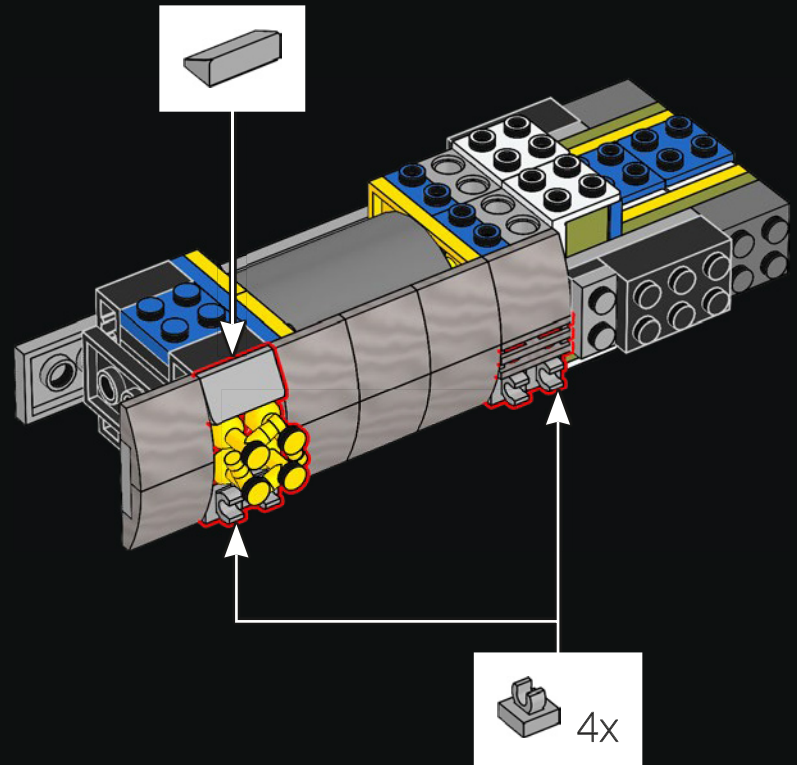




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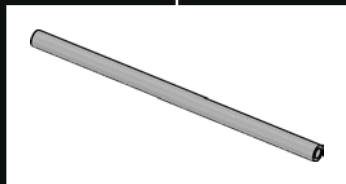
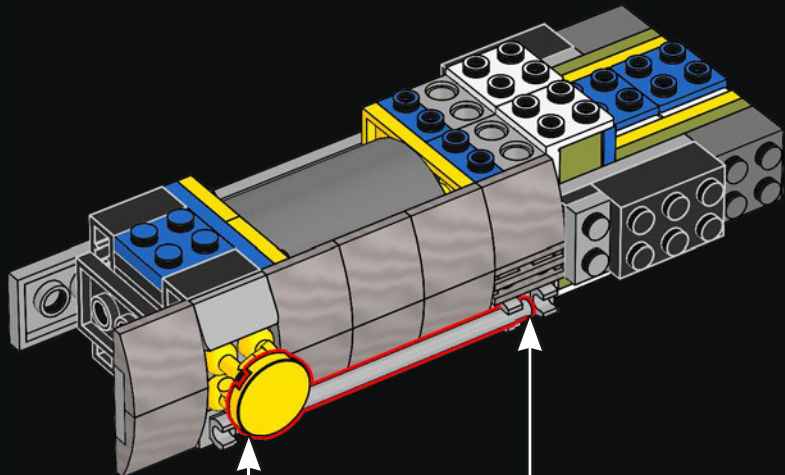


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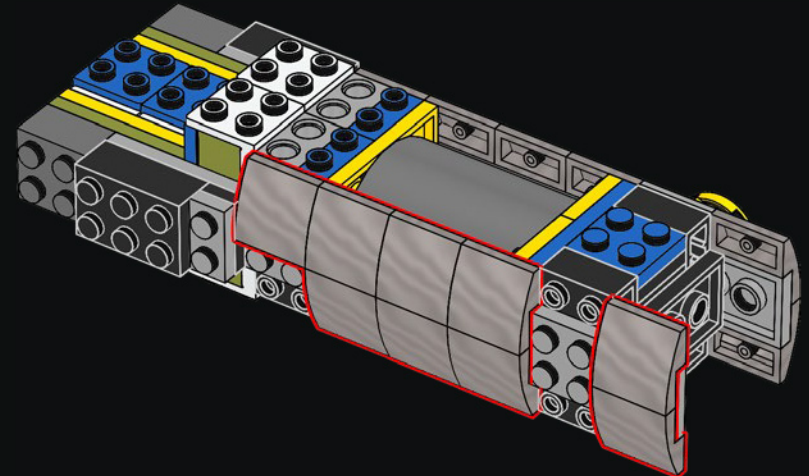


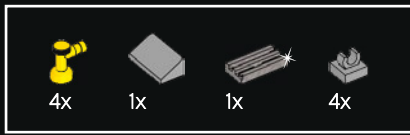


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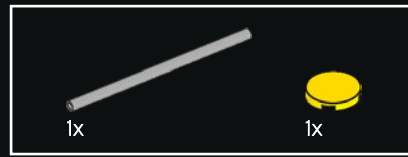
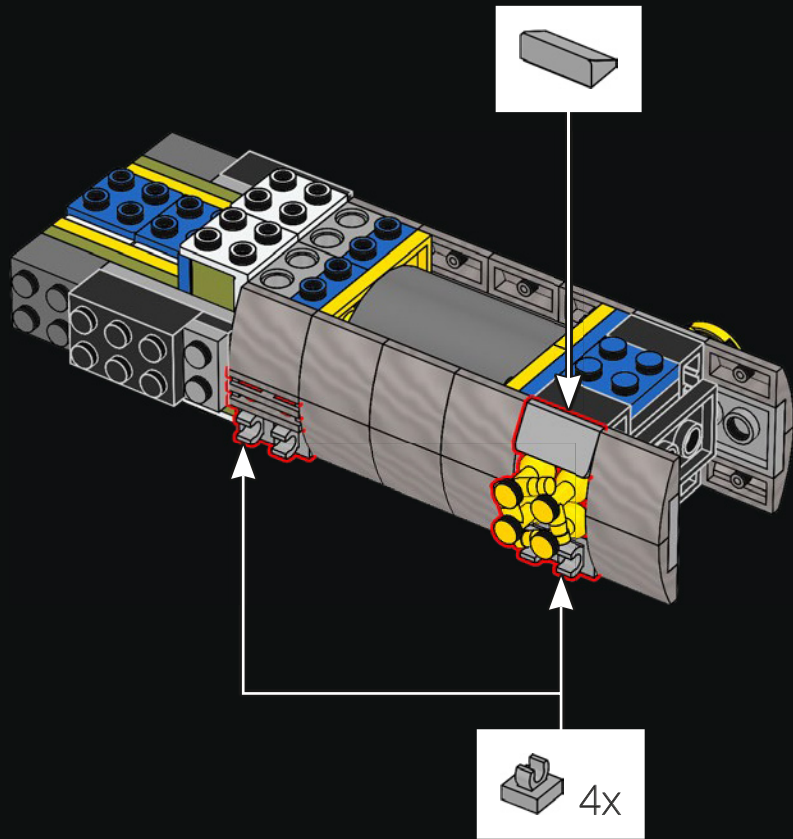


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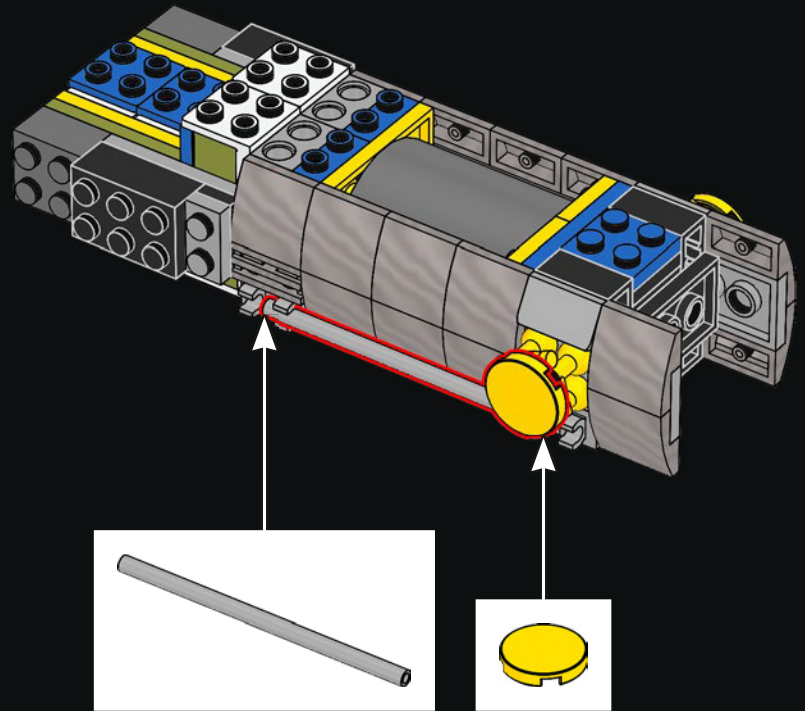


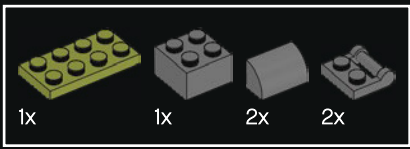


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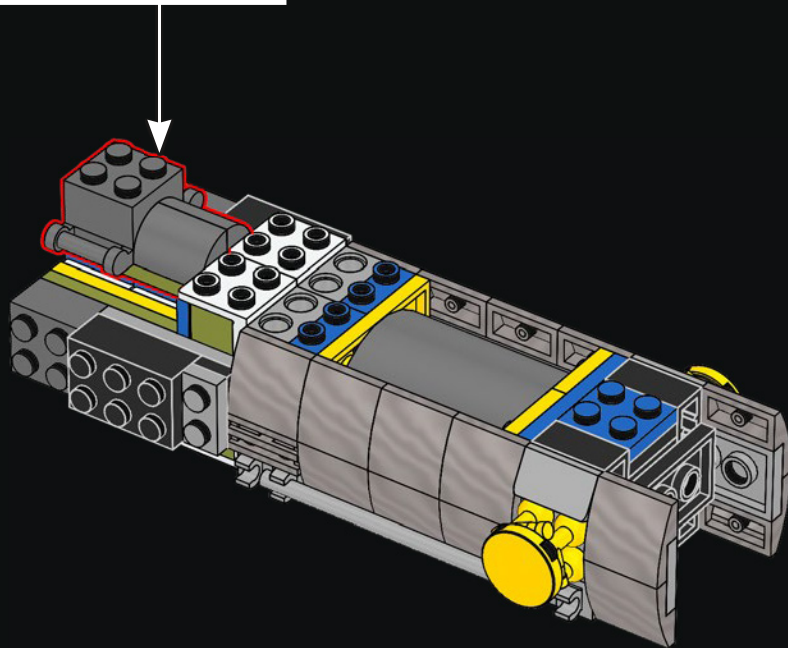
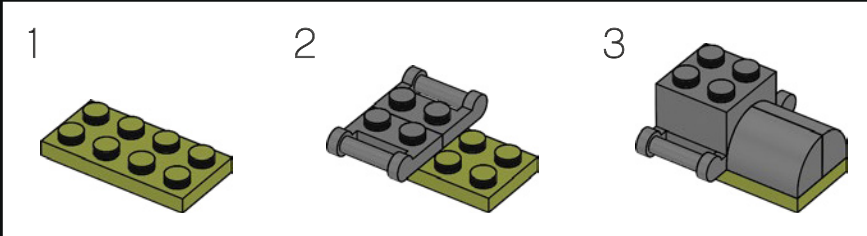


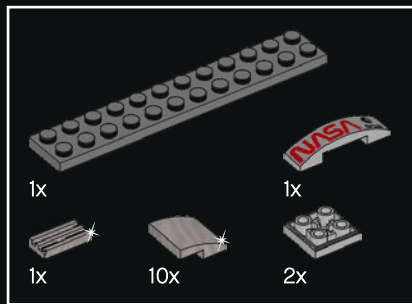
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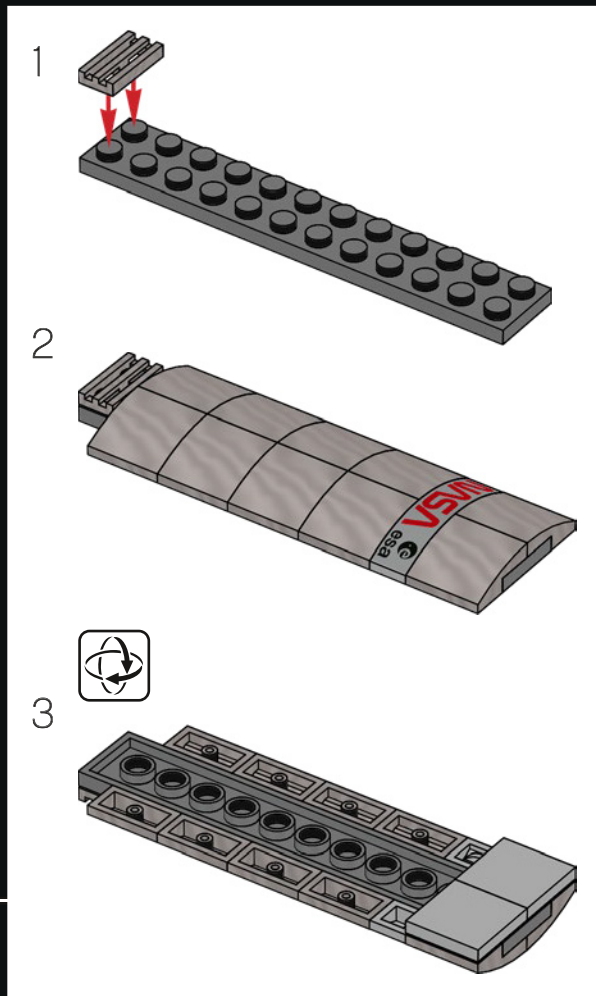
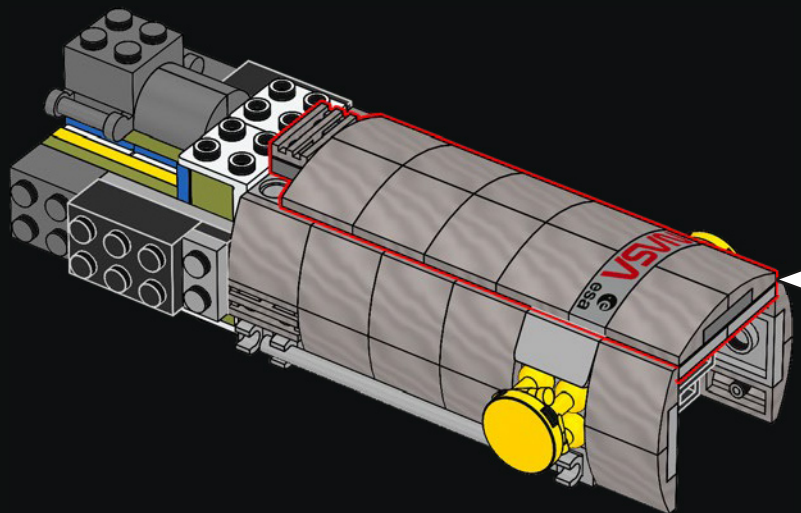


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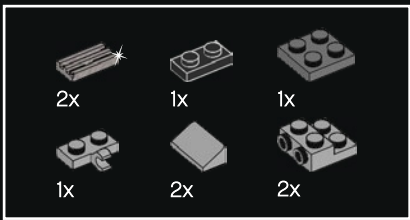


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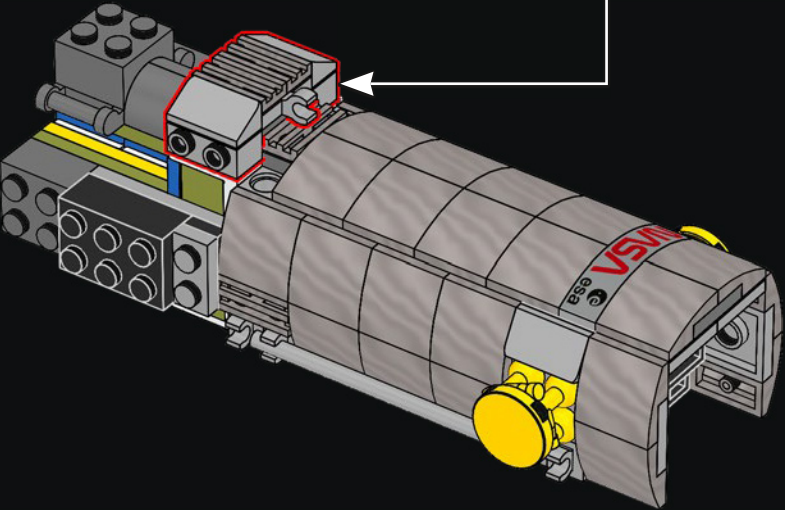
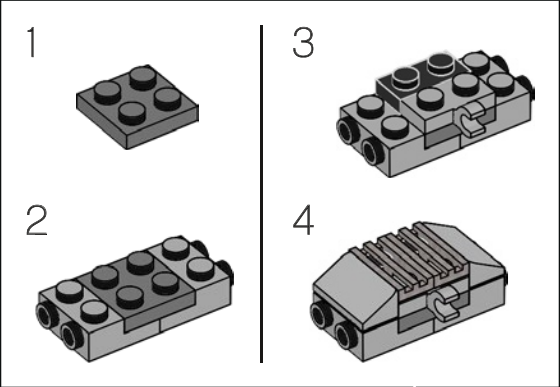


### 你知道吗？

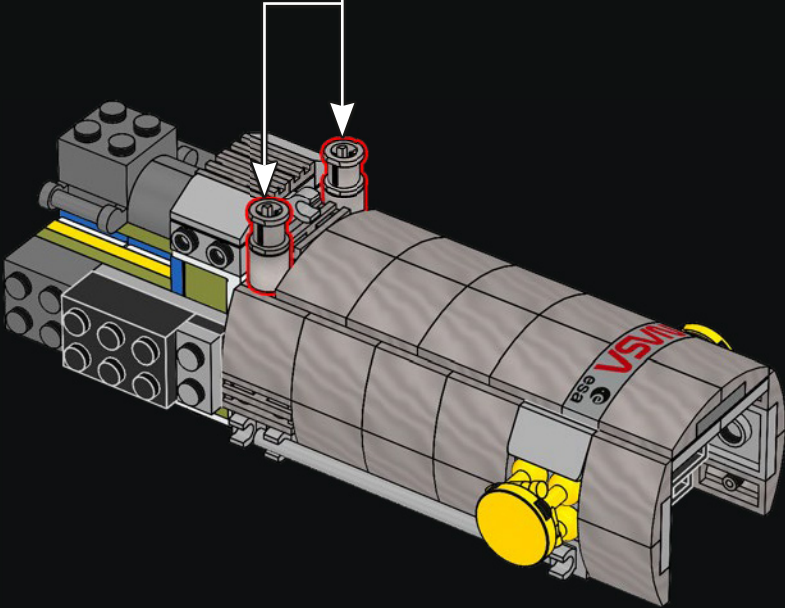
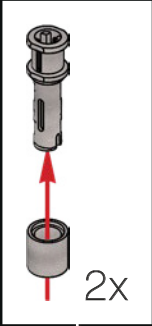
哈勃太空望远镜以美国天文学家爱德文·哈勃 (1889-1953) 的名字命名。

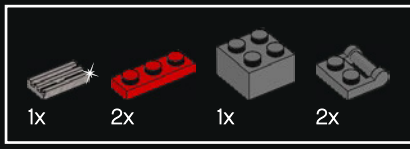


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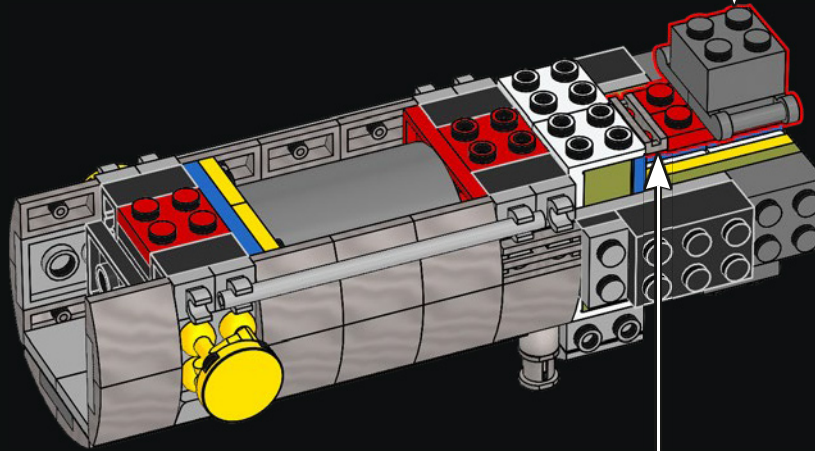
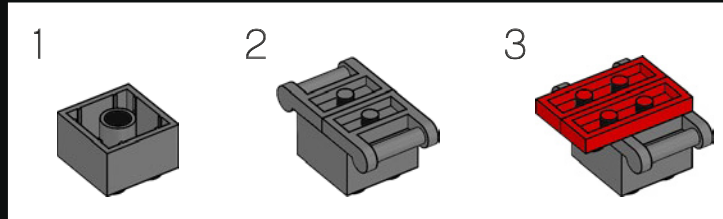


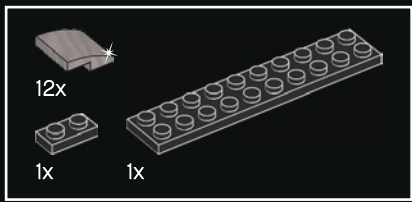
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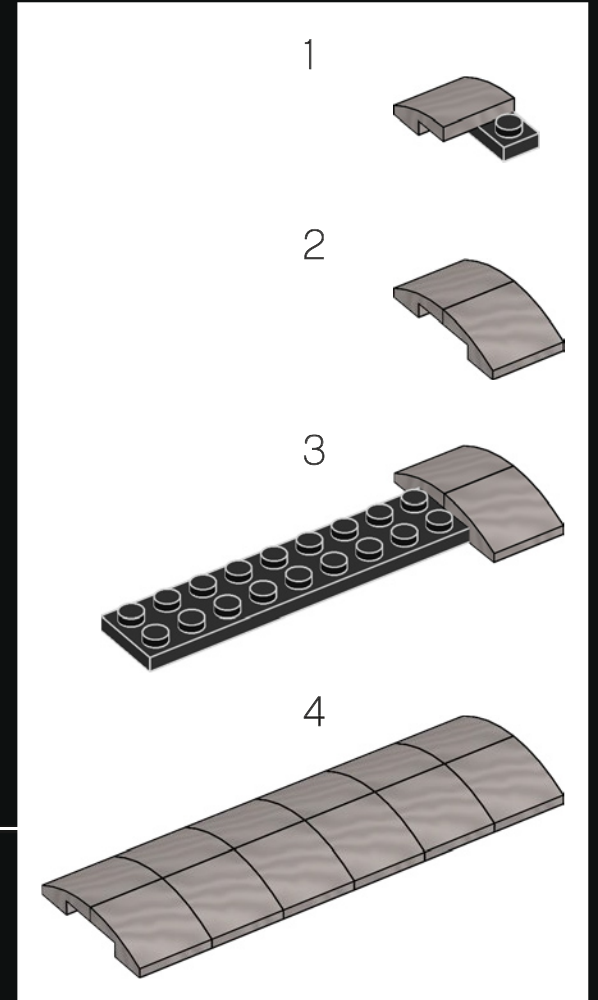
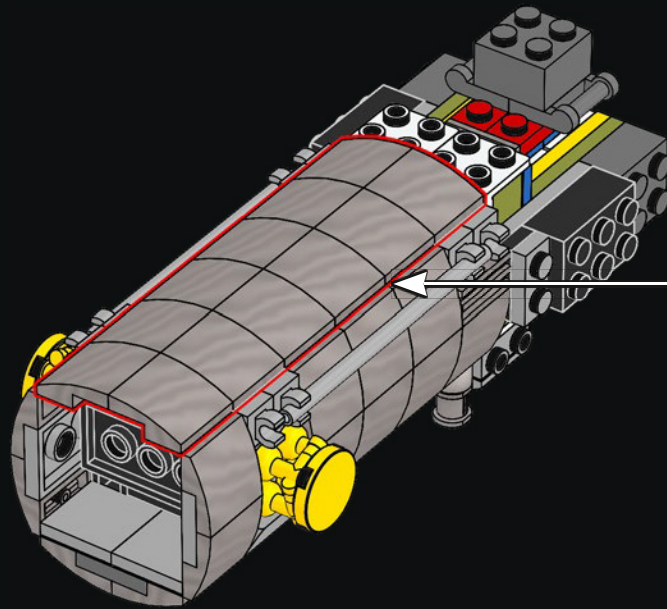


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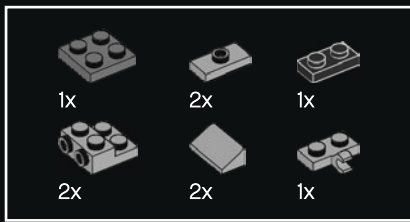




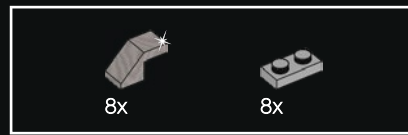
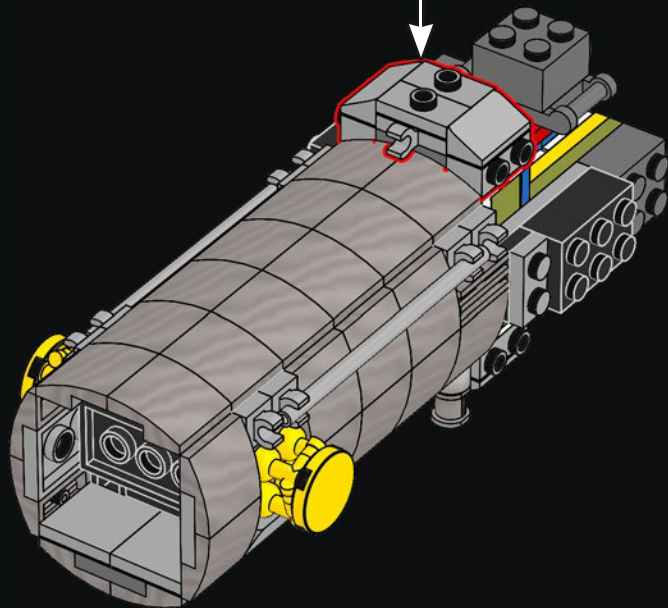
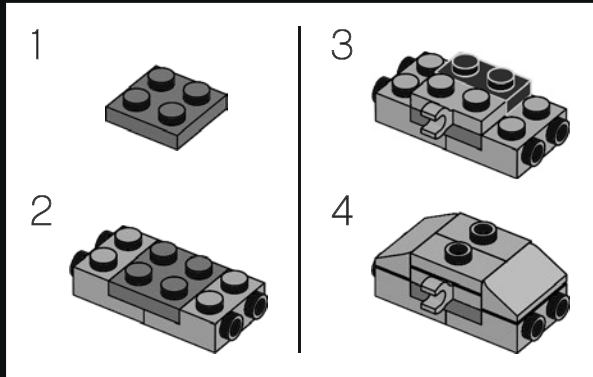
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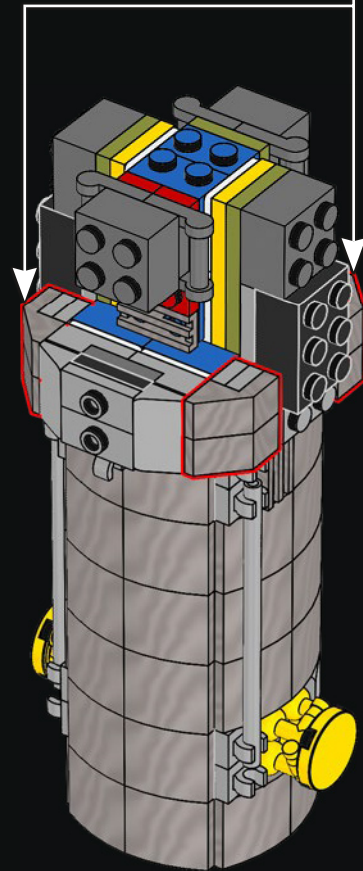
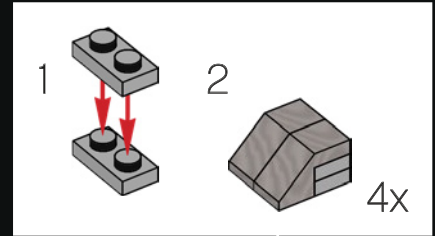


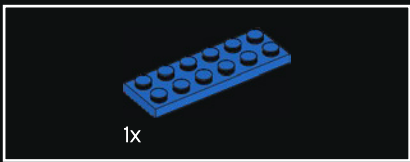


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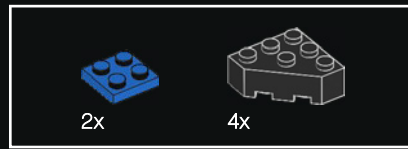
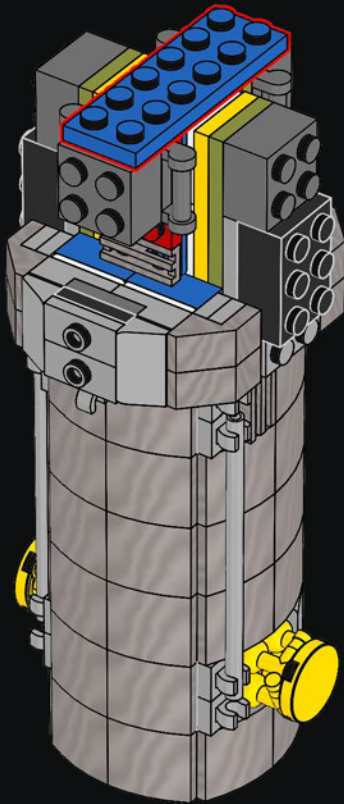


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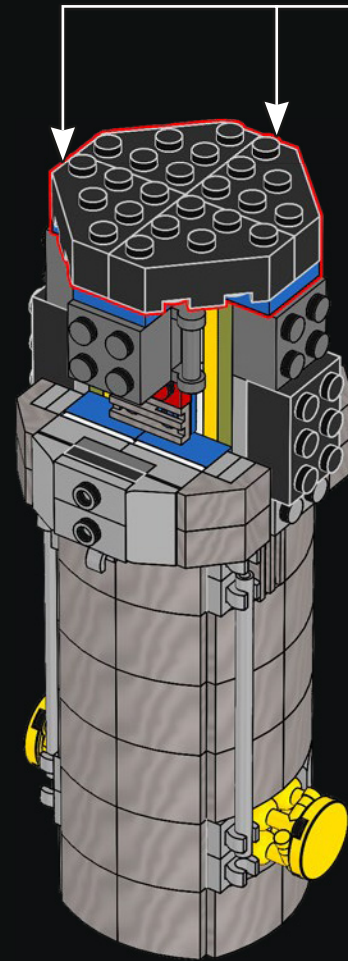
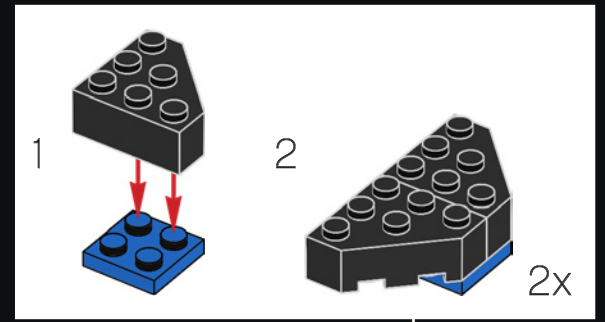


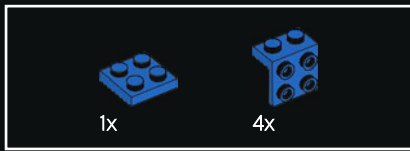


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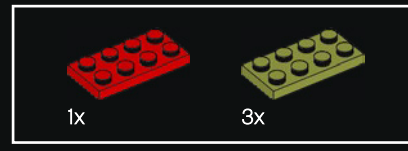
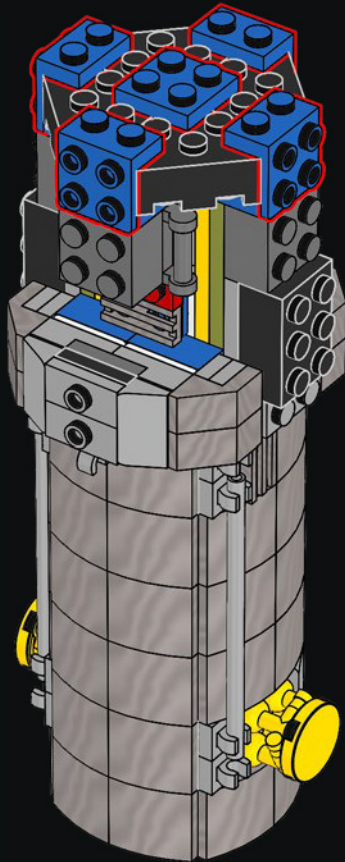


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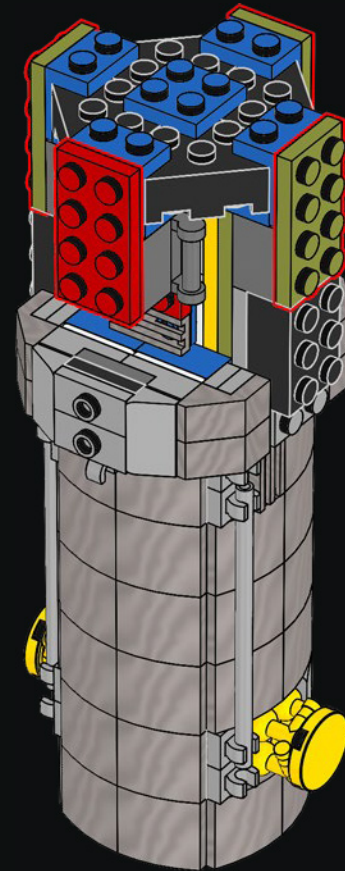




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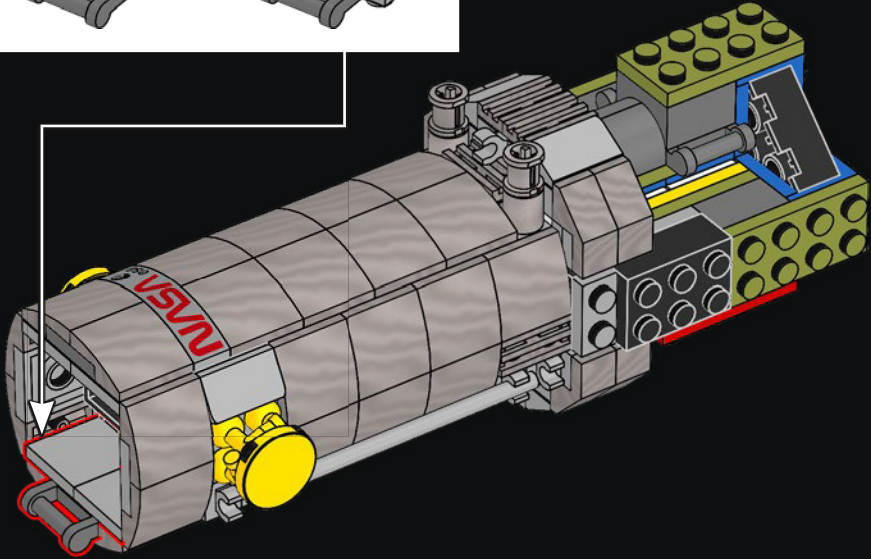
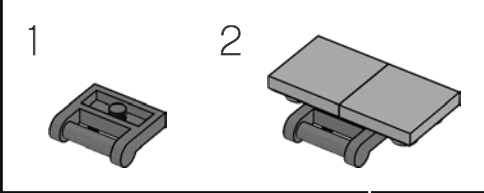


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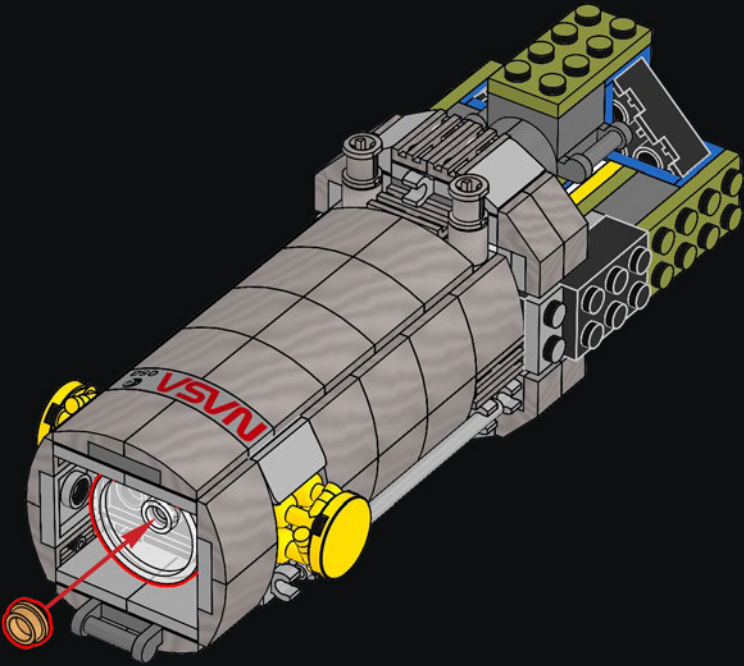


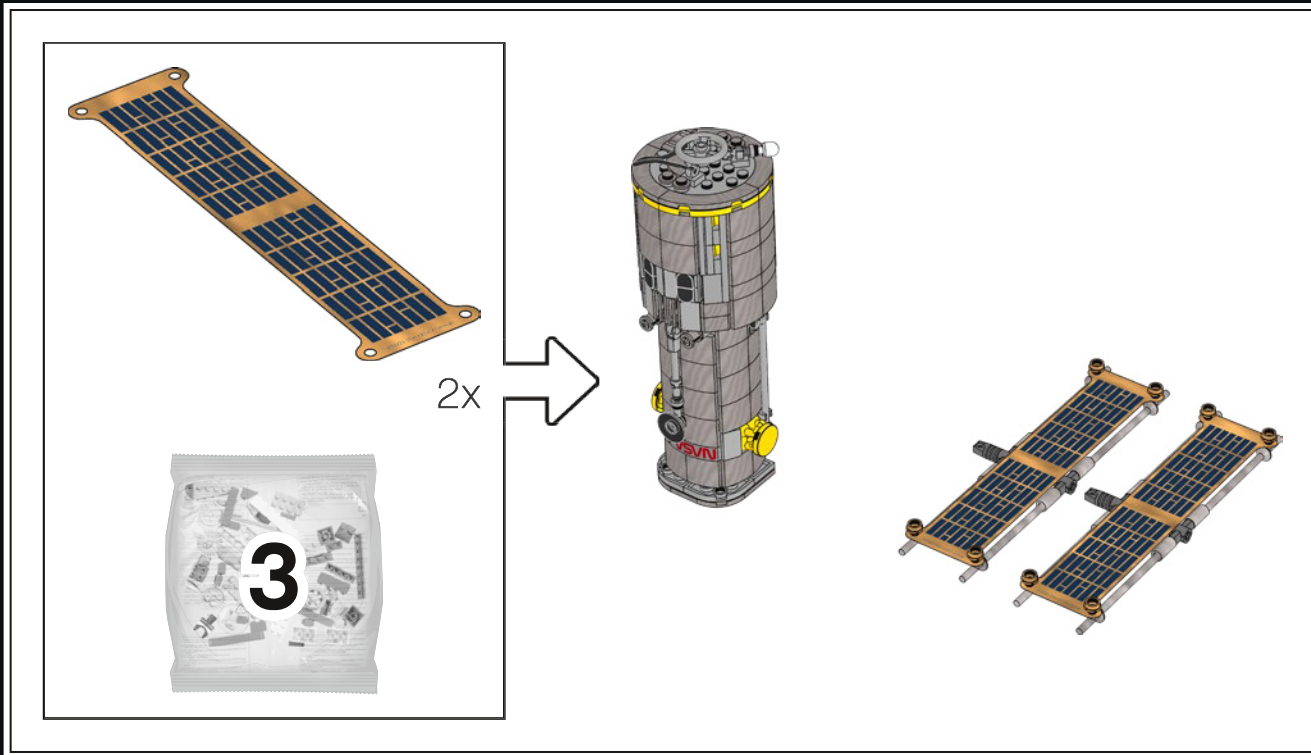


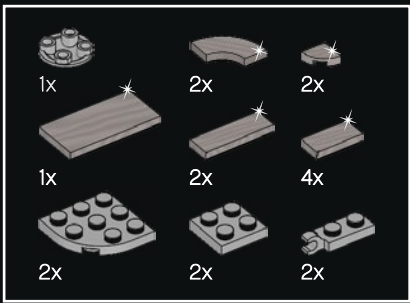
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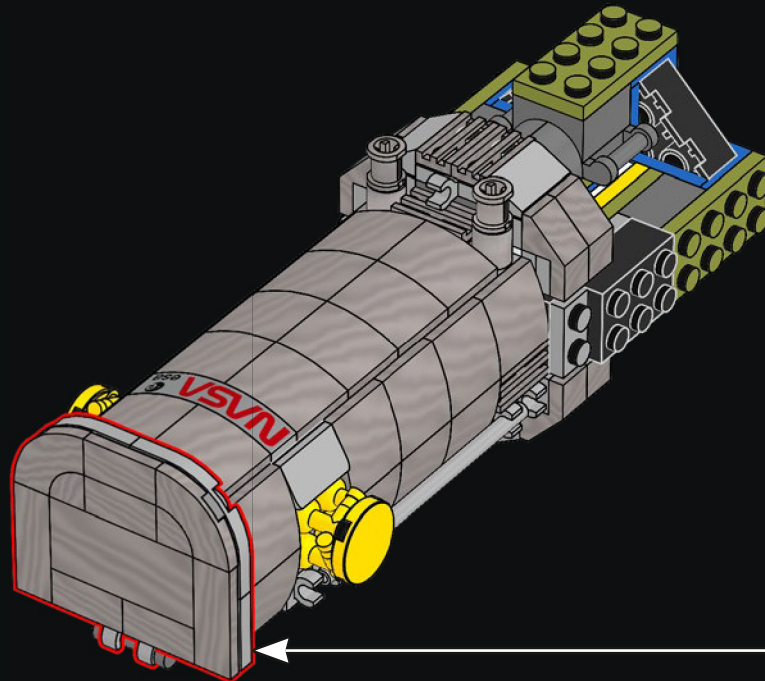
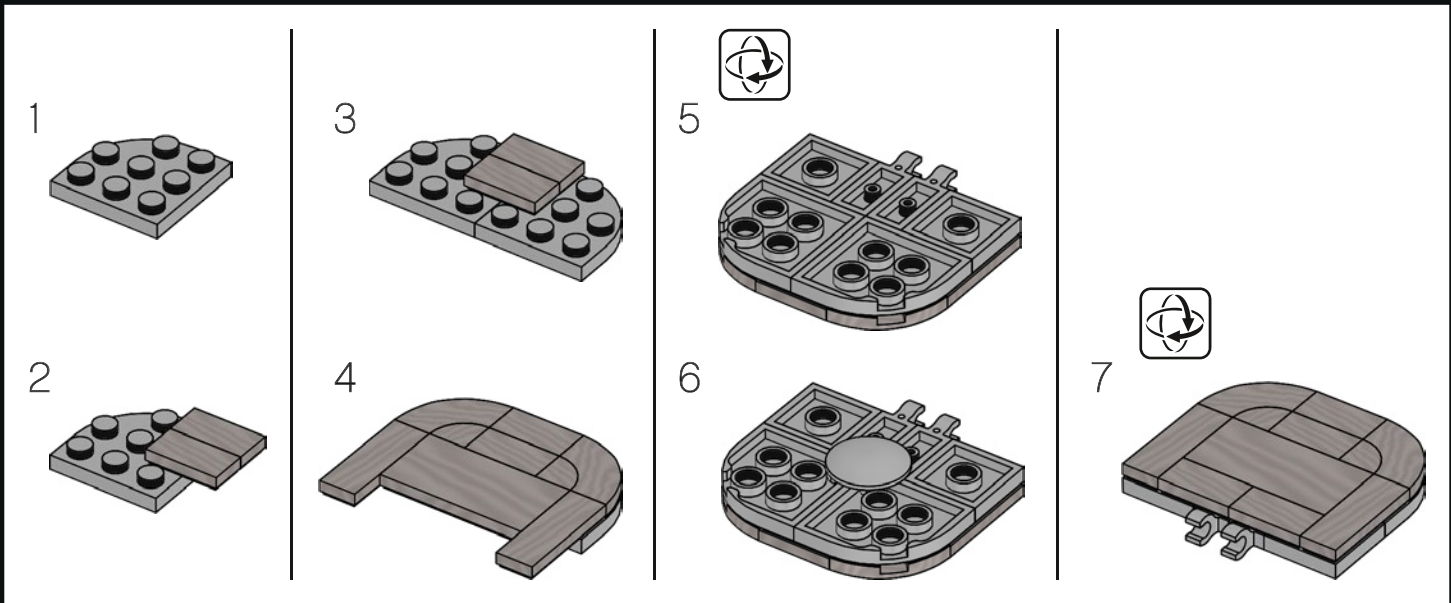
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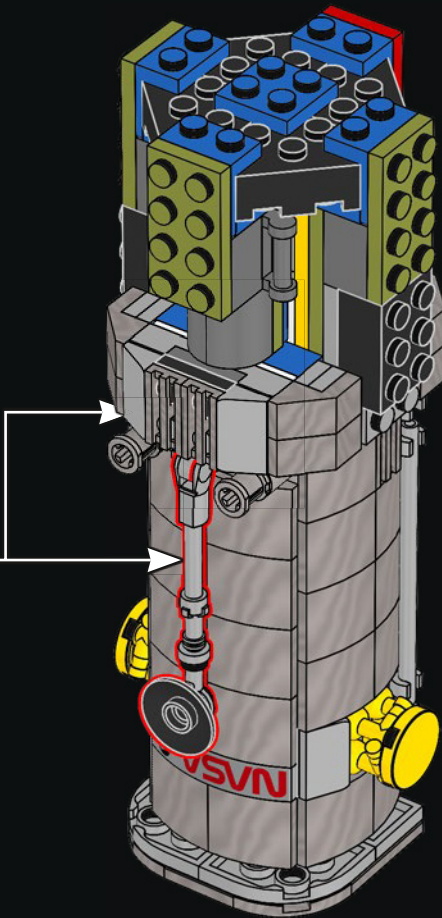
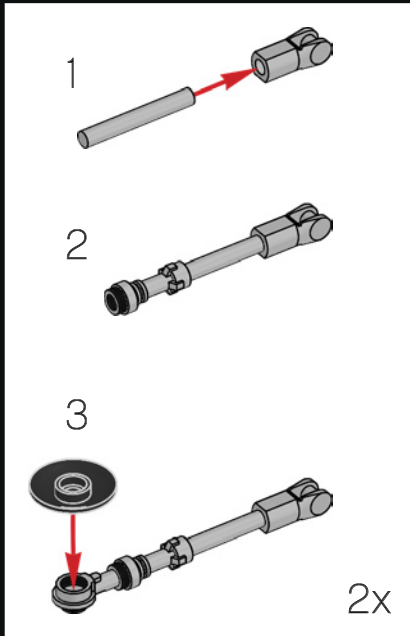


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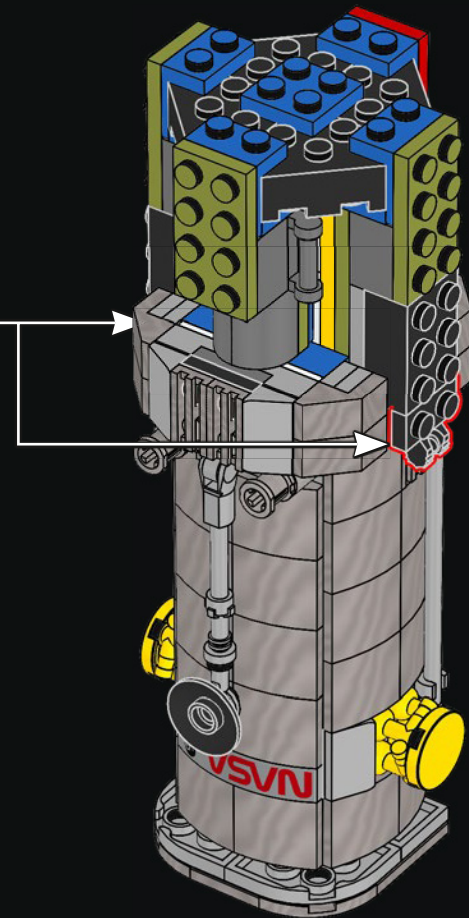
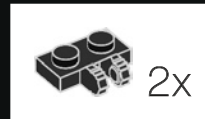


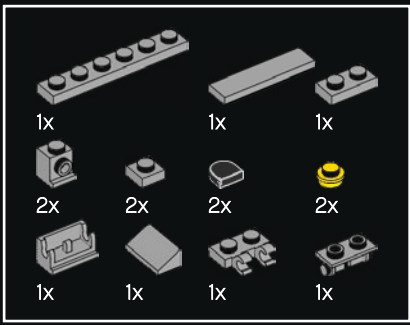


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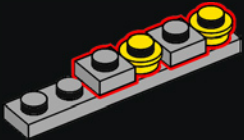


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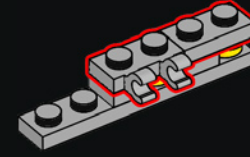
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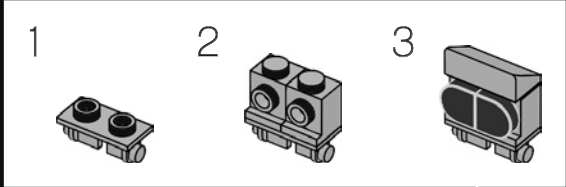
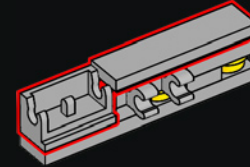
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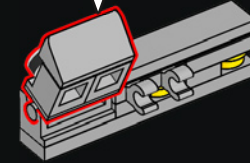
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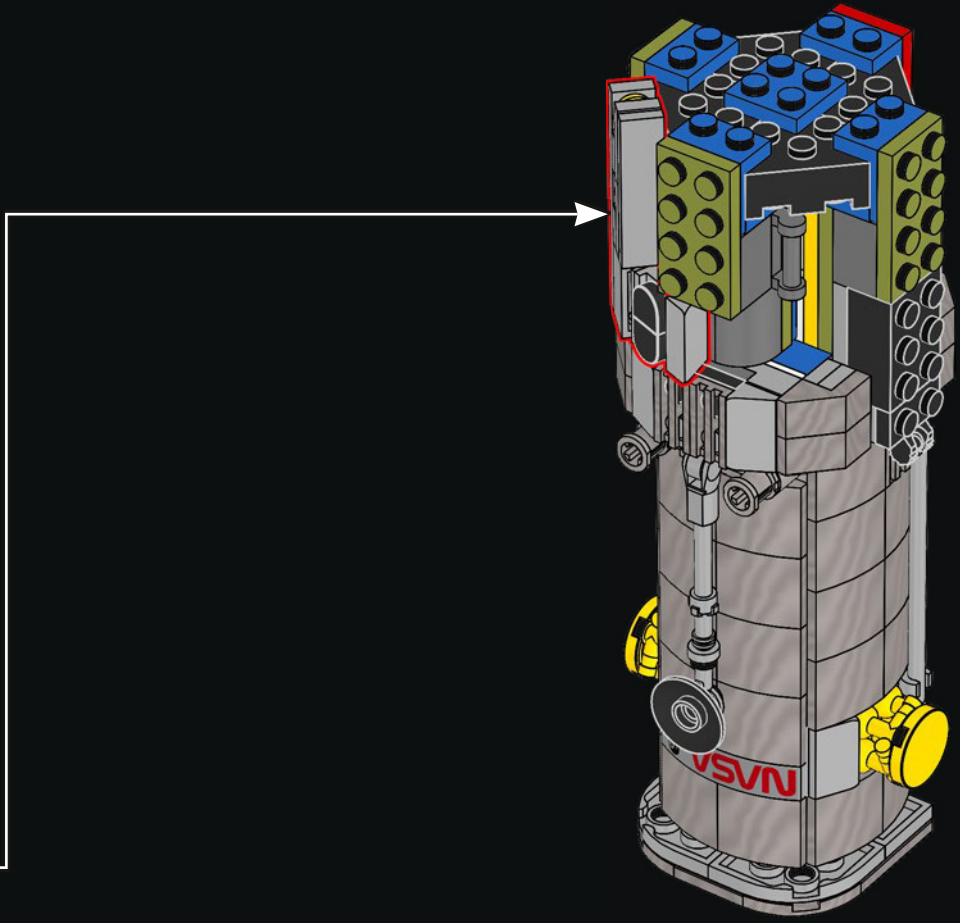
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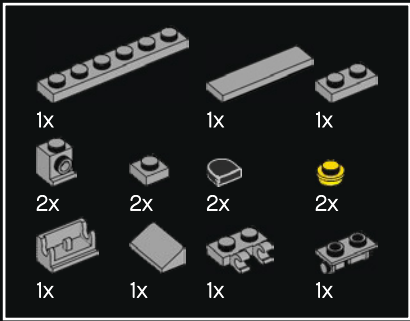


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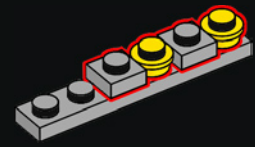


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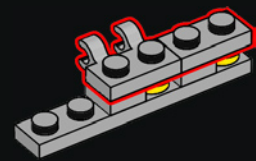
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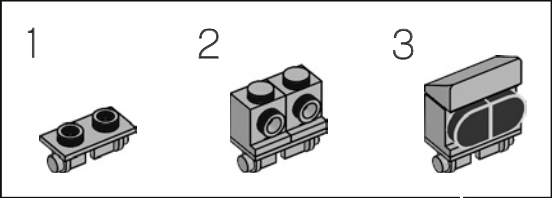
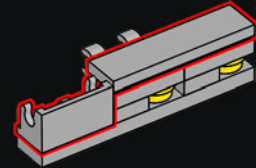
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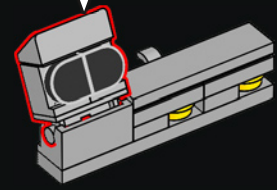
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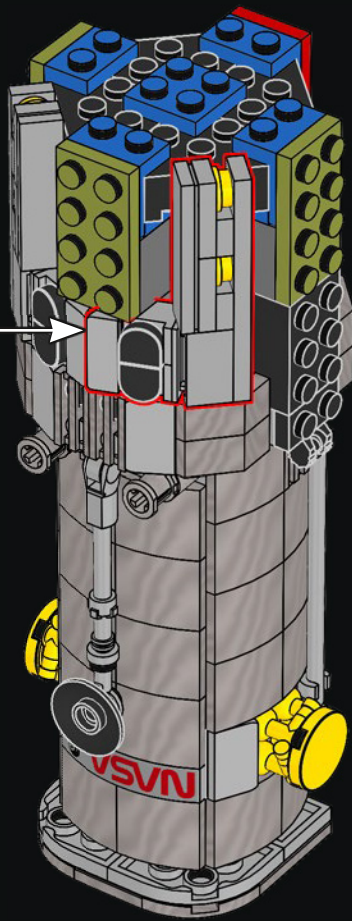


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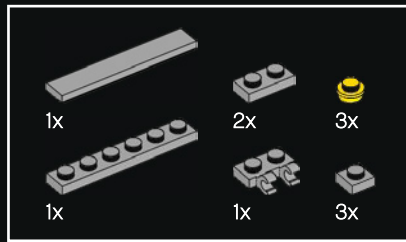
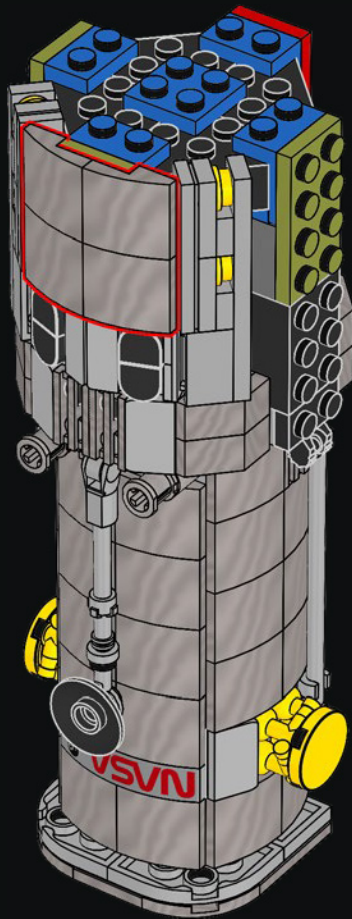
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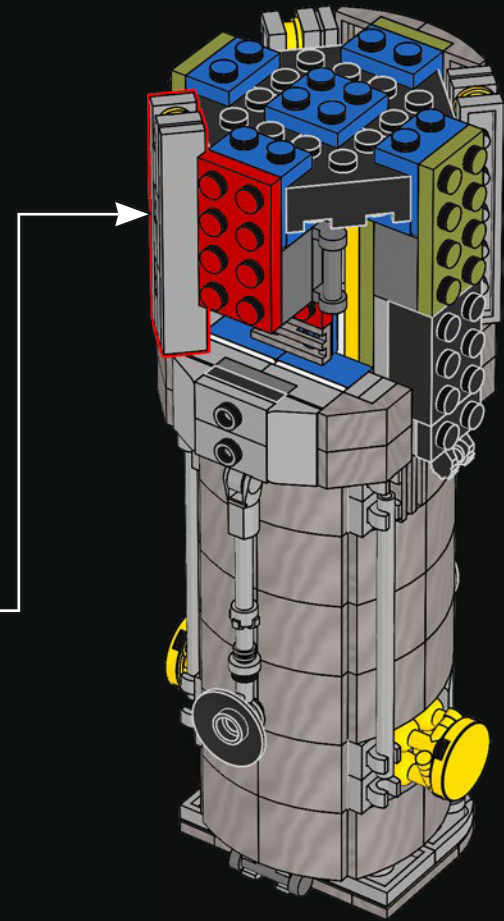
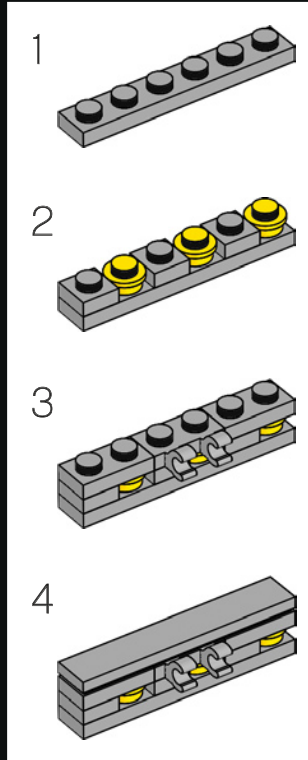


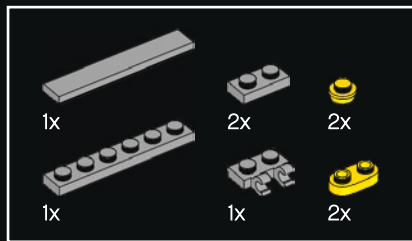


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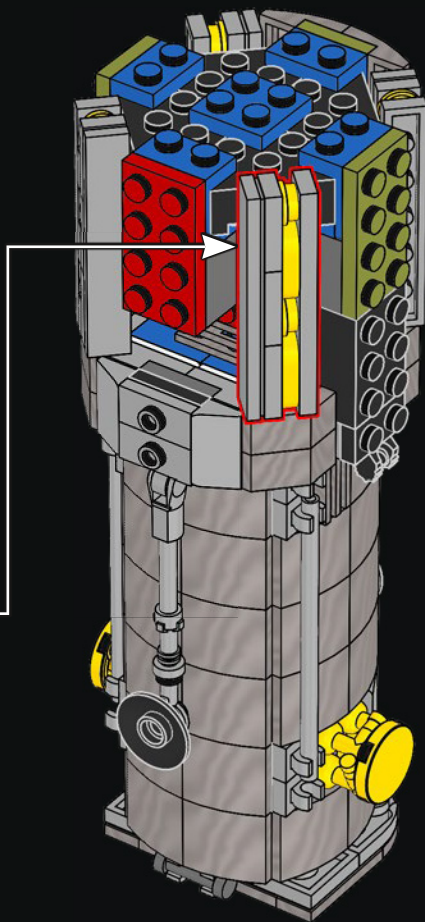
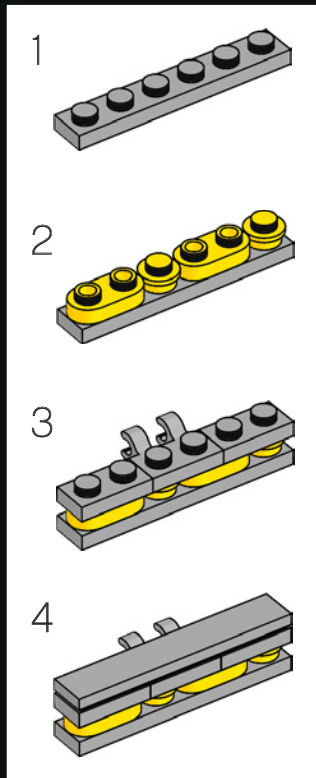


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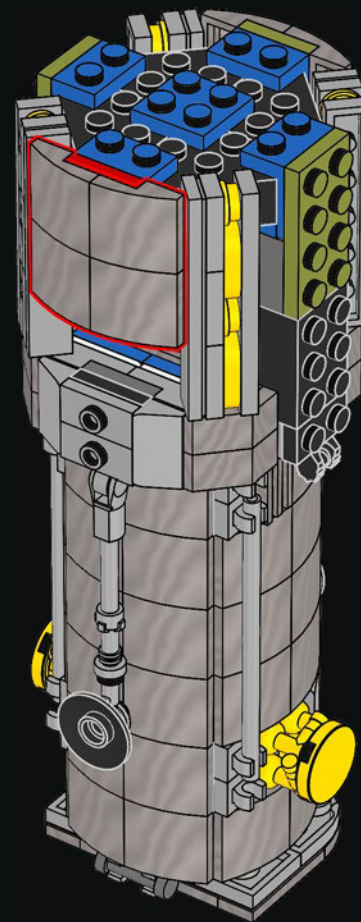




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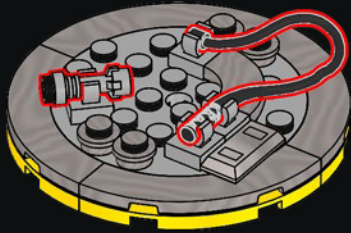


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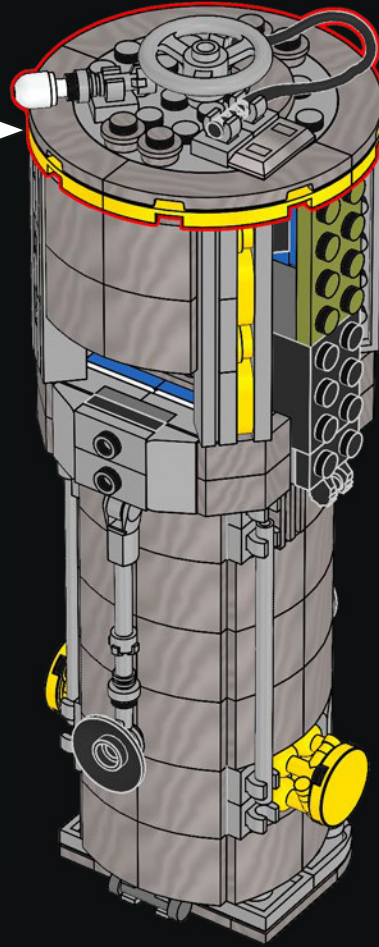
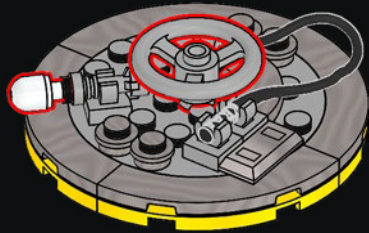




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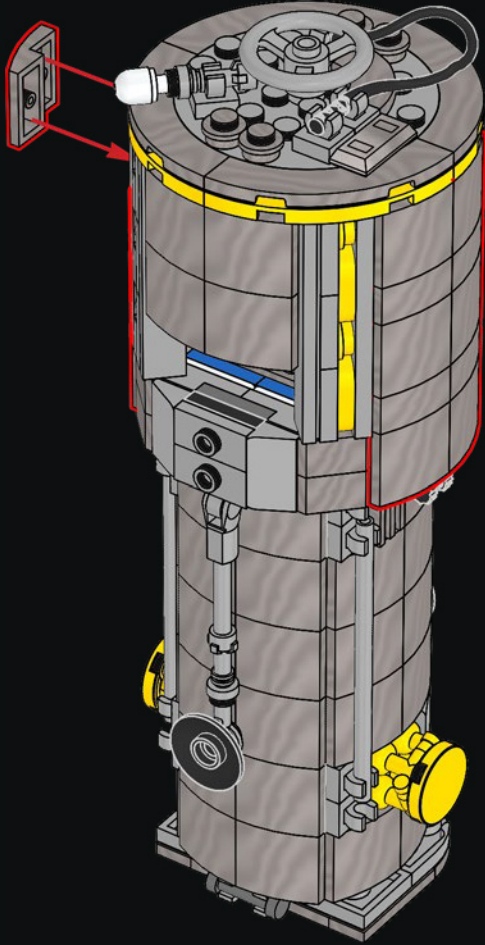


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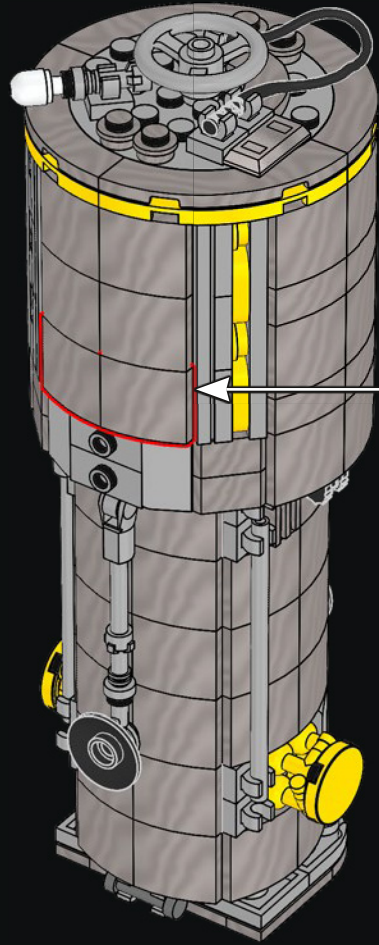
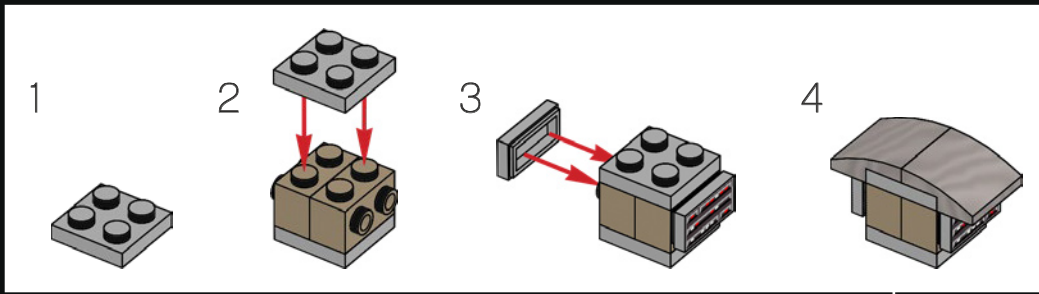
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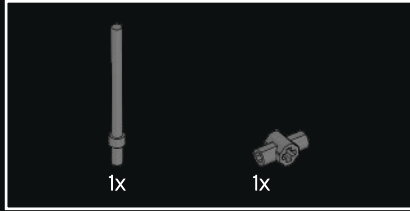
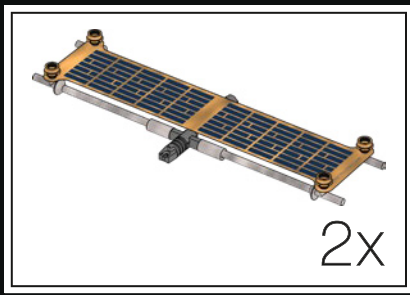




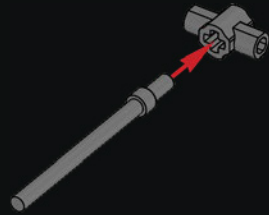


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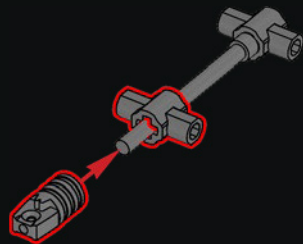




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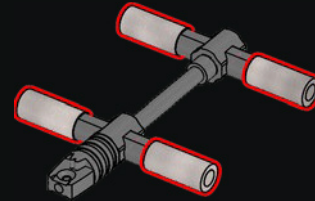
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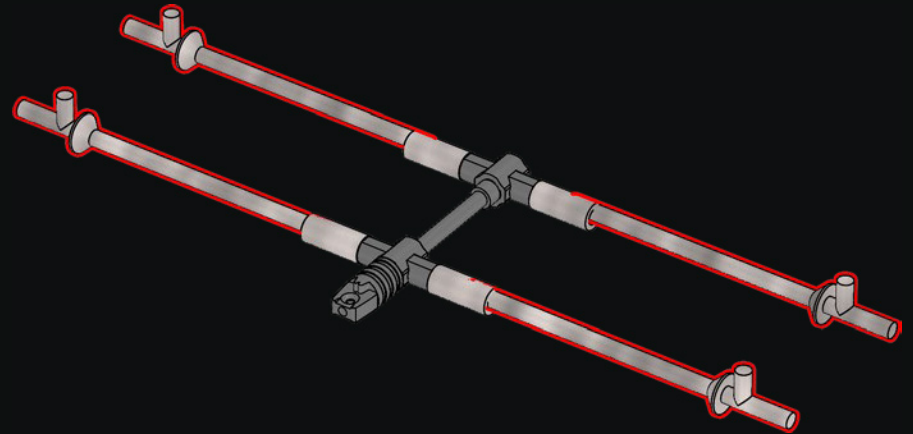
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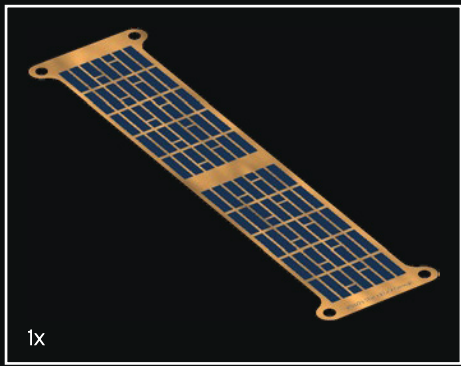


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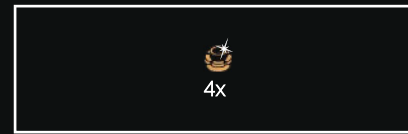
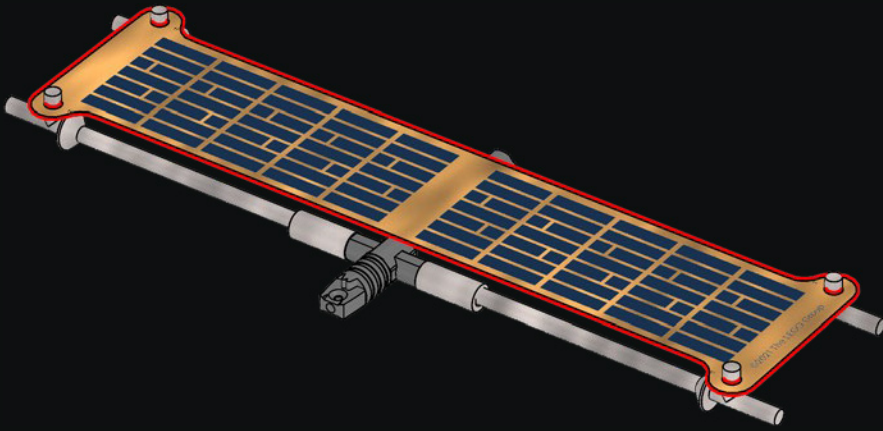


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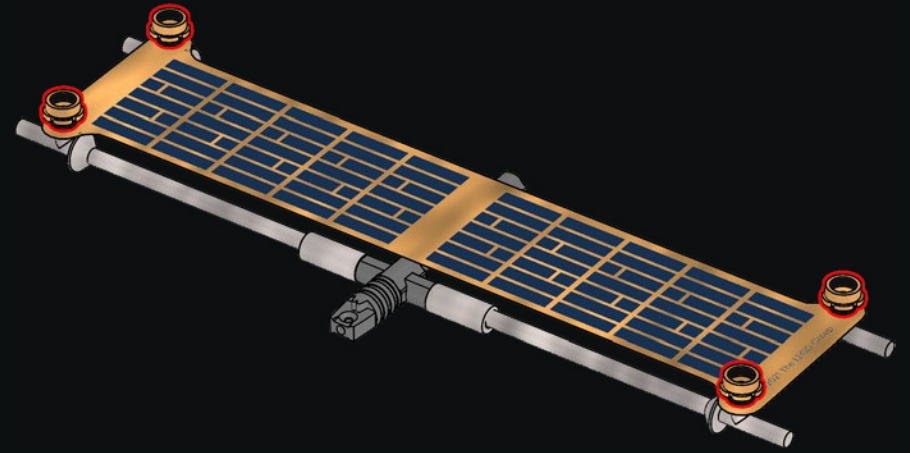




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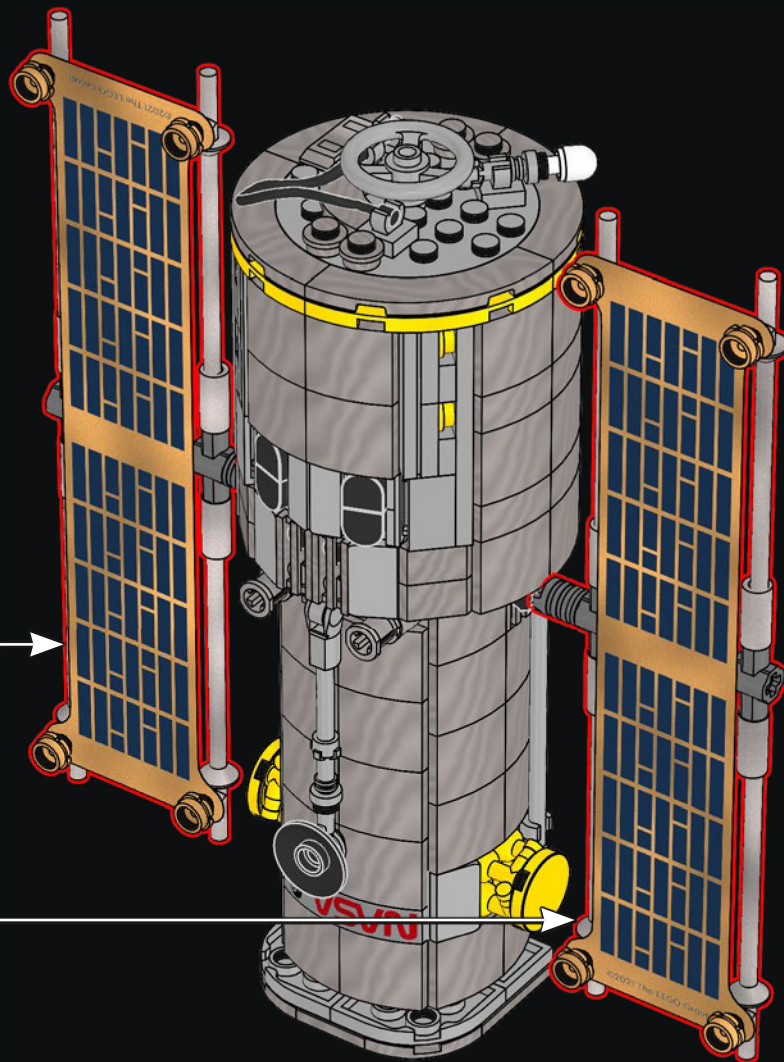


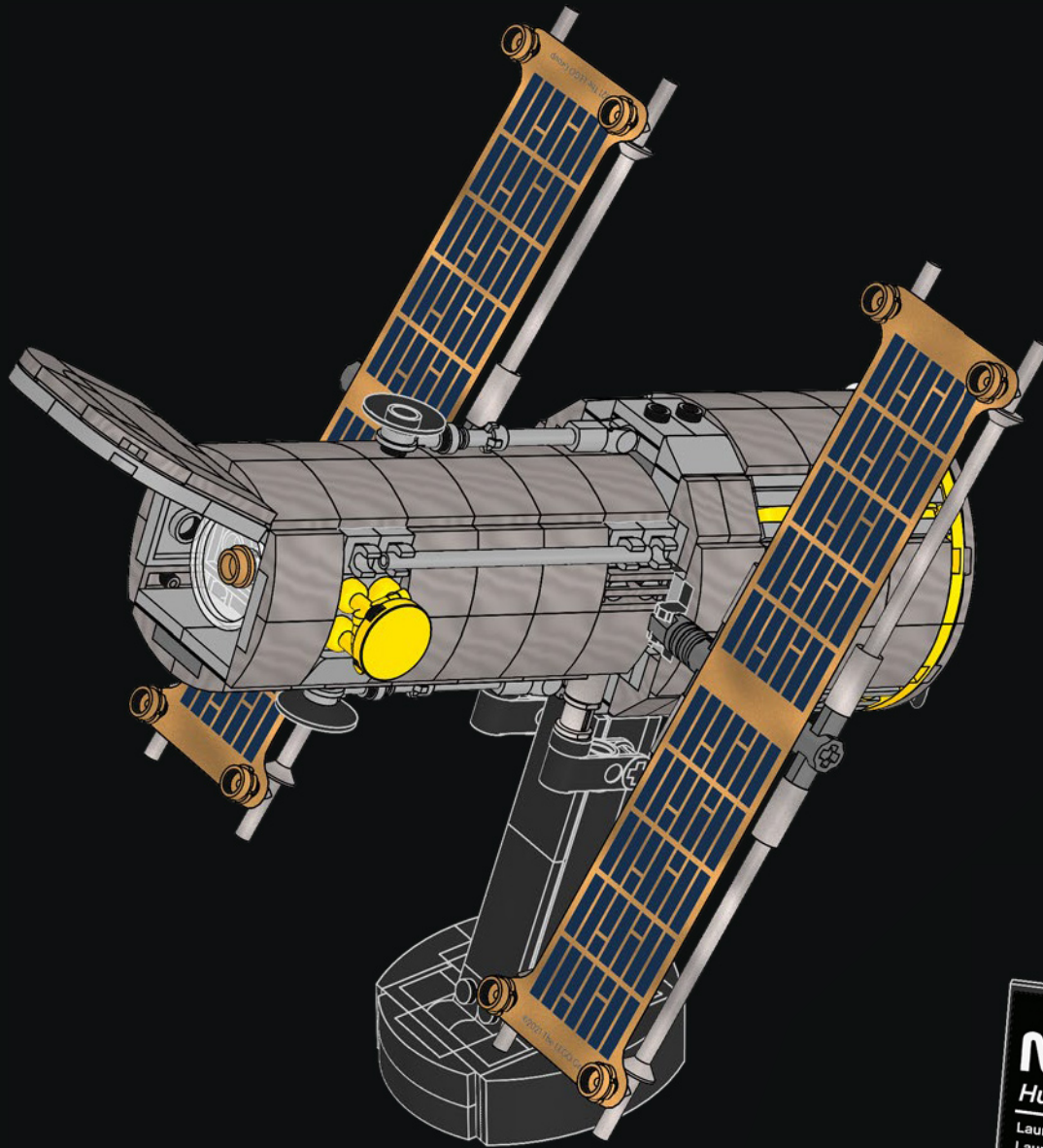
2x

## 你知道吗？

哈勃太空望远镜负责观测宇宙最深处，那里有一些距离地球 130 亿光年的星系。

56





**NASA**  **esa**  
**Hubble Space Telescope**

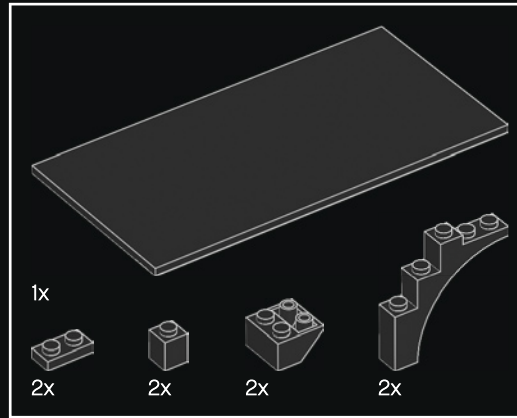
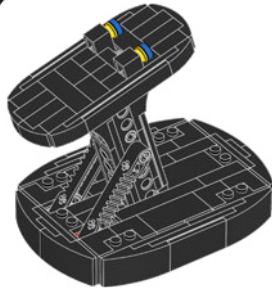
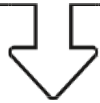
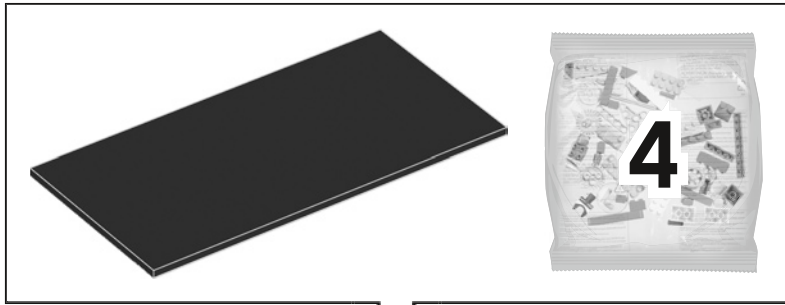
Launch: April 24, 1990  
Launch Mass: 24,490 lbs  
Velocity: 4.72 mi/s  
Deploy Altitude: 350 miles

## 发现号航天飞机

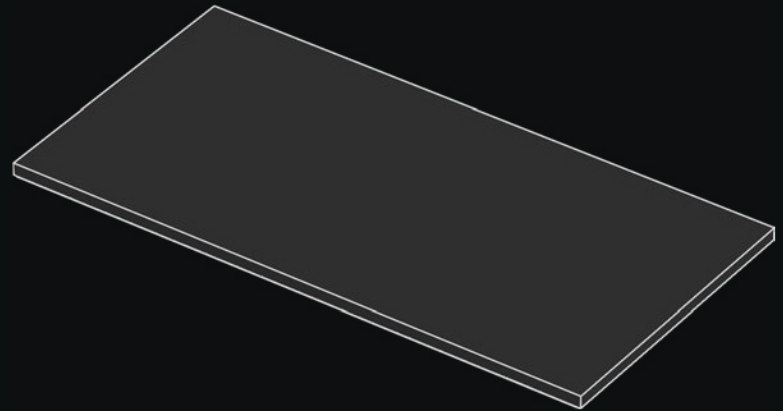
航天飞行需要可重复使用且可以携带大型酬载进入轨道的航天器，航天飞机计划即受此需求的驱动。发现号 (OV-103) 是美国宇航局的第三架“轨道飞行器”，于 1983 年 11 月服役。服役 27 年期间，它完成 39 次飞行任务，飞行 2.38 亿公里 (1.49 亿英里)，环绕地球 5830 圈，并在太空中度过近 365 天。1990 年 4 月 24 日，这架航天飞机从美国肯尼迪航天发射中心发射，执行为期 5 天的哈勃部署任务。设计师们制造了这架能够紧凑放置在航天飞机货舱内的望远镜。







1

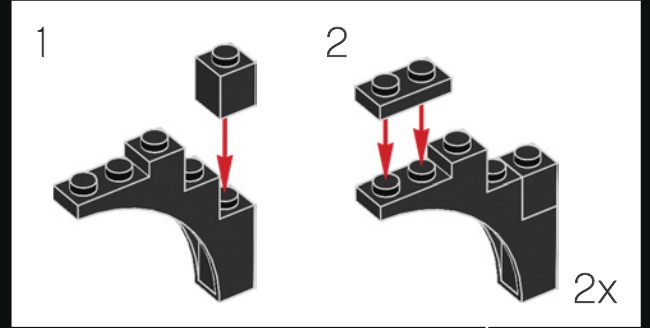
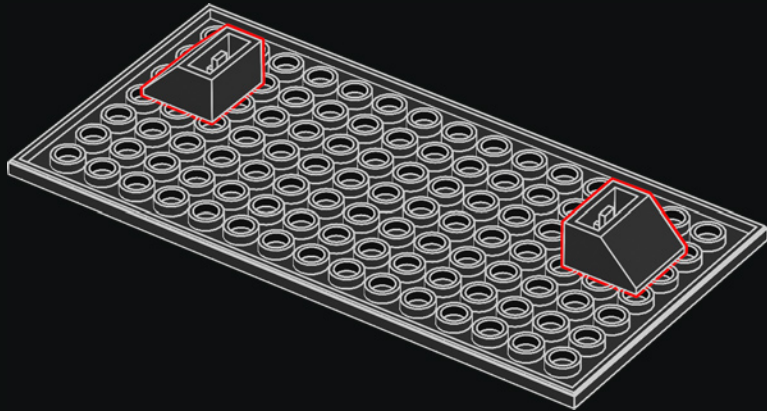




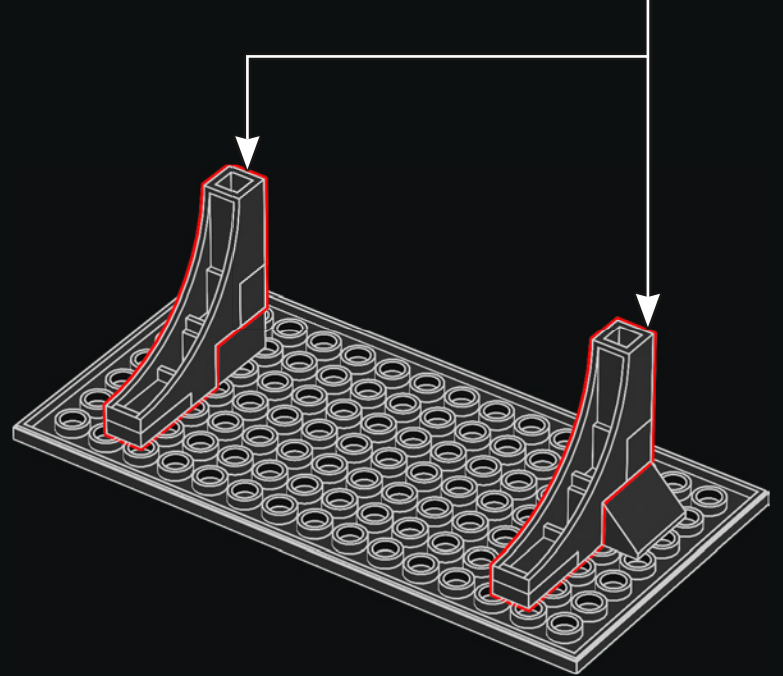
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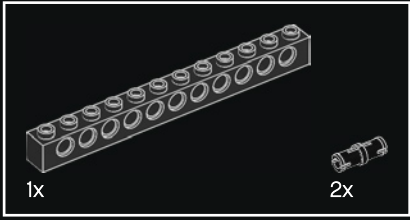
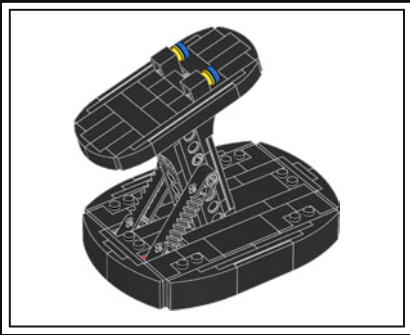


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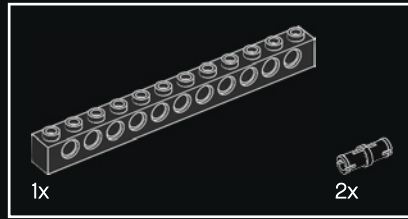
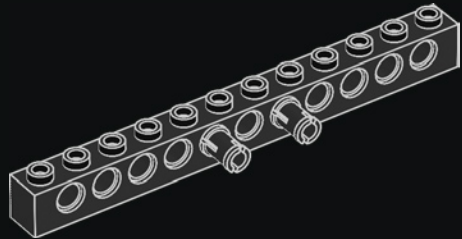


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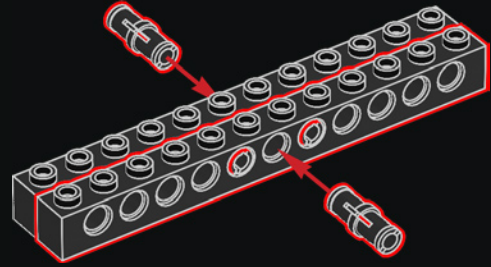




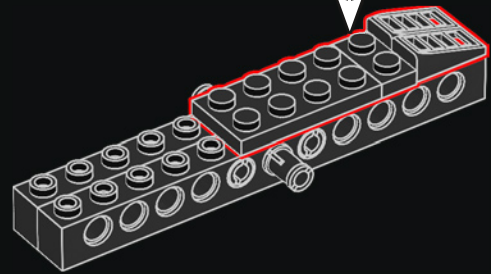
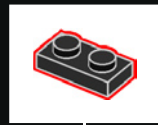
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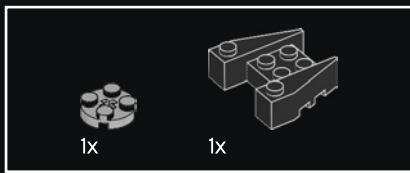


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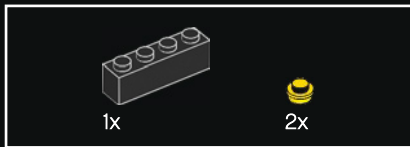
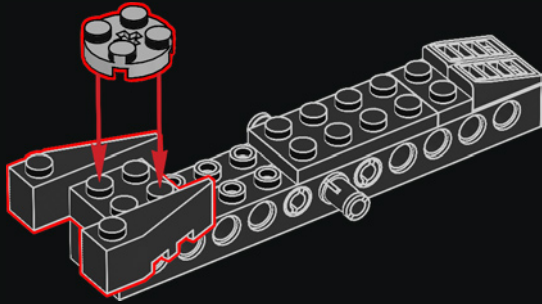


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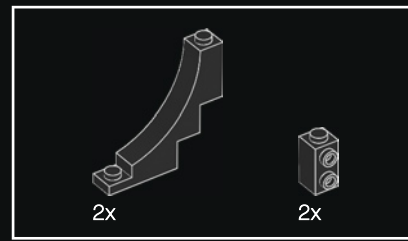
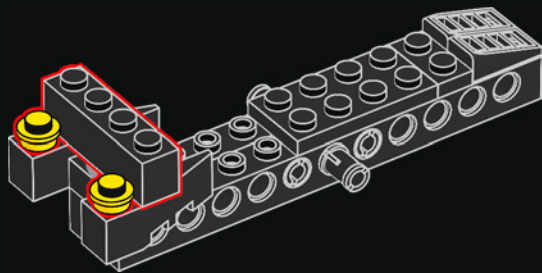




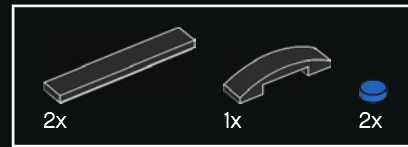
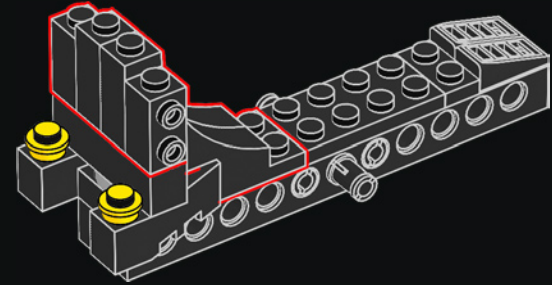
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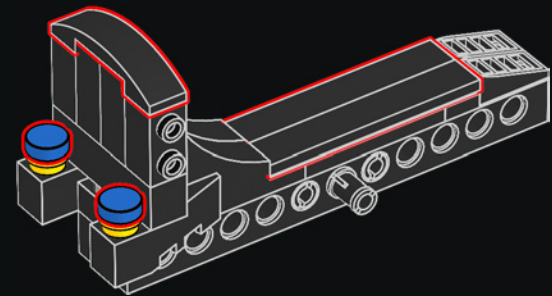
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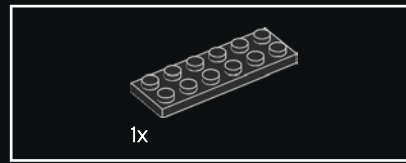
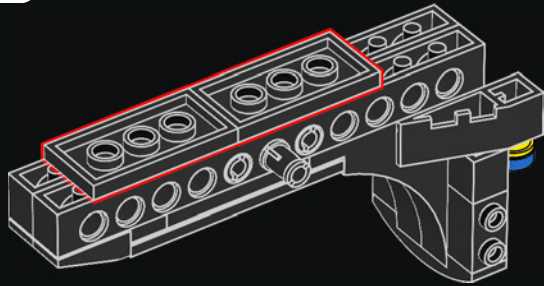


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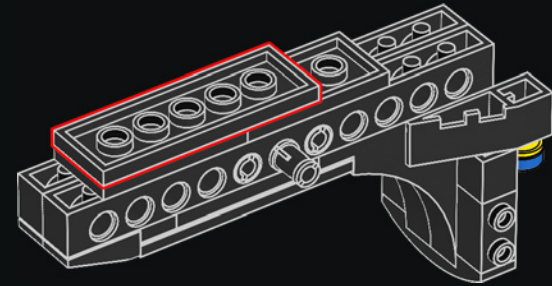


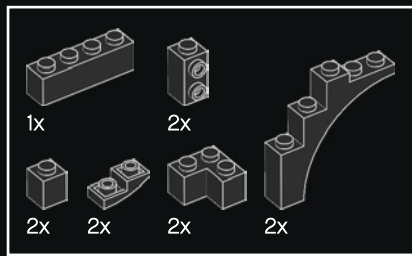


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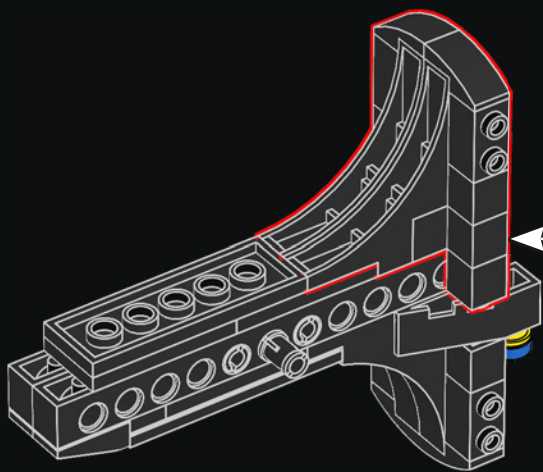
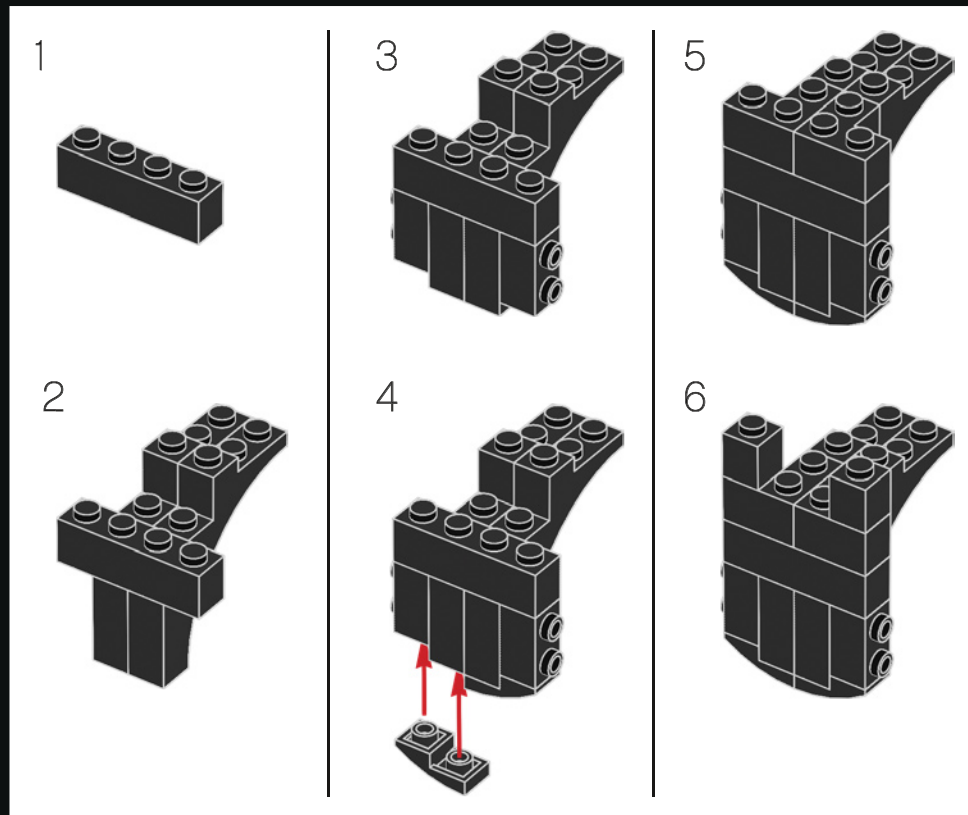


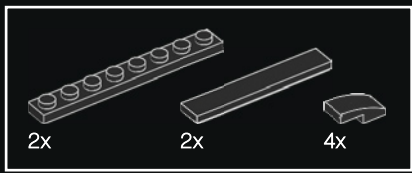
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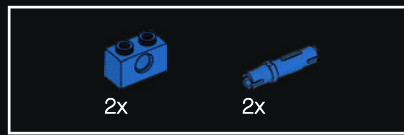
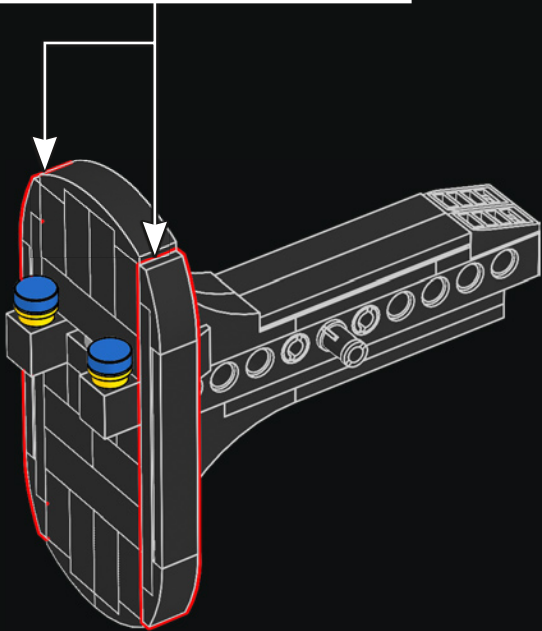
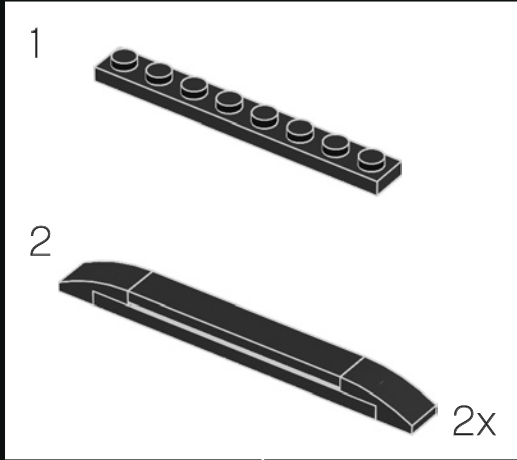


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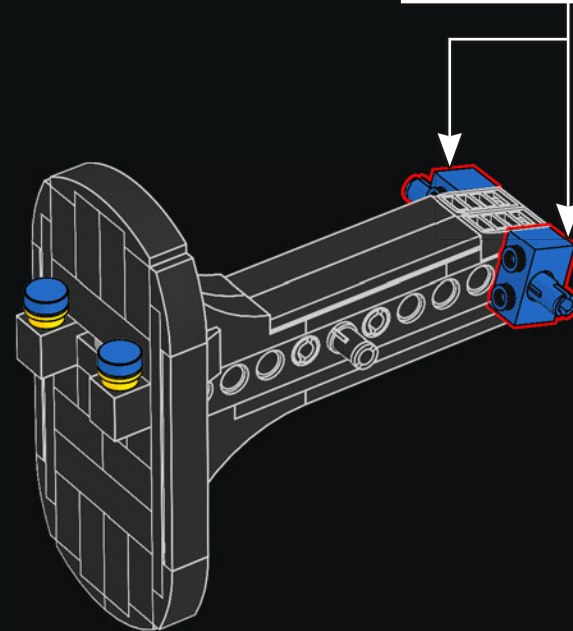
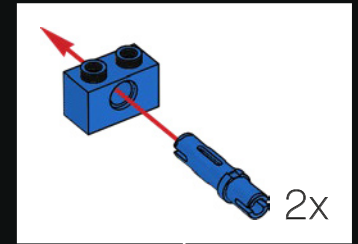


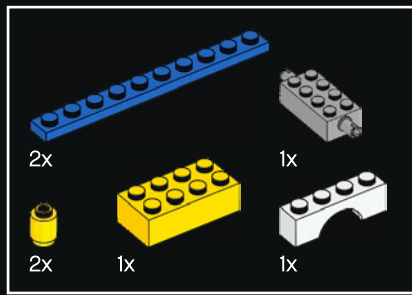


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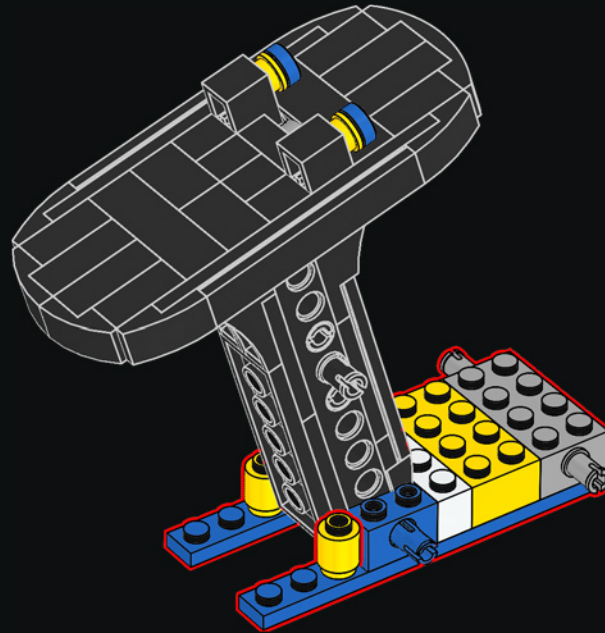
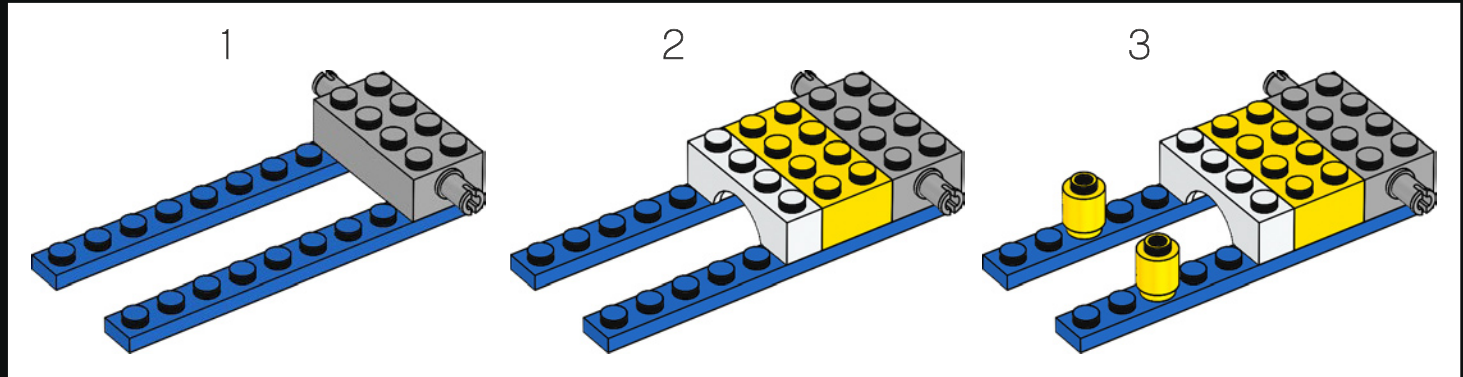


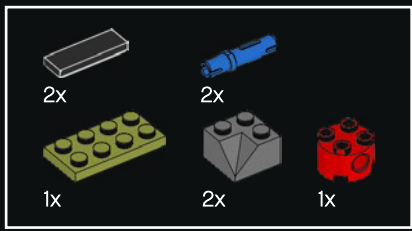
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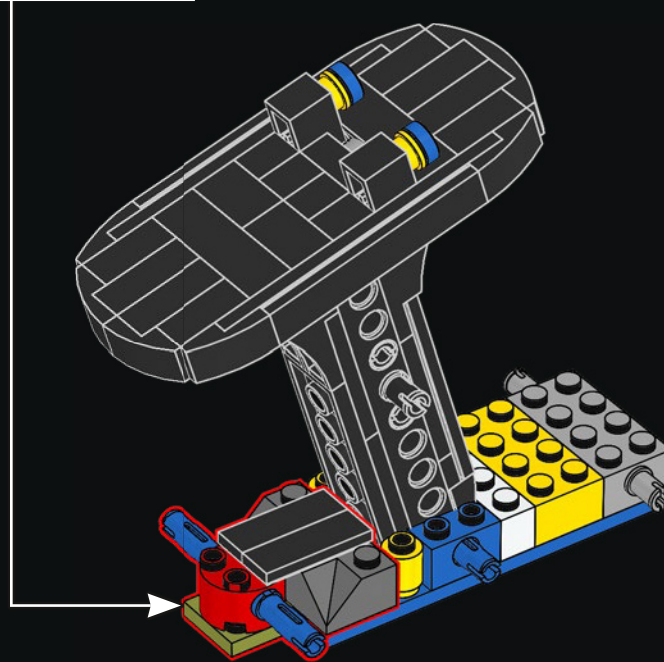
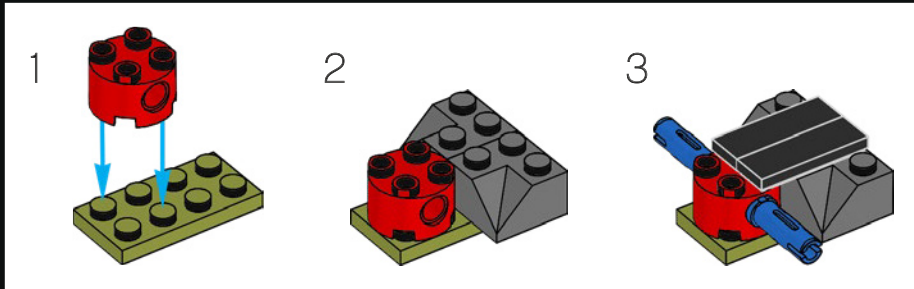


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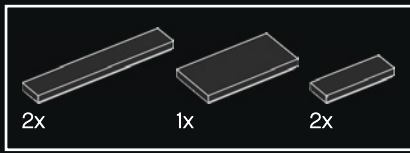




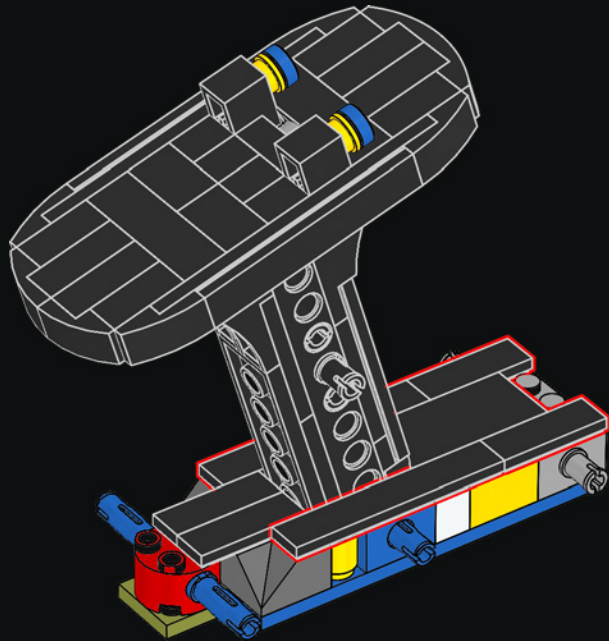
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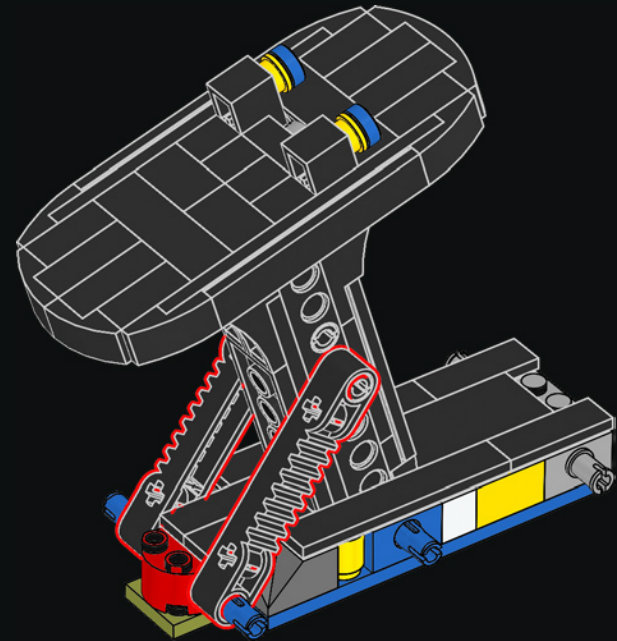


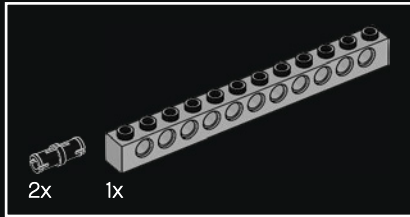
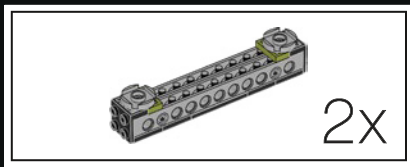


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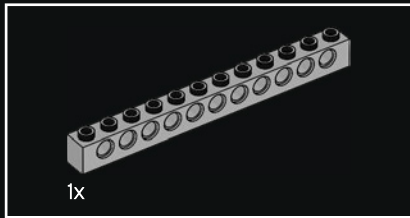
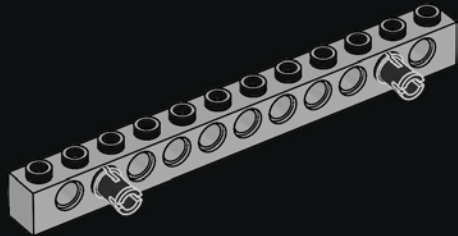


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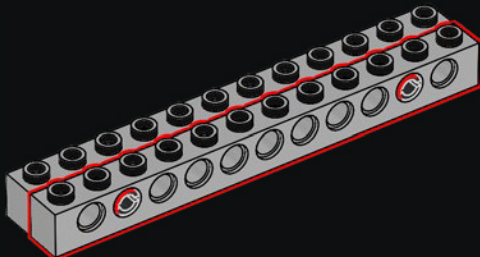




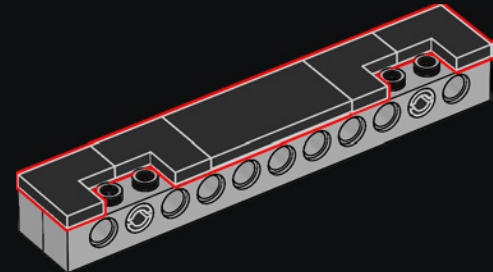
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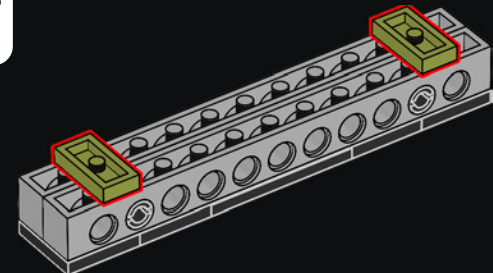
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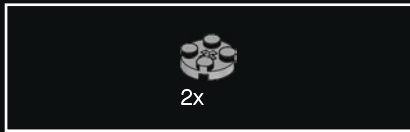
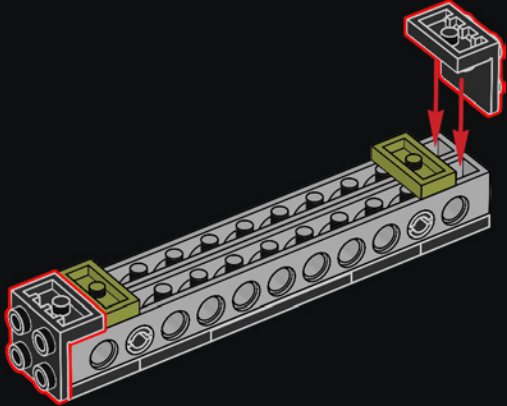


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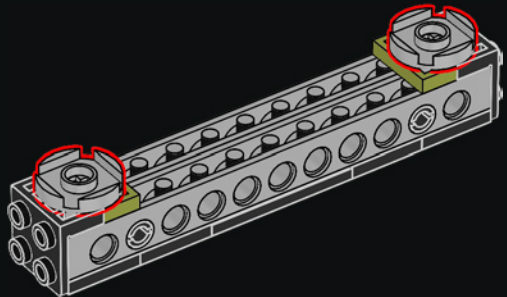




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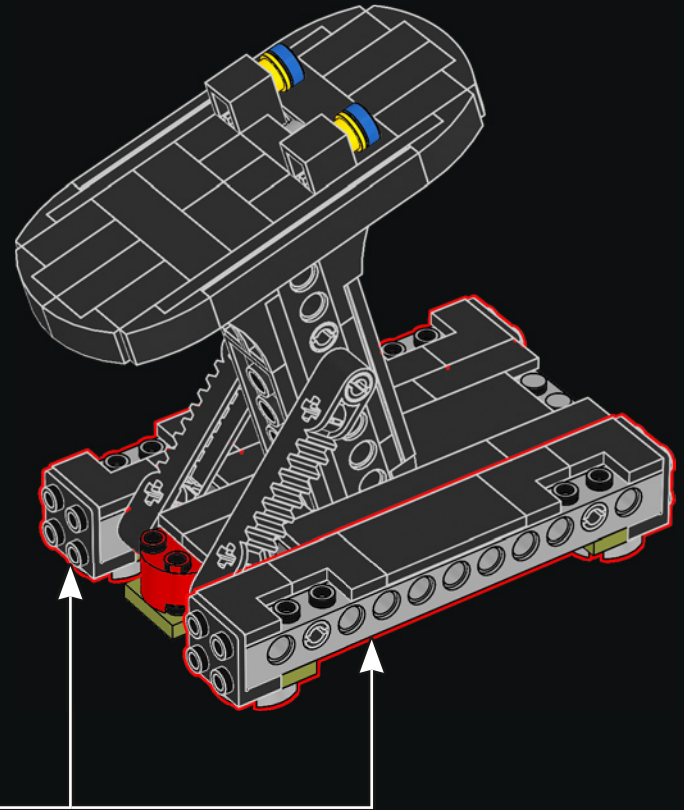


22



2x

23



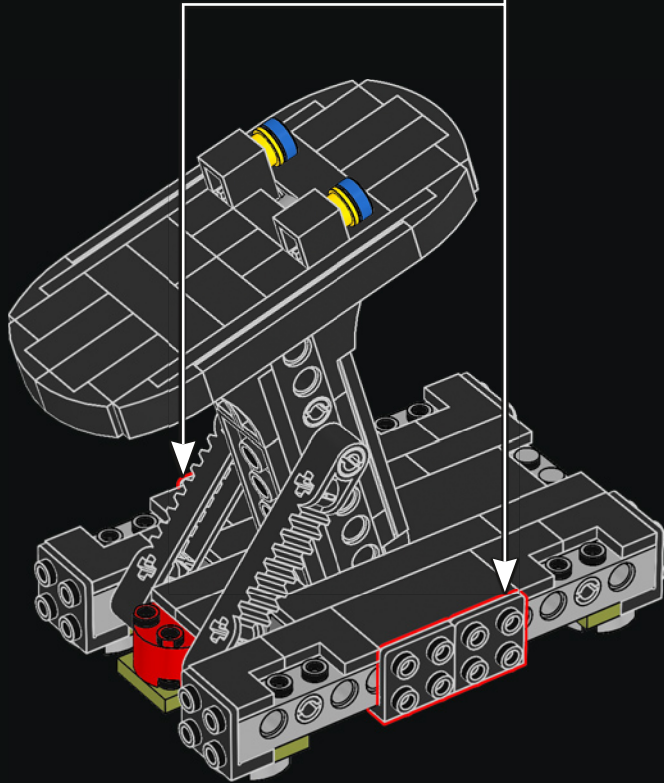


4x

24

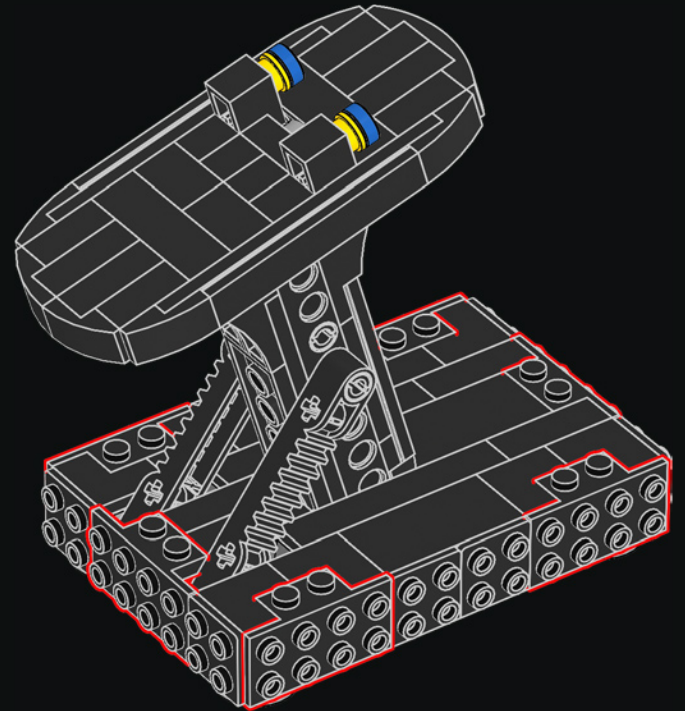


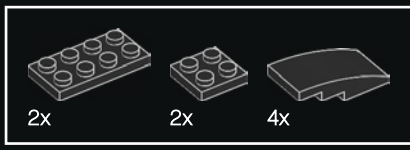
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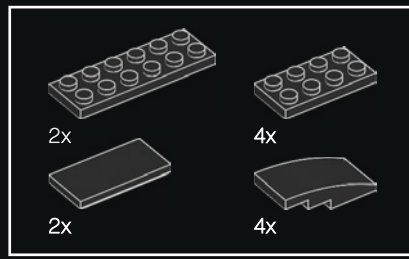
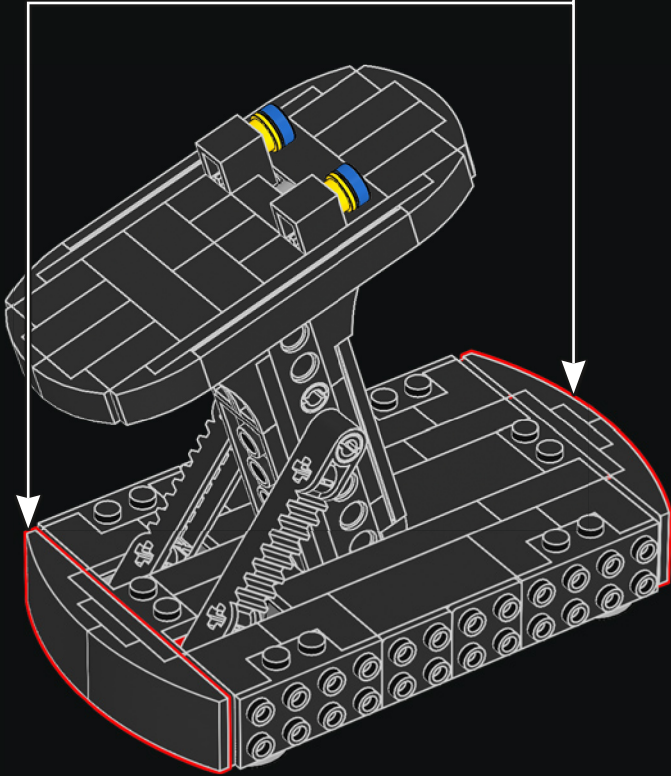
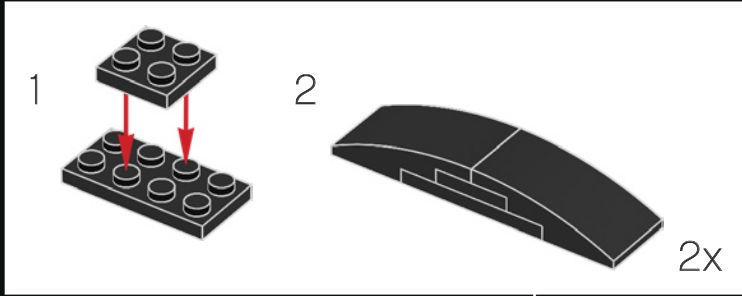
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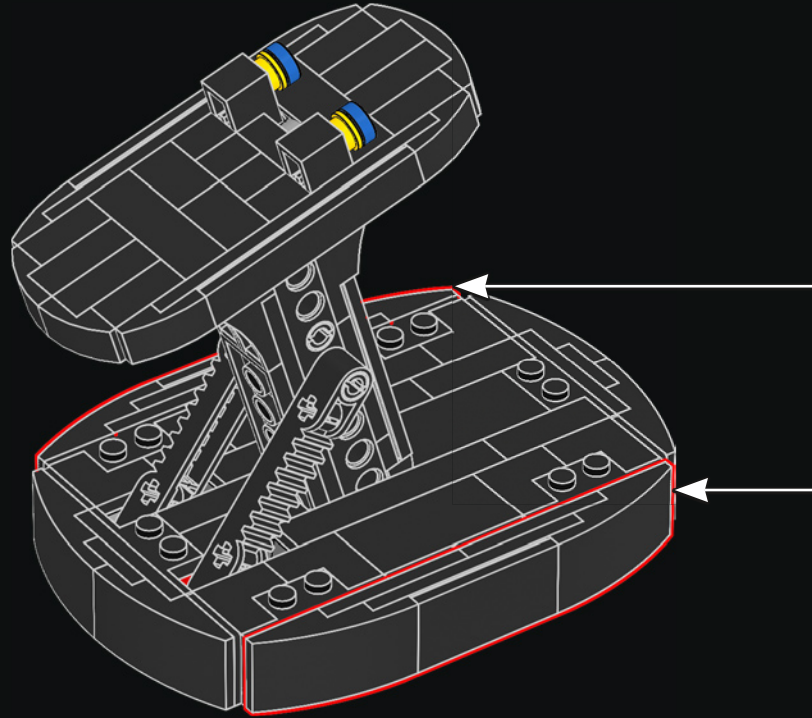
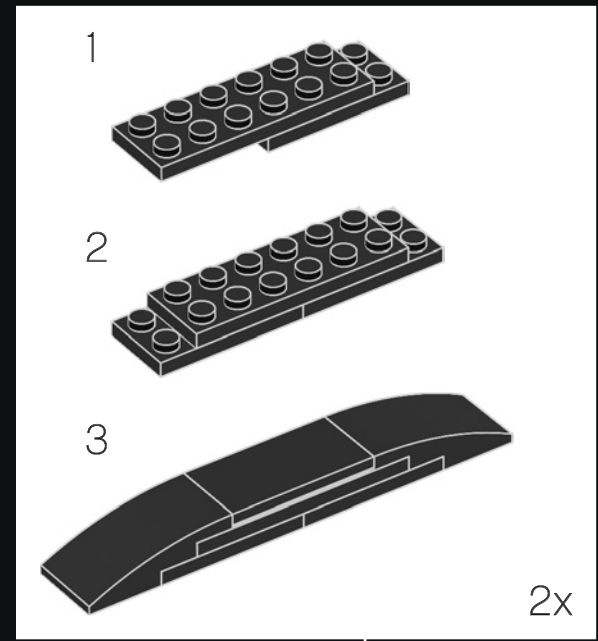


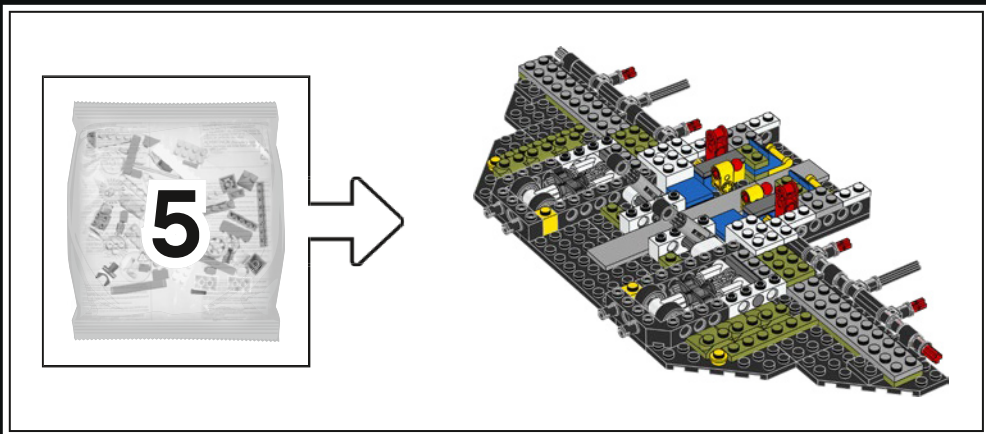


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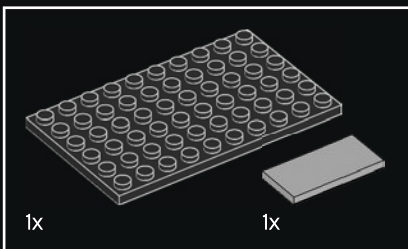
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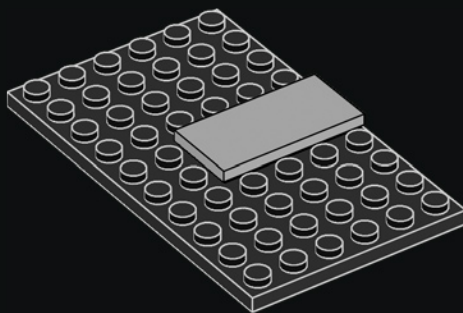


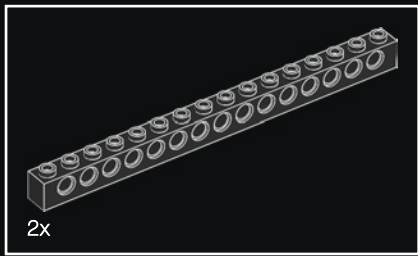
### 你知道吗？

发现号在服役期间共运载 222人，为航天飞机之最。

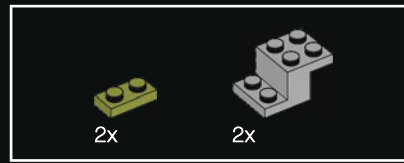
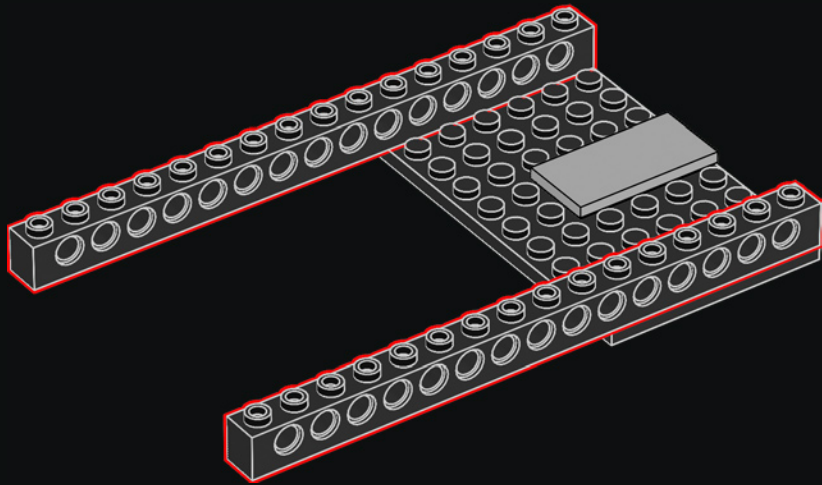


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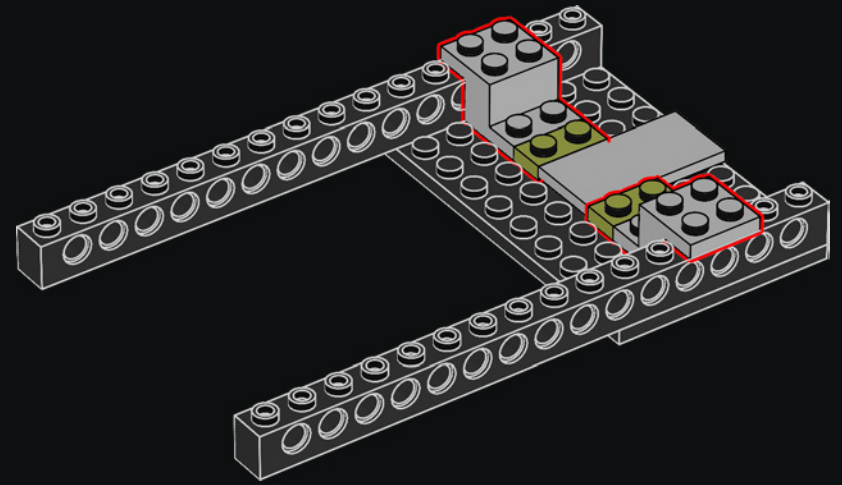




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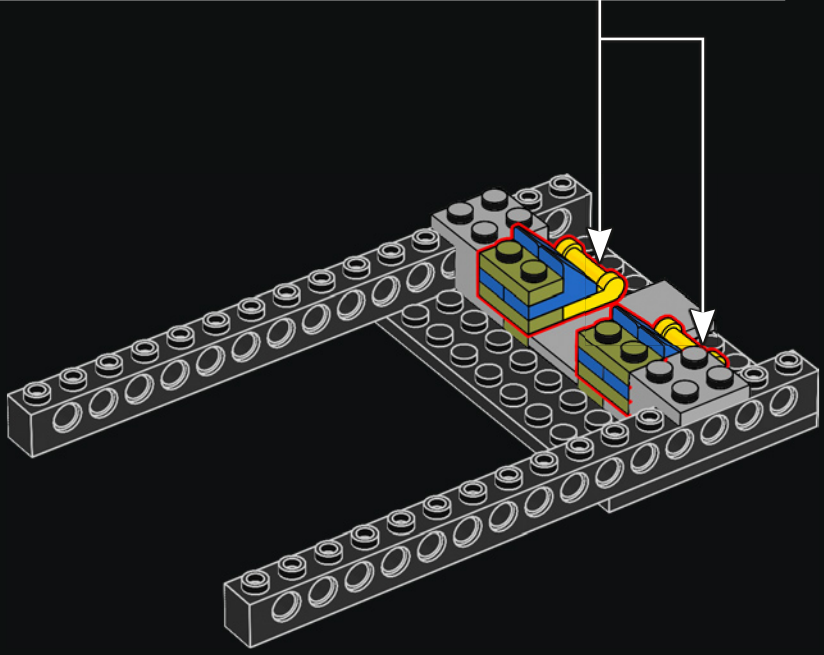
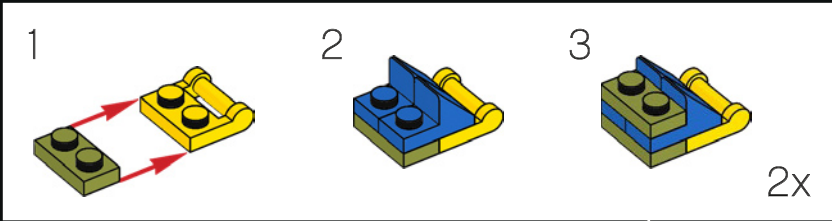


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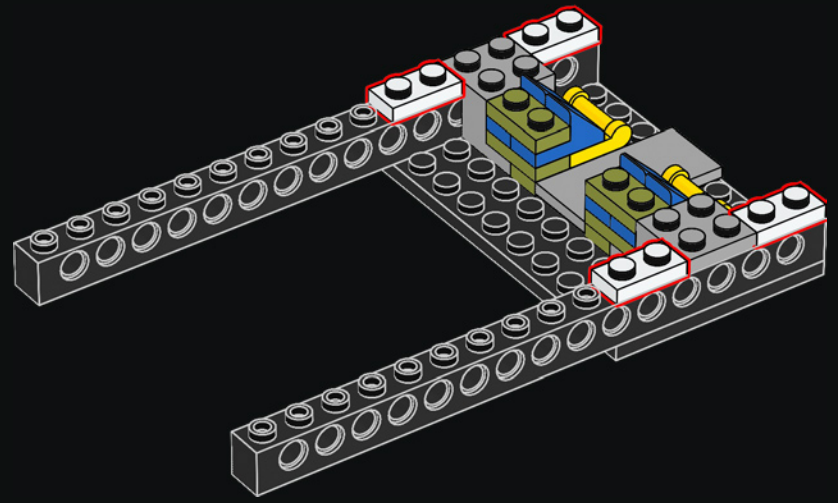




4



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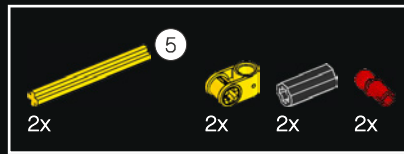
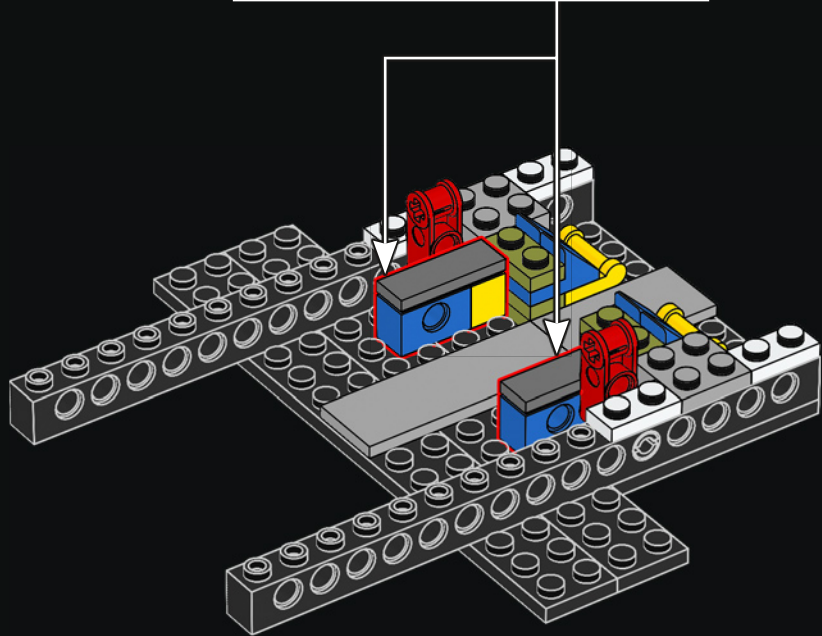
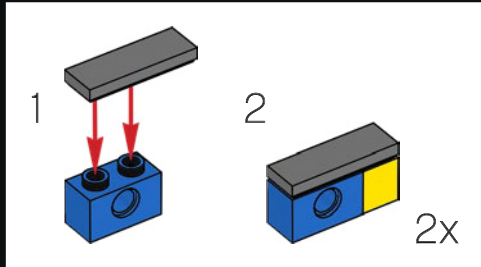




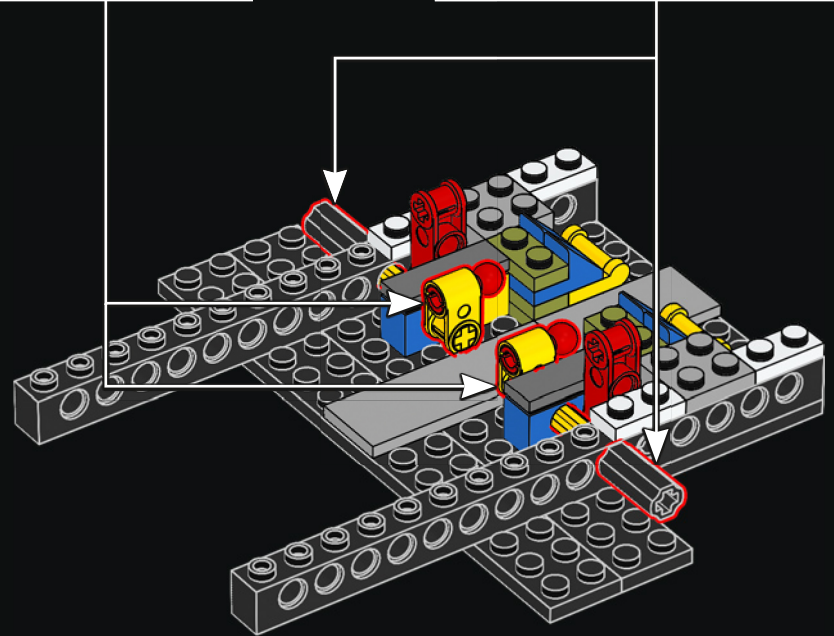
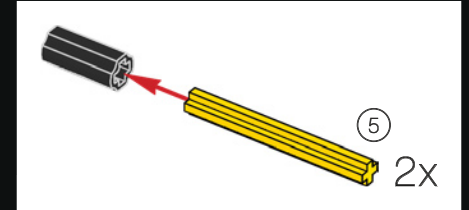
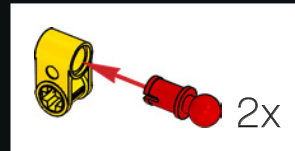


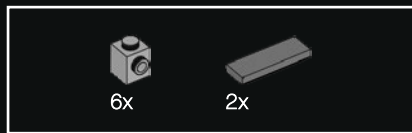


8

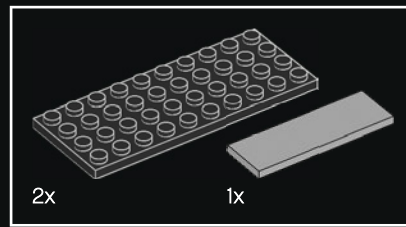
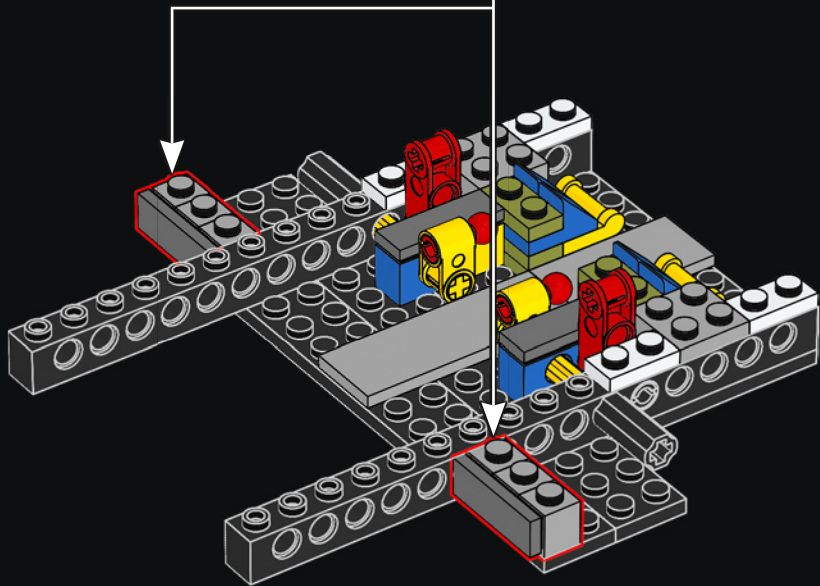
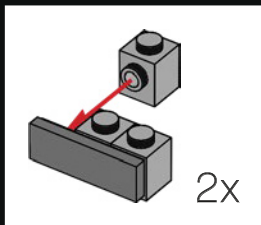


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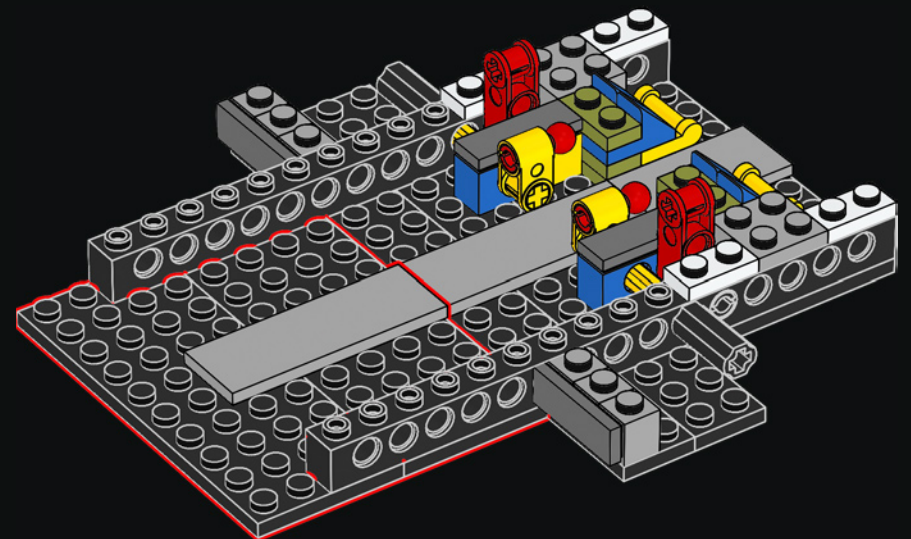


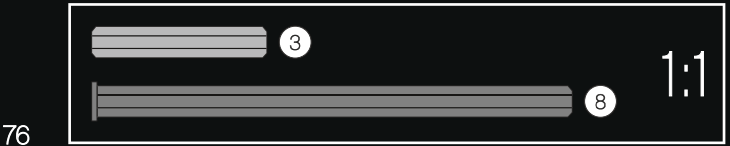
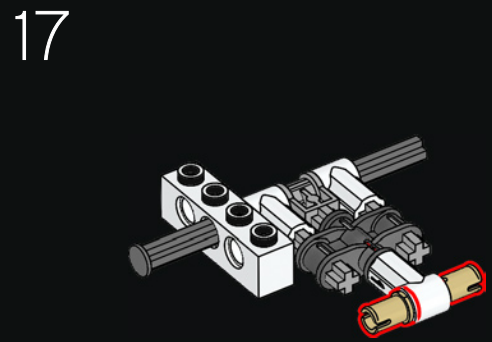
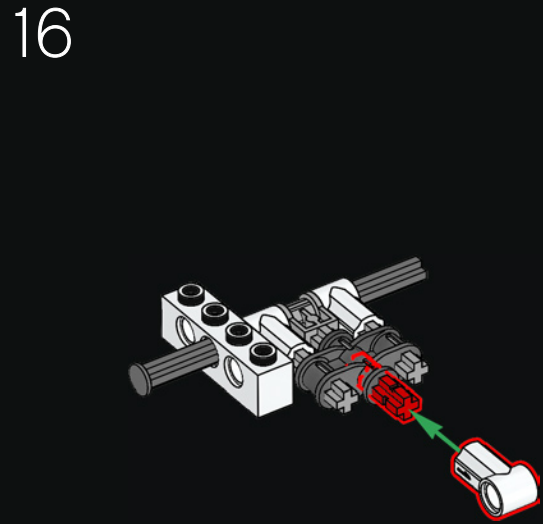
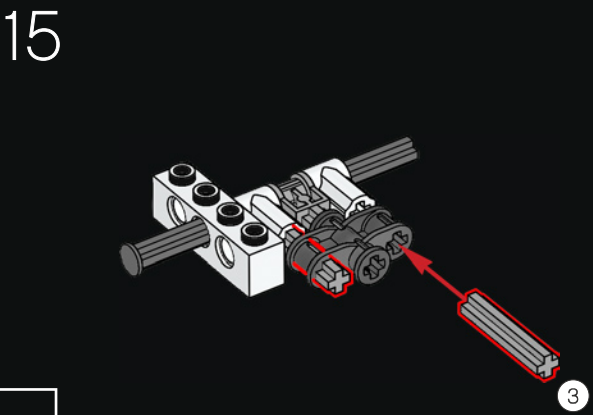
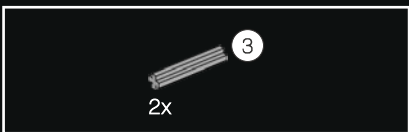
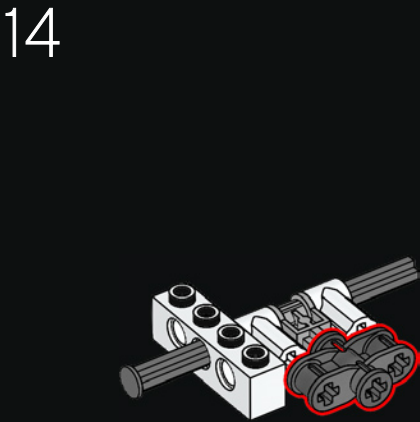
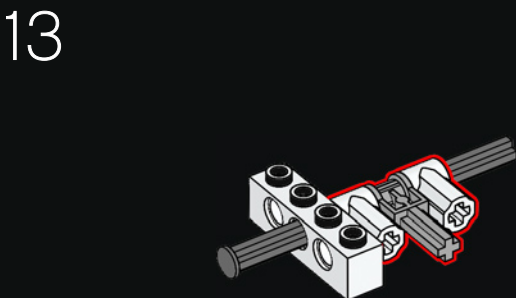
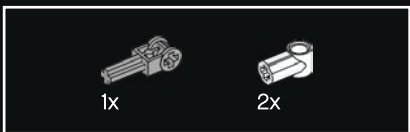
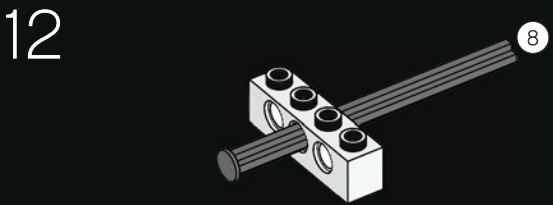
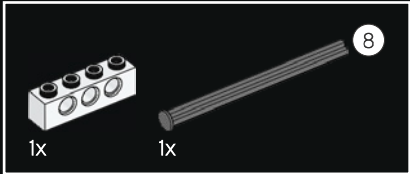
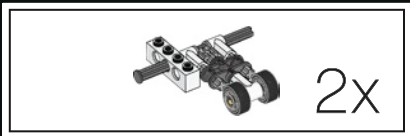


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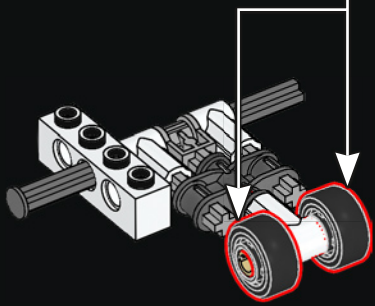
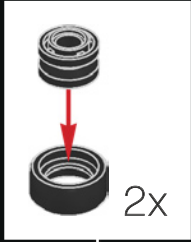
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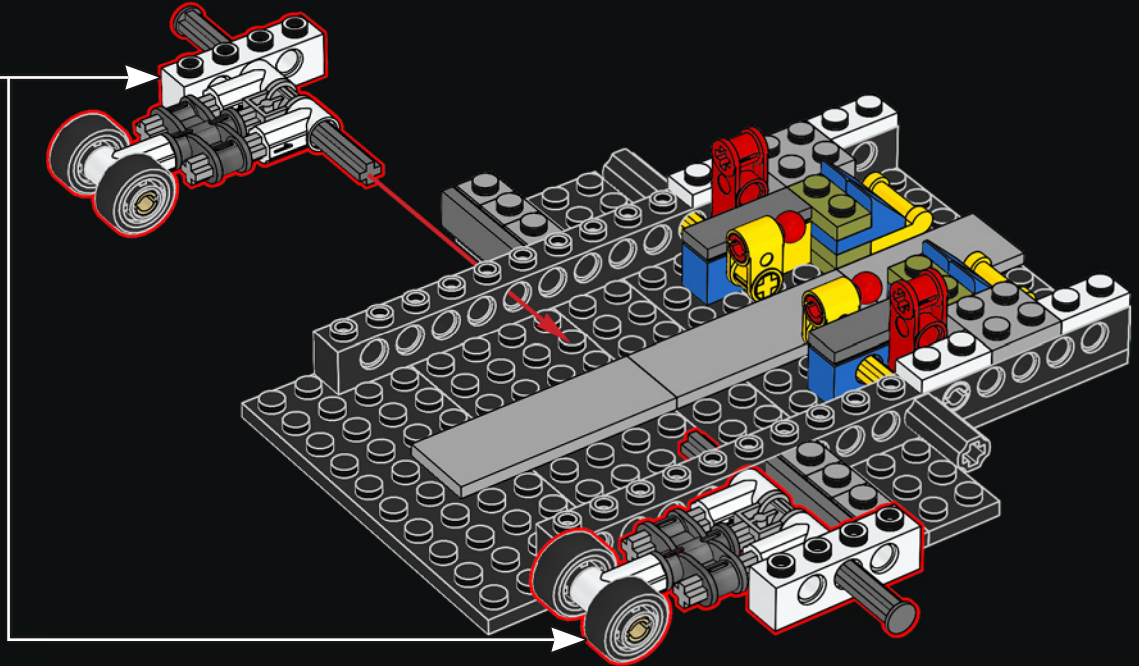


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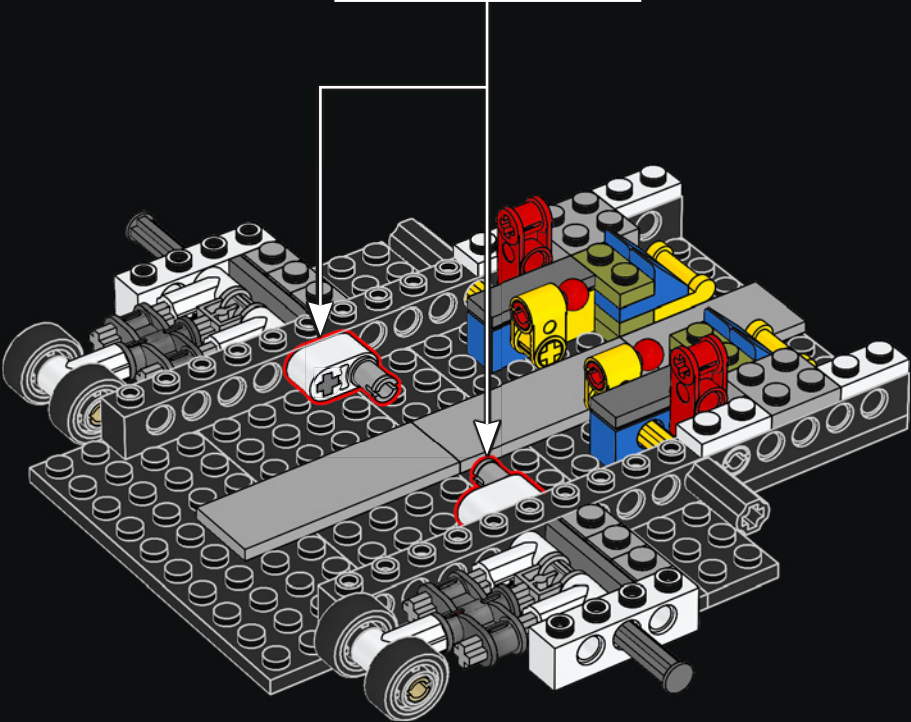
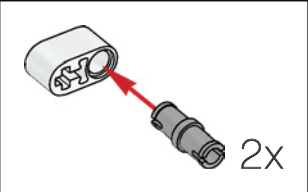
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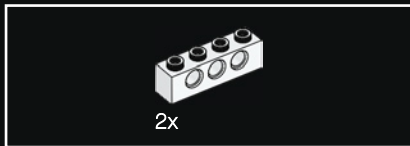
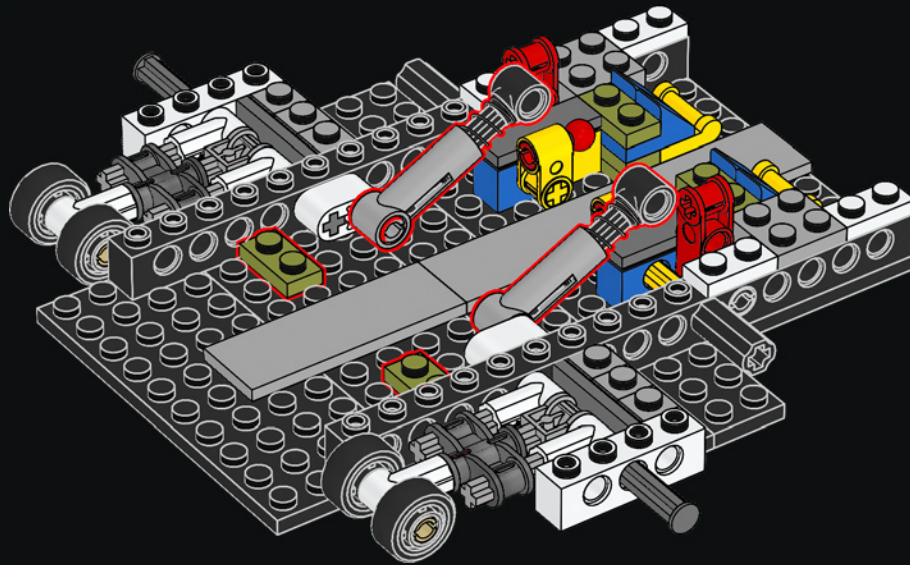


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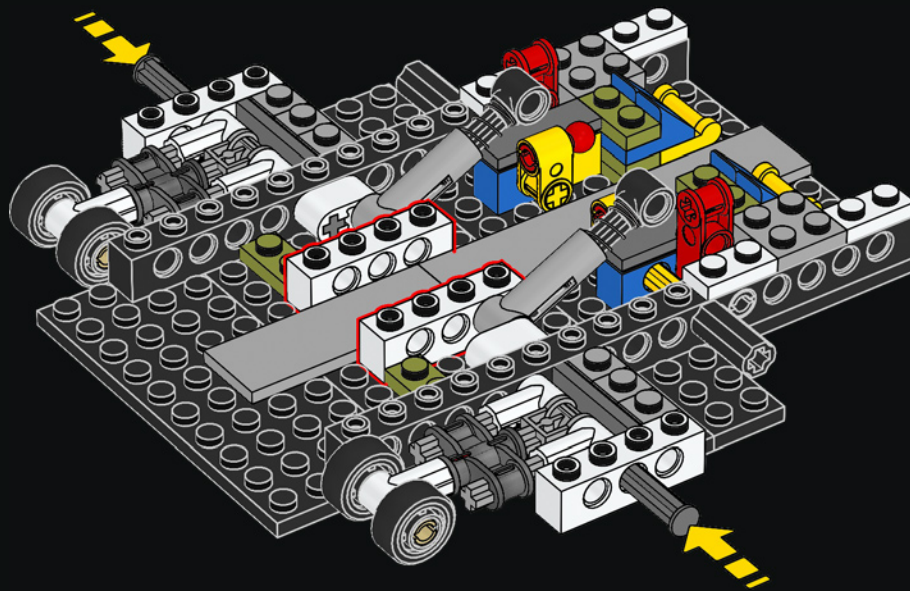


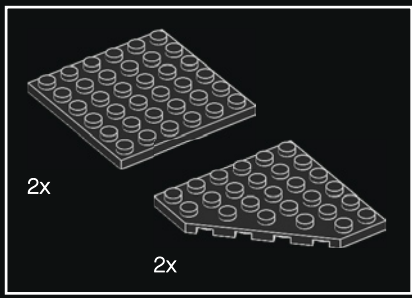


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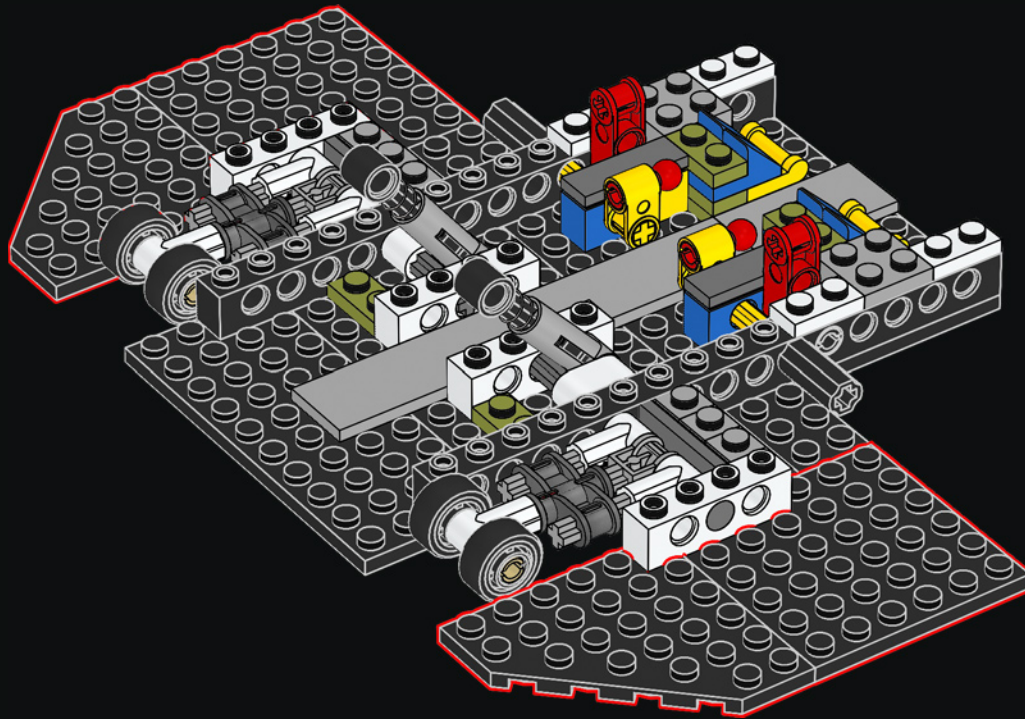


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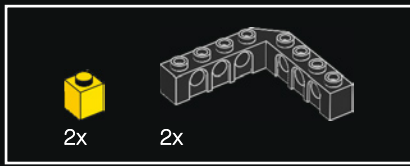




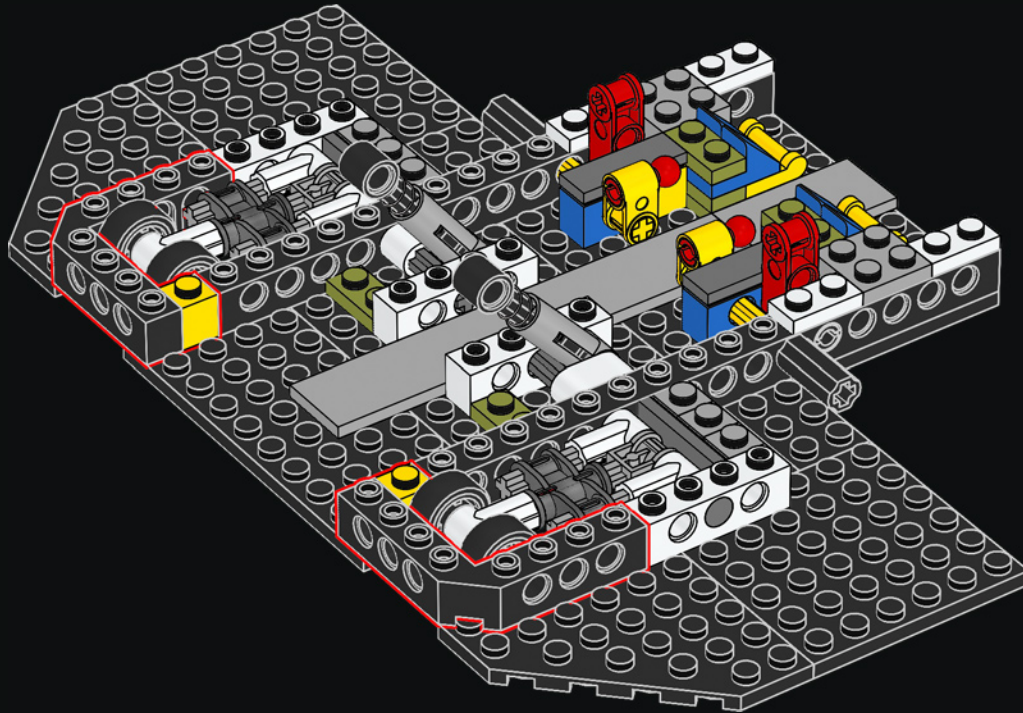
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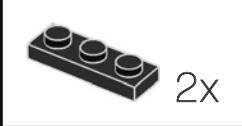
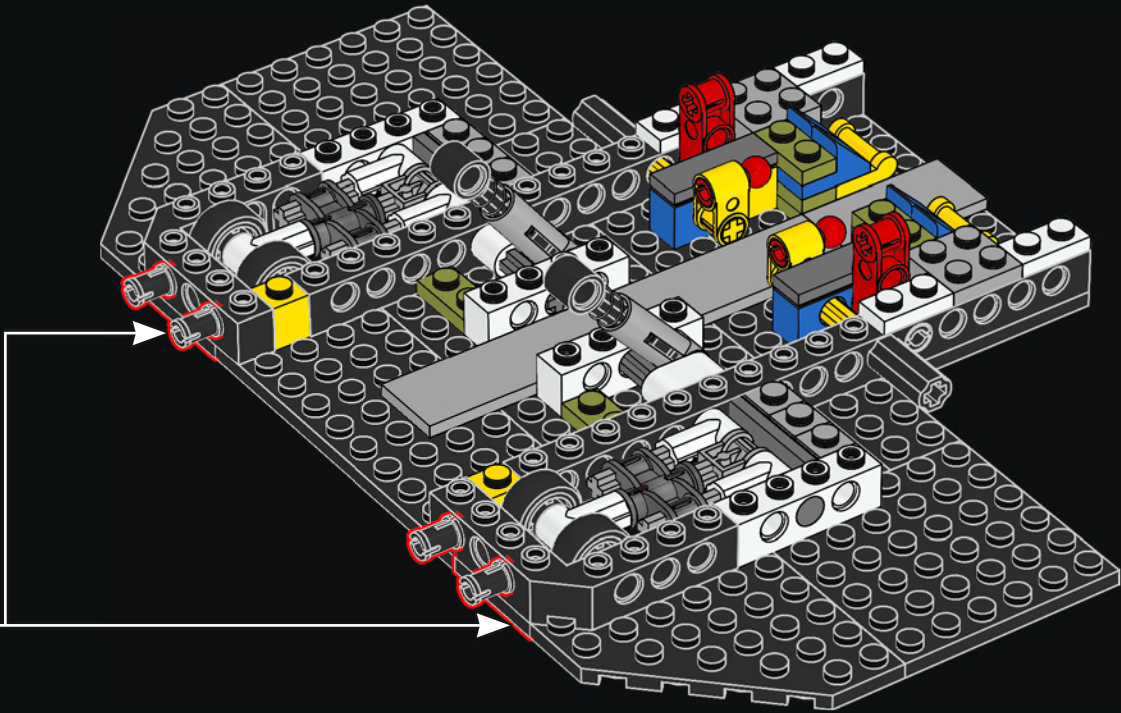


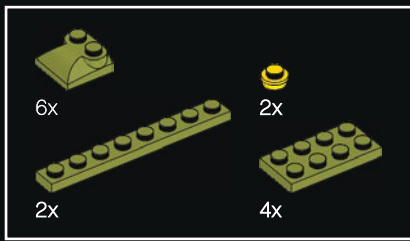
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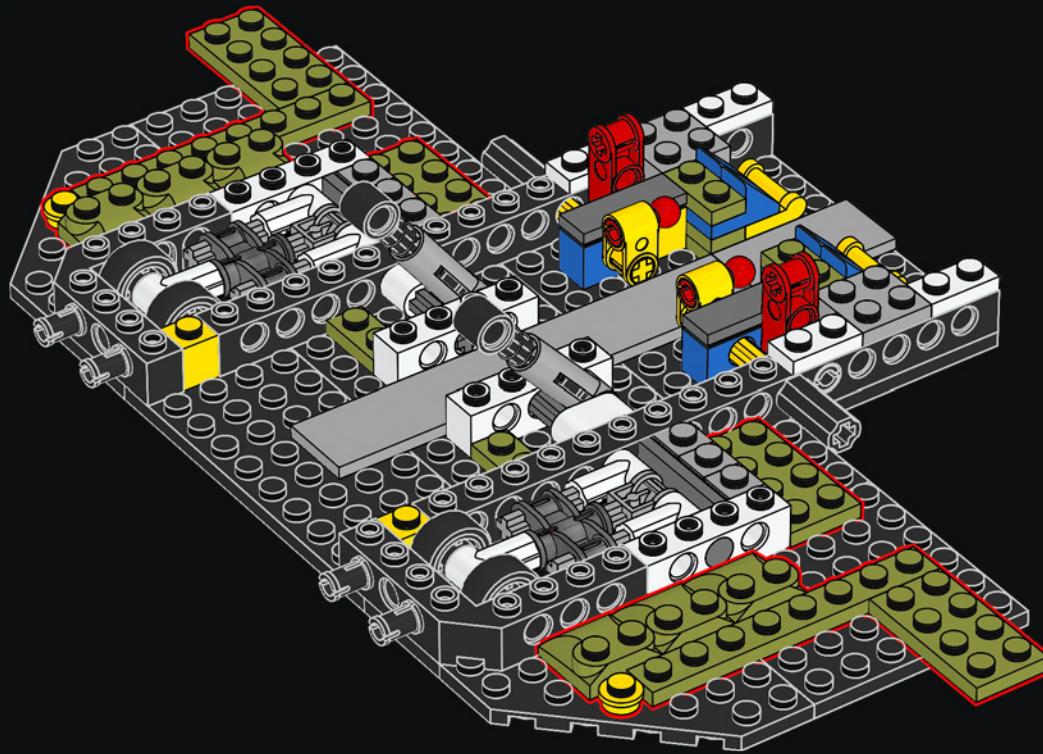


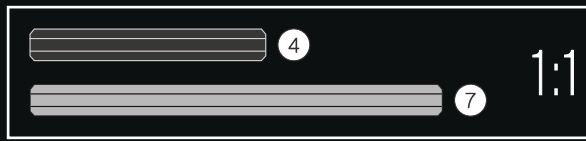
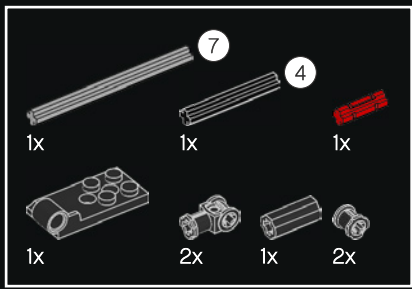
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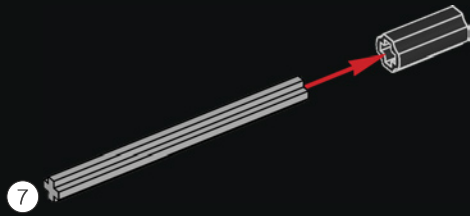
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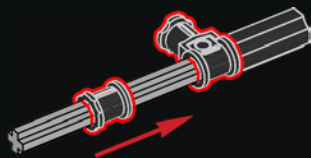


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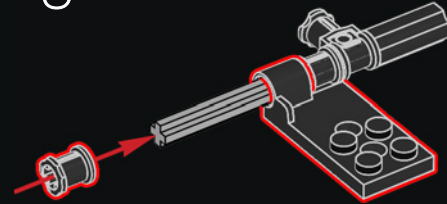
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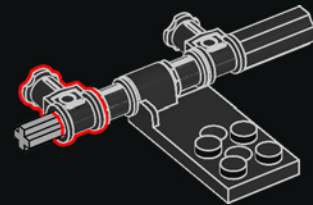
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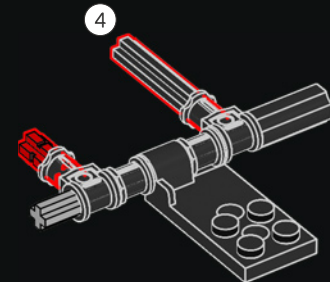
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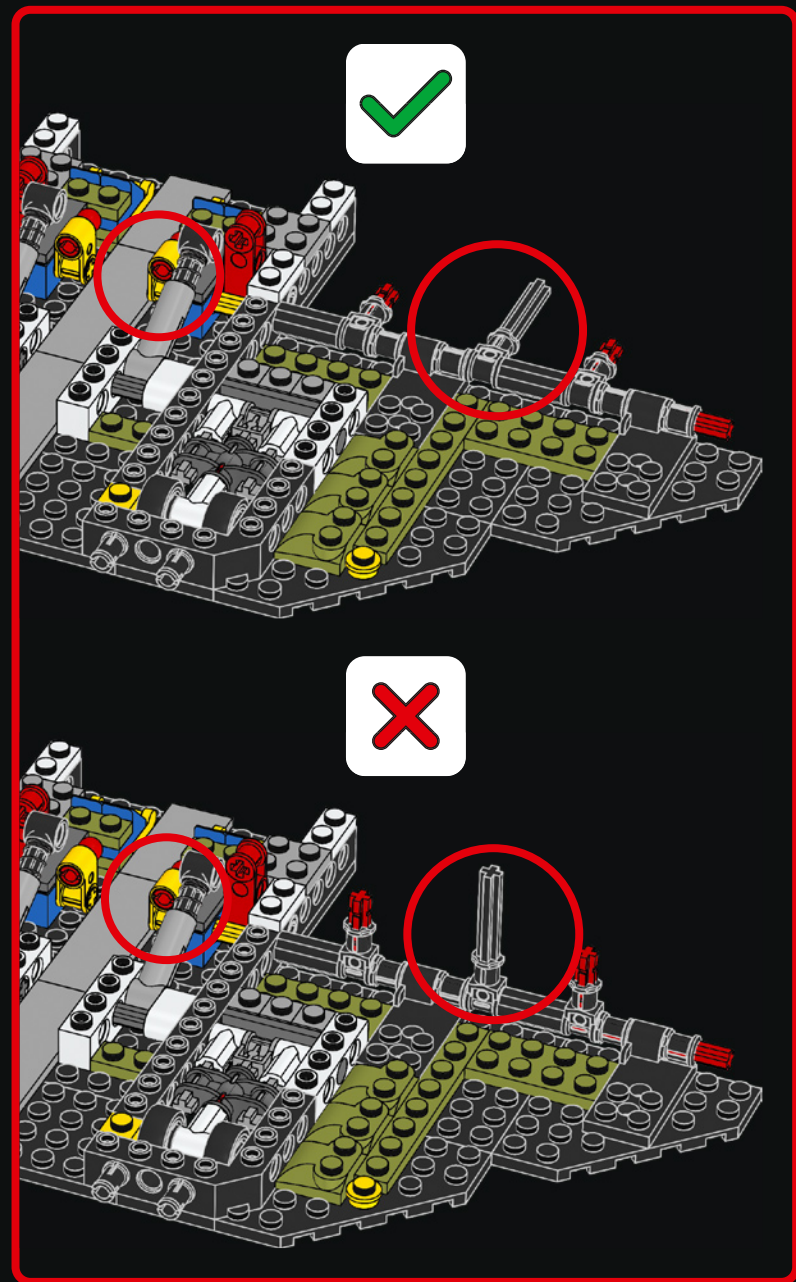
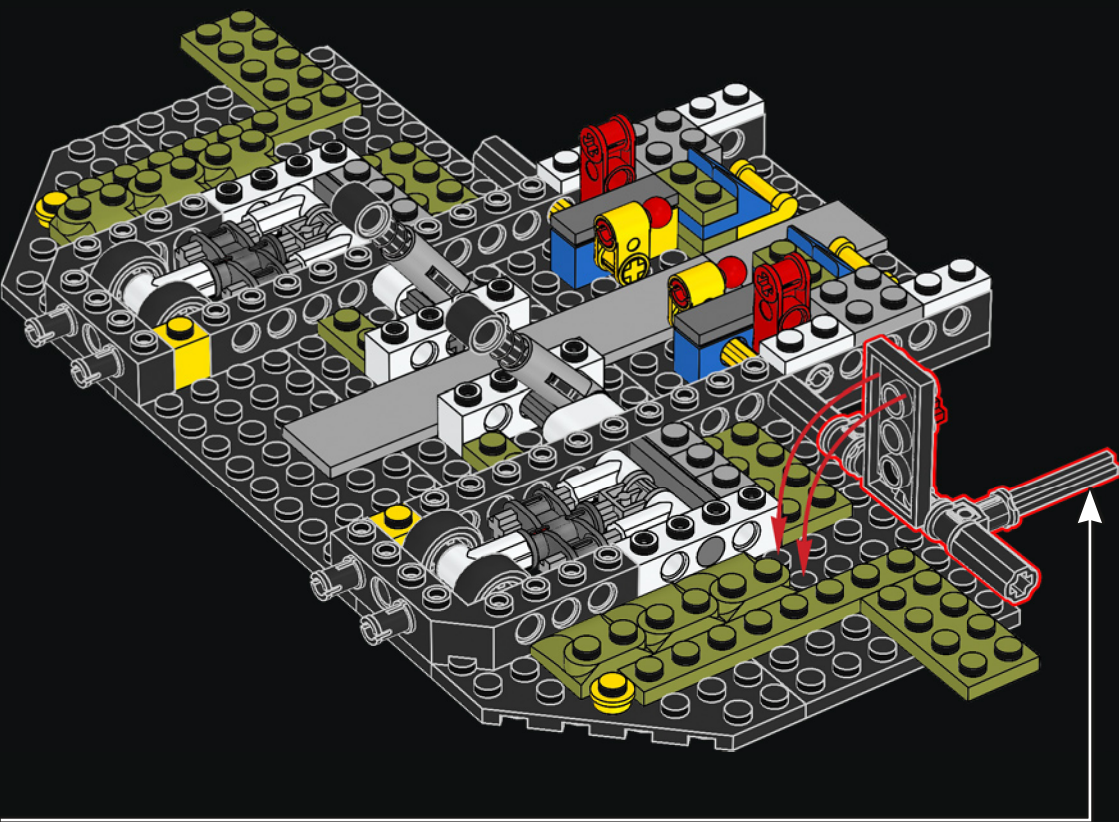


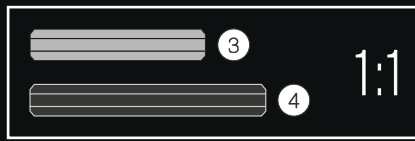
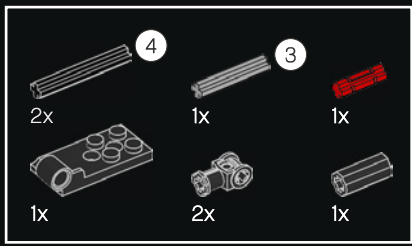
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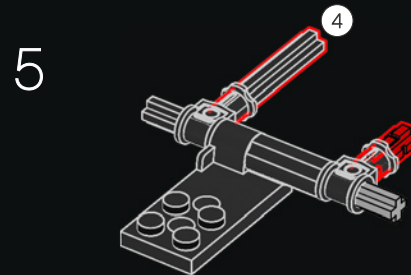
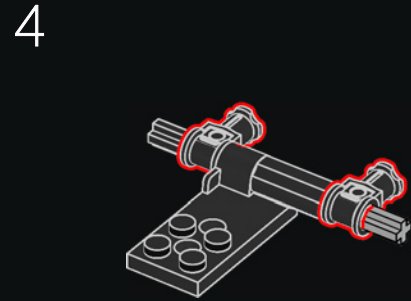
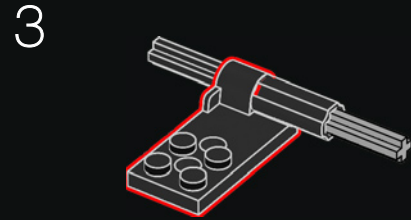
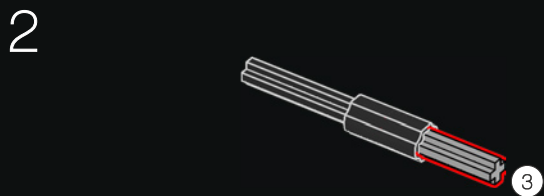
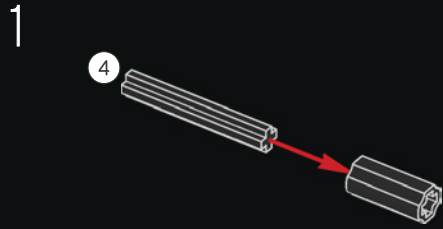
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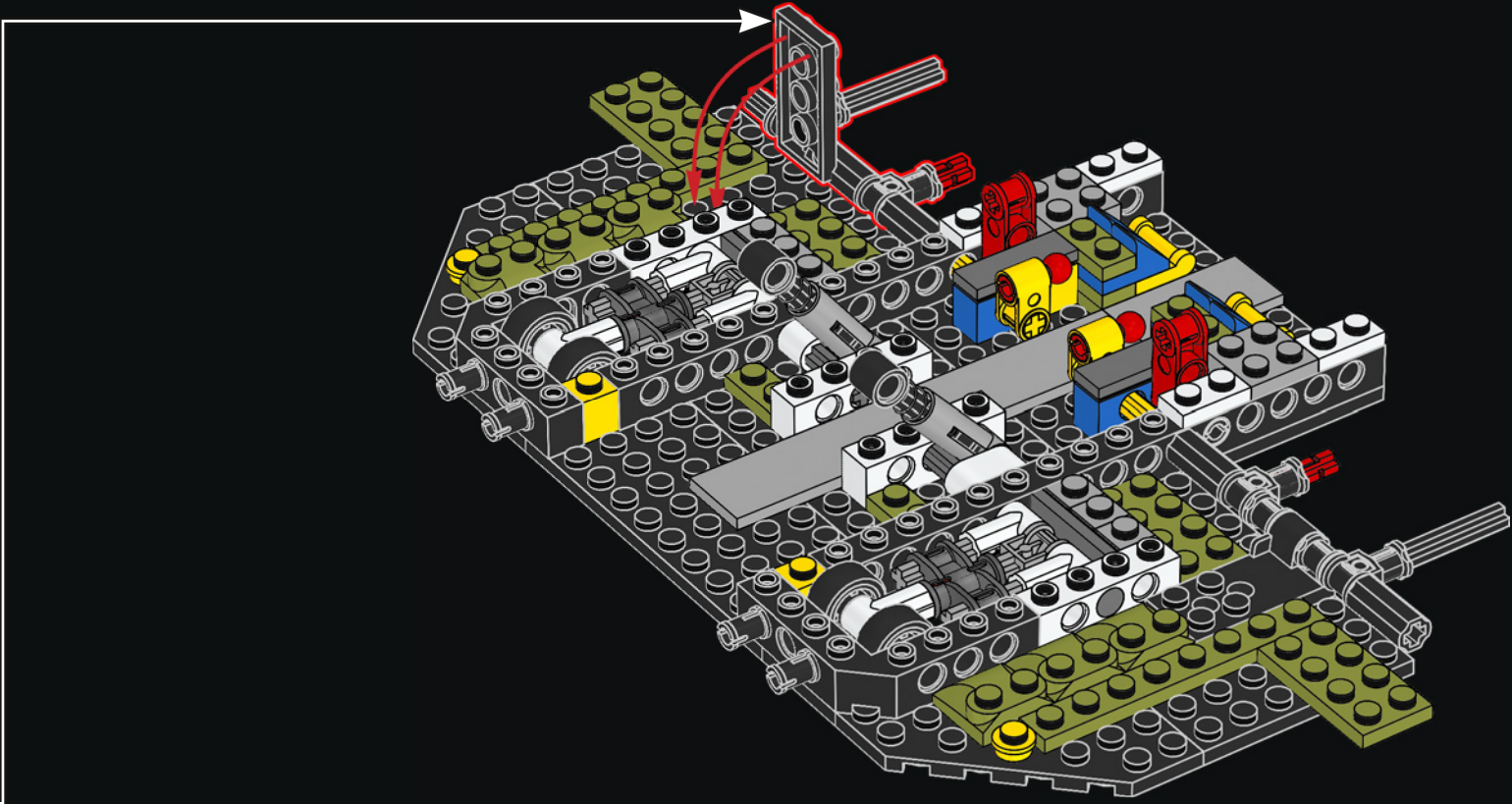


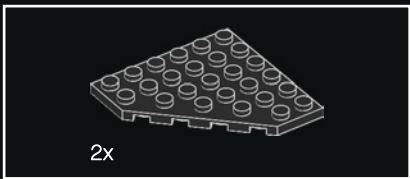




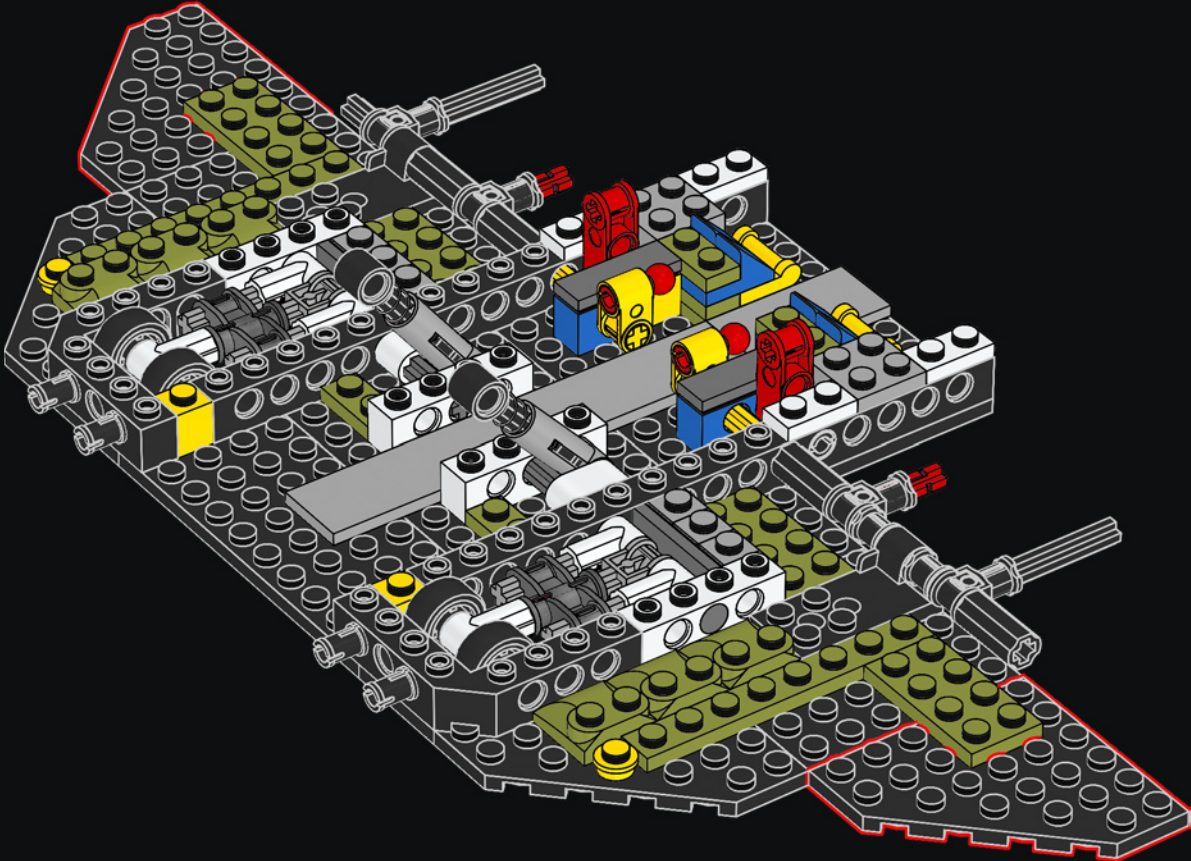
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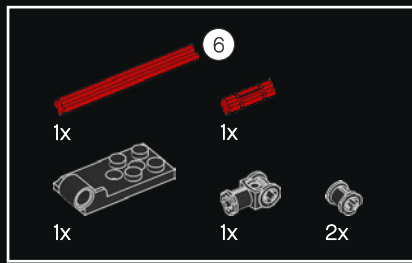




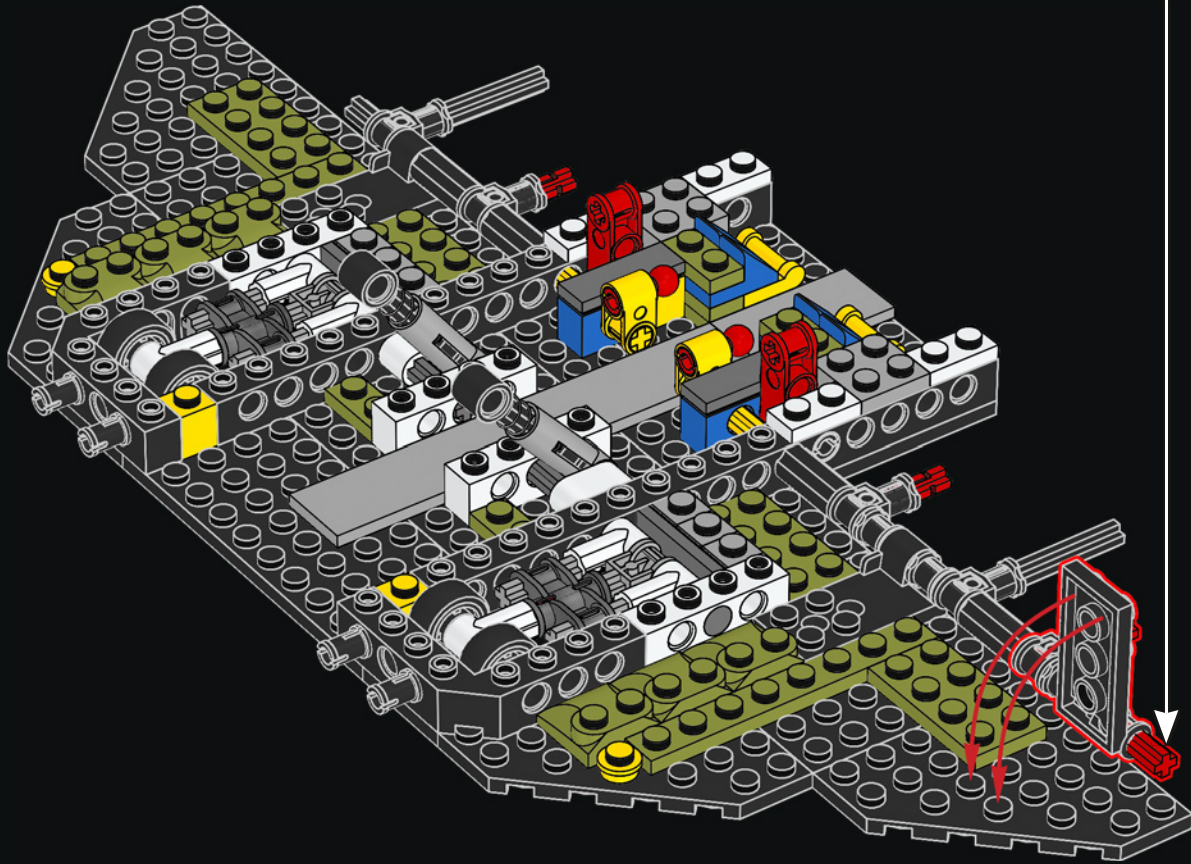
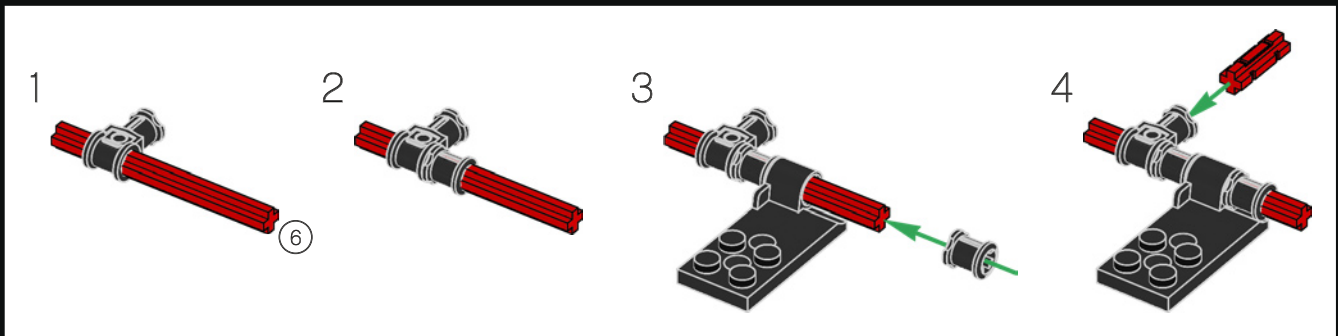
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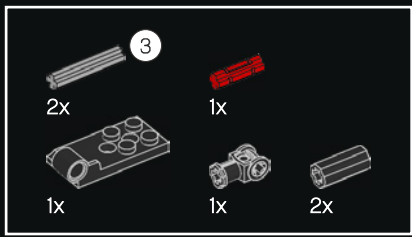




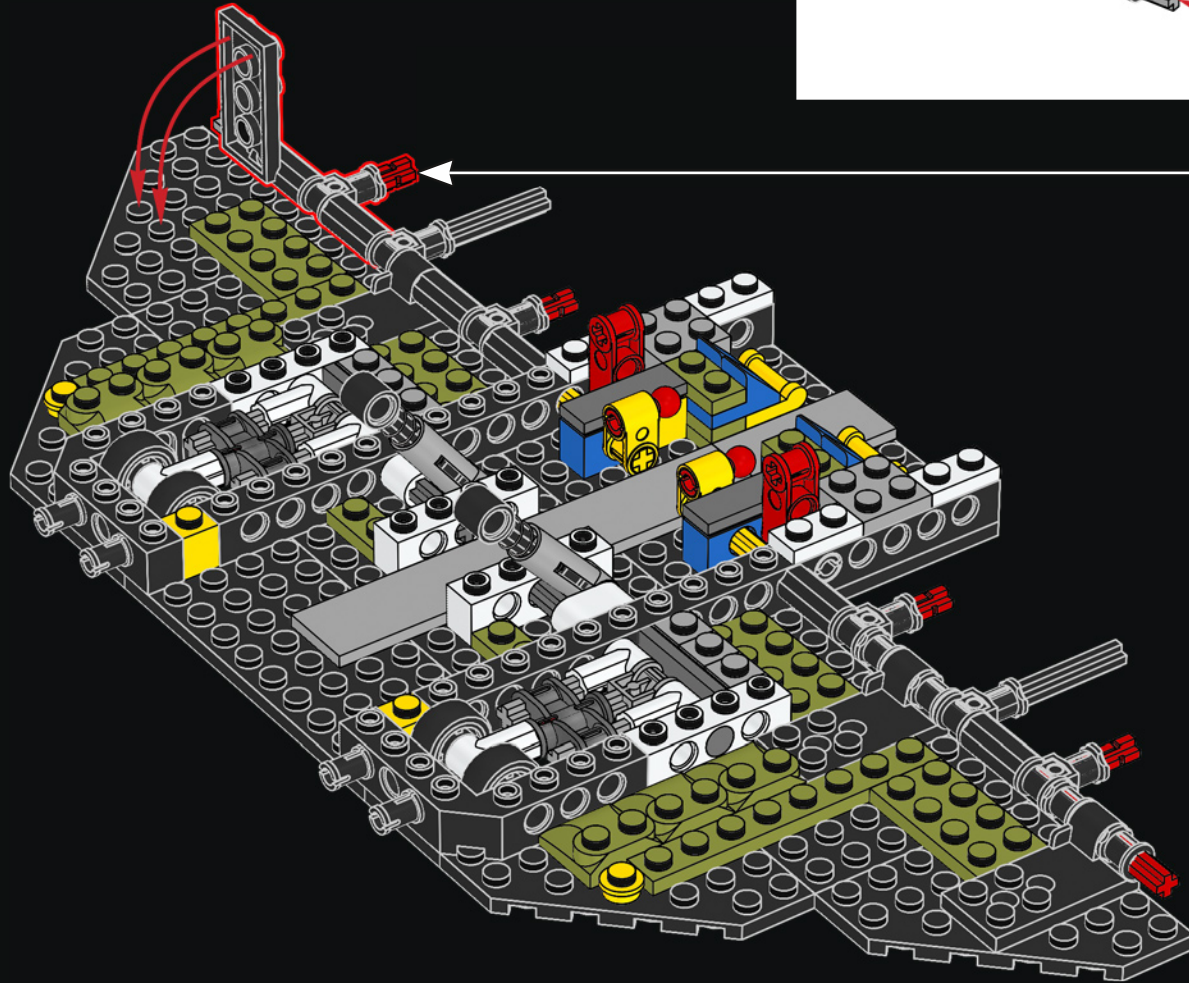
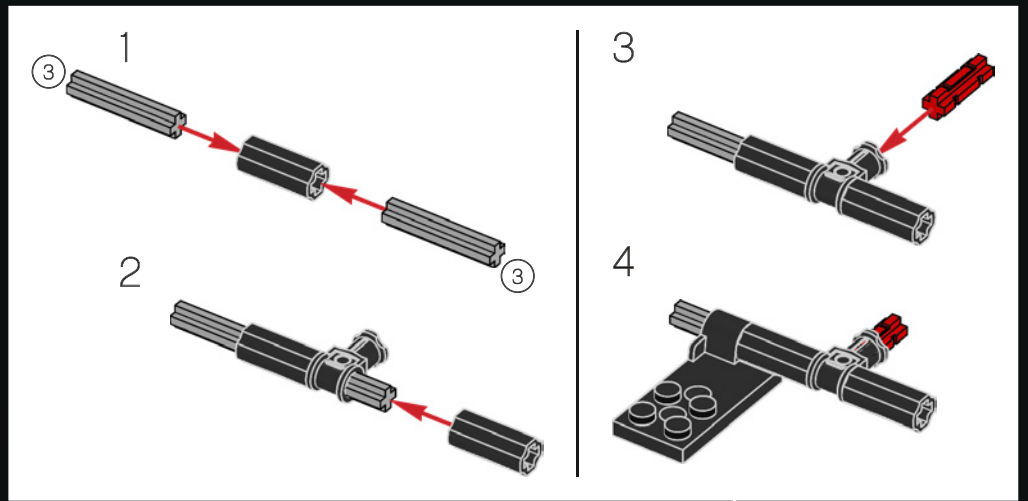


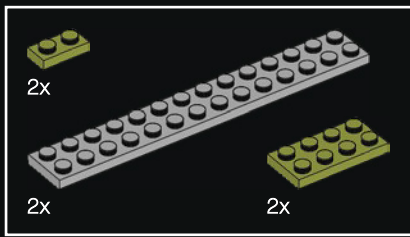
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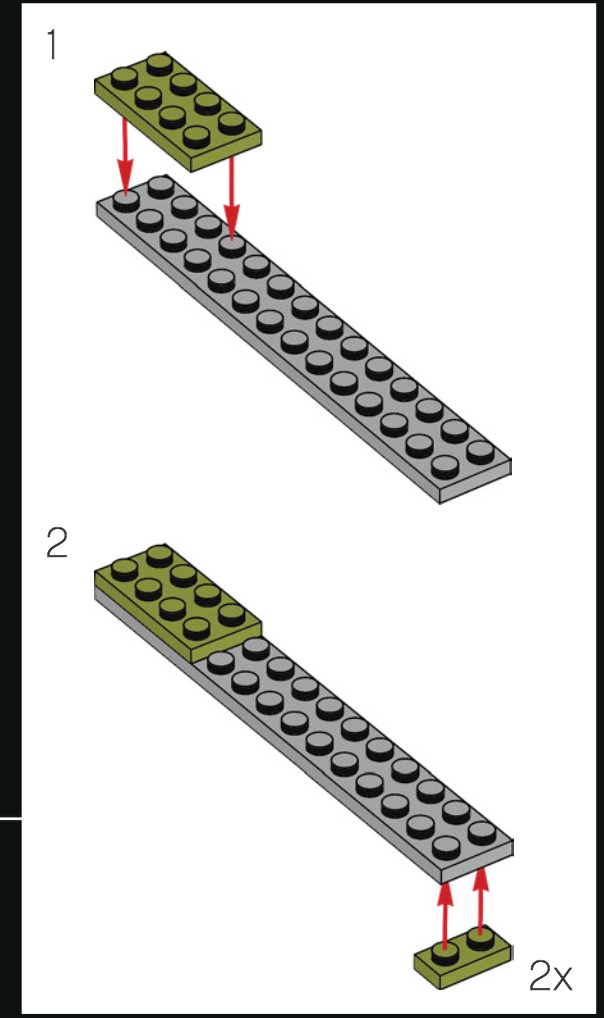
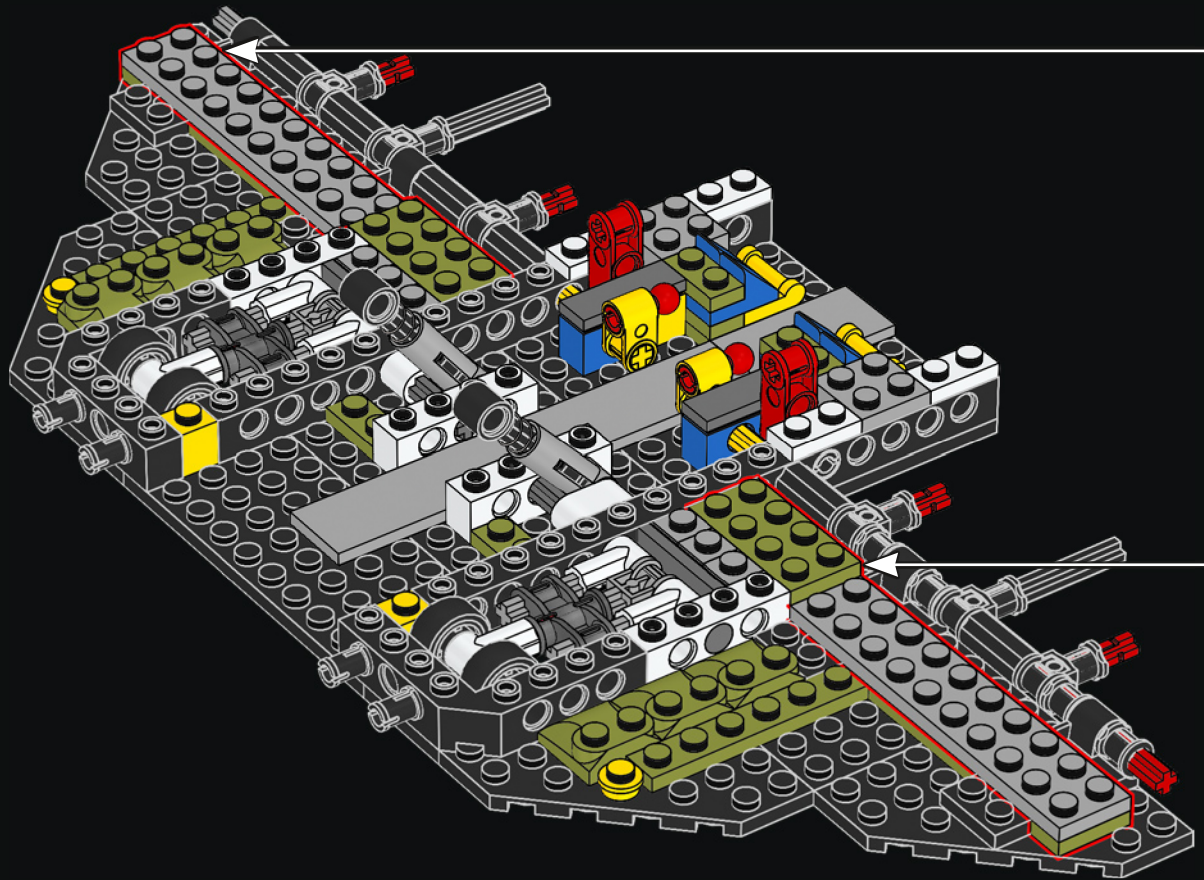


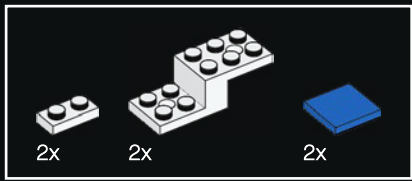
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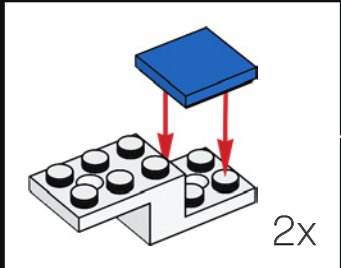
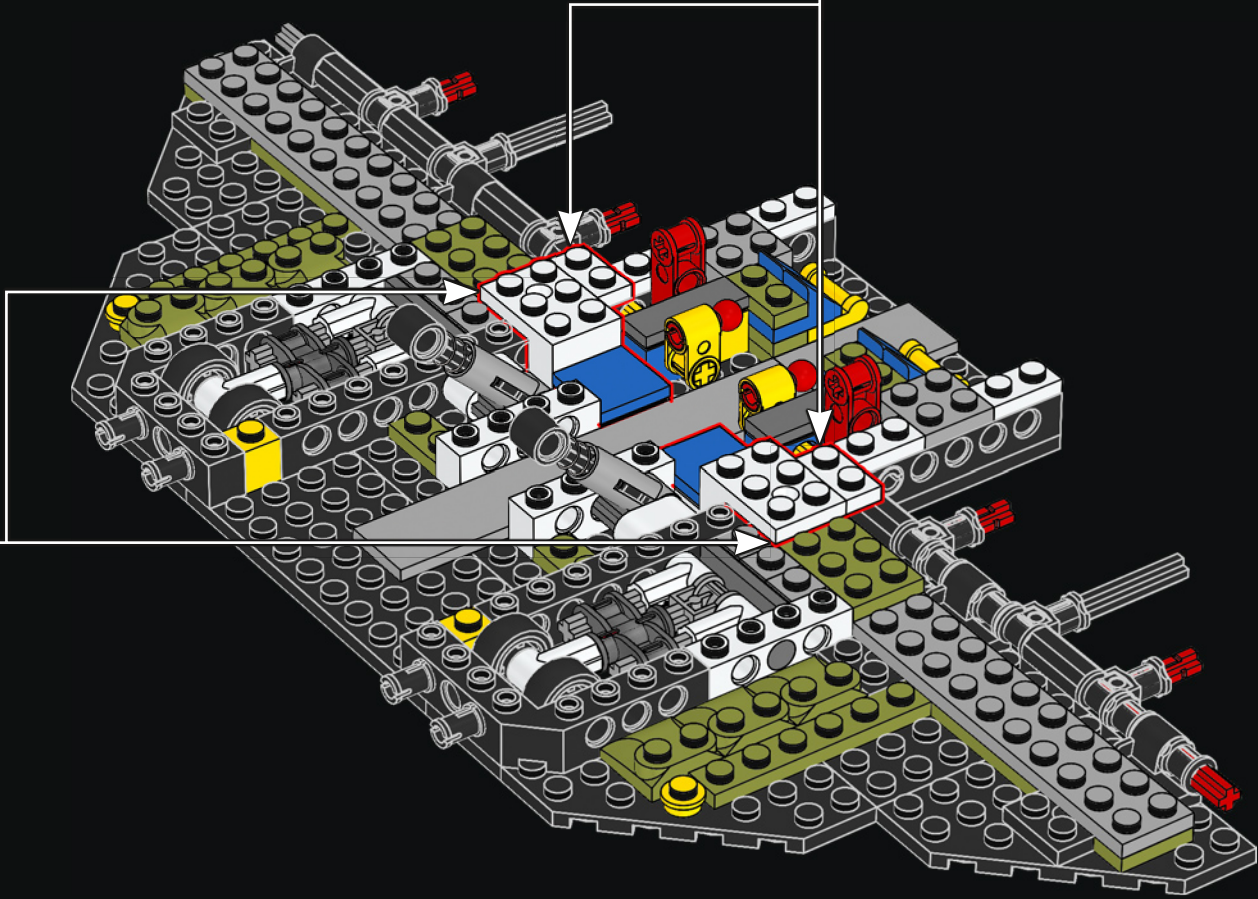
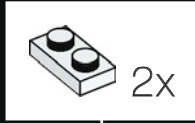


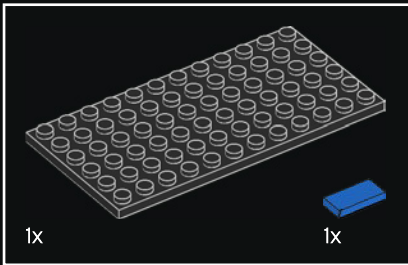
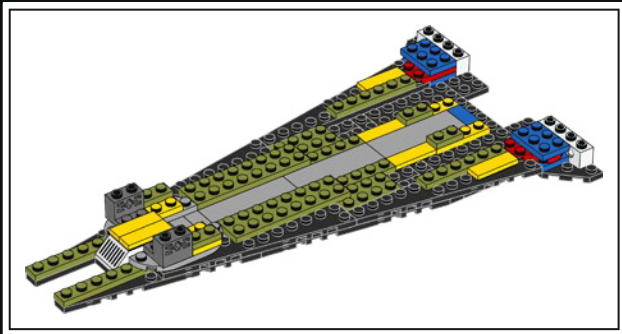
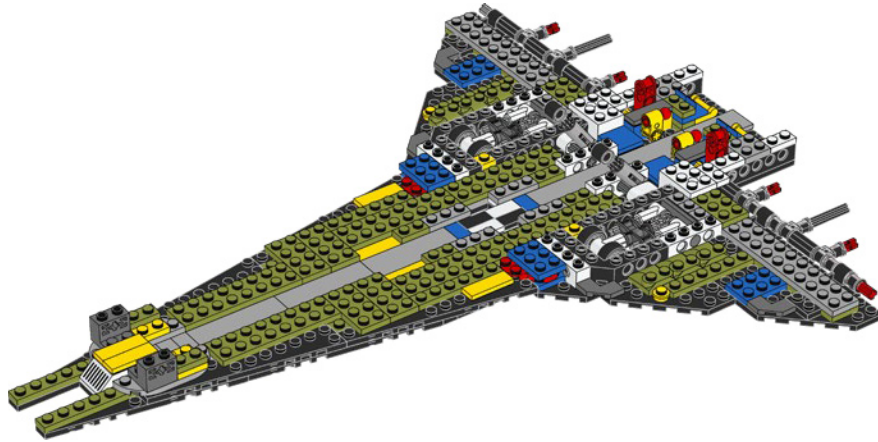
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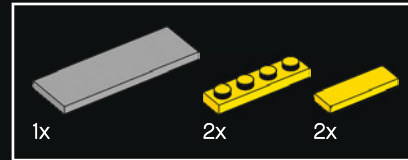
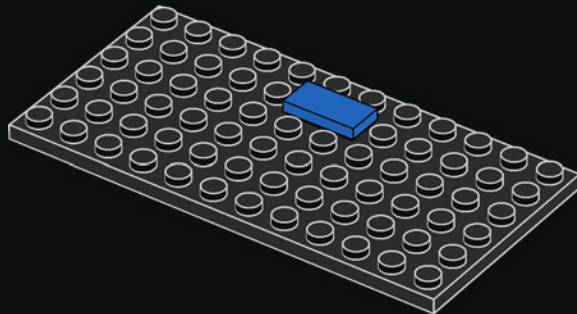




1x

1x

34

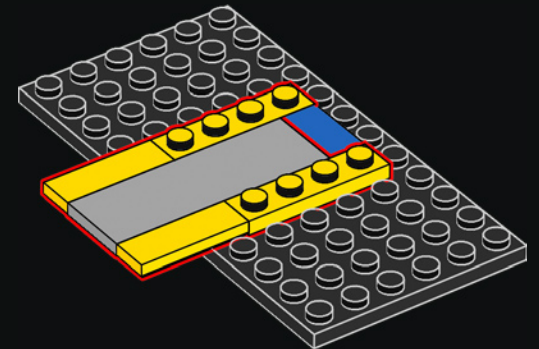


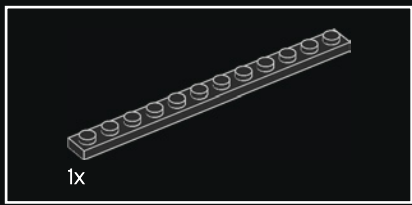
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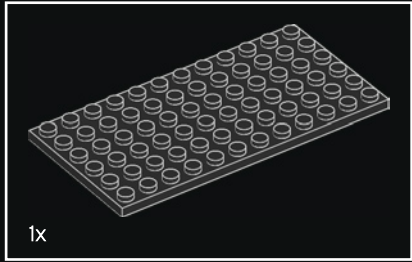
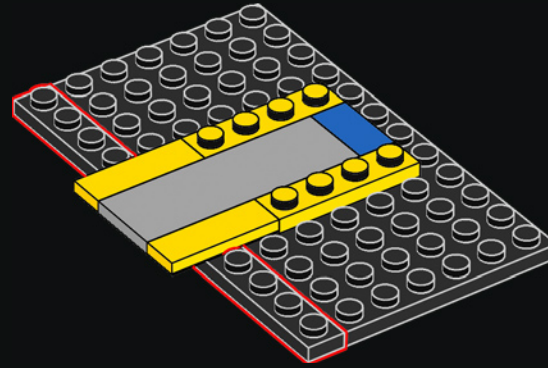
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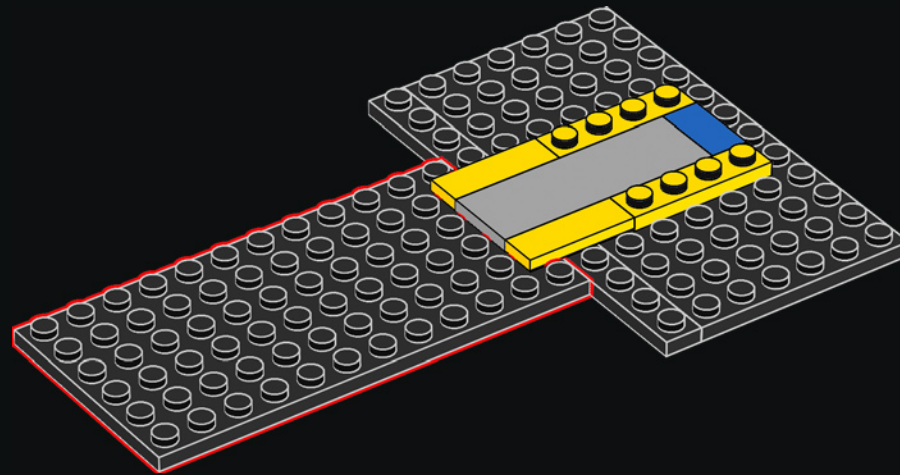


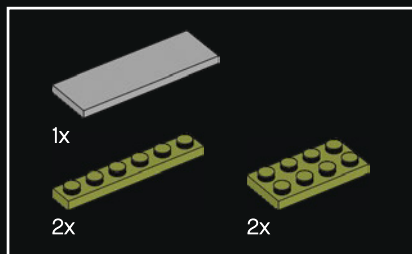


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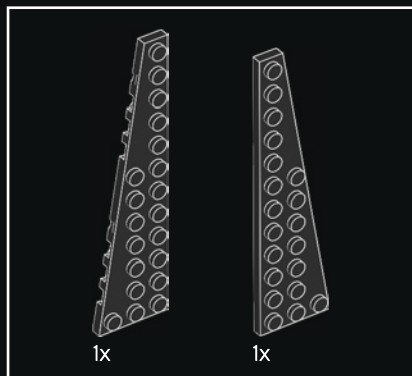
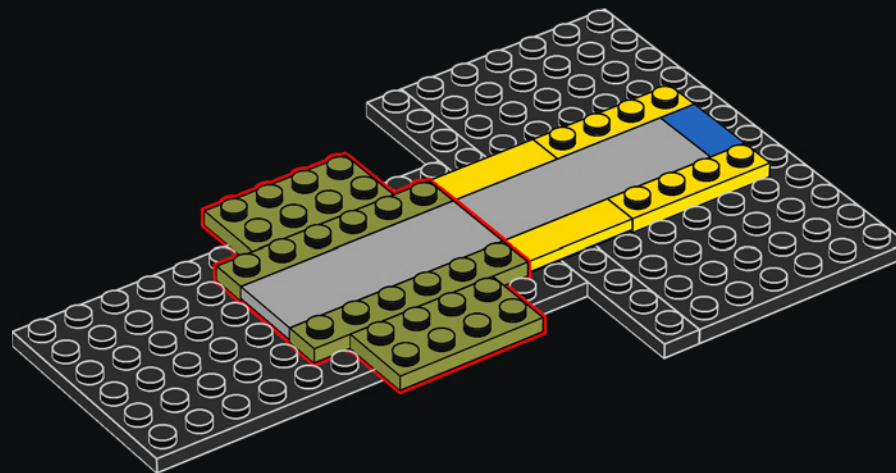


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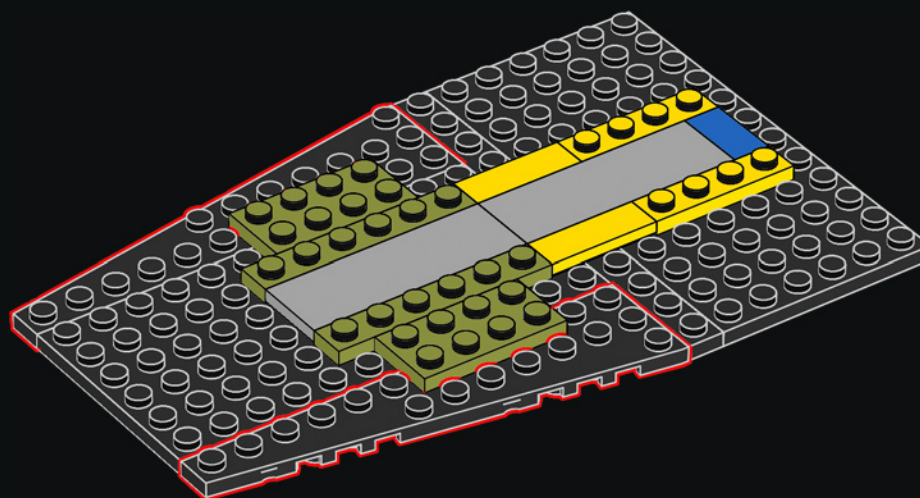


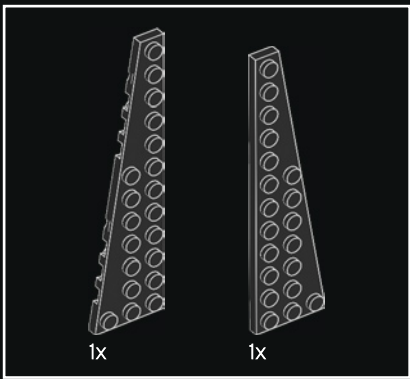


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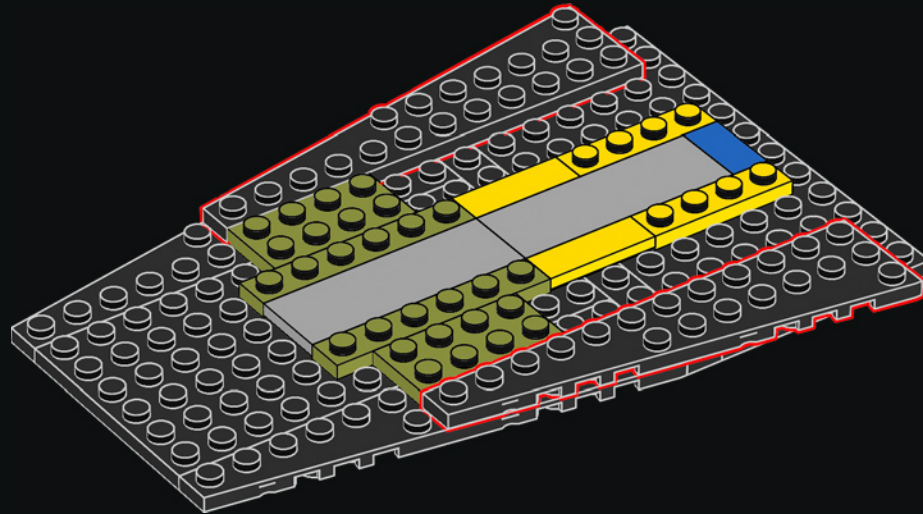




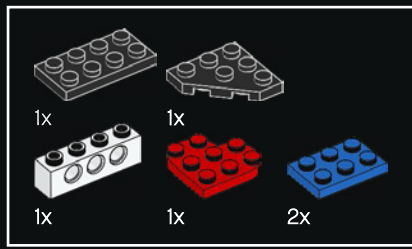
### 你知道吗？

航天飞机的轨道速度高达 28158 公里/小时（17500 英里/小时），  
机组人员每 45 分钟就可以看一次日出或日落。

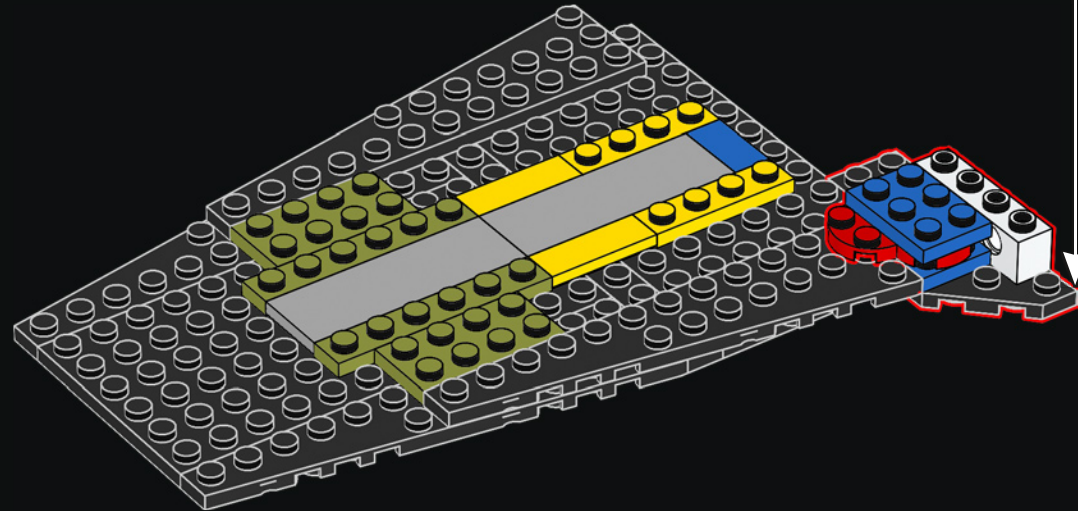
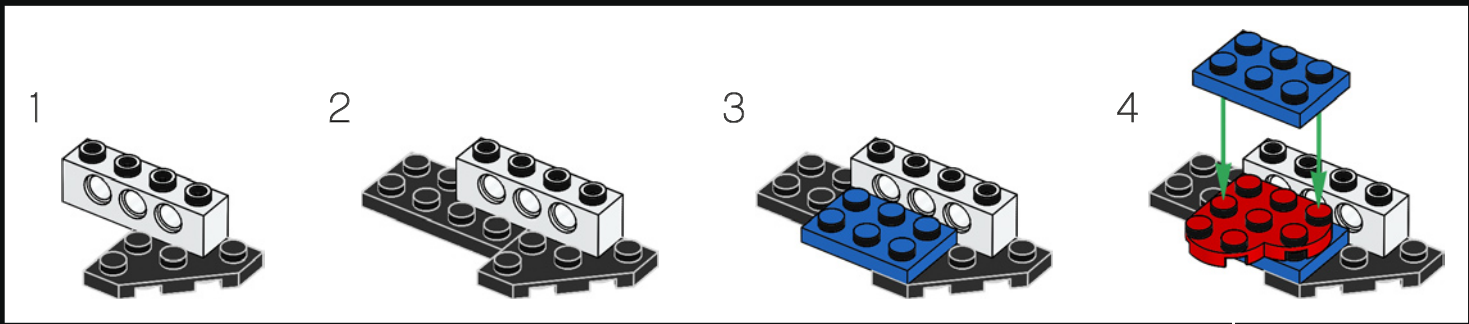
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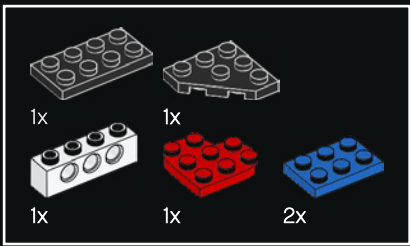




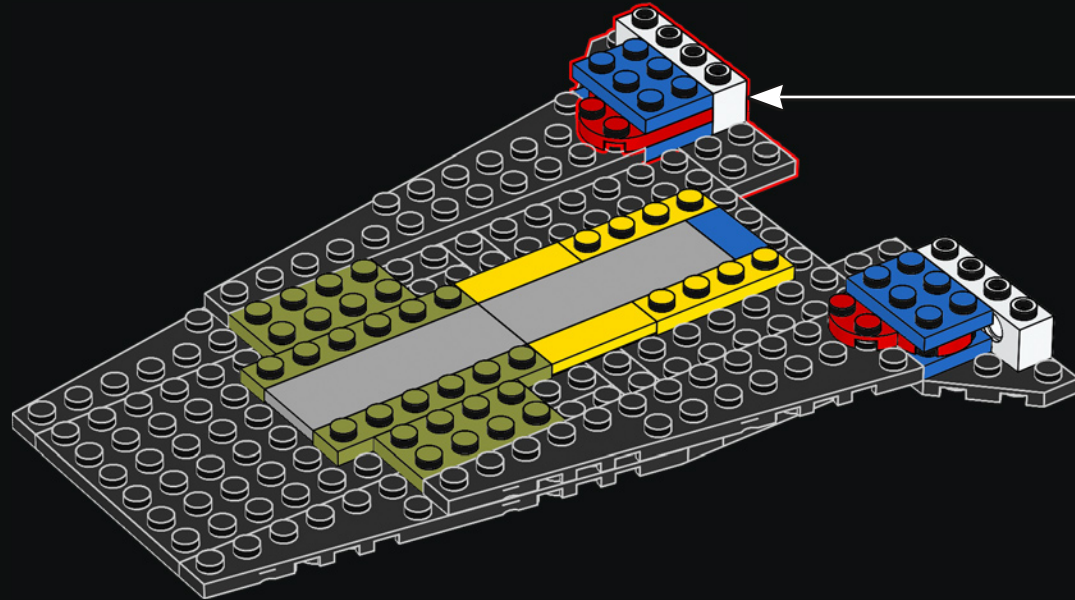
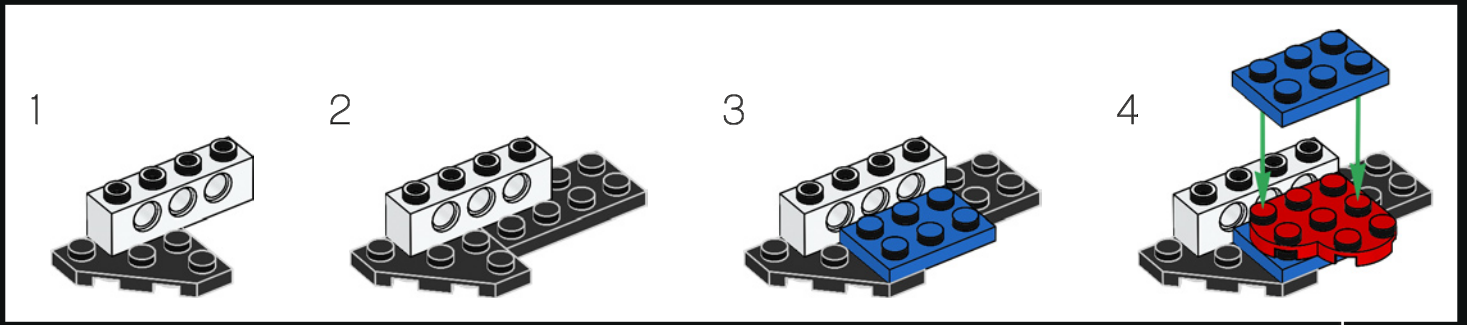


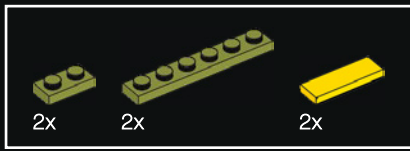
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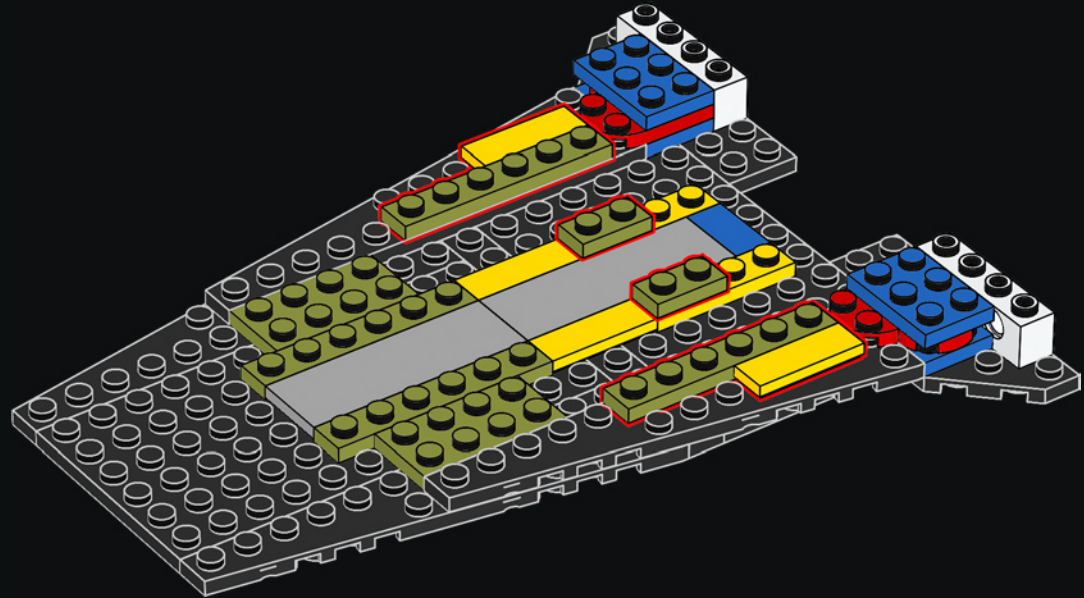


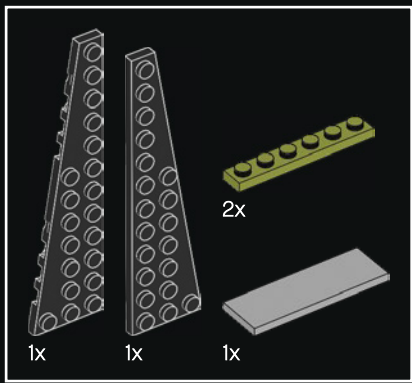
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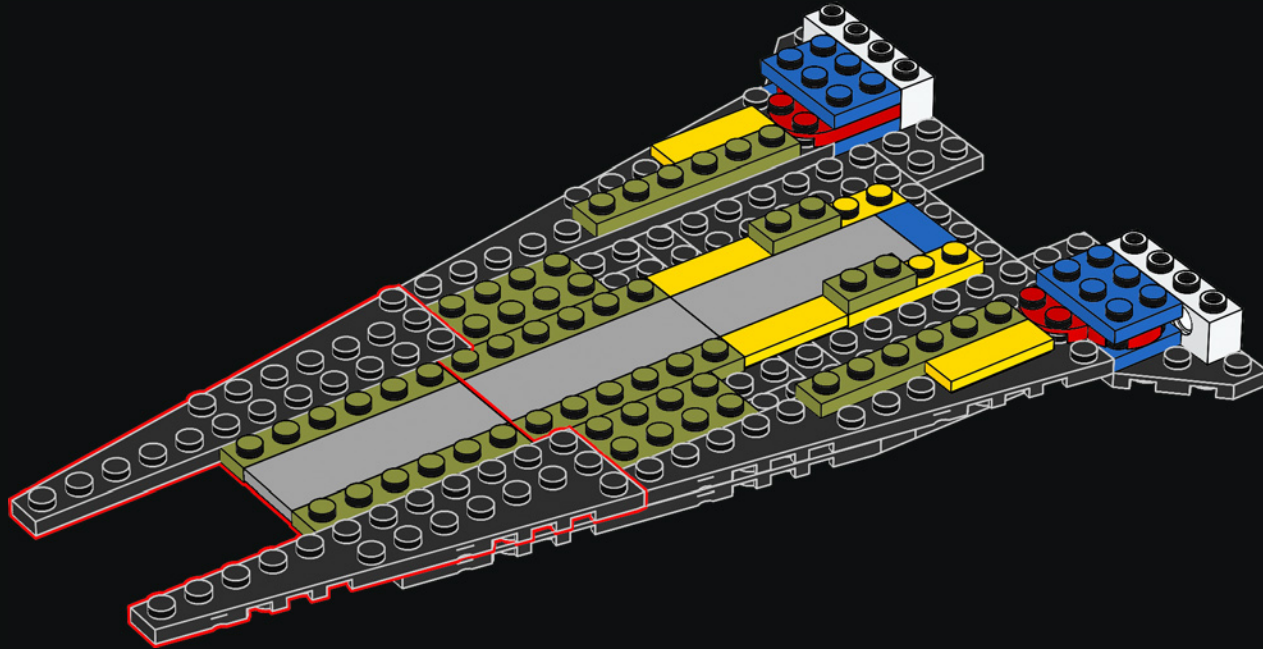


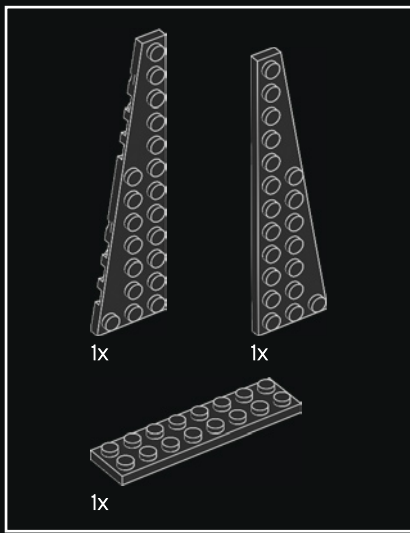
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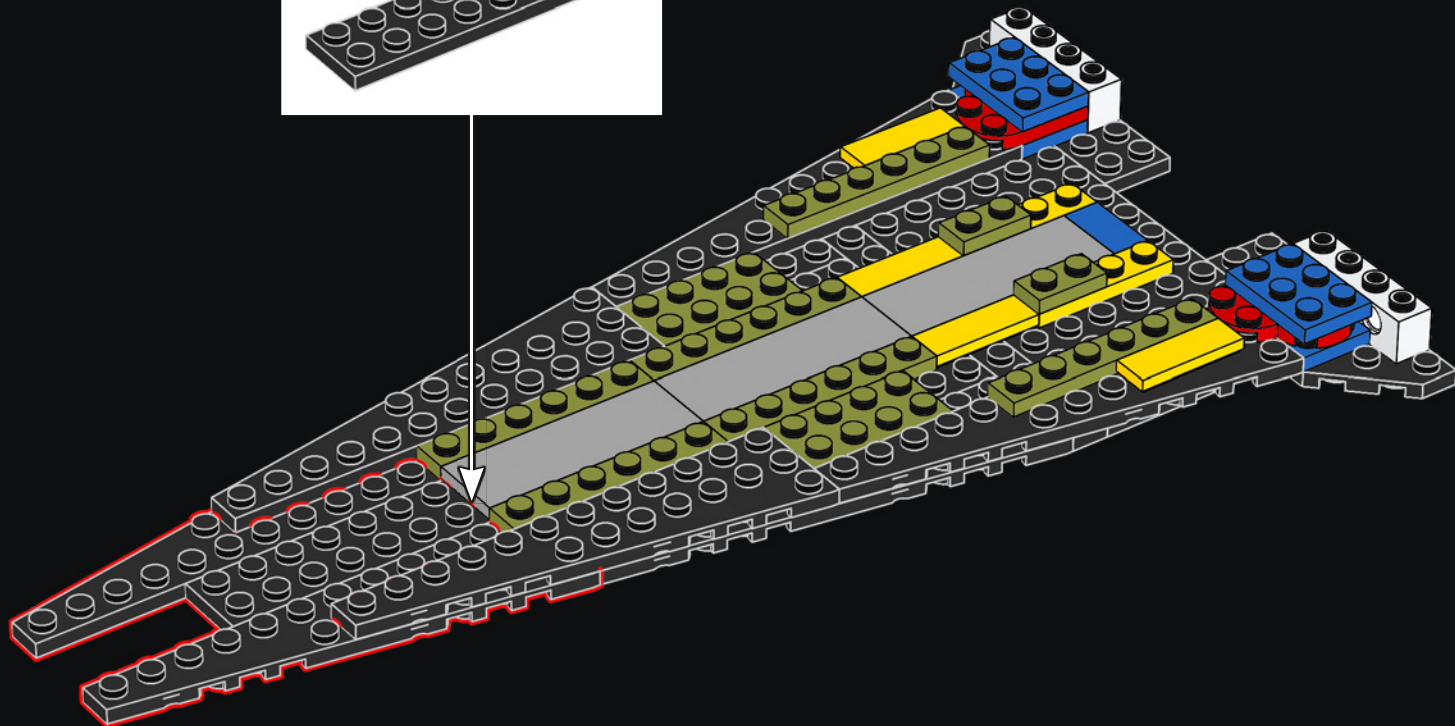
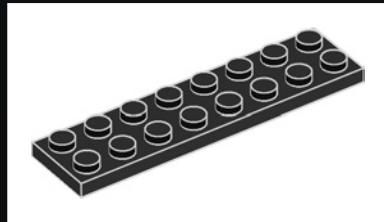


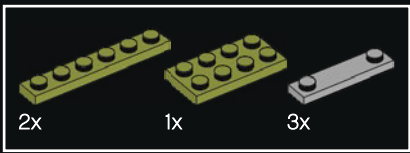
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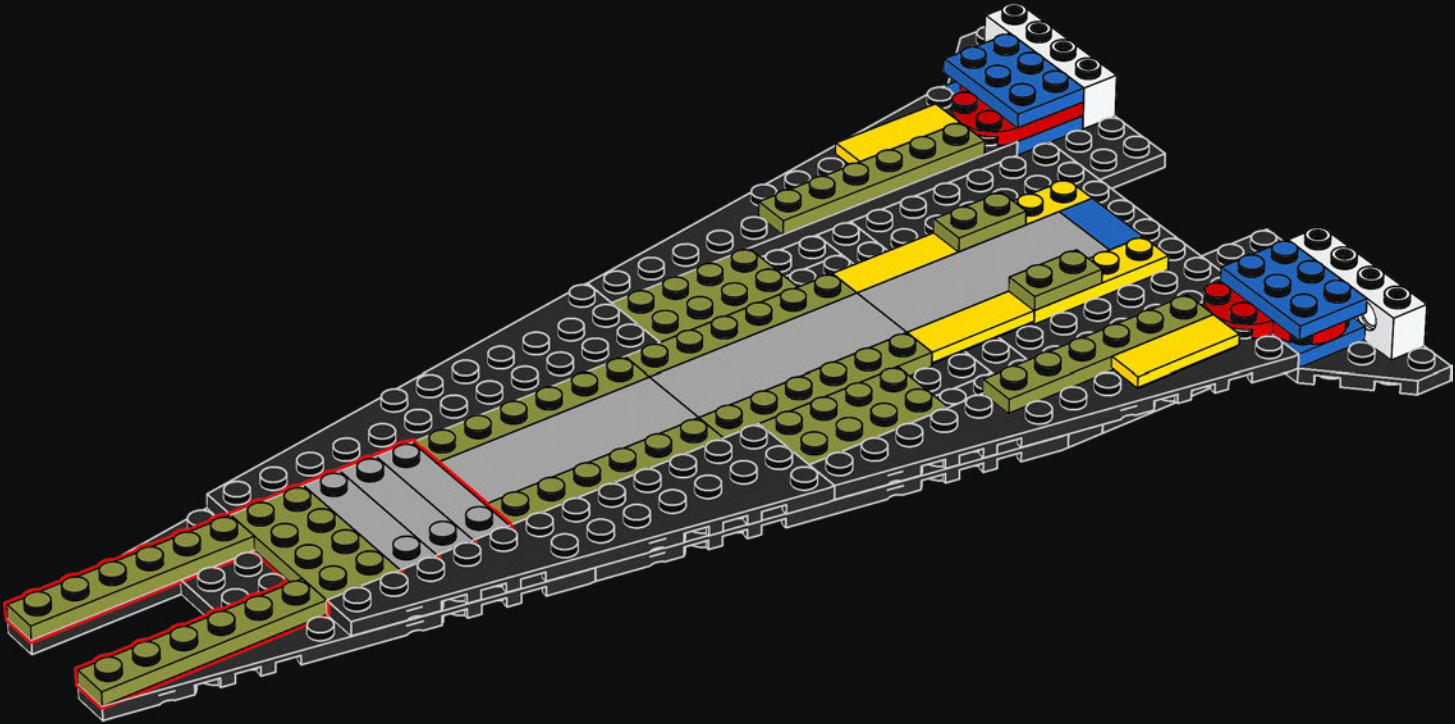


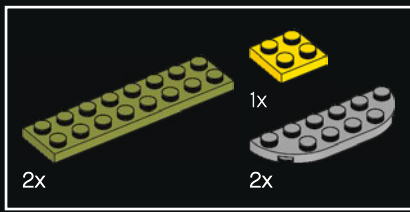
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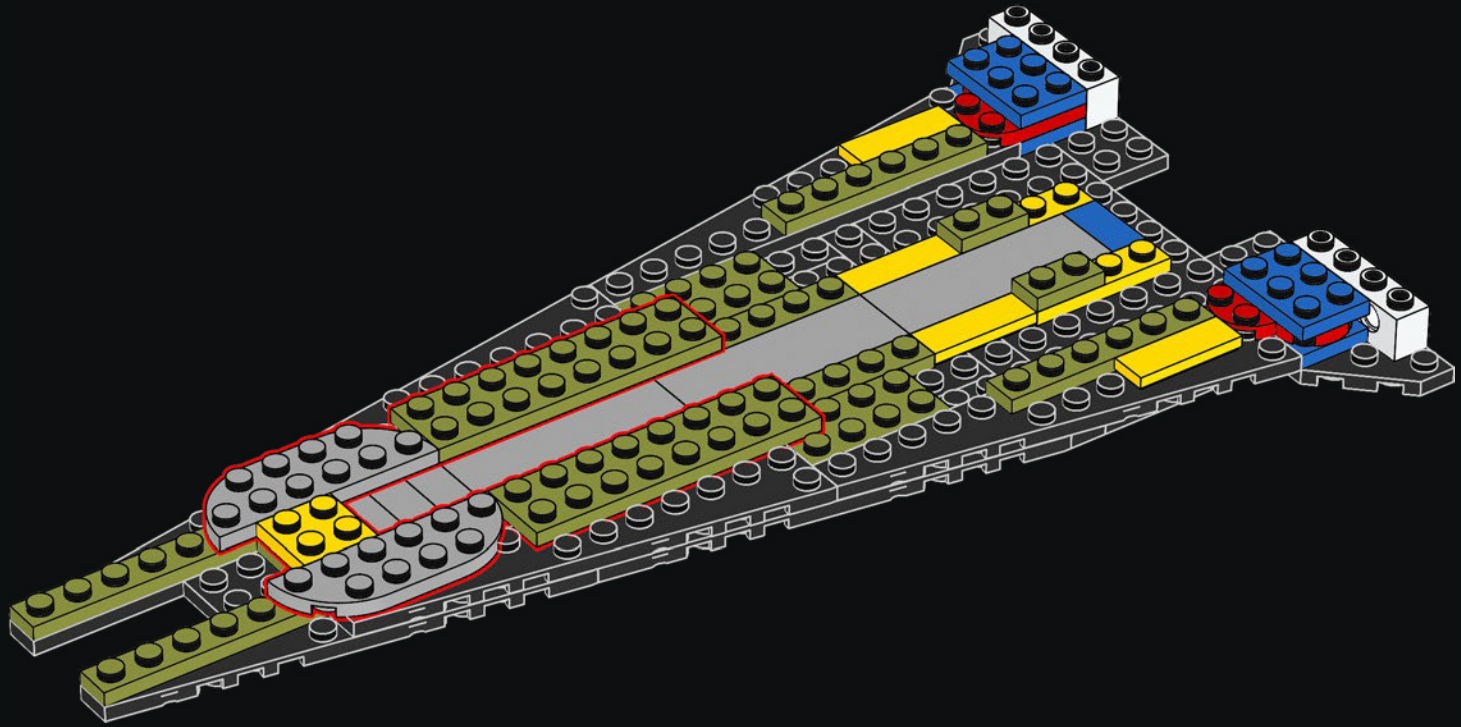


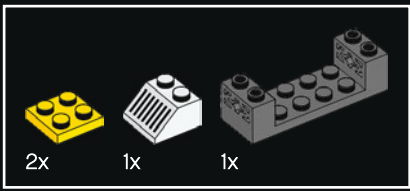
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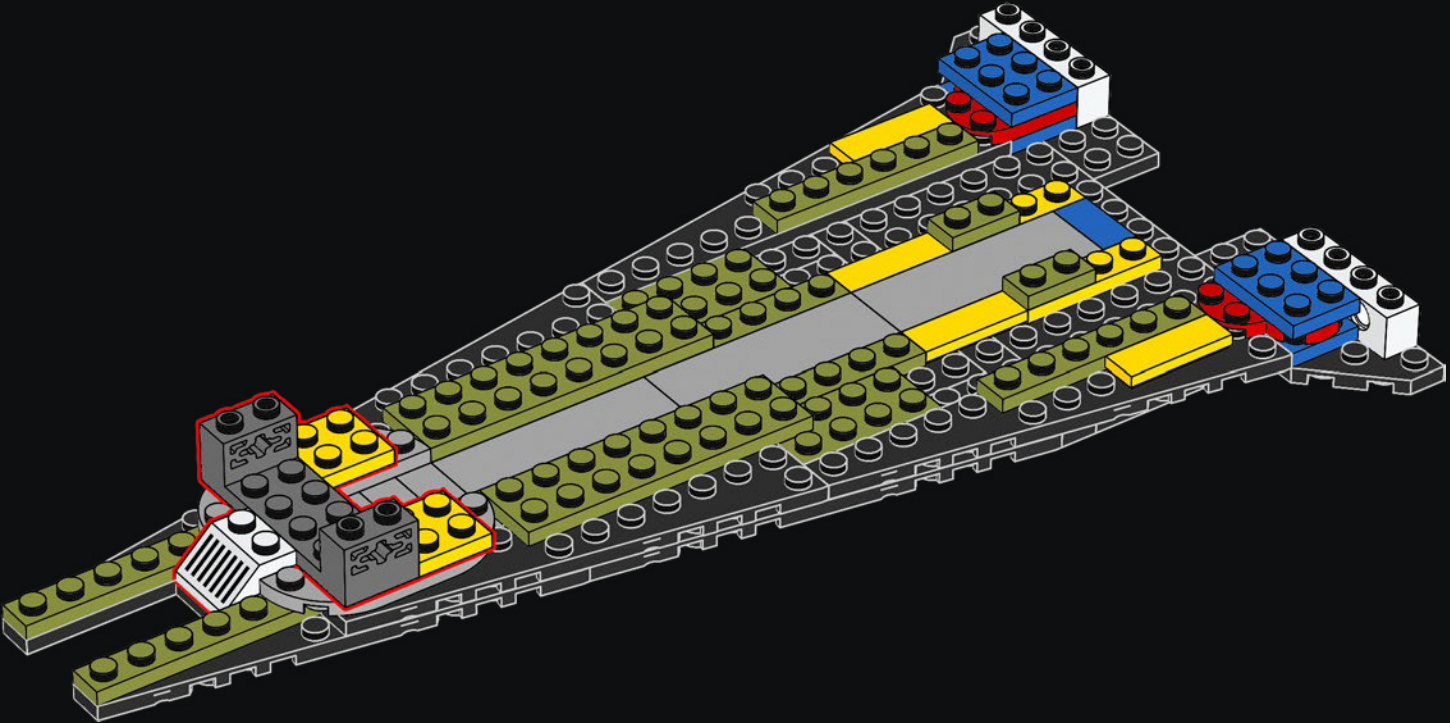


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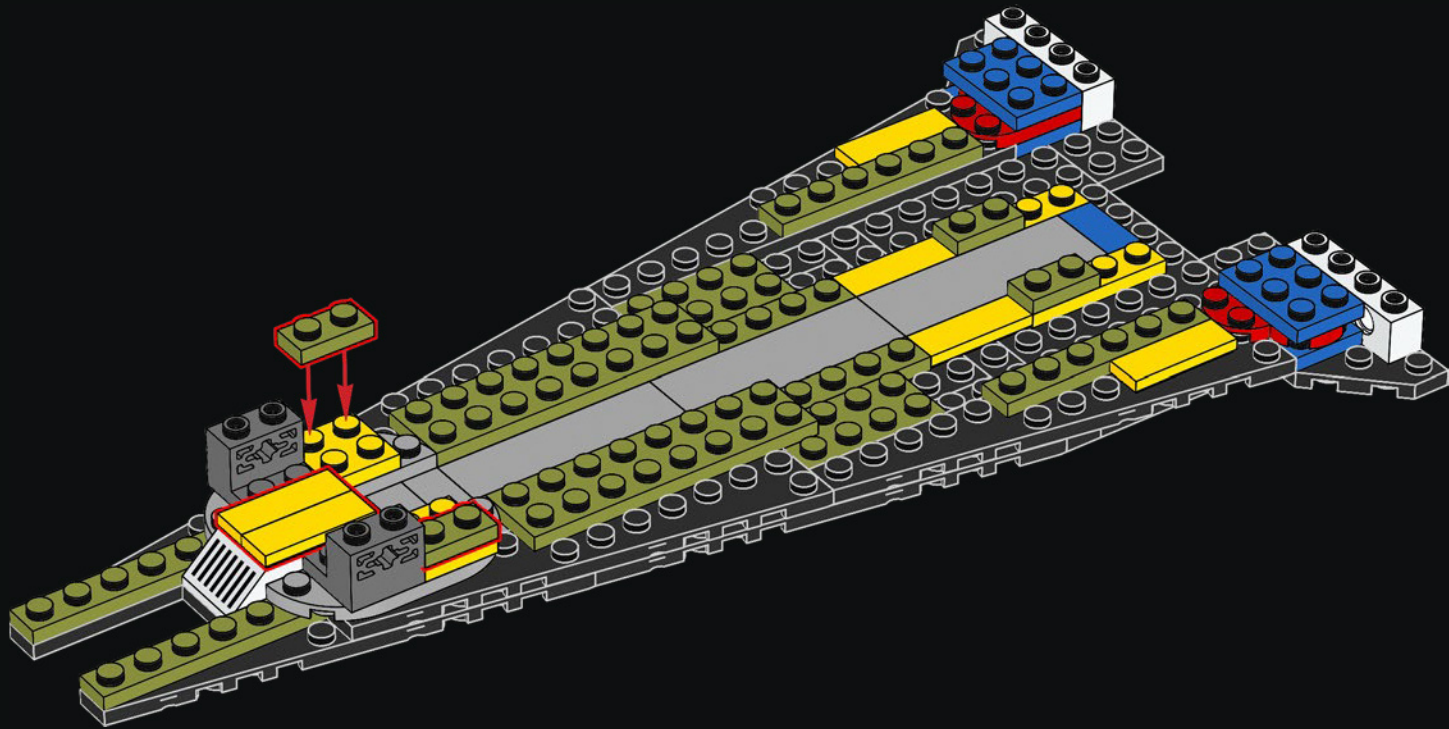
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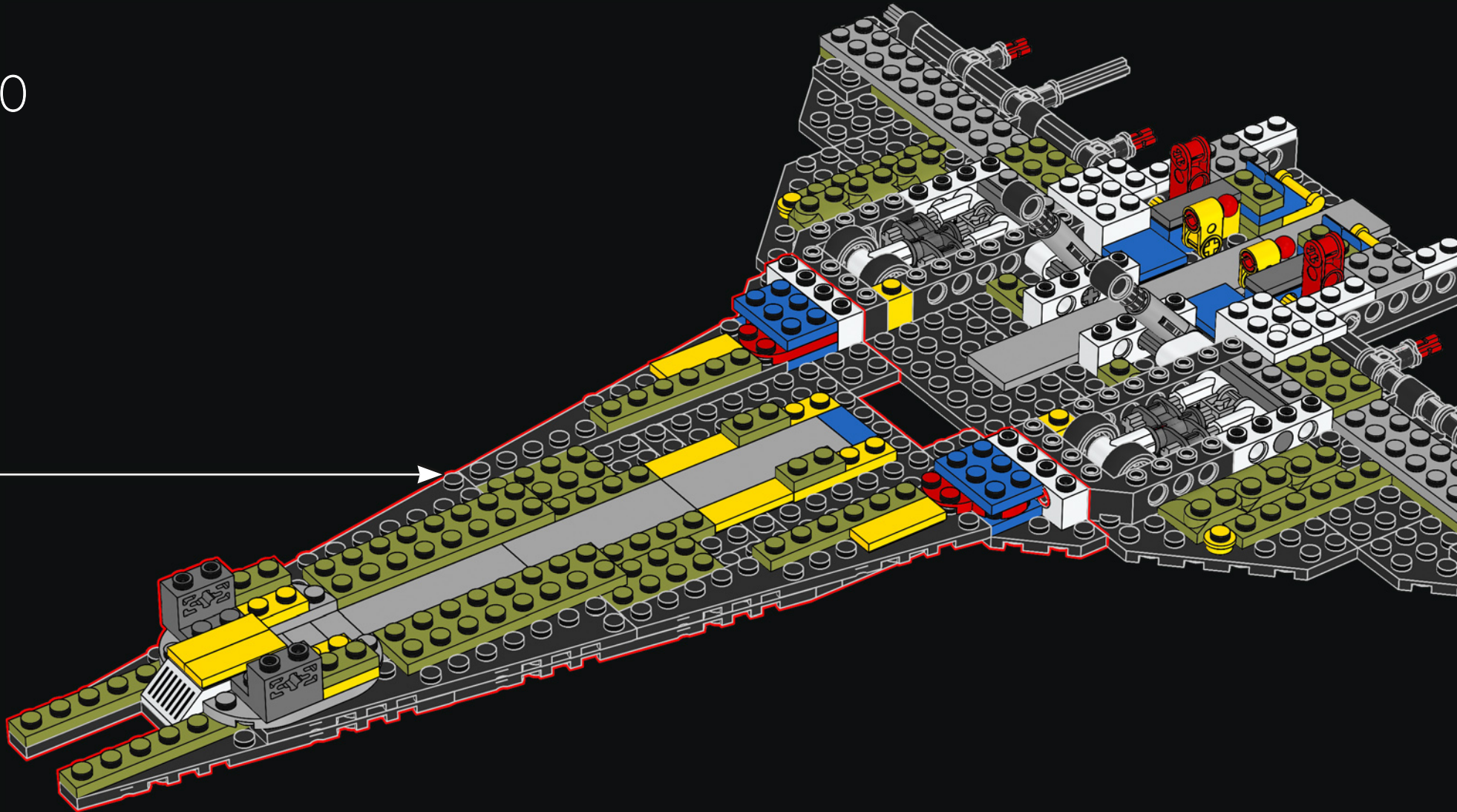


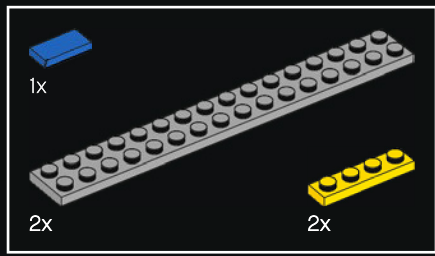


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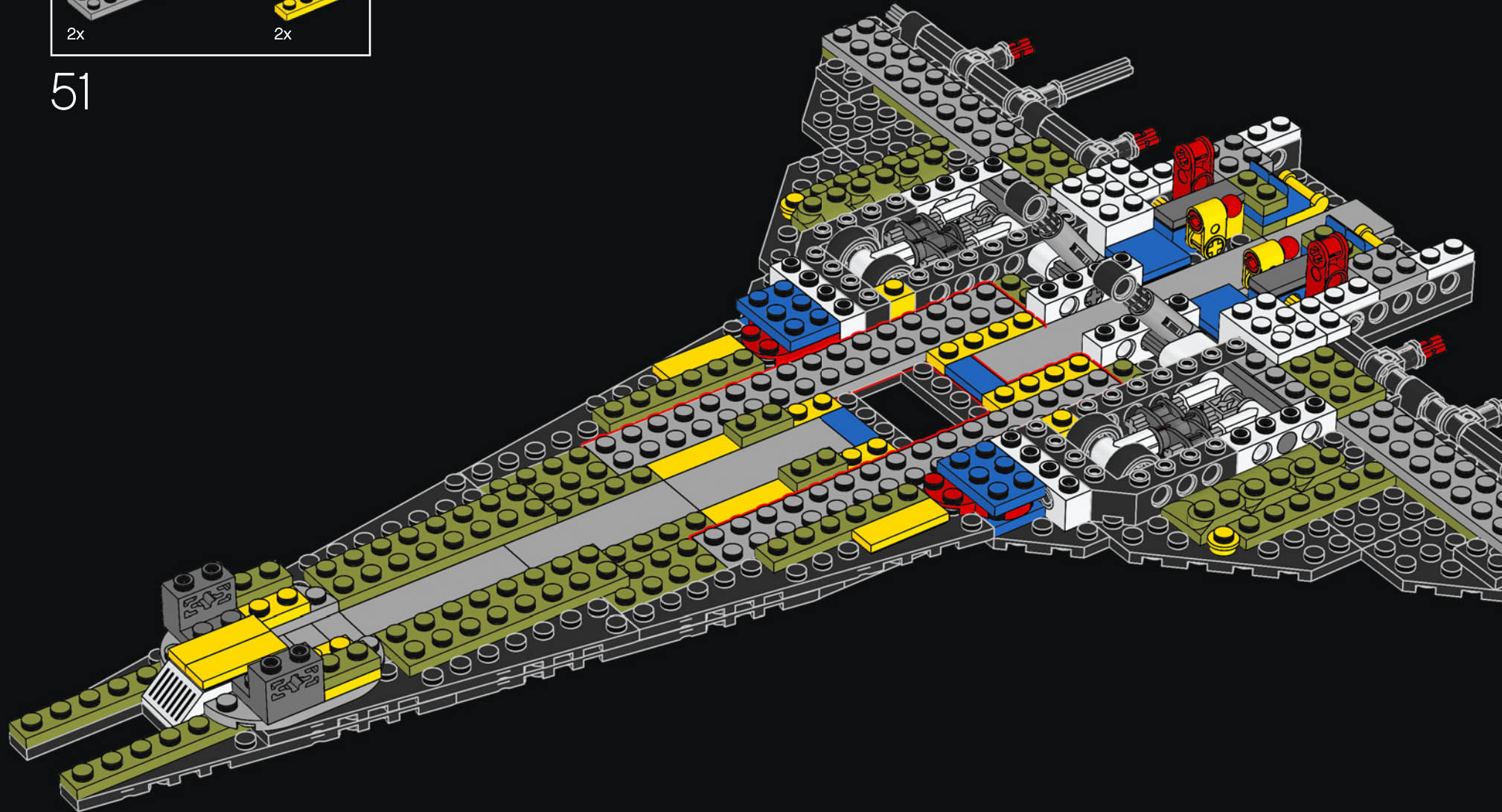


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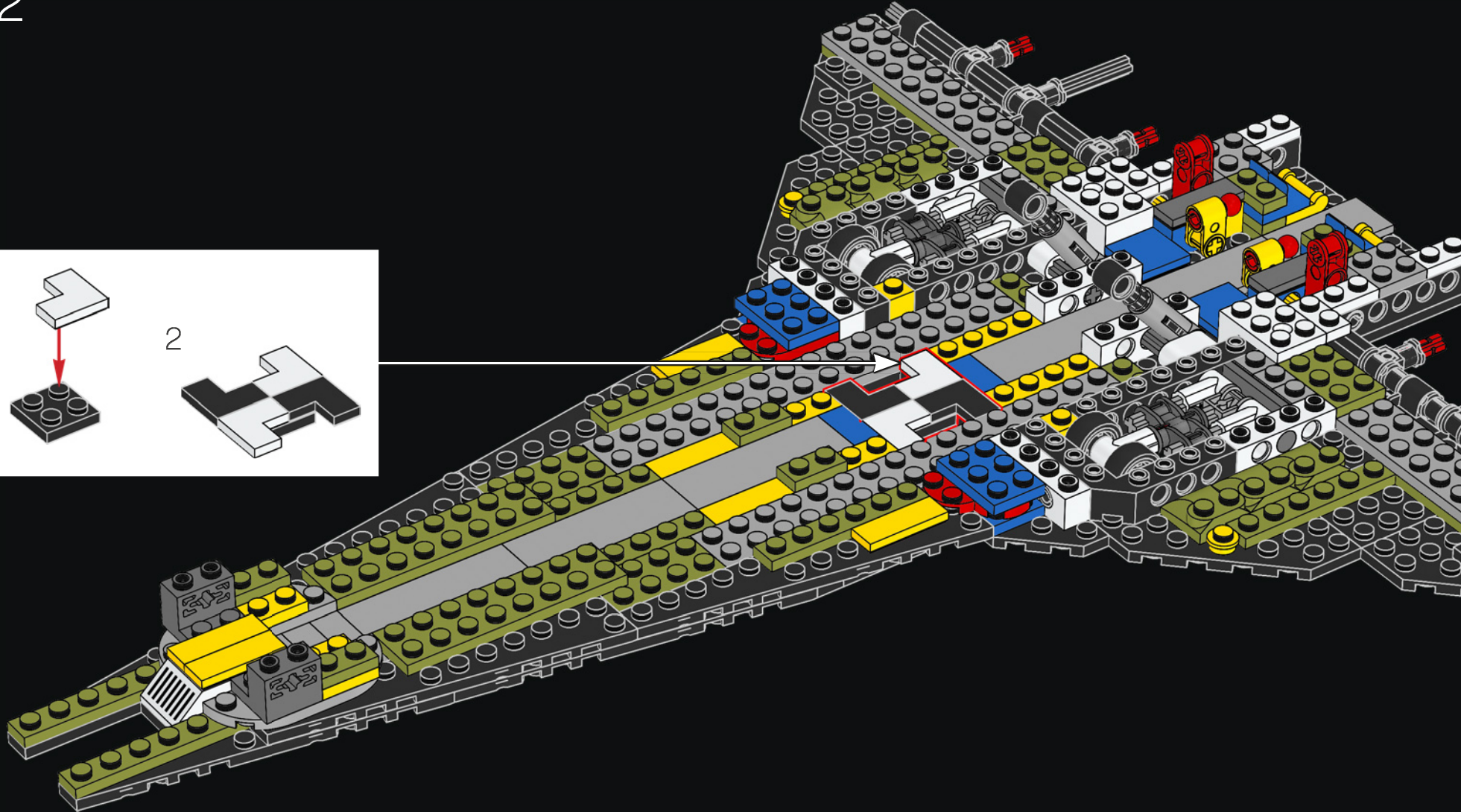
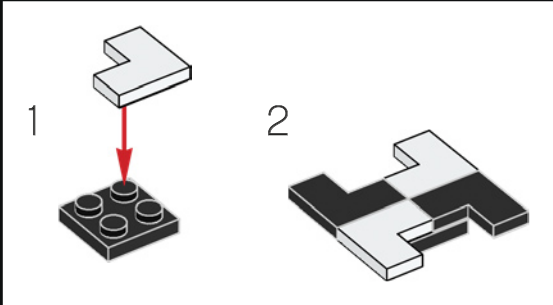


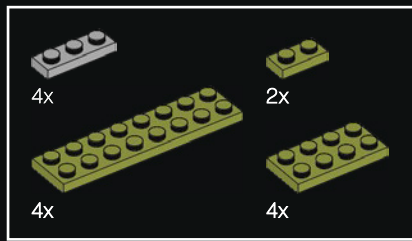
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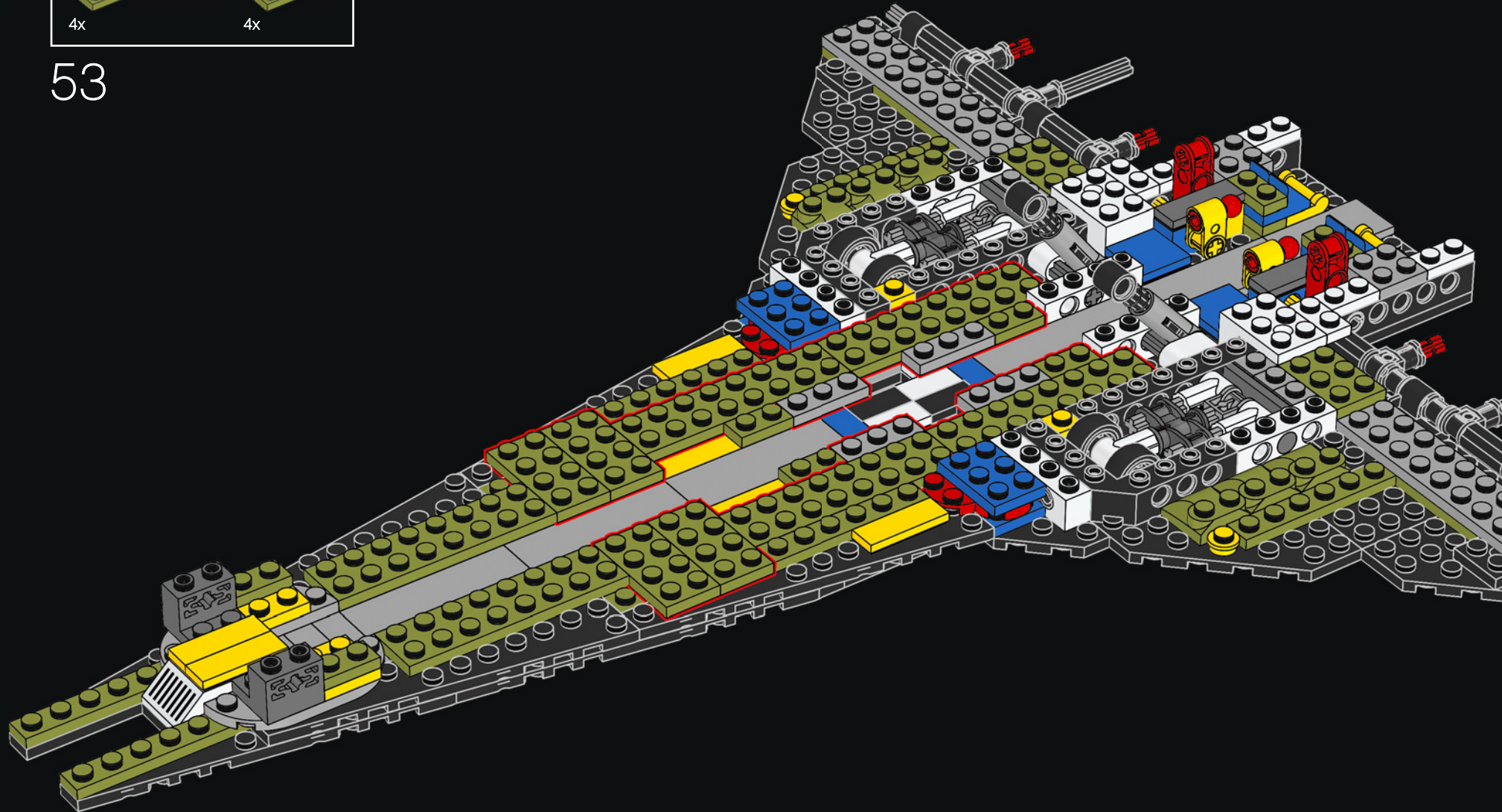


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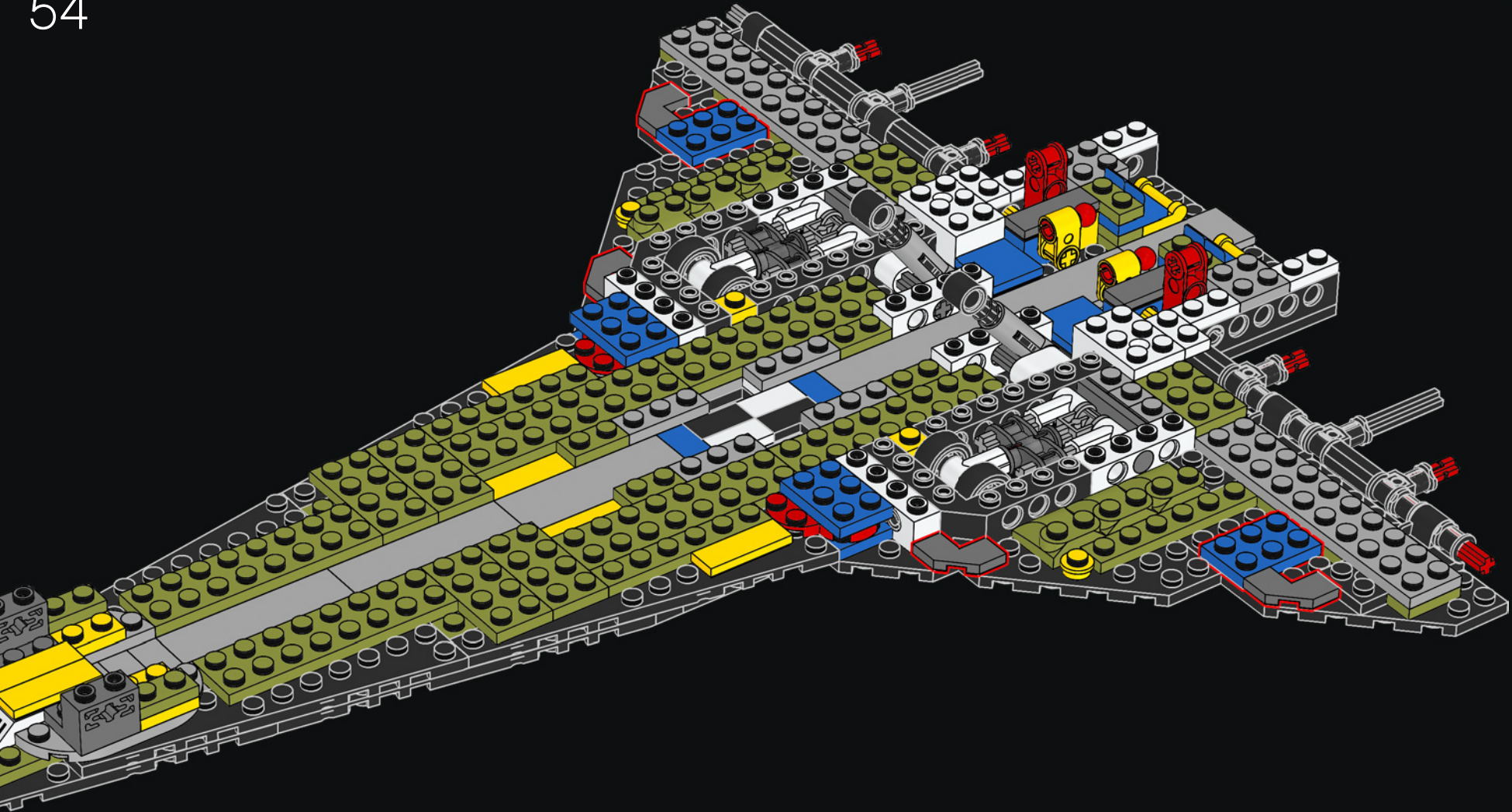


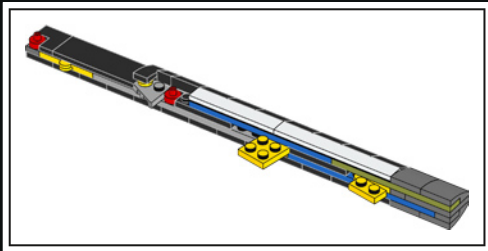
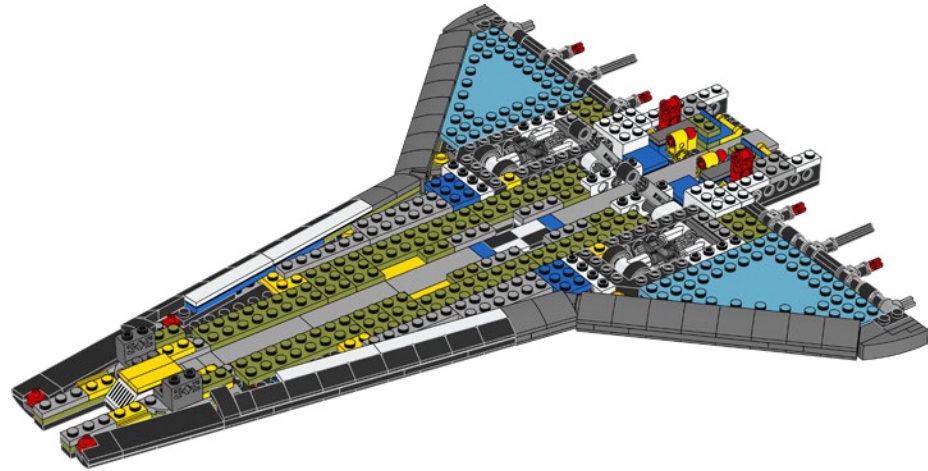
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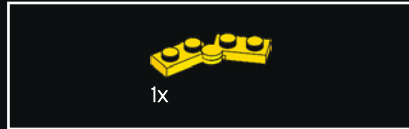
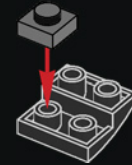


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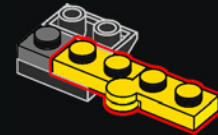




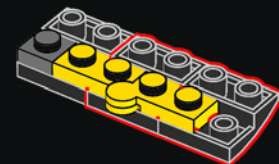
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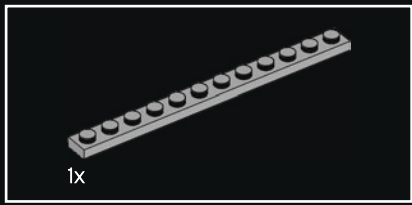


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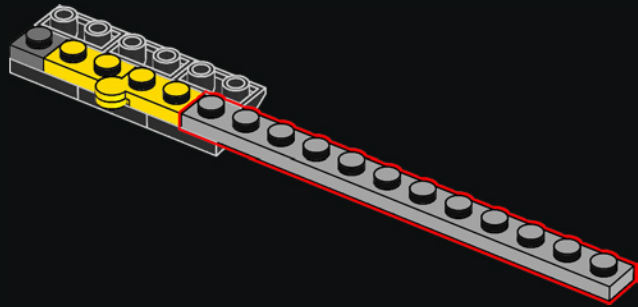
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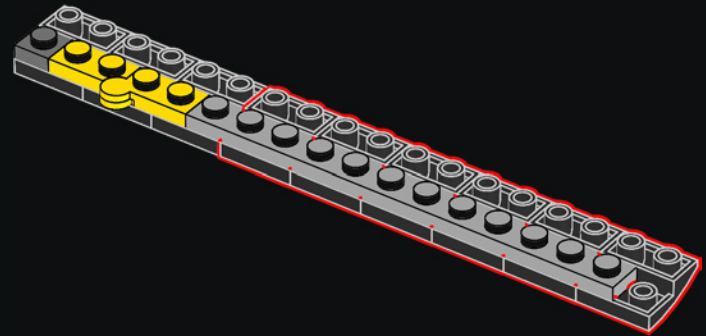
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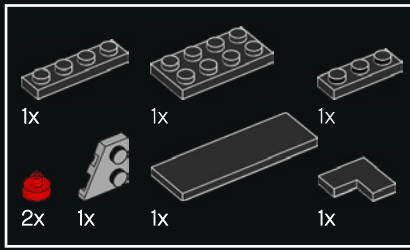


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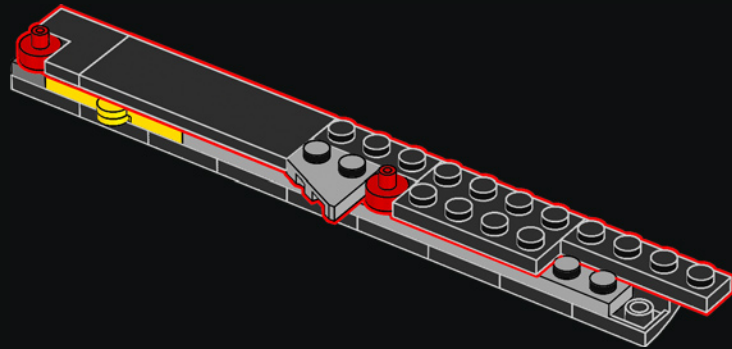
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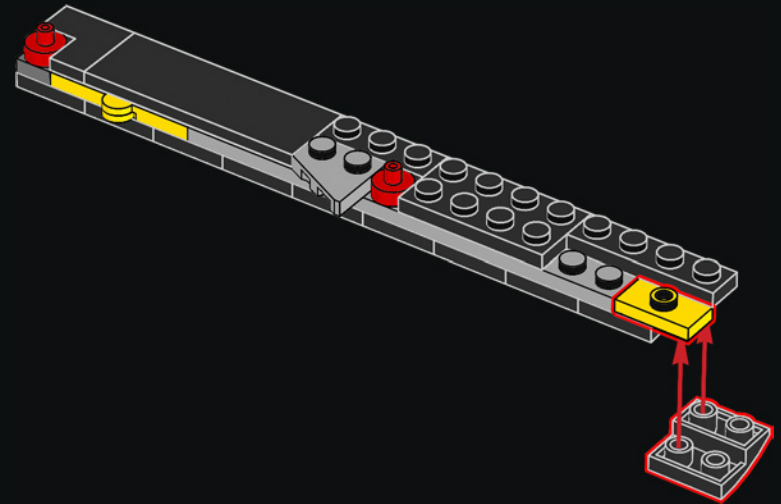


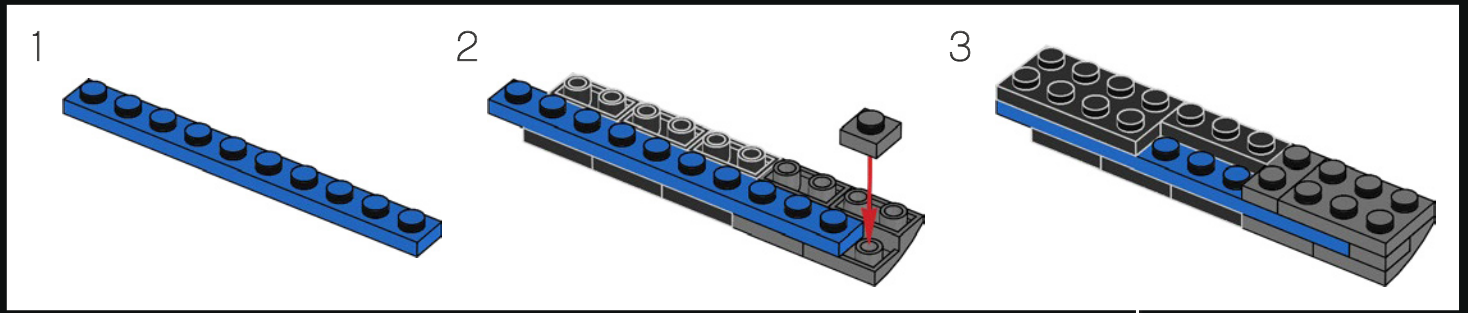
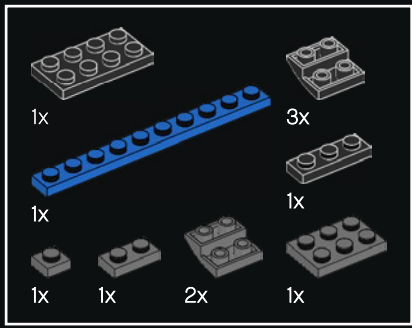


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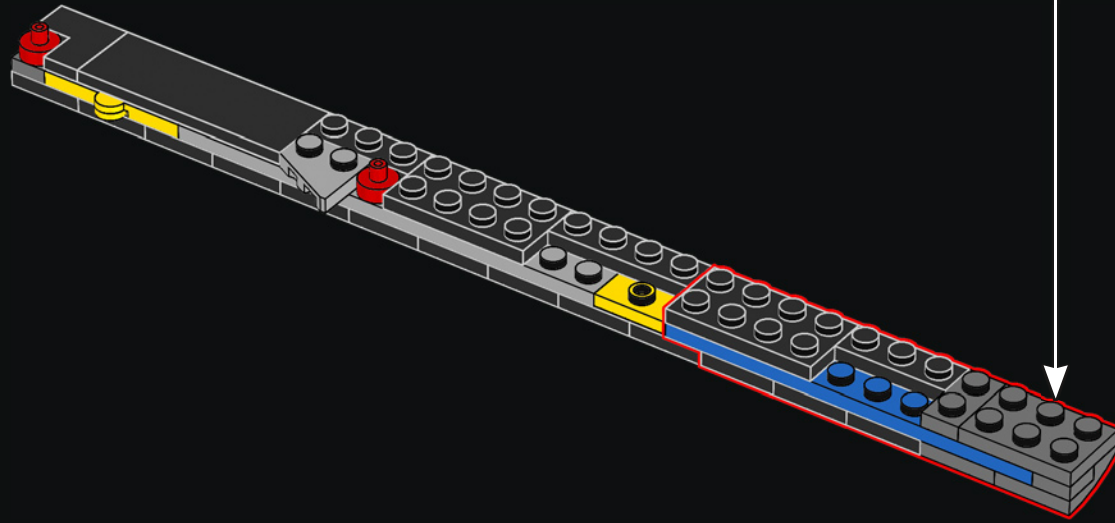


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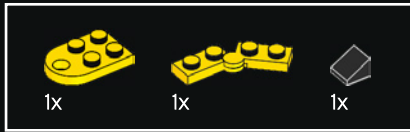
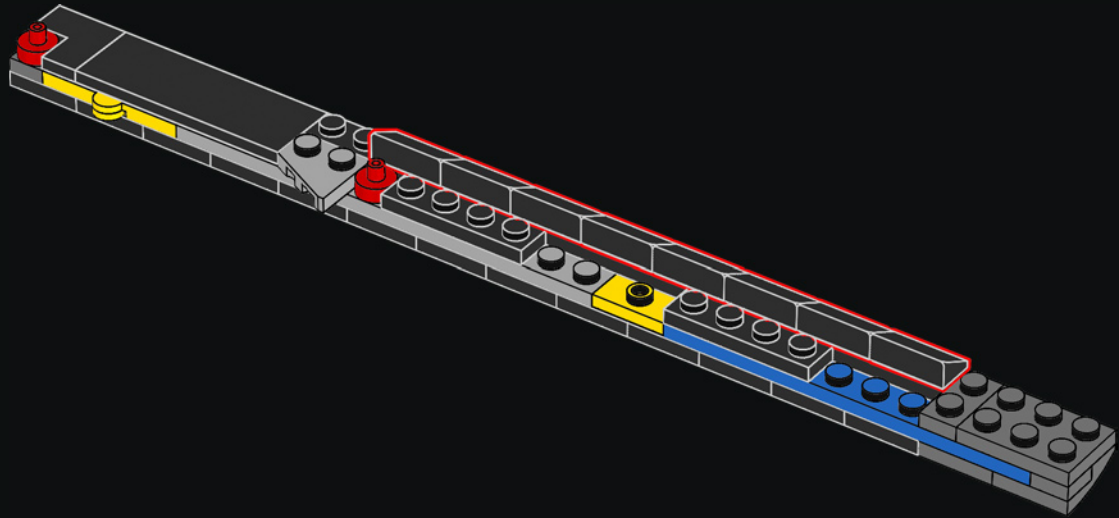


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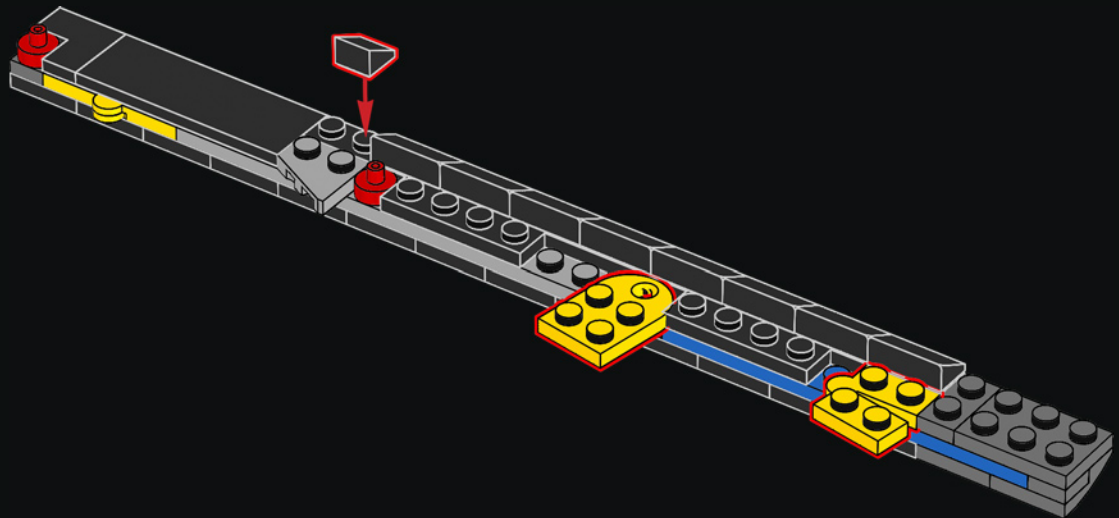


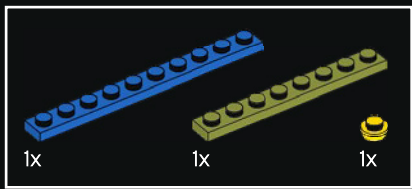


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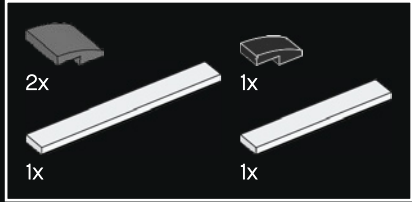
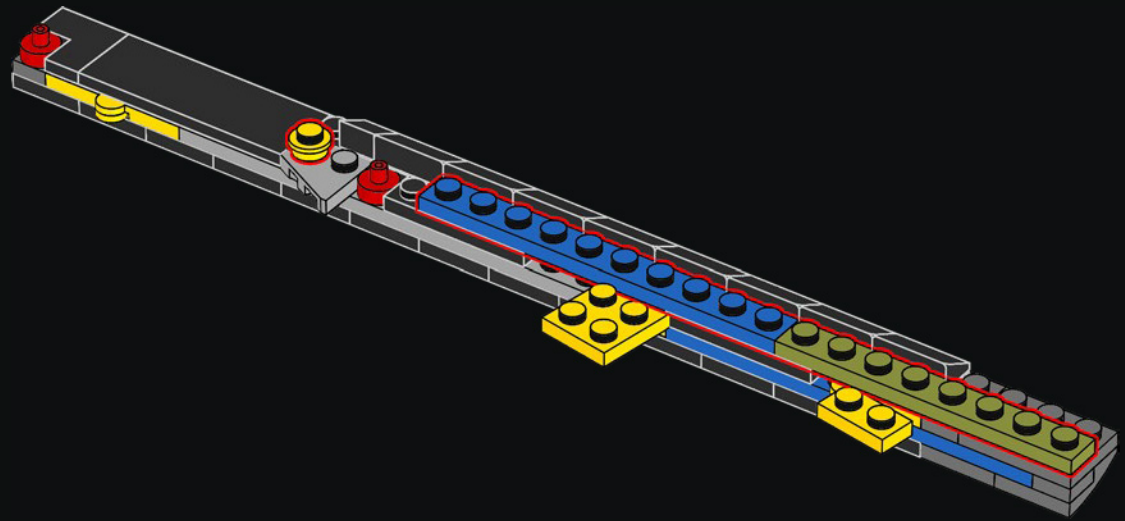


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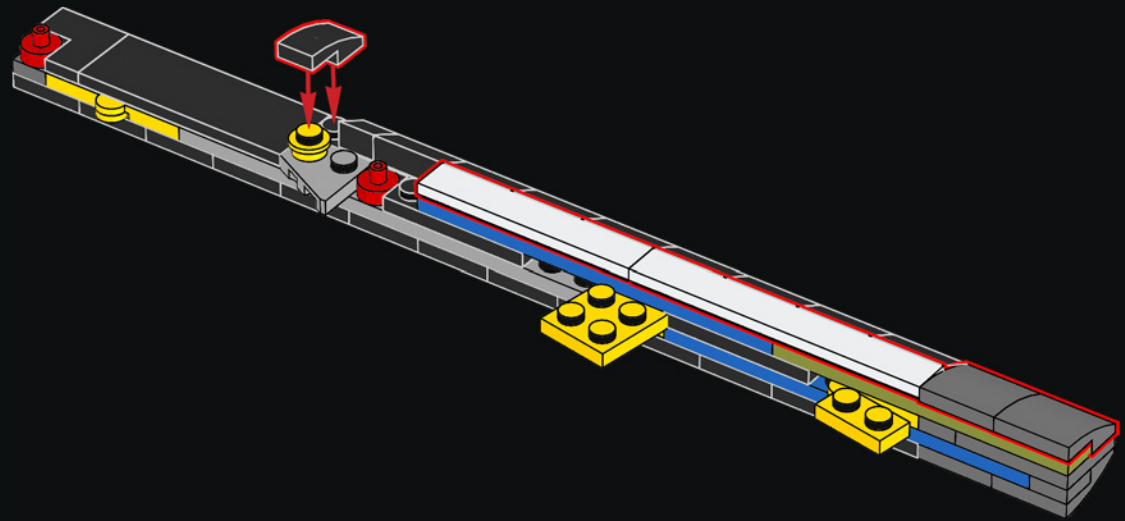




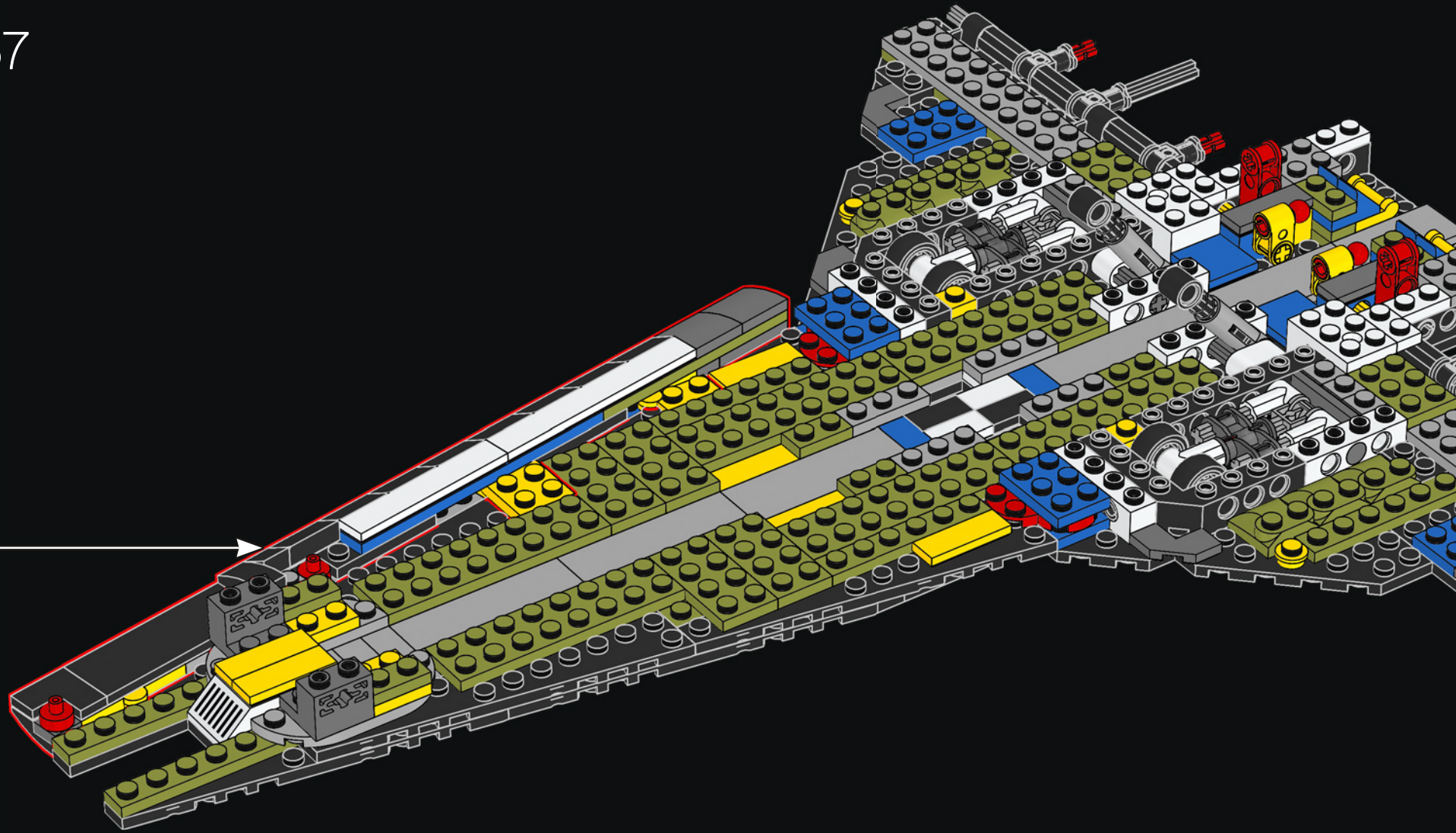
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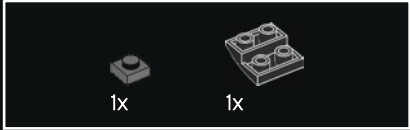
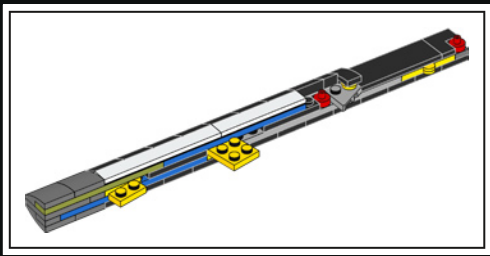


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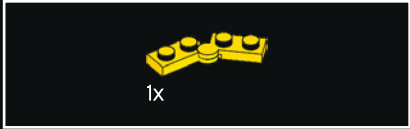
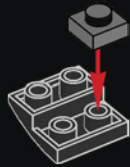


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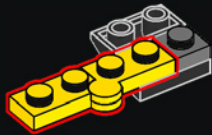




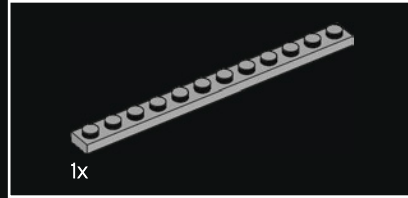
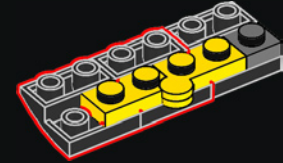
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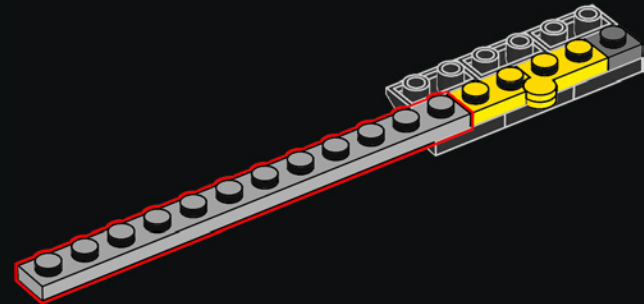
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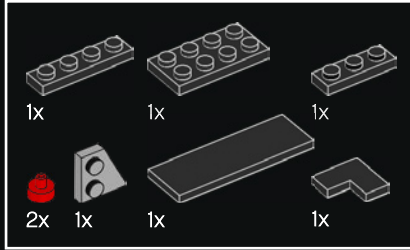
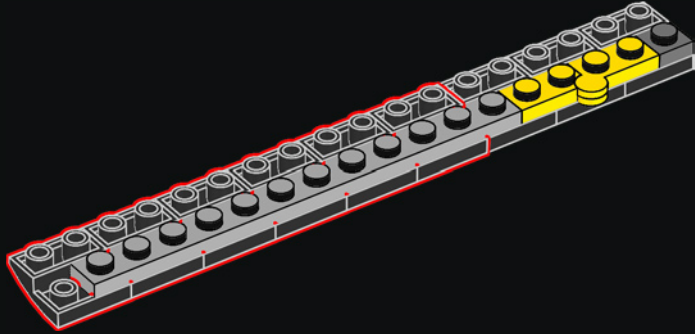


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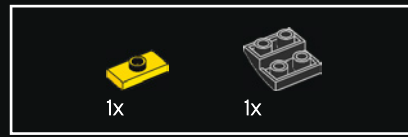
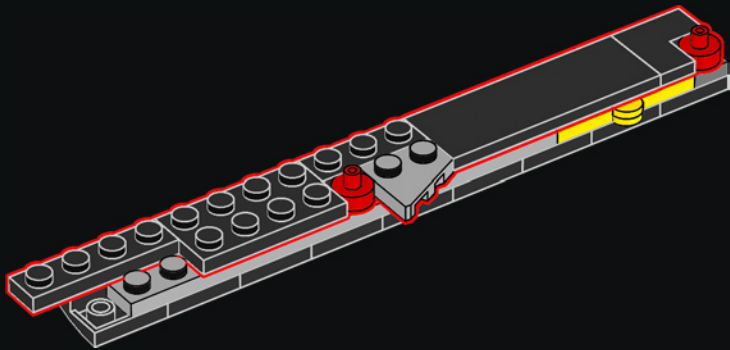




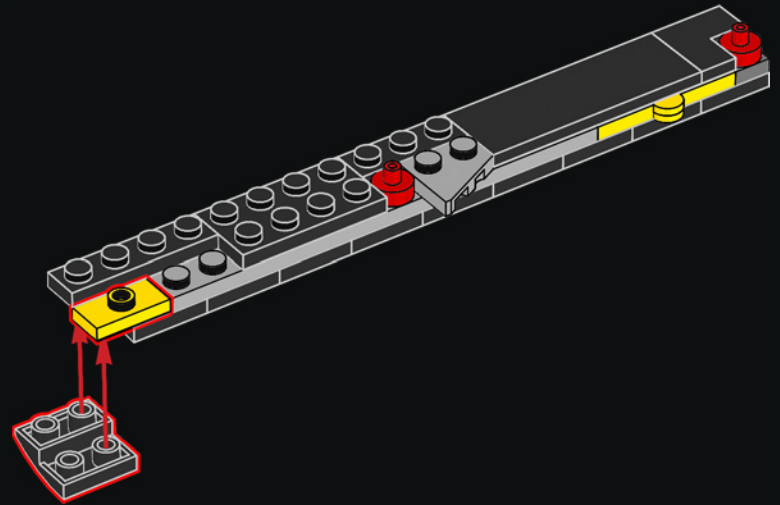
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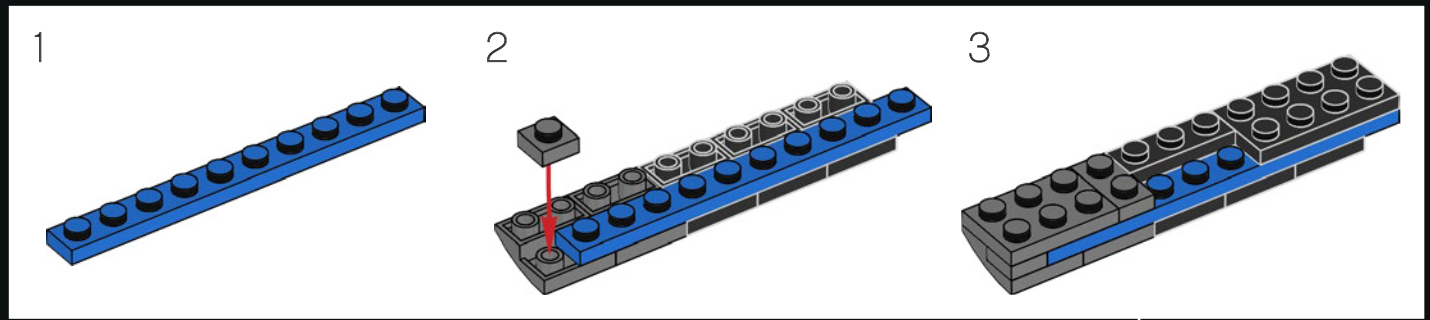
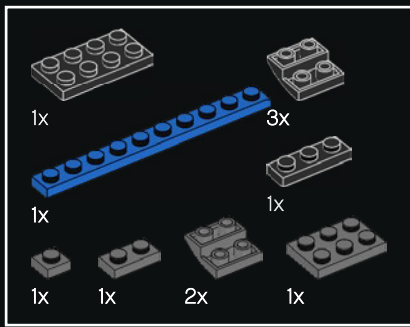


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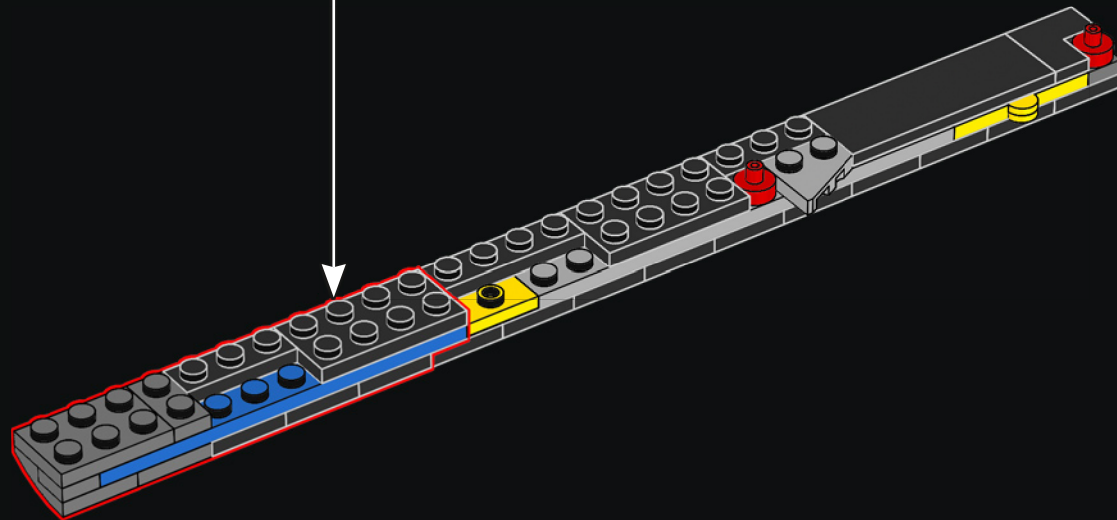


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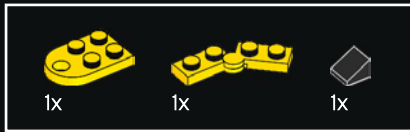
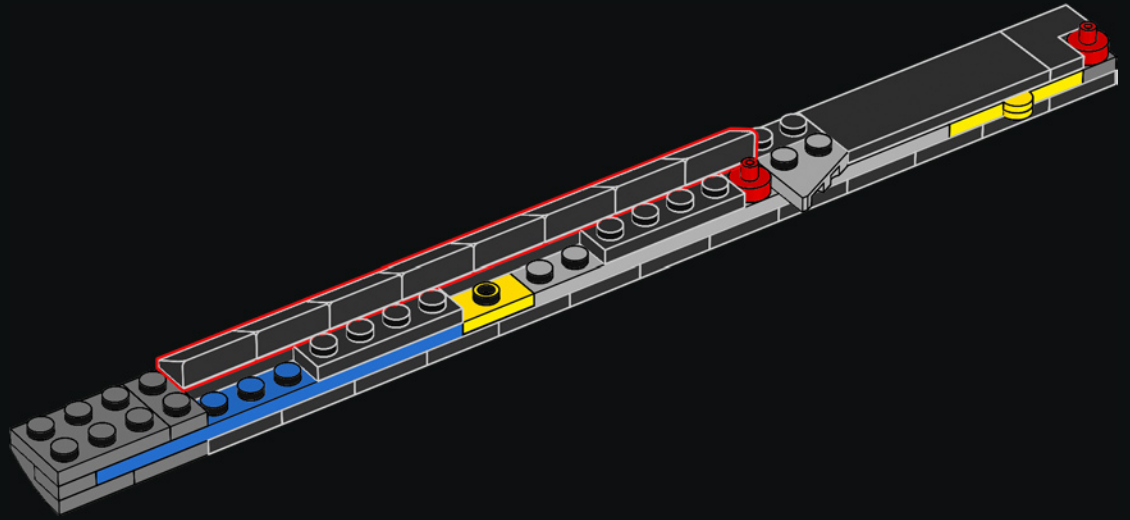
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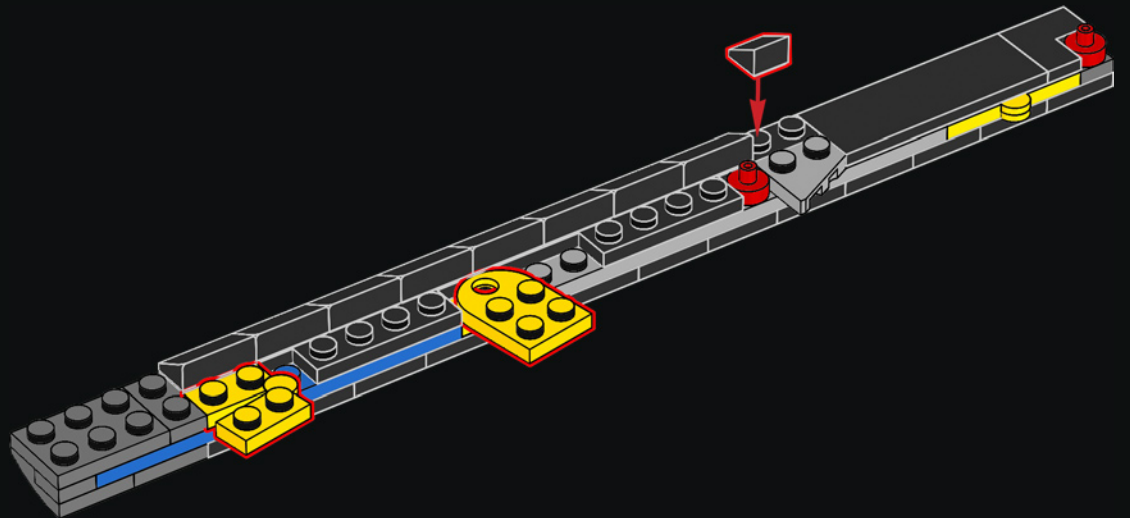


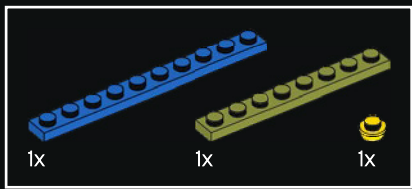


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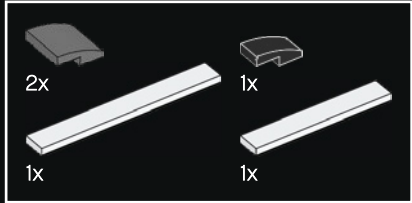
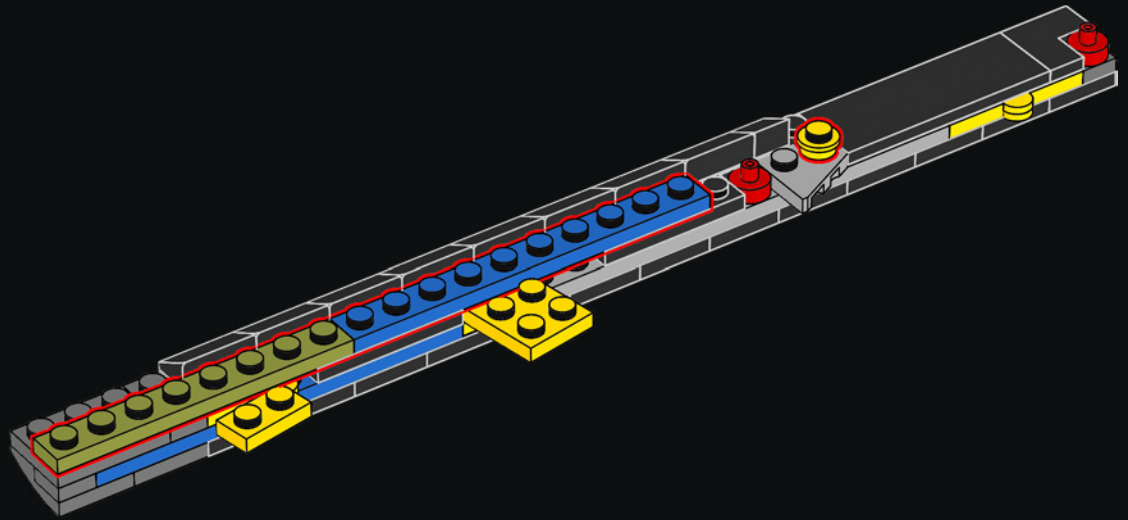


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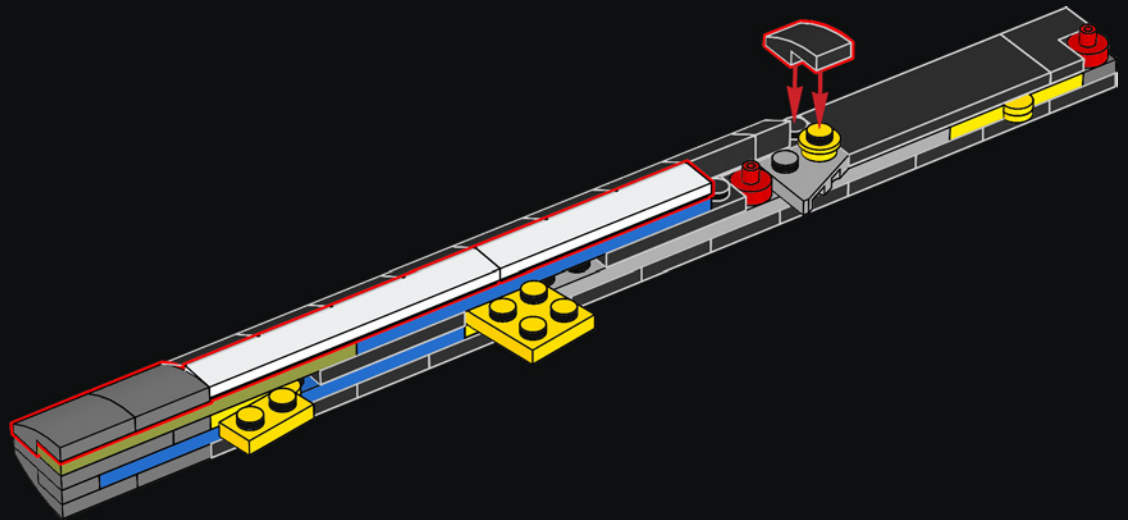




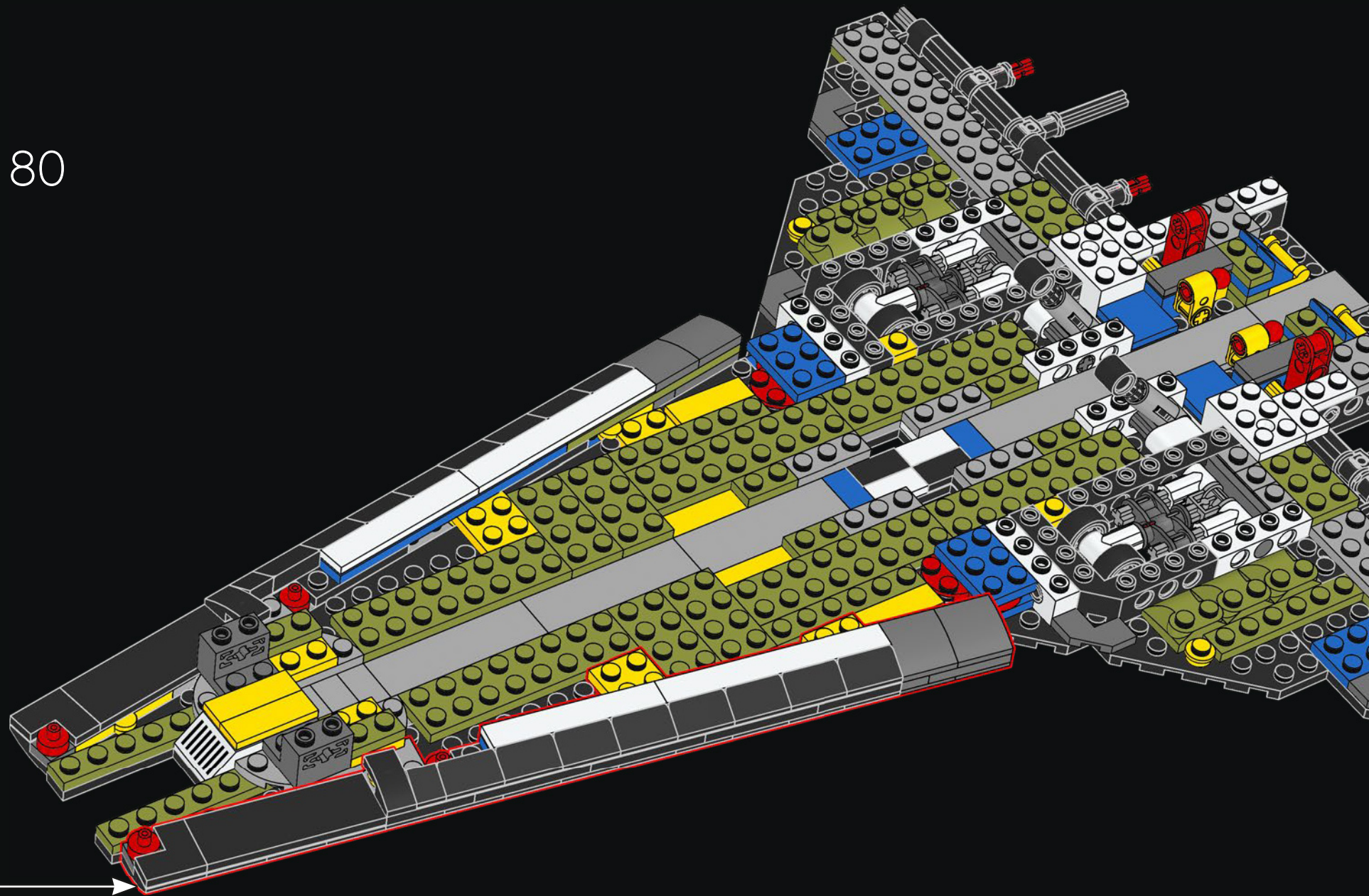
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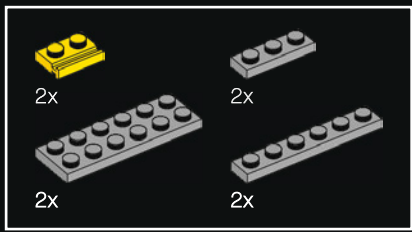


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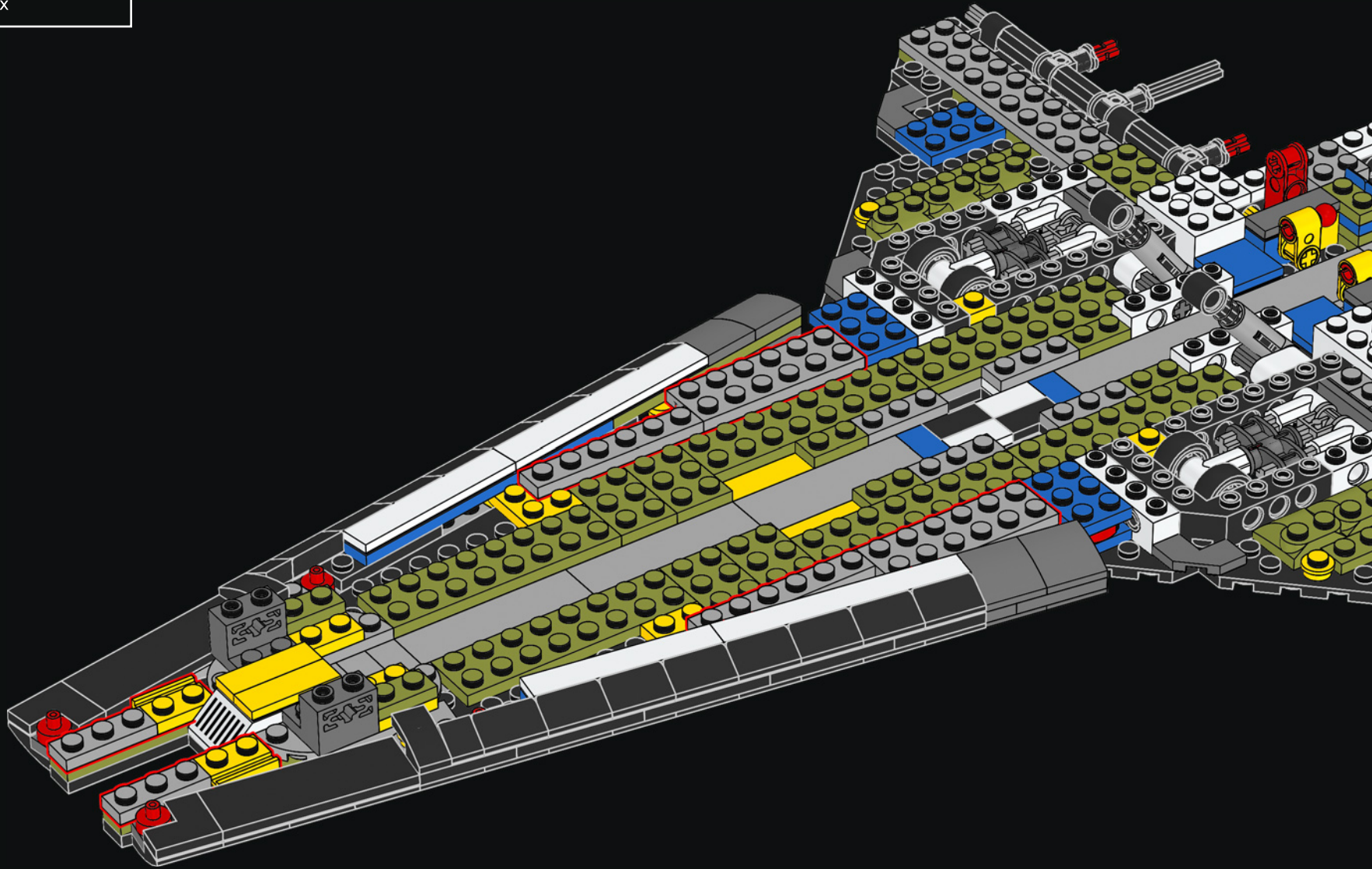


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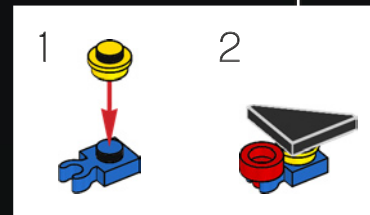
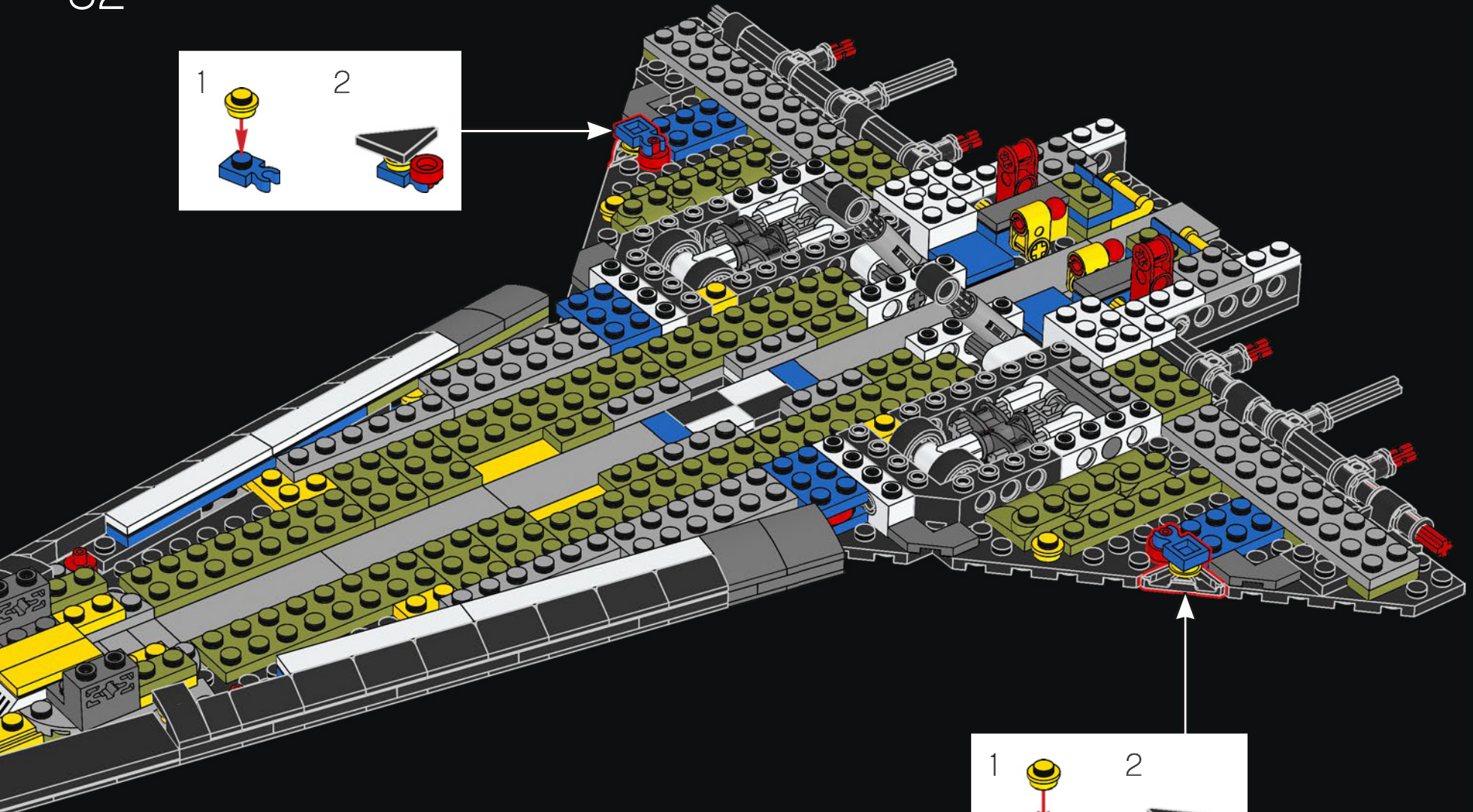
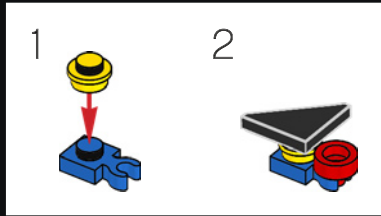


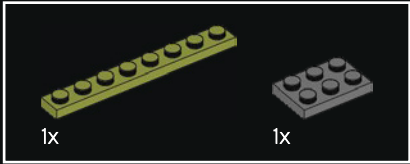
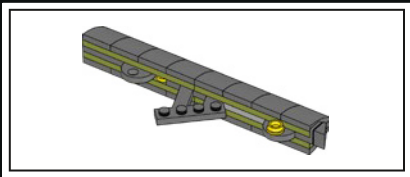
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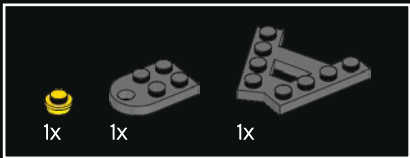
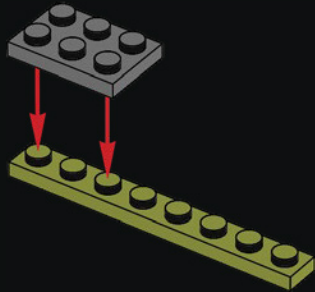
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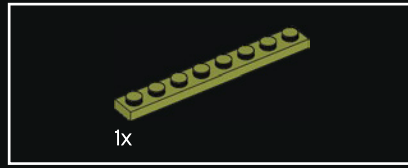
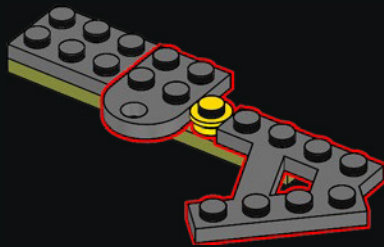




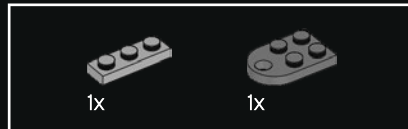
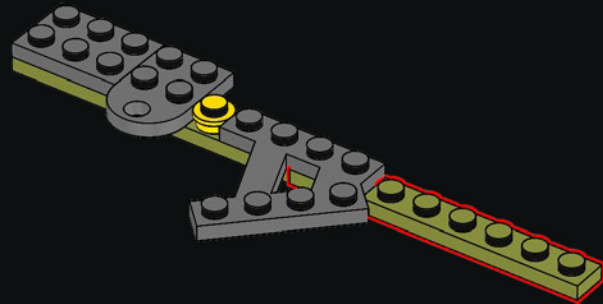
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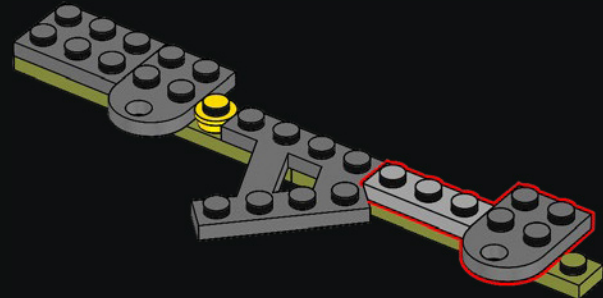
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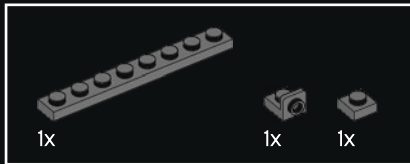
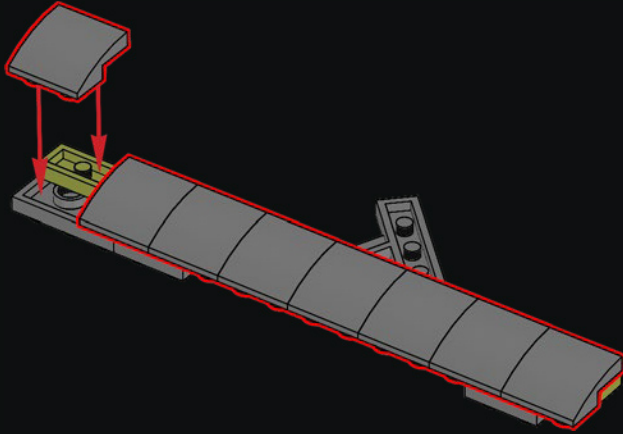


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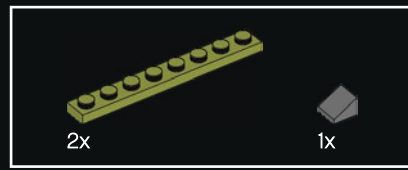
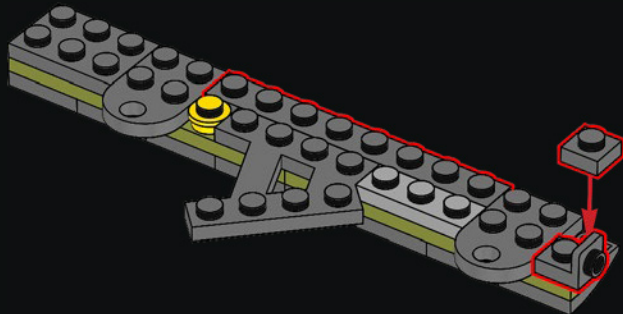




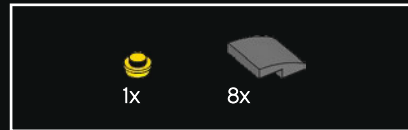
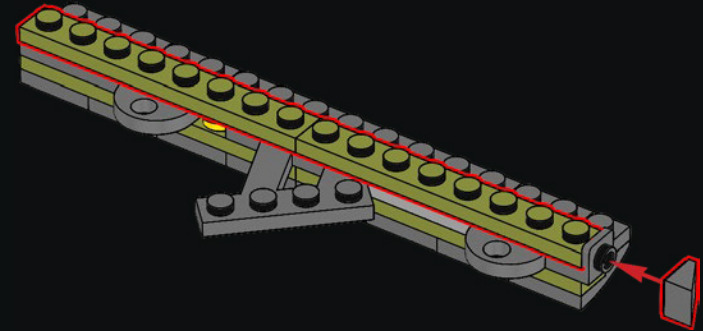
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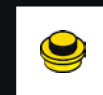
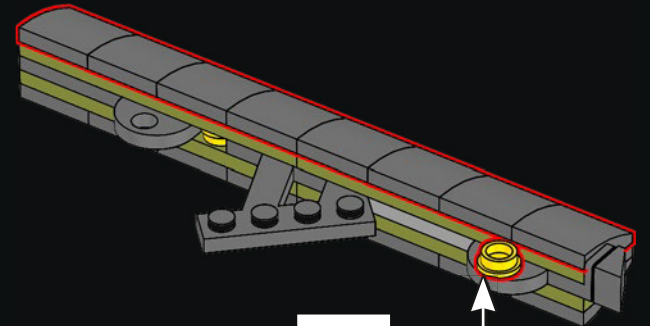
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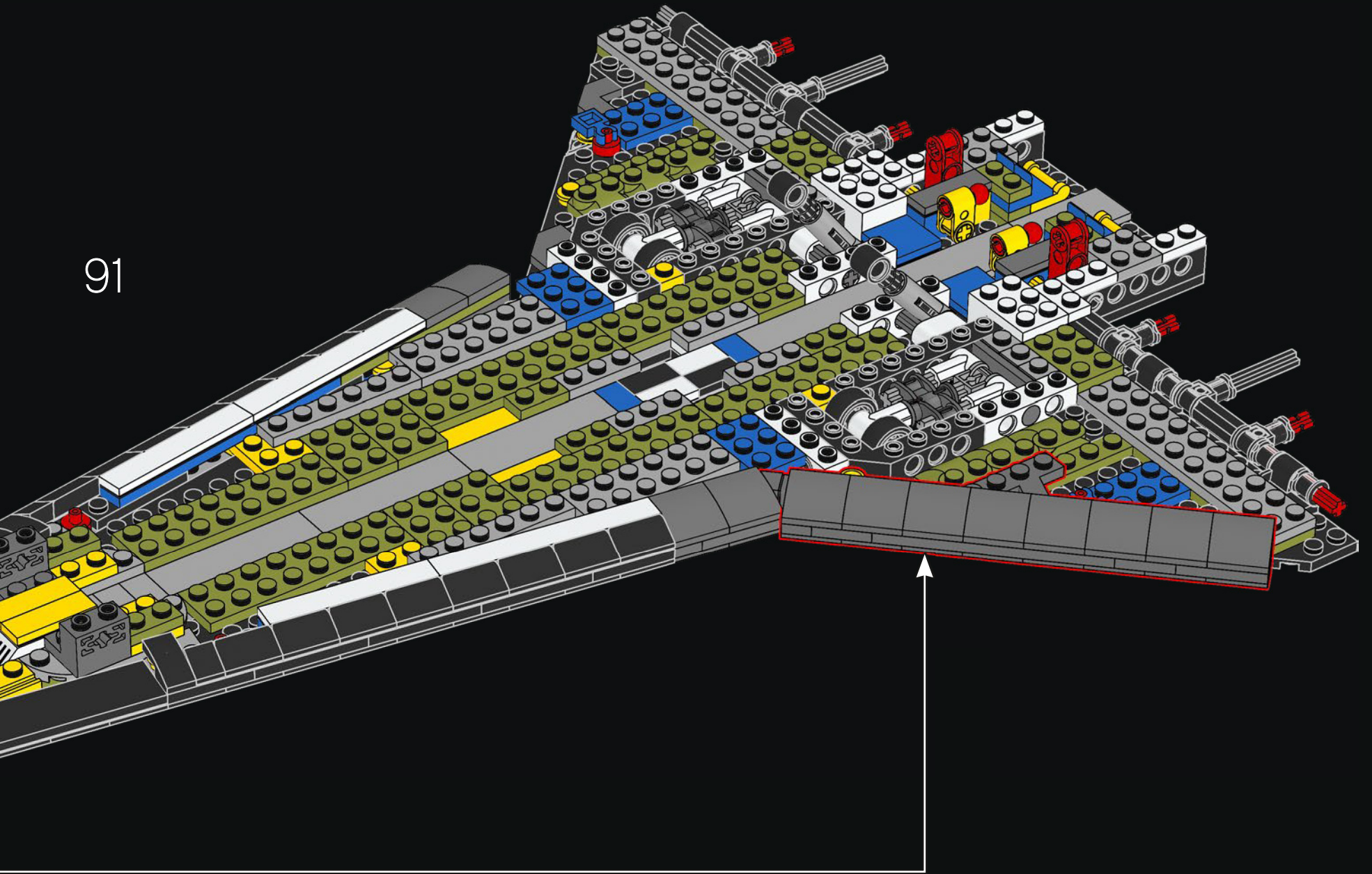
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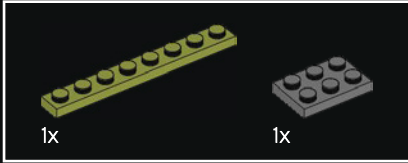
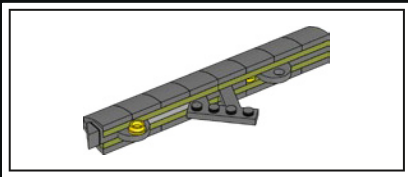
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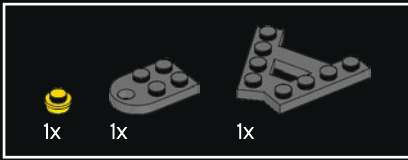
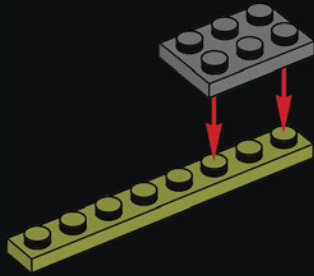
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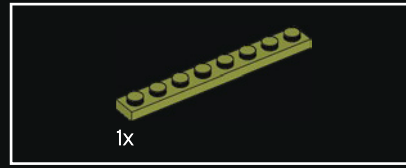
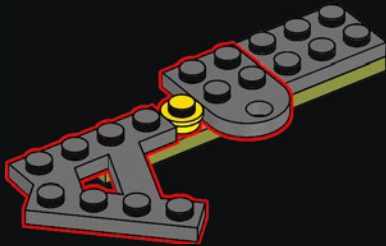




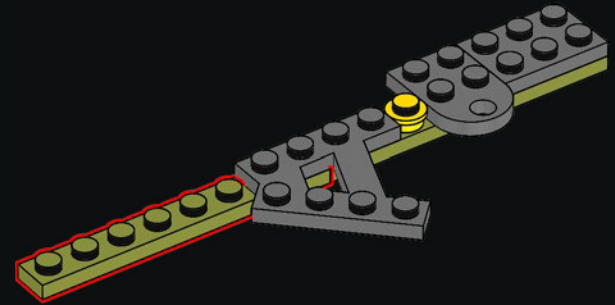
92



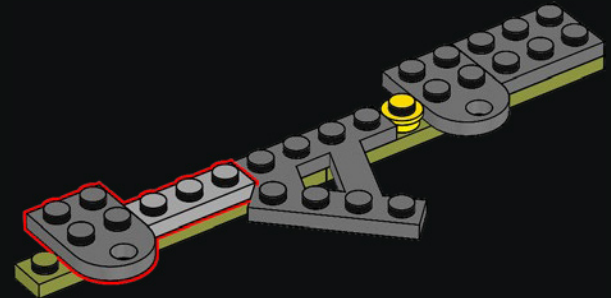
93



94

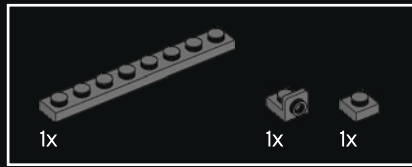
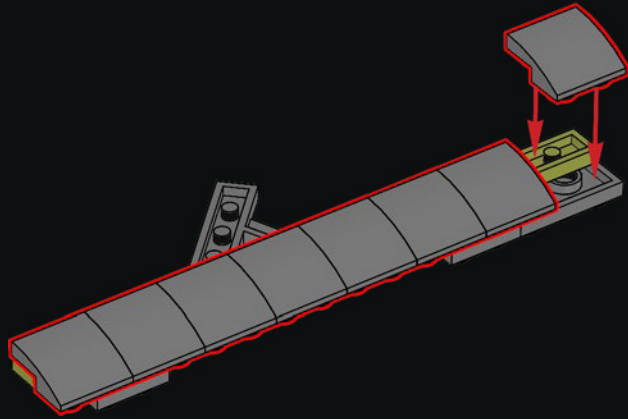


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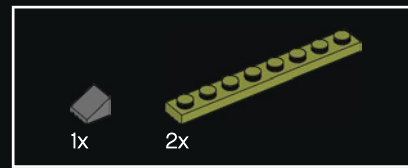
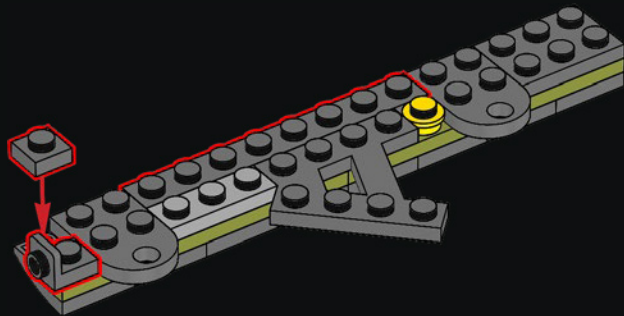




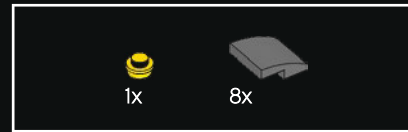
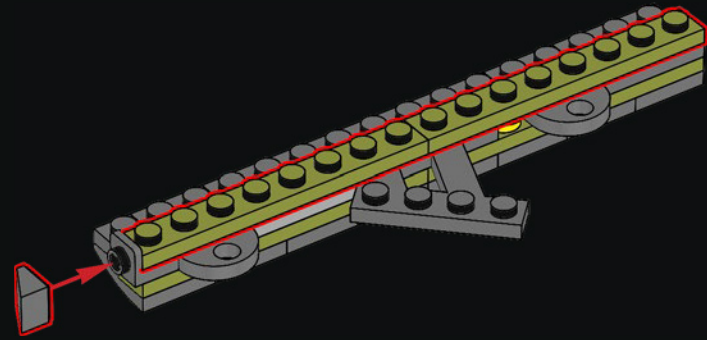
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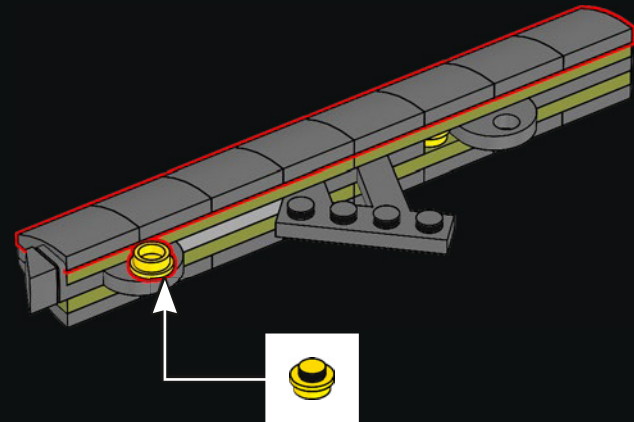
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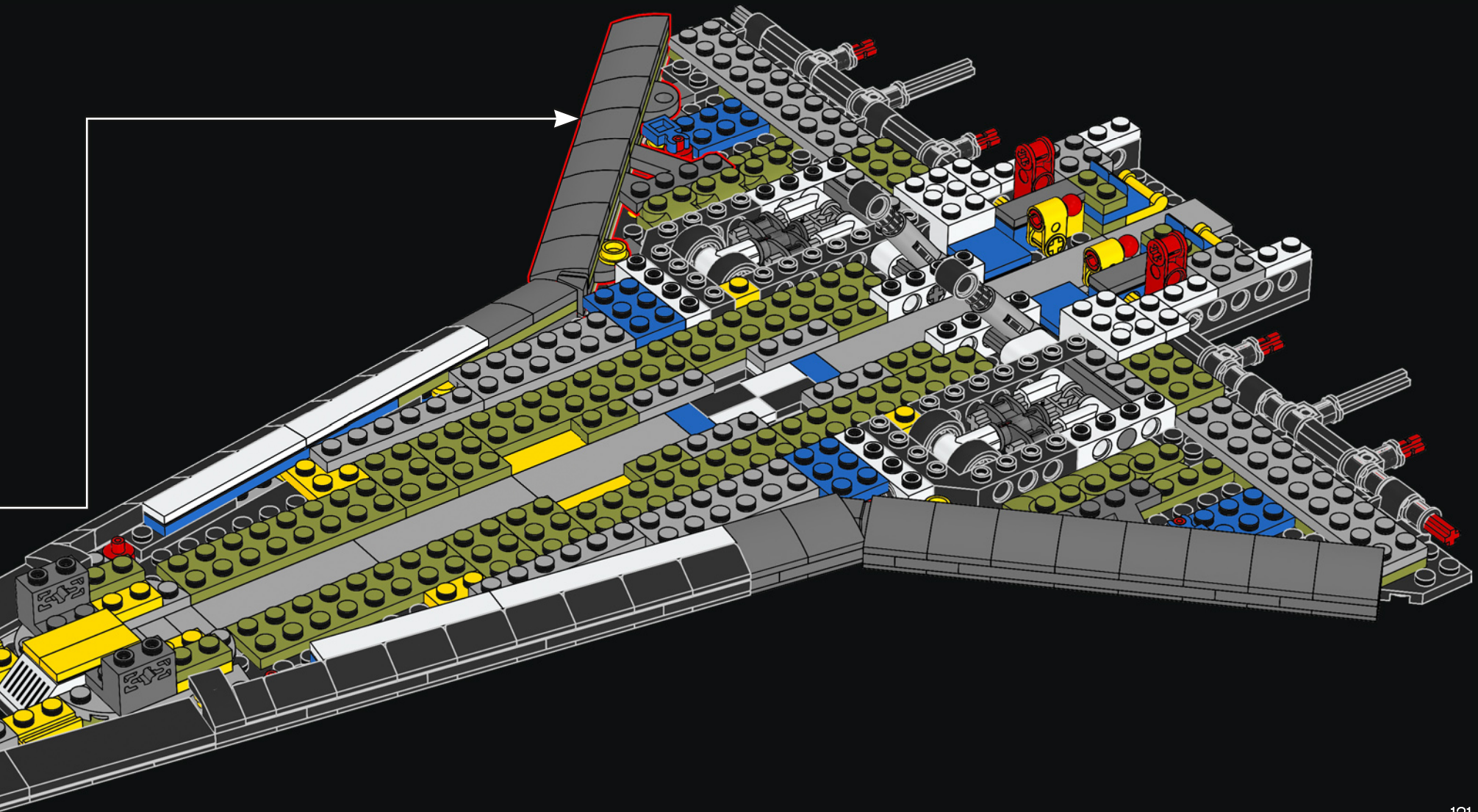
98

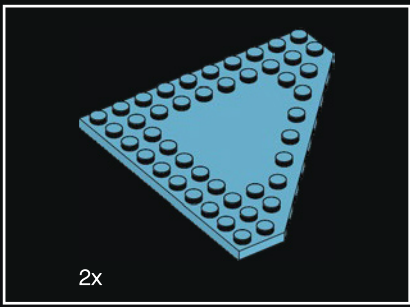


99

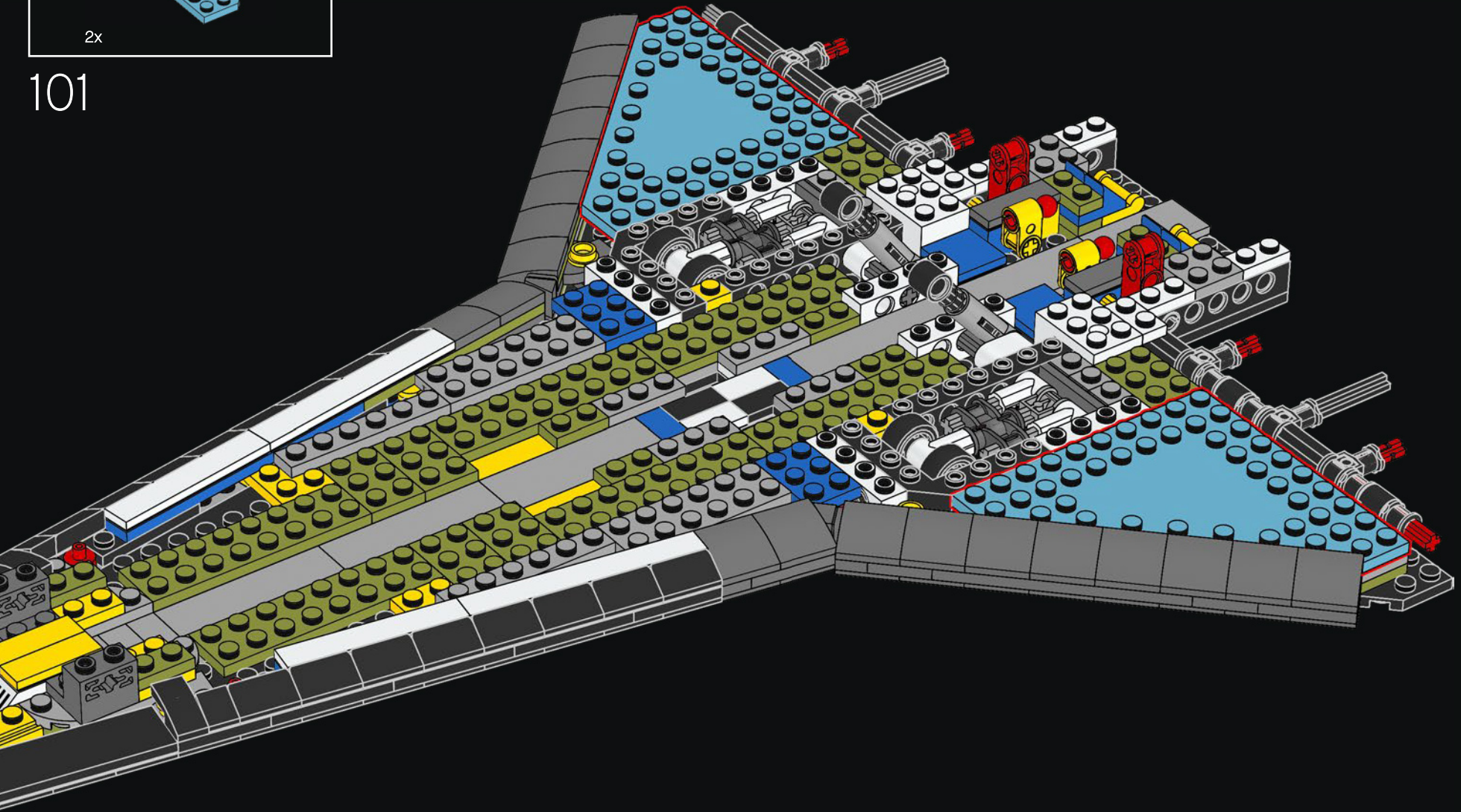


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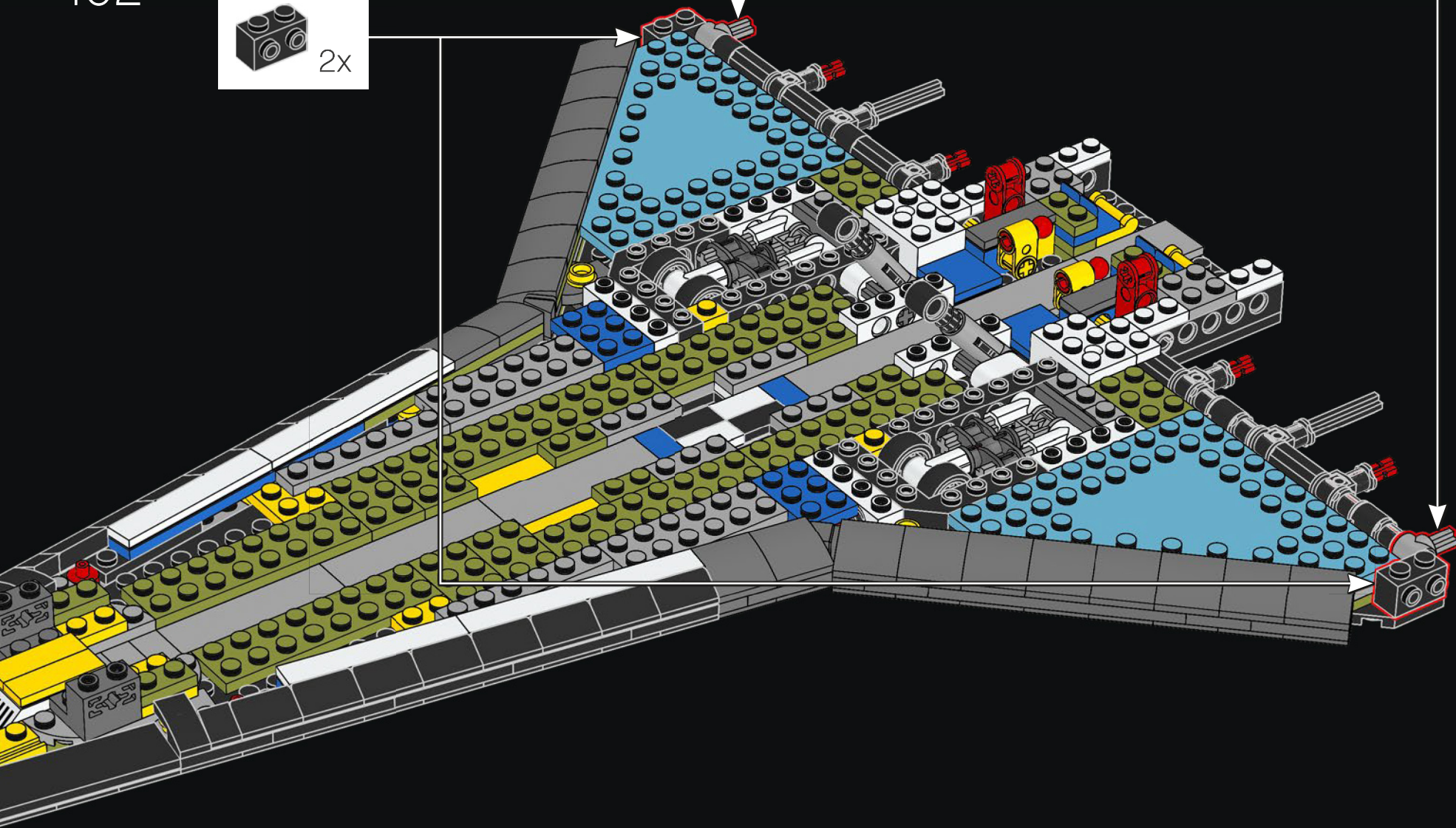
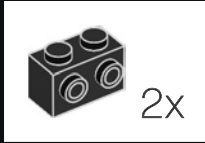


101



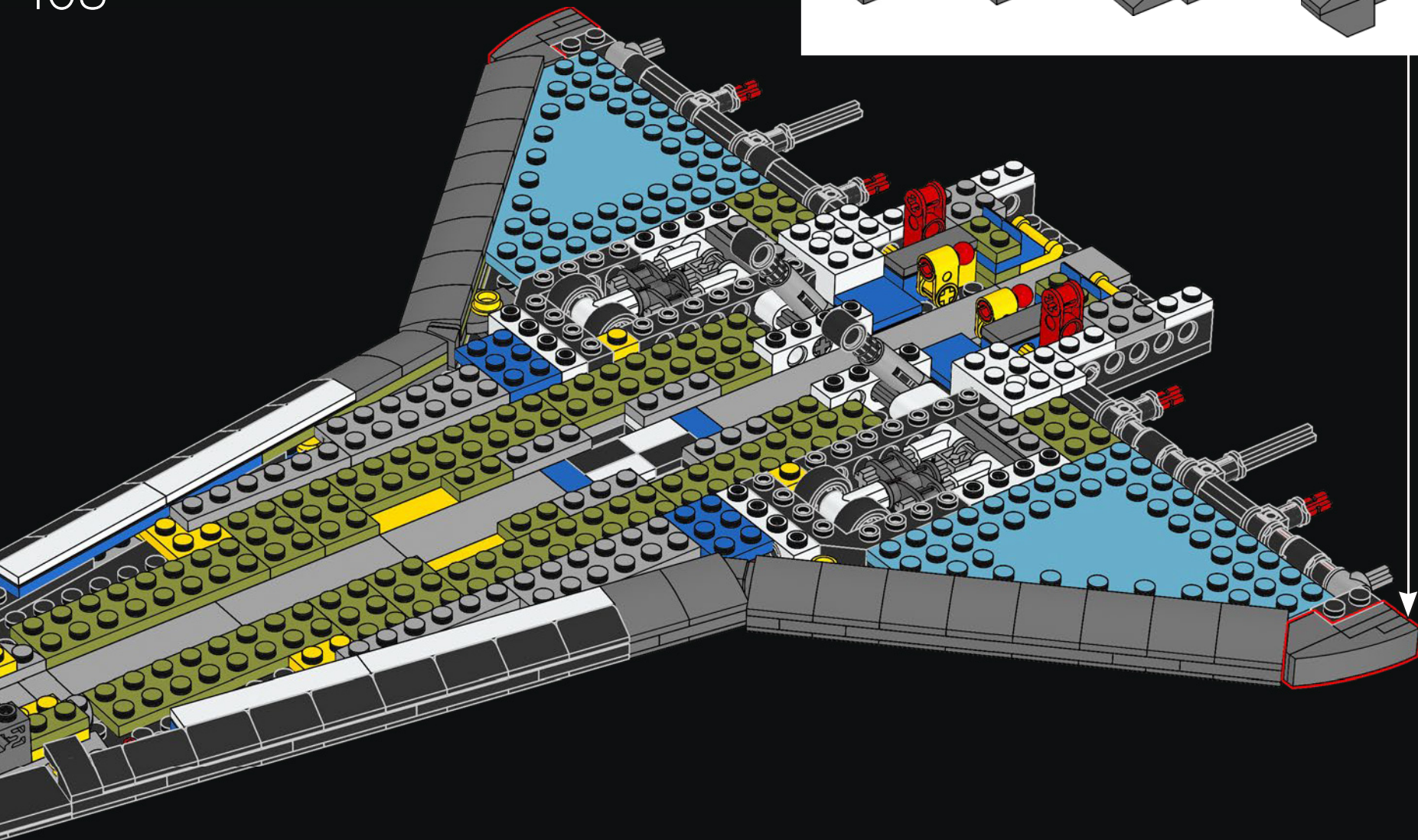
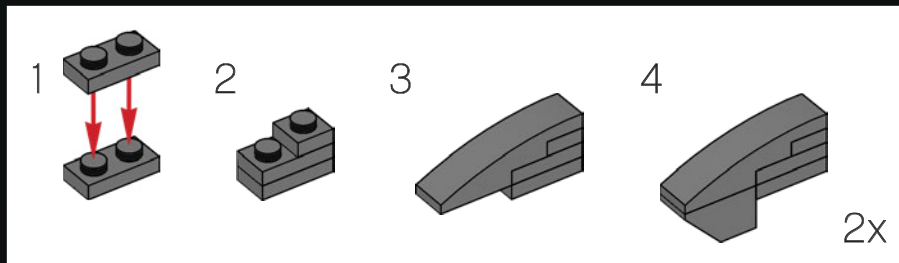


102



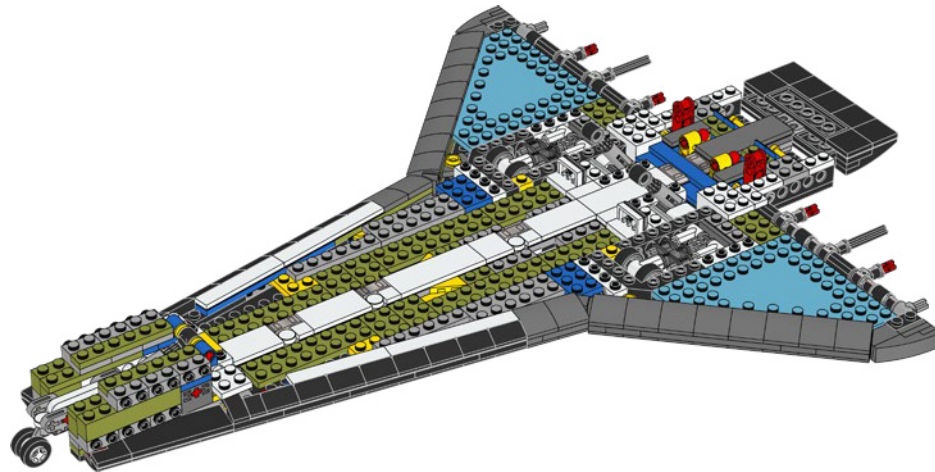
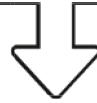


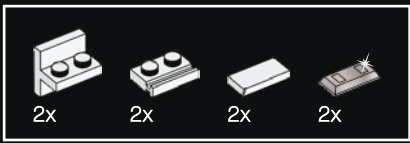
103



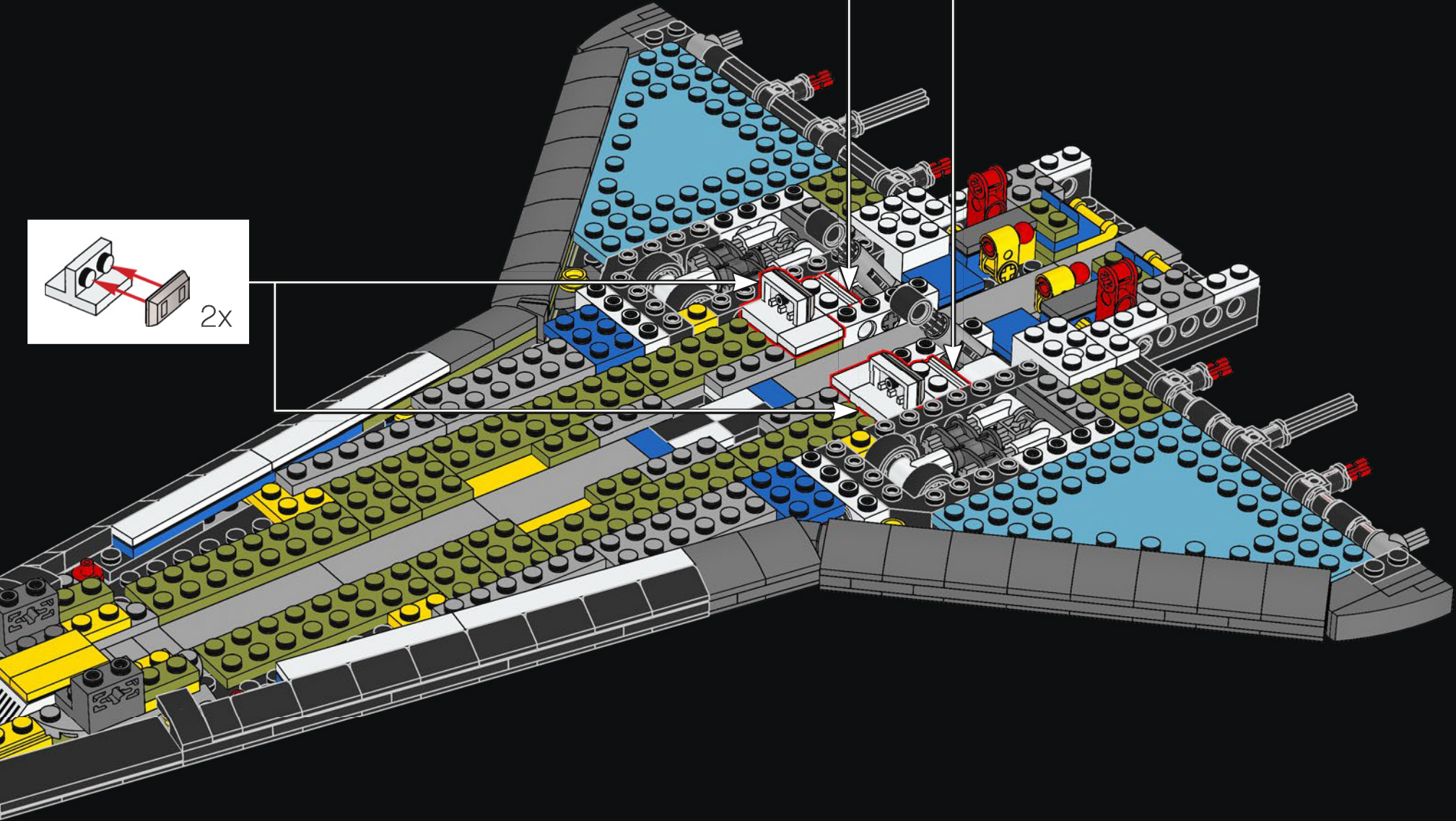
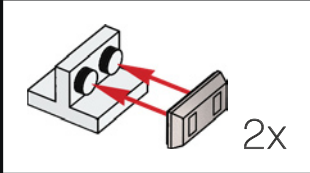
### 你知道吗？

航天飞机重返大气层时，机头和机翼的前缘吸收了大部分热量，温度高达 1600 摄氏度（2912 华氏度）！

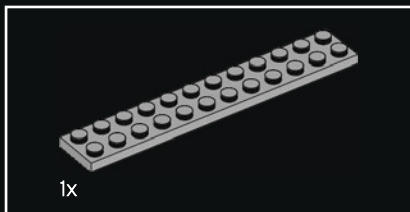
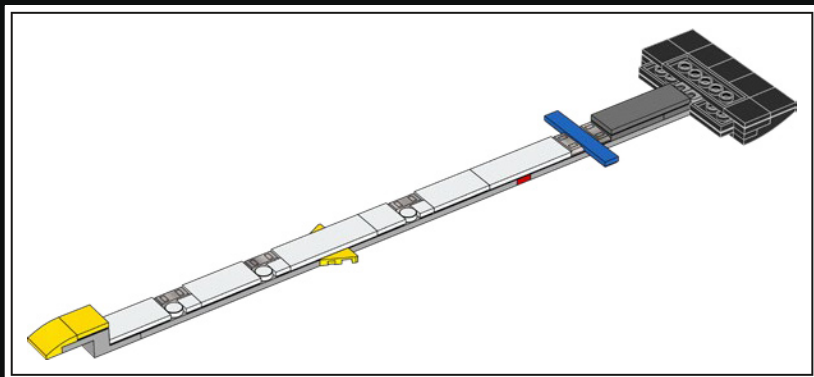




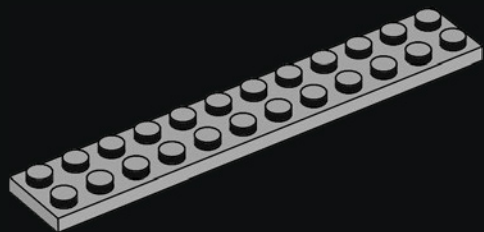
104



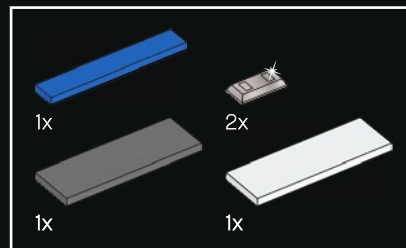
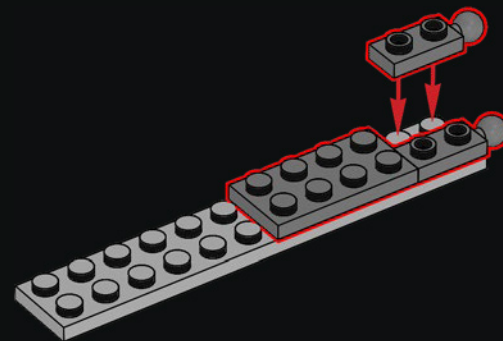




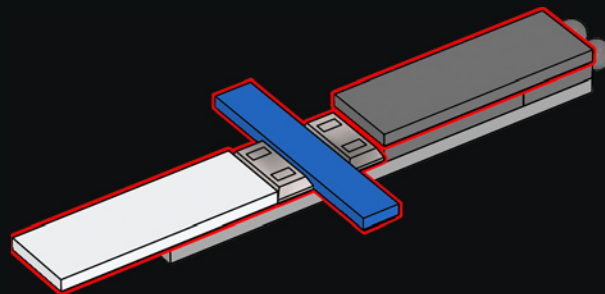
105

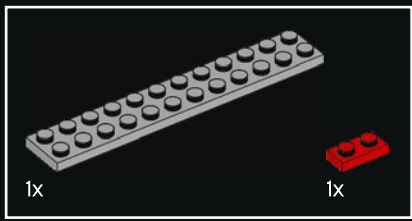


106

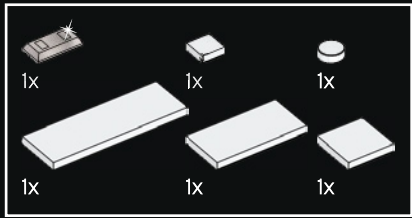
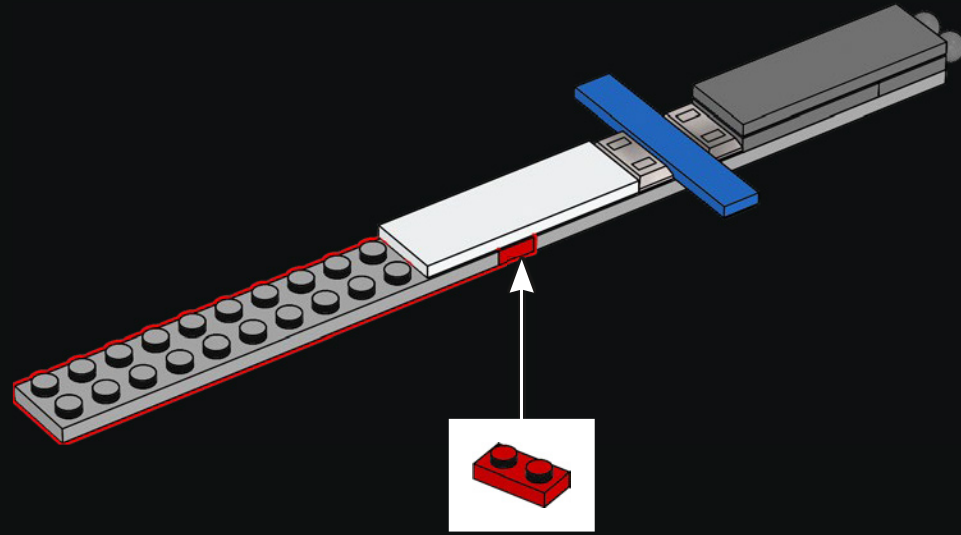


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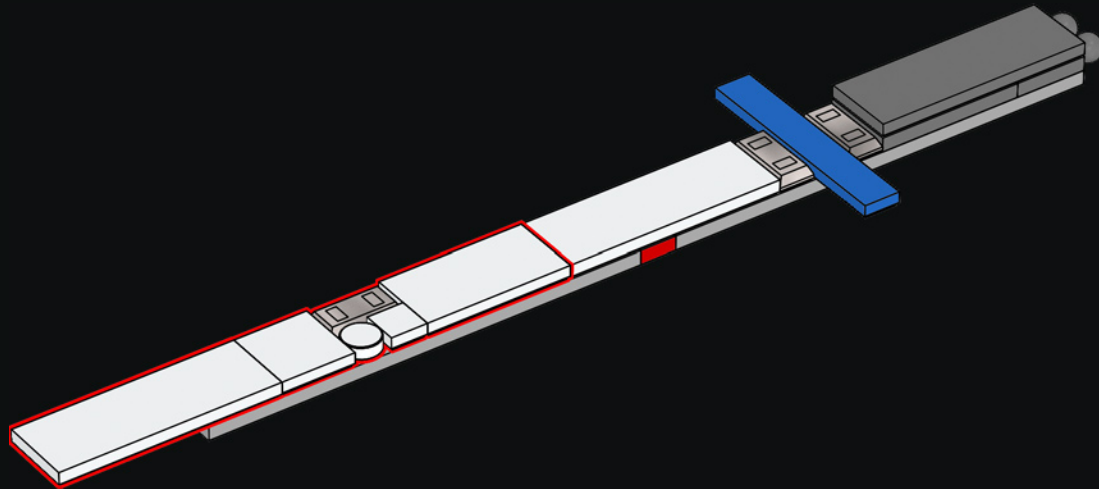


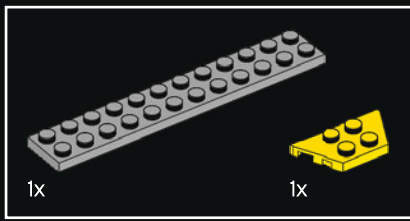


108

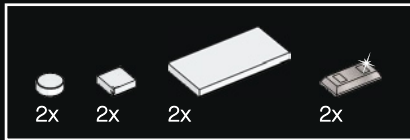
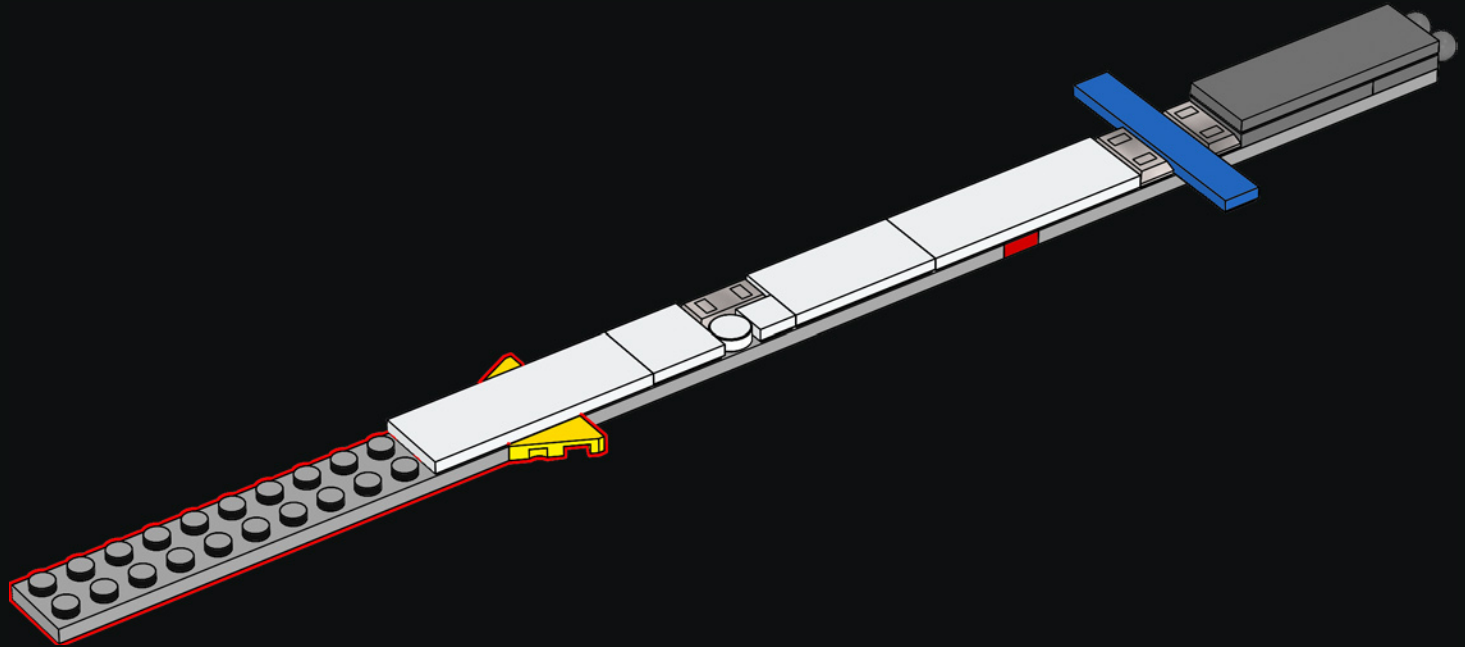


109

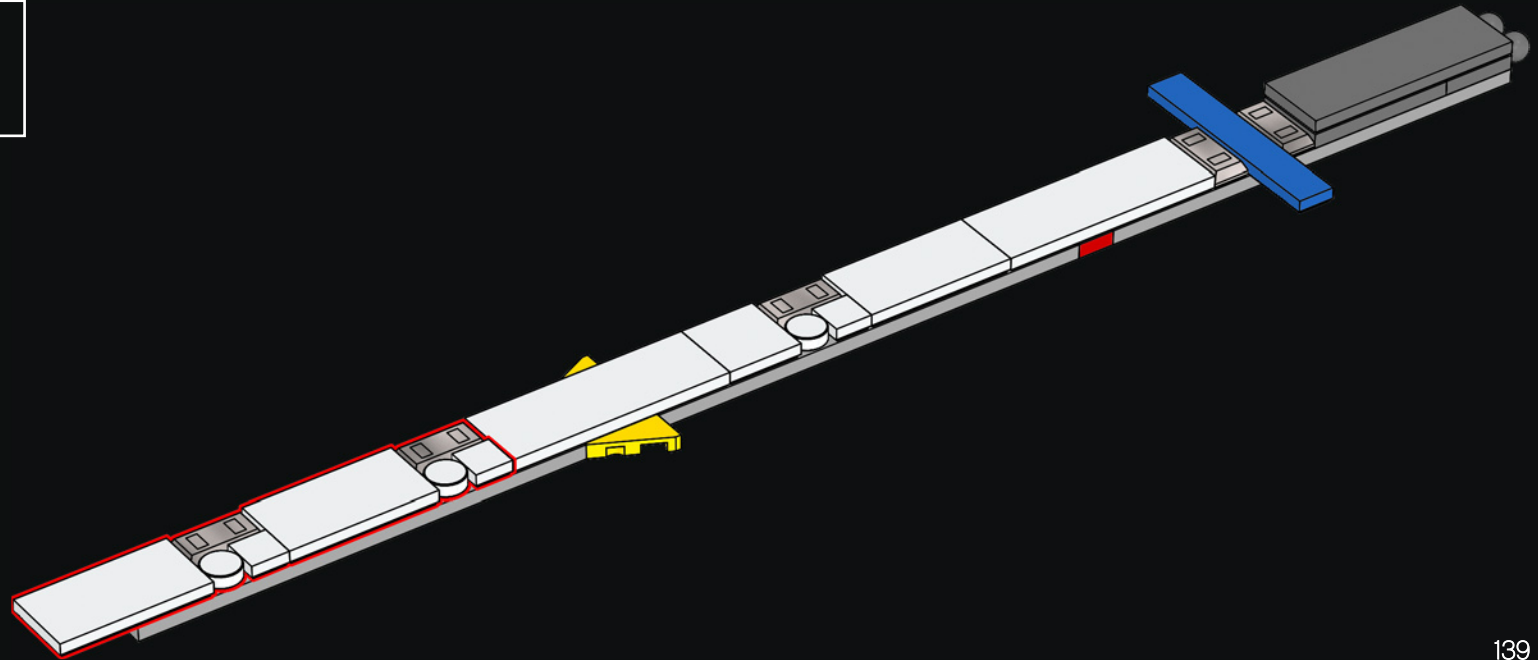


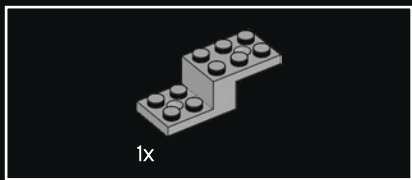


110

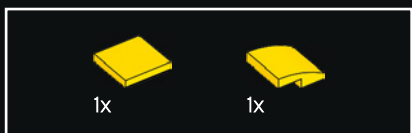
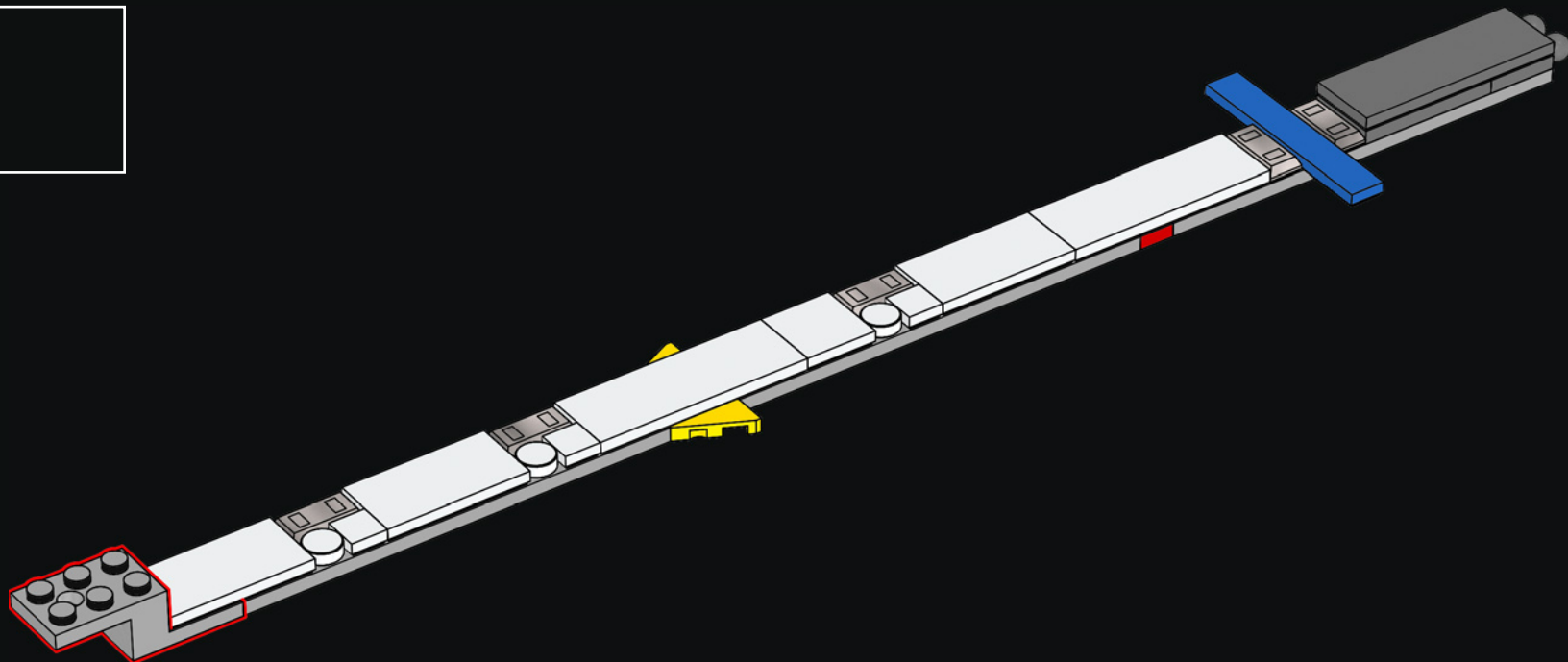


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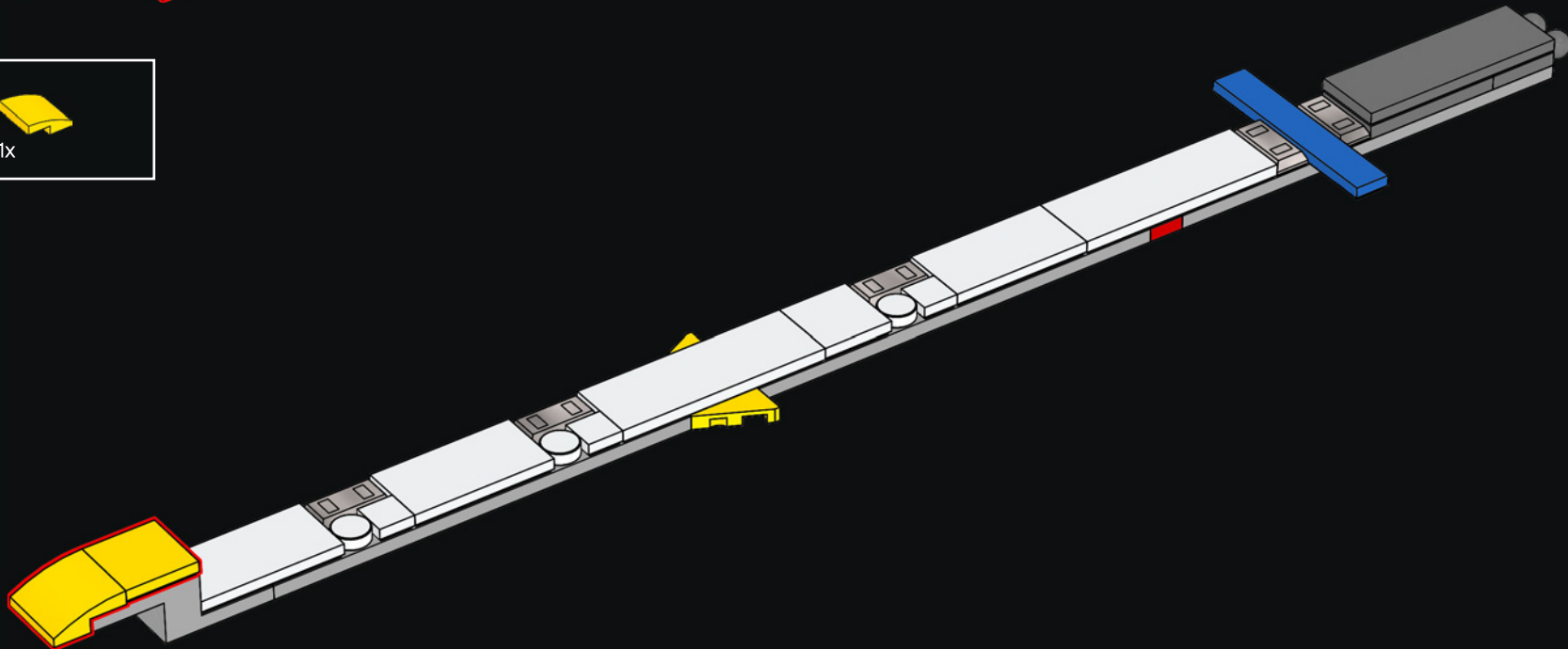


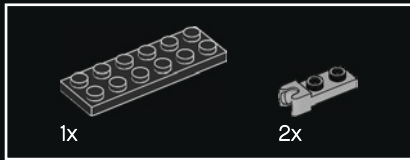
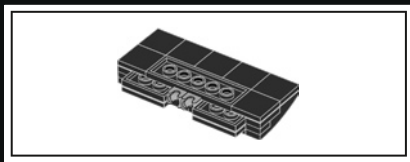


112



113

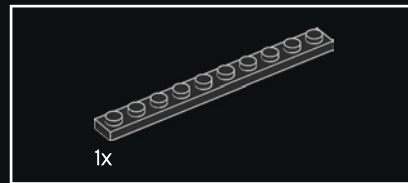
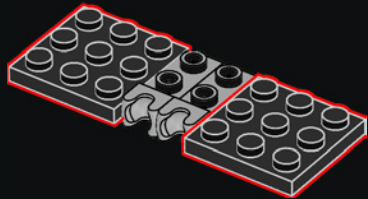




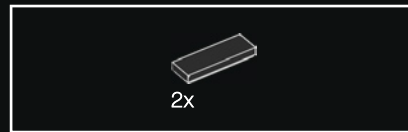
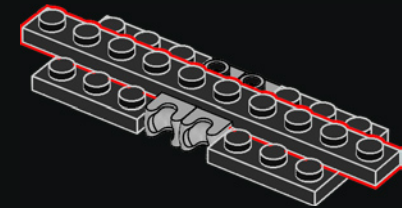
114



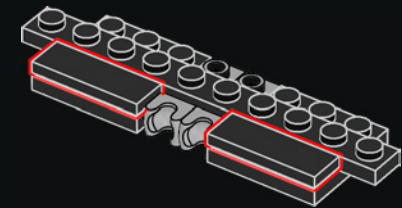
115

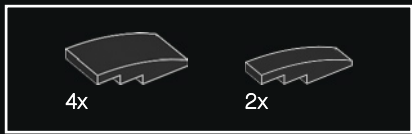


116

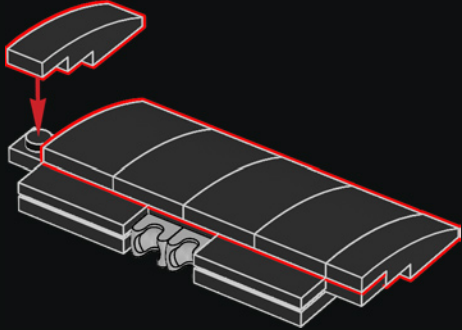


117

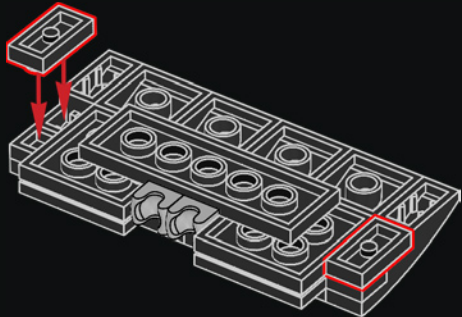




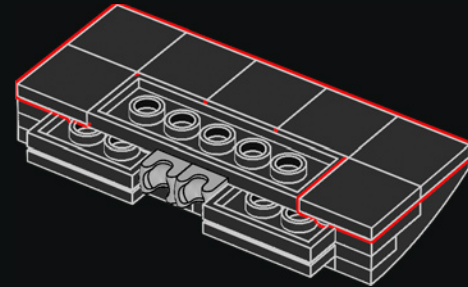
118



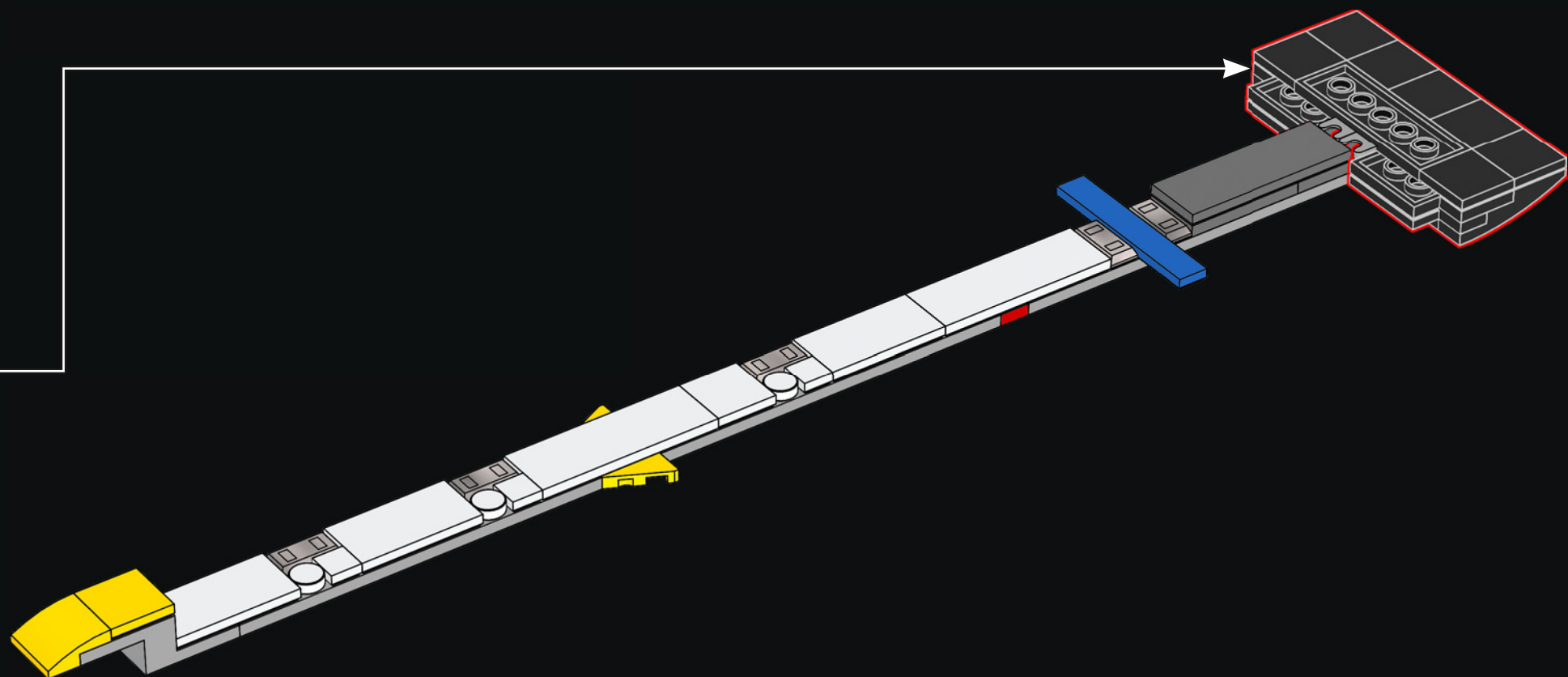
119



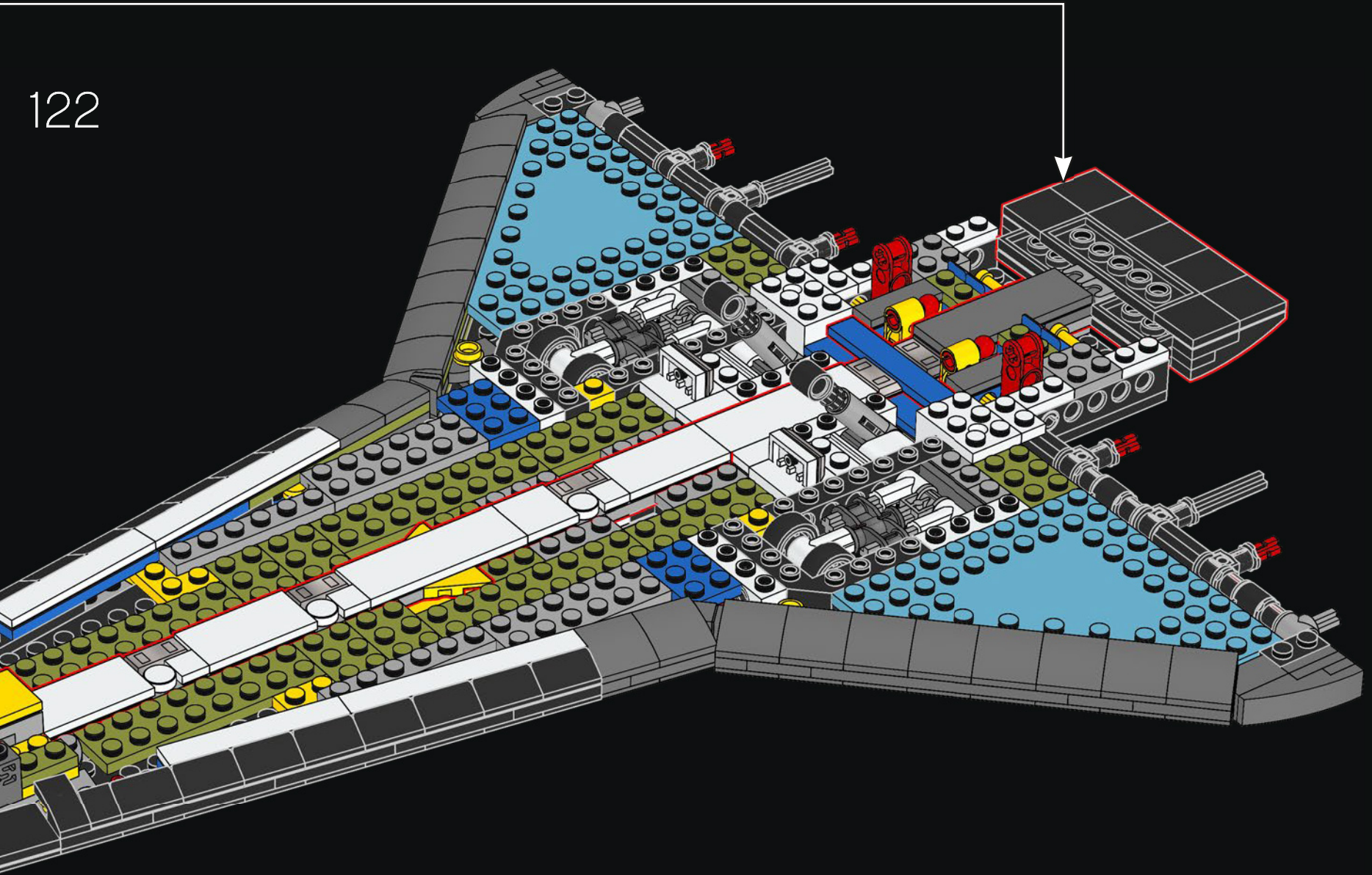
120



121



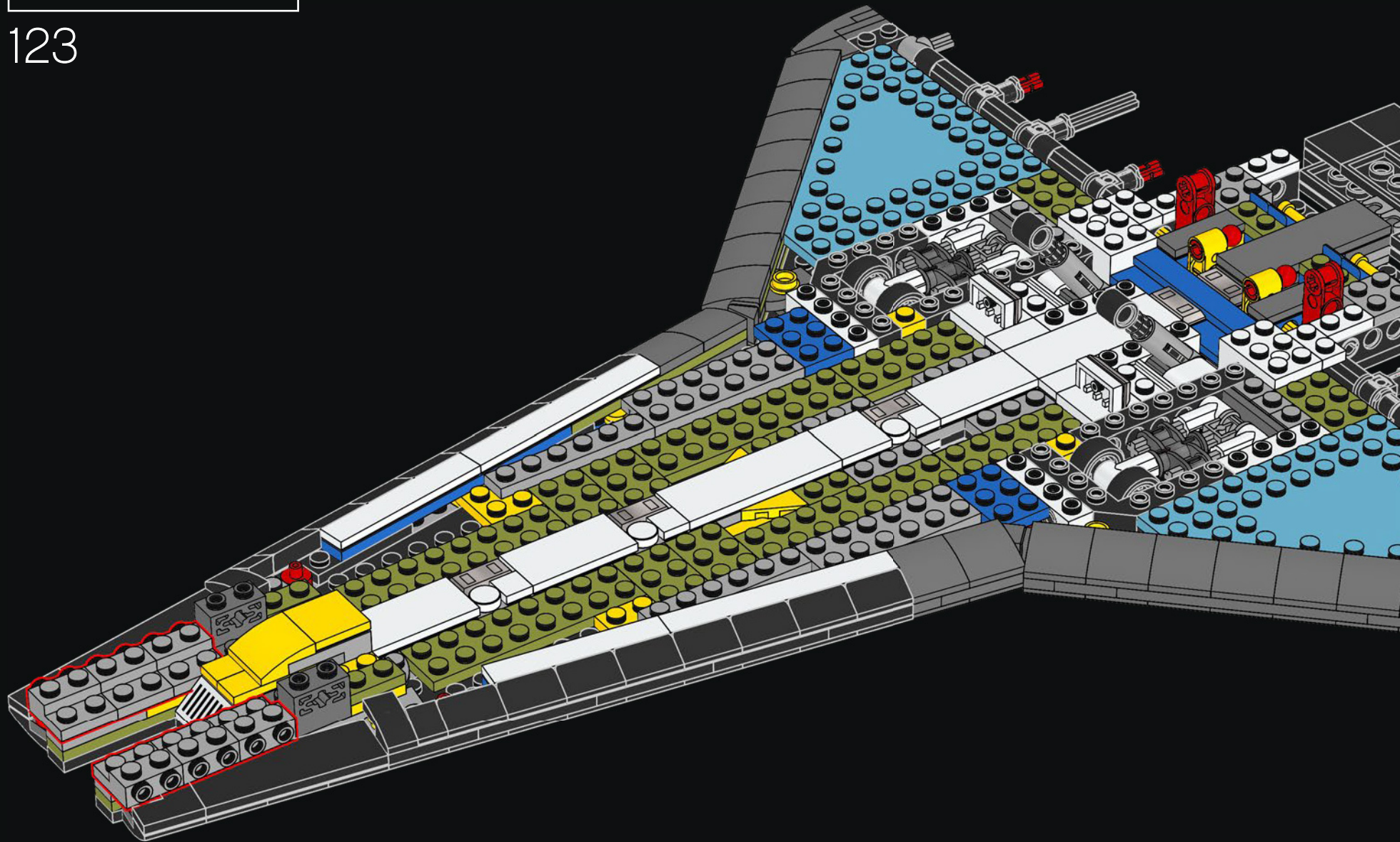
122







123





124



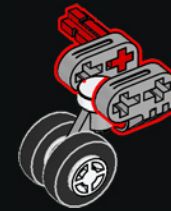
125



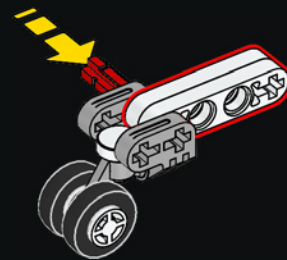
126

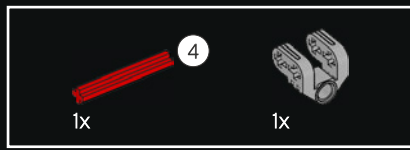


127

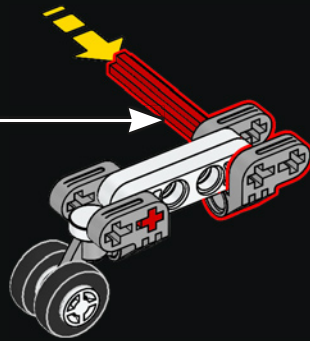
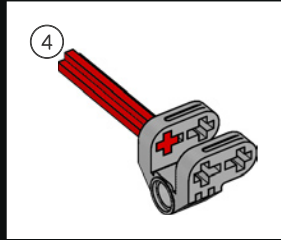


128

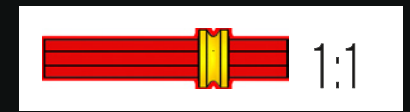
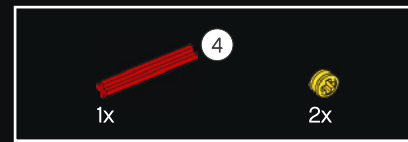
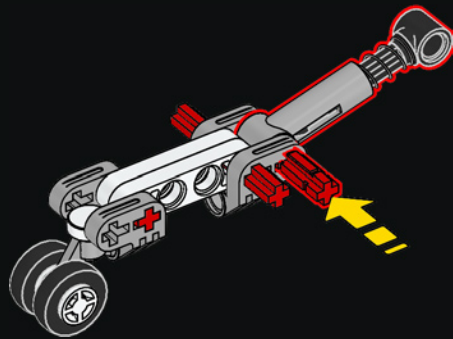




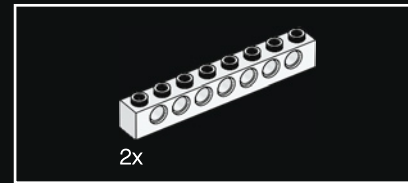
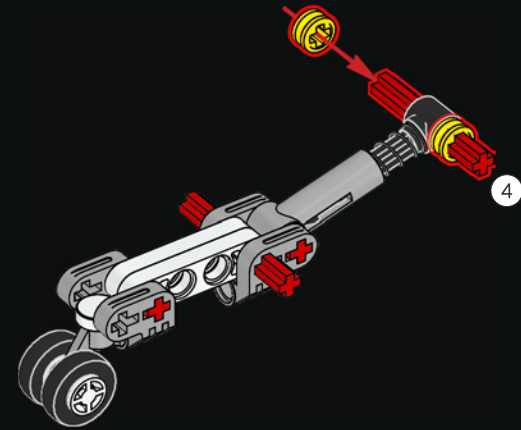
129



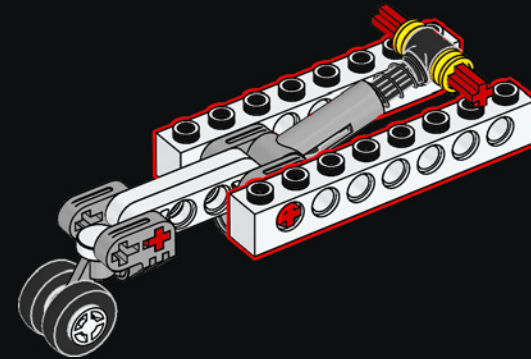
130



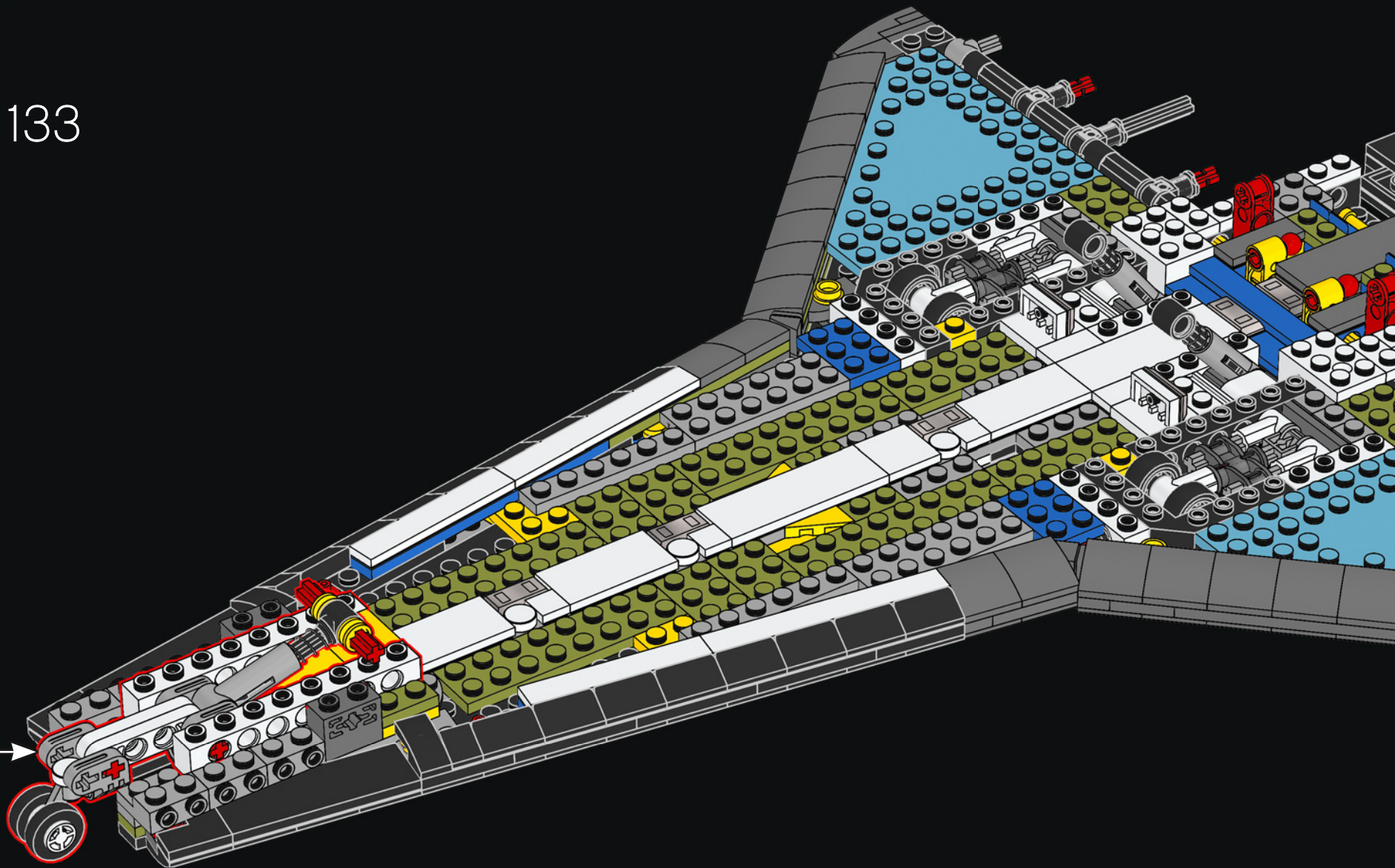
131



132

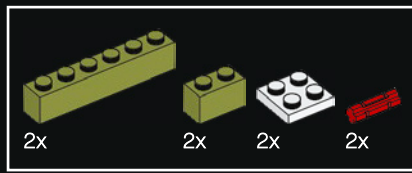


133

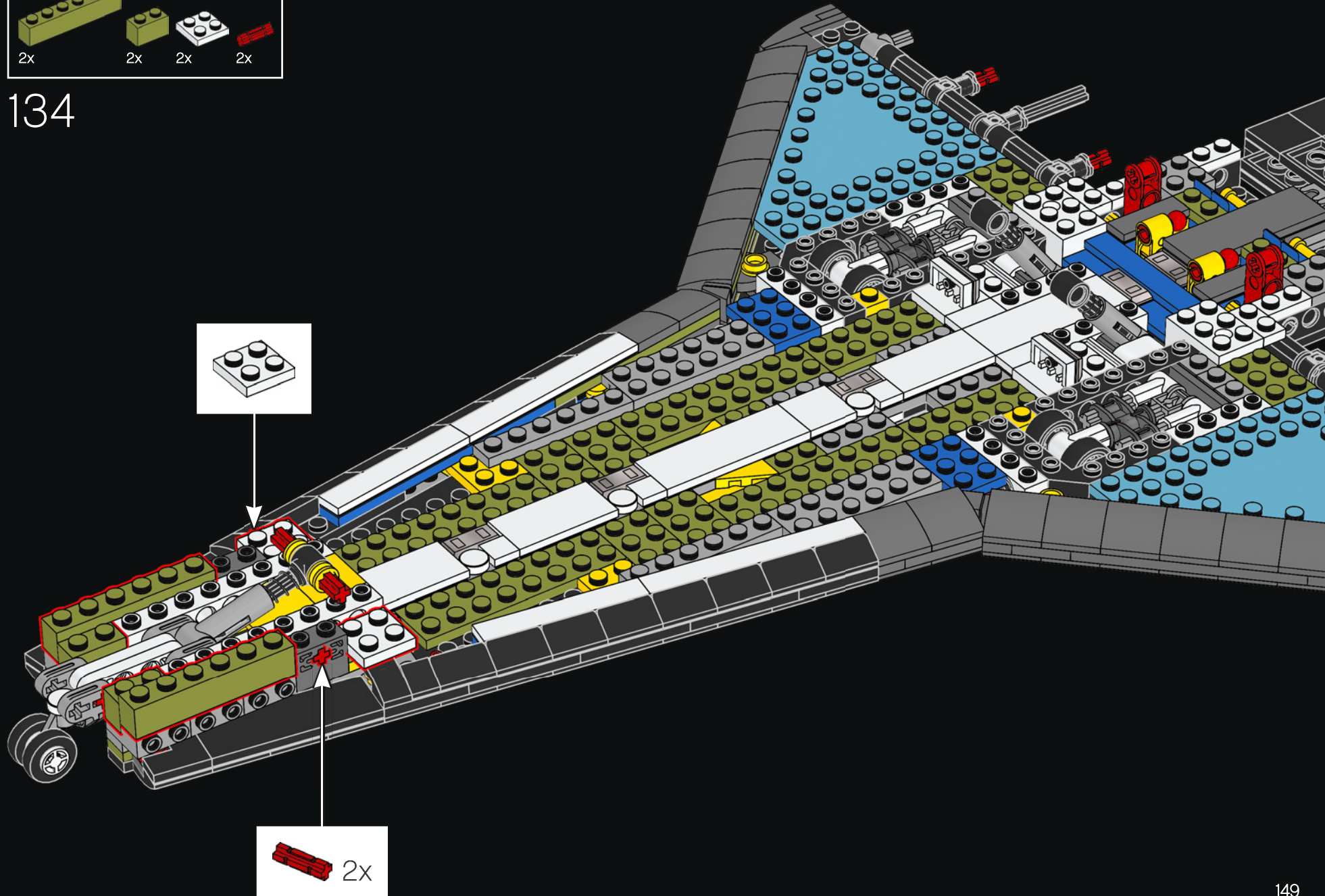


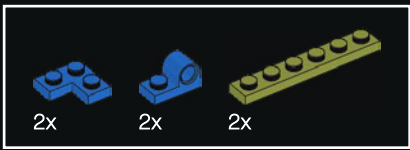
### 你知道吗？

作为滑翔机，航天飞机只有一次着陆的机会。一旦启用起落架，就无法收回。

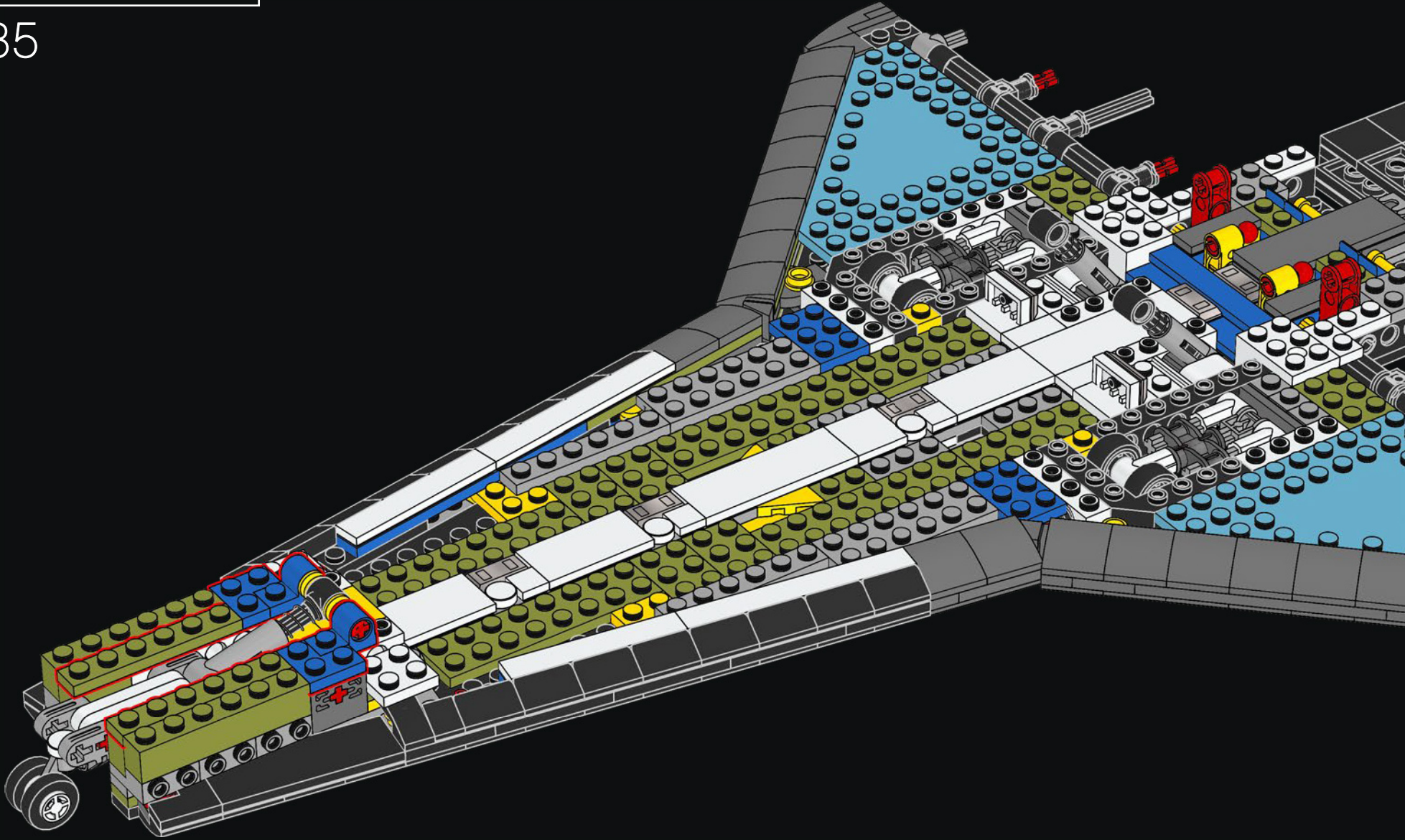


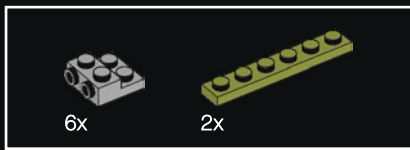
134



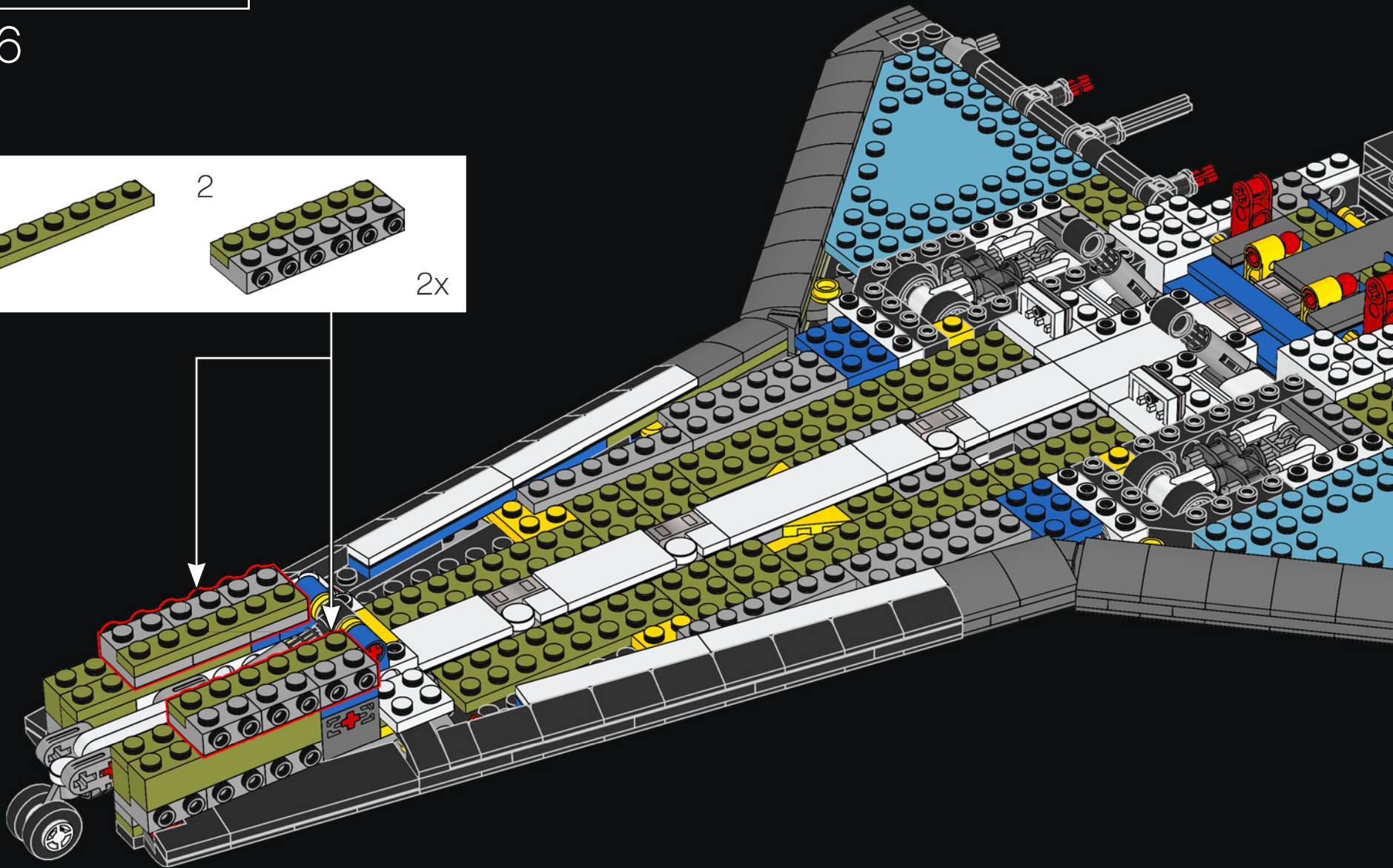
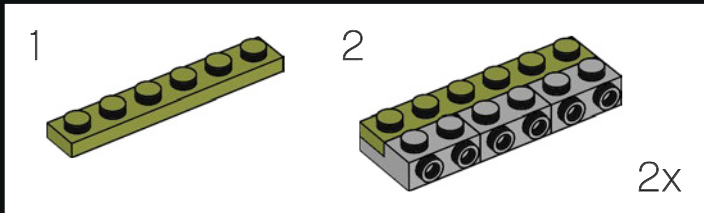


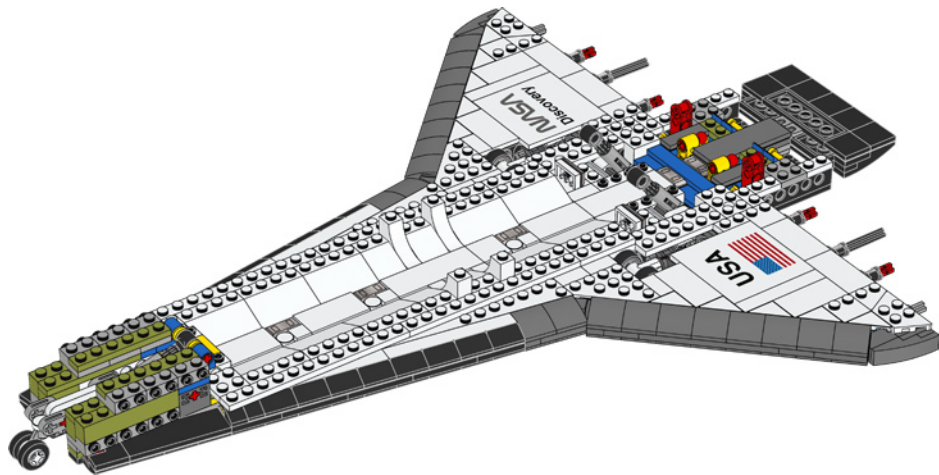
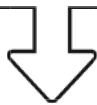
135



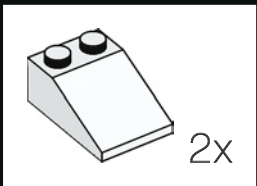
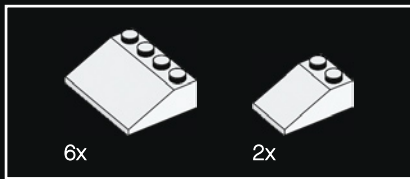


136

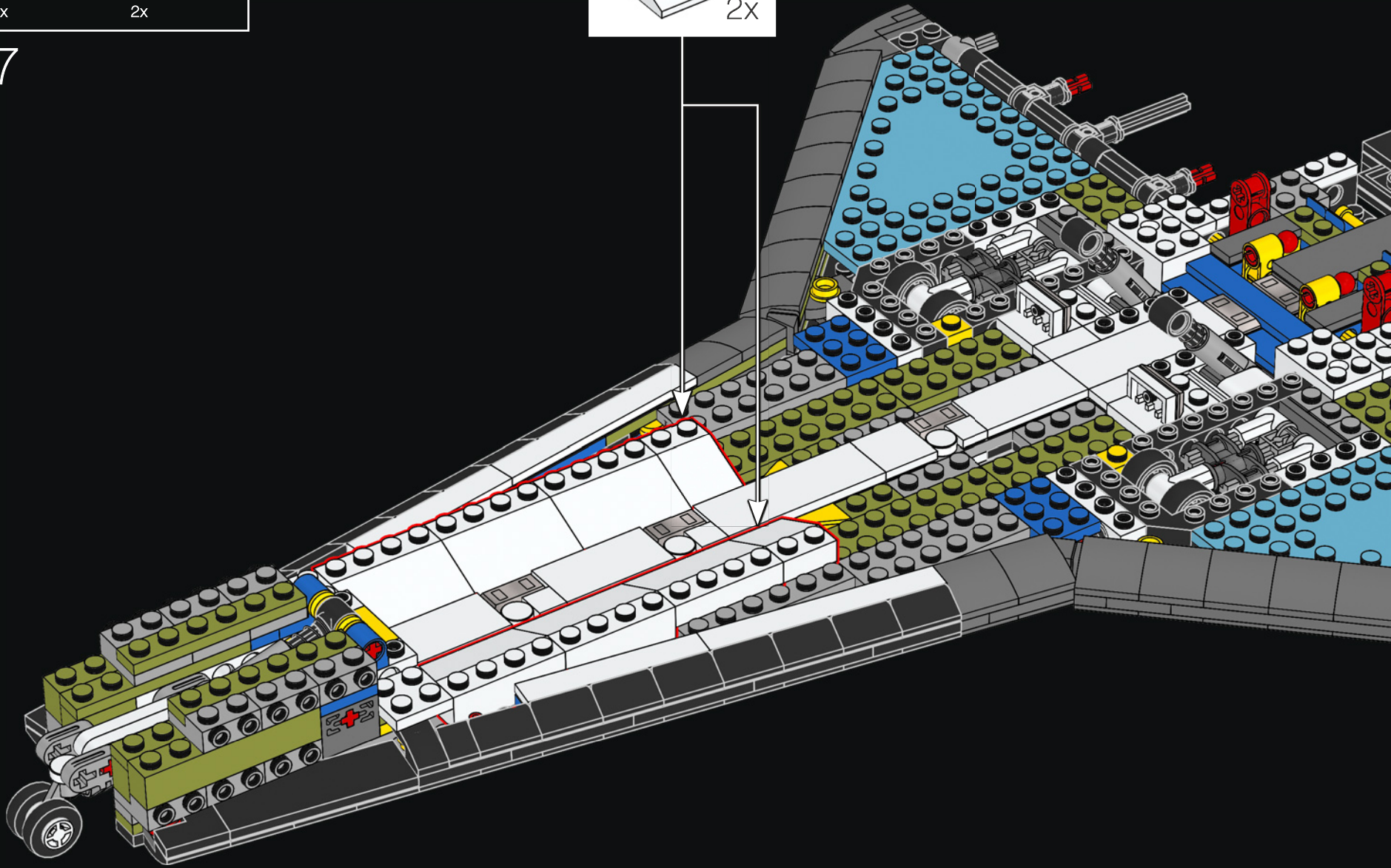


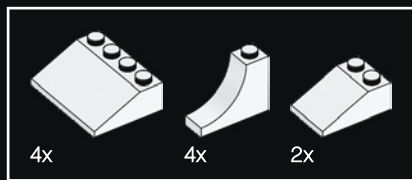




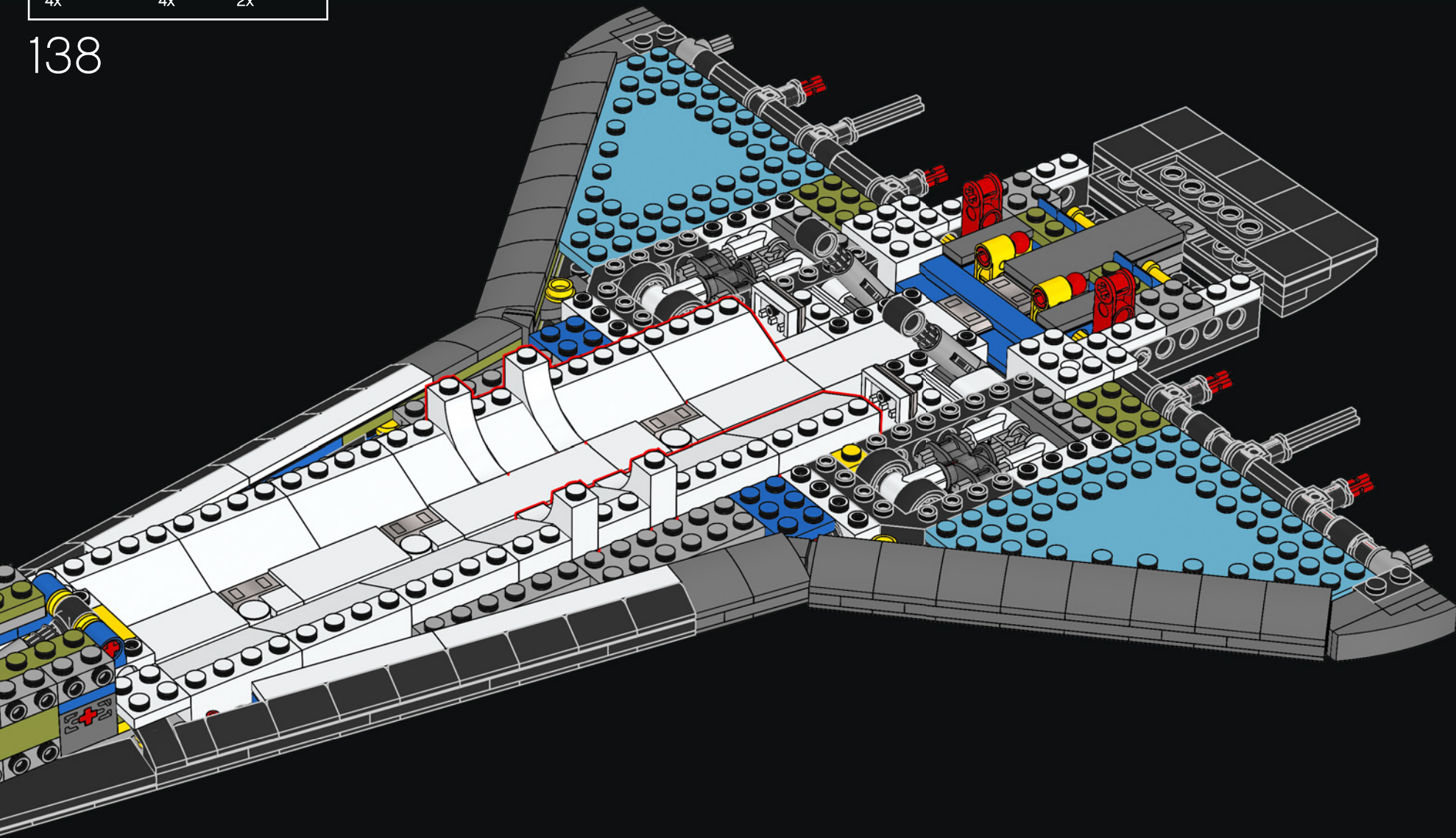


137



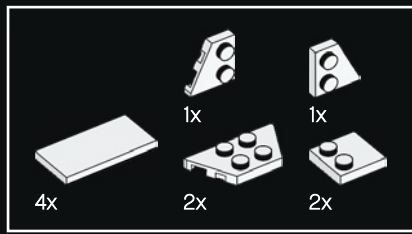


138

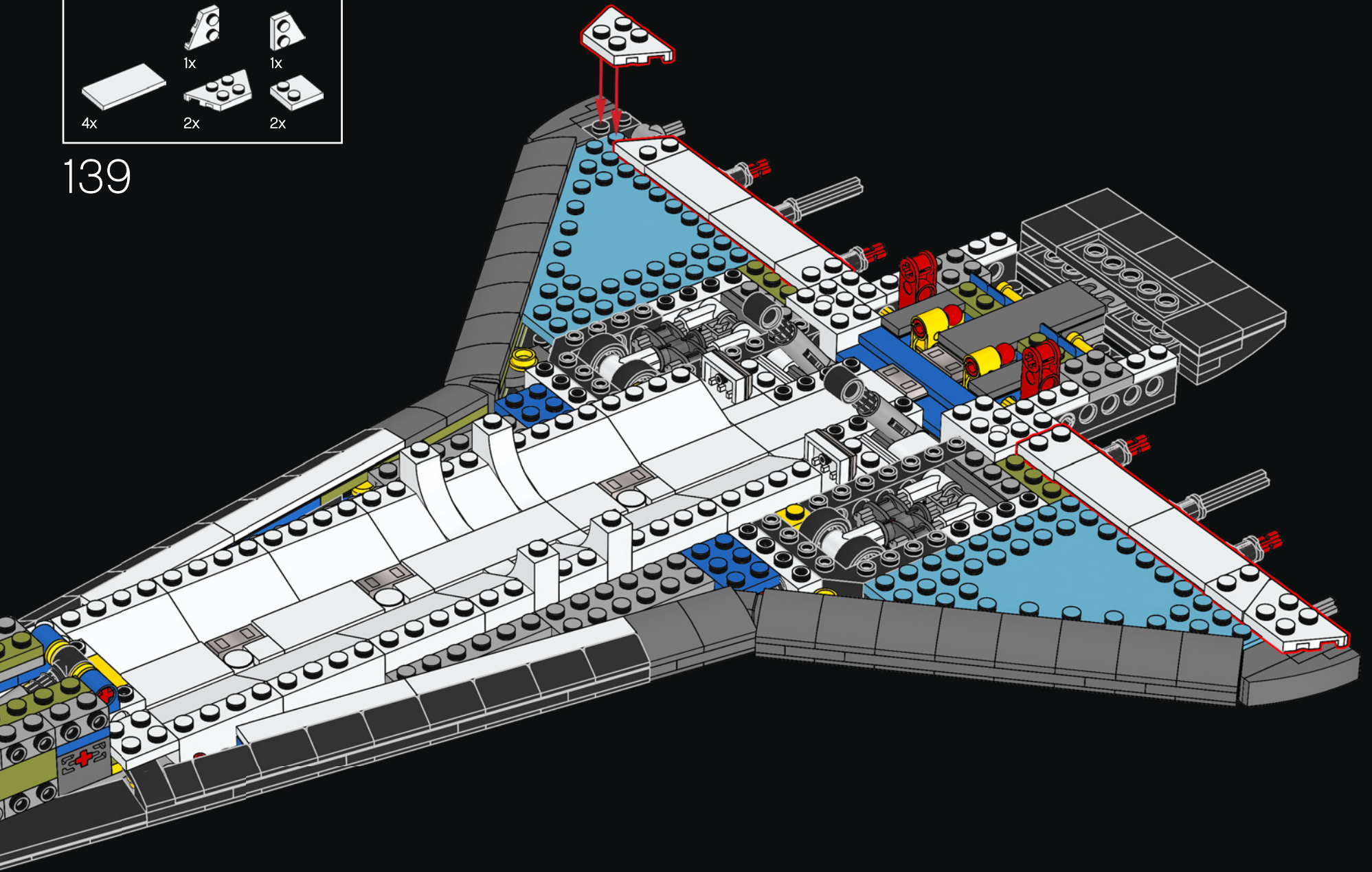


### 你知道吗？

当航天飞机以 25 马赫的速度进入大气层时，因速度太快，会使得周围的空气过热，从而在等离子体光辉的包裹下返回地球。

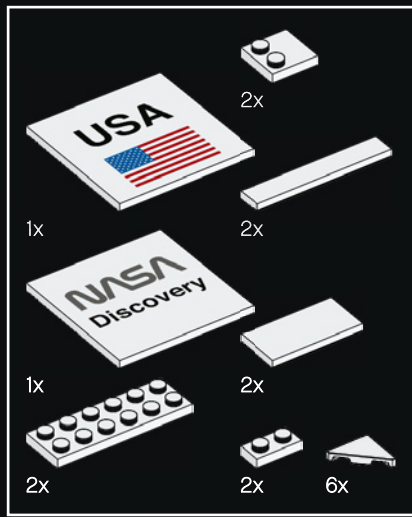


139

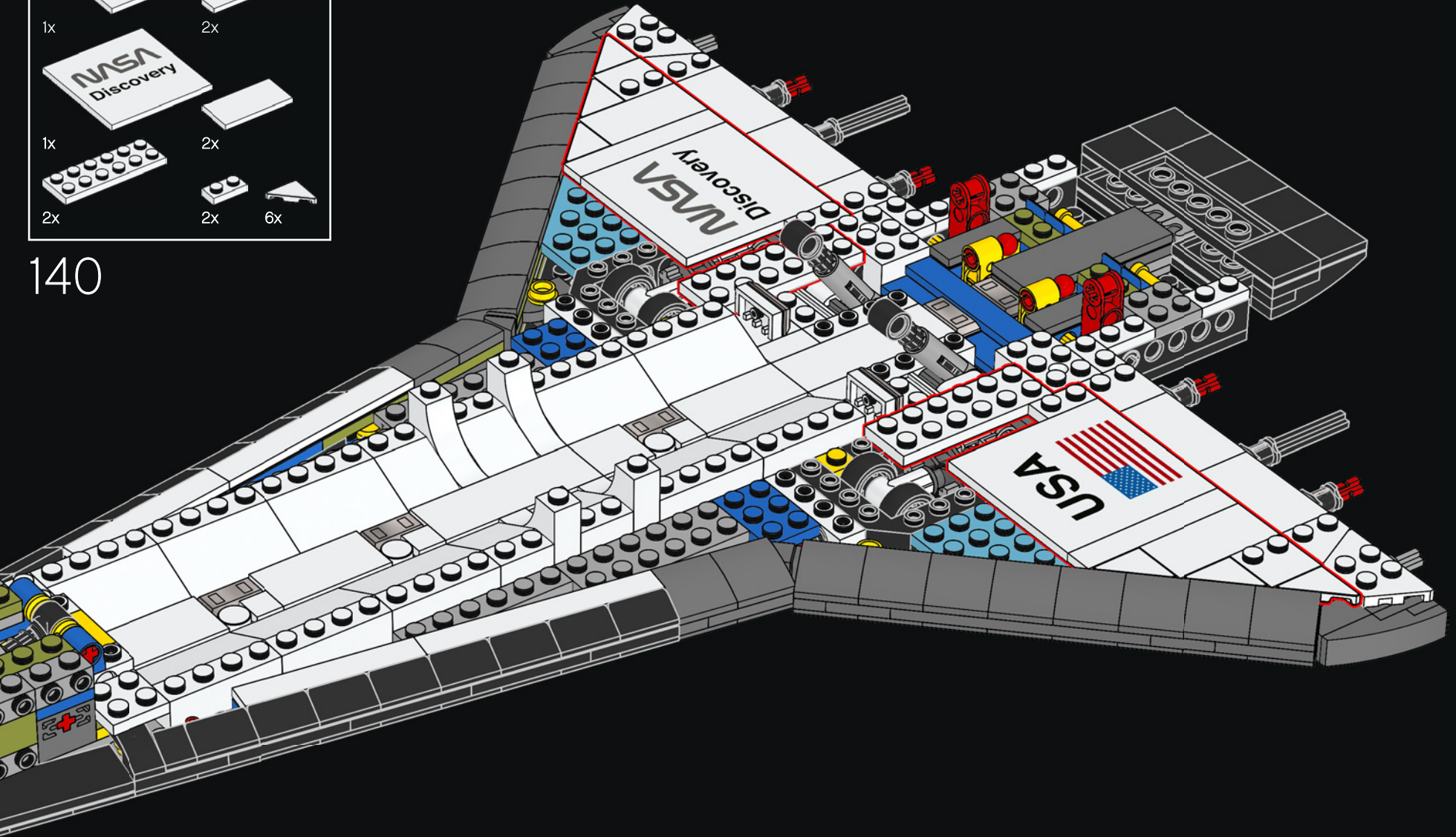


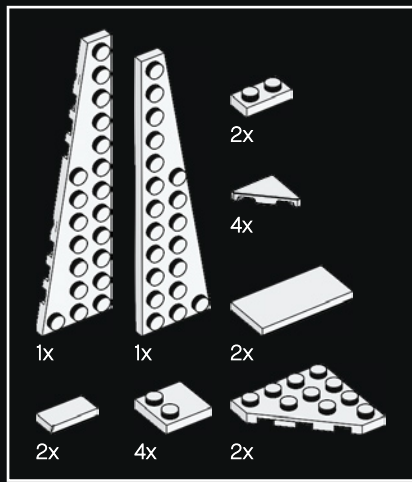
## 你知道吗？

发现号航天飞机表面覆盖着约 23000 块隔热瓷片，以保护其重返大气层时免受极端高温的侵袭。

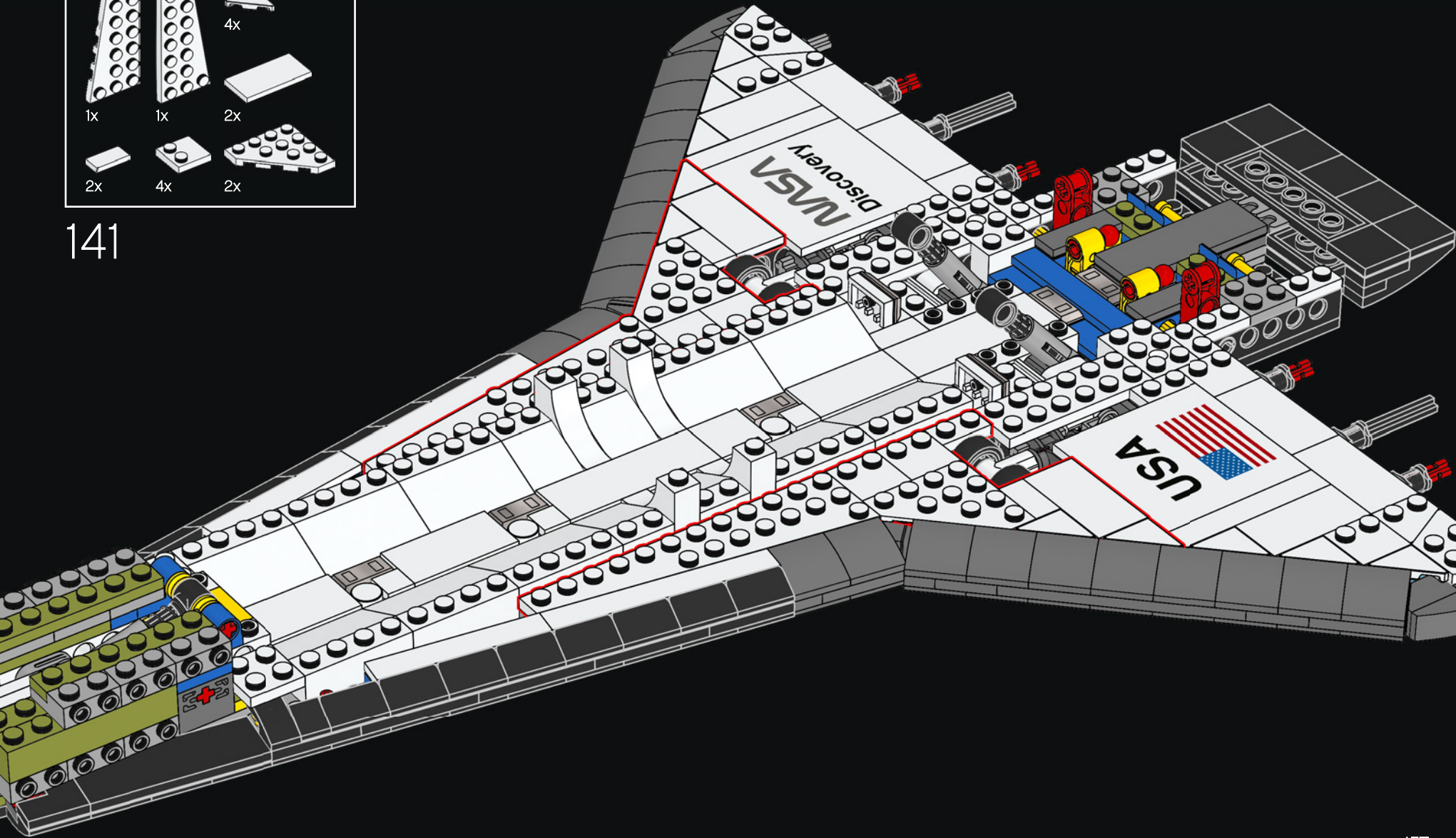


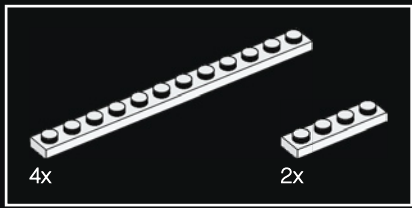
140



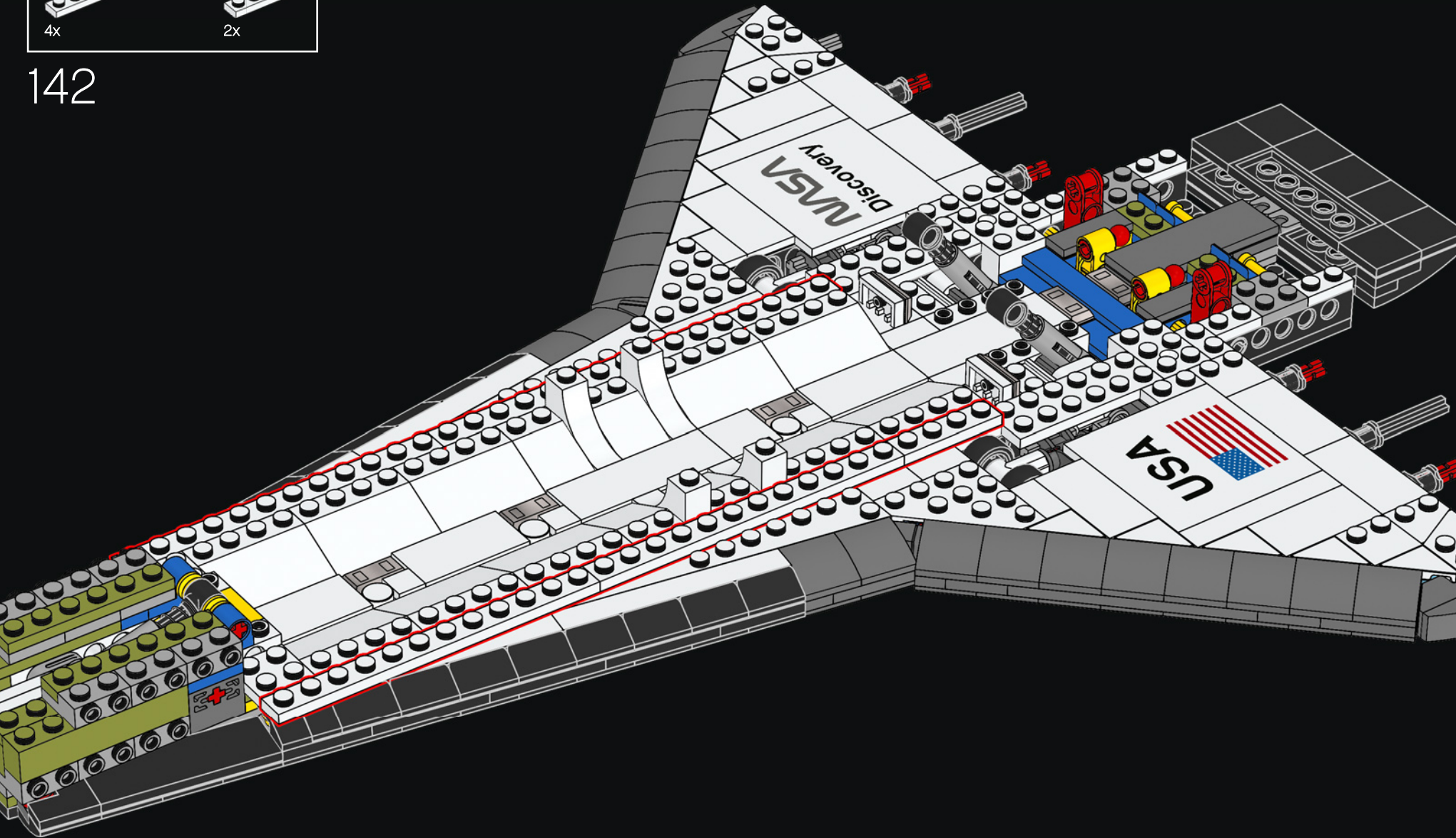


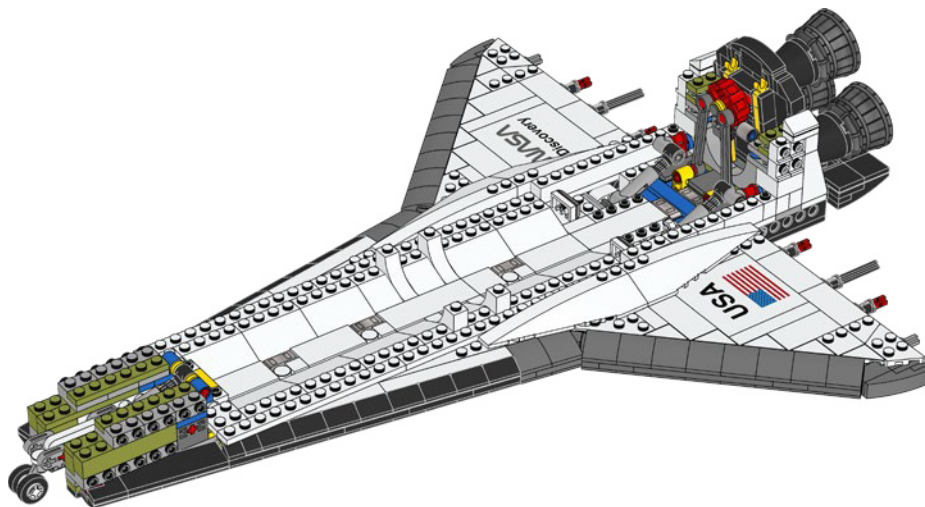
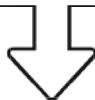
141





142

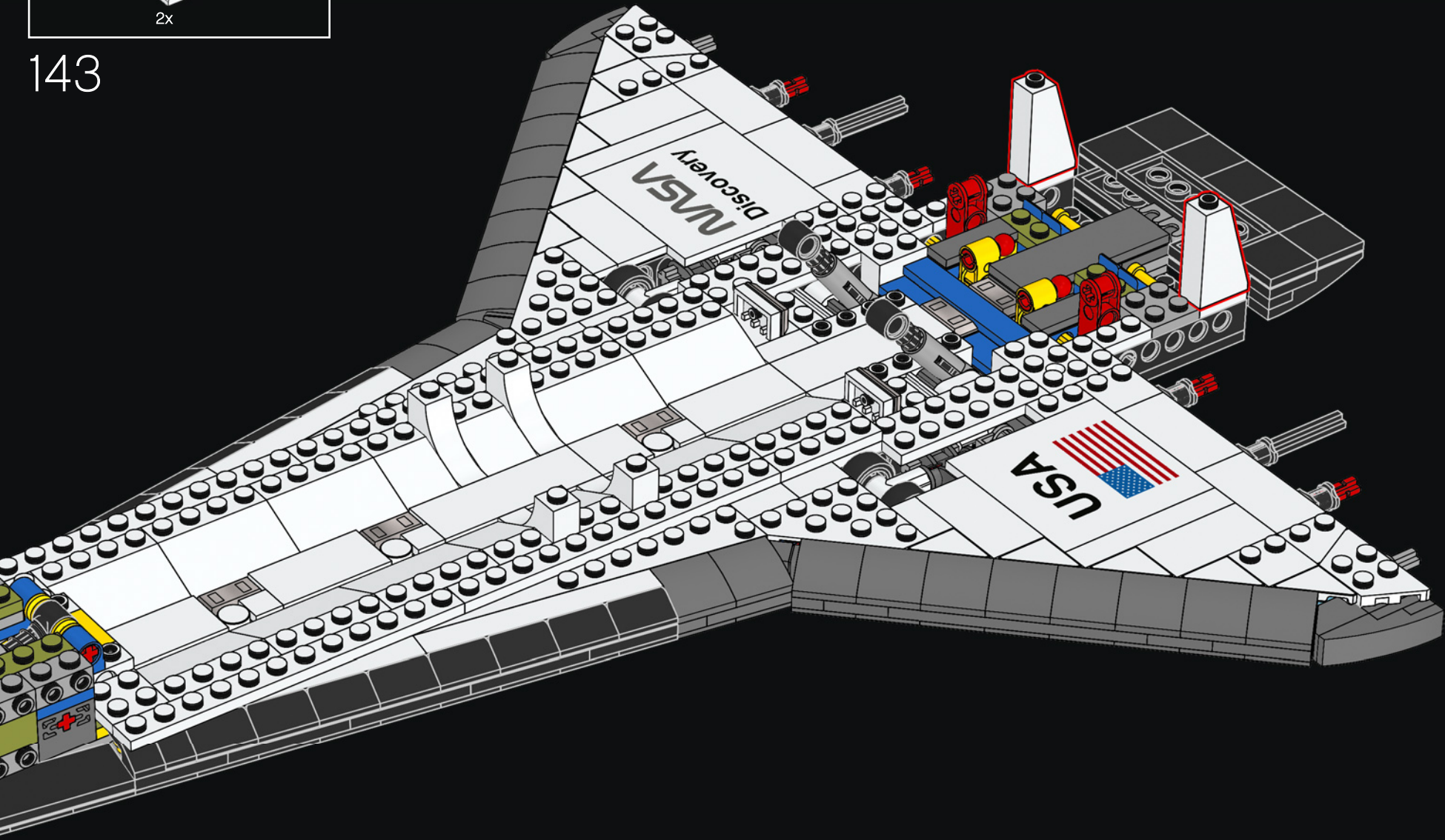






2x

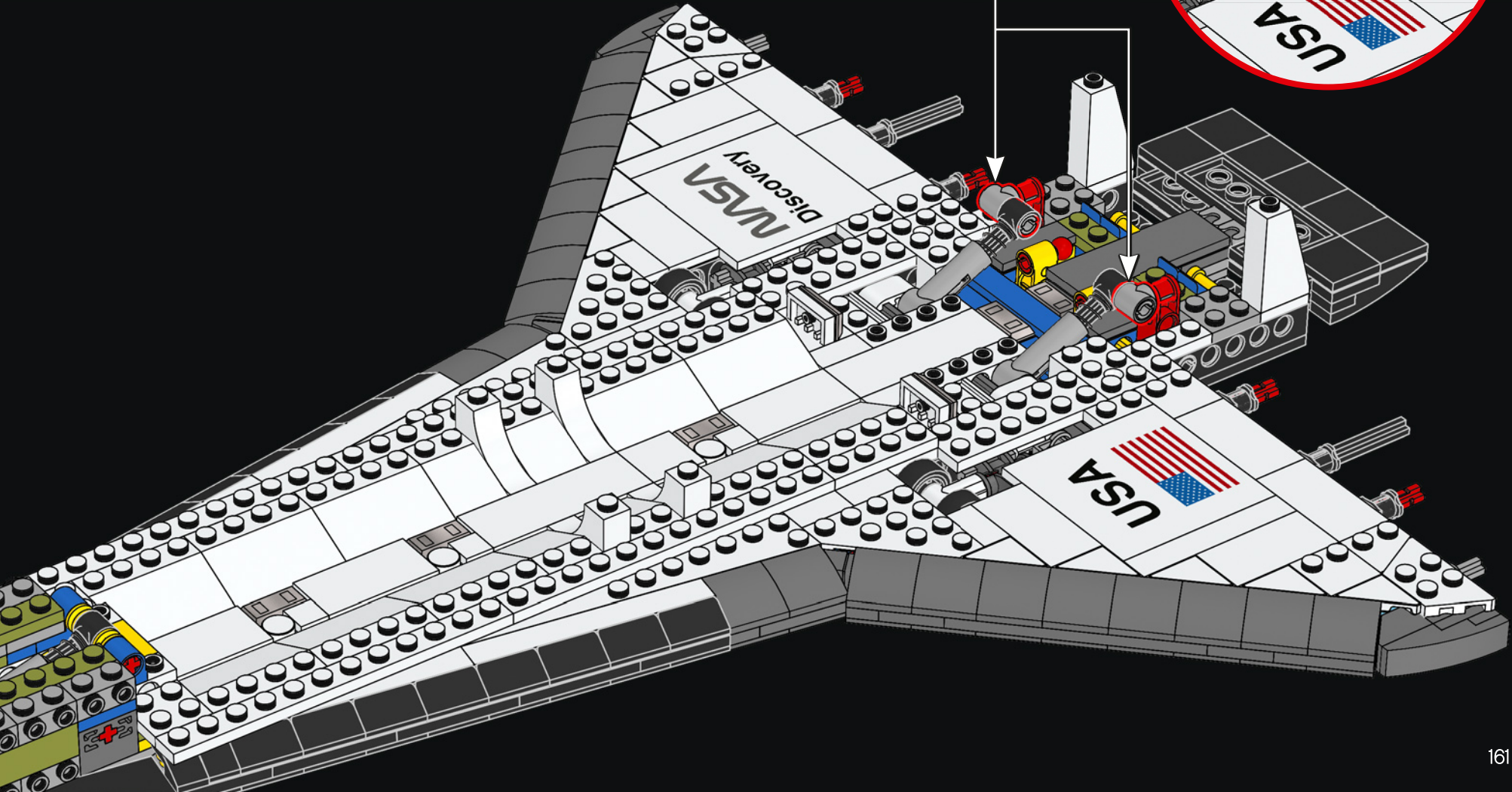
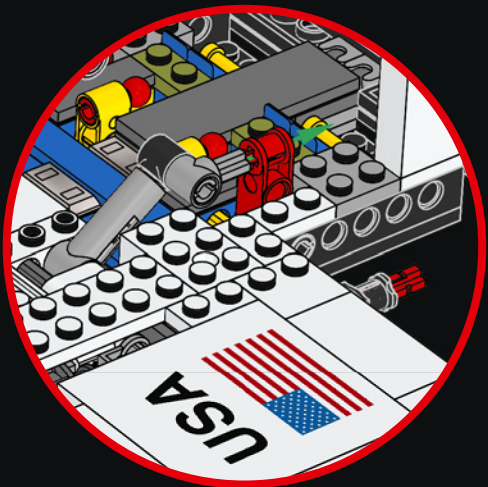
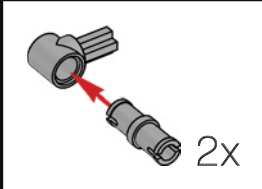
143





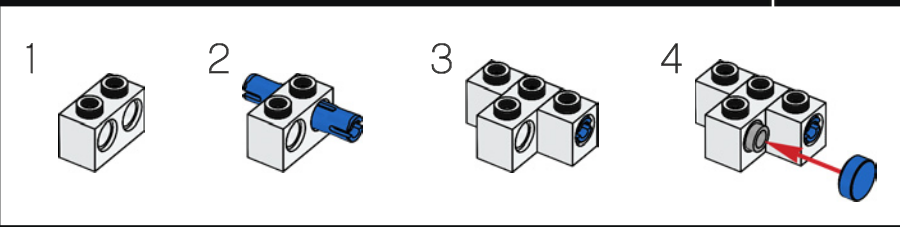
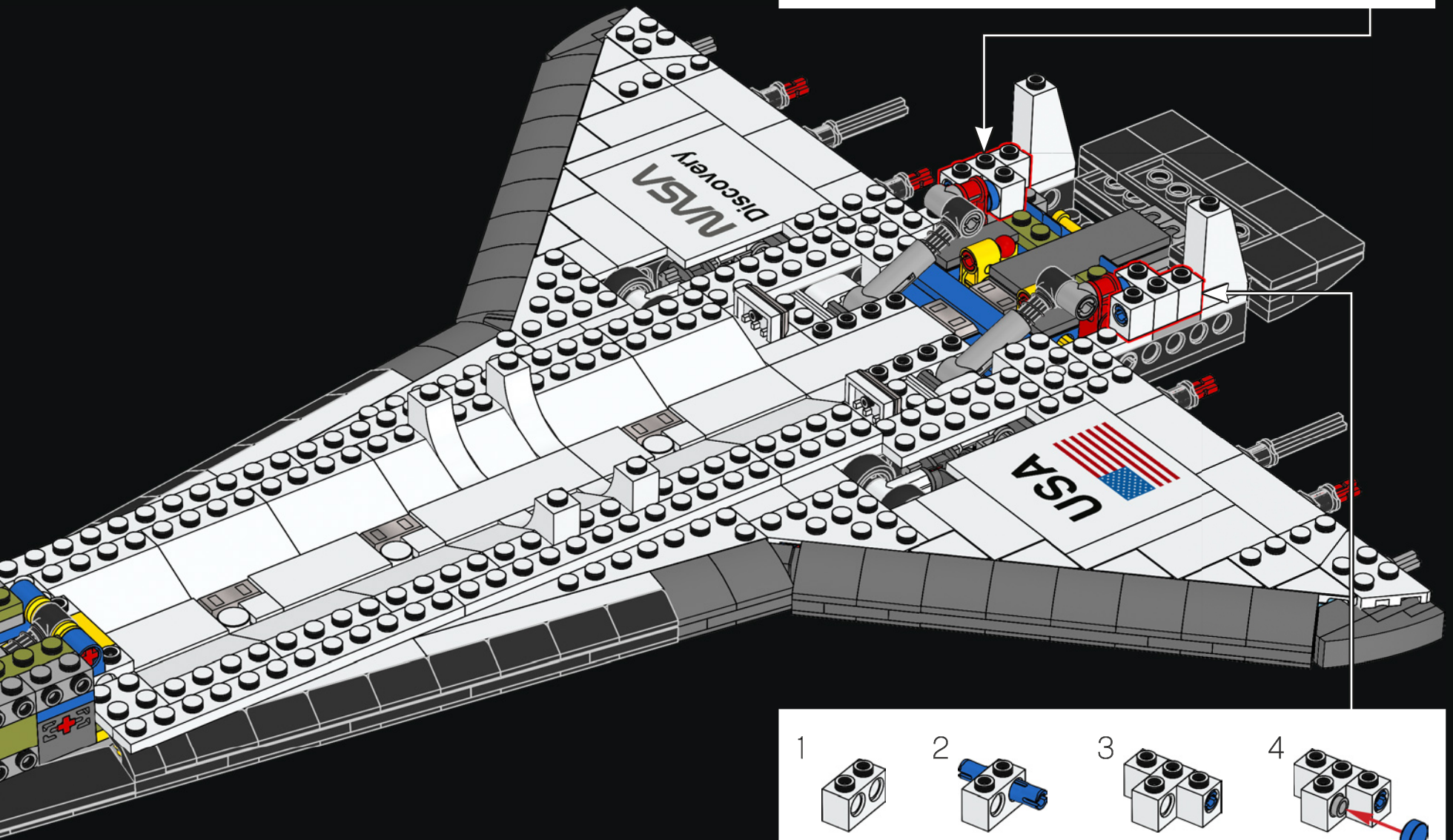
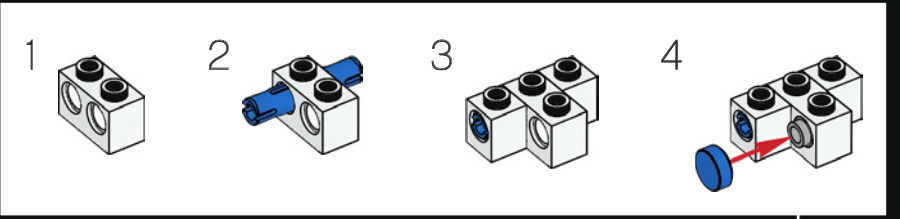


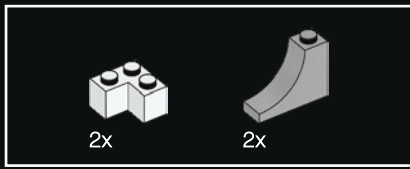
144



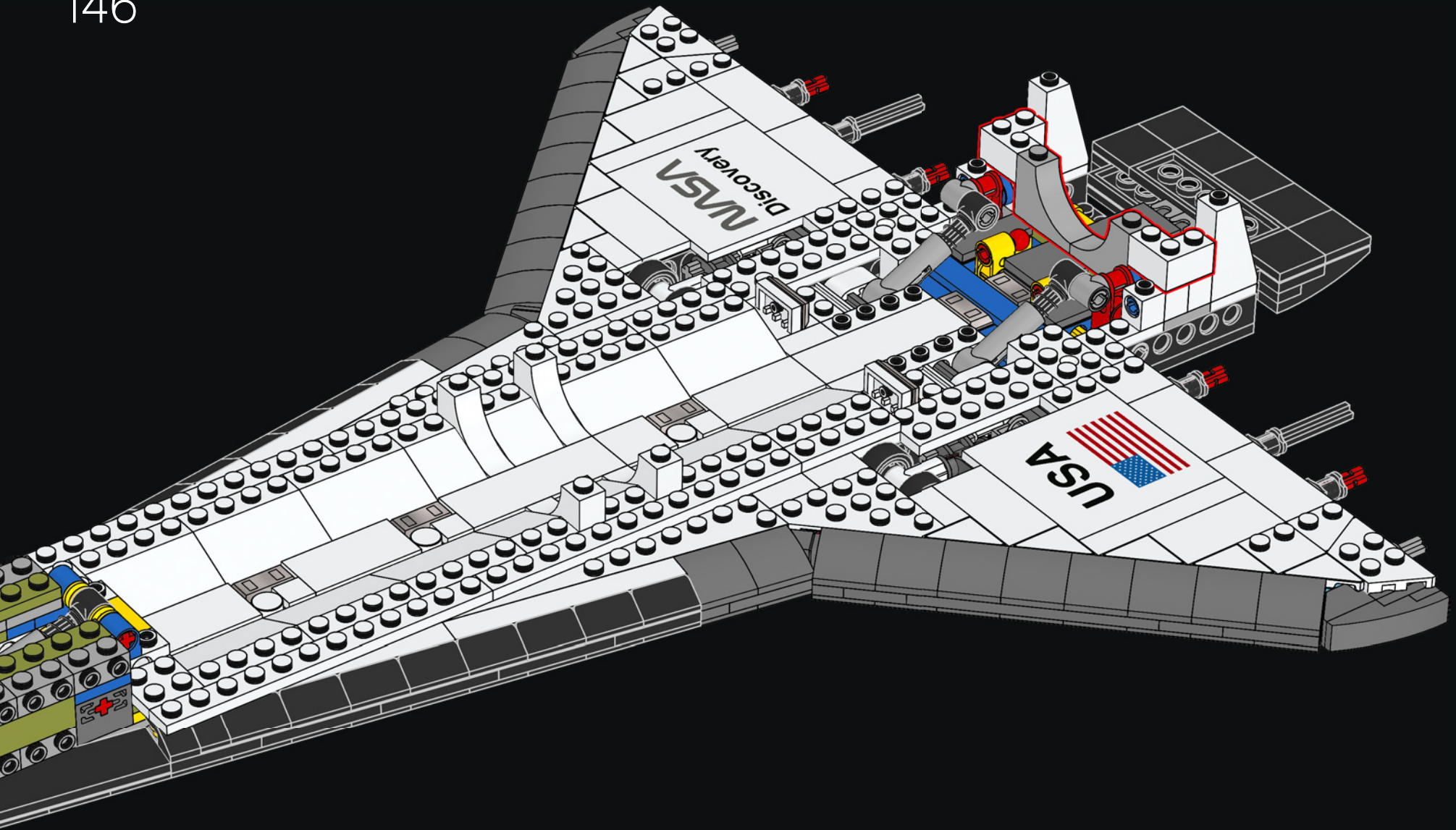


145



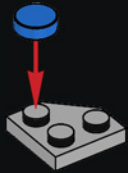


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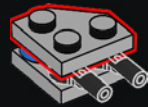
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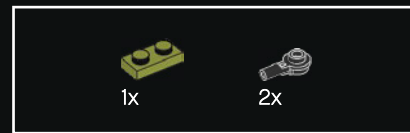
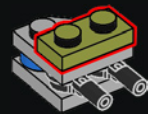
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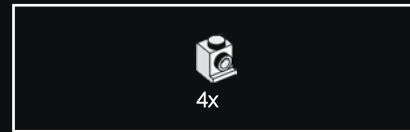
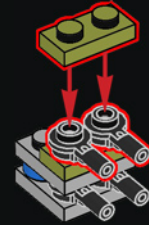
149



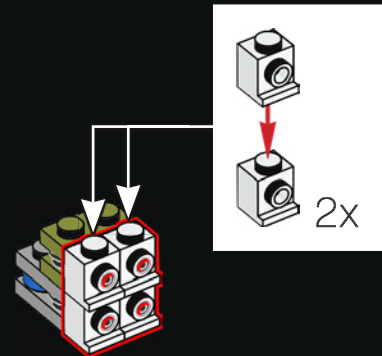
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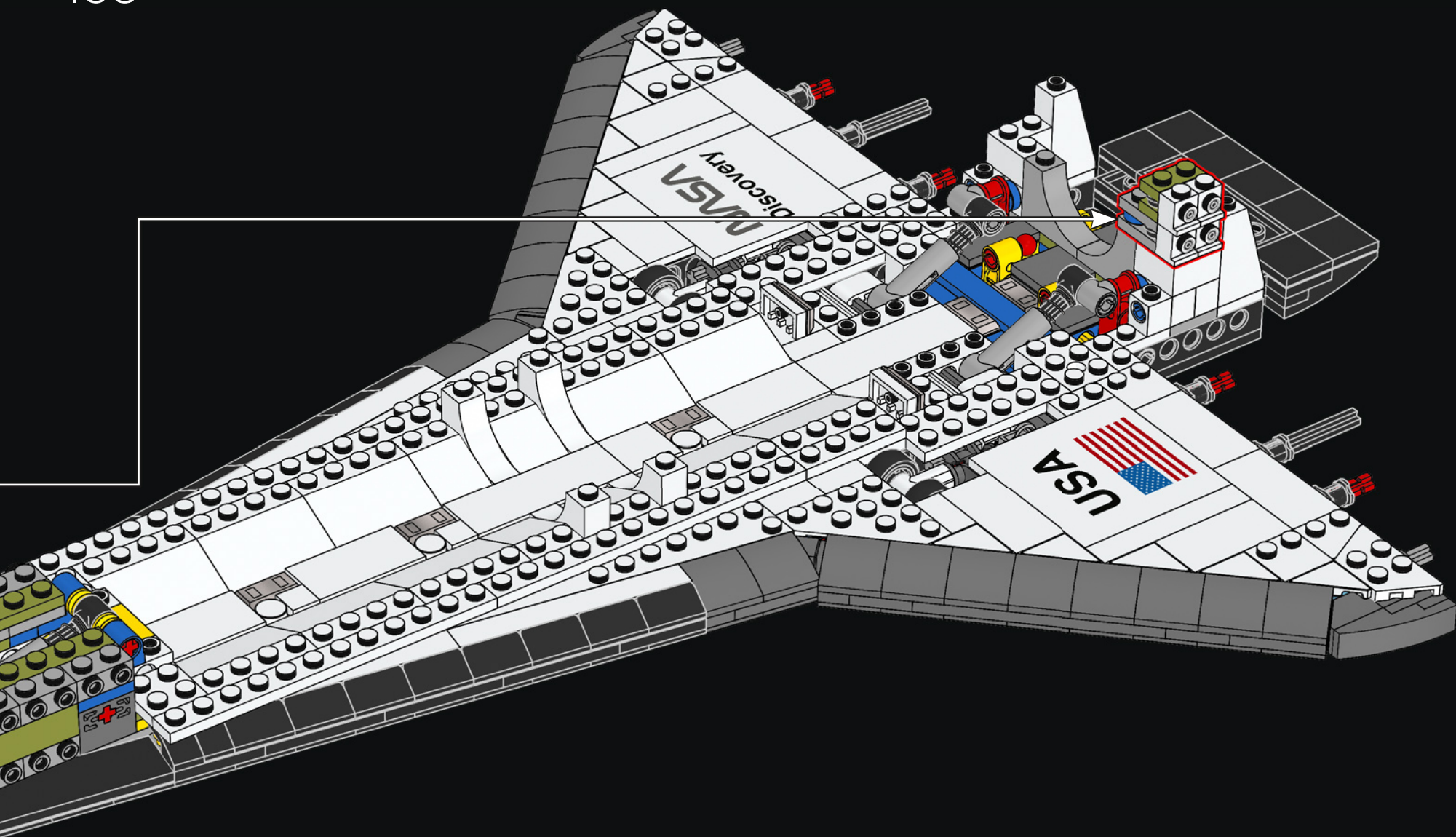


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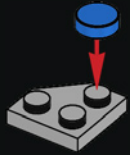
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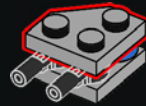
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155



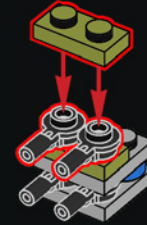
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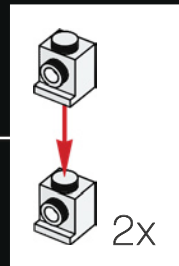
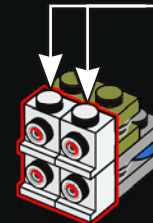
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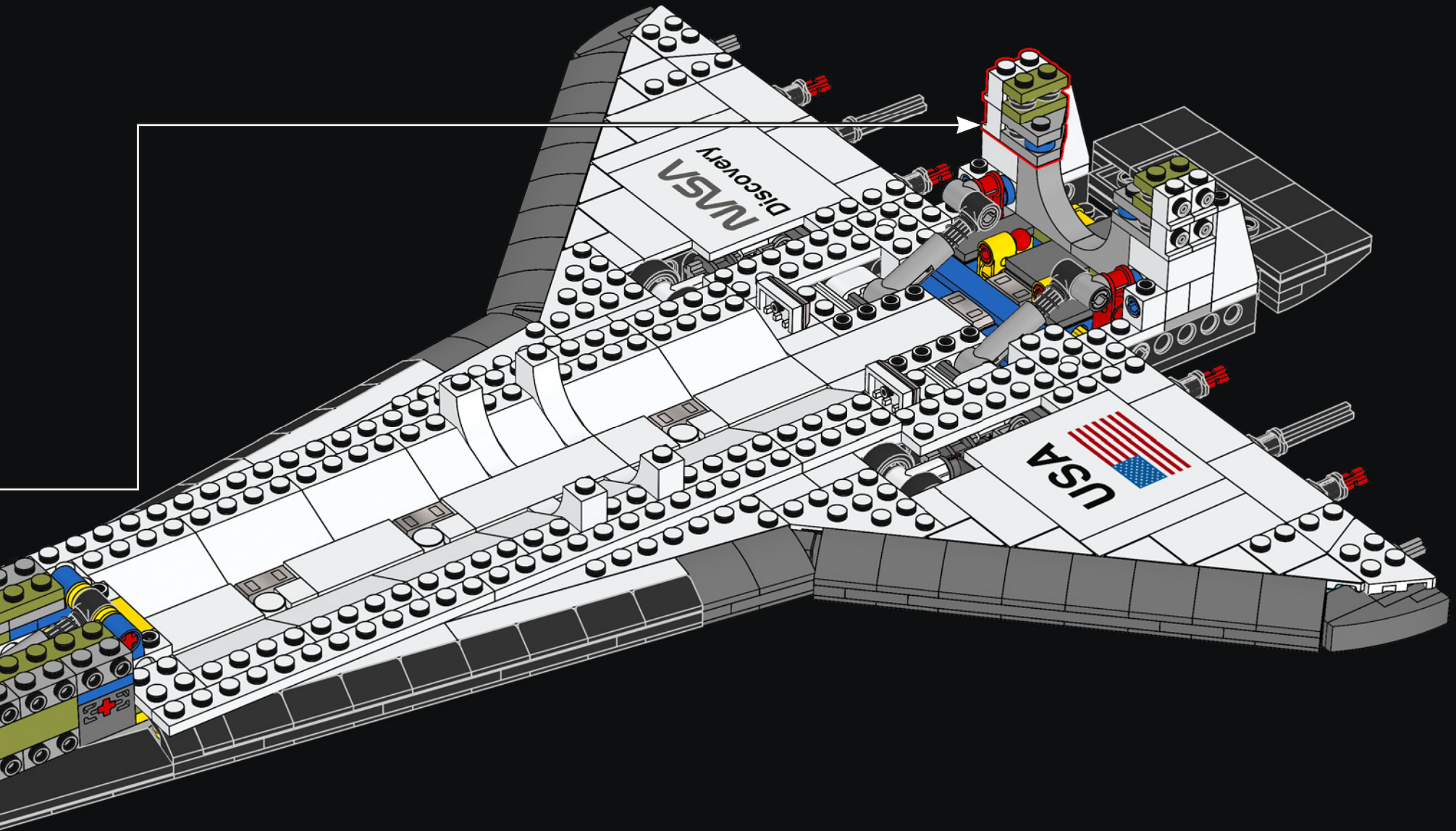


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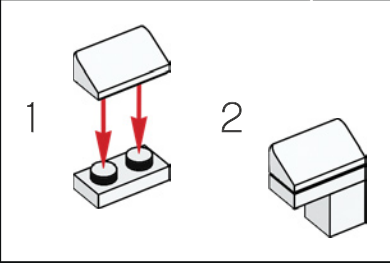
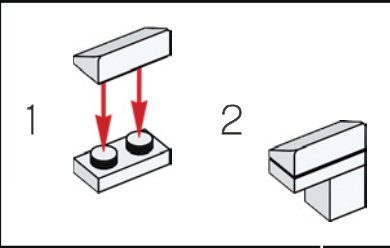
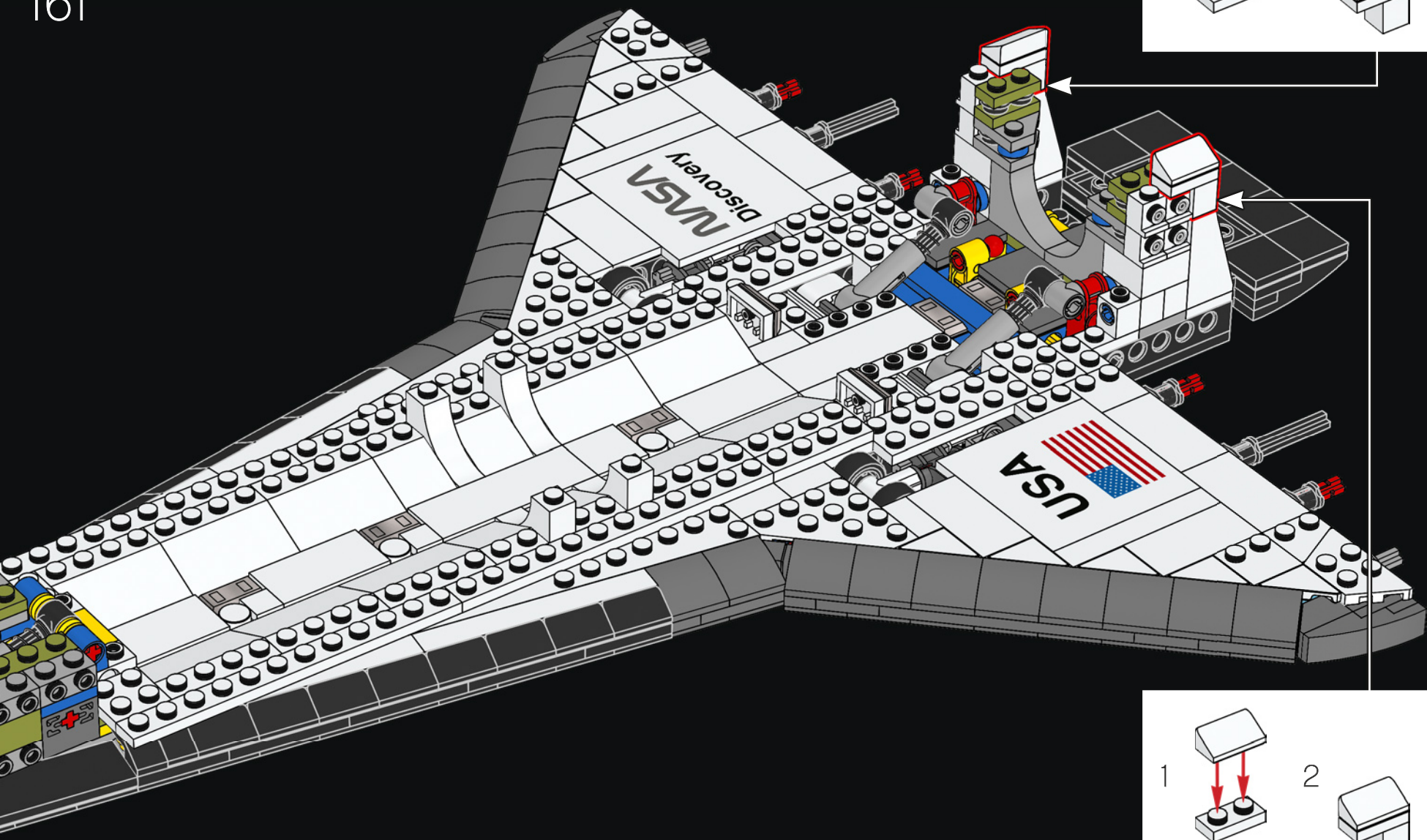
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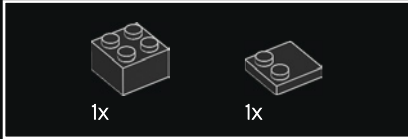
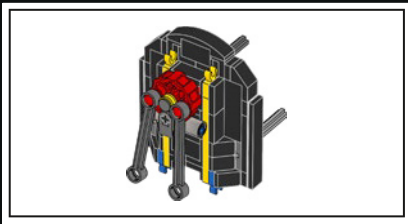




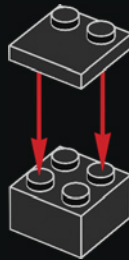
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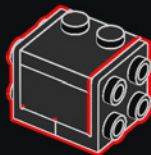




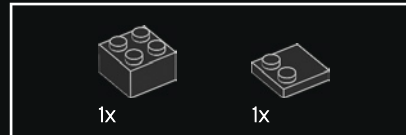
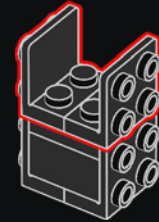
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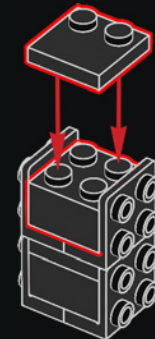
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164

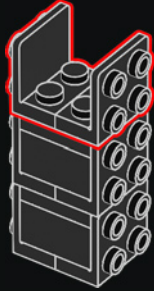


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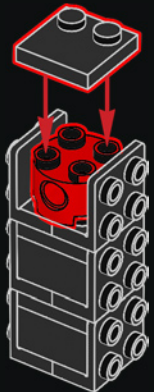




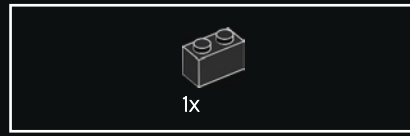
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167



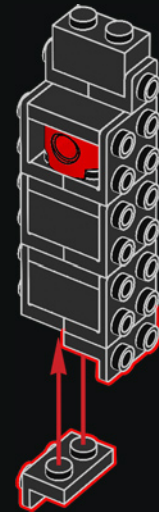
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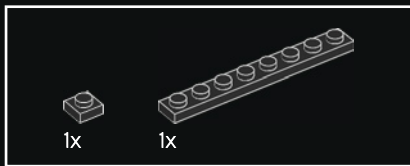
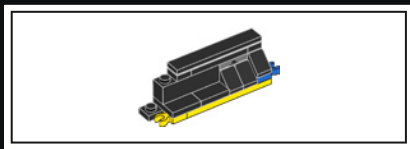


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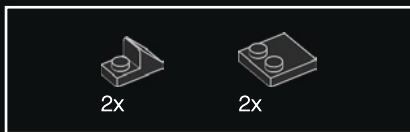
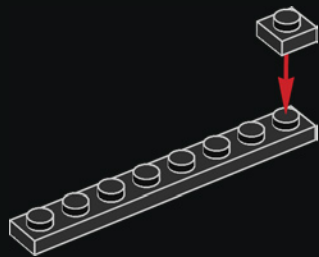


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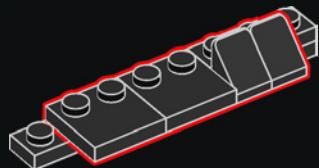




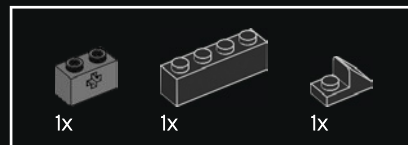
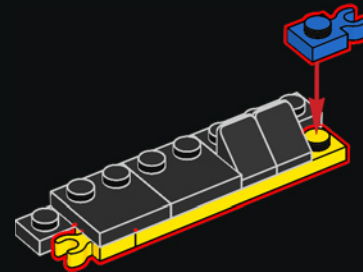
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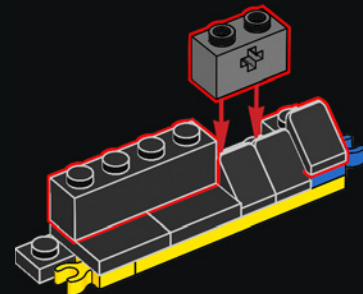
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173

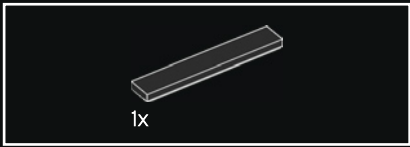
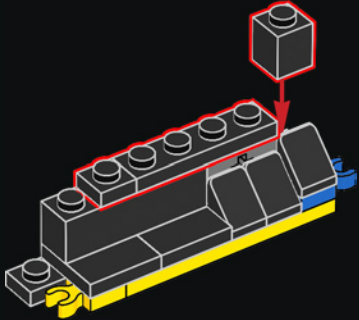


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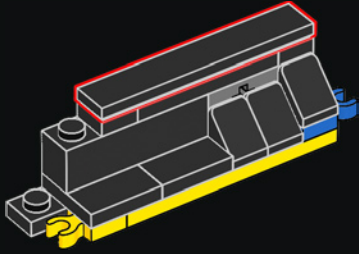




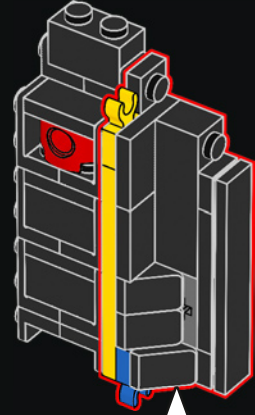
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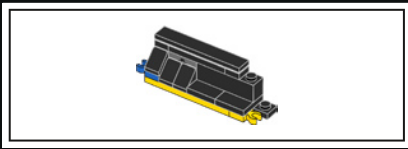


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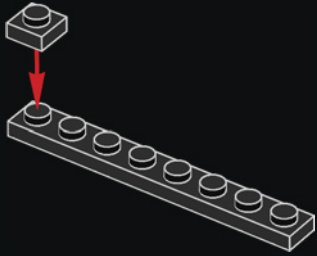


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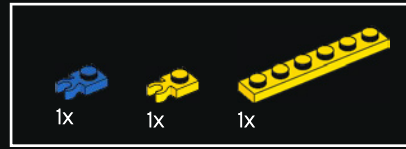
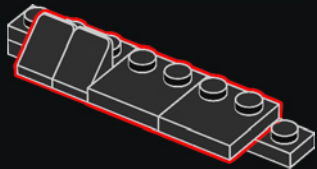




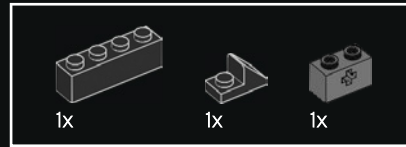
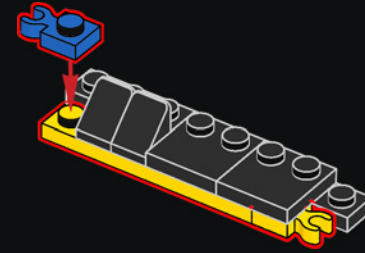
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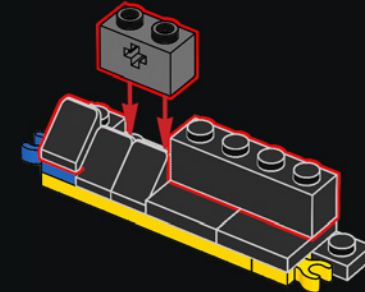
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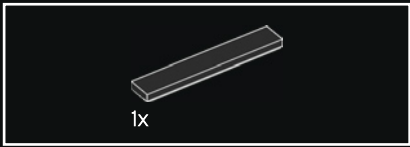
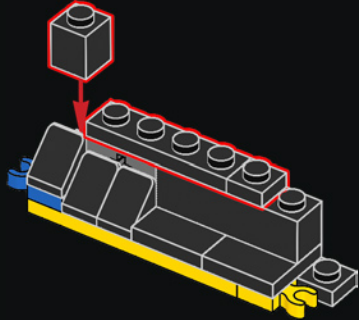


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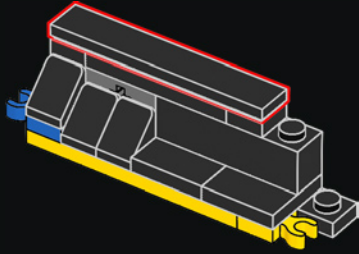




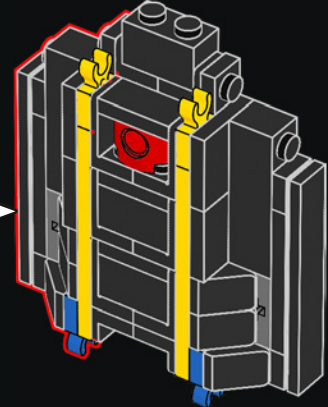
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183

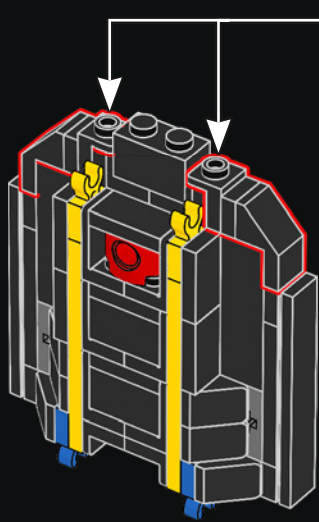
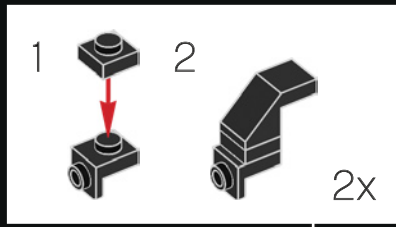


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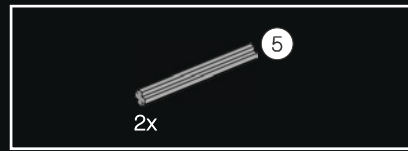
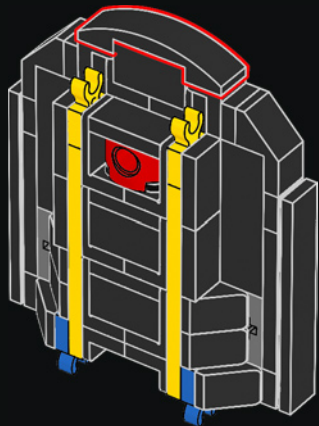




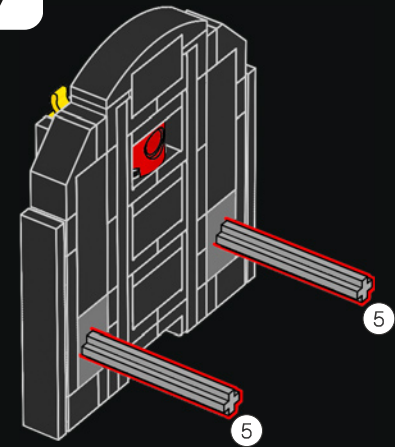
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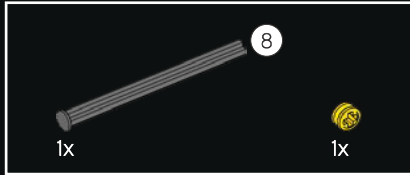
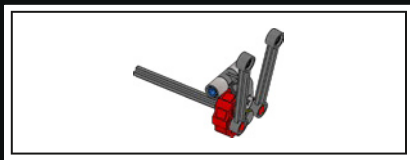


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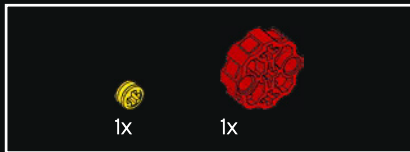
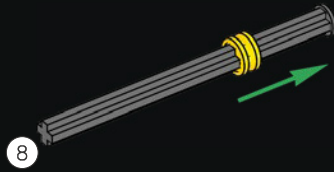


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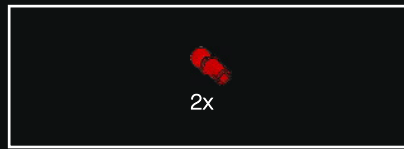
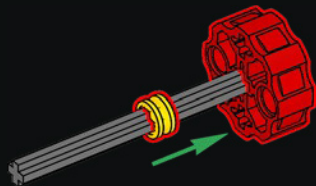




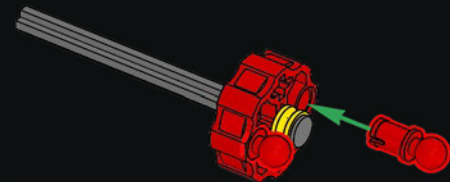
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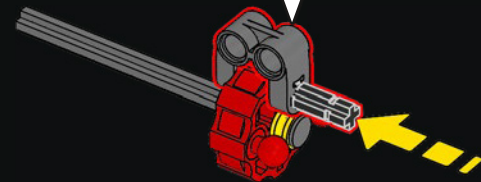
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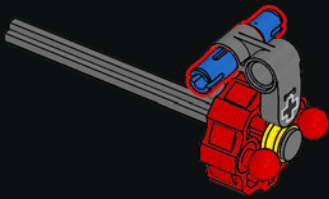
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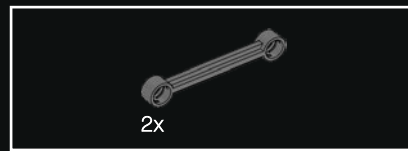
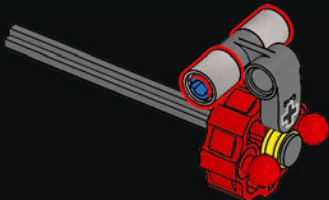




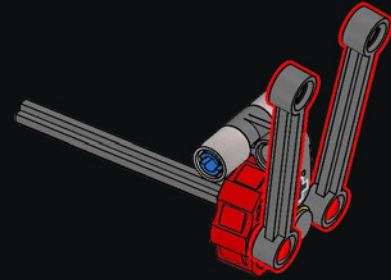
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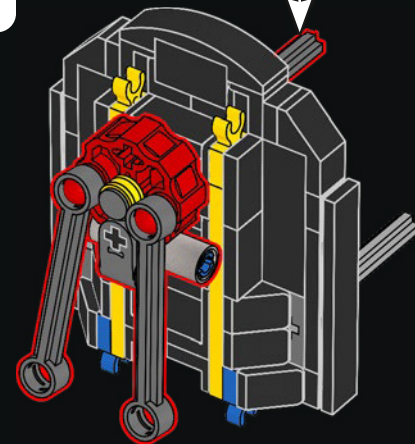
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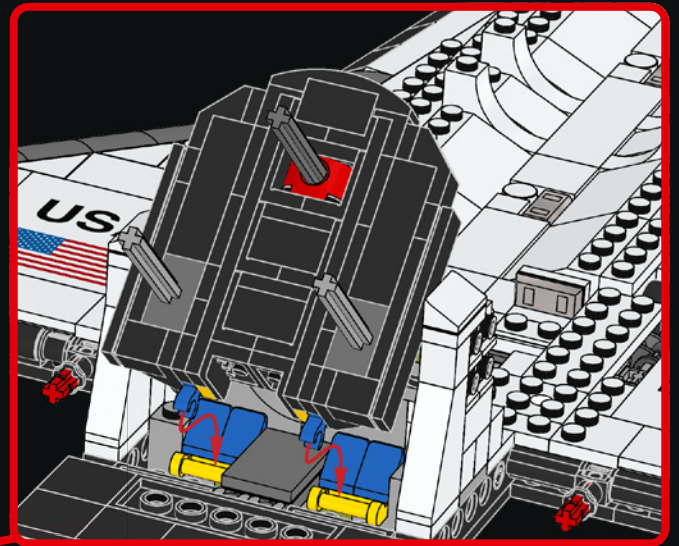
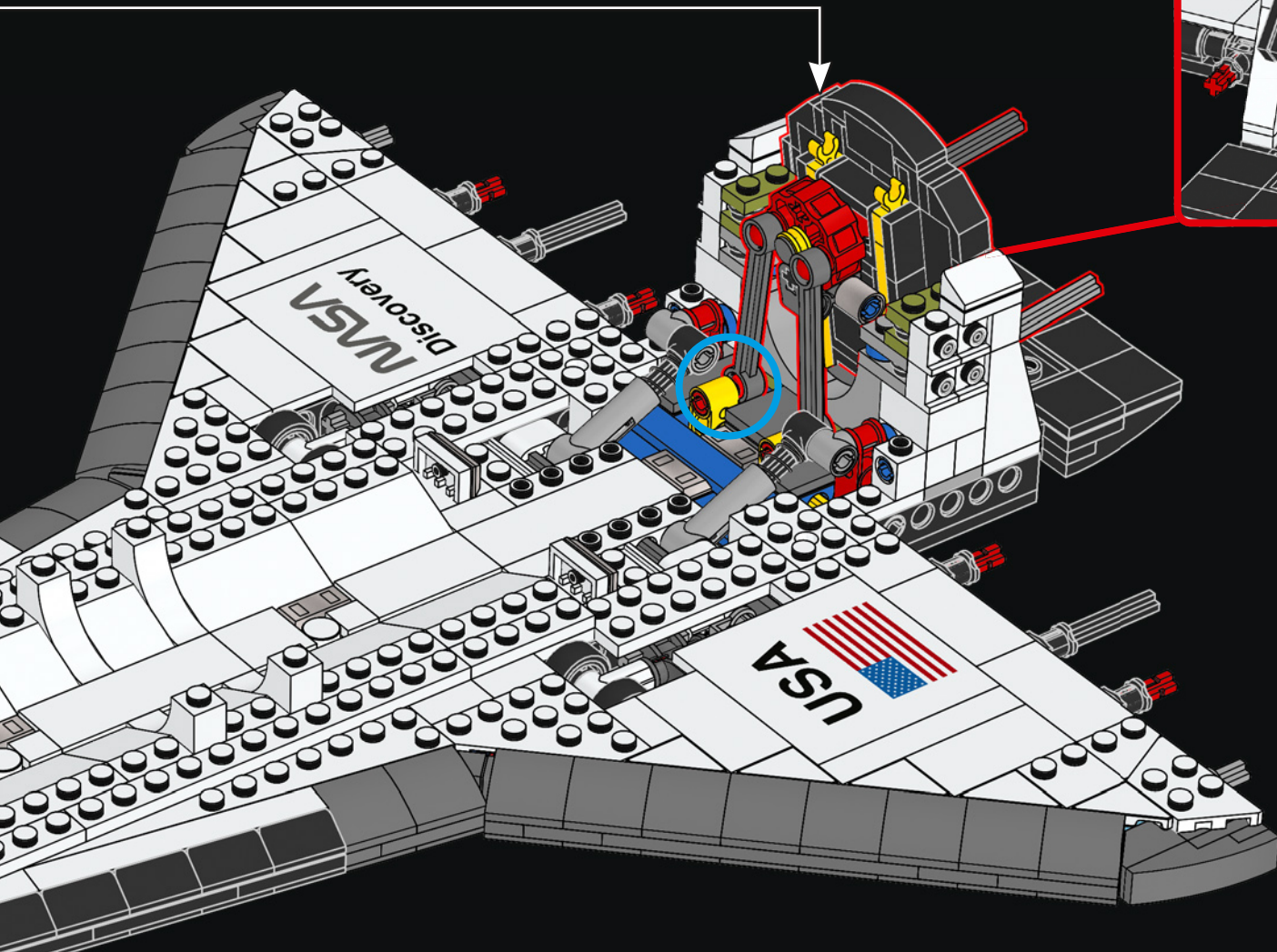


194



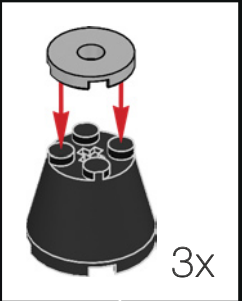
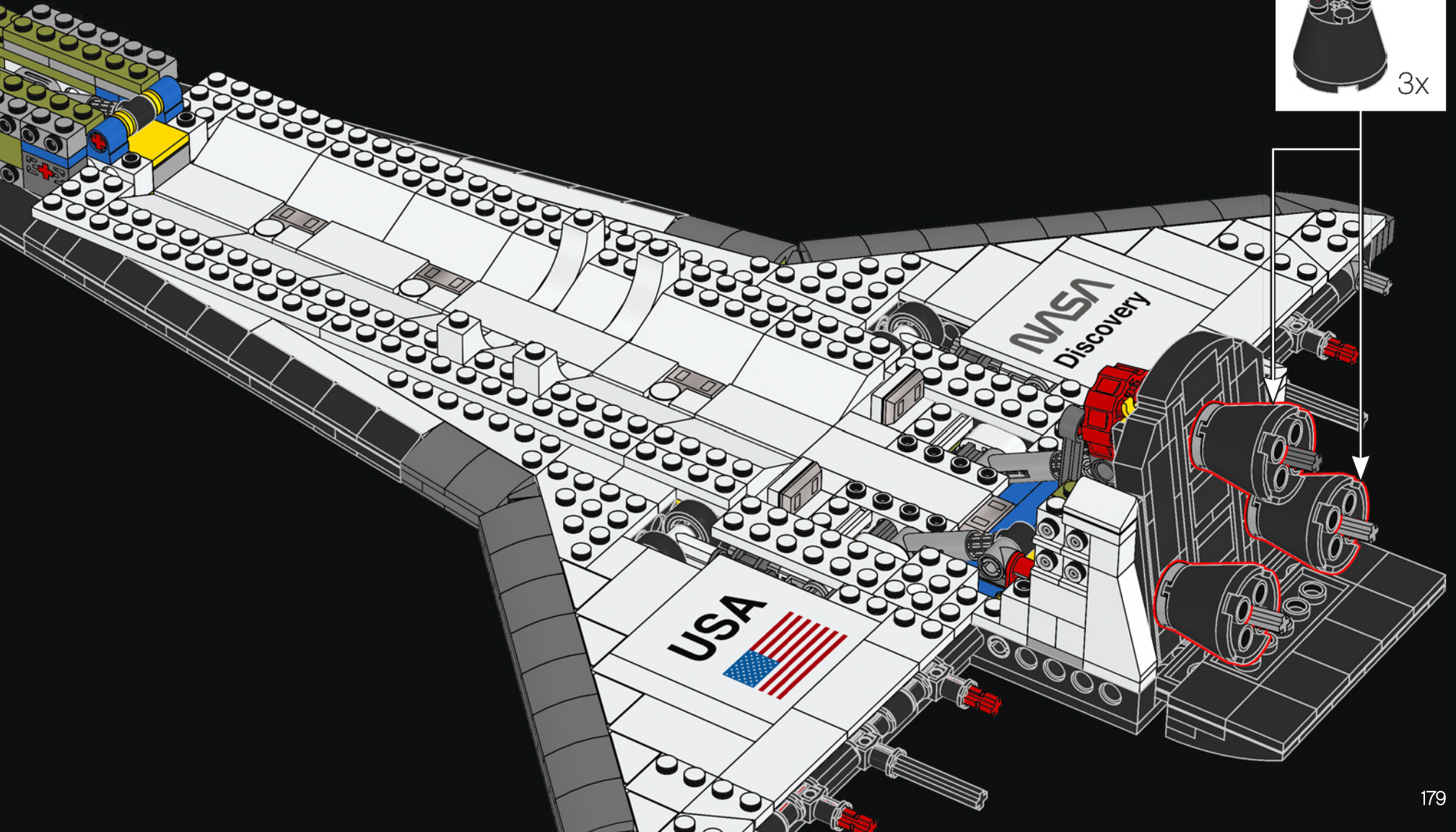
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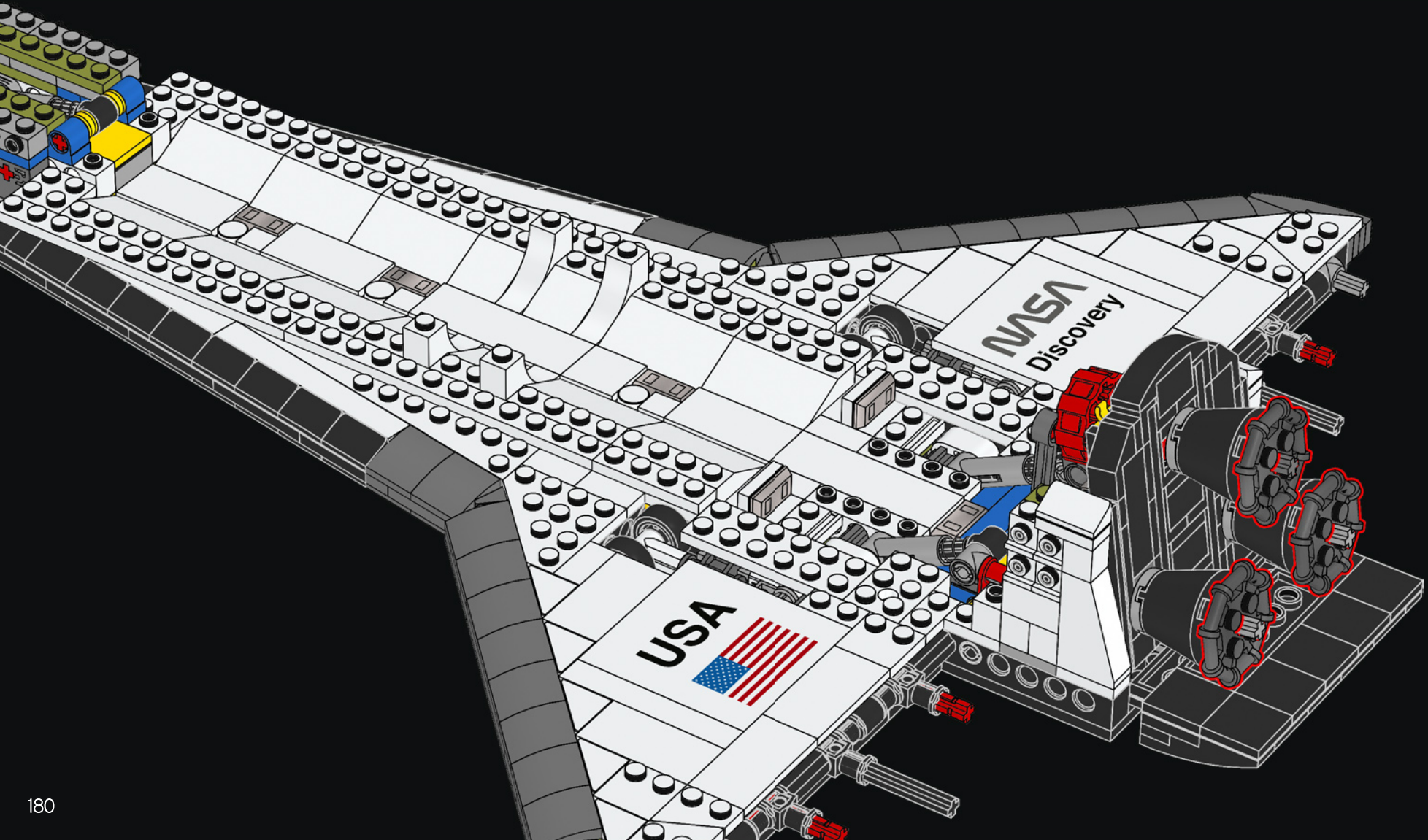


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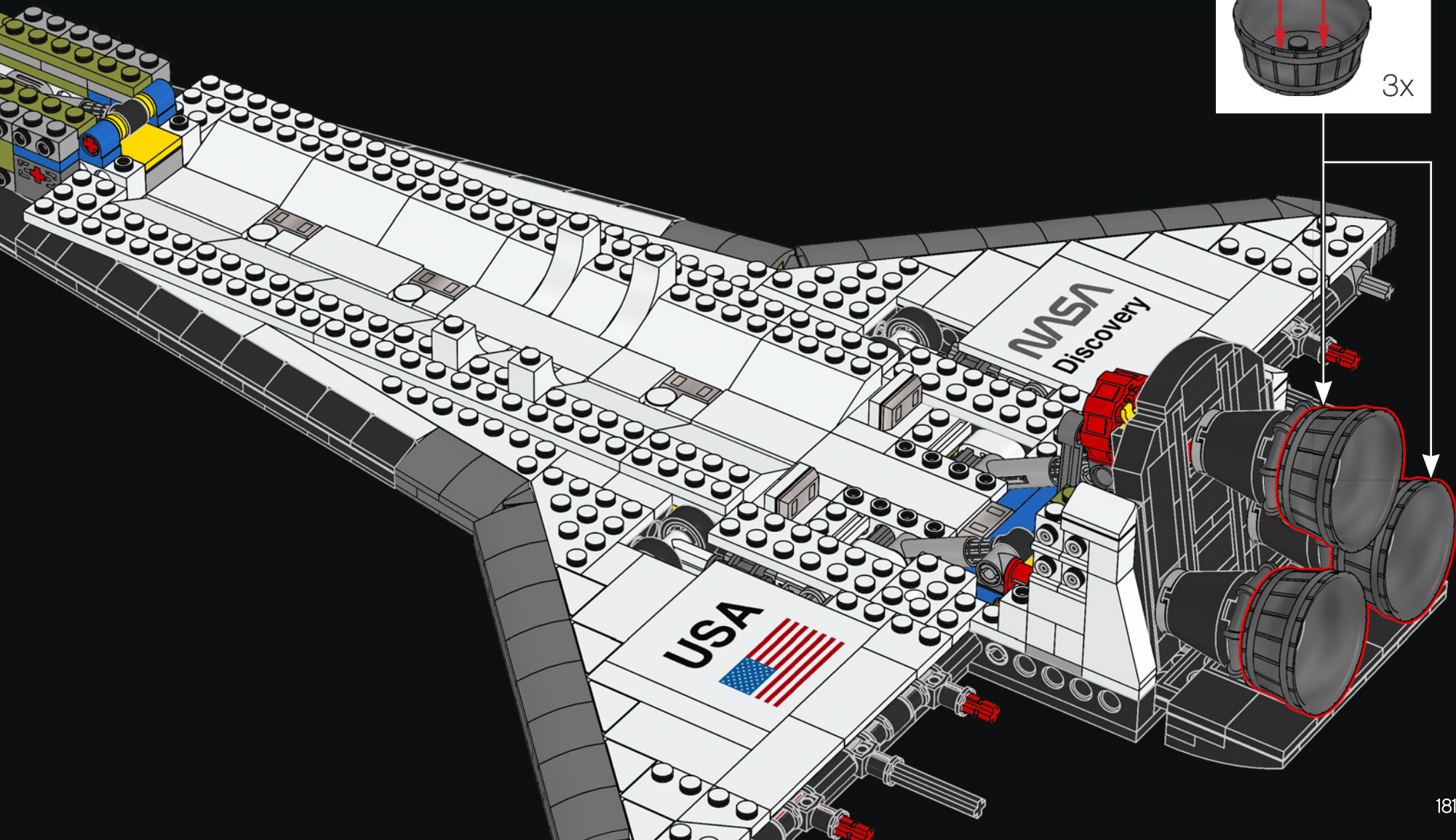
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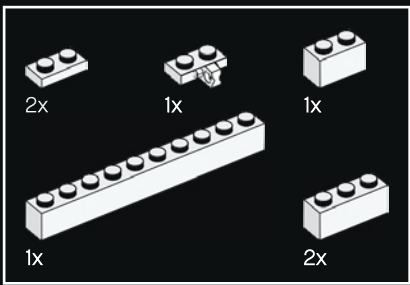


### 你知道吗？

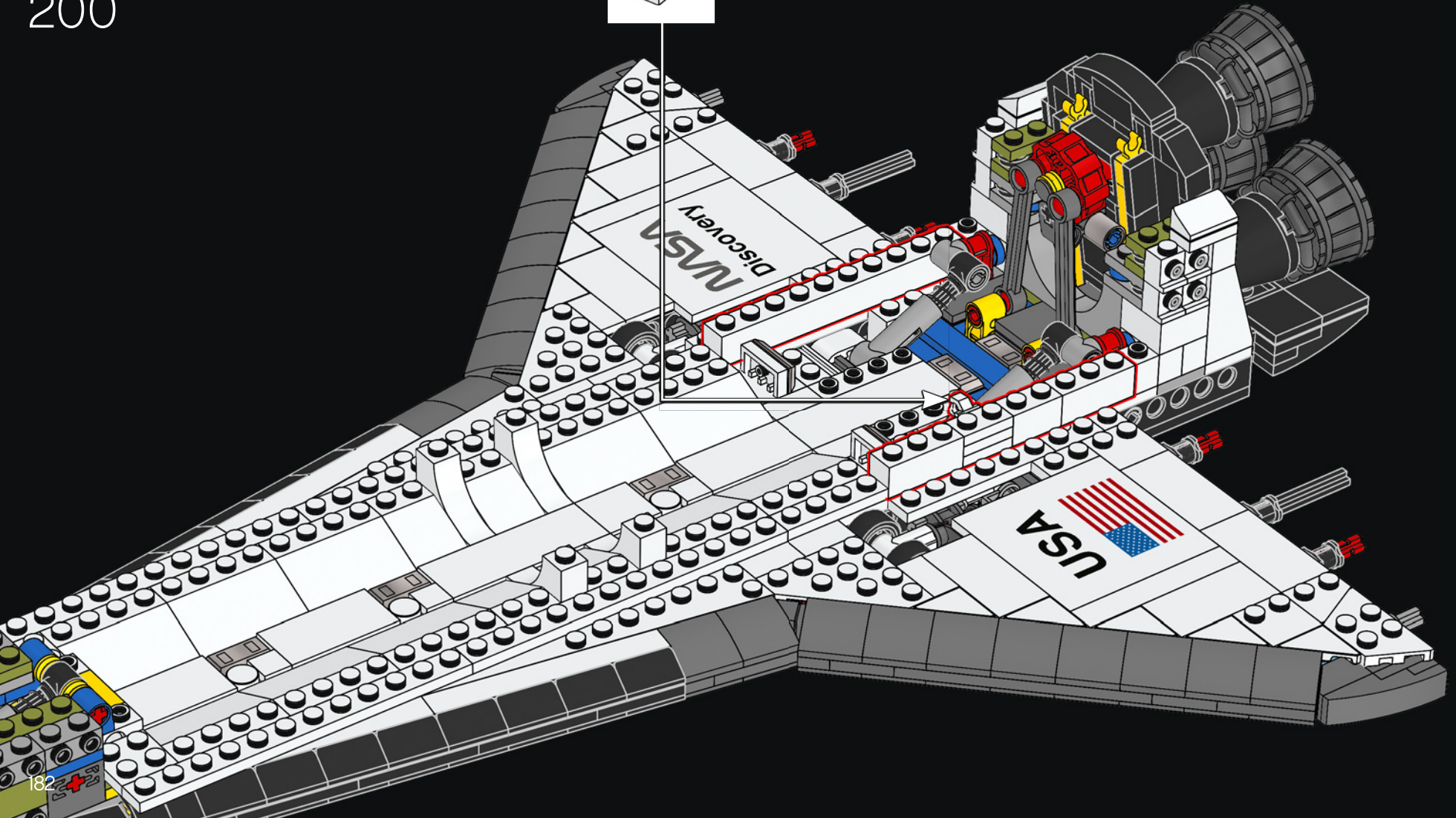
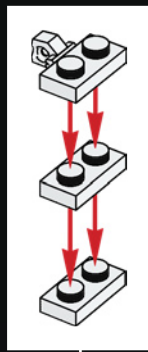
通过泵将超冷液态氢燃料送至喷嘴壁中的 1080 根管道，然后进入主燃烧室，使发动机保持在 10 摄氏度（50 华氏度）的低温。

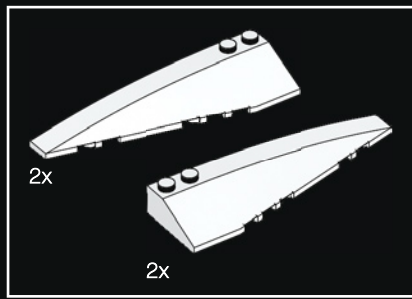
199



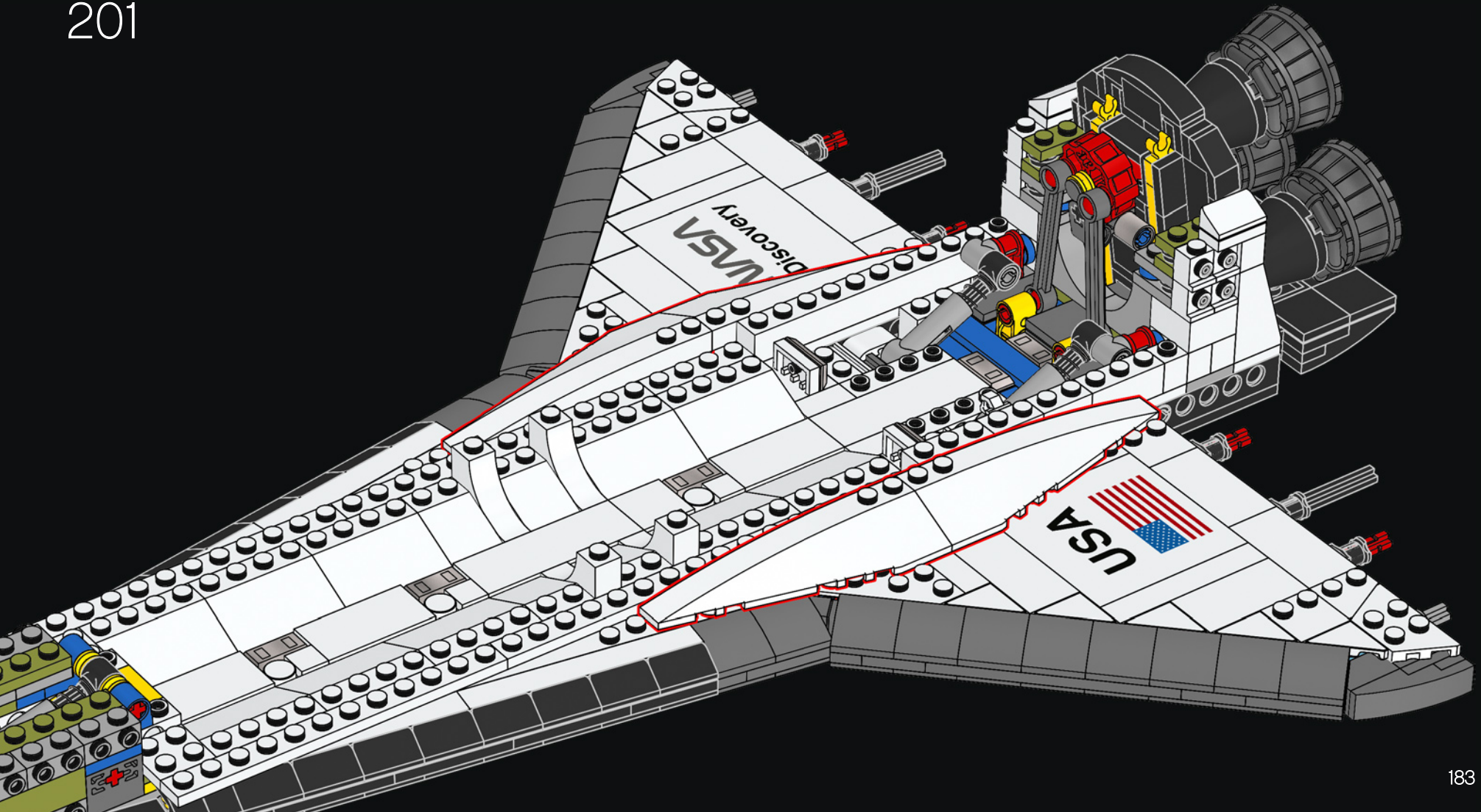


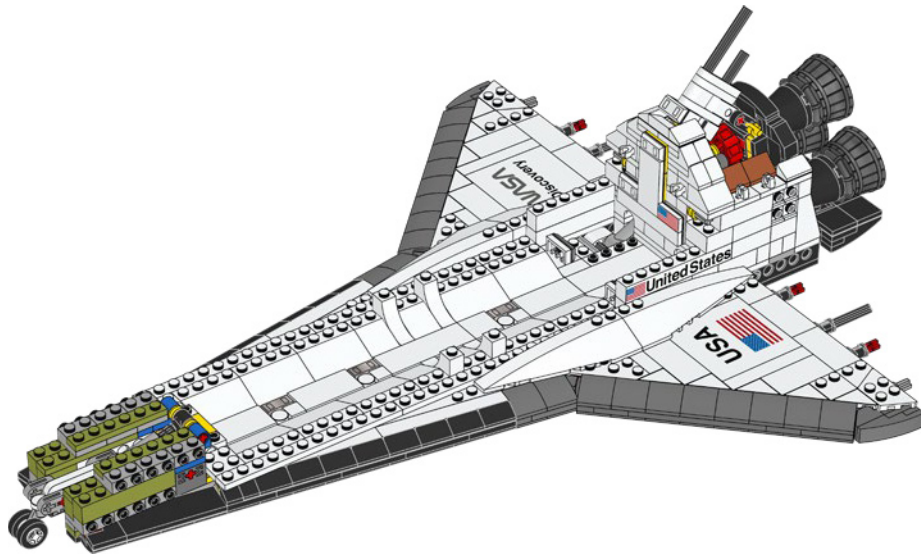
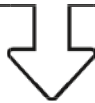
200



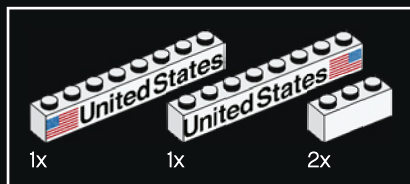


201

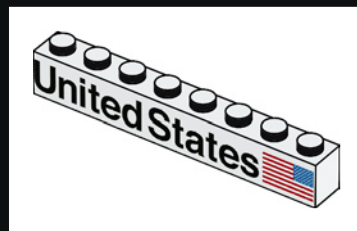






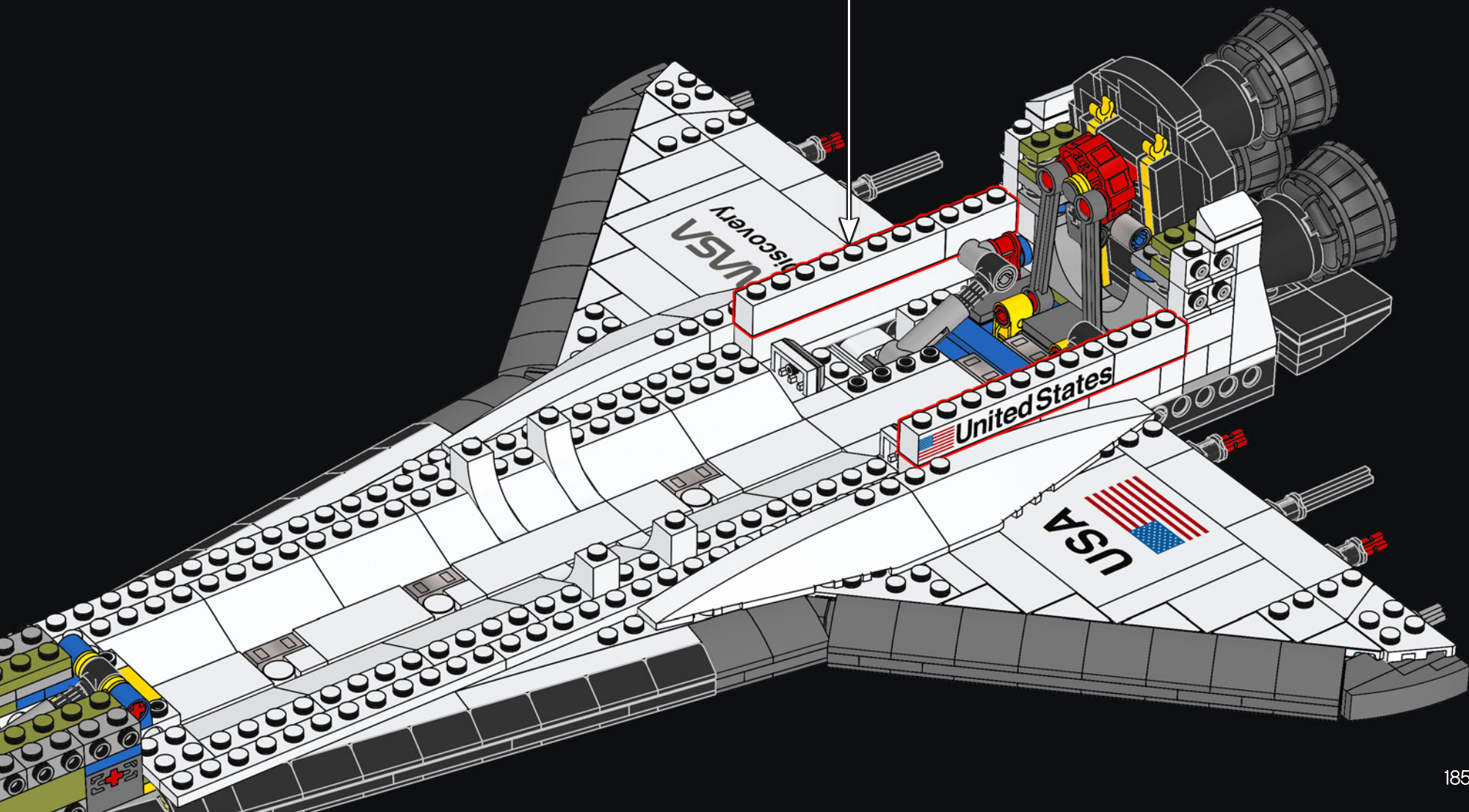


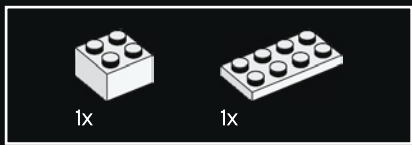
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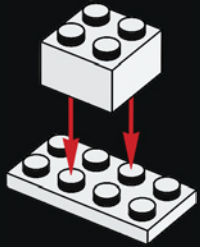
### 你知道吗？

根据美国法规要求，美国国旗的星星必须朝前，就像国旗迎风飘扬一样，所以发现号机身右舷的美国国旗向后飘扬。

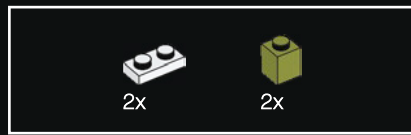
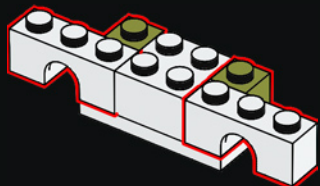




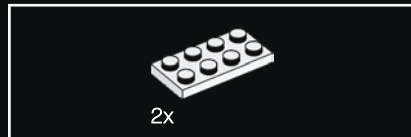
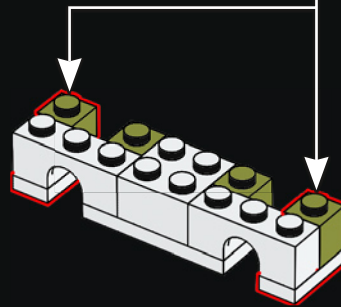
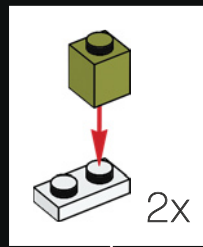
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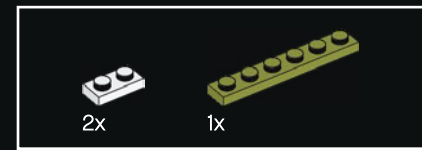
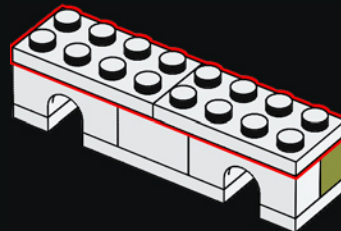
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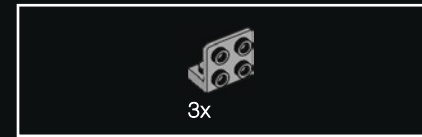
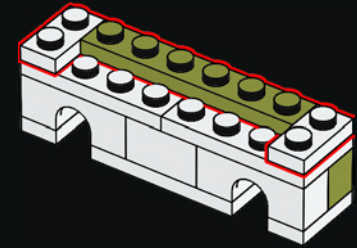
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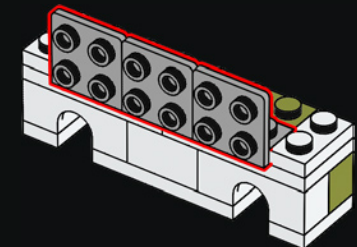
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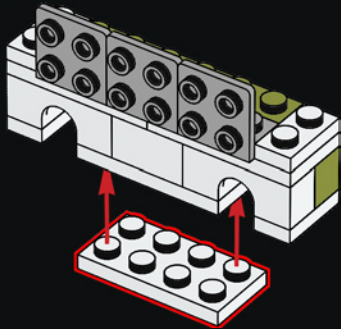


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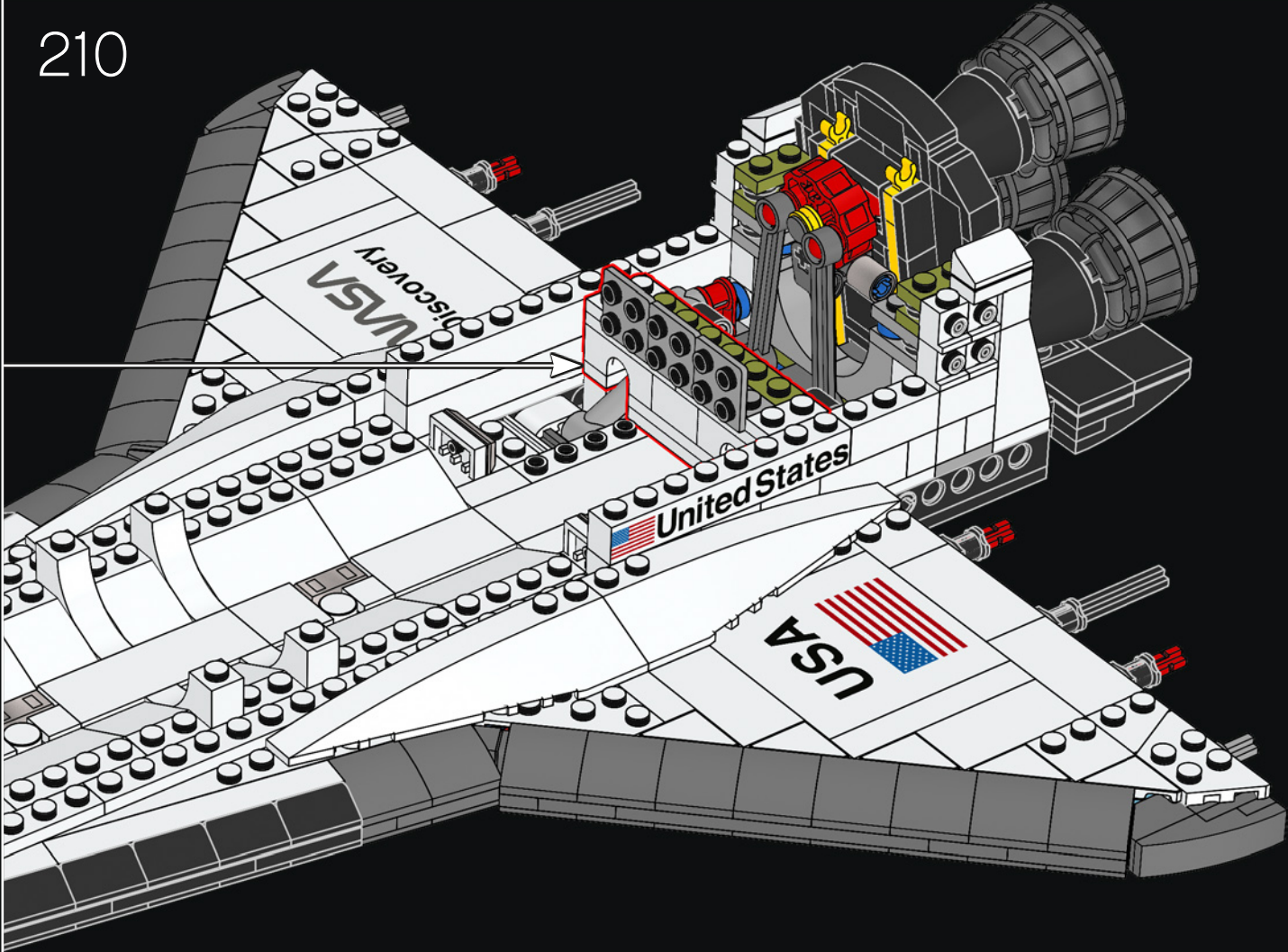


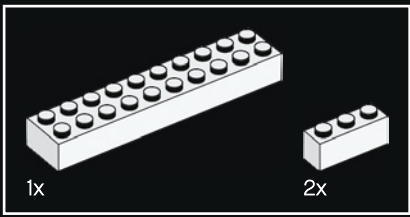


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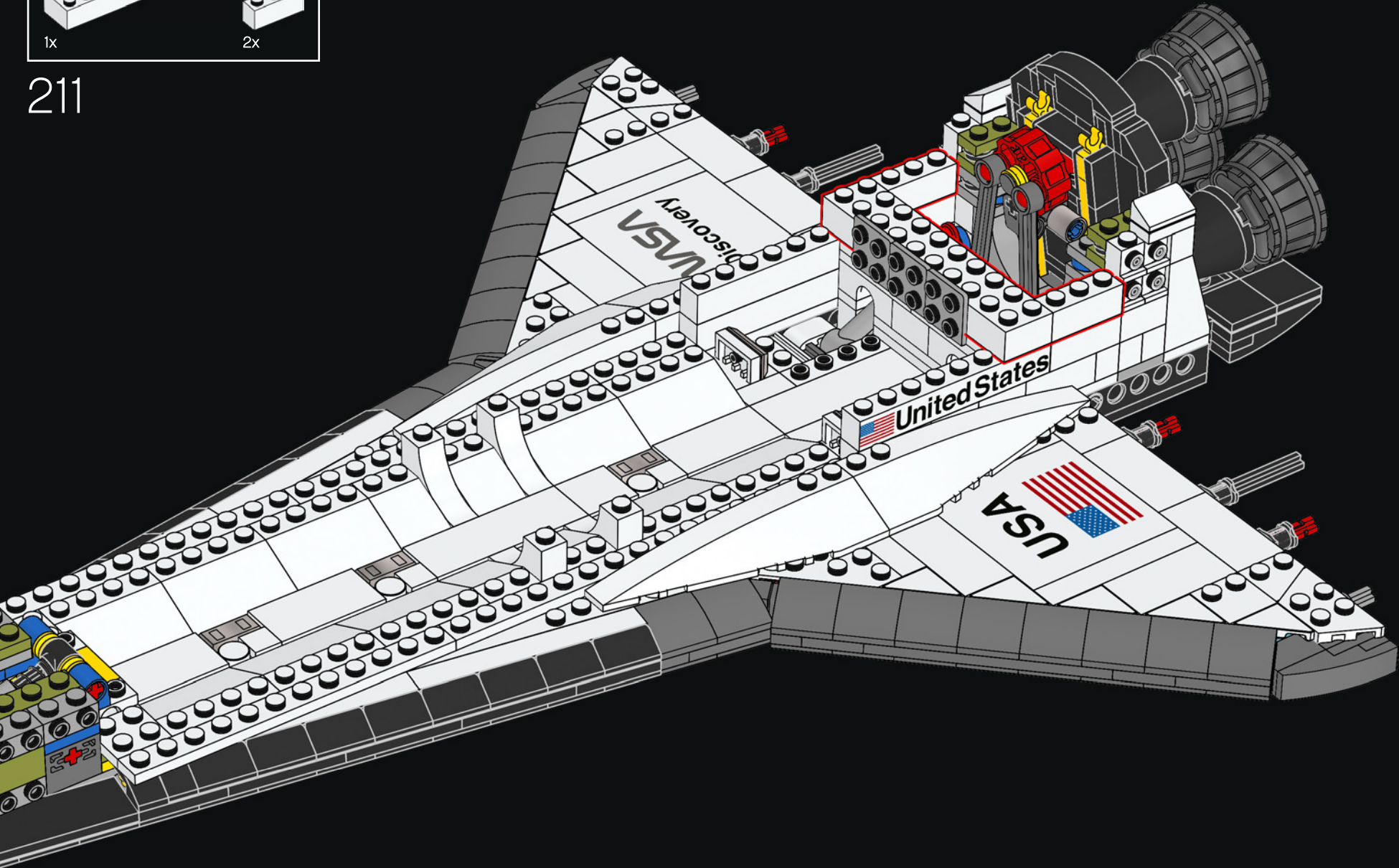


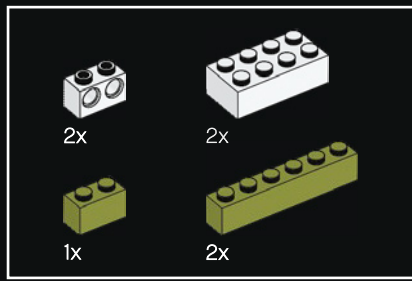
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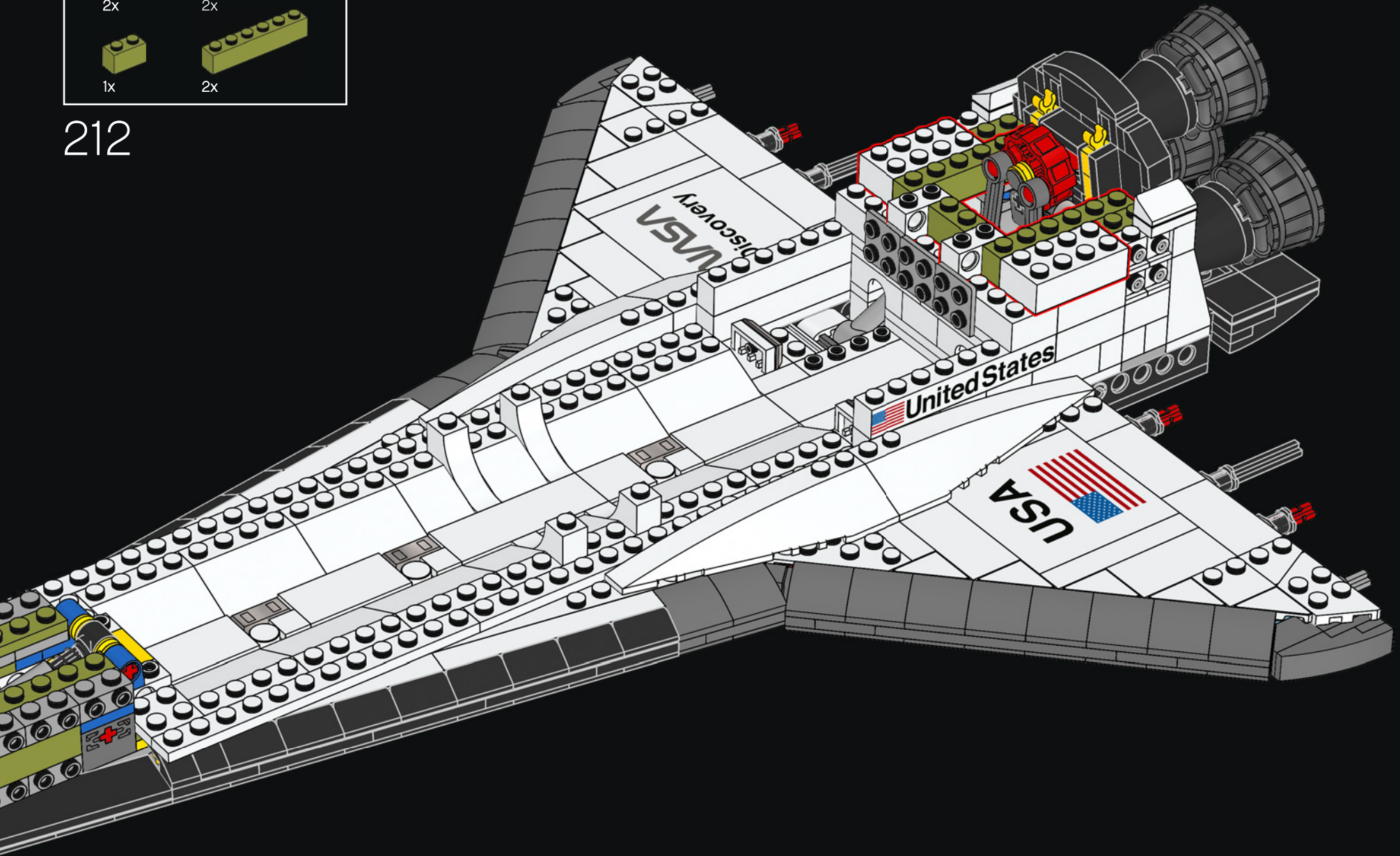


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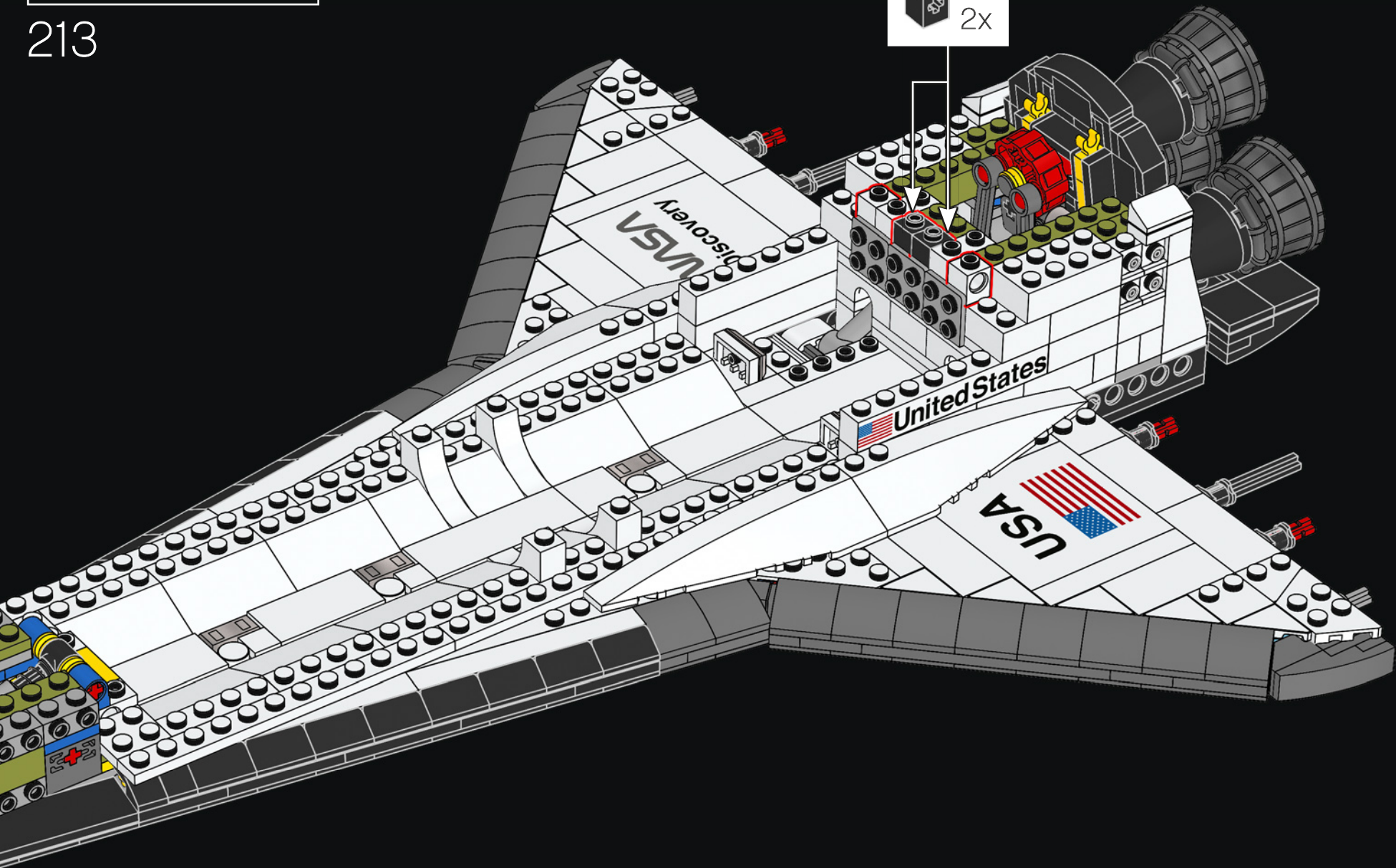
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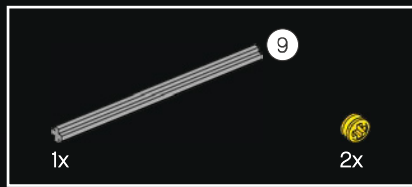


2x 2x

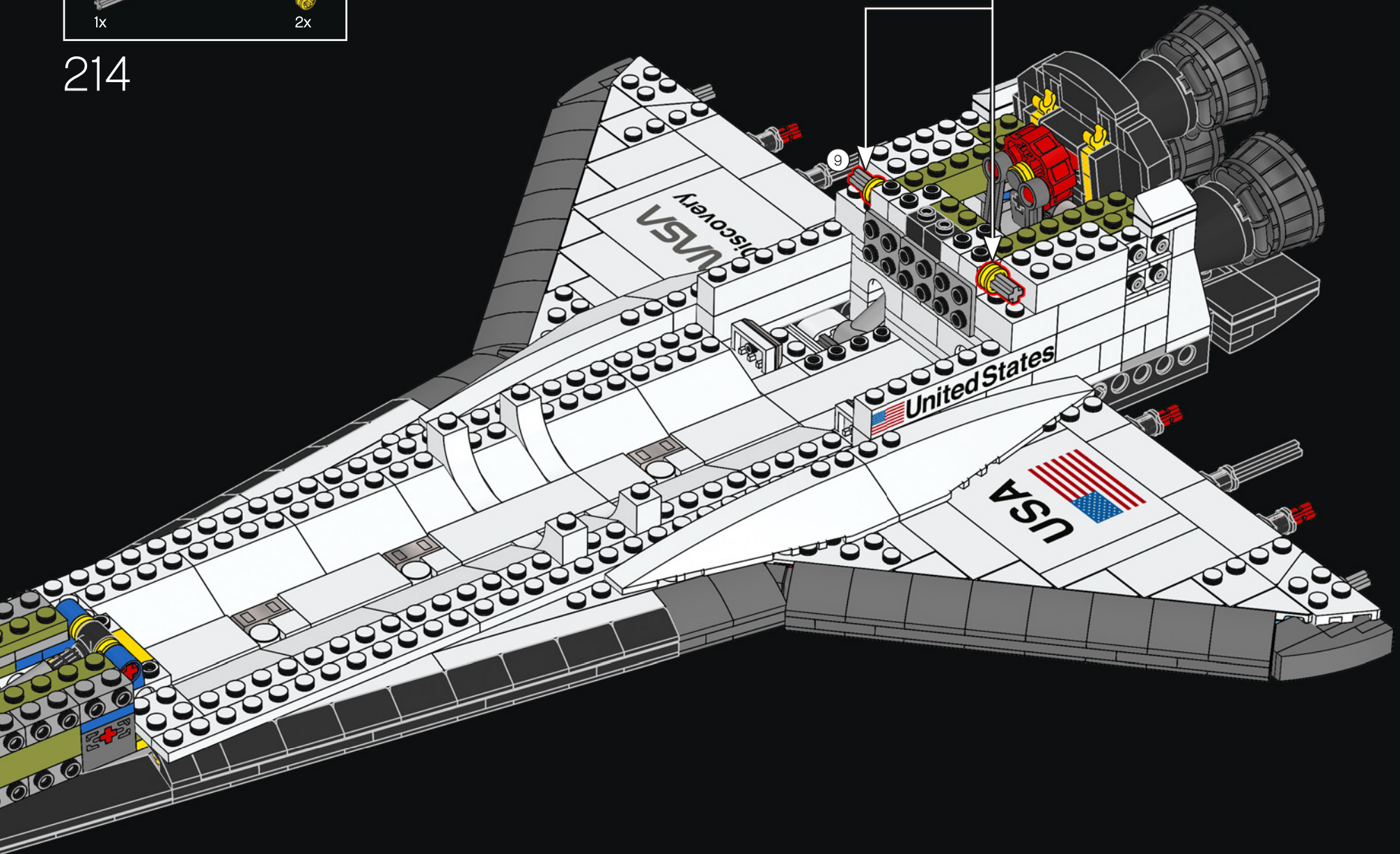
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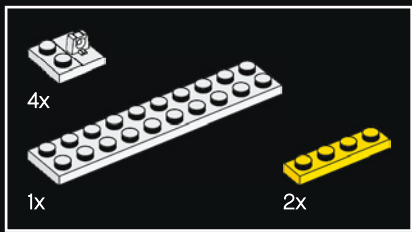
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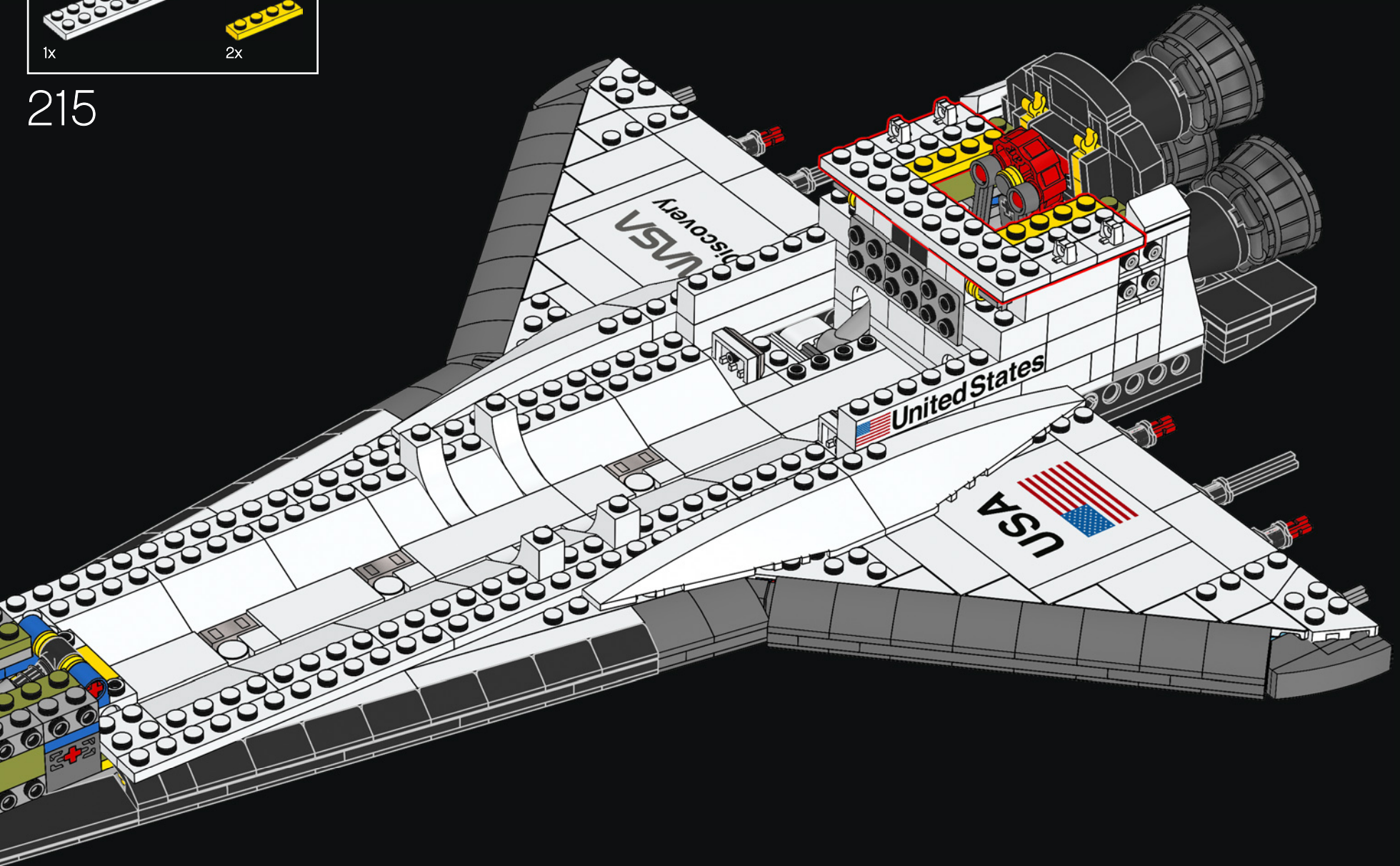


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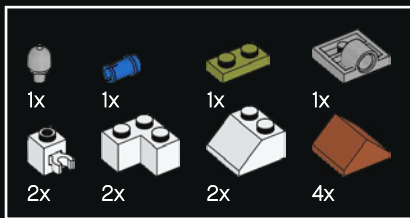




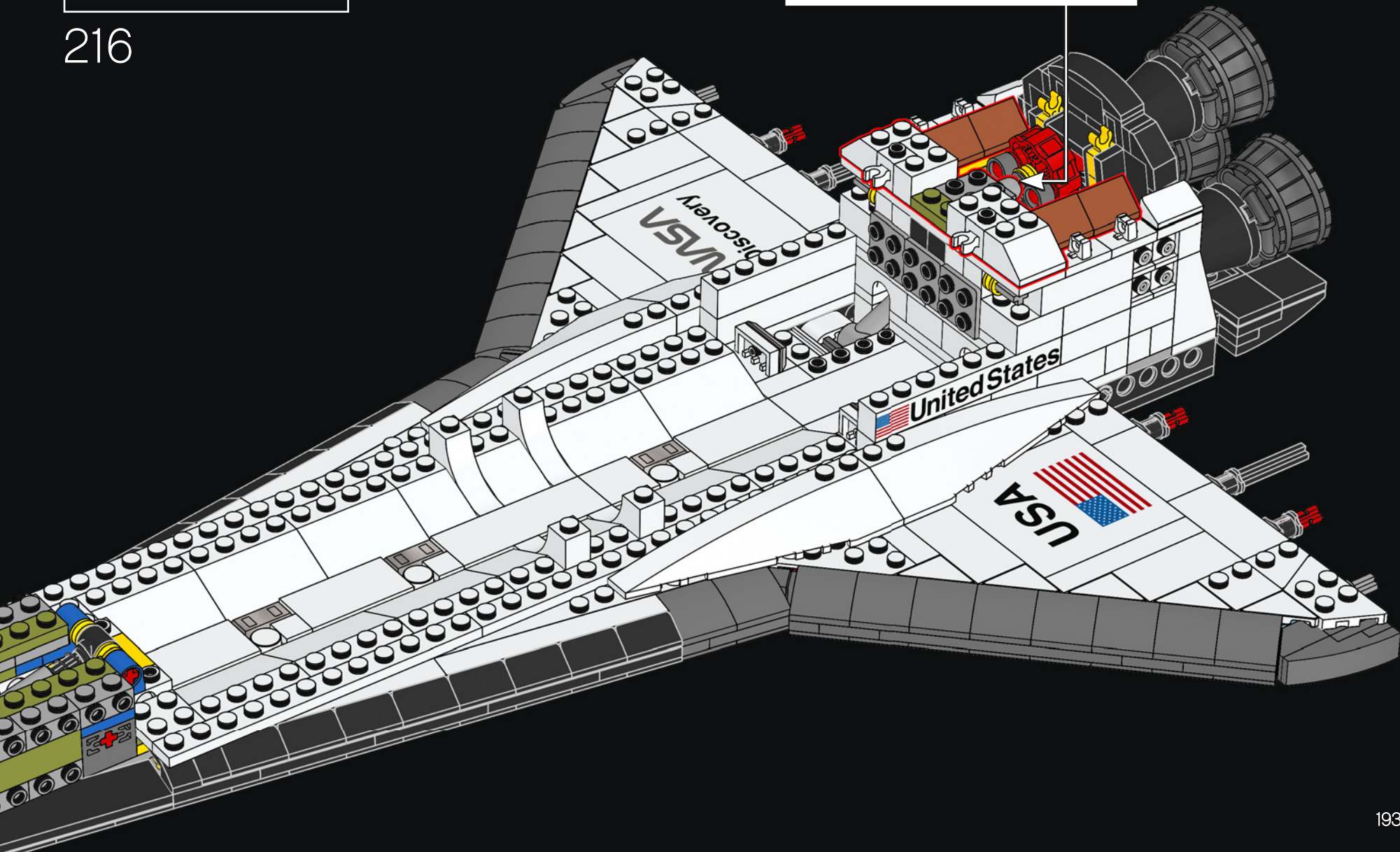
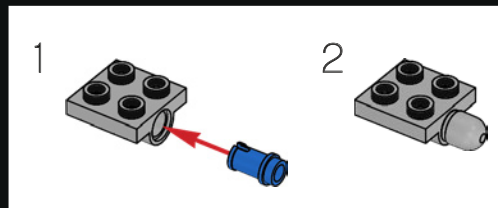
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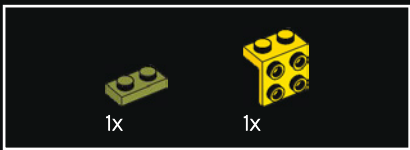




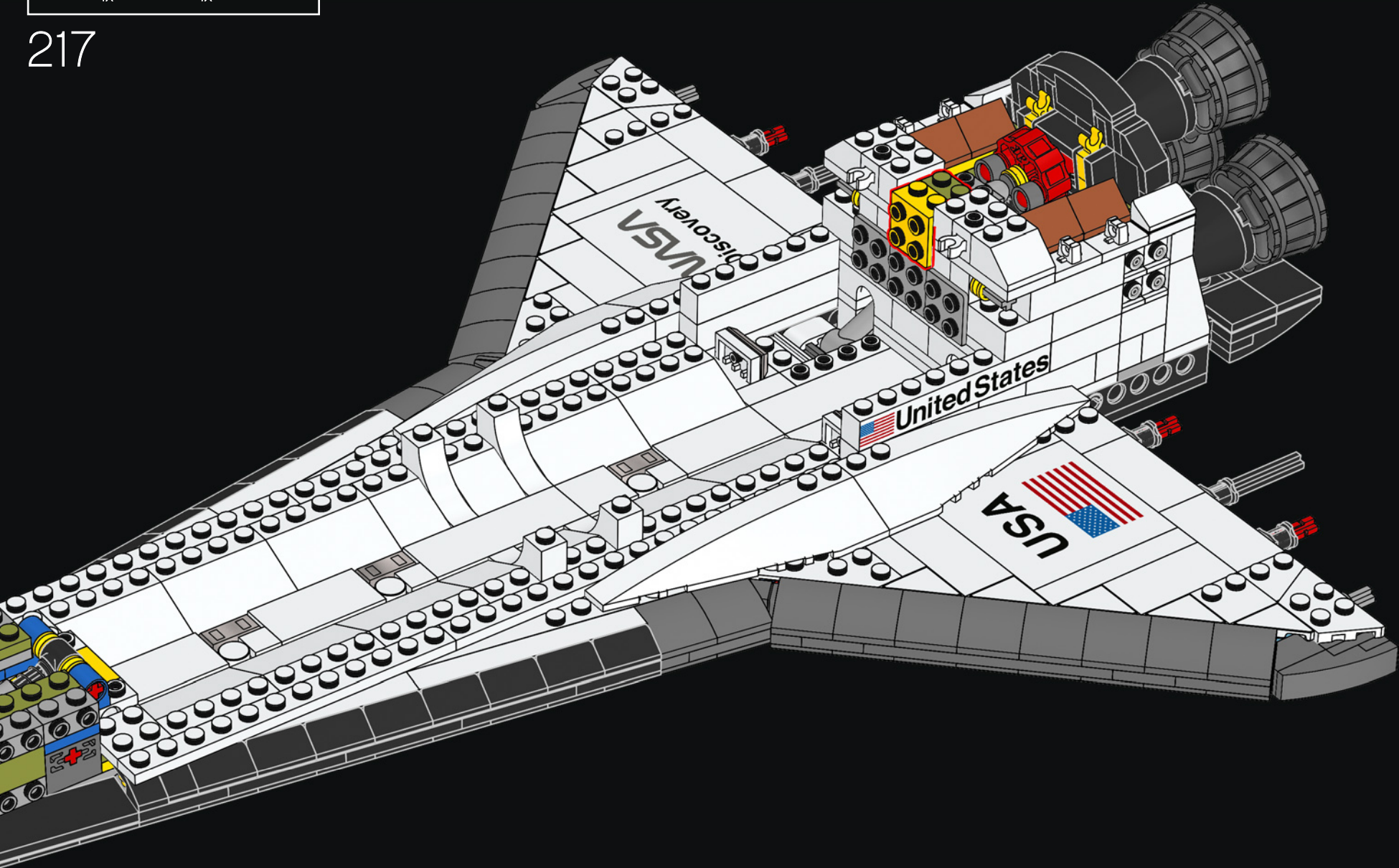


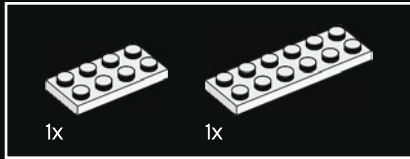
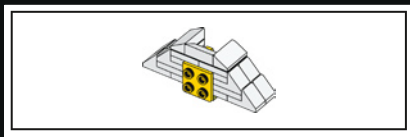
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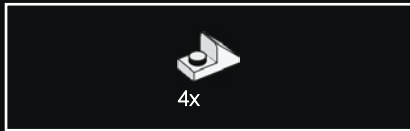
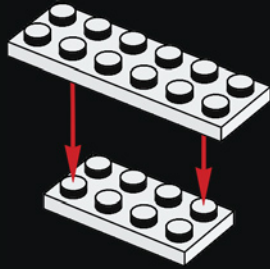


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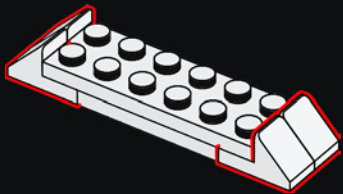




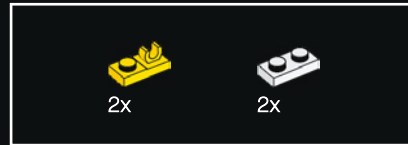
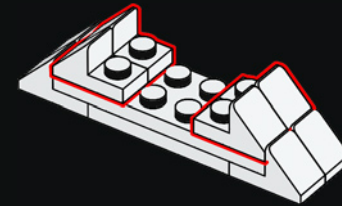
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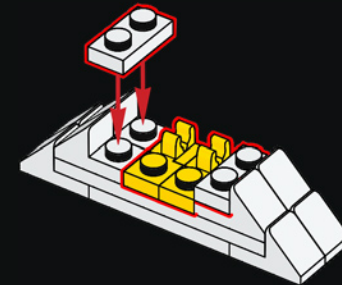
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220

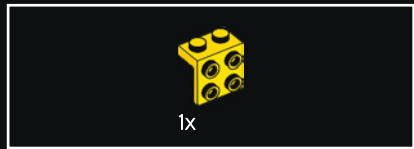
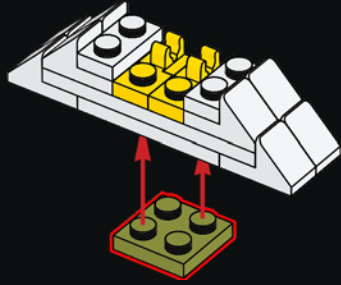


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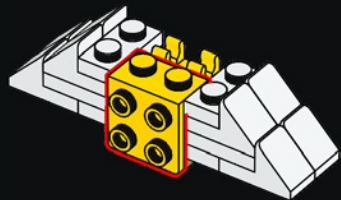




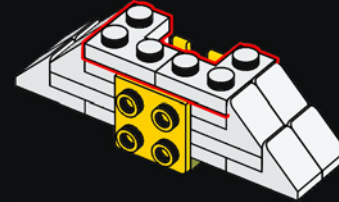
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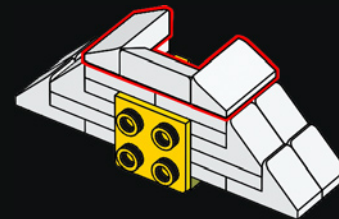
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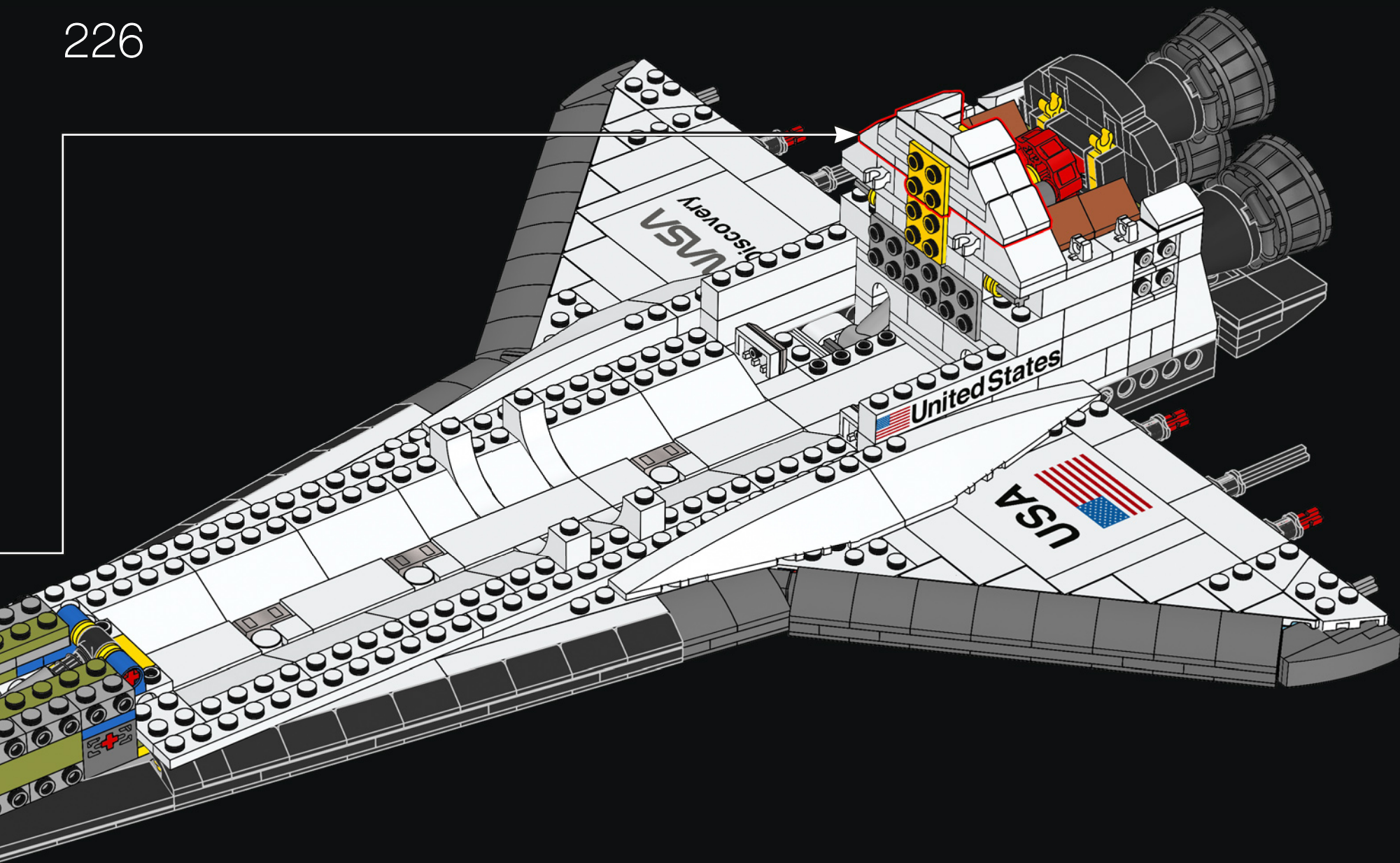
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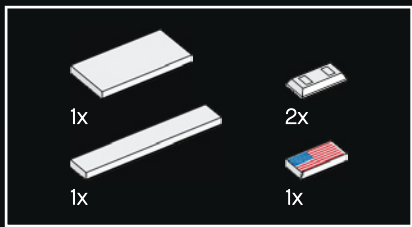


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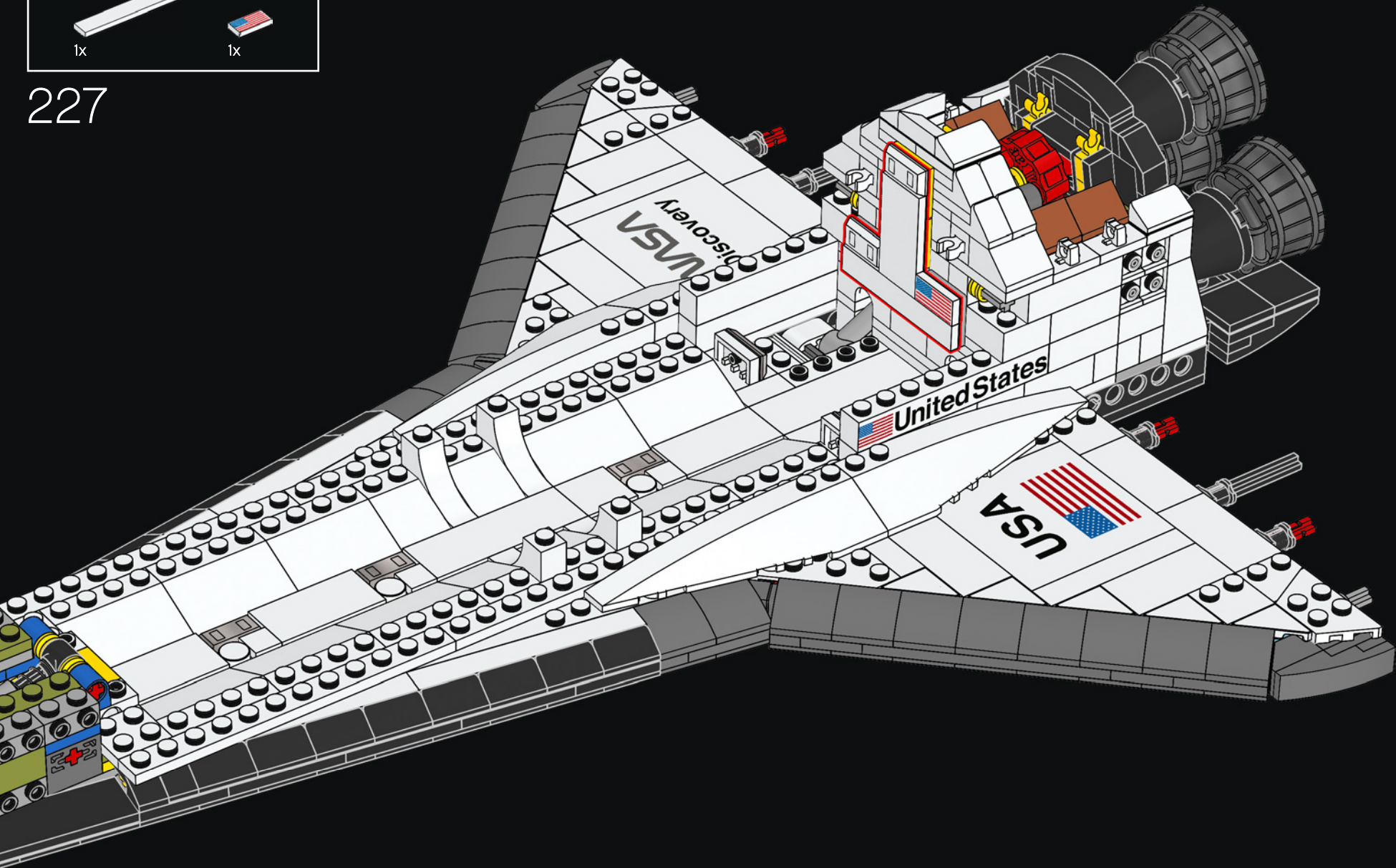


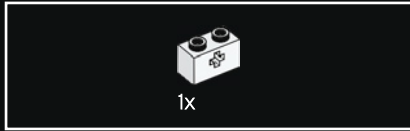
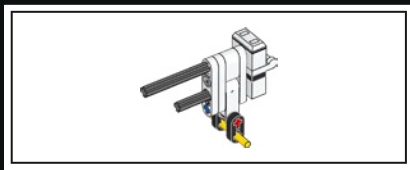
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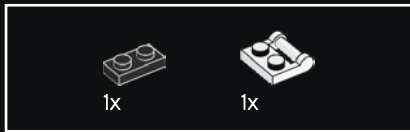
227





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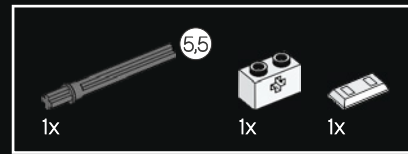
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1x

1x

229

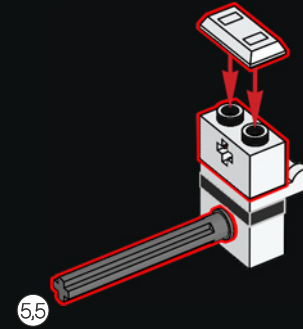


1x

1x

1x

230



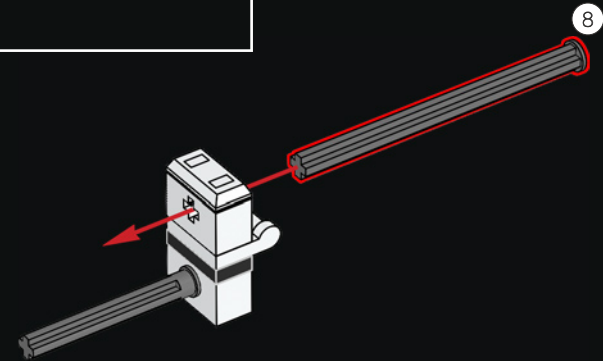
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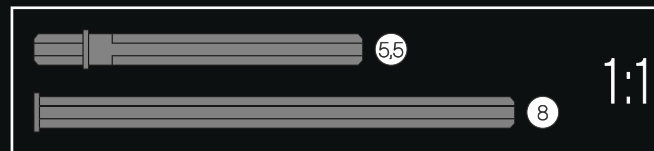
1x

8

231



8



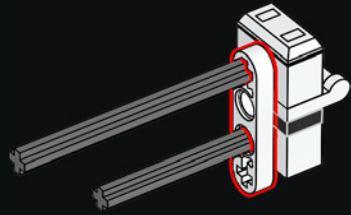
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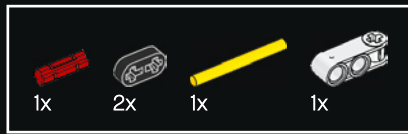
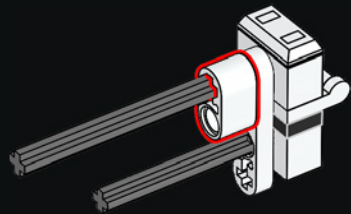
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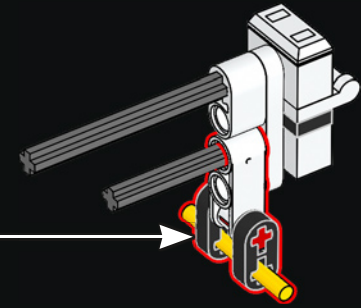
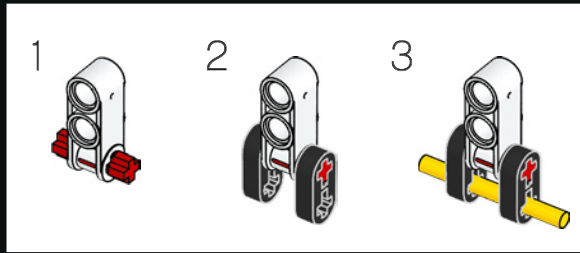
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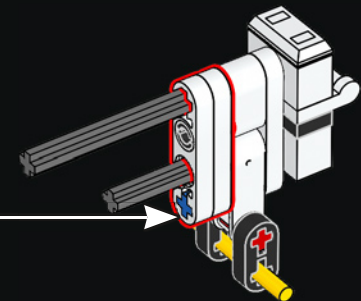
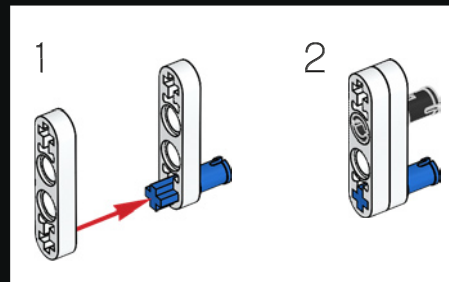
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234

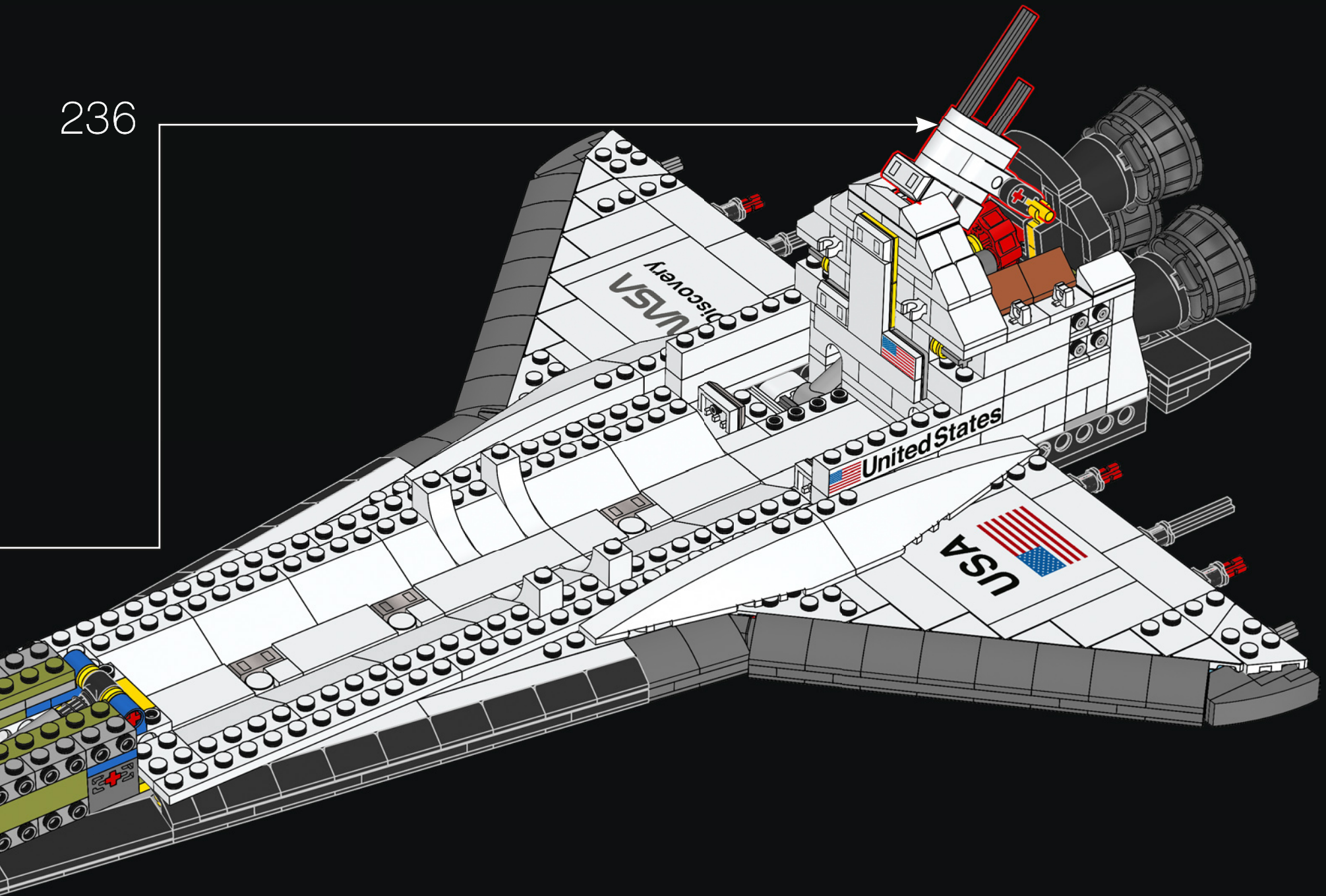


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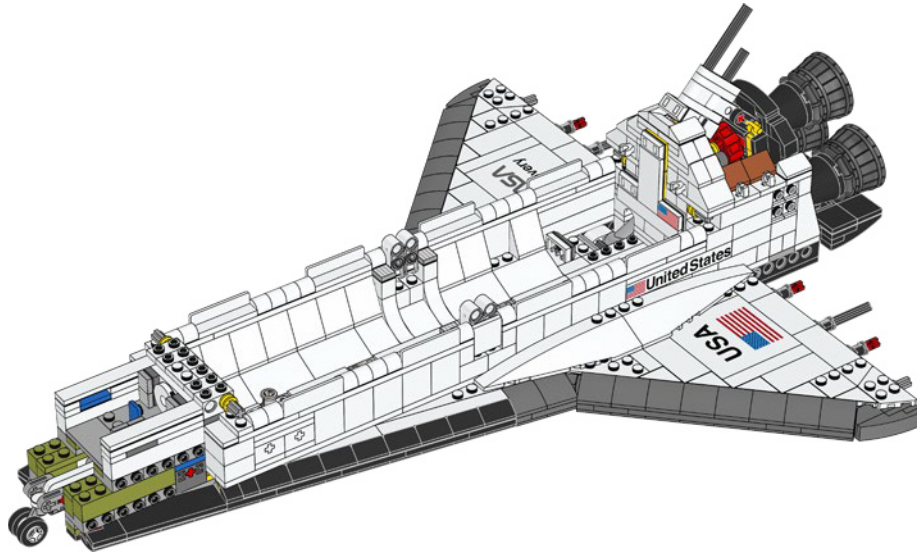




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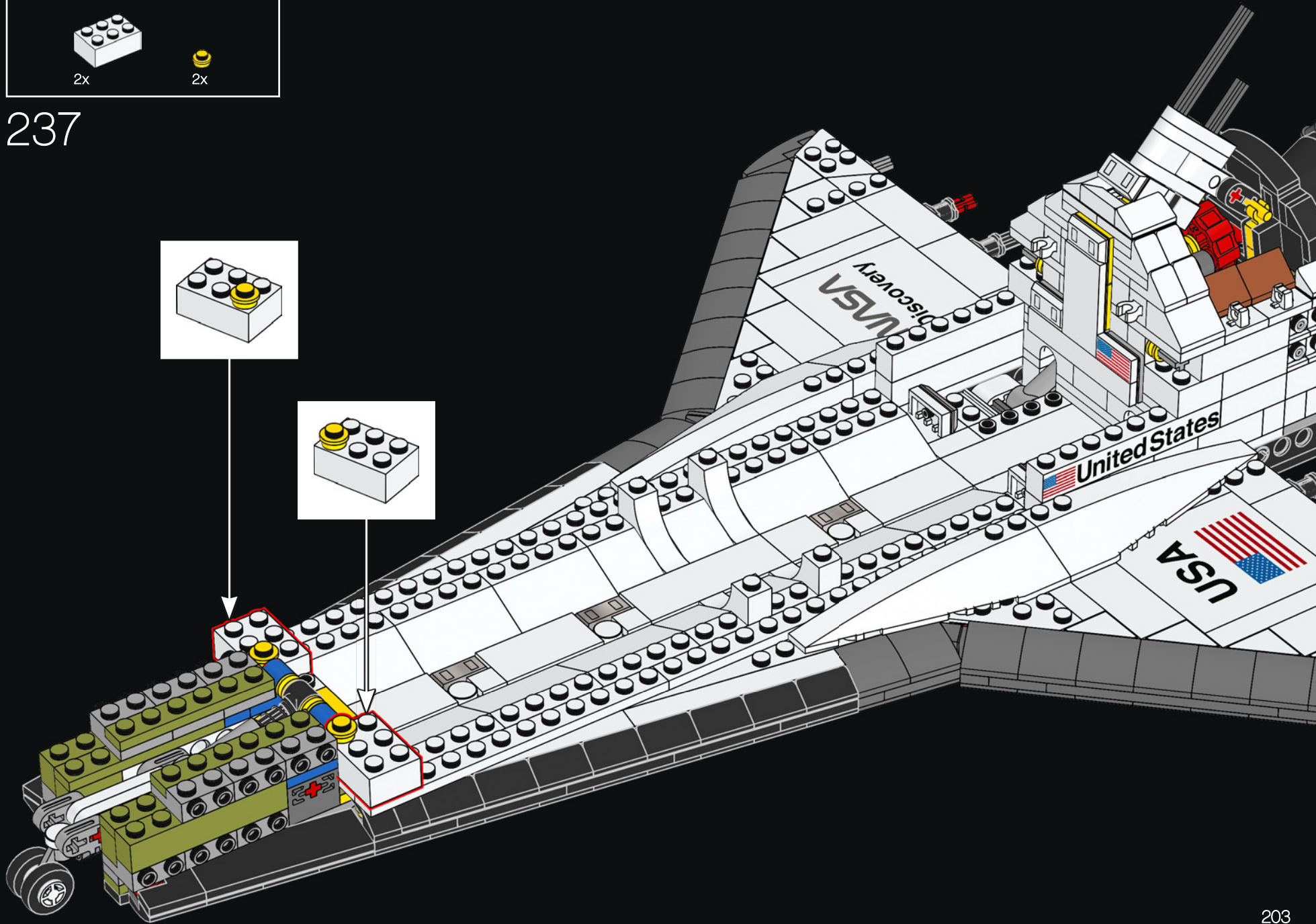
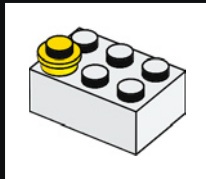
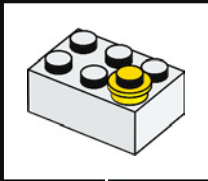


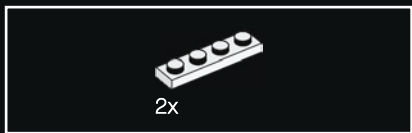
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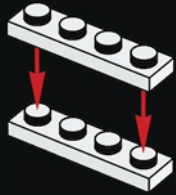


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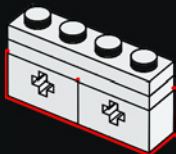




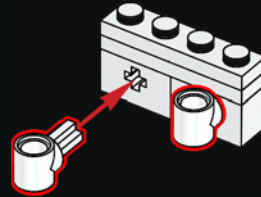
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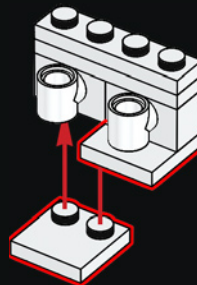
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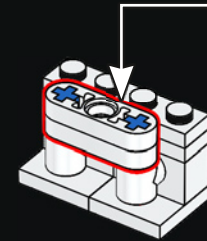
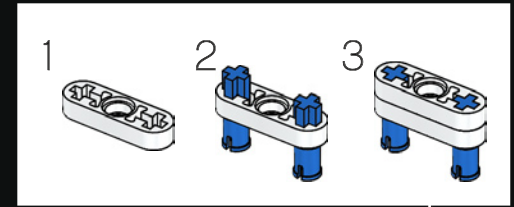
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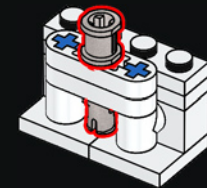
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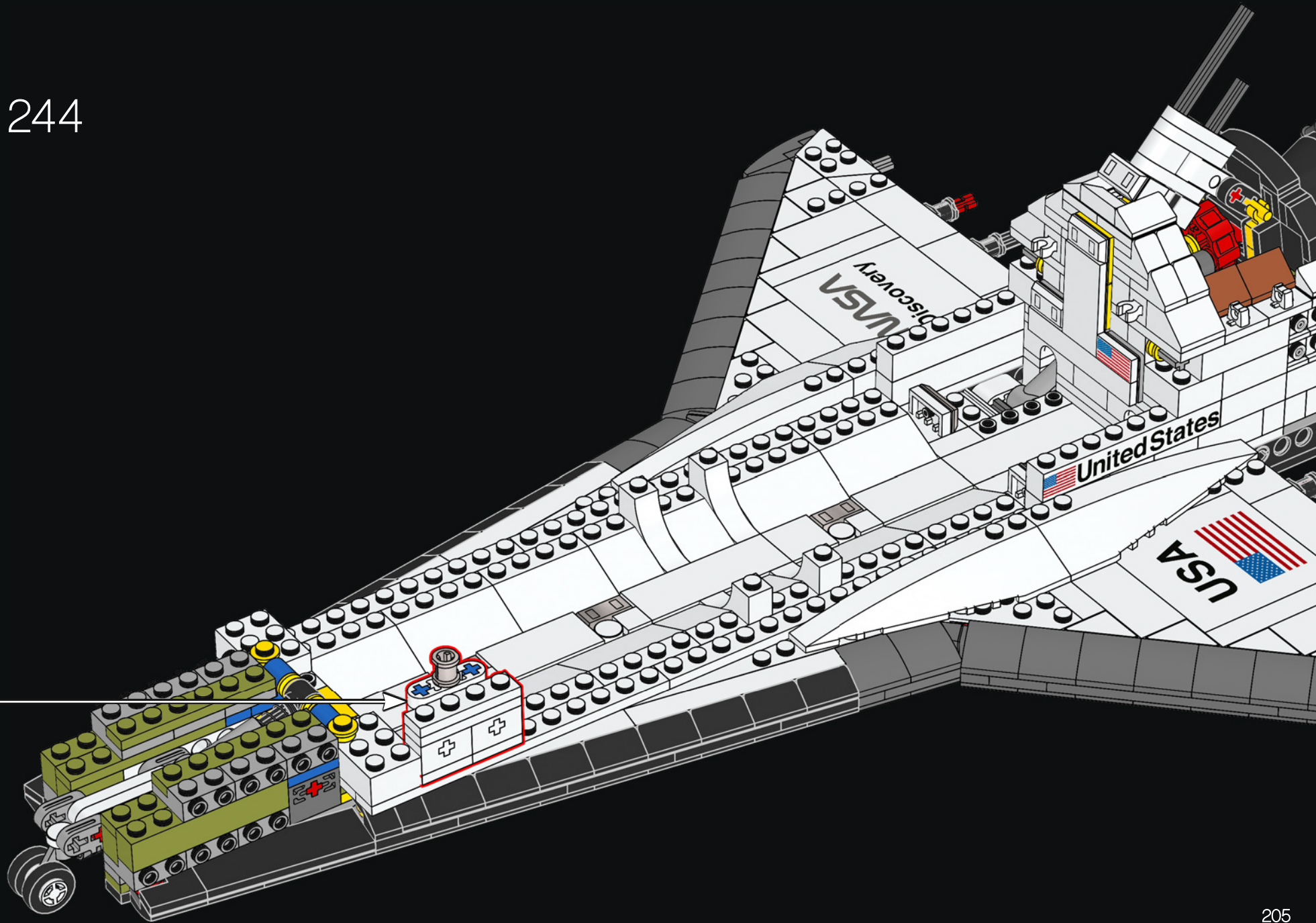


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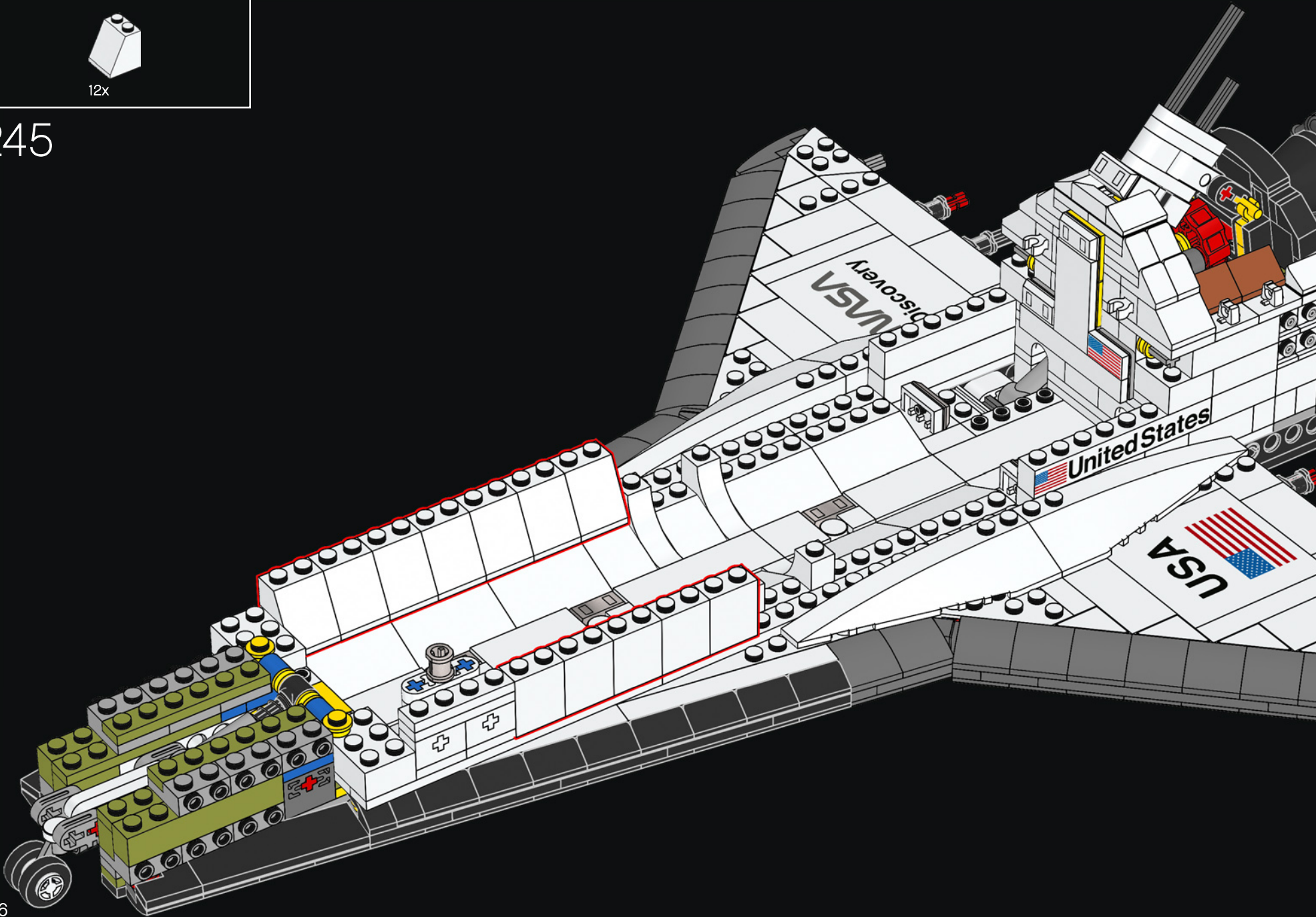
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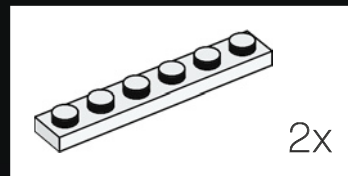
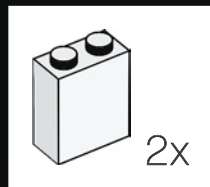
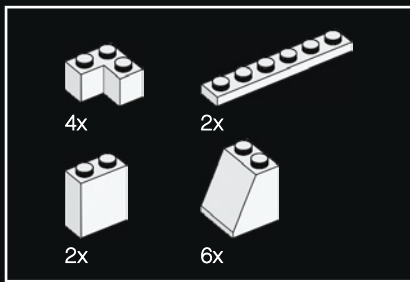




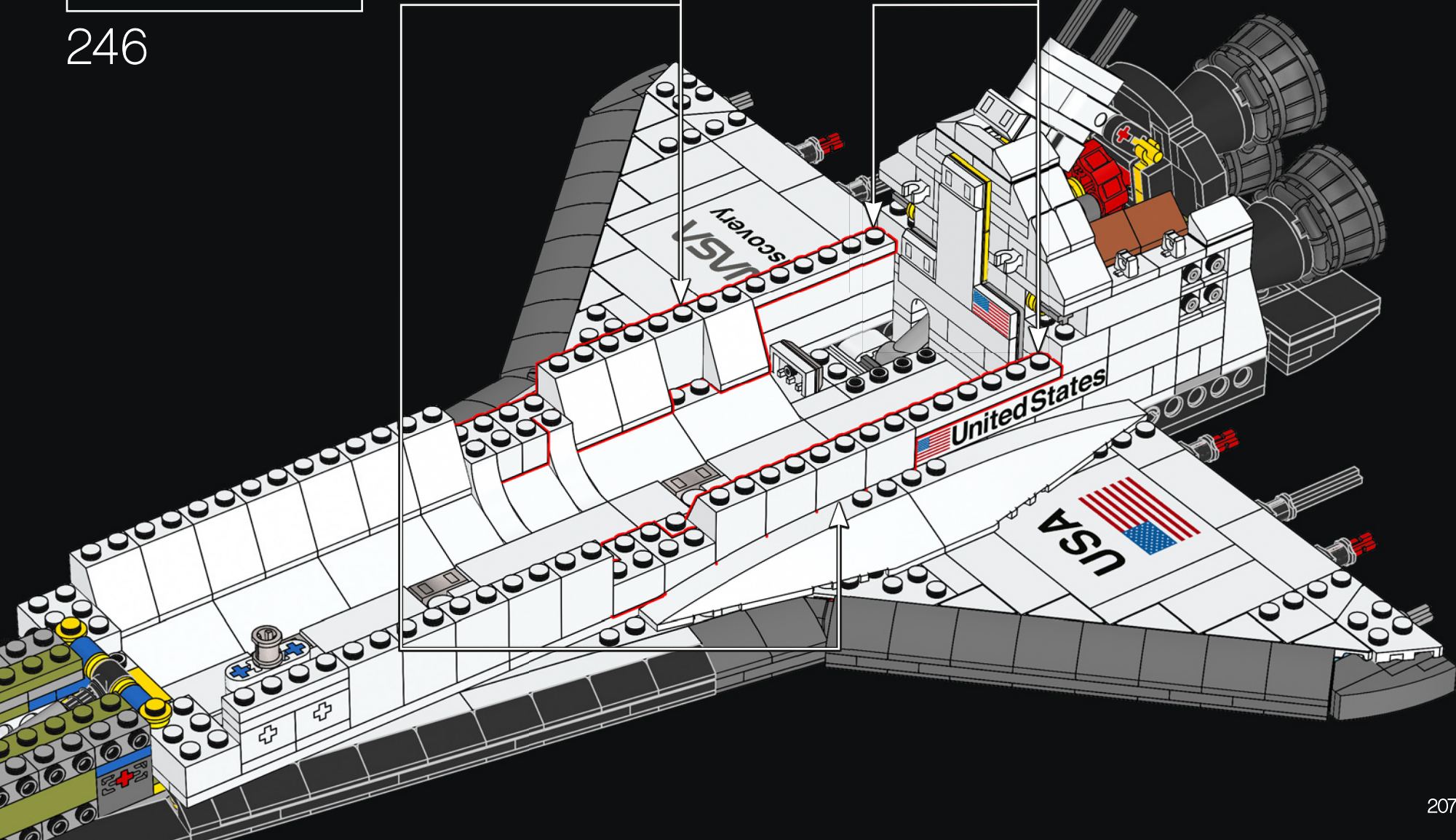


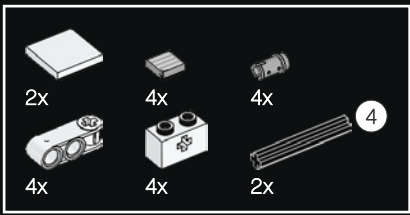
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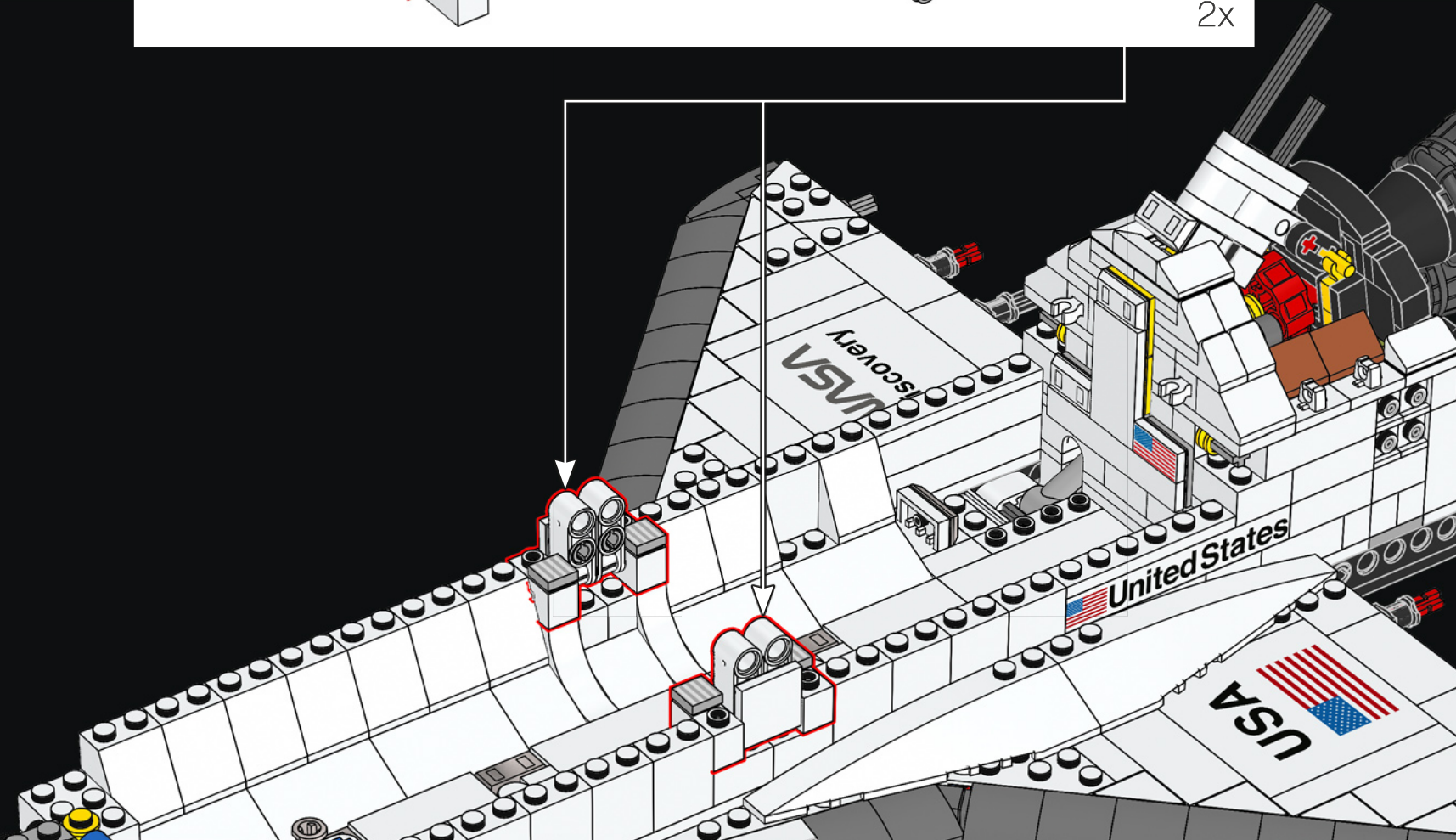
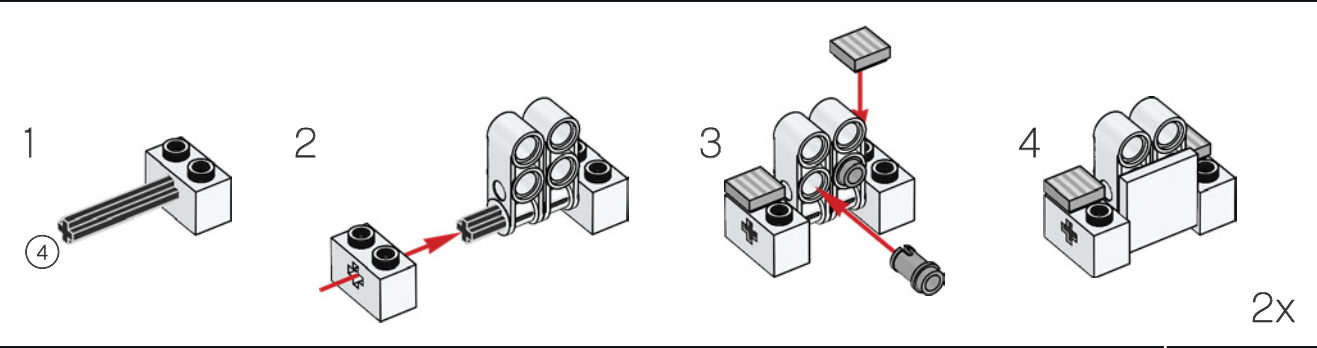


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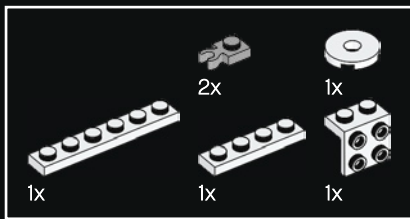




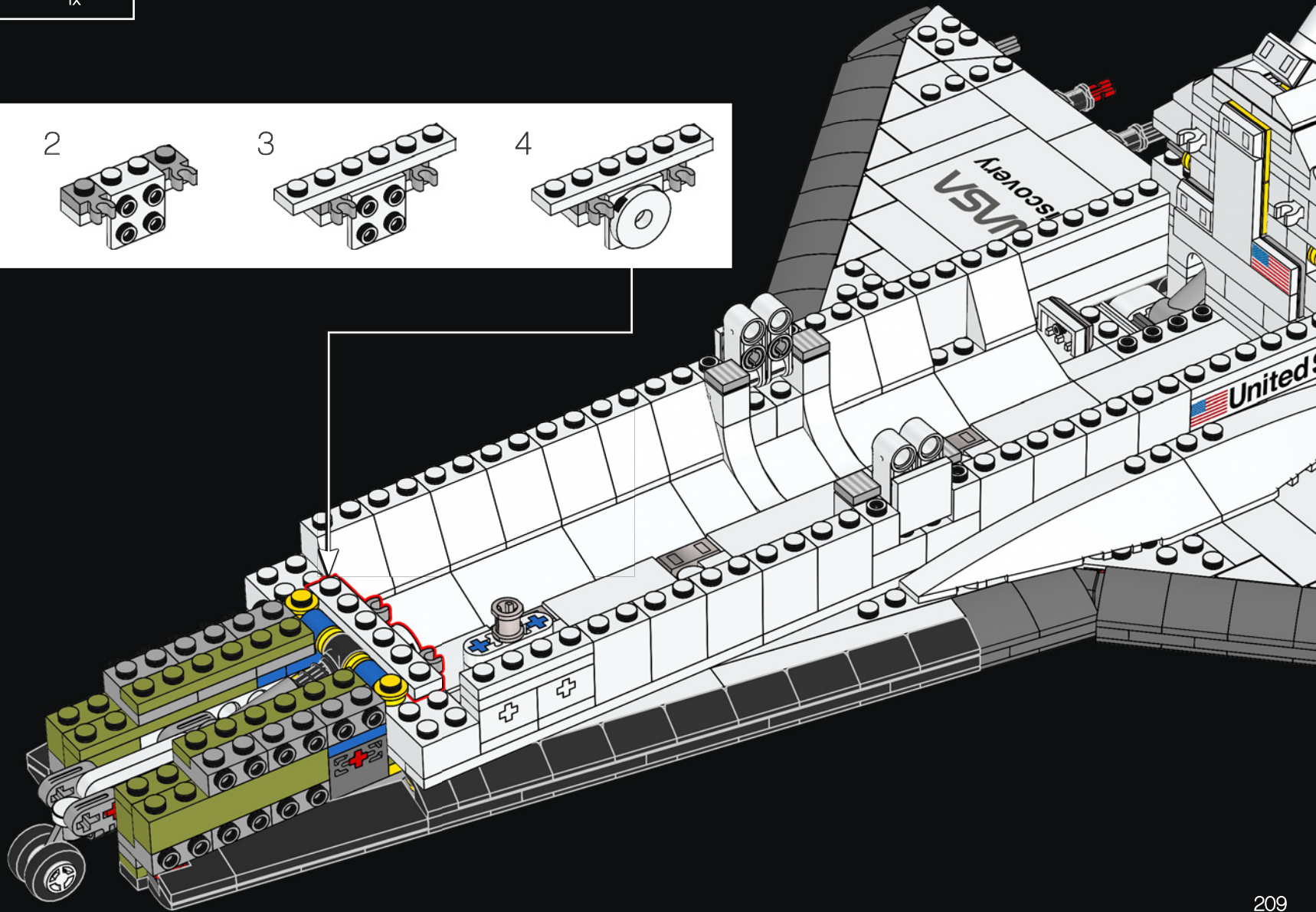
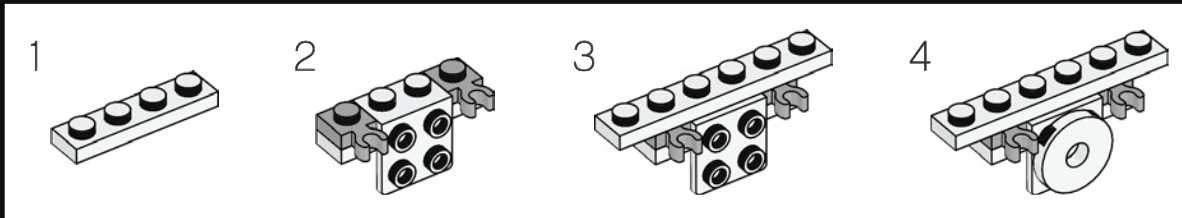
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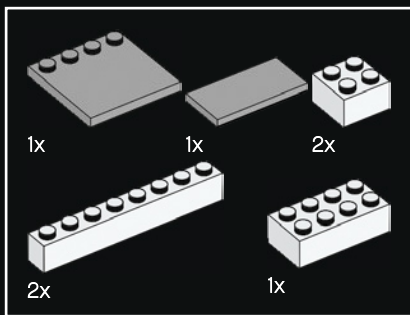


248

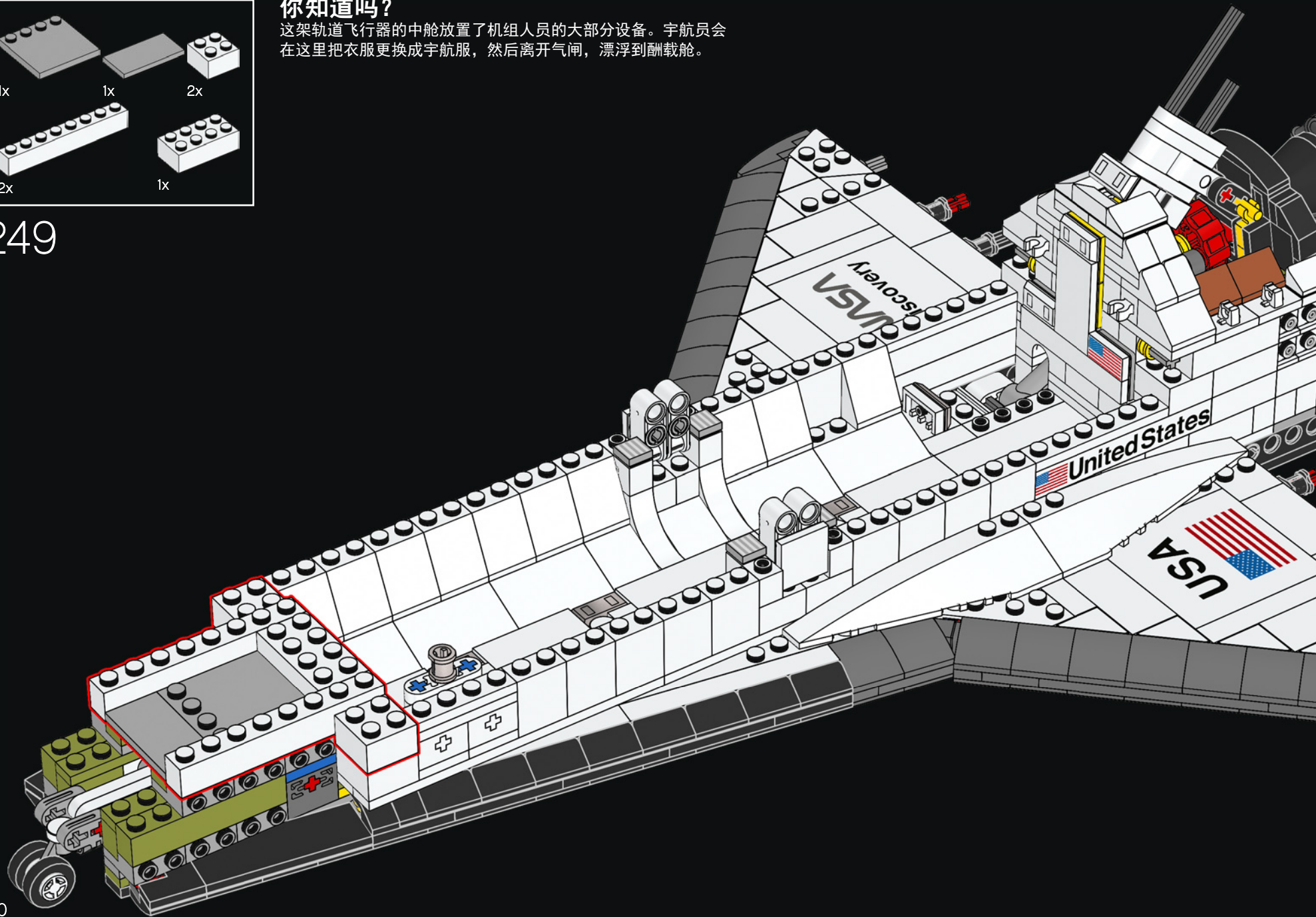


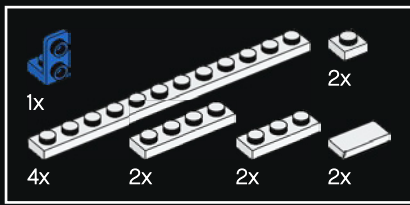
## 你知道吗？

这架轨道飞行器的中舱放置了机组人员的大部分设备。宇航员会在这里把衣服更换成宇航服，然后离开气闸，漂浮到酬载舱。

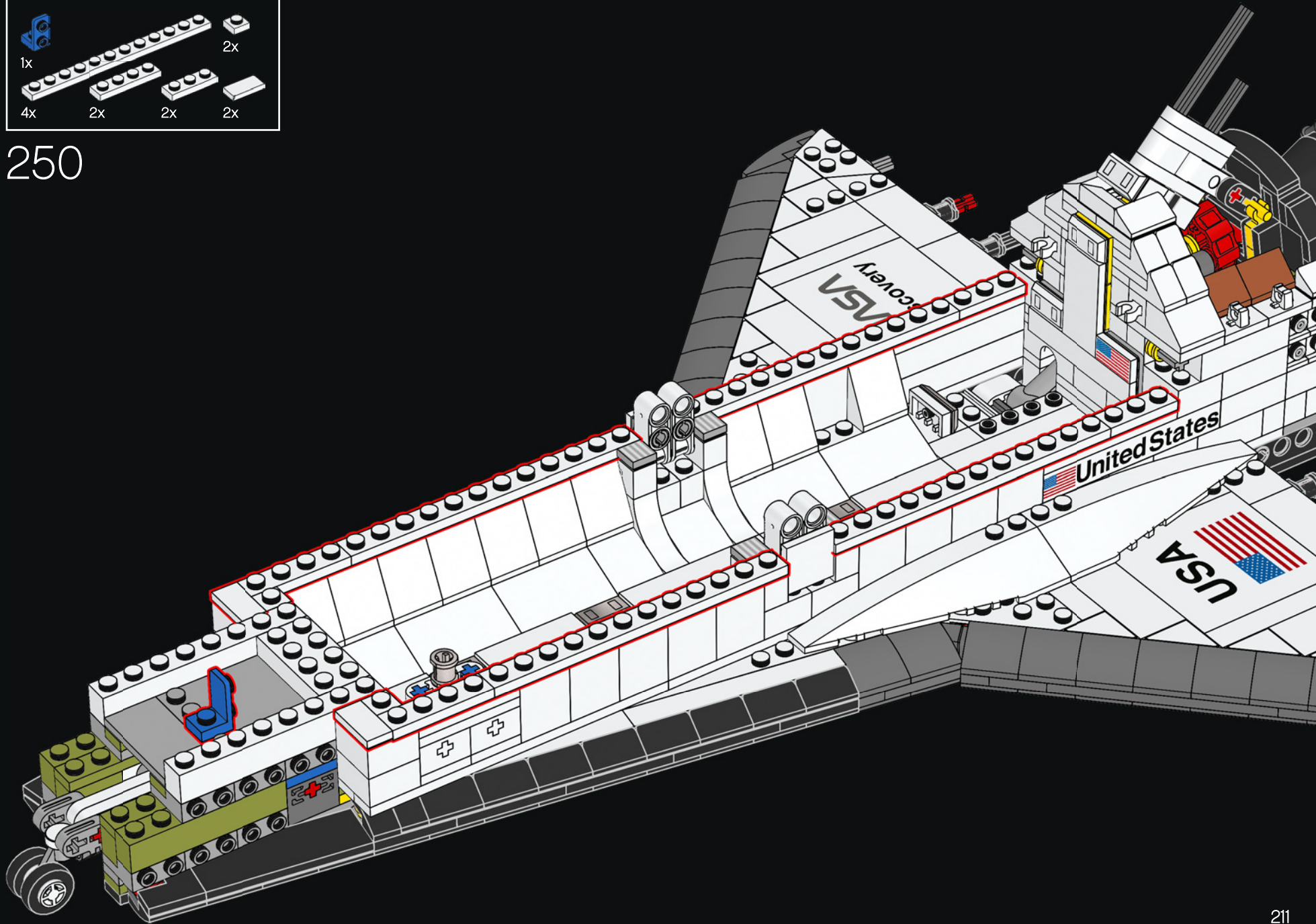


249



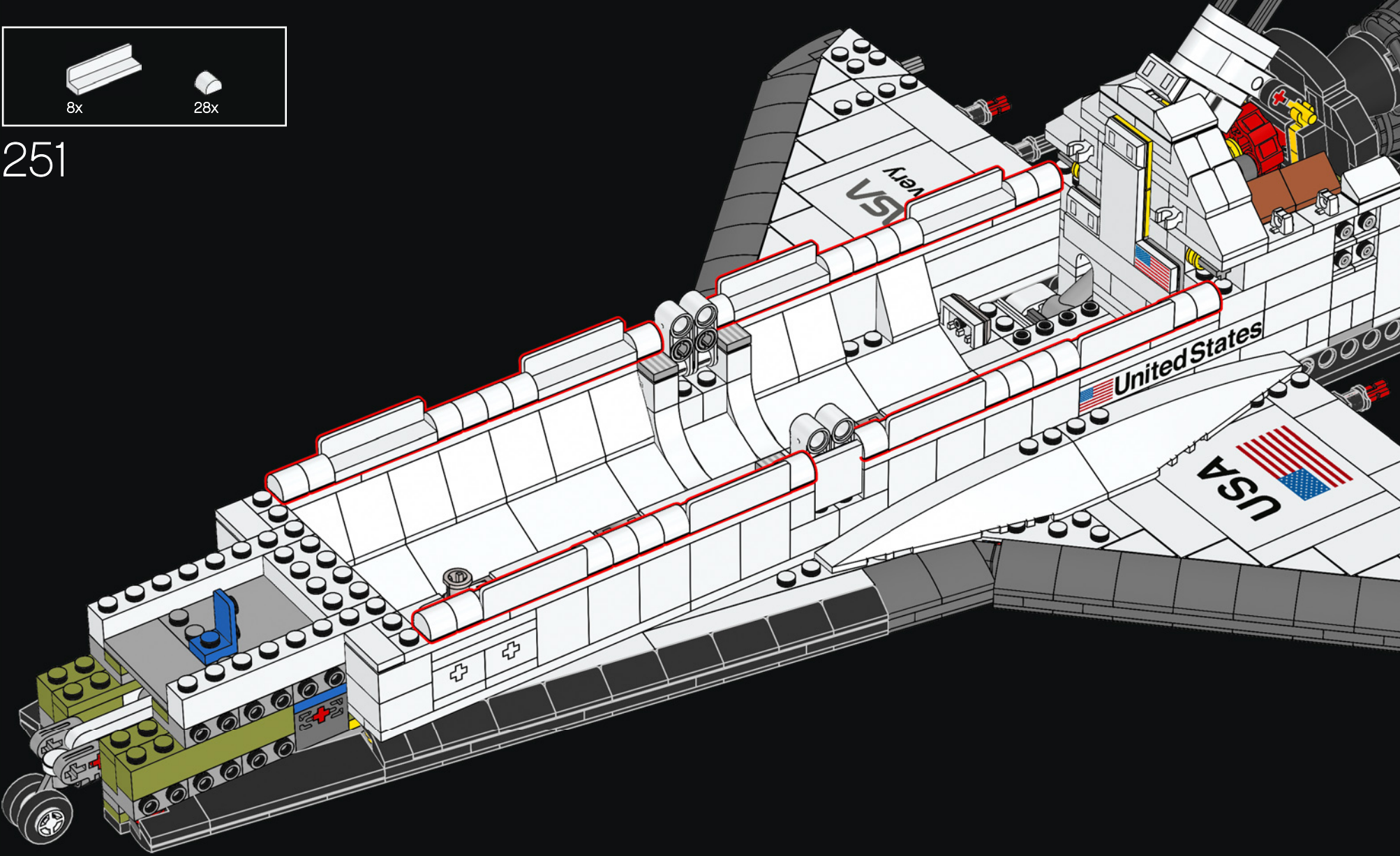


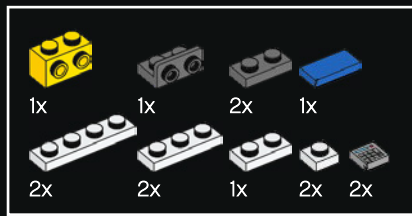
250



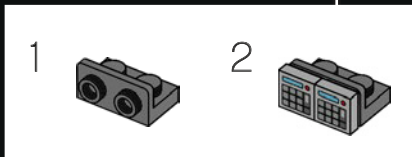
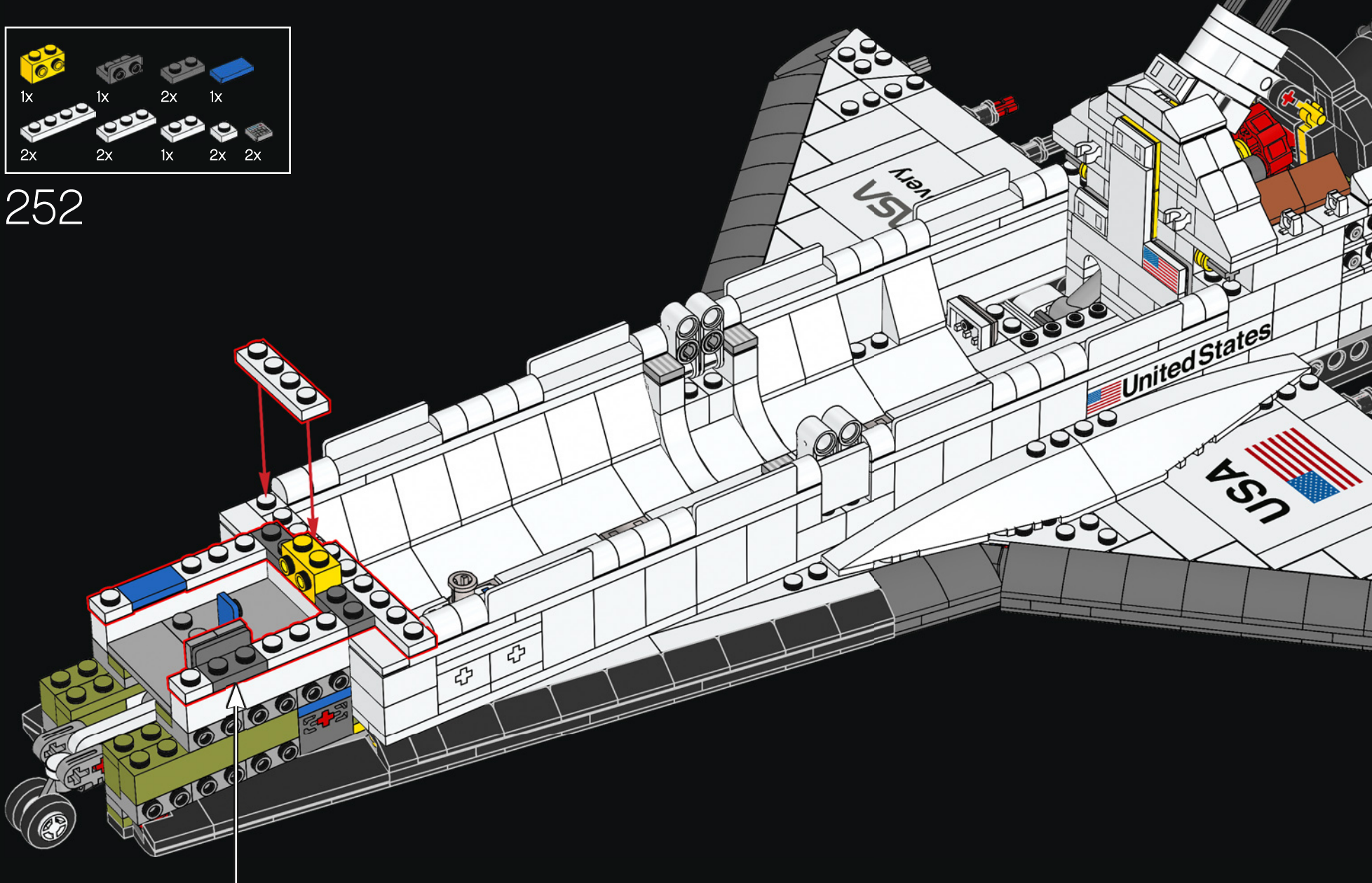


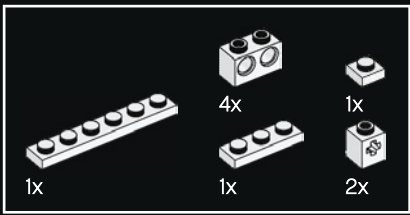
251



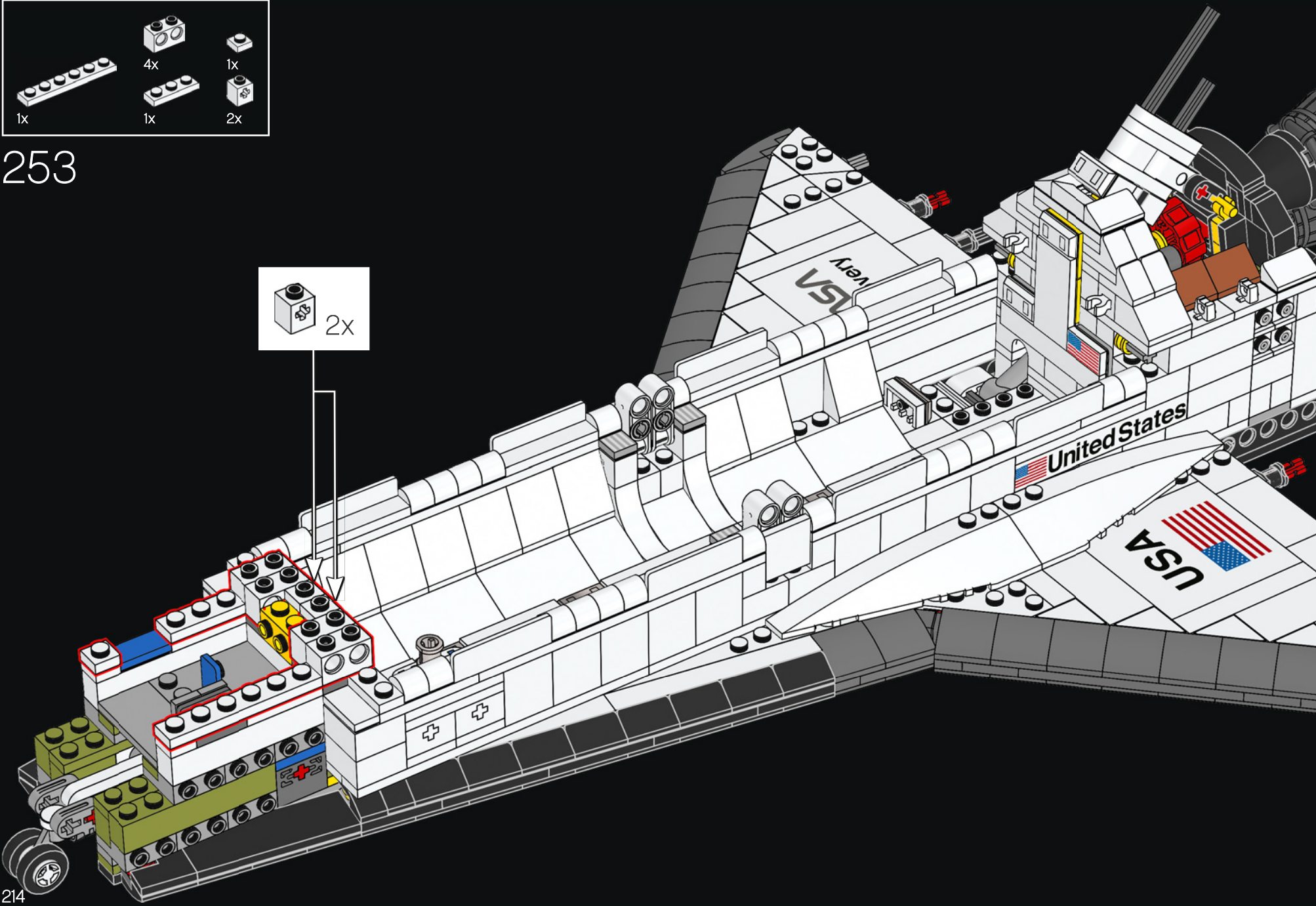
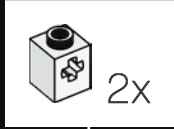


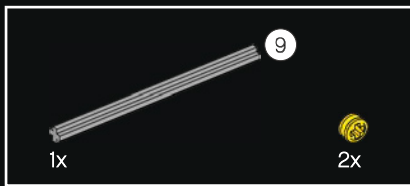
252



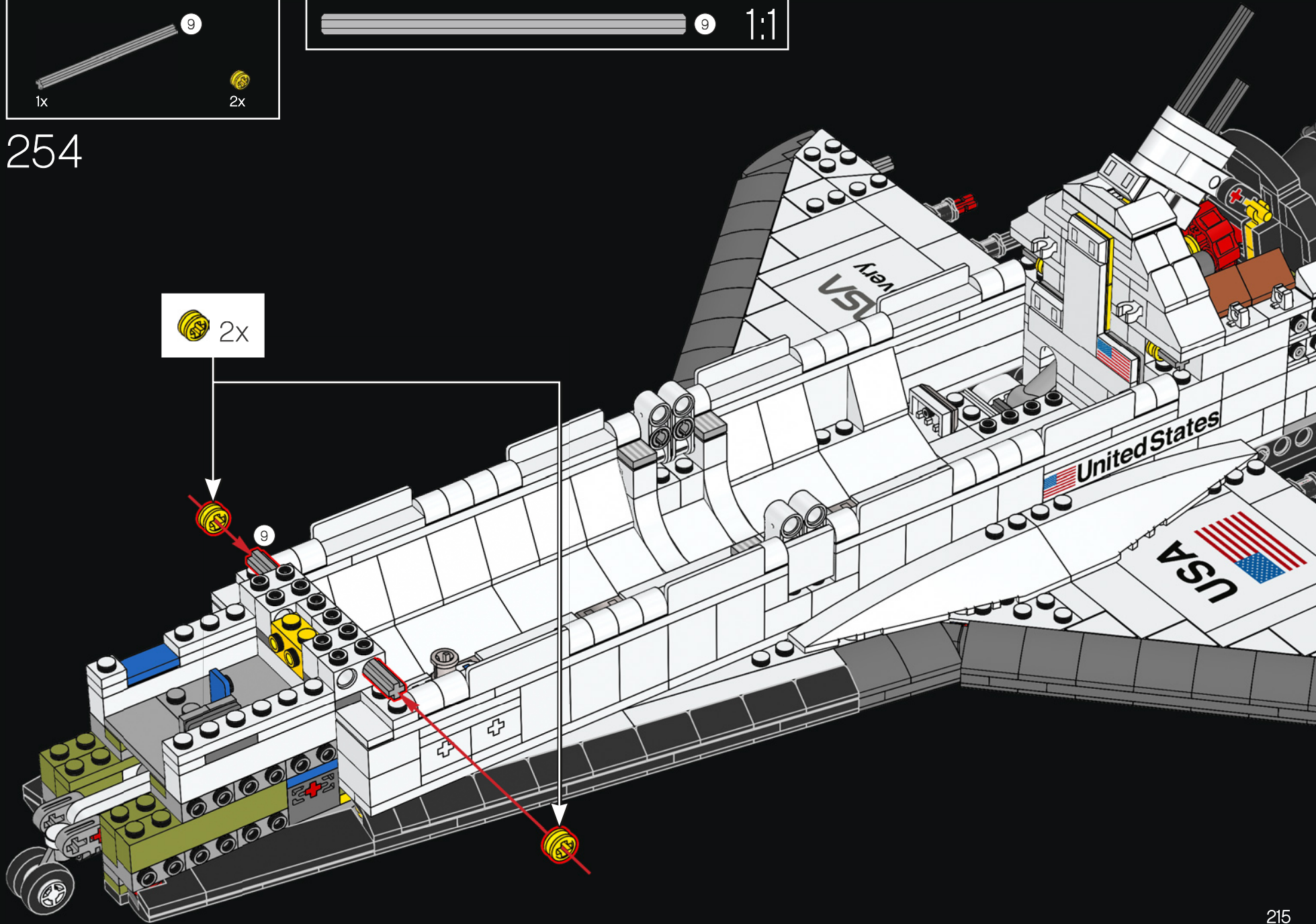
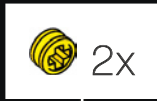


253





254

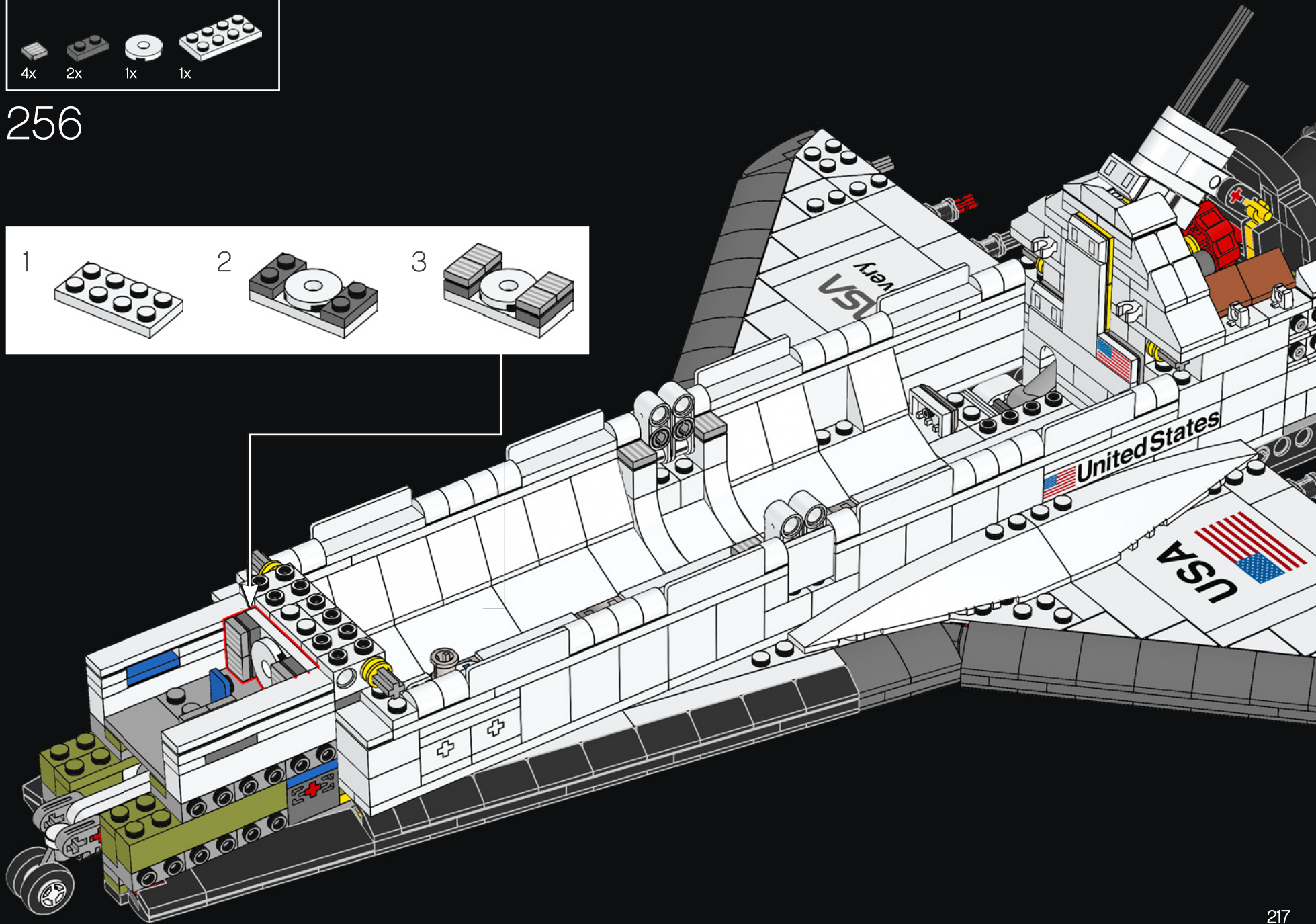
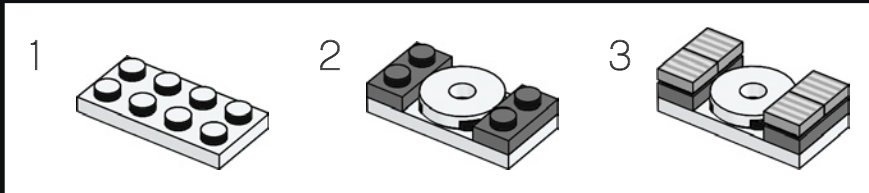


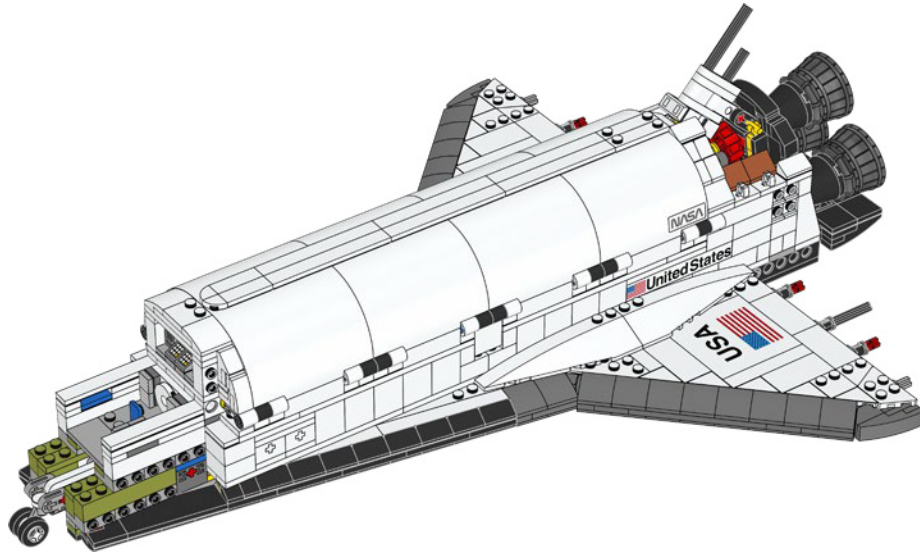




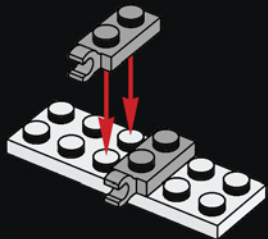


256

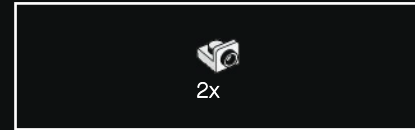
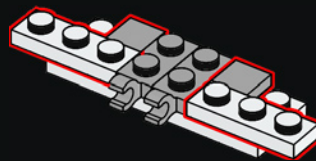




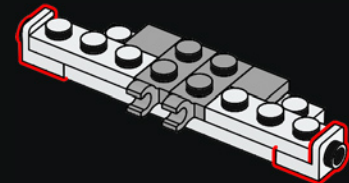
257



258

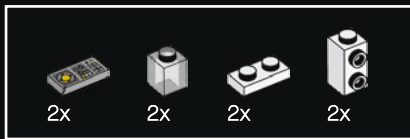
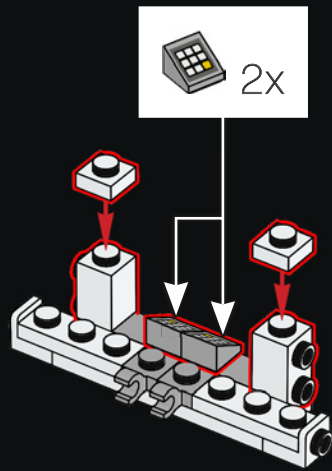


259

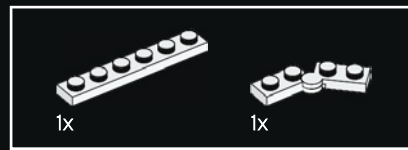
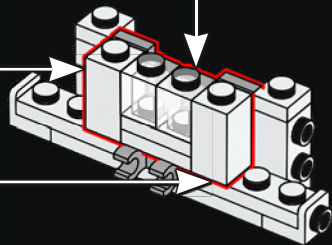
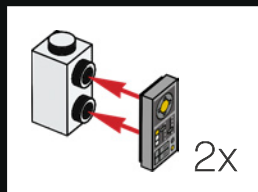
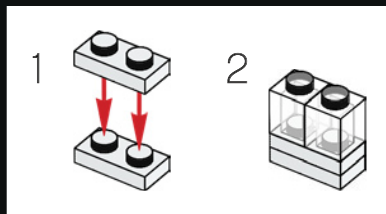




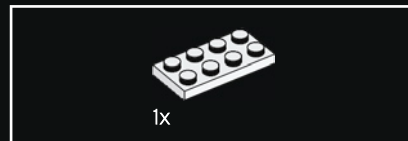
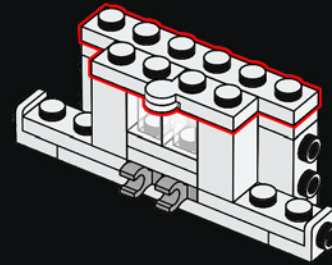
260



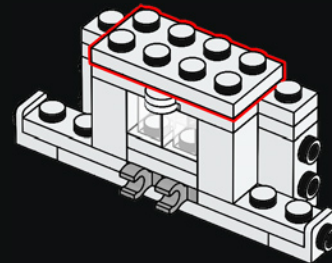
261



262

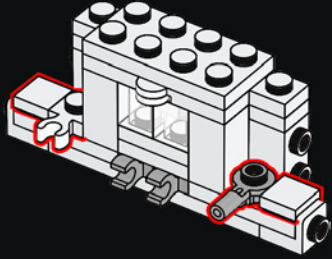


263

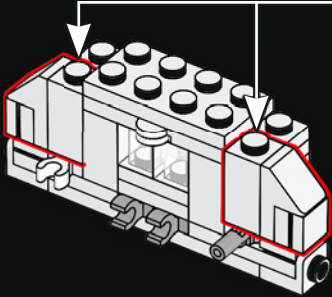
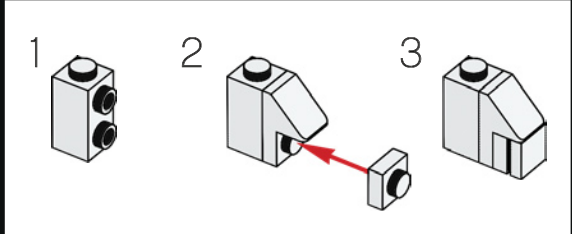




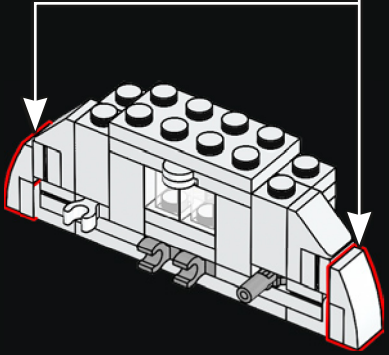
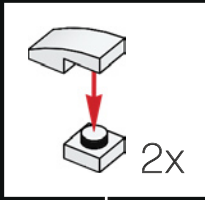
264



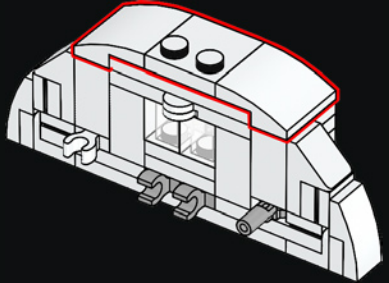
265

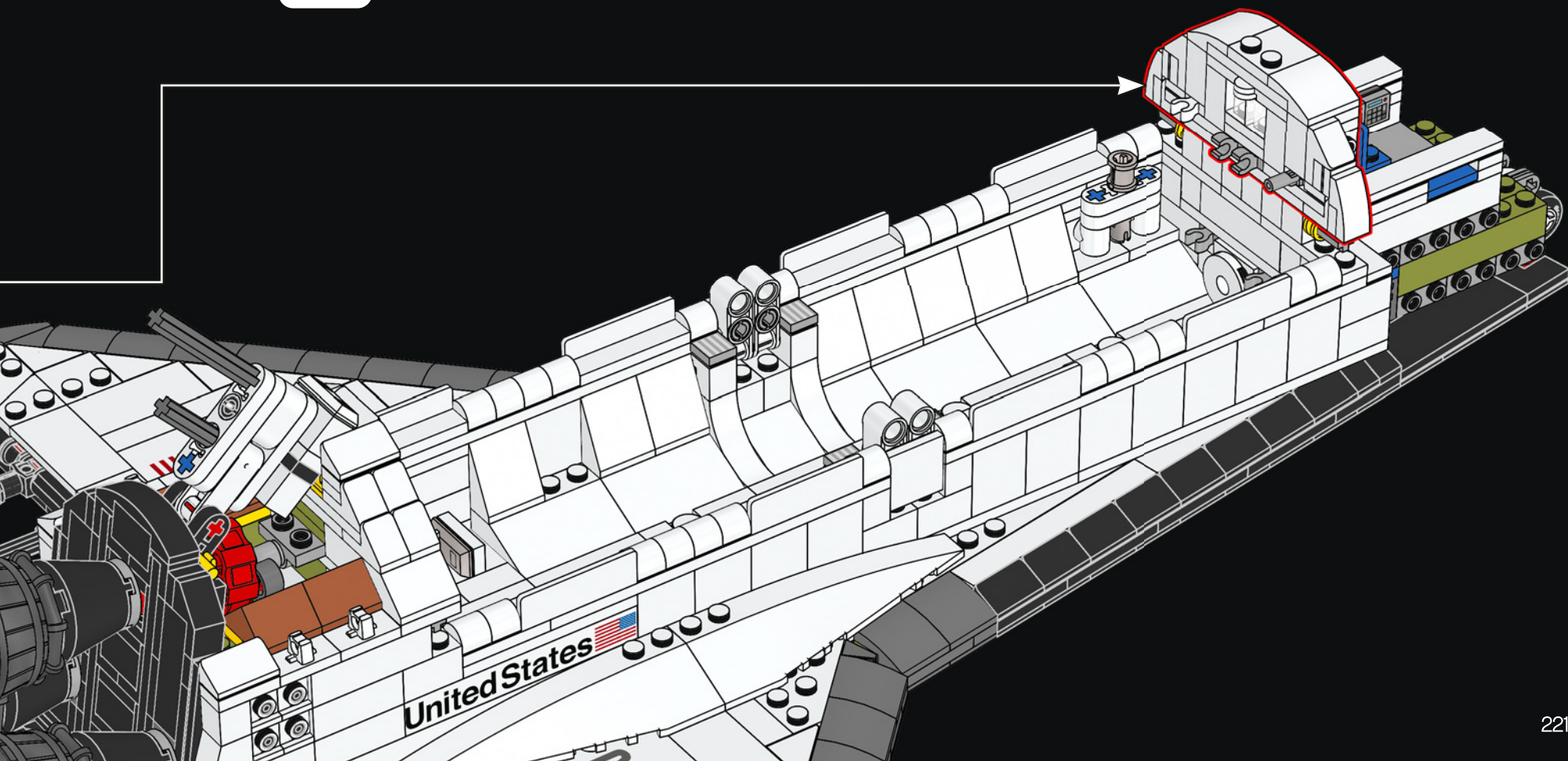


266



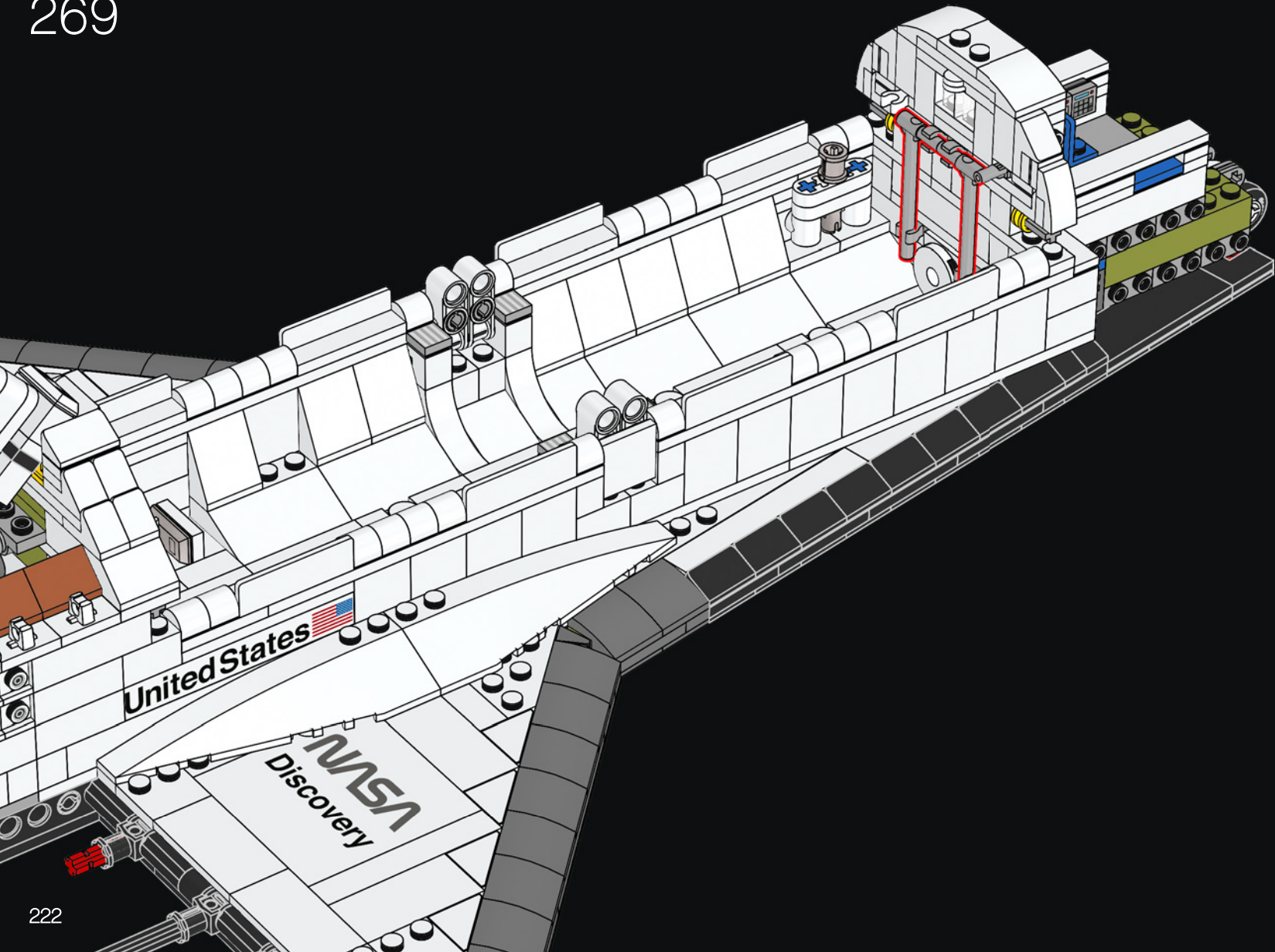
267



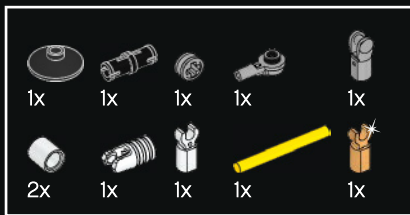




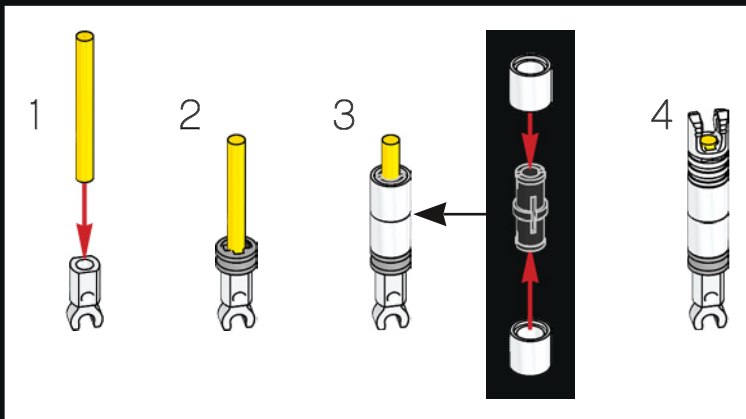
269



222

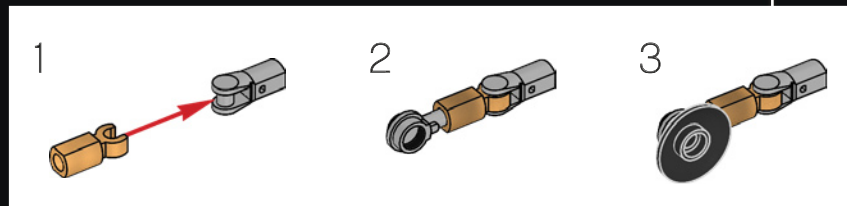
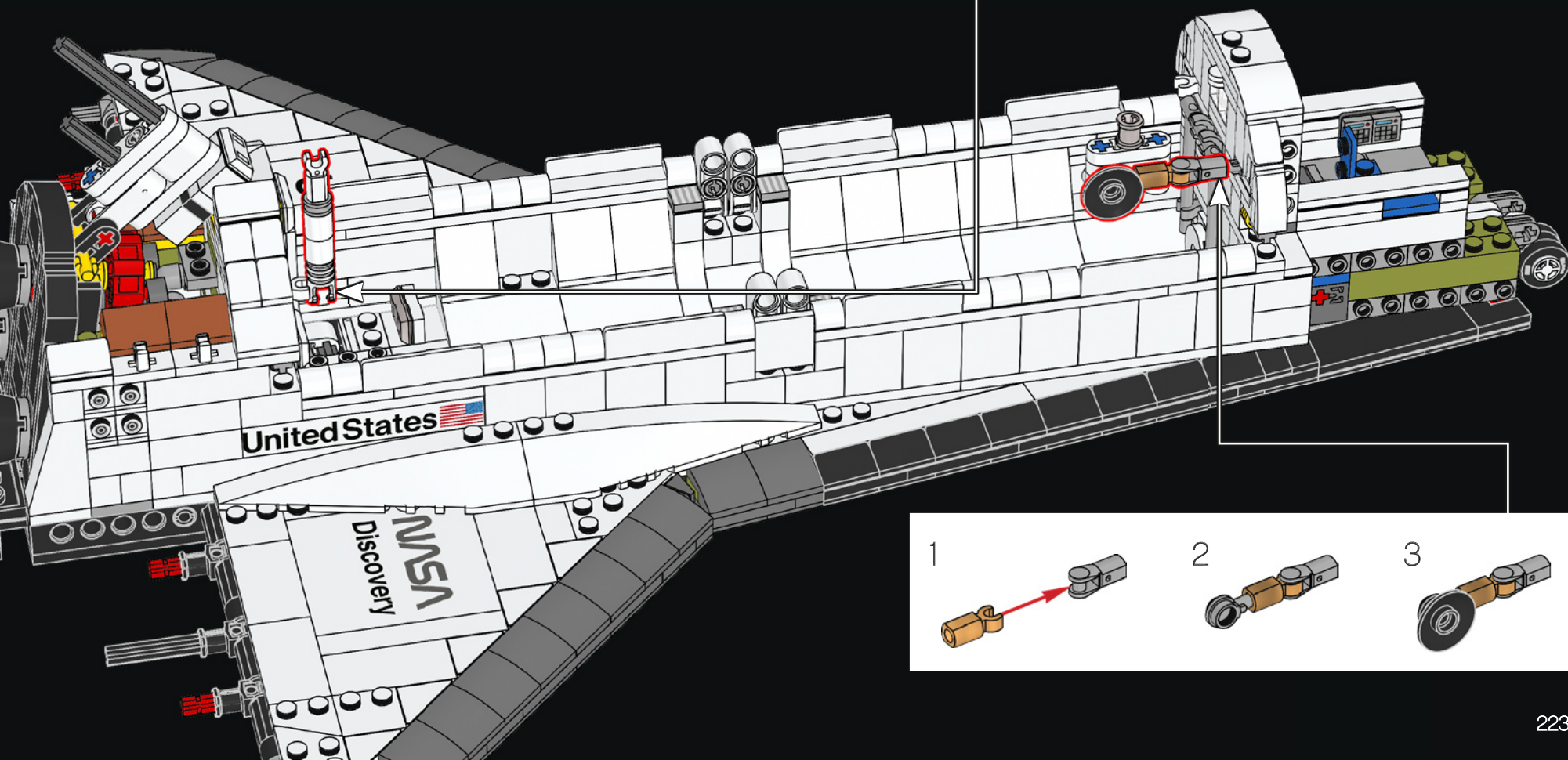


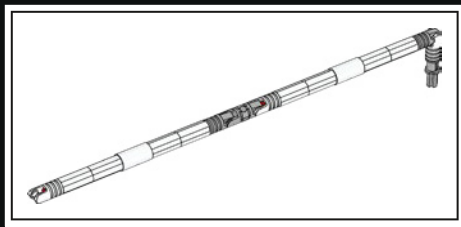
270



### 你知道吗？

KU 波段天线部署在轨道上，允许航天飞机的机组人员发送和接收地球的讯息。

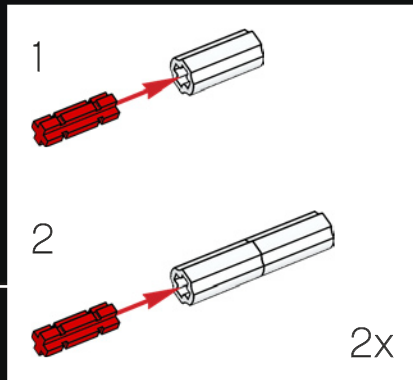
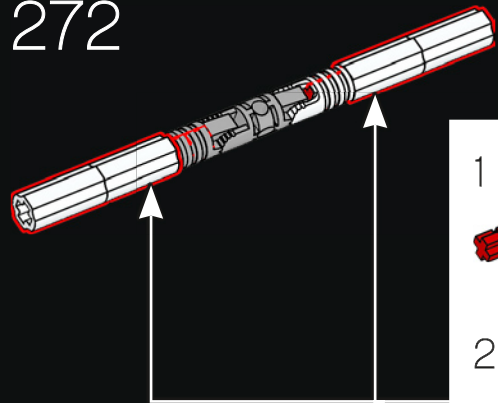




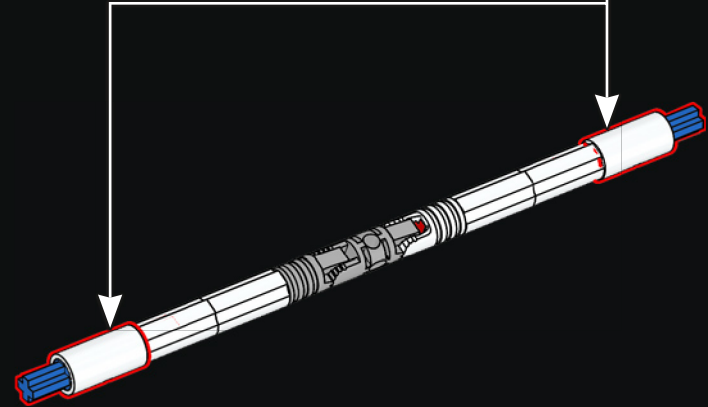
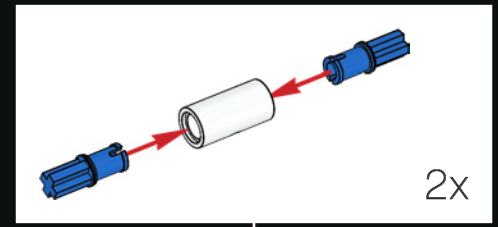
271



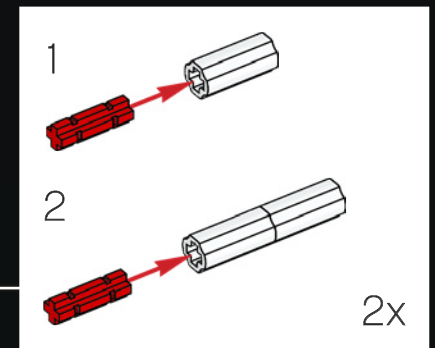
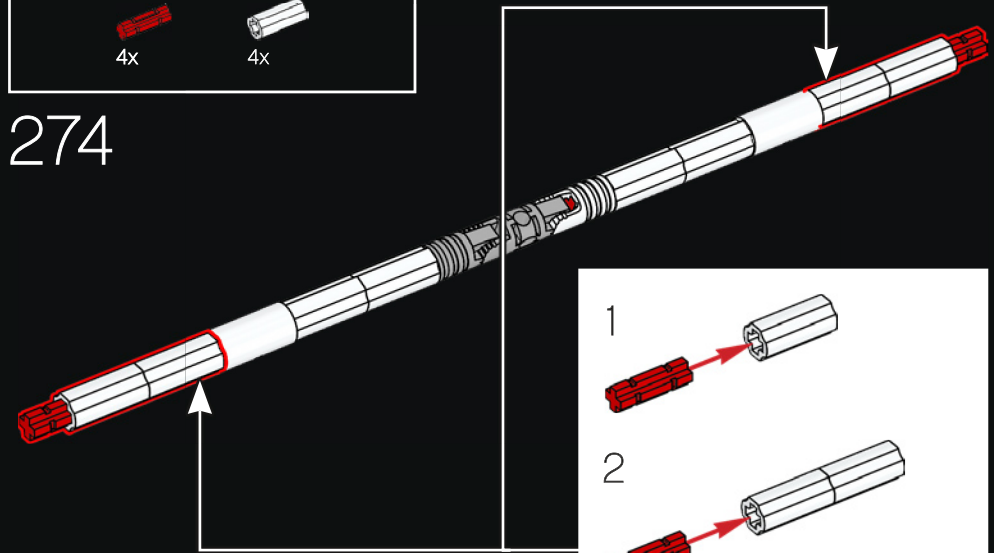
272



273



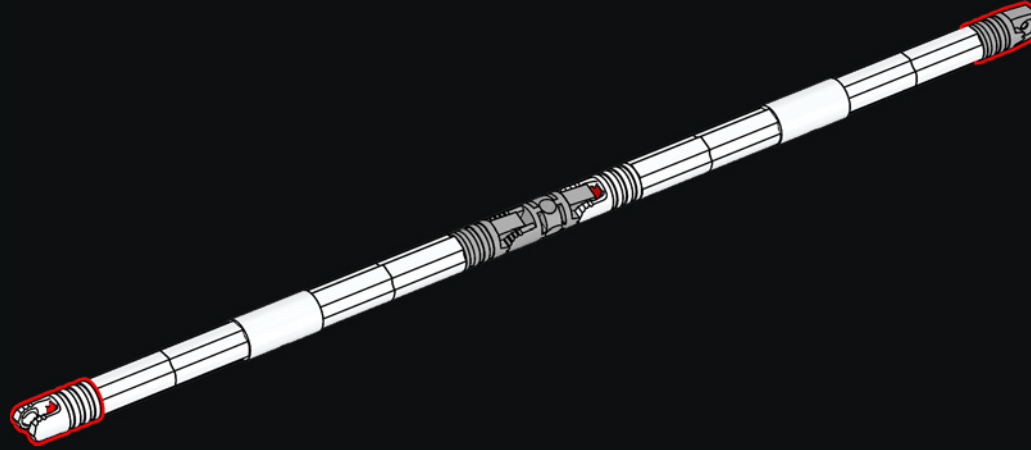
274



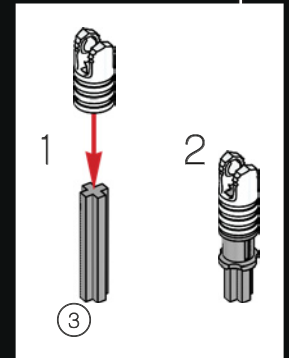
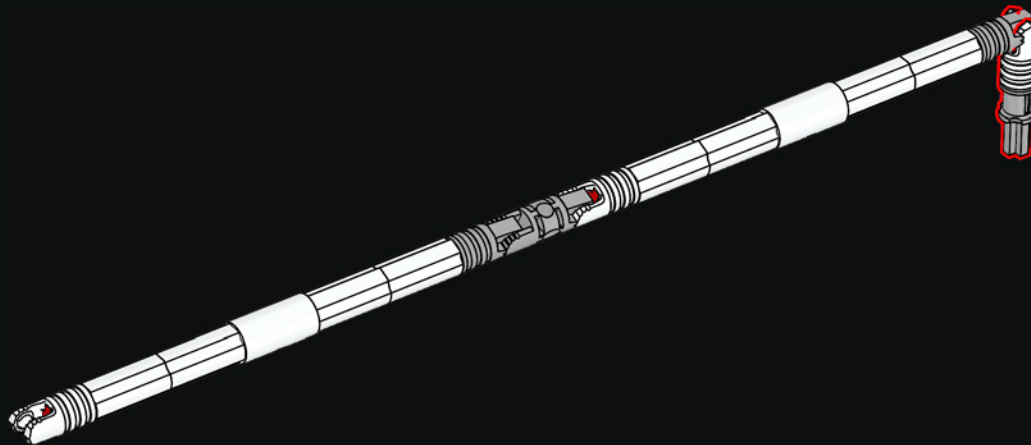




275



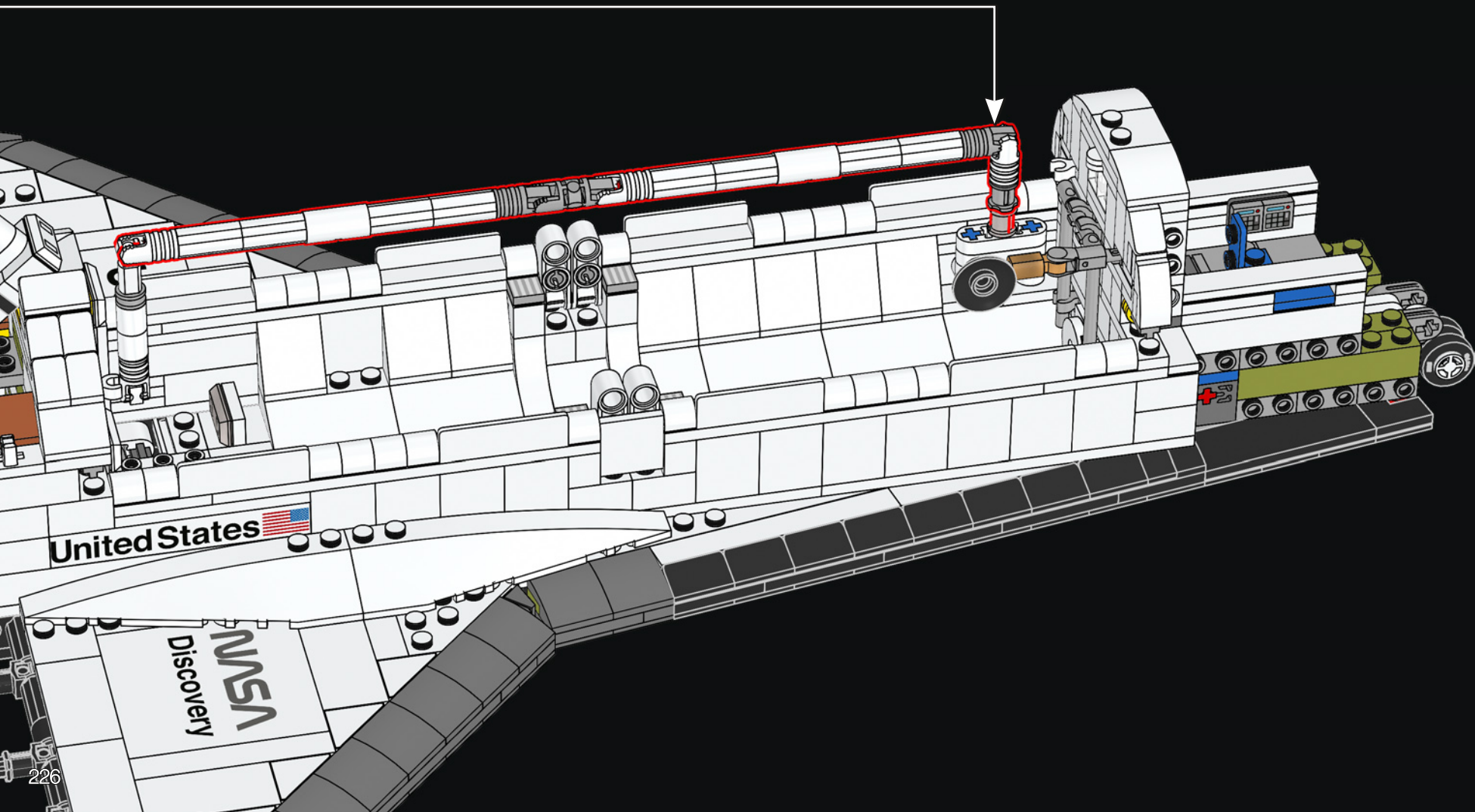
276



## 你知道吗？

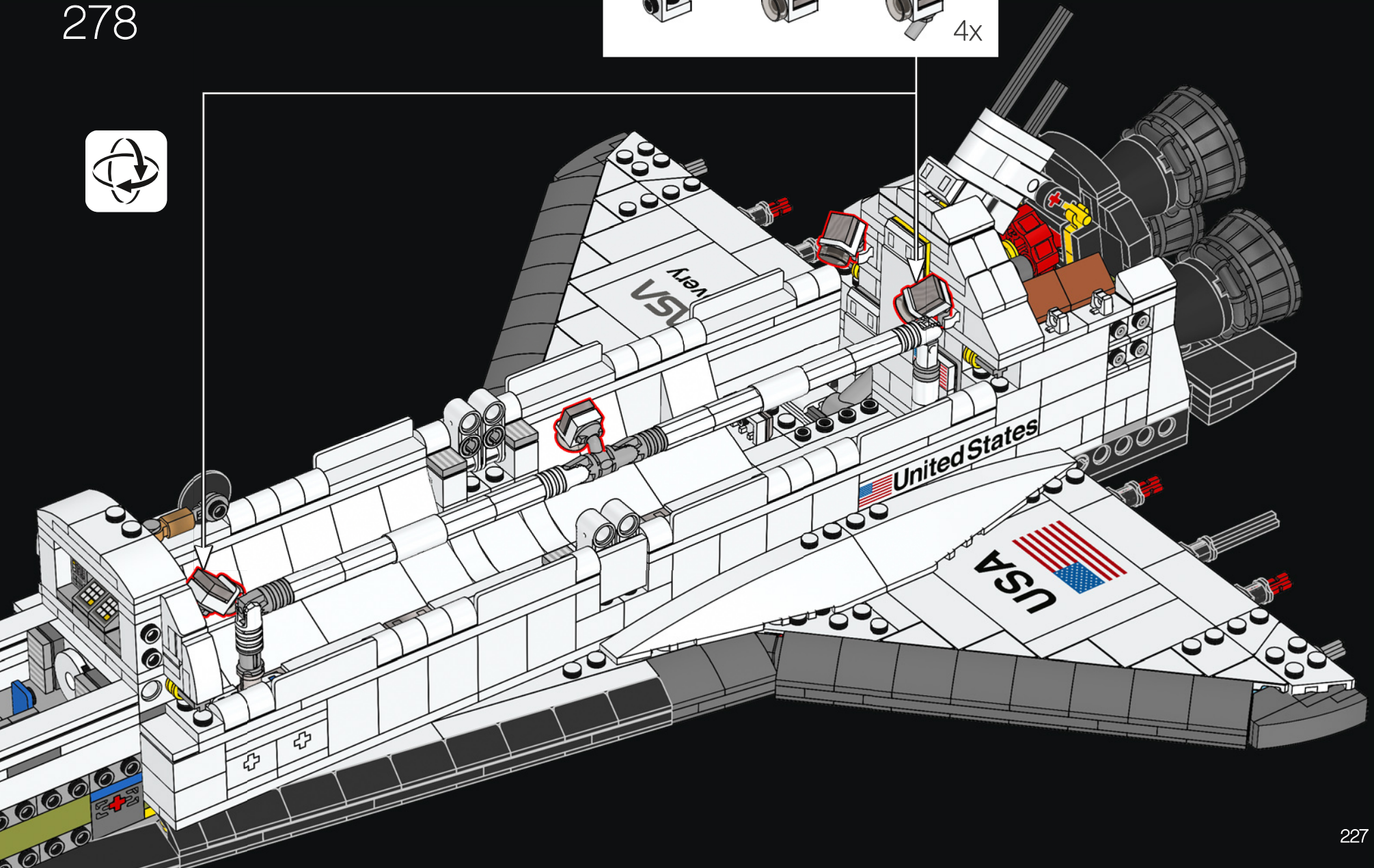
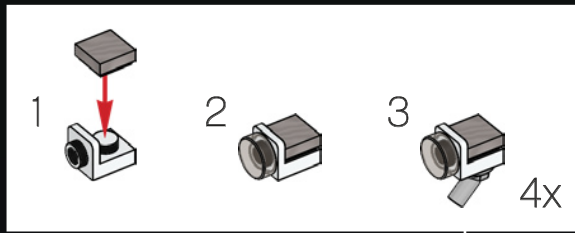
宇航员使用航天飞机遥控机械手系统 (RMS) 部署和操纵酬载，协助进行太空行走。

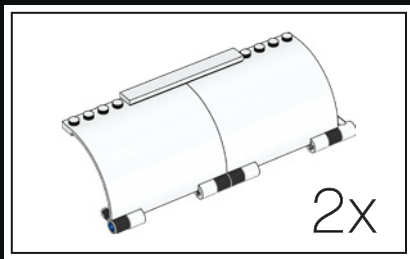
277



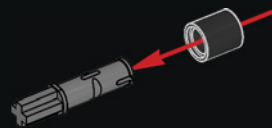


278

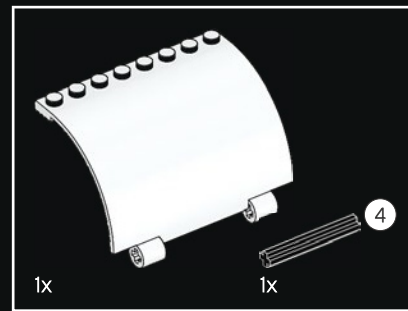
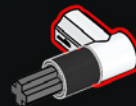




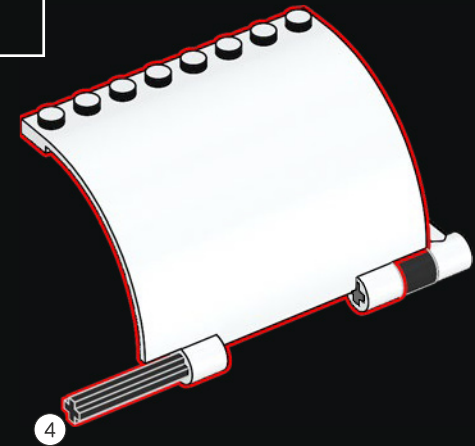
279



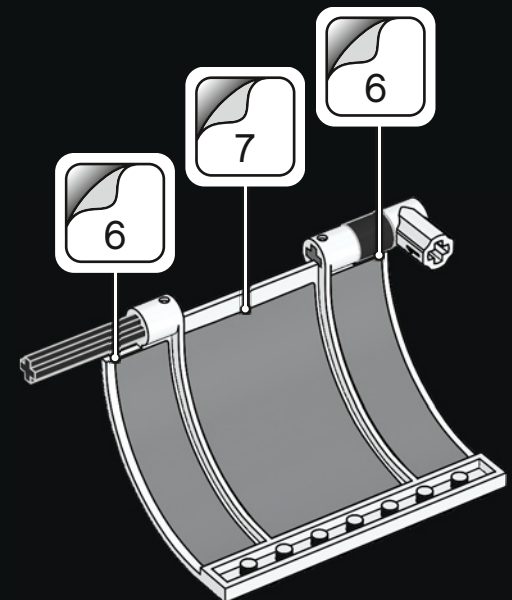
280



281

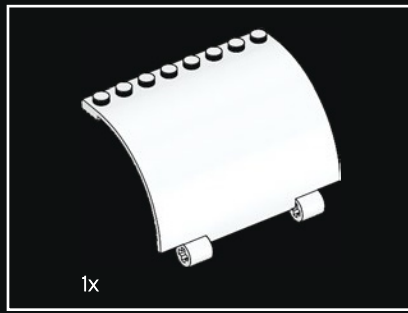
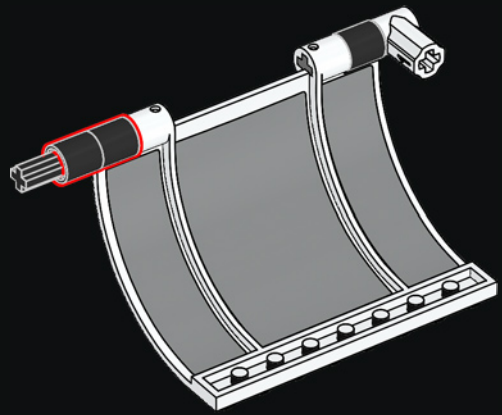


282

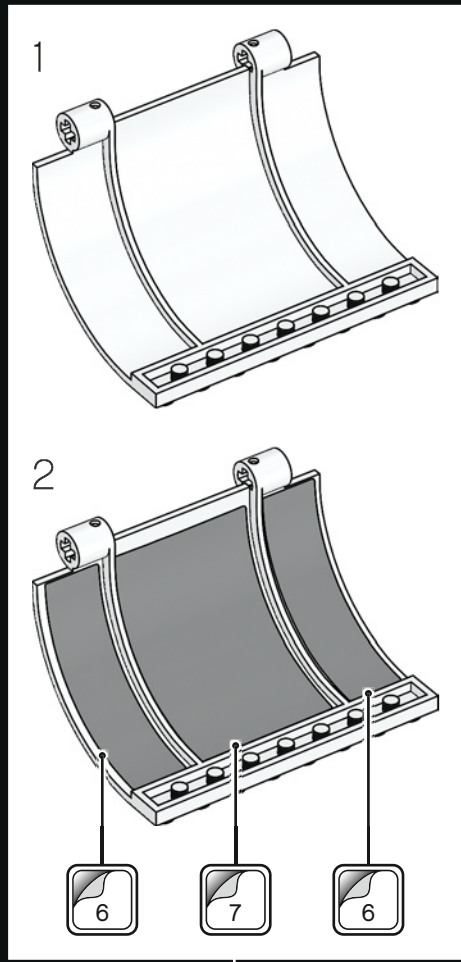
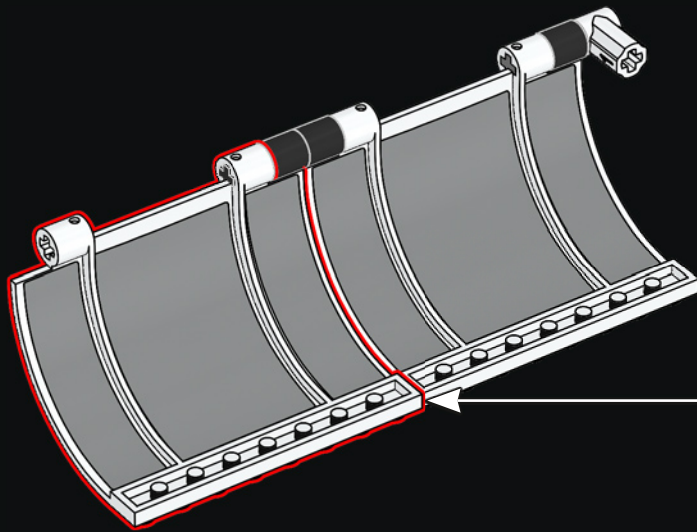




283

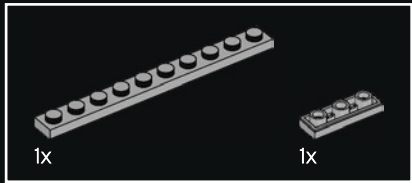
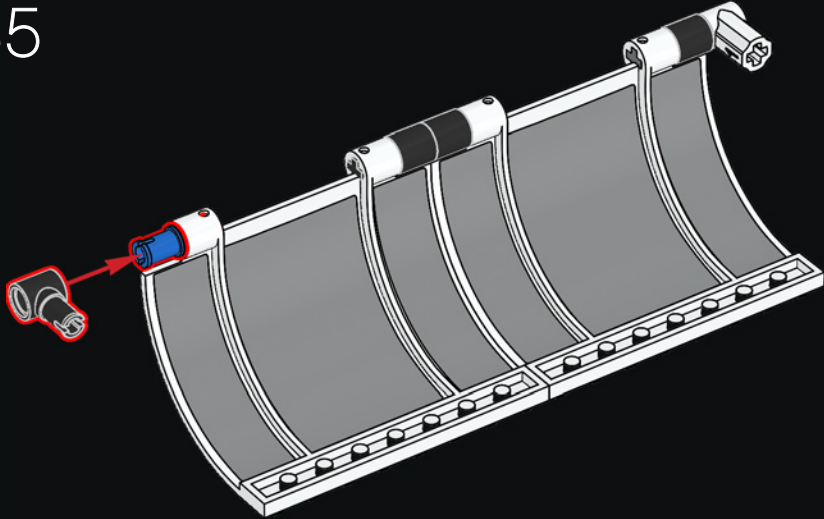


284

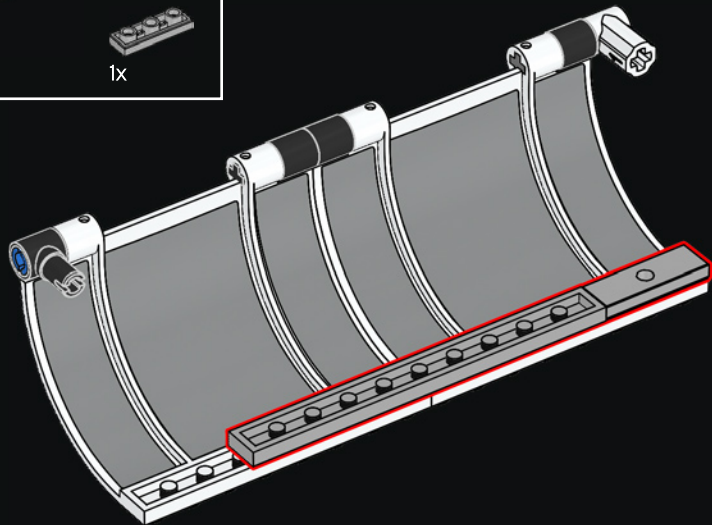




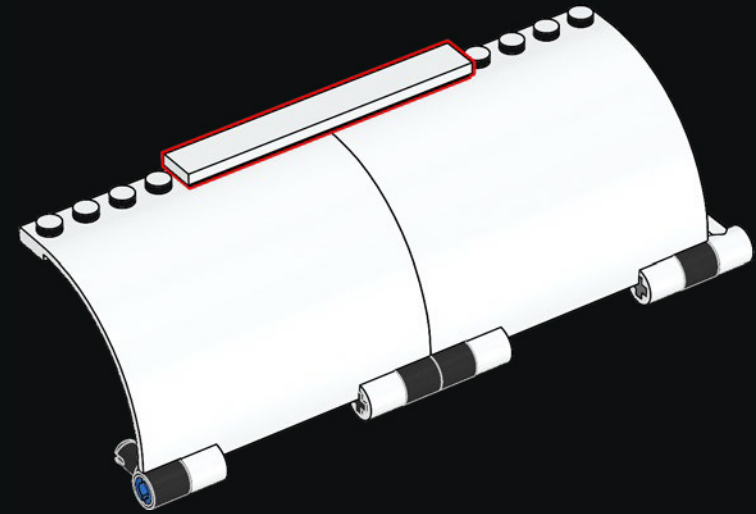
285



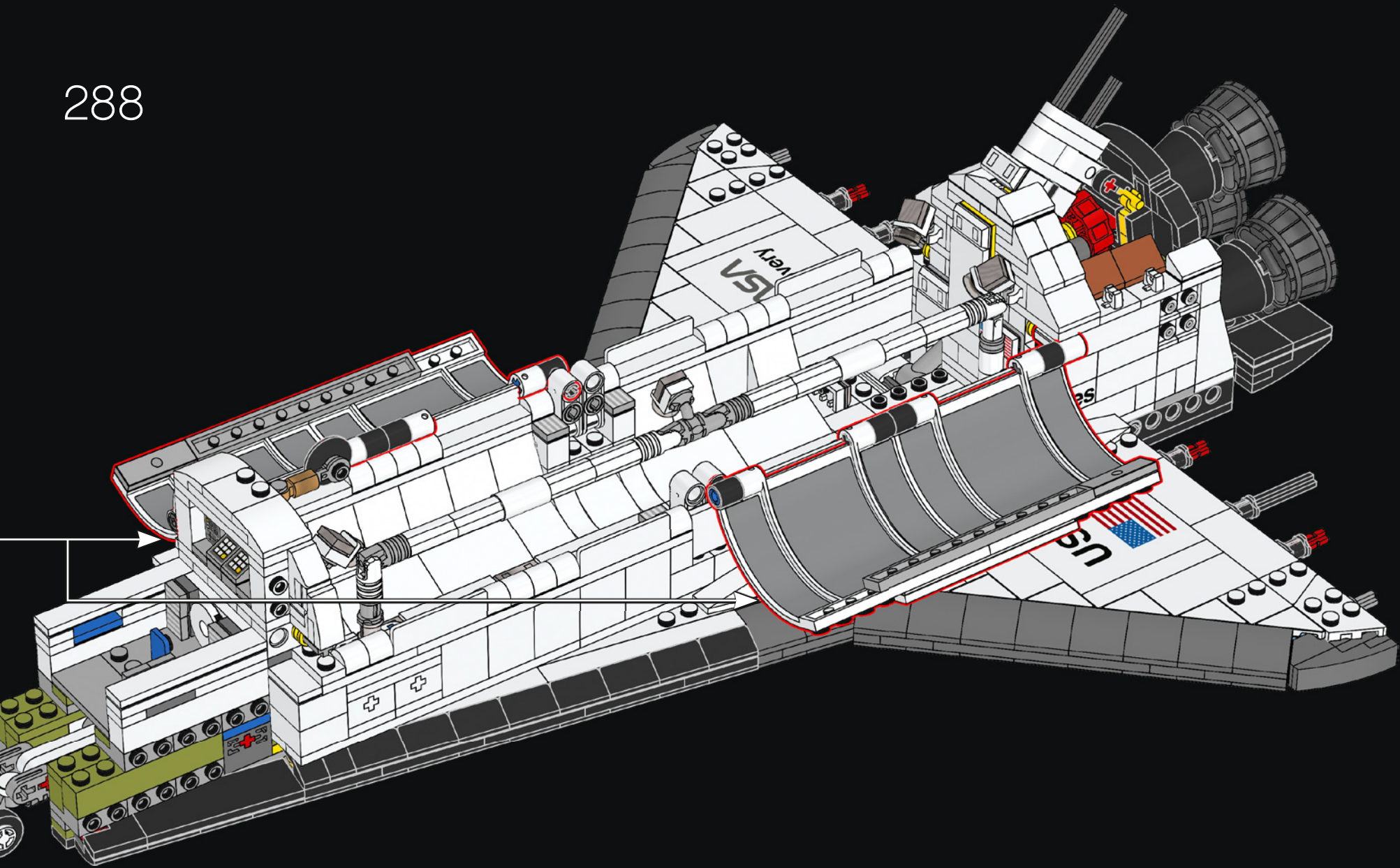
286

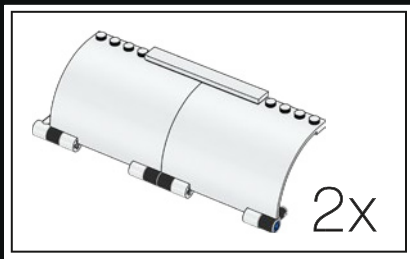


287



2x

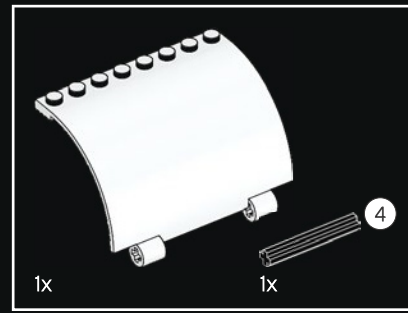
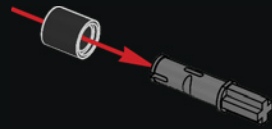




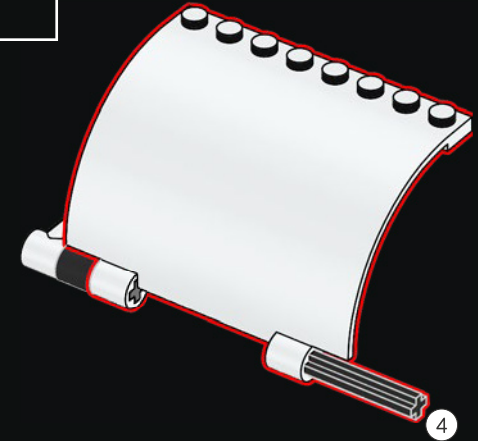
289



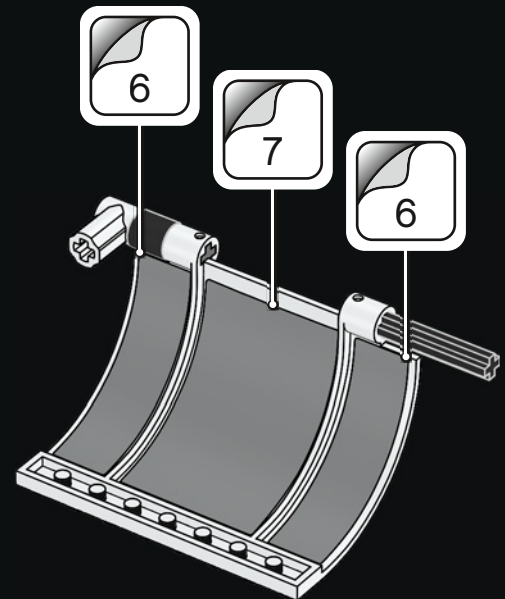
290



291



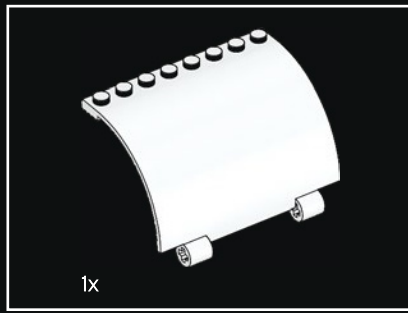
292



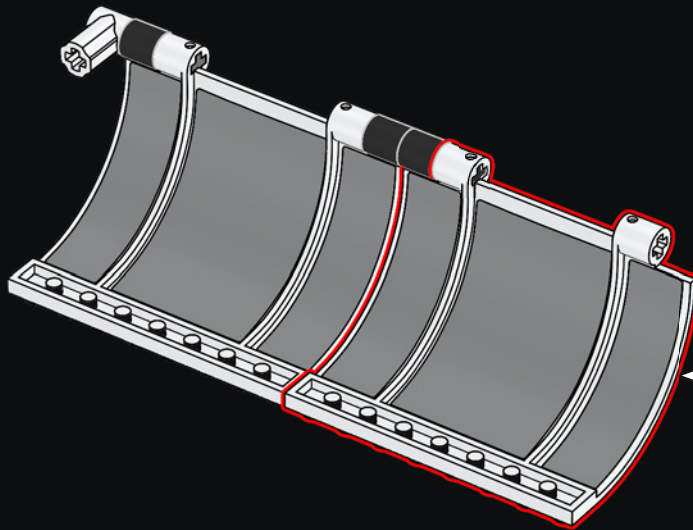
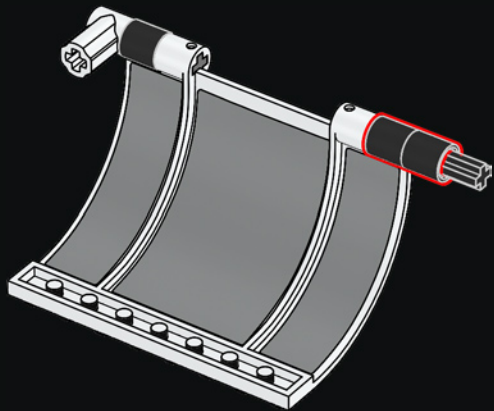
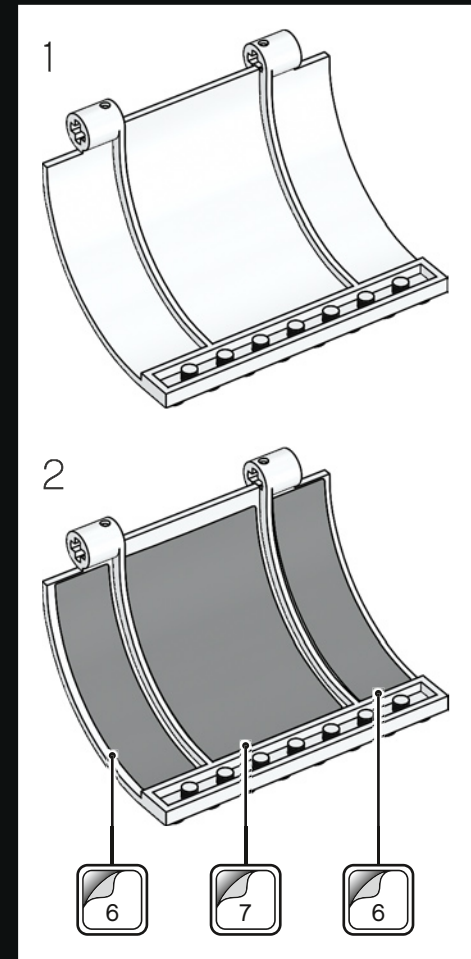




293

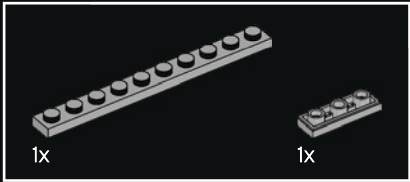
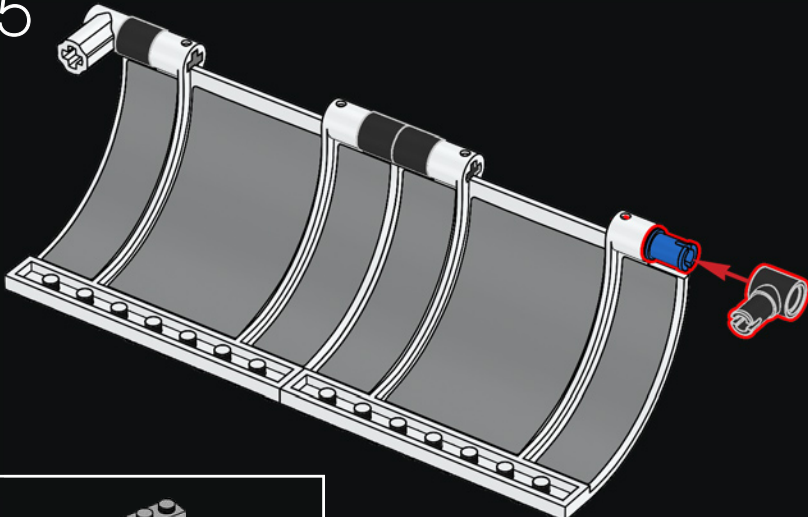


294

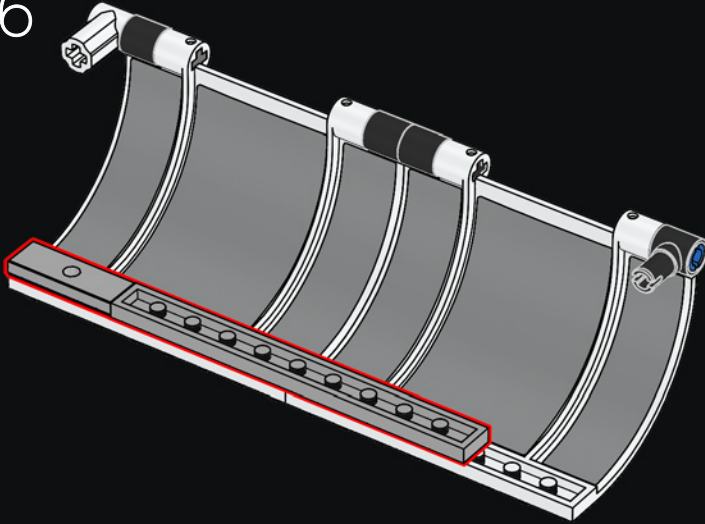




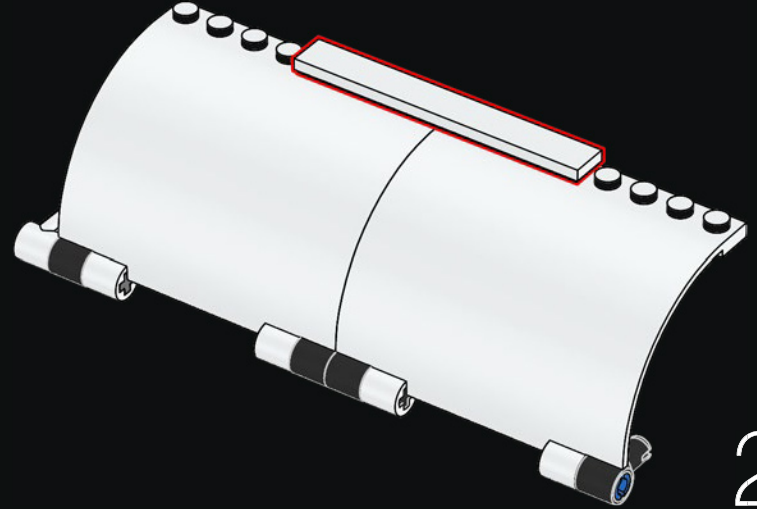
295



296



297

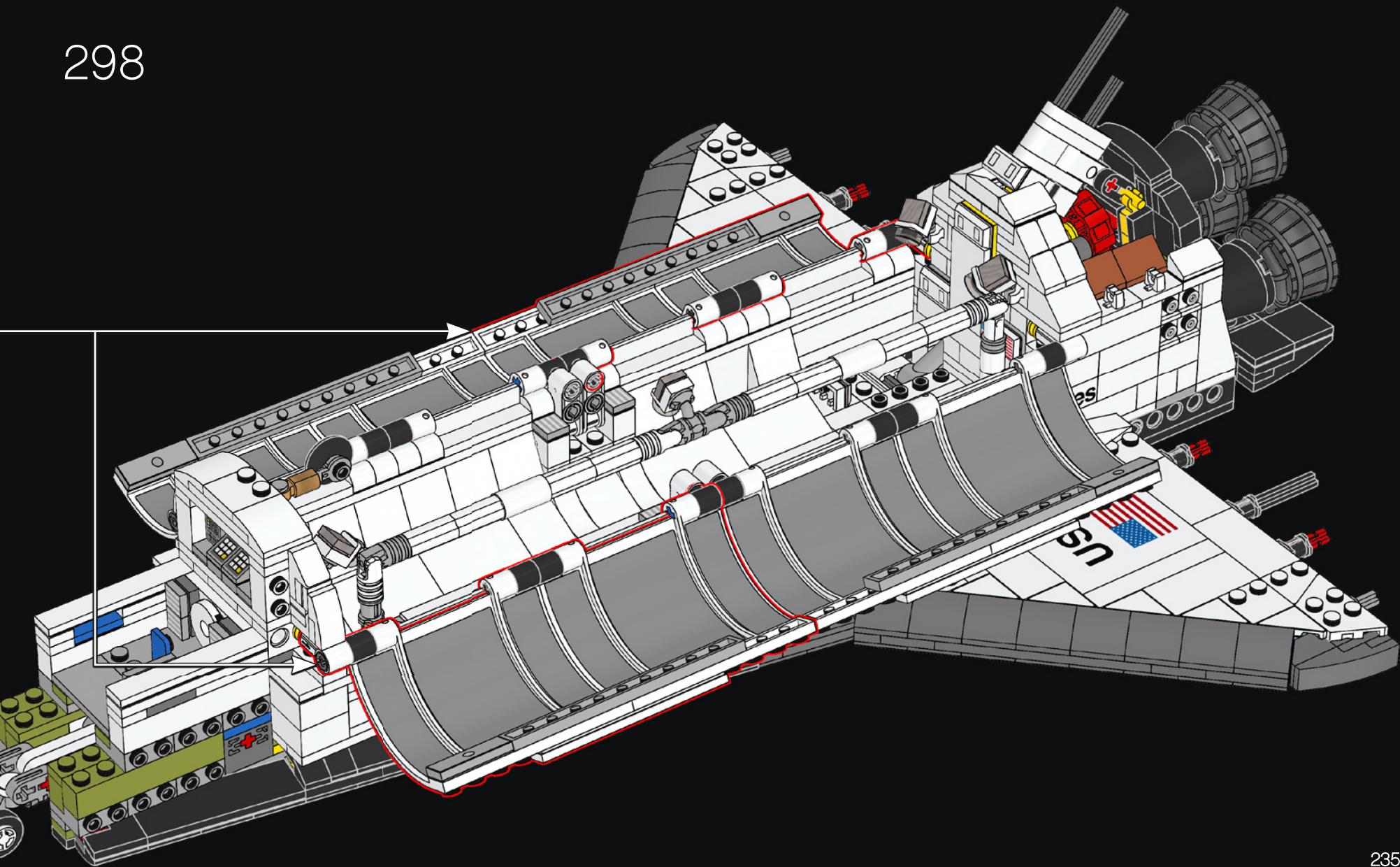


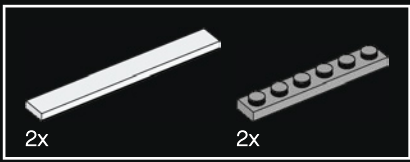
2x

## 你知道吗？

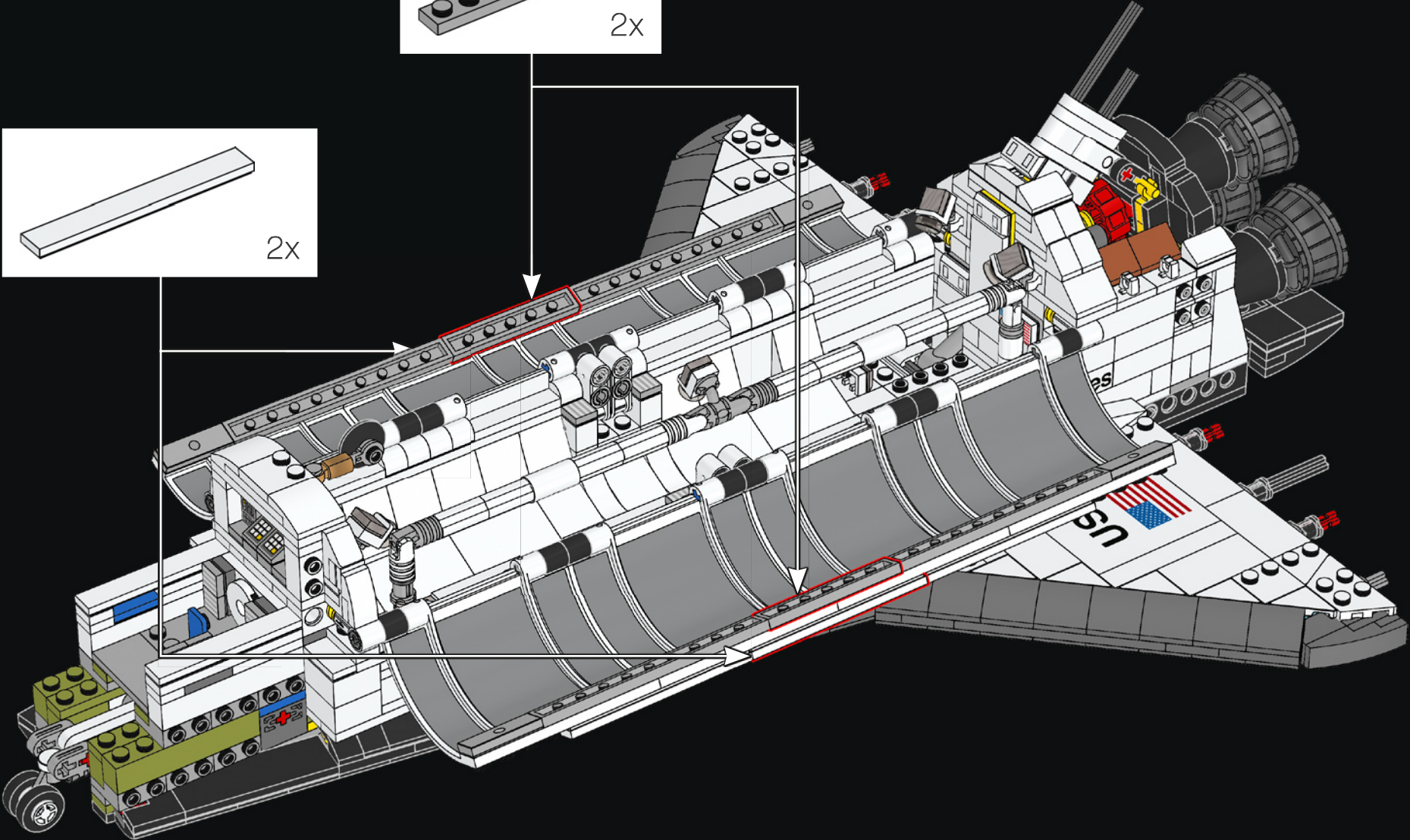
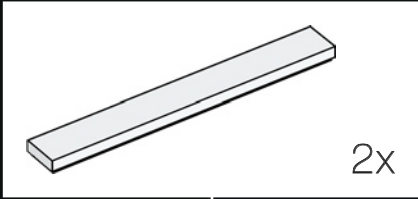
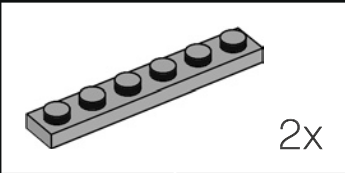
18.2 米（60 英尺）长的酬载舱门始终打开，以启动散热器，  
在航天飞机到达轨道后进行冷却。

298



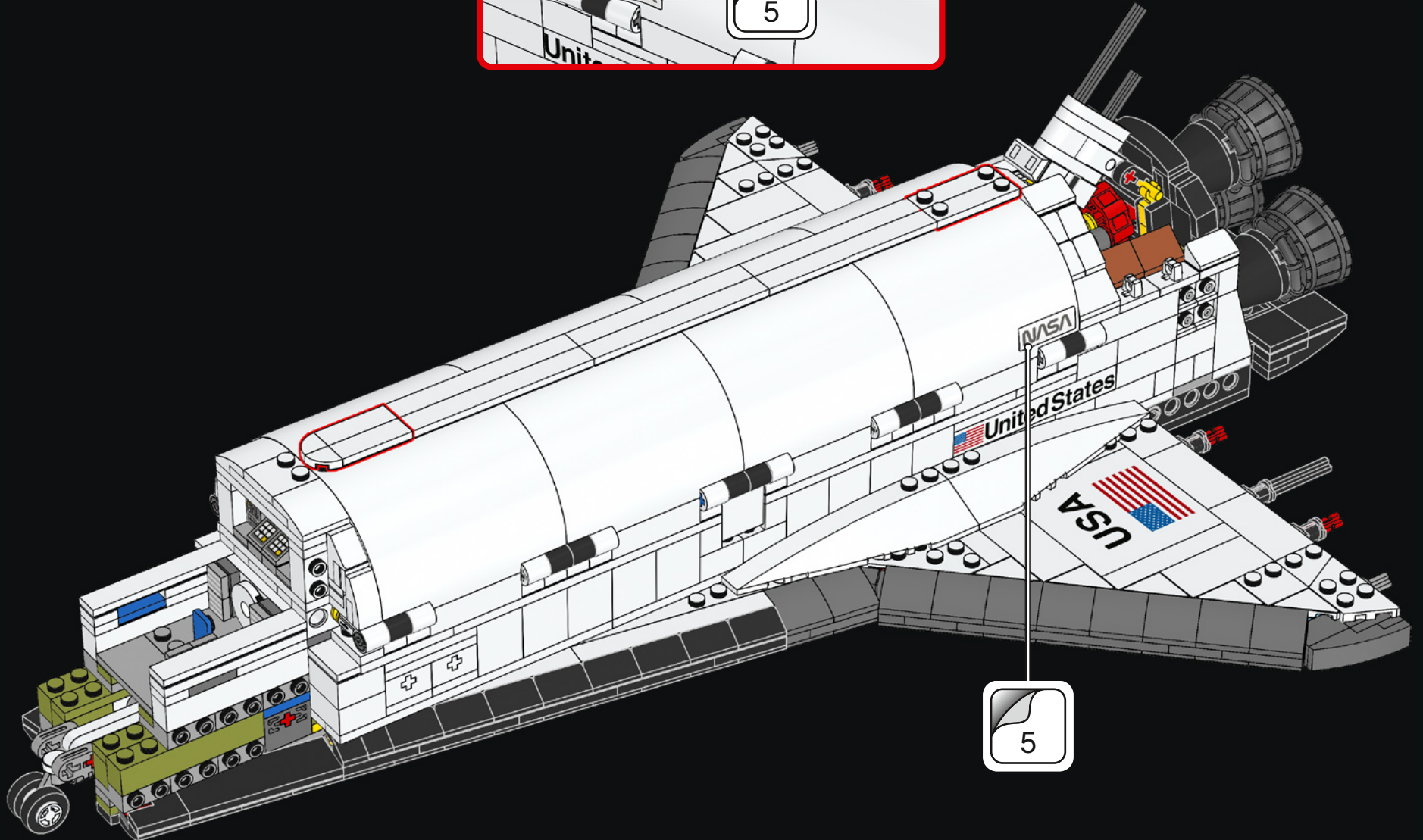
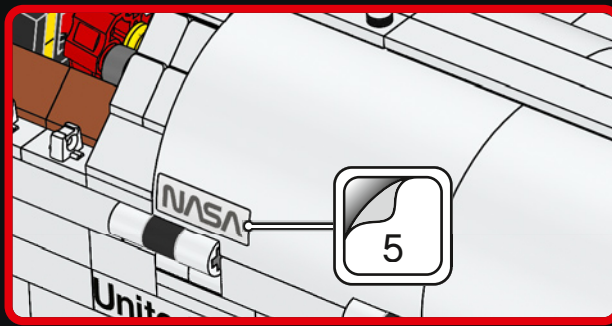


299

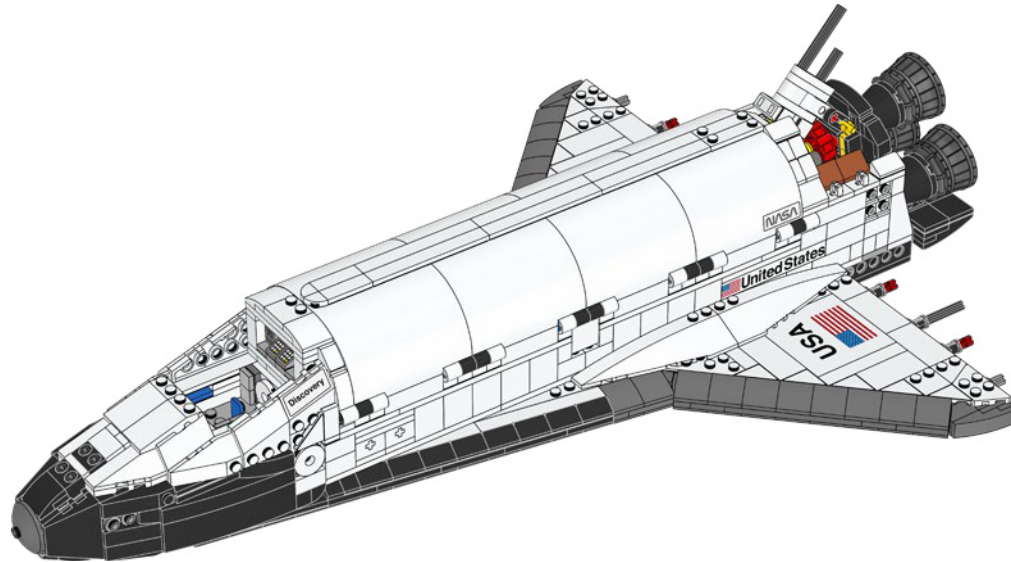


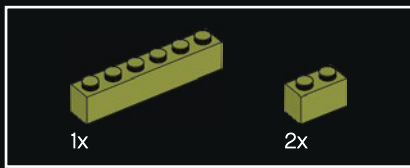


300

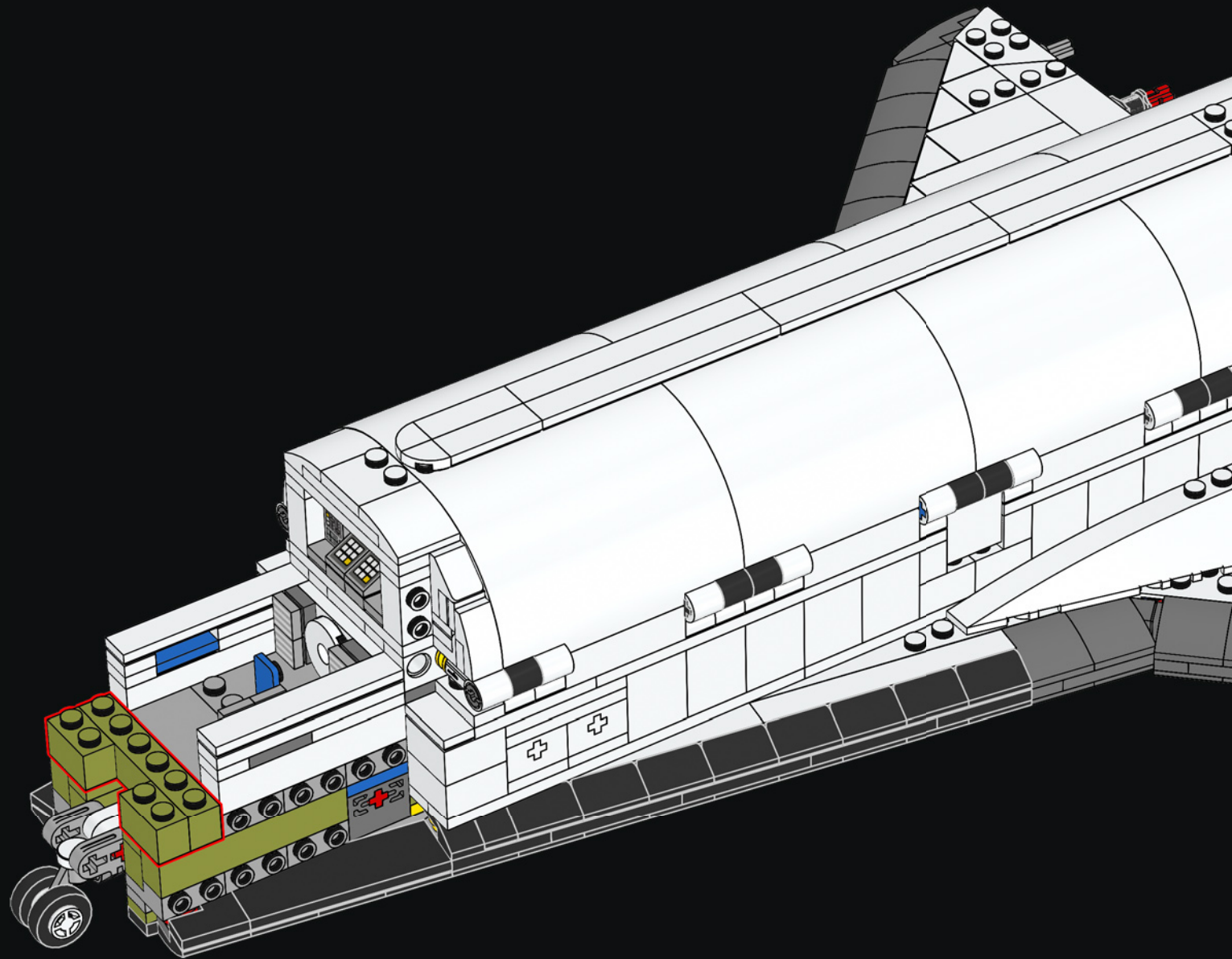


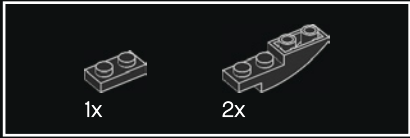
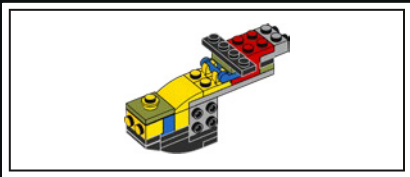
14



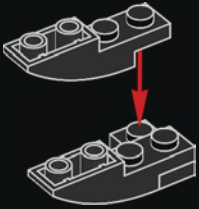


301

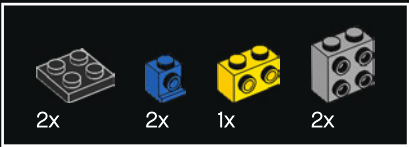
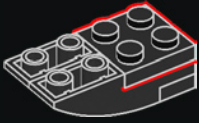




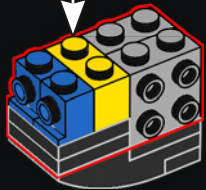
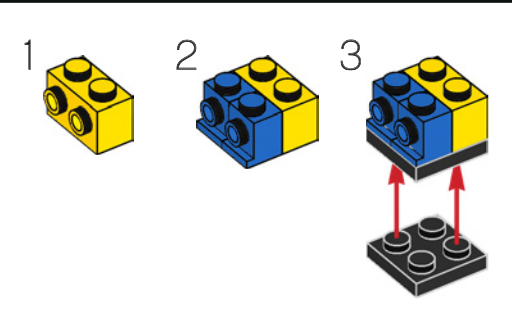
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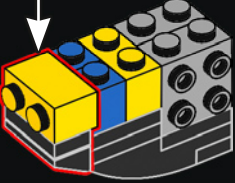
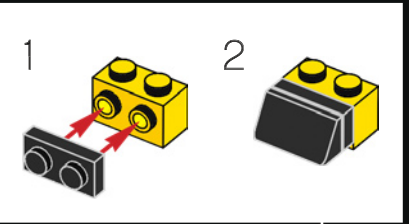
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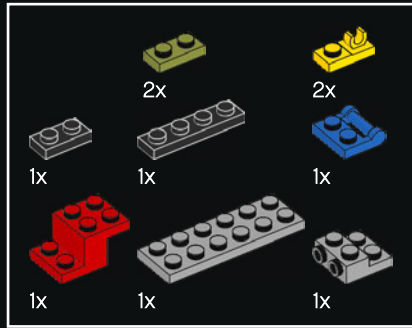
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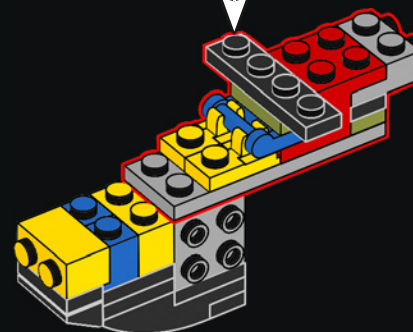
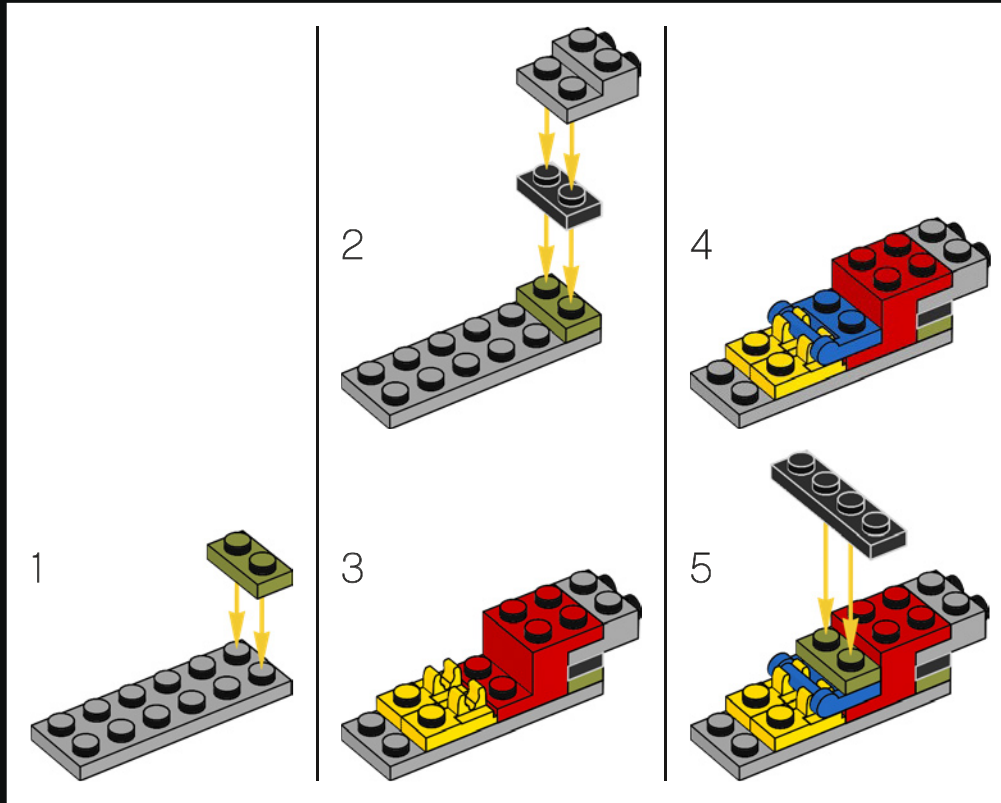
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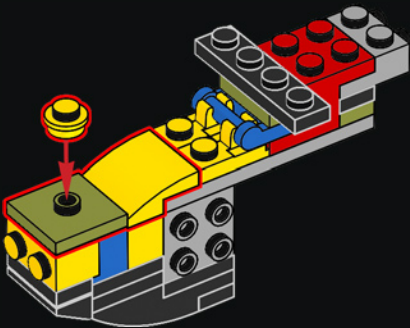


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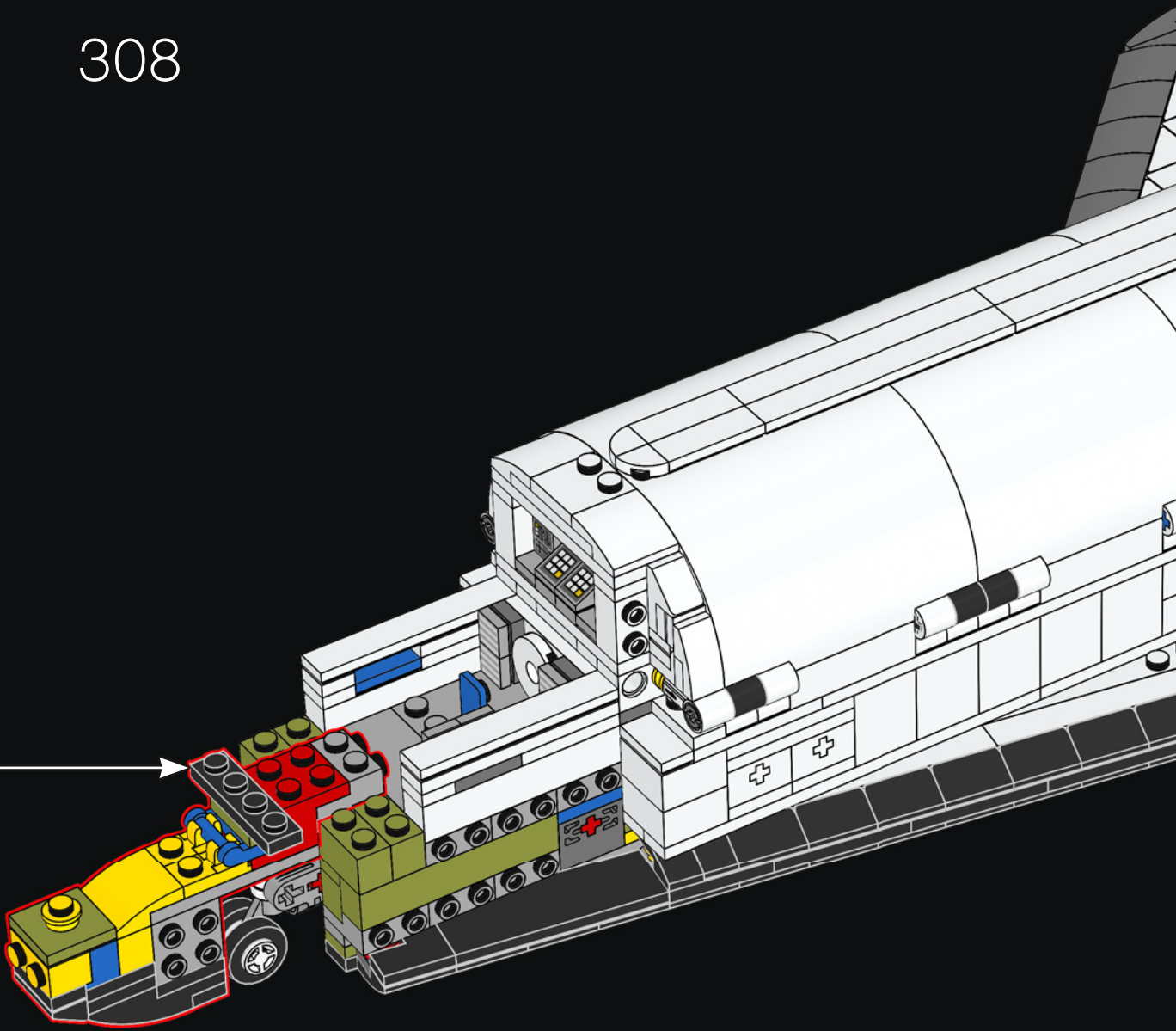


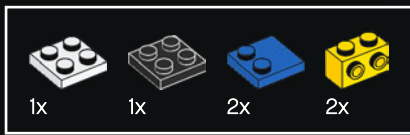


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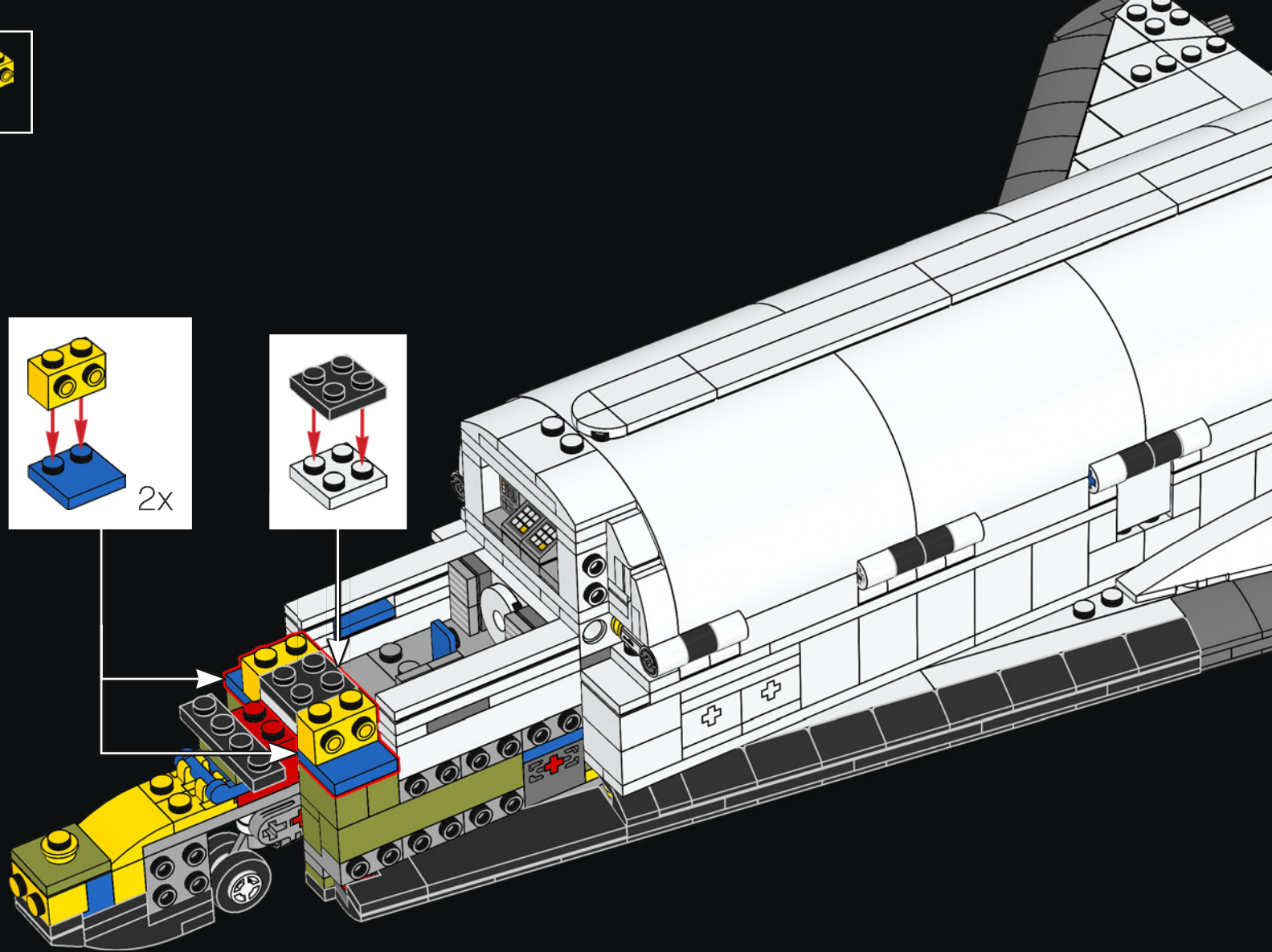
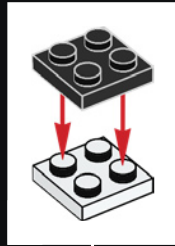
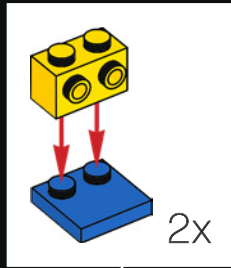


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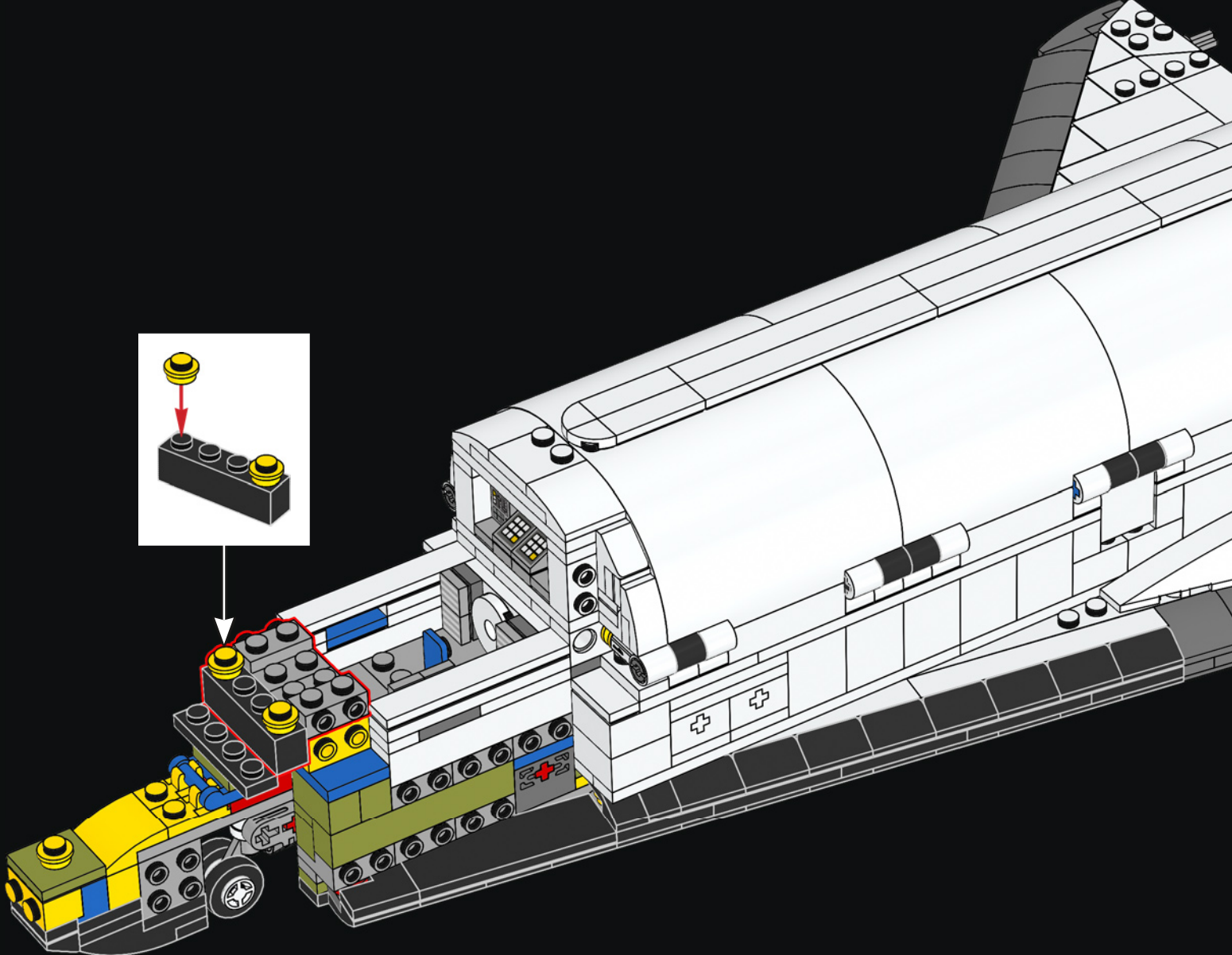
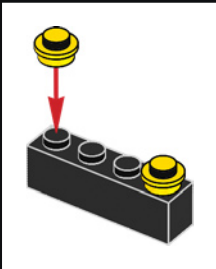


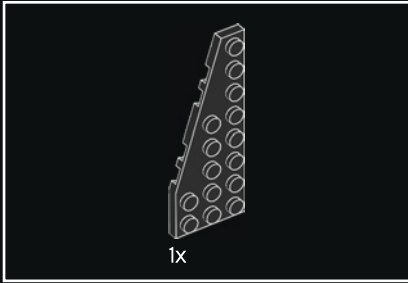
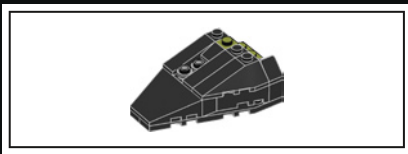
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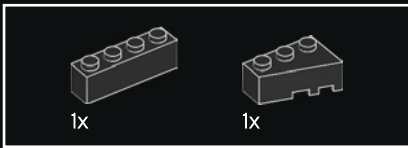
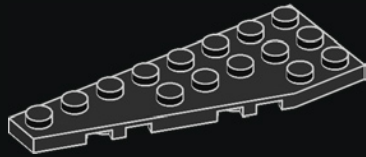


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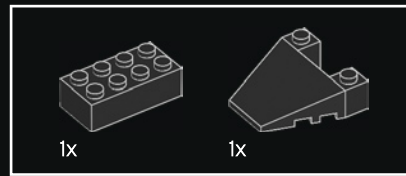
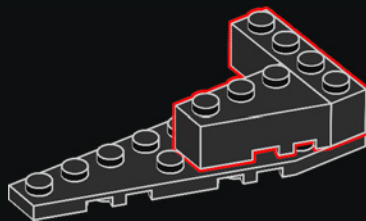




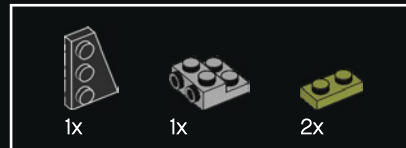
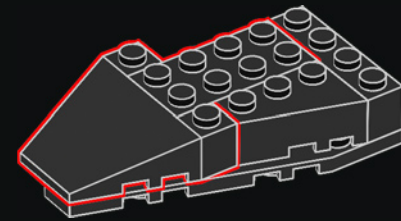
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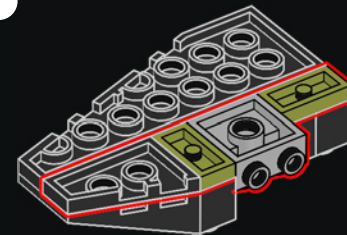
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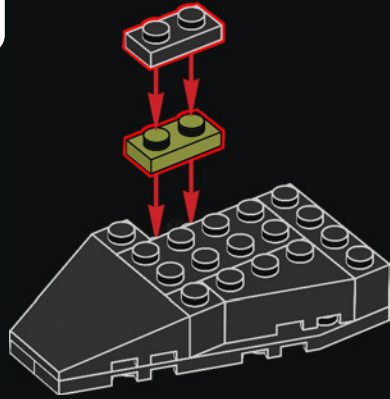


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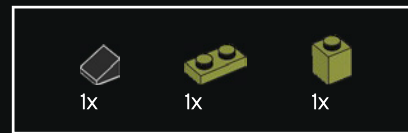
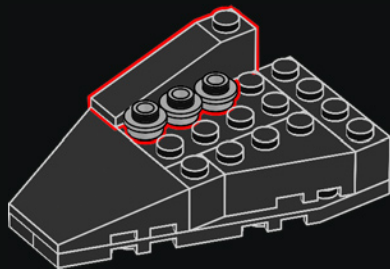




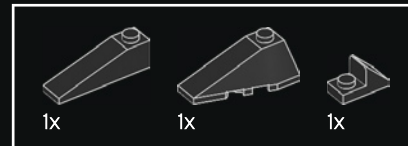
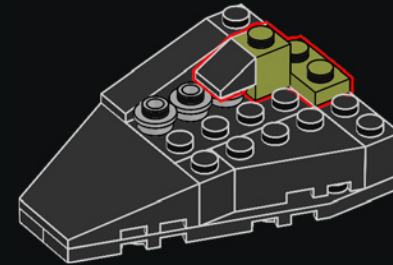
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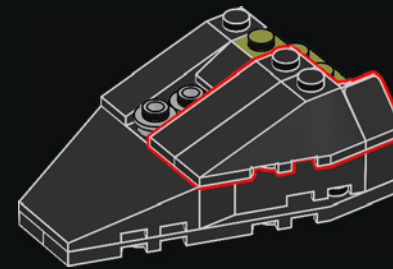
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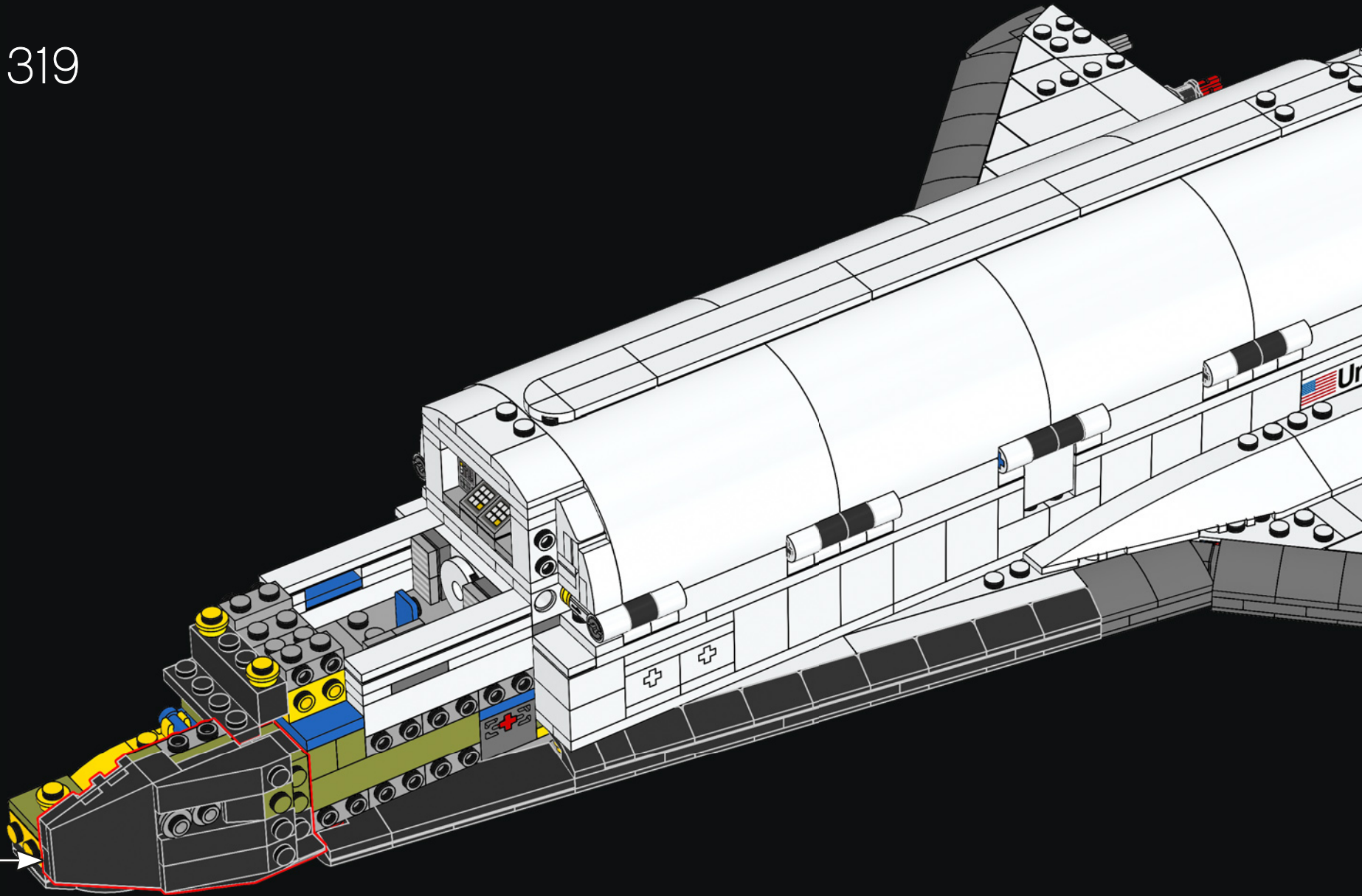
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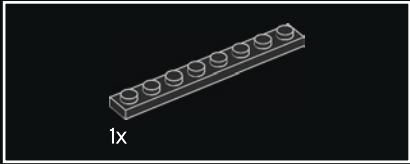
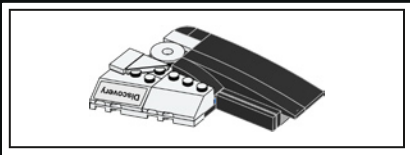


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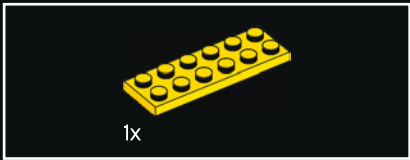
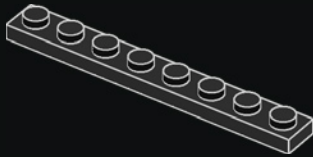


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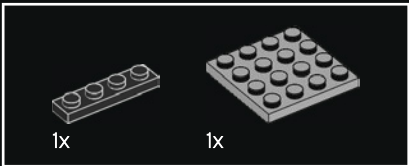
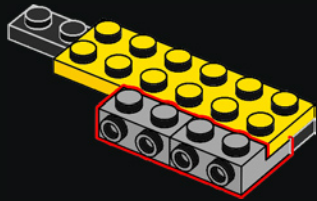
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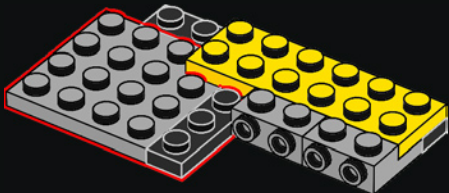
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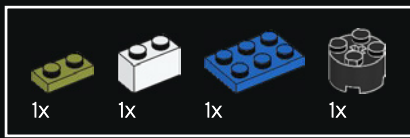
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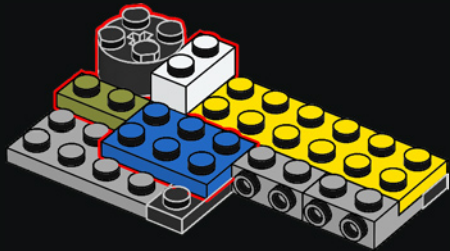
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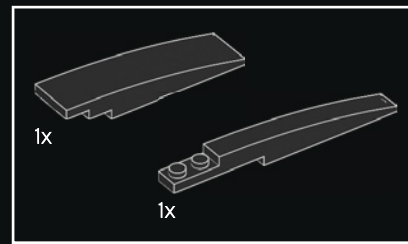
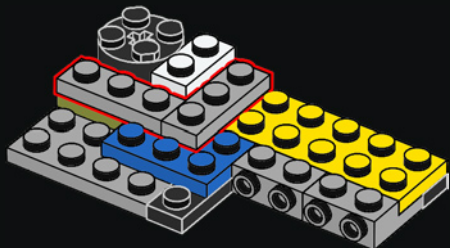




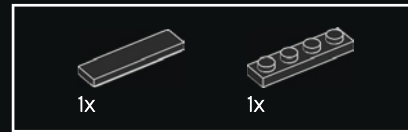
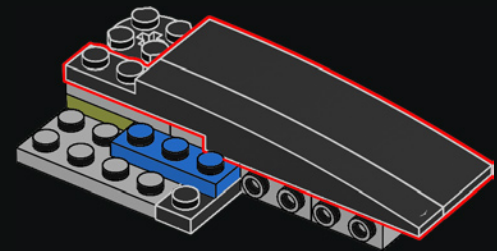
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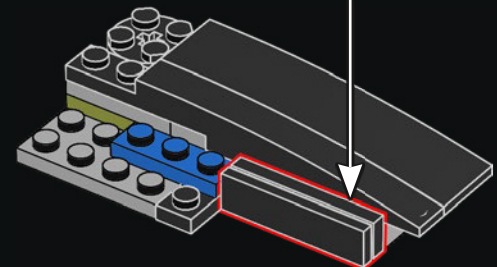
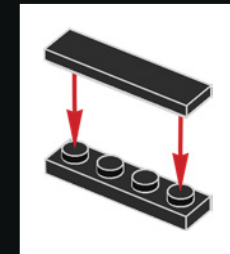
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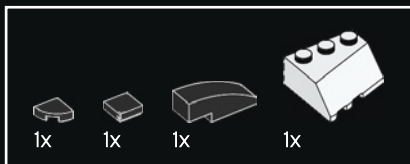
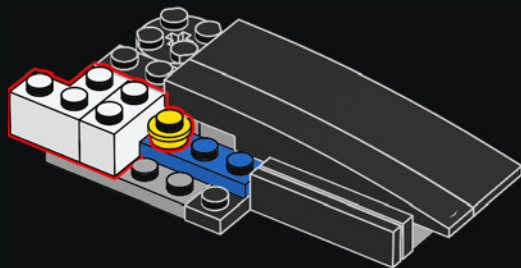


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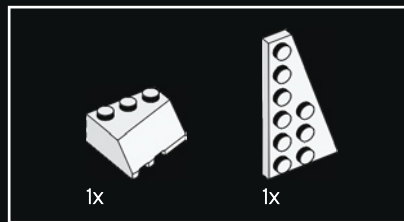
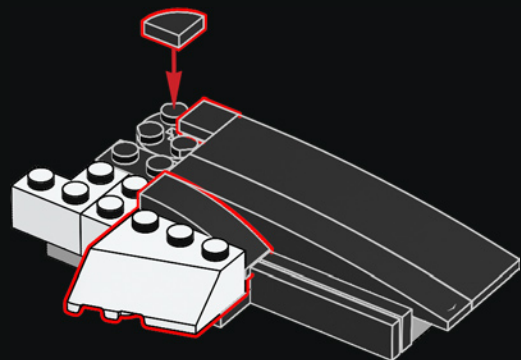




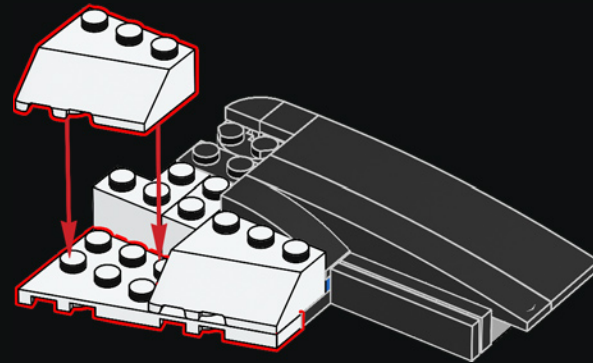
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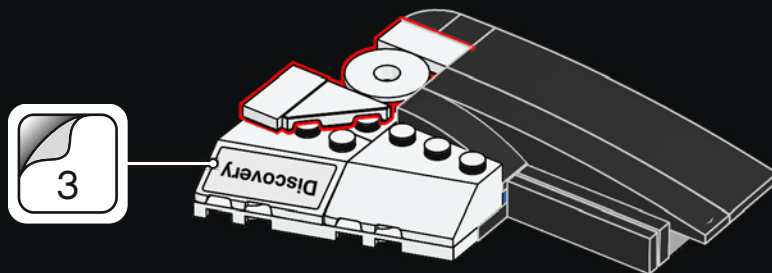
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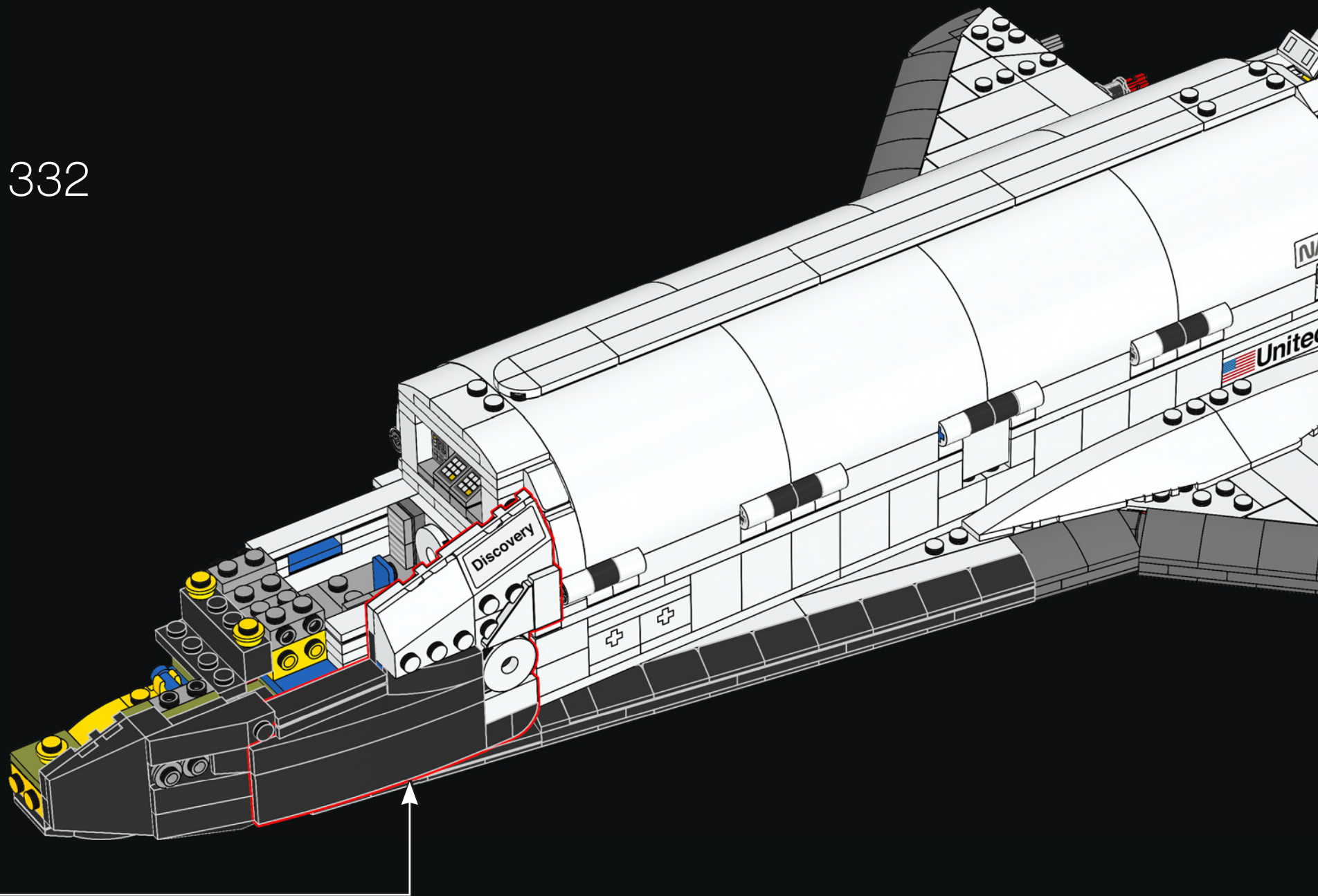
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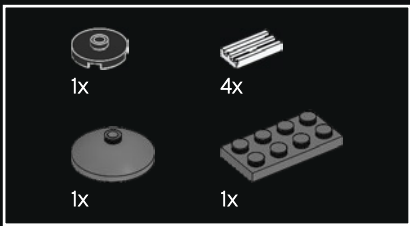


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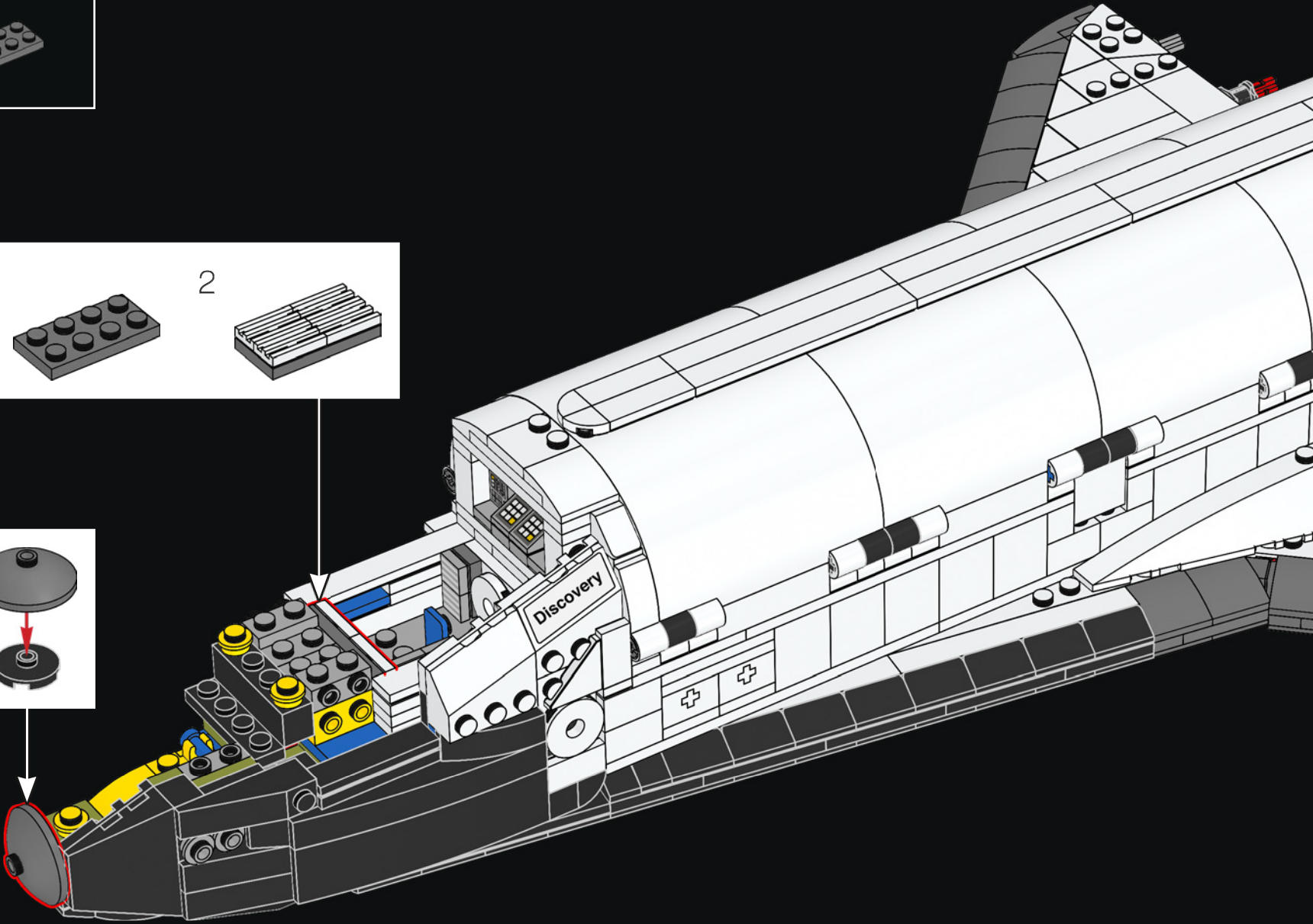
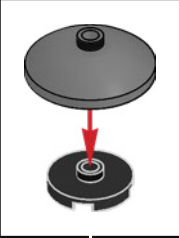
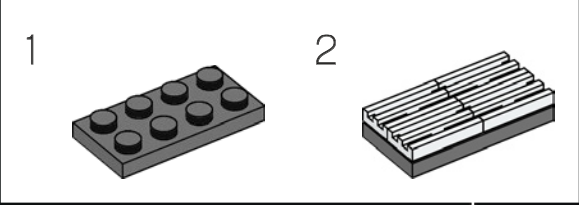


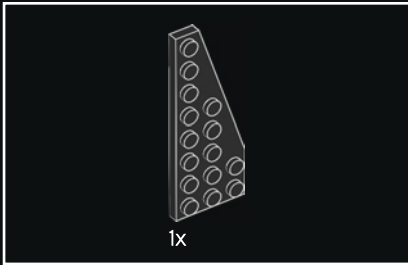
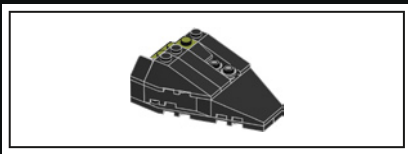
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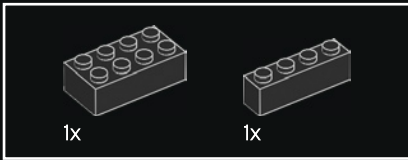
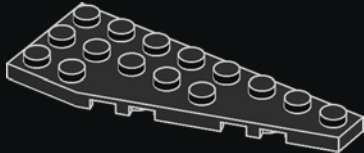


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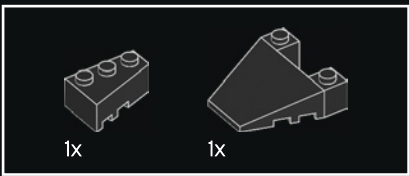
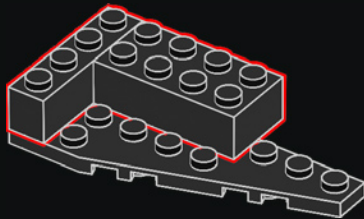




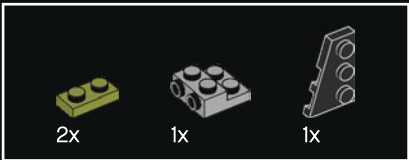
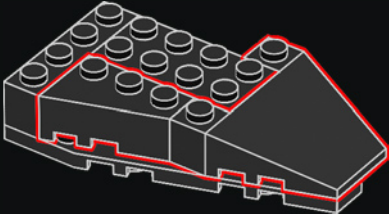
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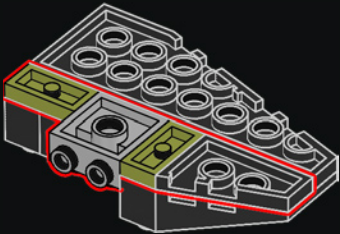
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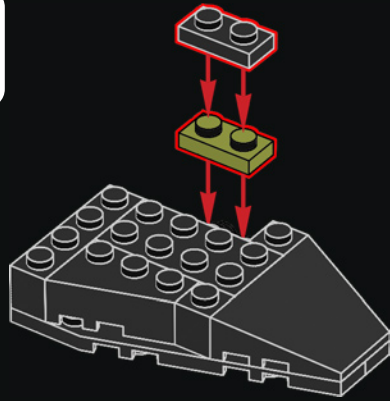


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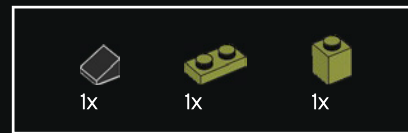
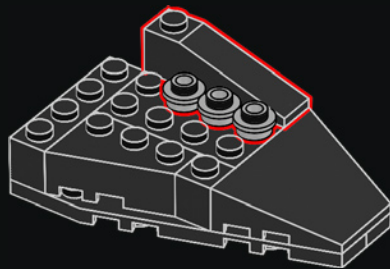




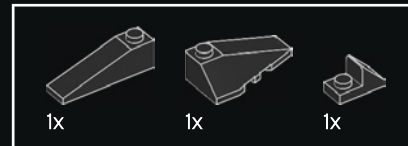
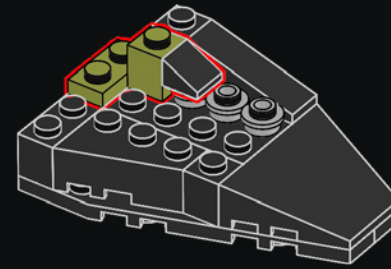
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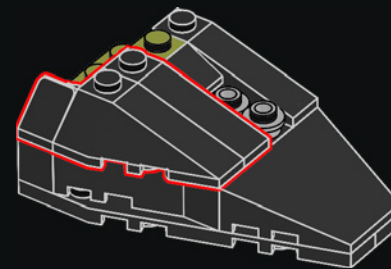
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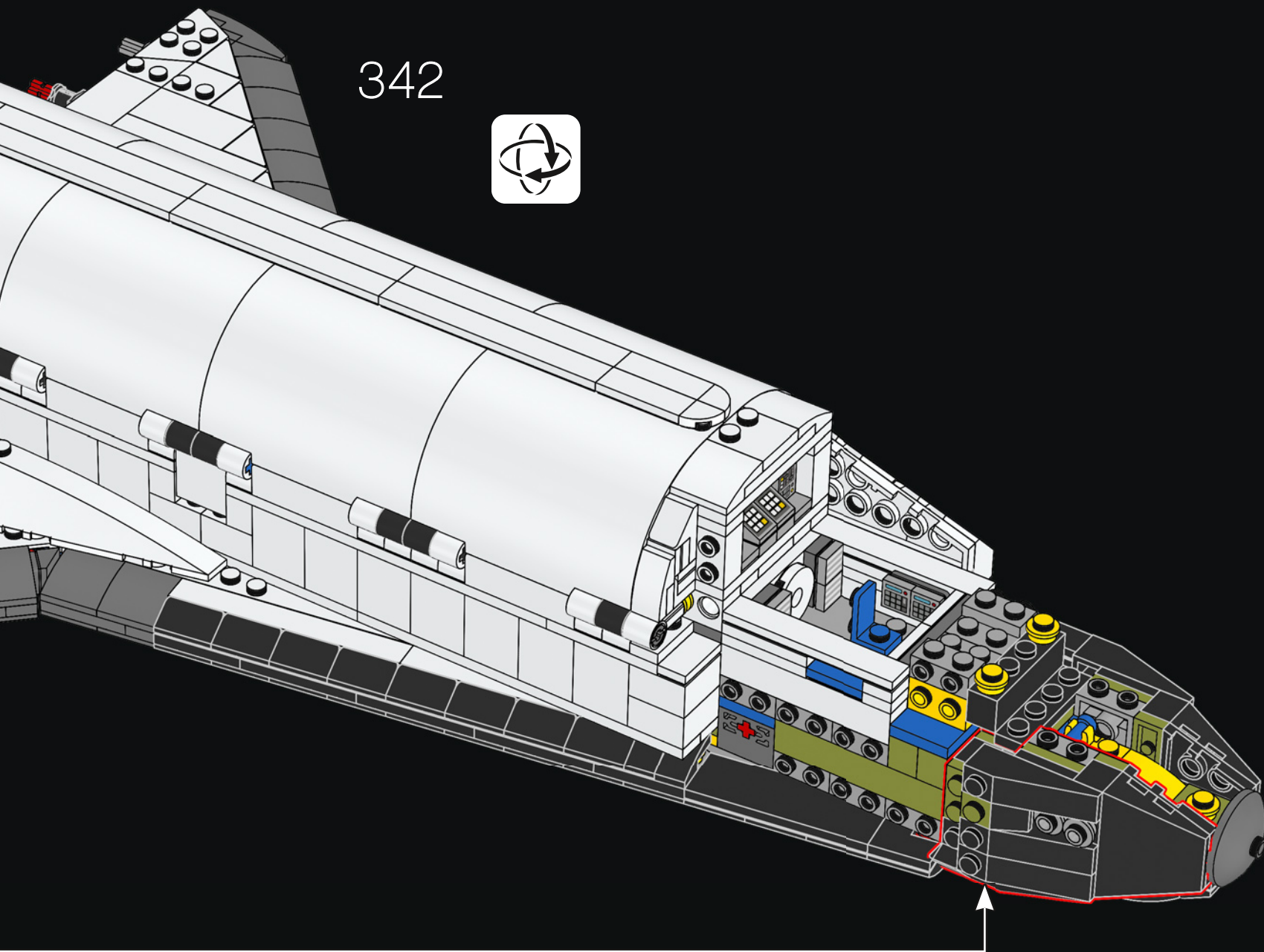
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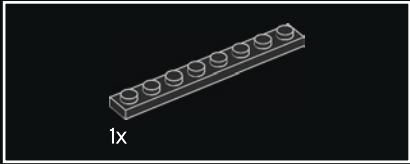
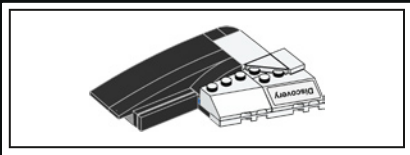


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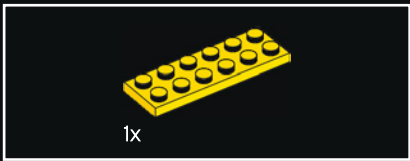
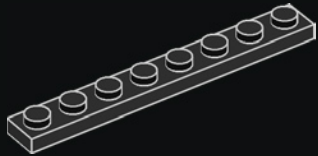


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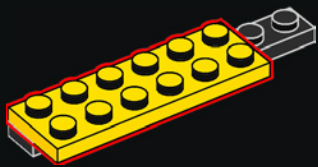




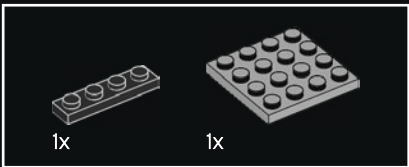
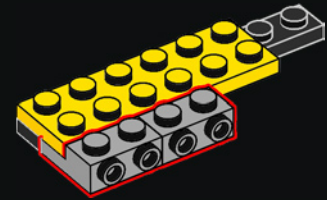
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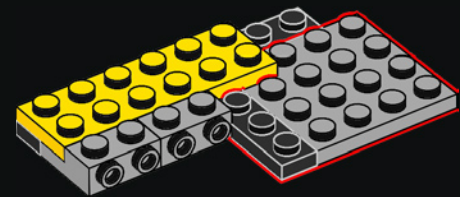
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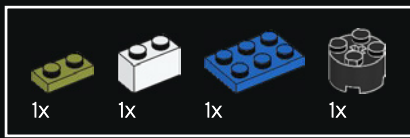
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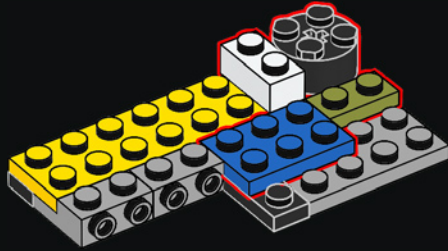
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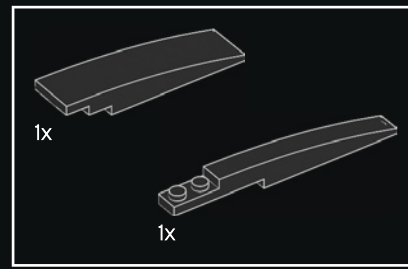
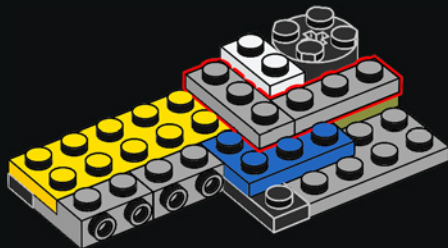




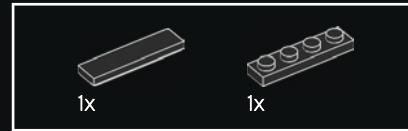
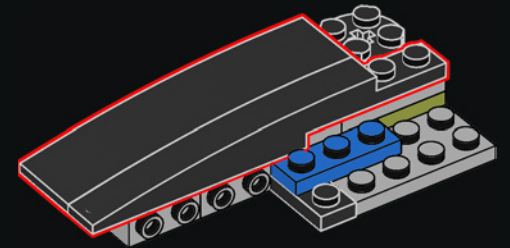
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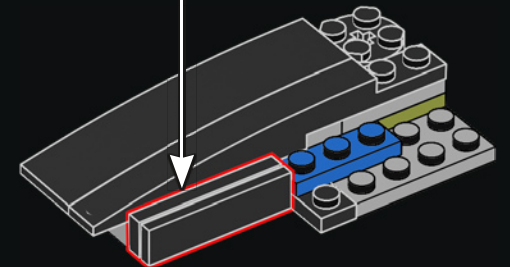
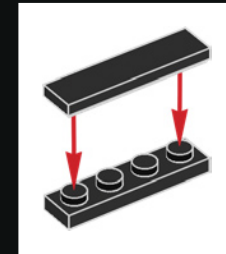
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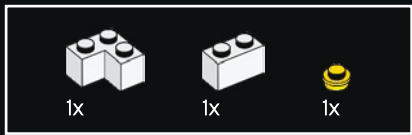


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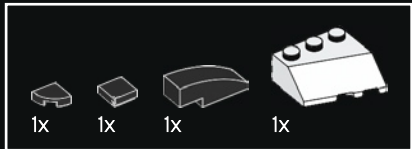
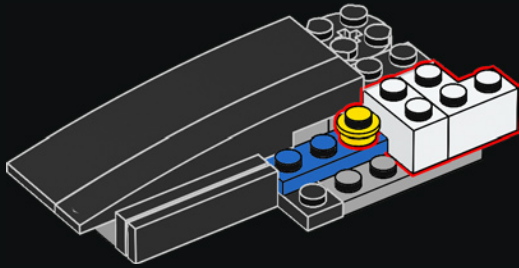


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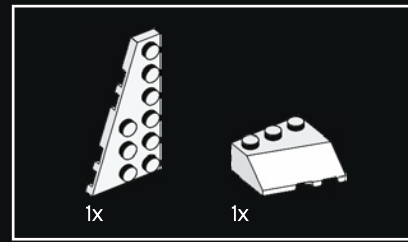
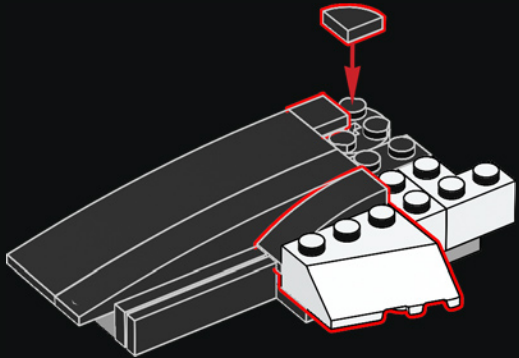




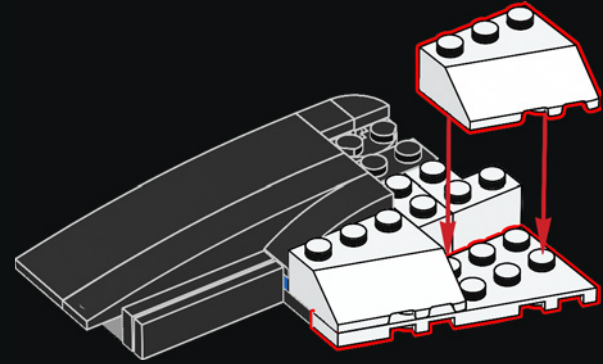
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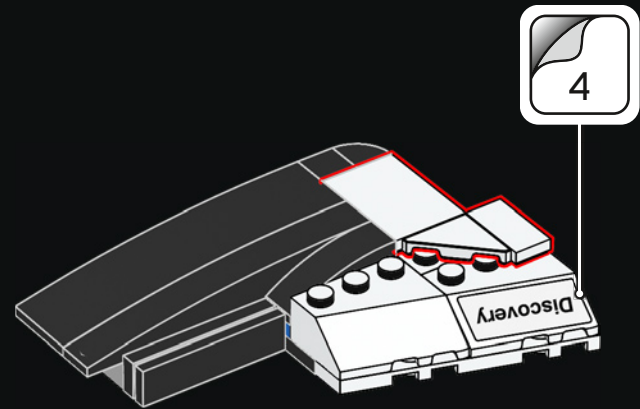
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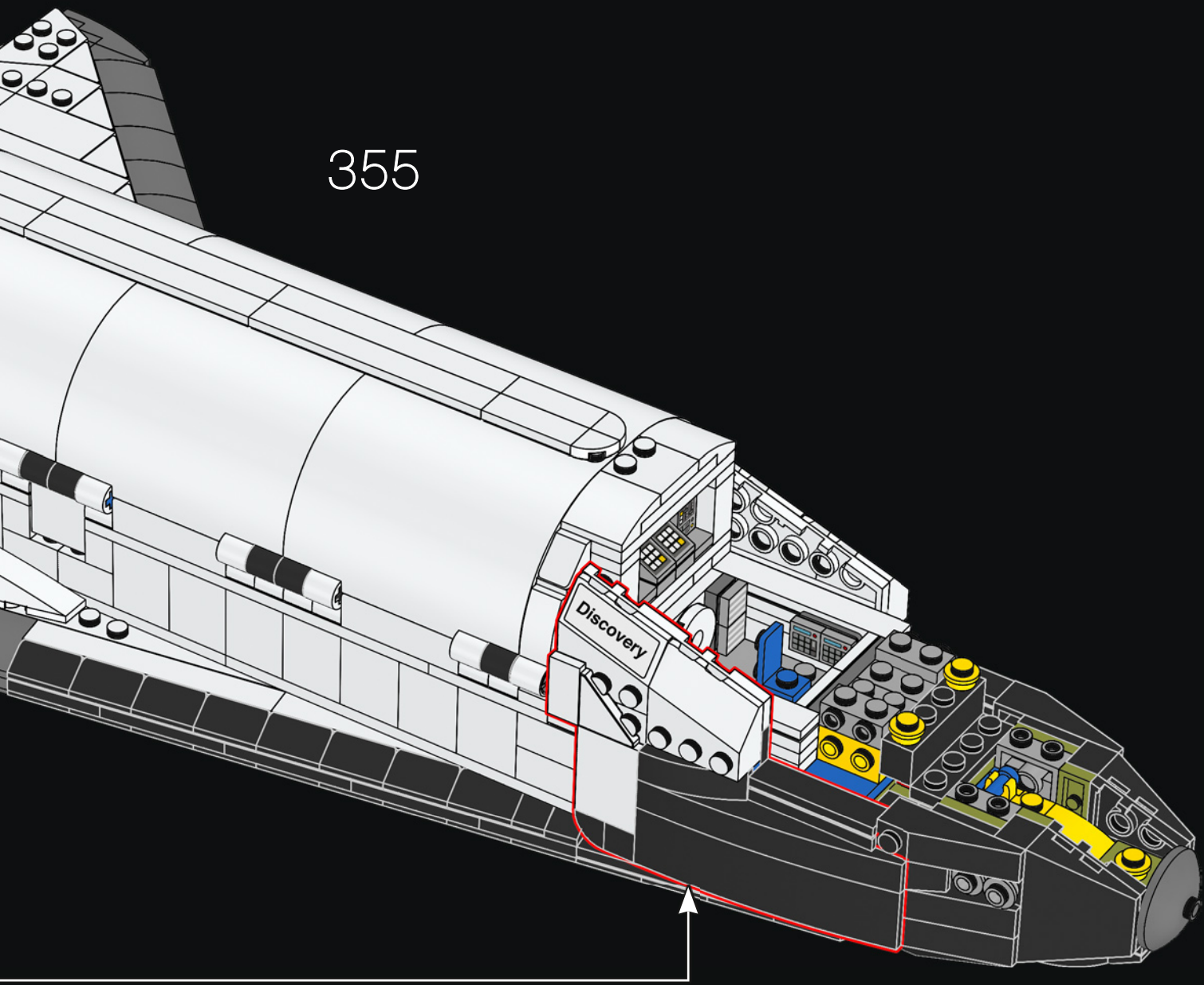
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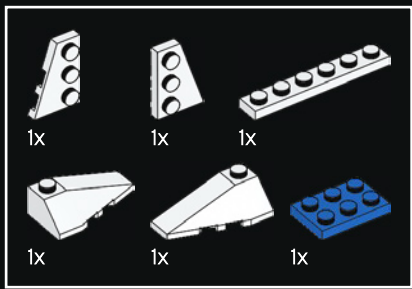


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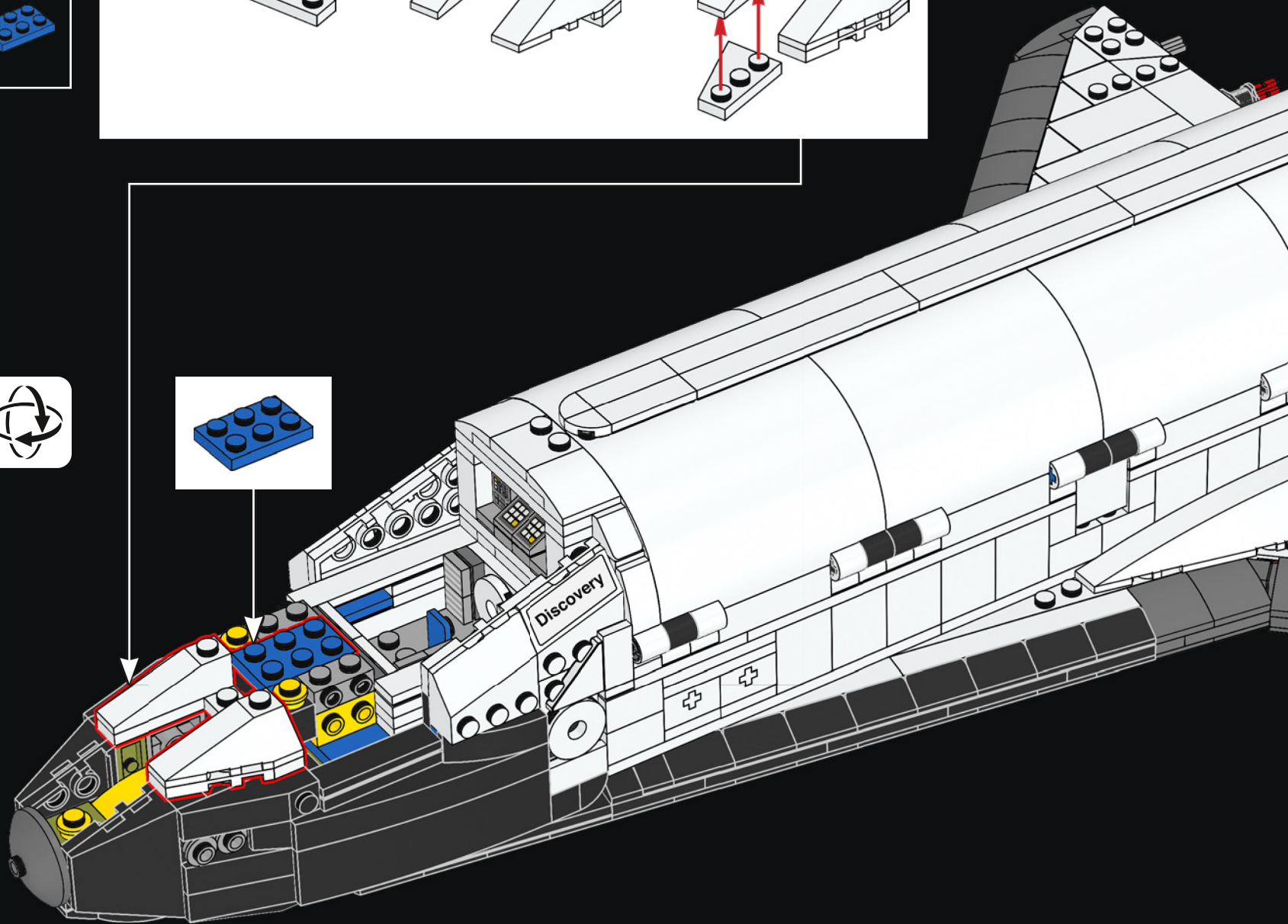
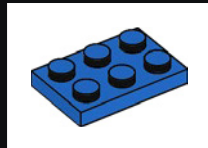
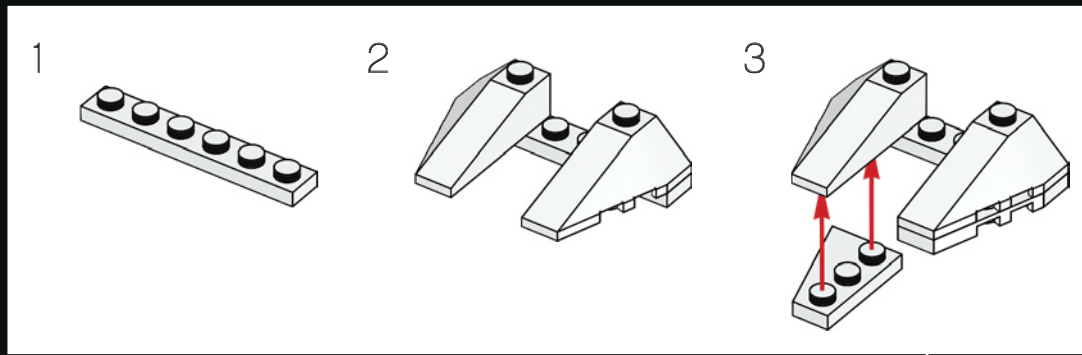


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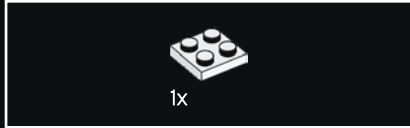
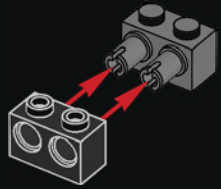


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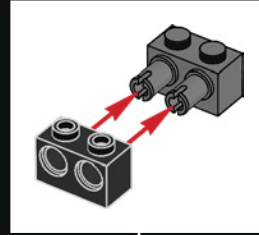
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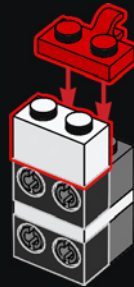
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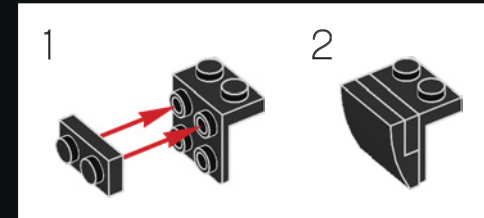
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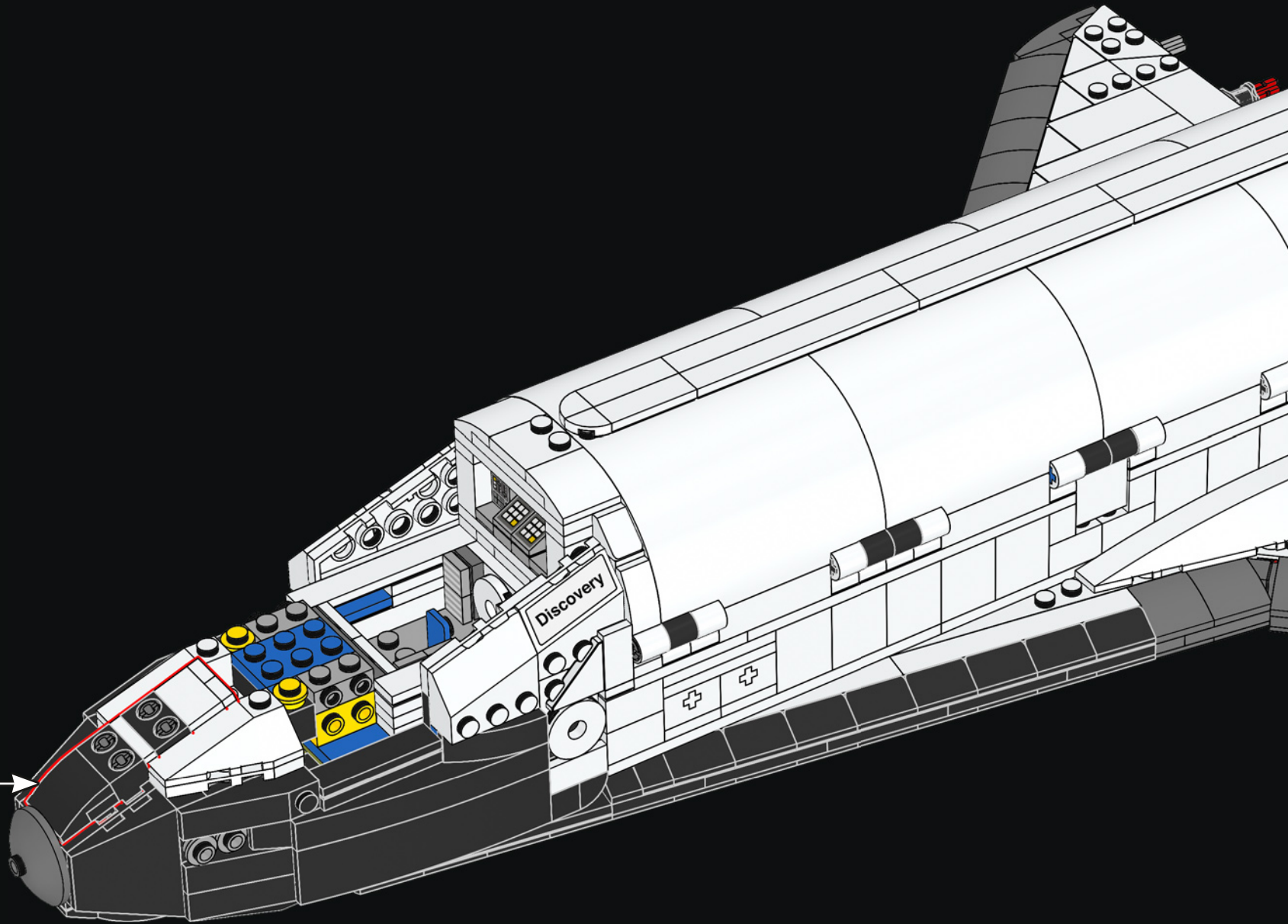
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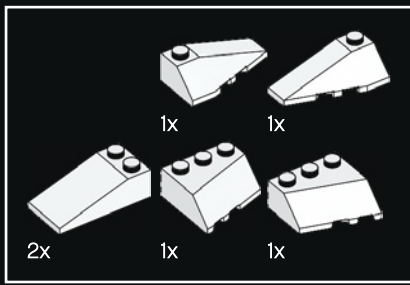


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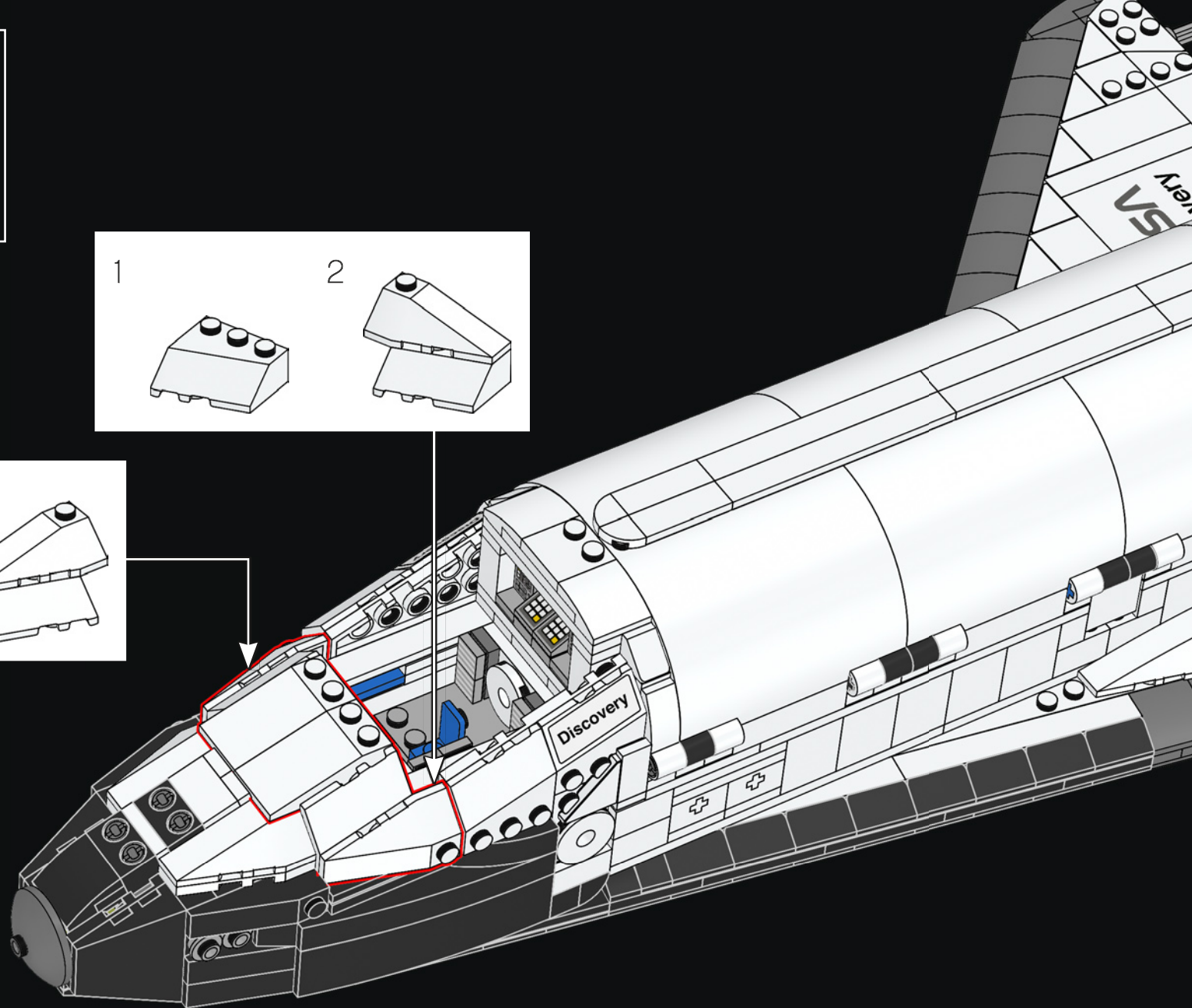
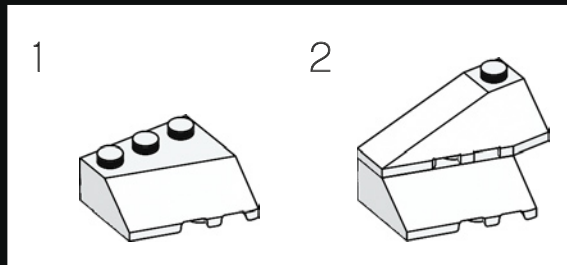
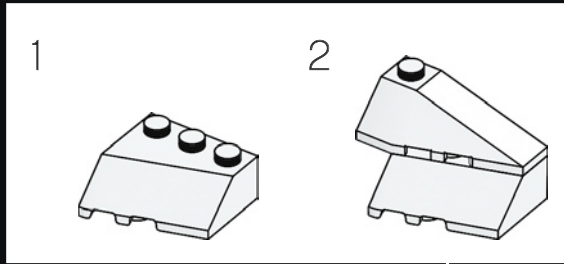


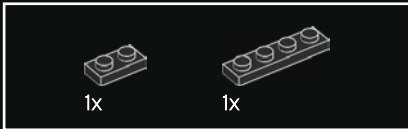
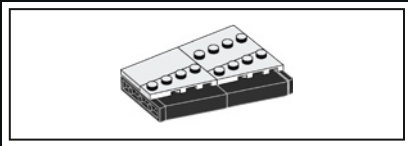
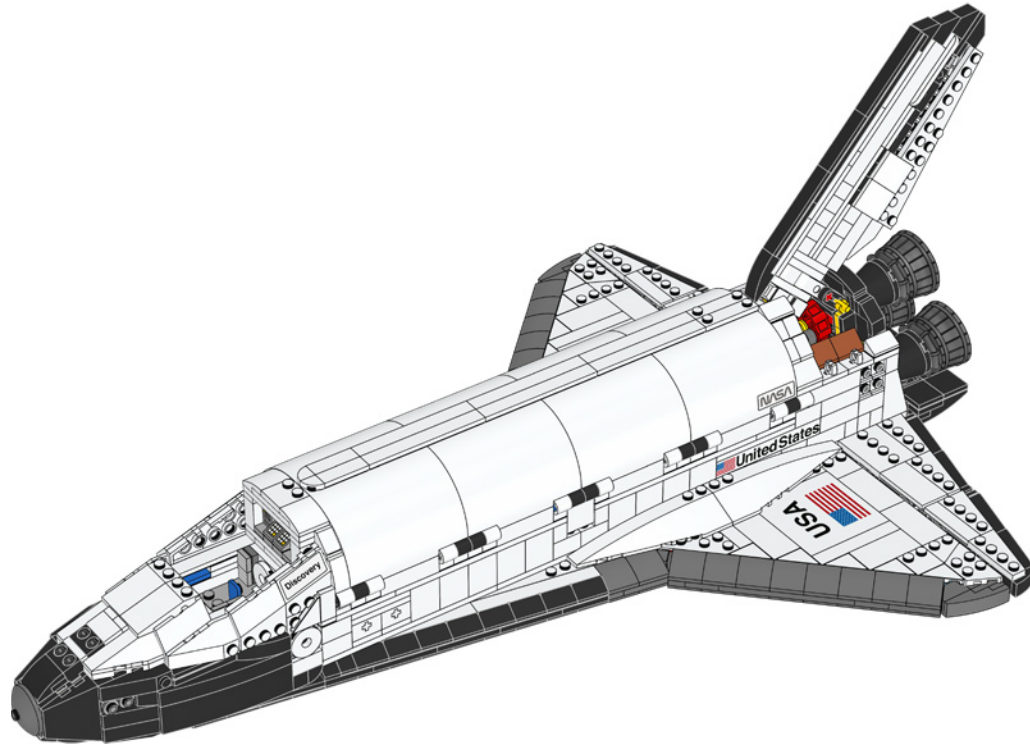
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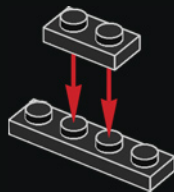


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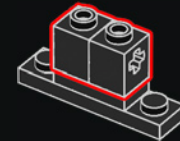




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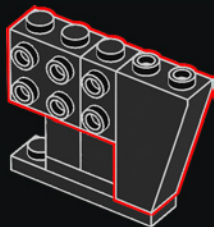
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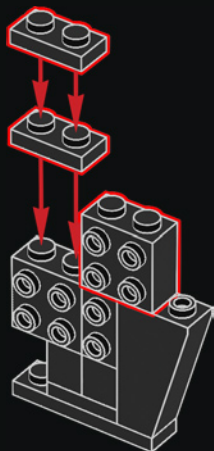




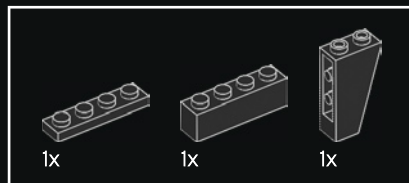
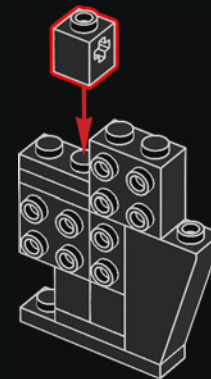
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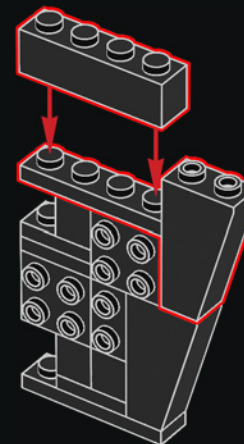
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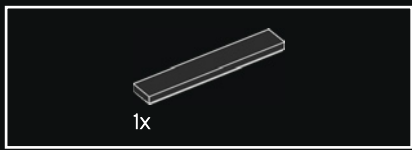


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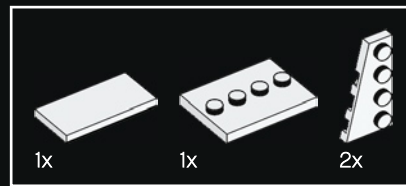
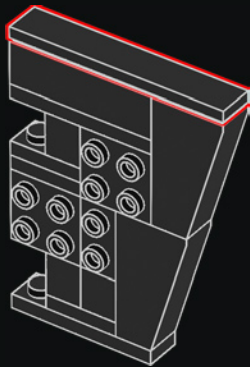


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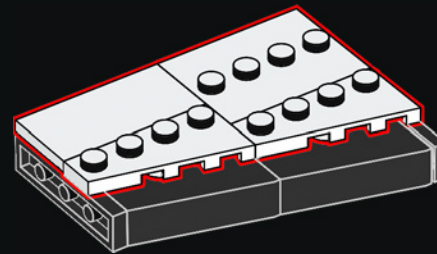




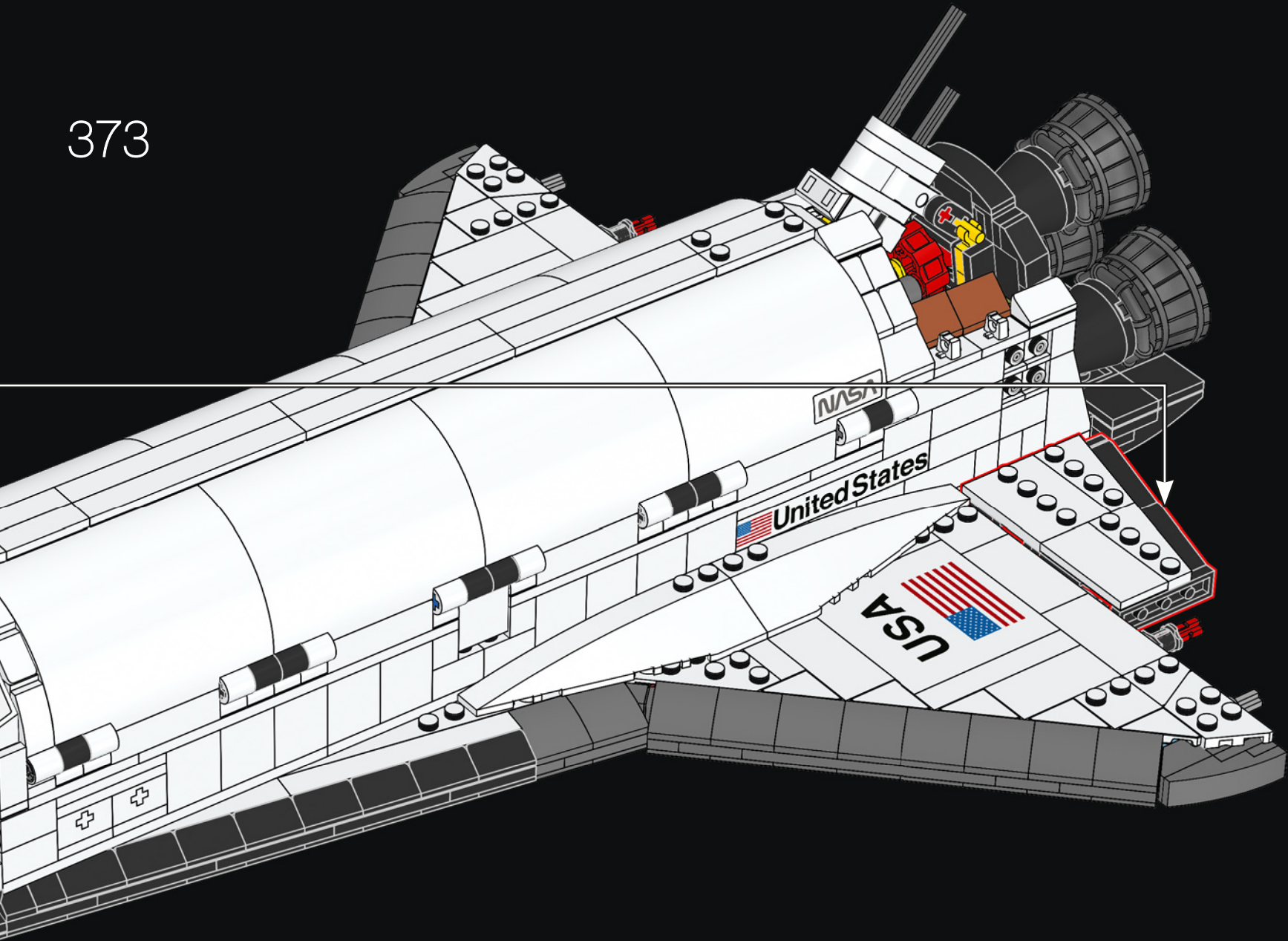
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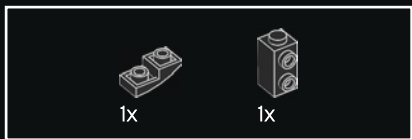


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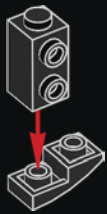


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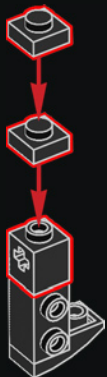




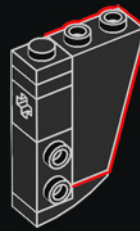
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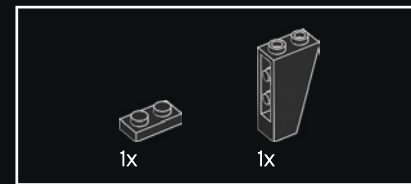
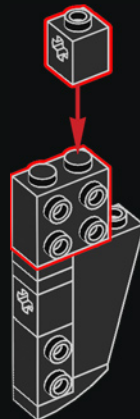
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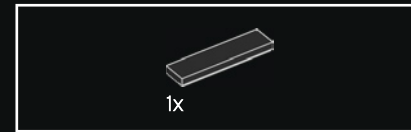
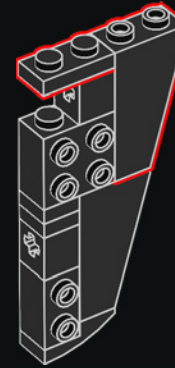
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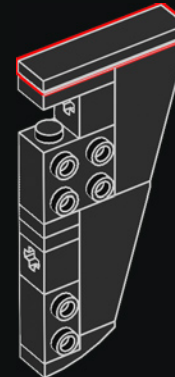
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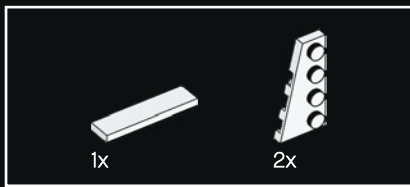


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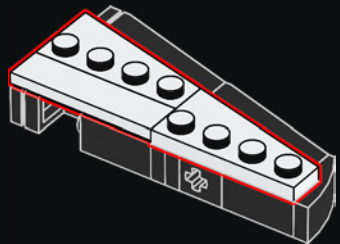


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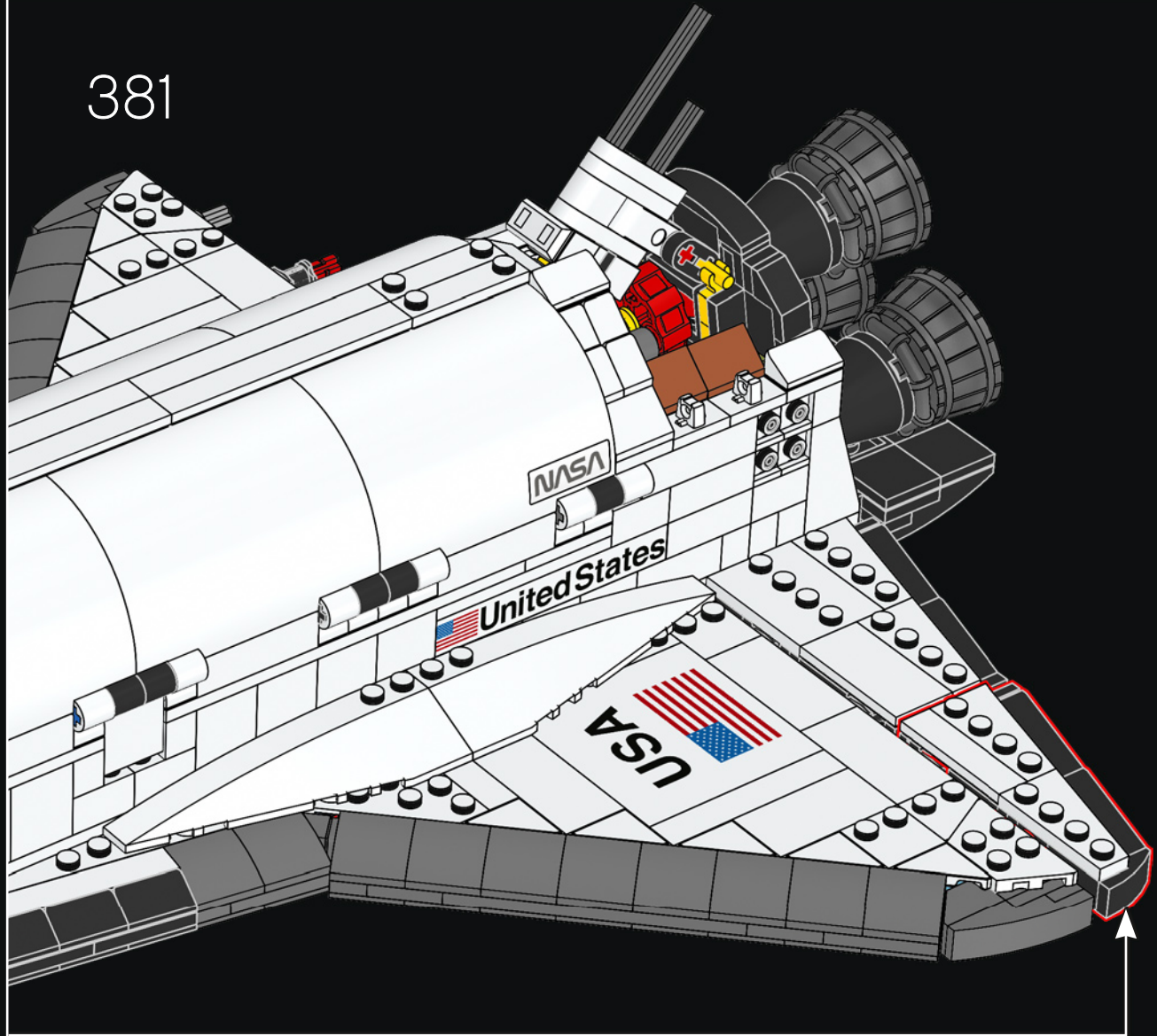


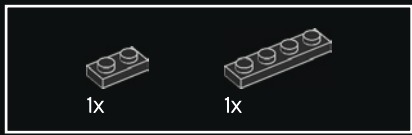


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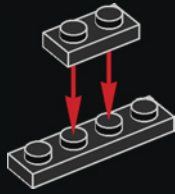


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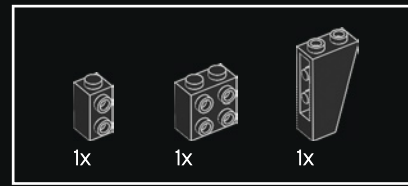
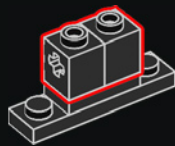




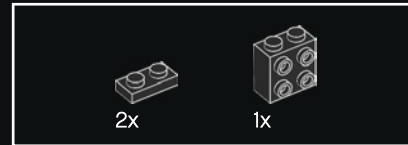
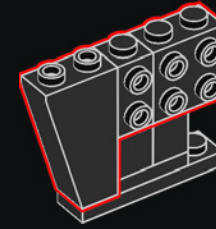
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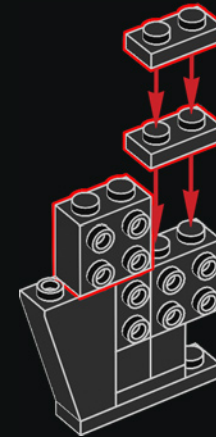
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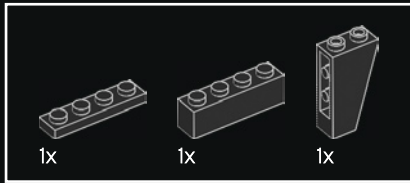
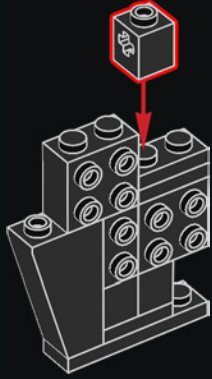


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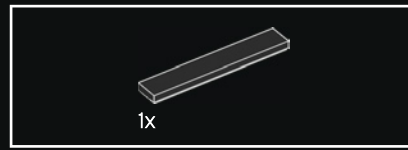
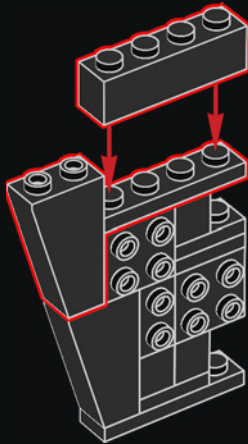




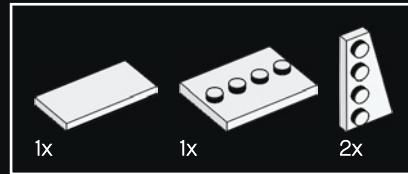
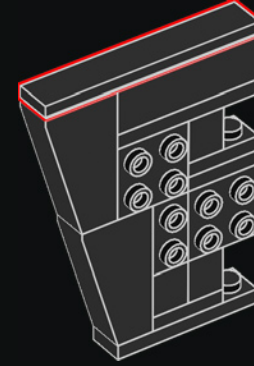
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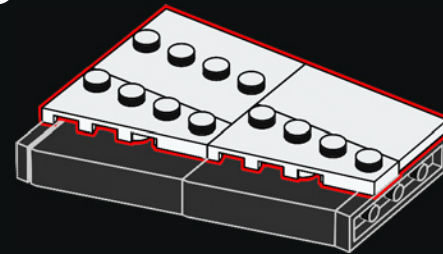
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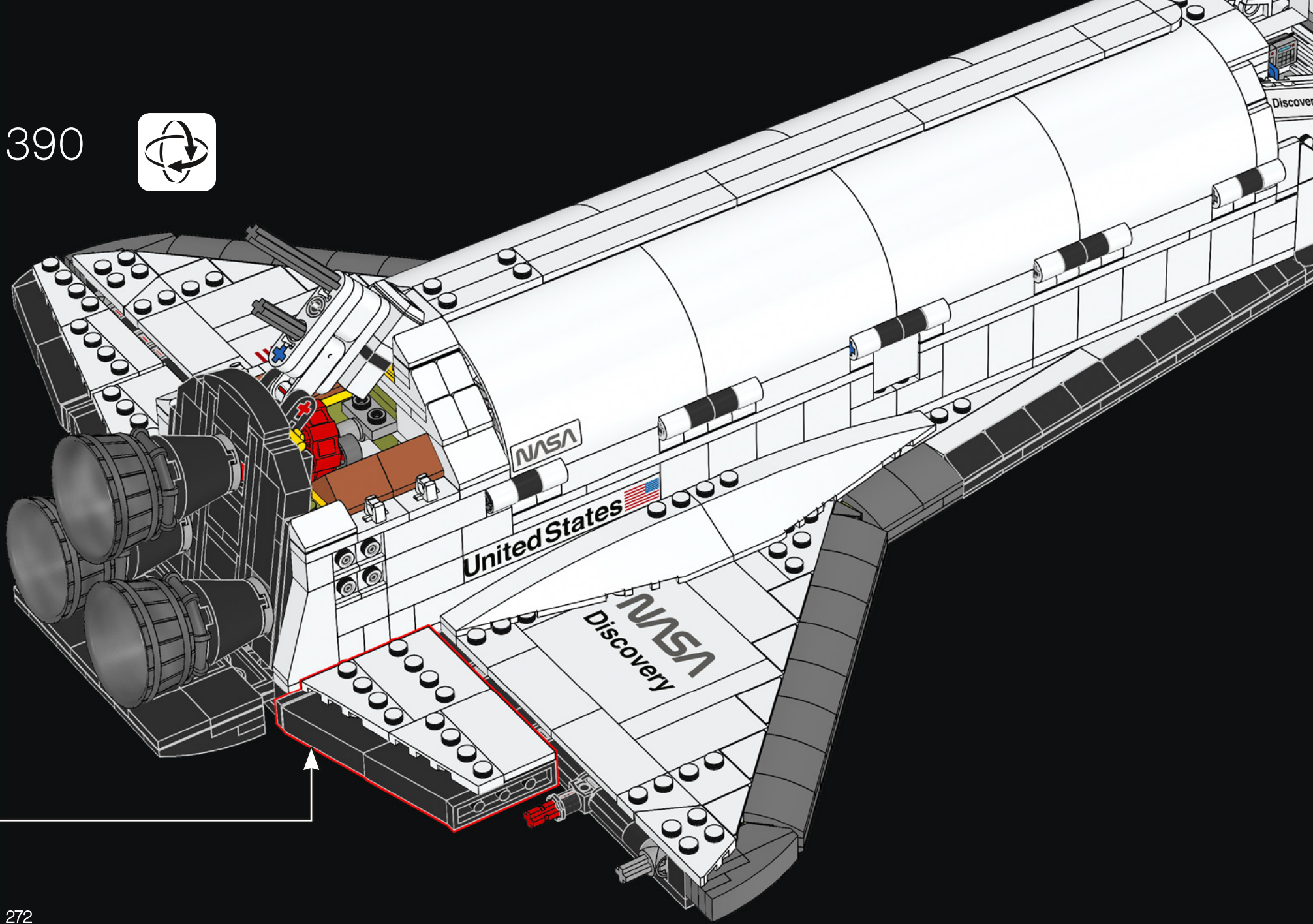
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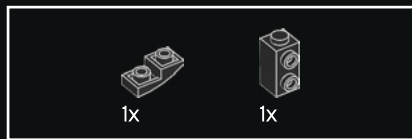
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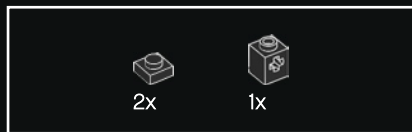
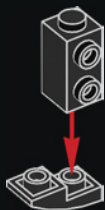
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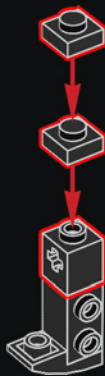




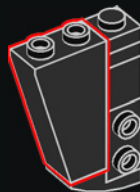
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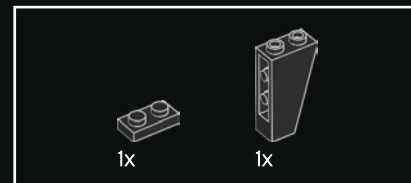
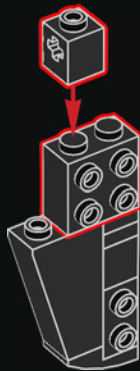
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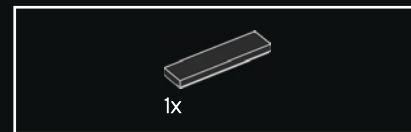
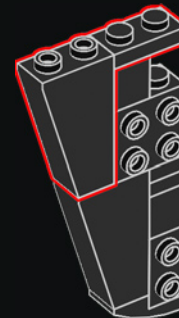
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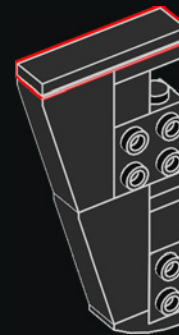
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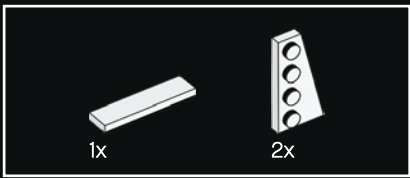


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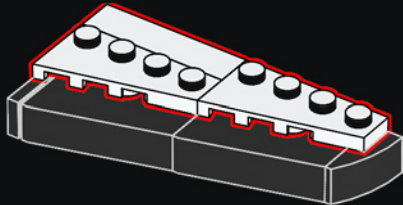


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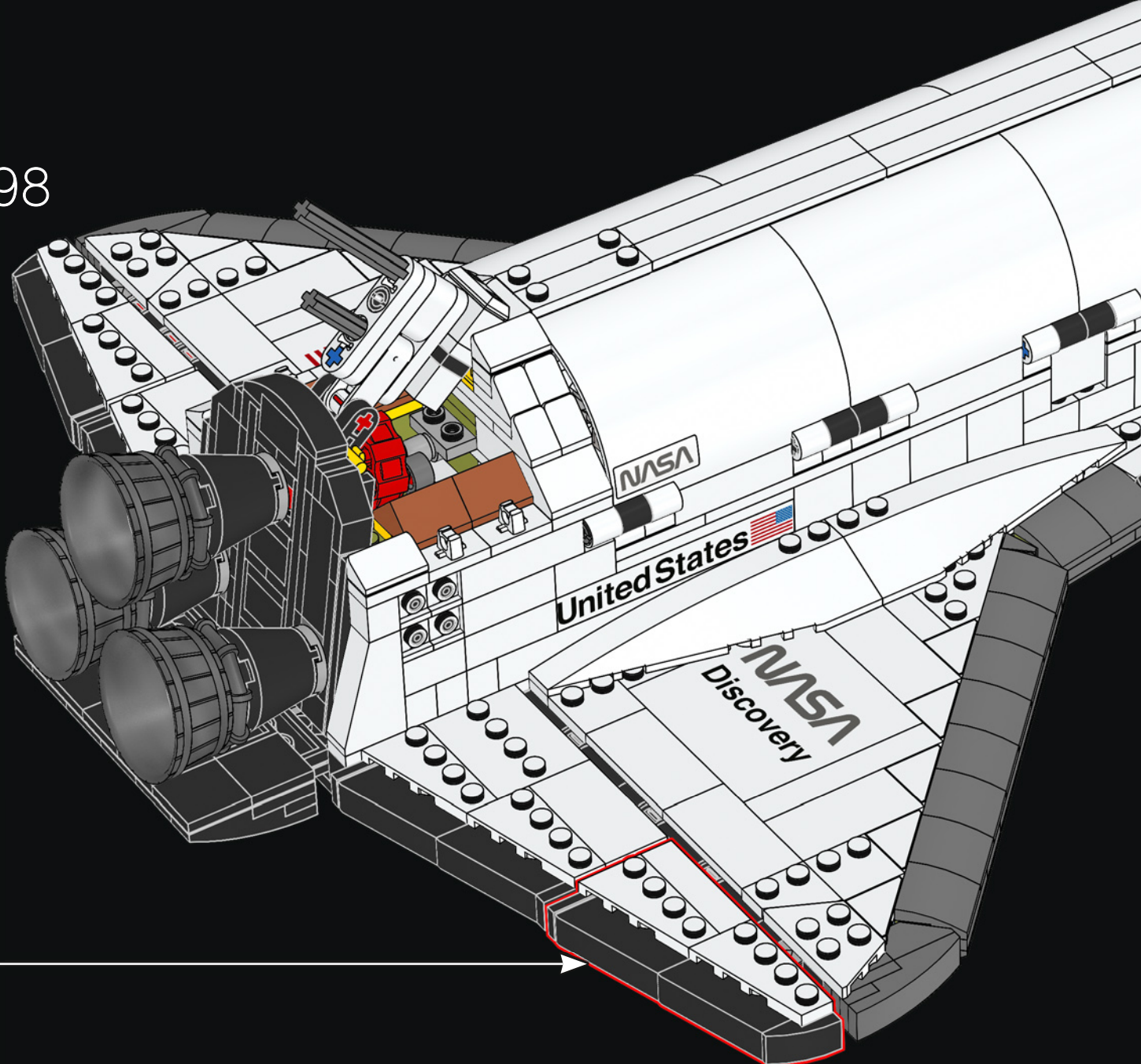


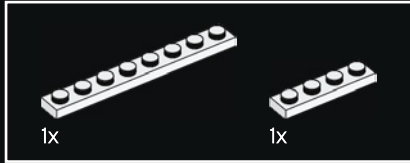
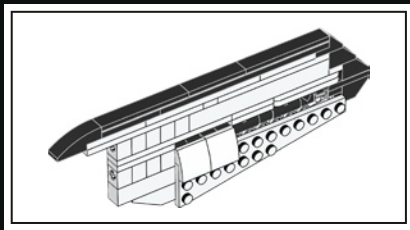


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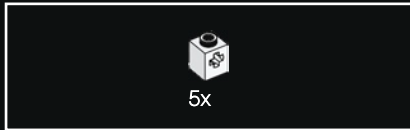
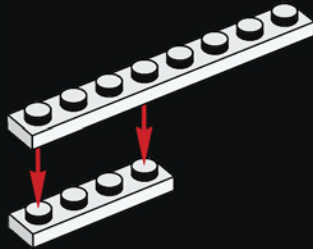


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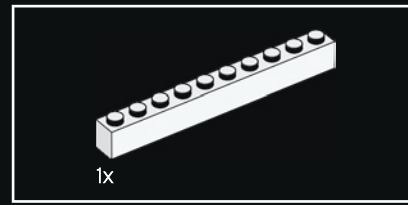
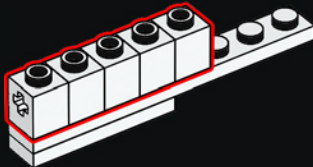




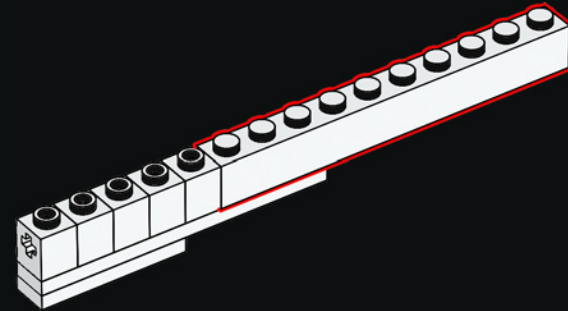
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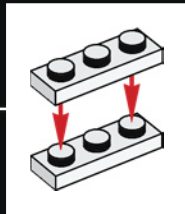
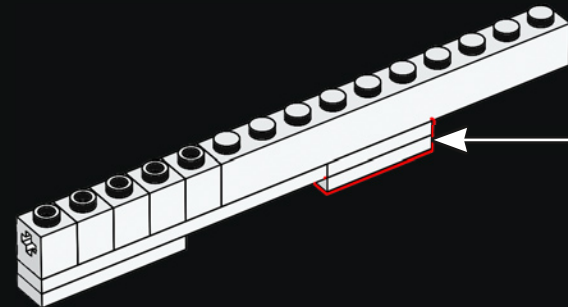
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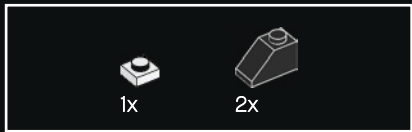
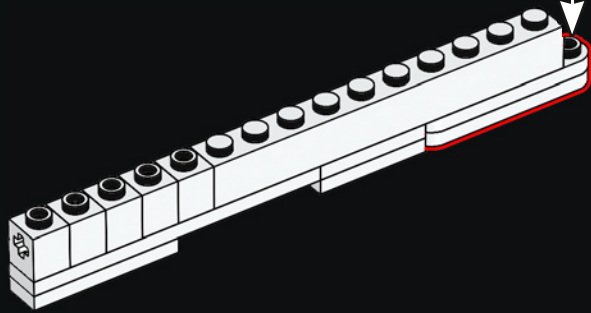
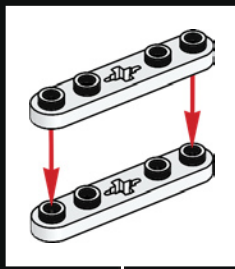


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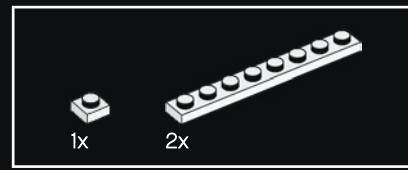
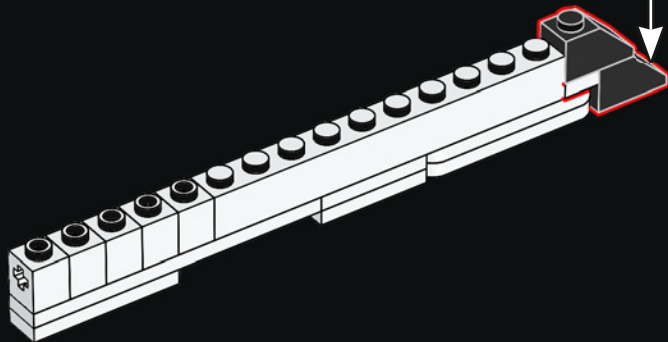
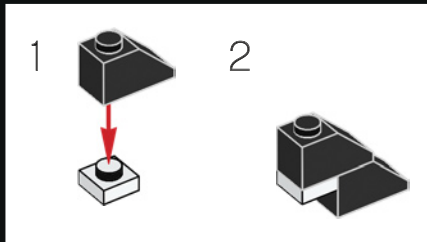




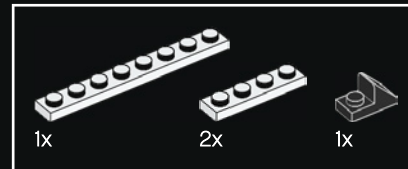
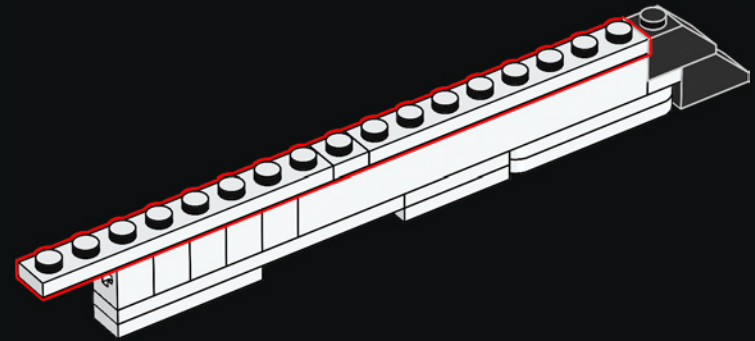
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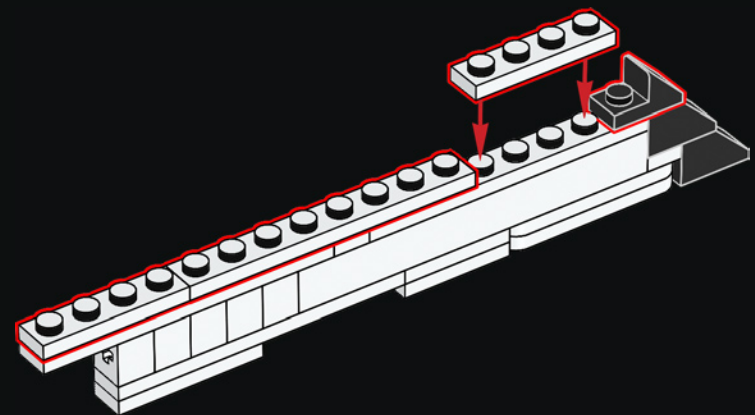
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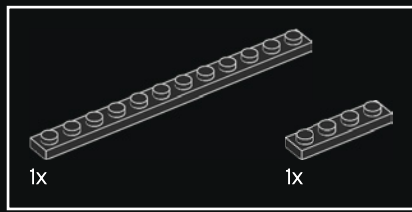


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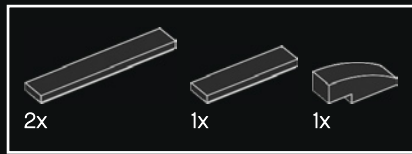
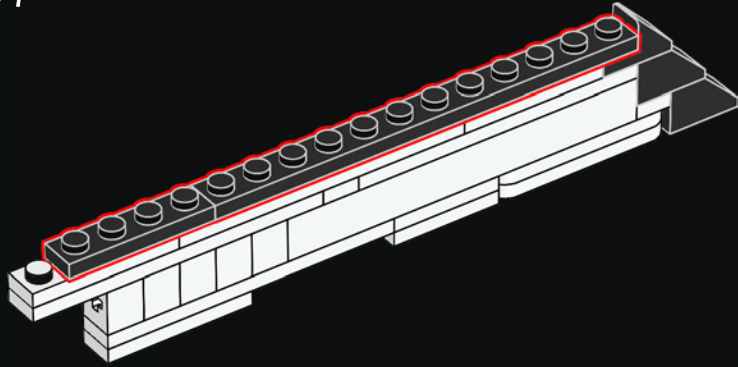


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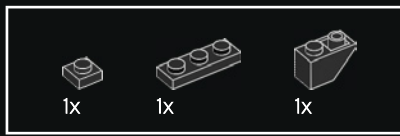
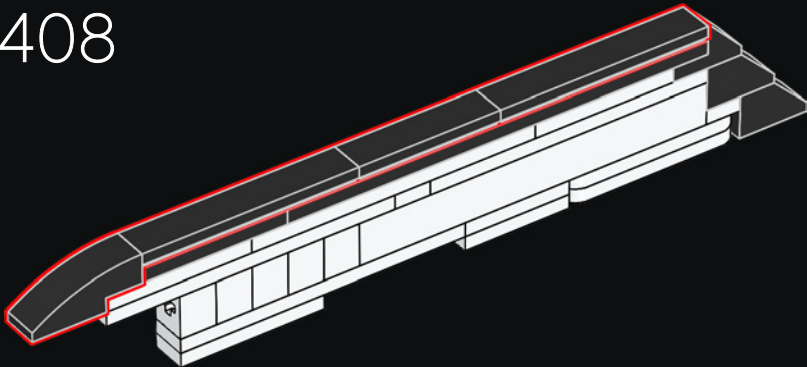




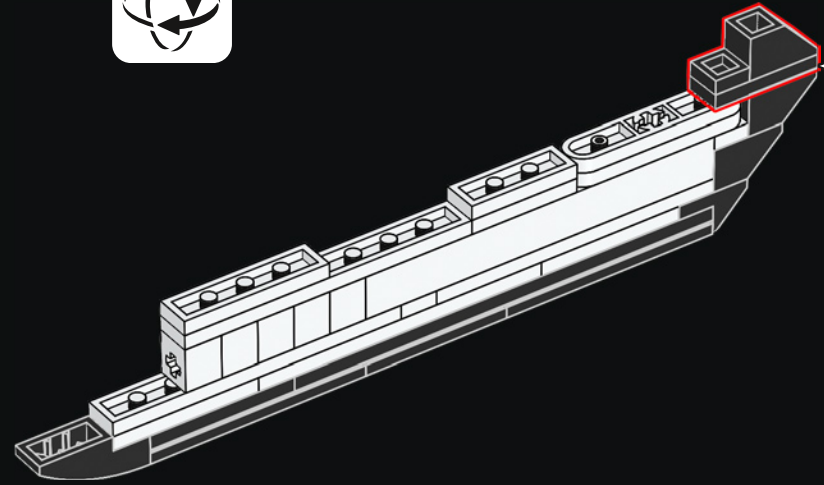
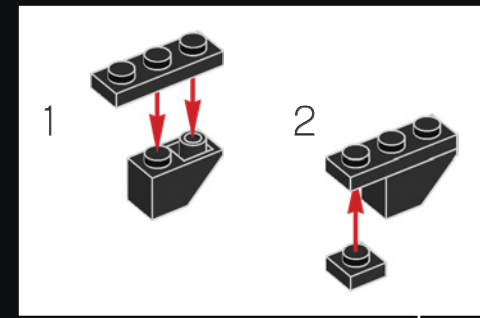
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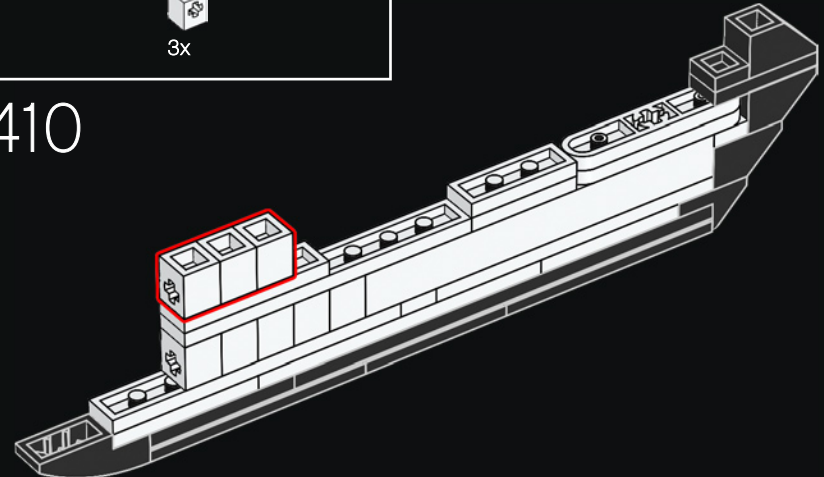
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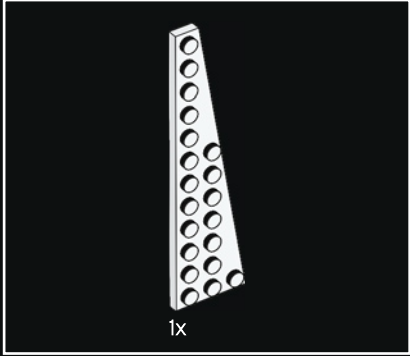
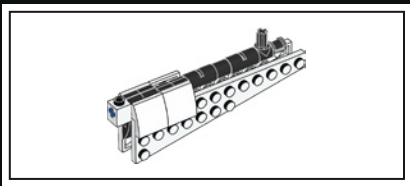


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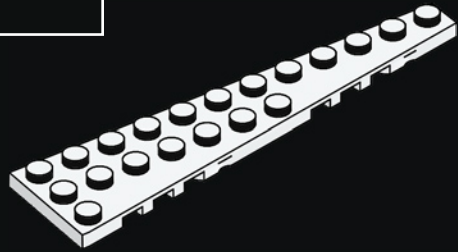


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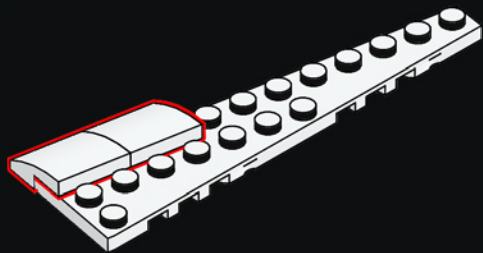




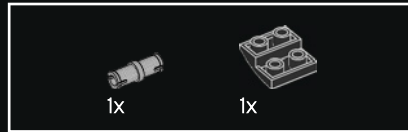
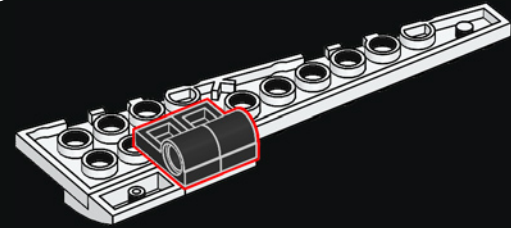
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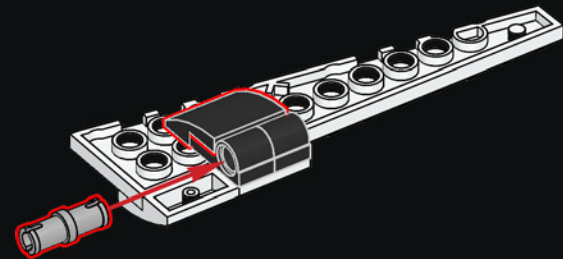
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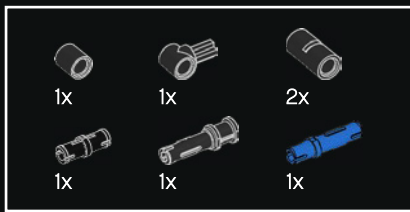


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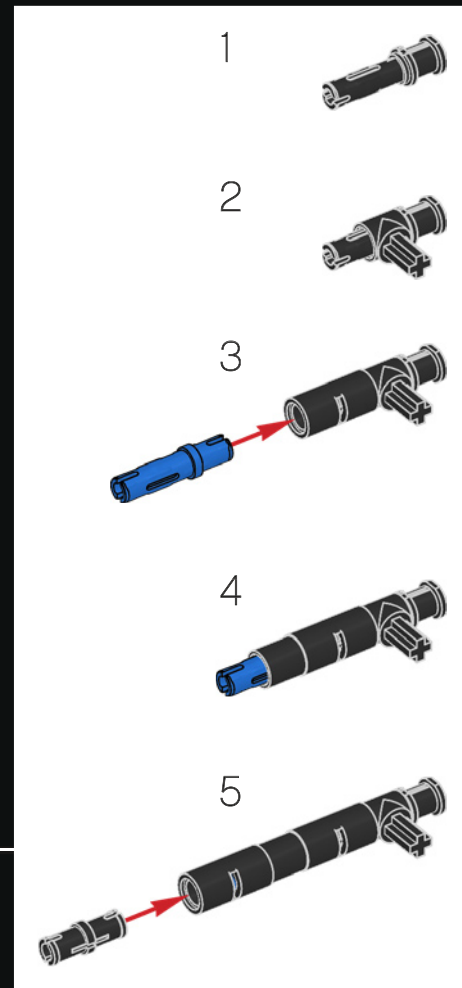
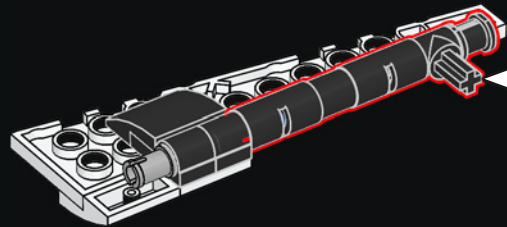


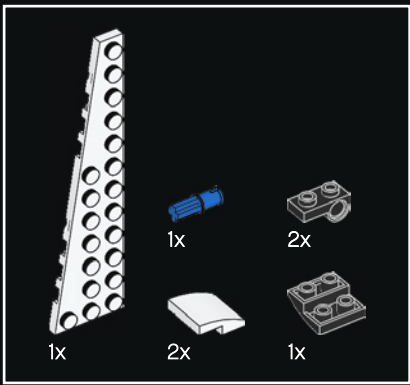
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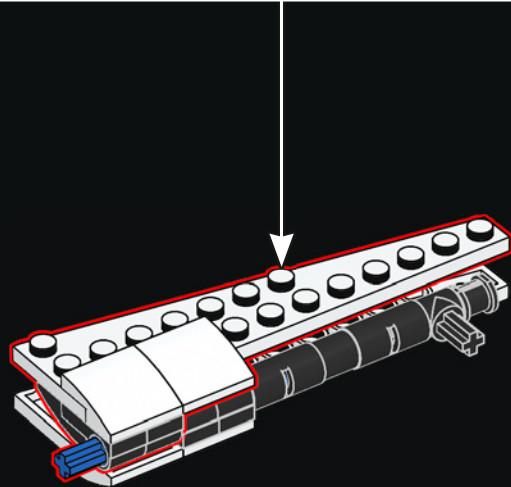
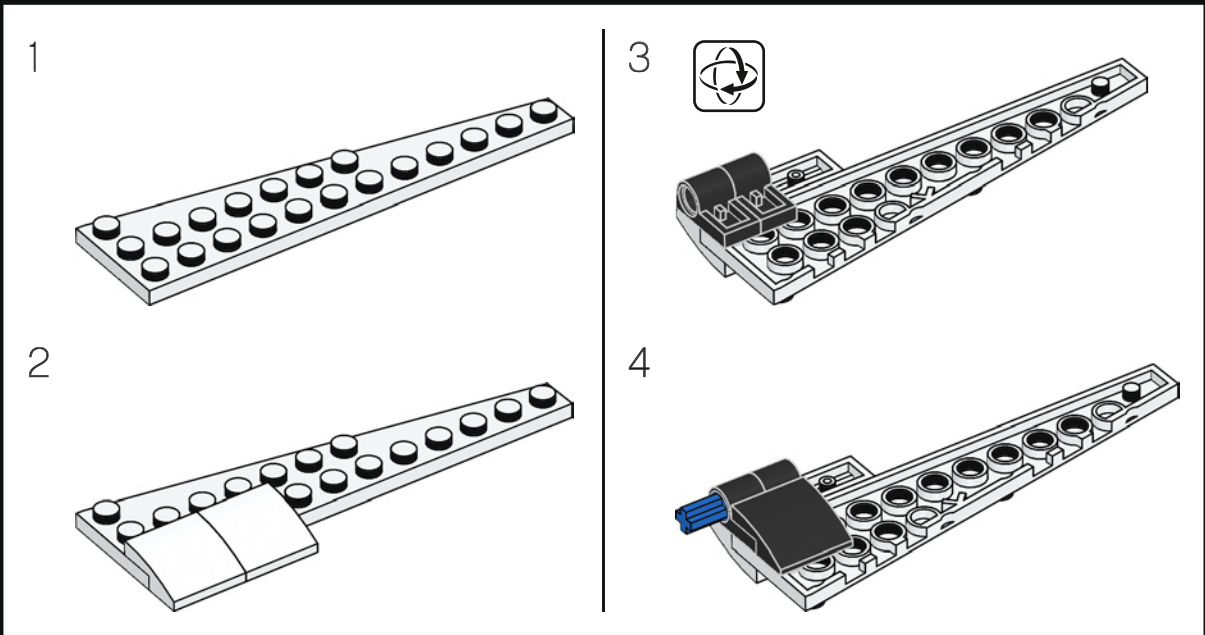


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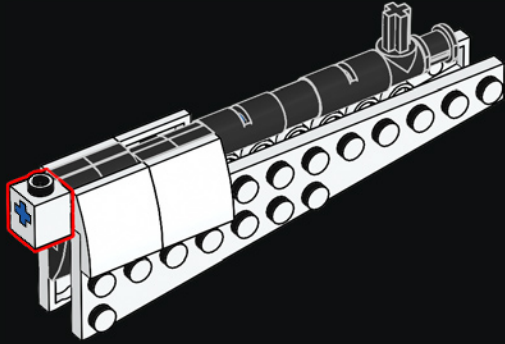
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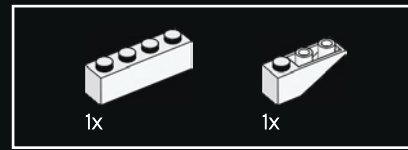
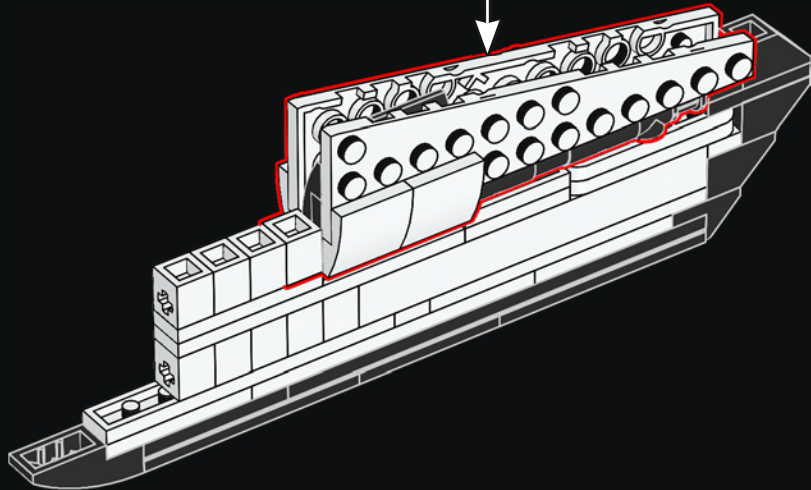




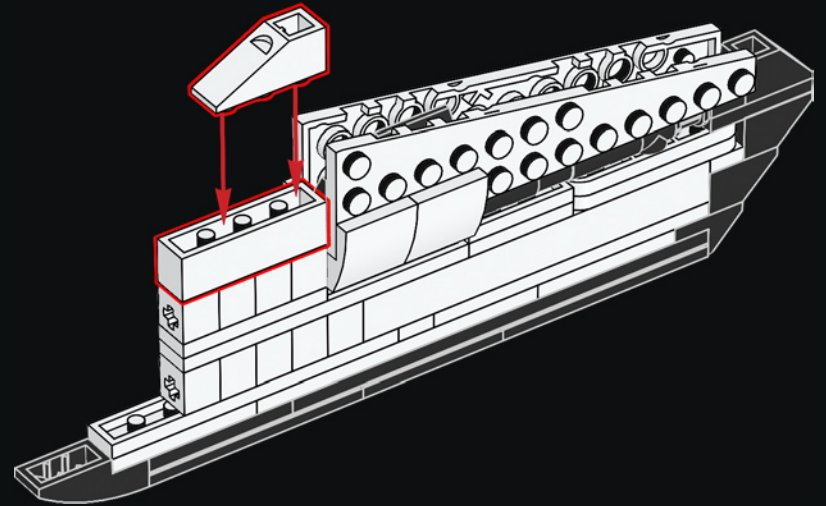
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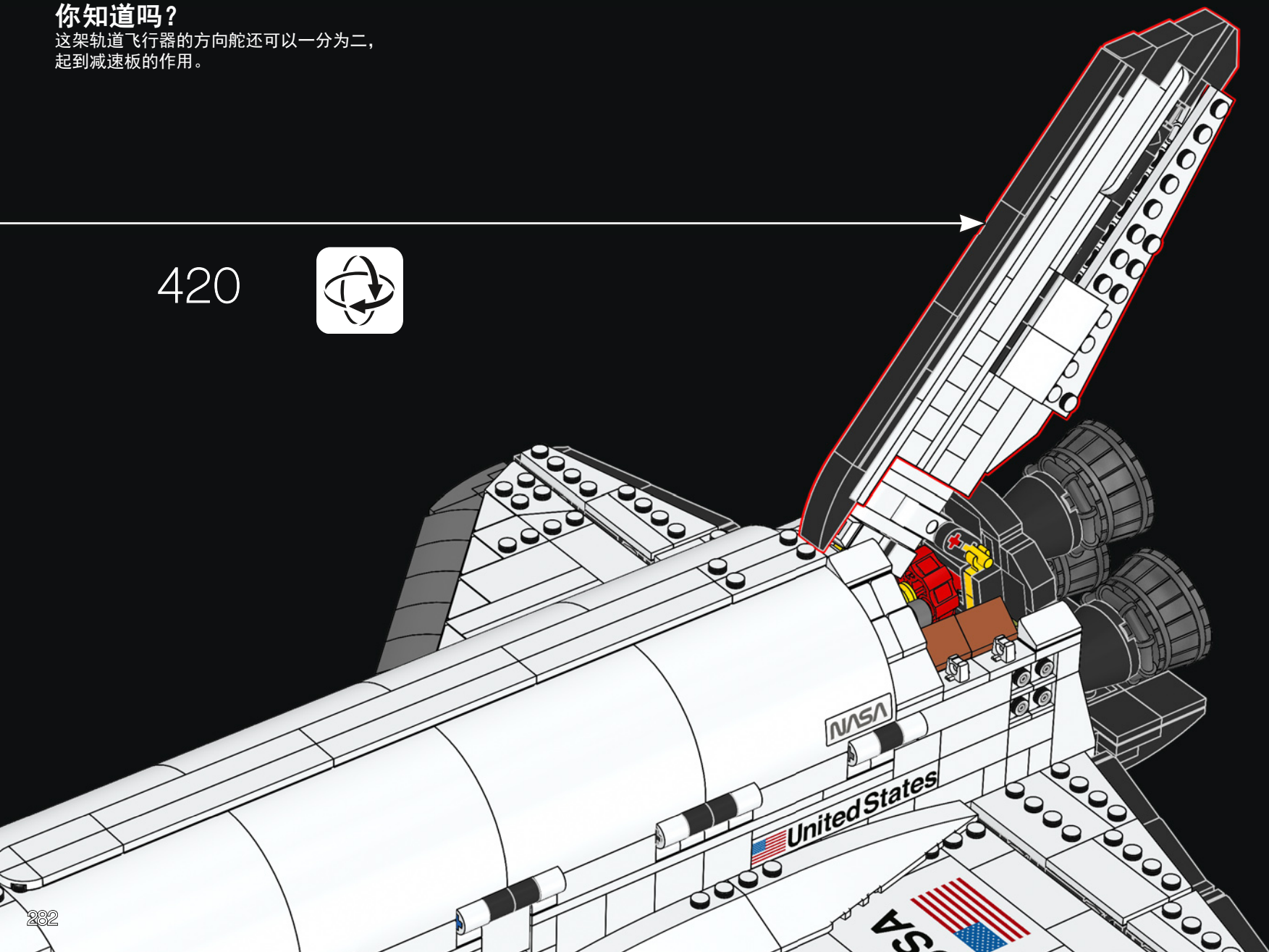
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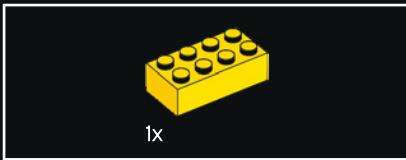
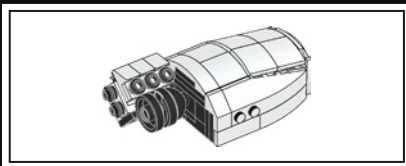
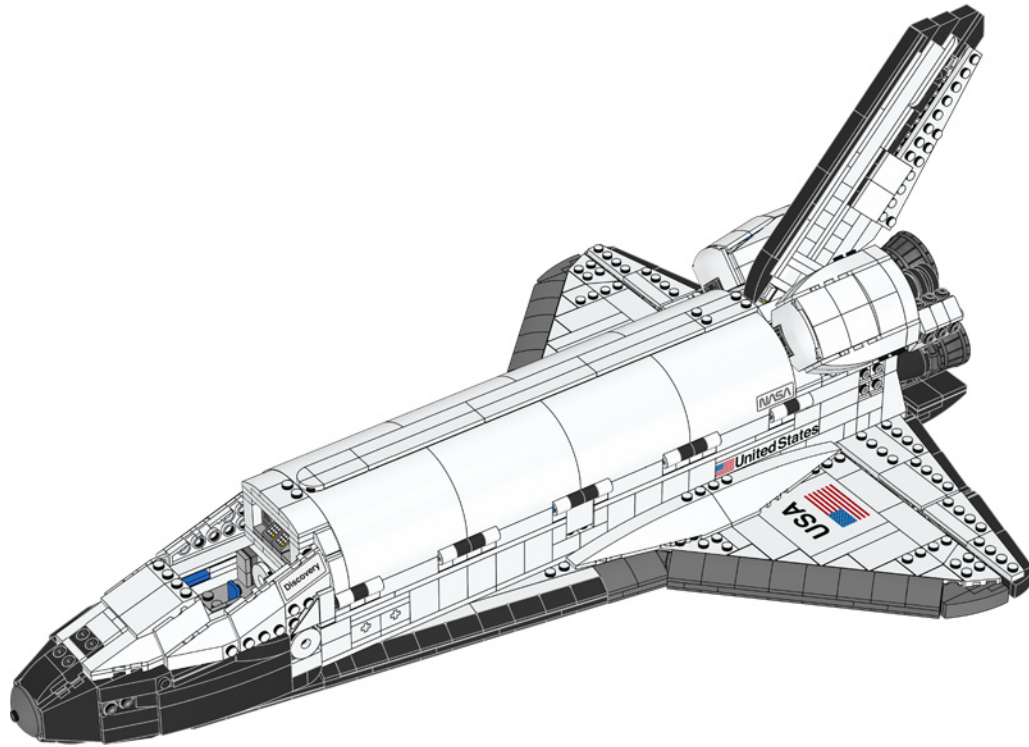


## 你知道吗？

这架轨道飞行器的方向舵还可以一分为二，起到减速板的作用。

420





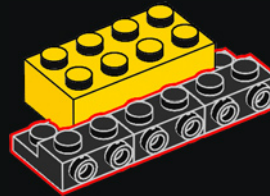
421

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3x

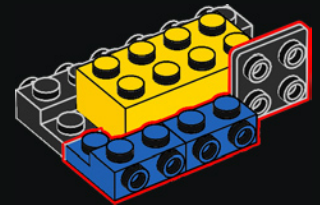
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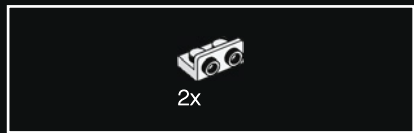
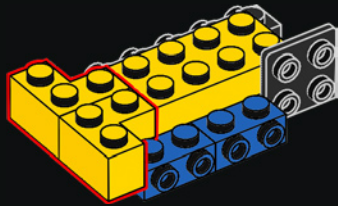
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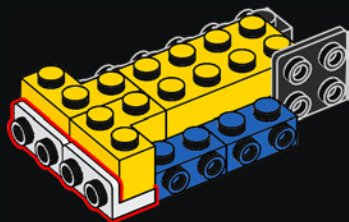




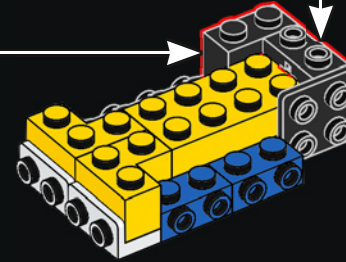
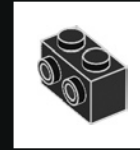
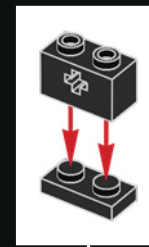
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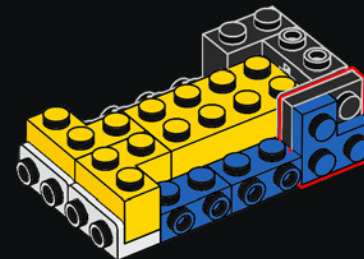
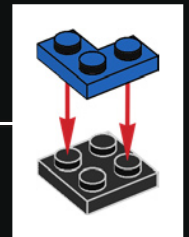
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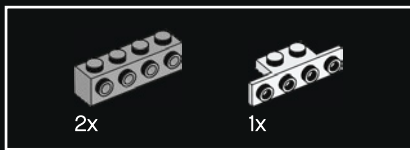


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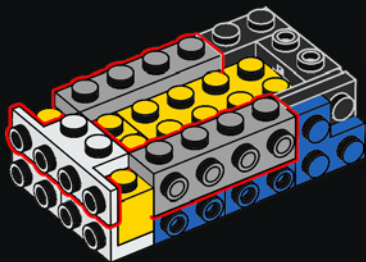


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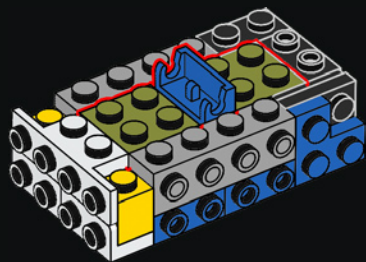




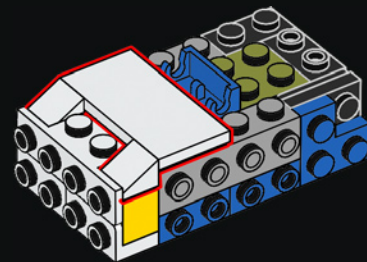
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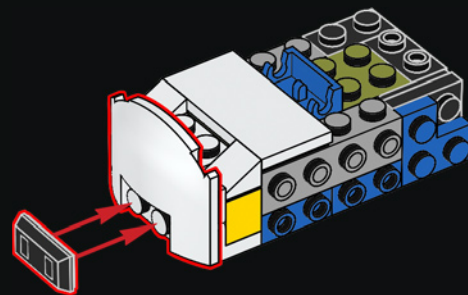
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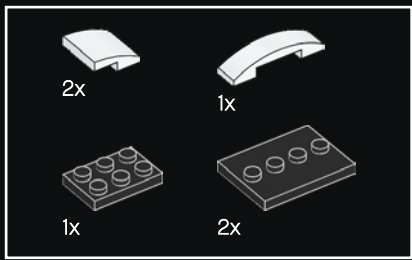


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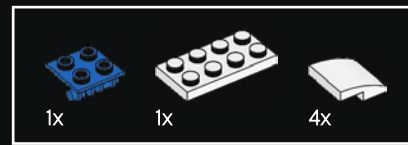
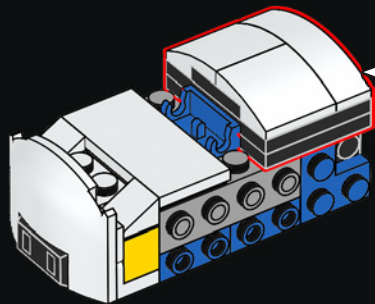
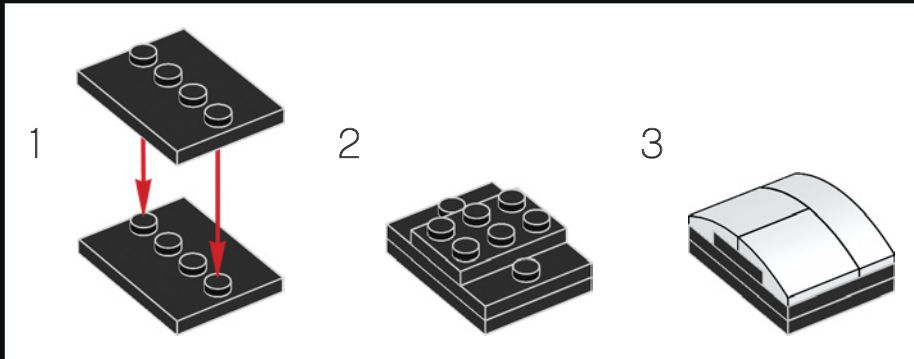


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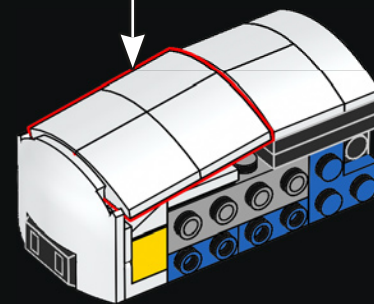
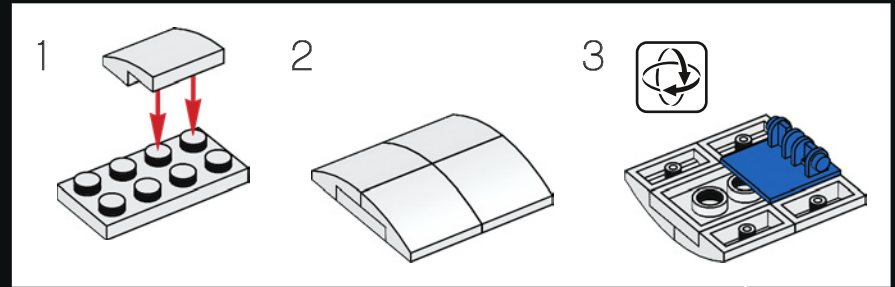


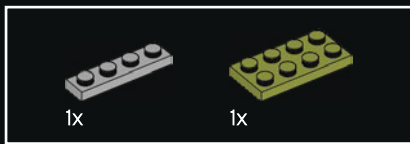


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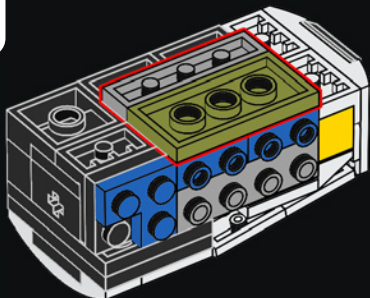


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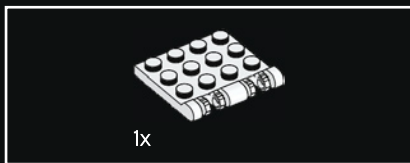
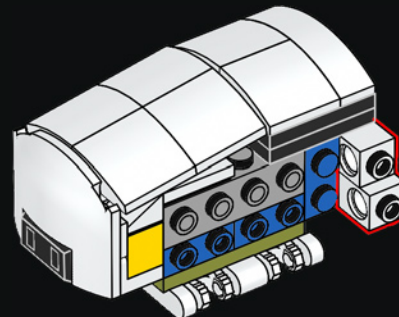




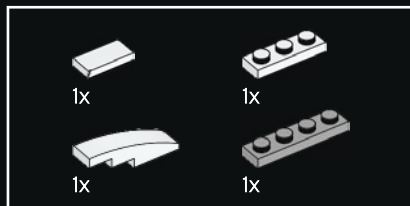
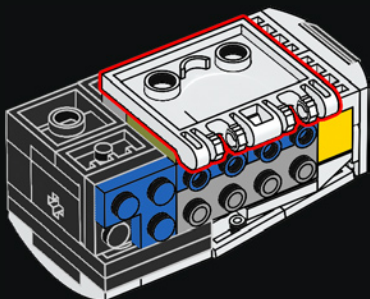
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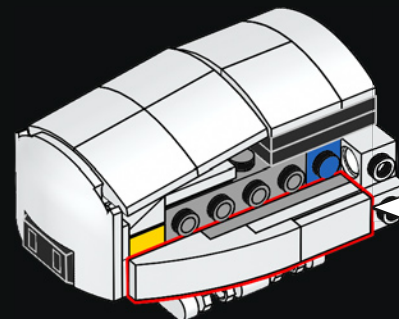
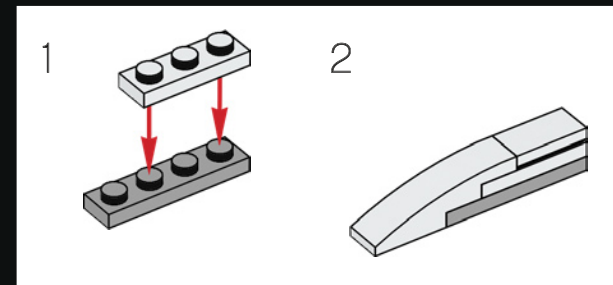
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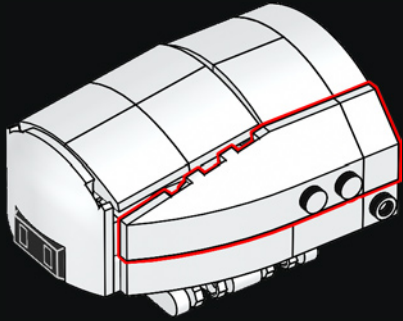


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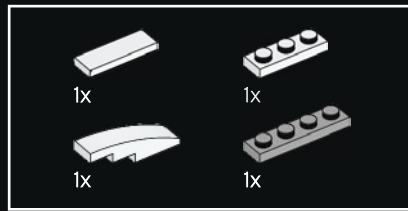
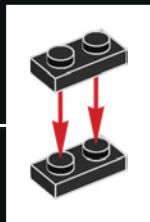
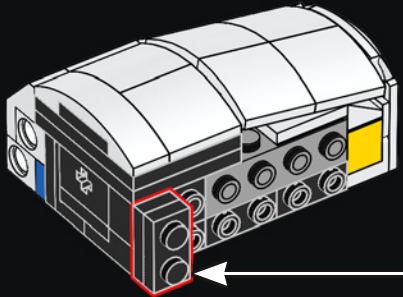




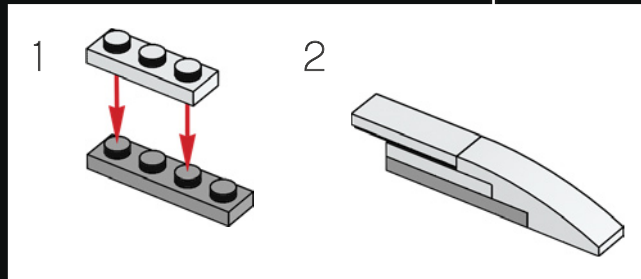
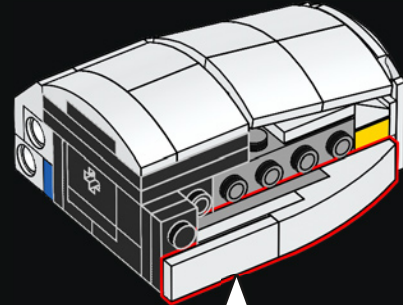
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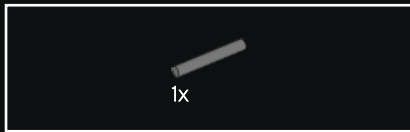
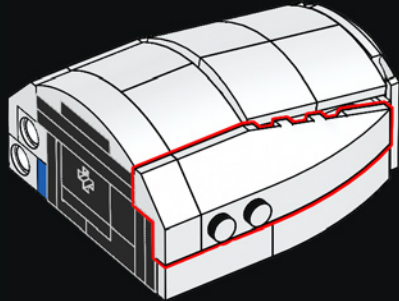
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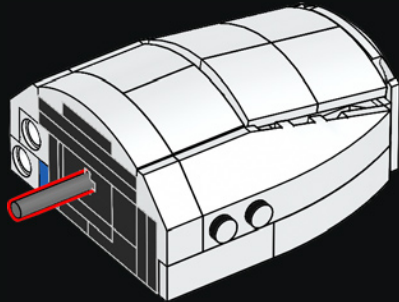




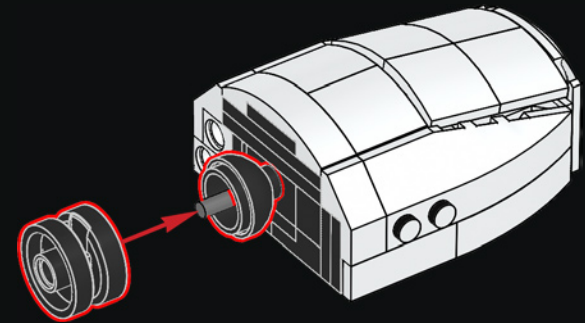
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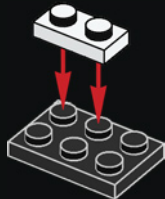


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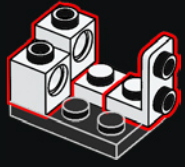




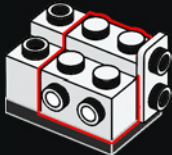
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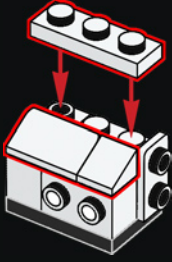
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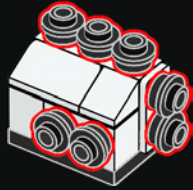


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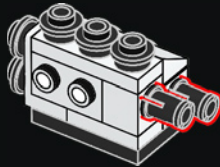




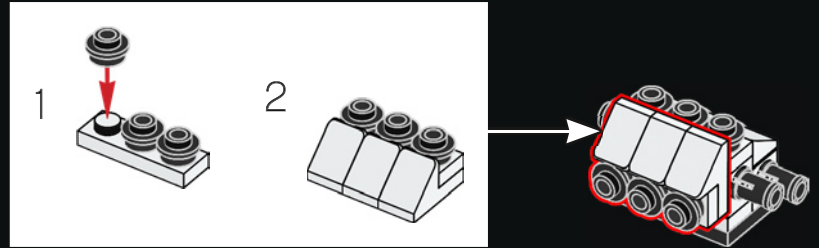
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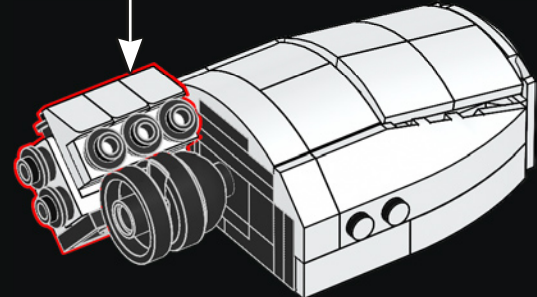
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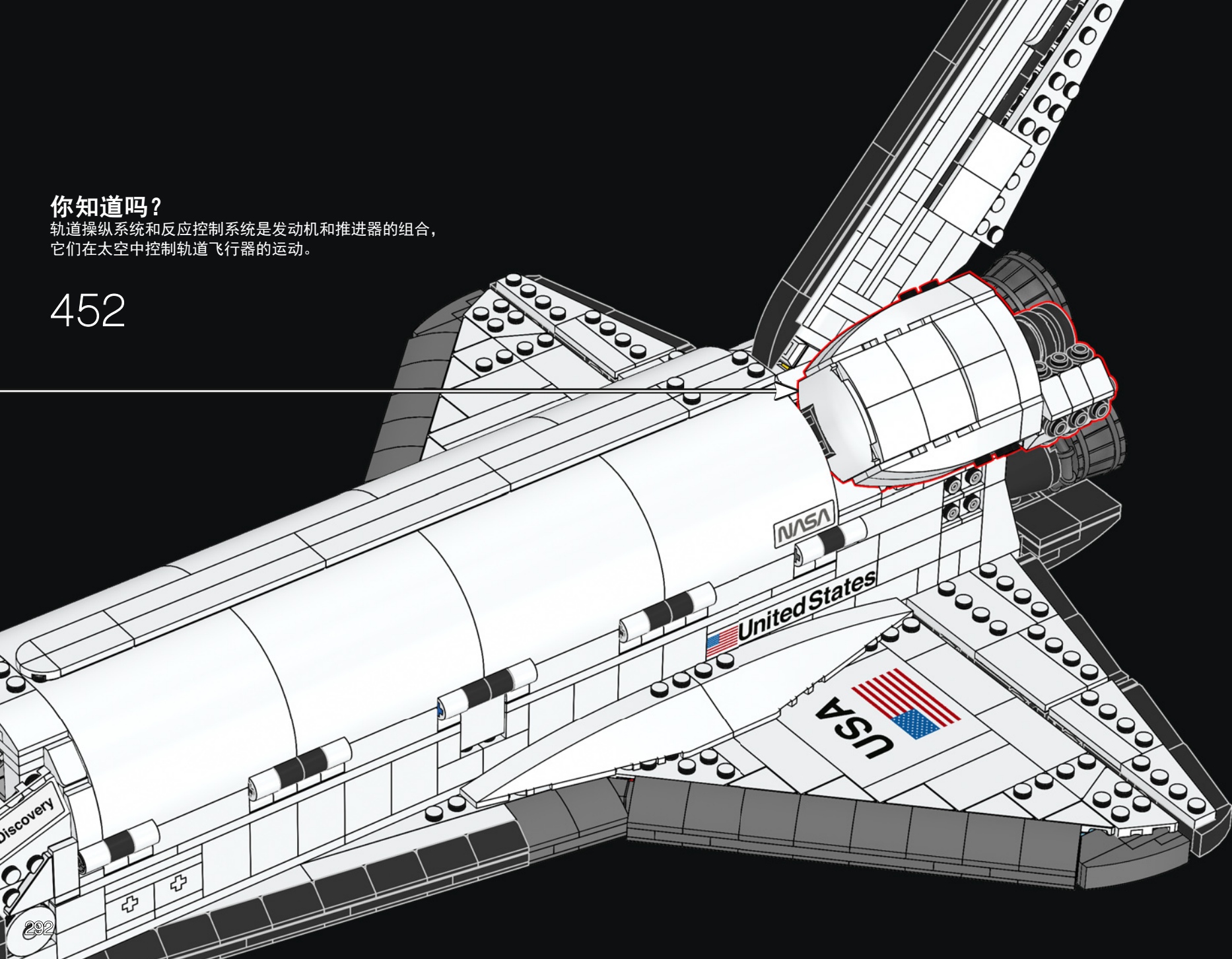
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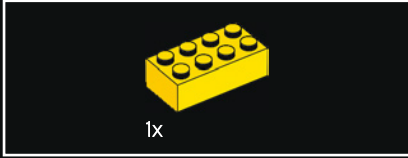
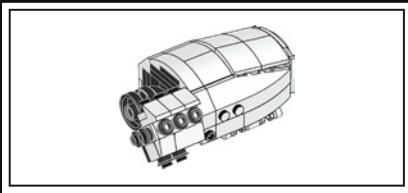


## 你知道吗？

轨道操纵系统和反应控制系统是发动机和推进器的组合，它们在太空中控制轨道飞行器的运动。

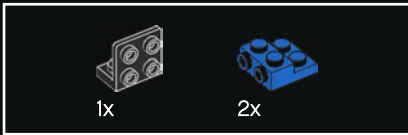
452





1x

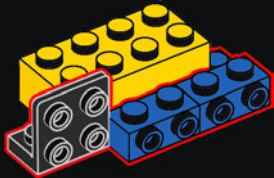
453



1x

2x

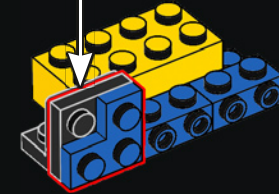
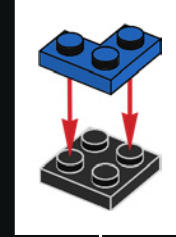
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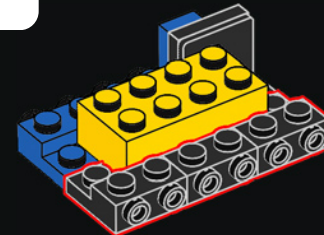
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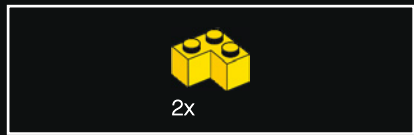
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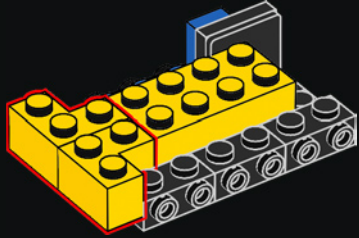
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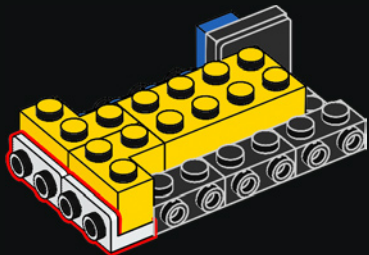




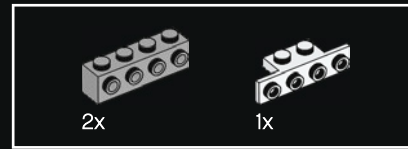
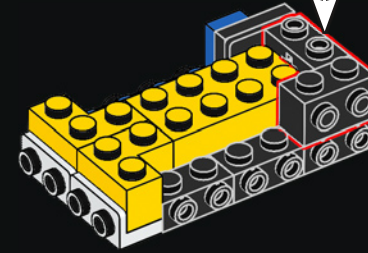
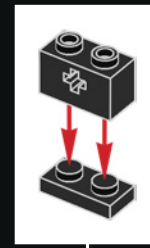
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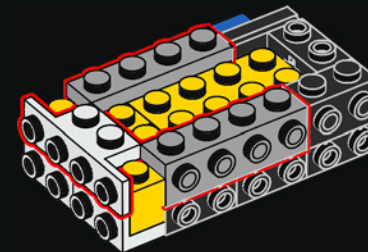
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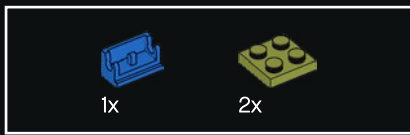


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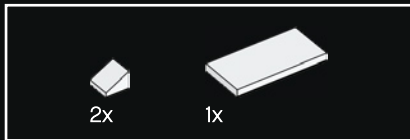
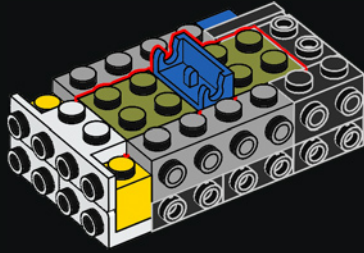


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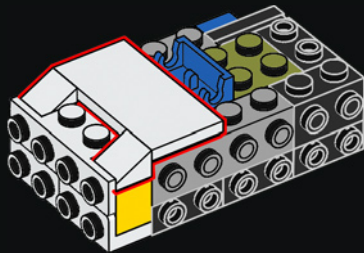




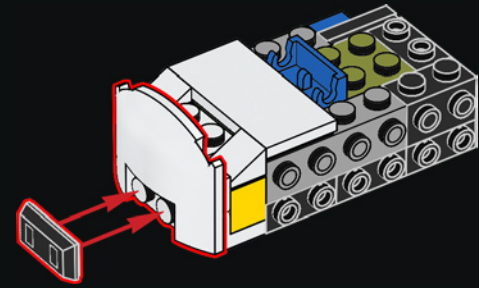
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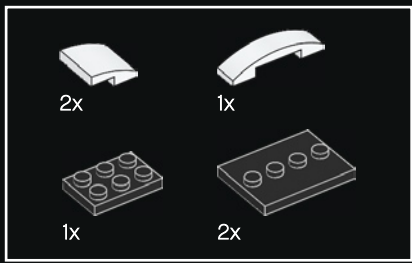


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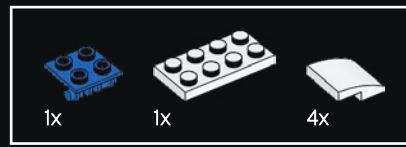
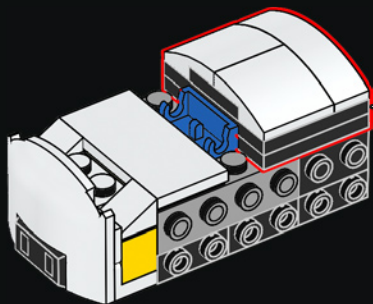
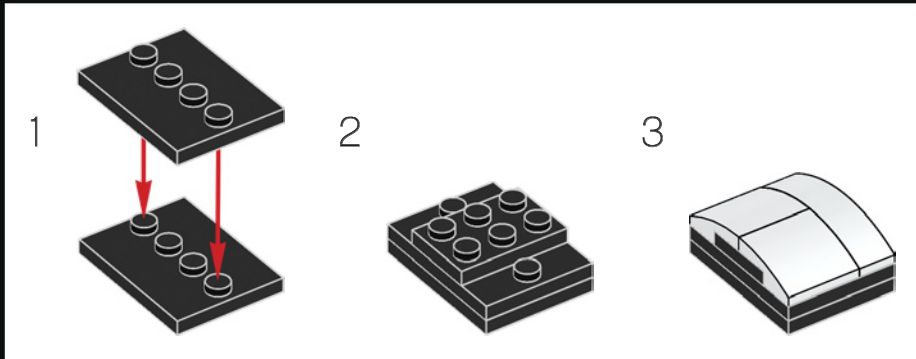


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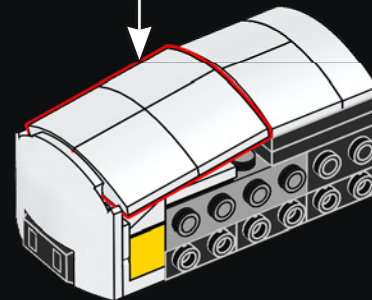
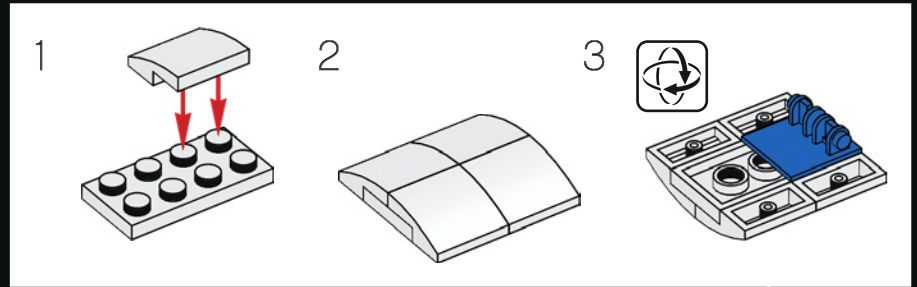




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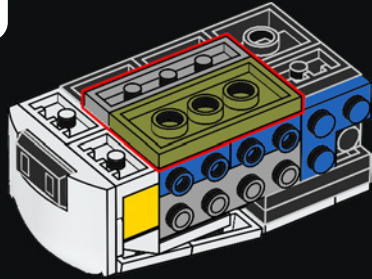
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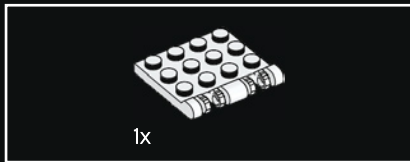
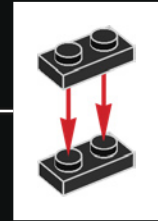
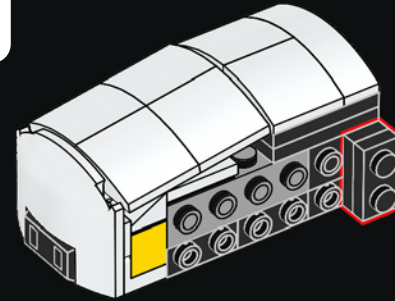




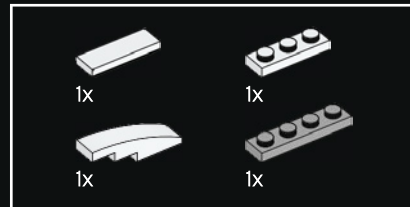
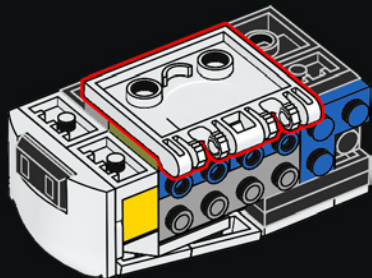
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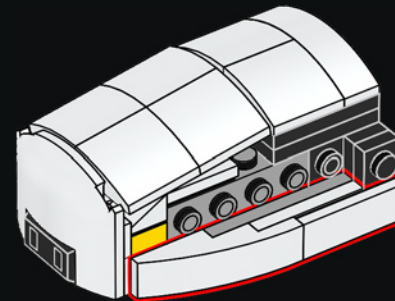
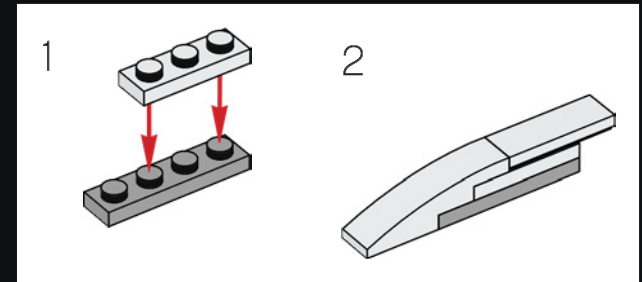
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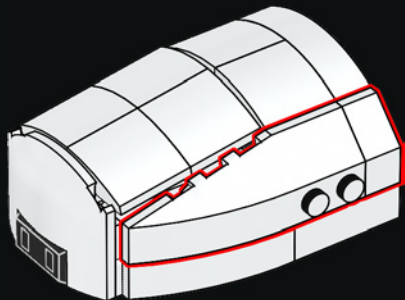


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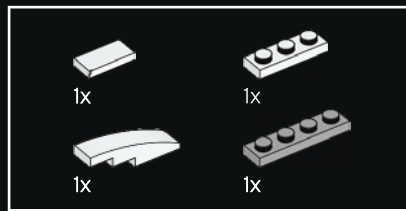
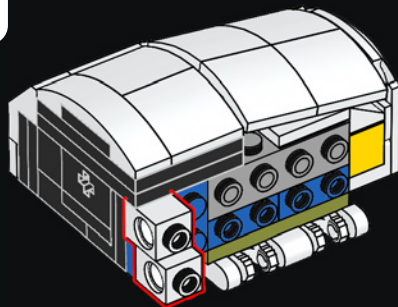




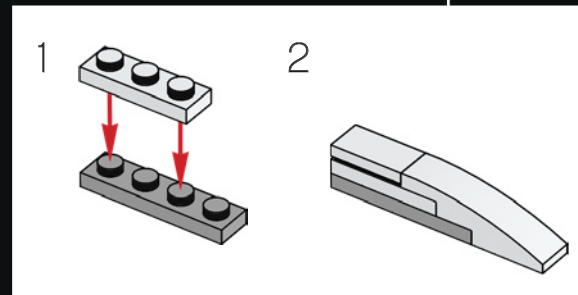
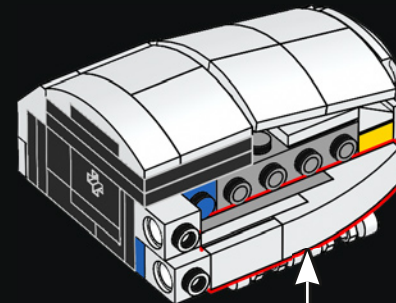
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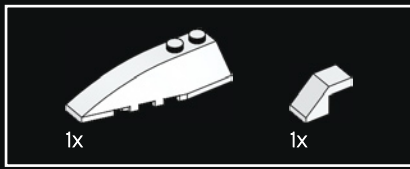


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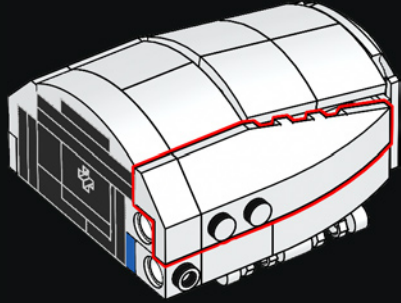


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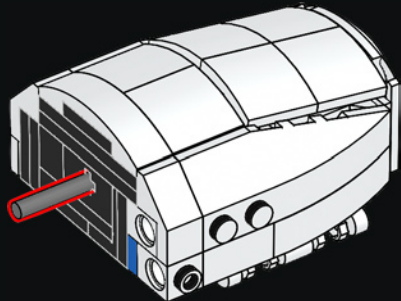




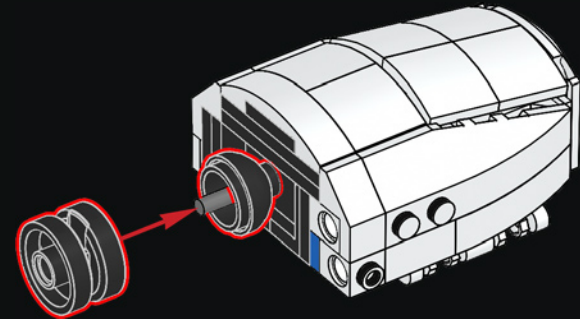
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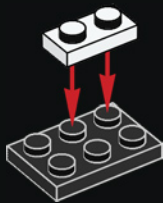


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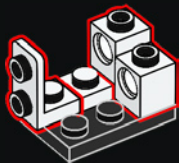




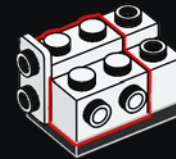
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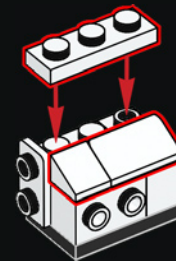
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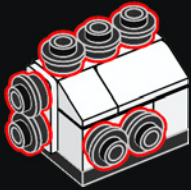


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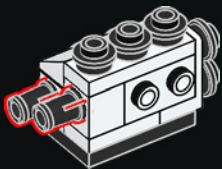




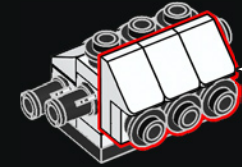
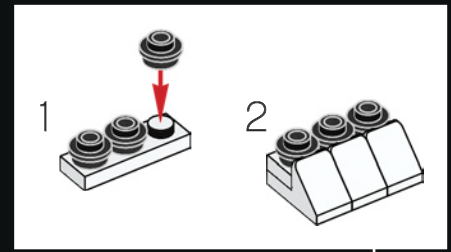
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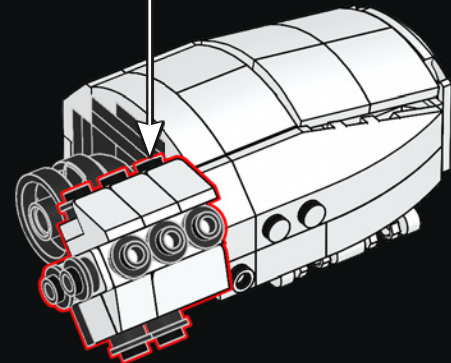
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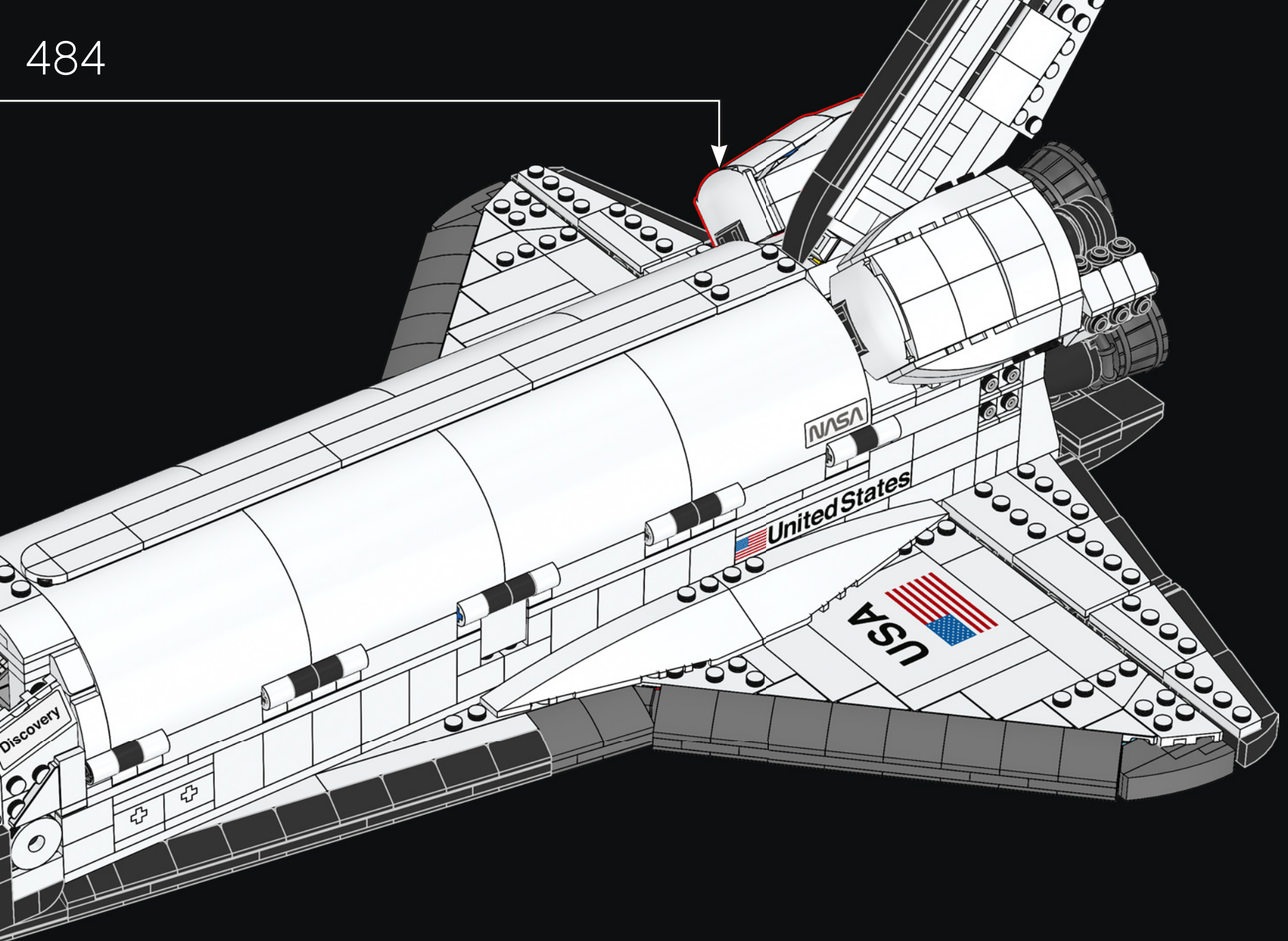


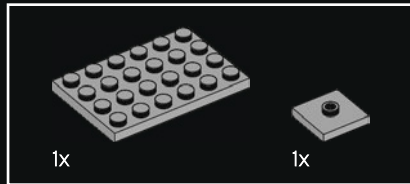
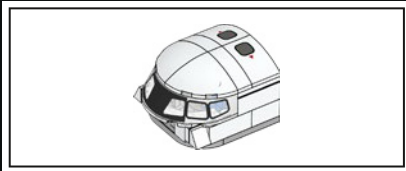
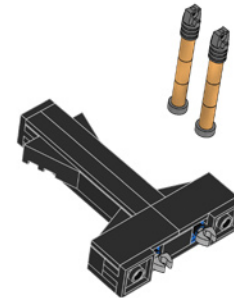
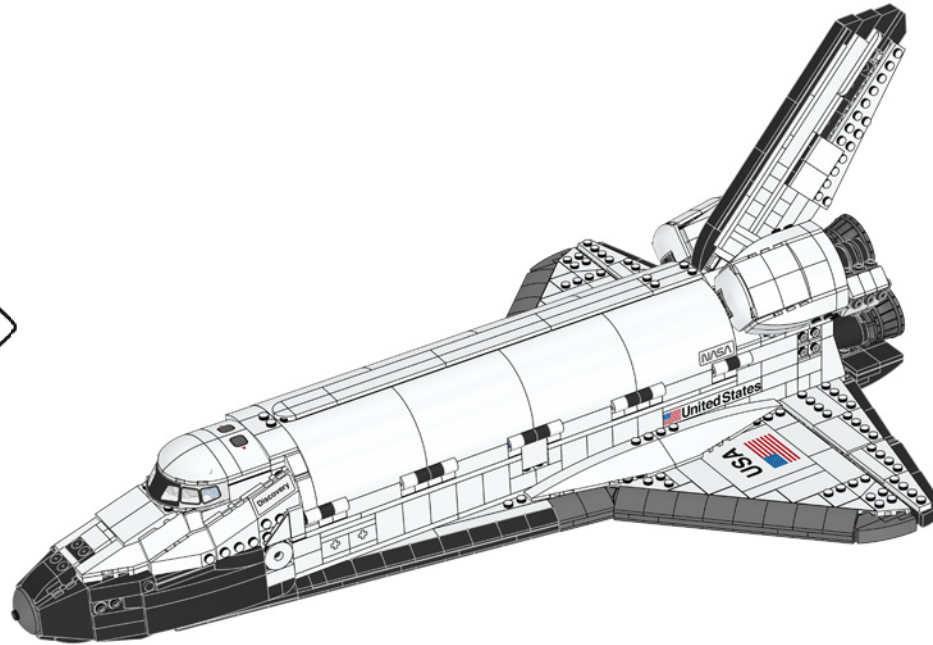
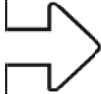
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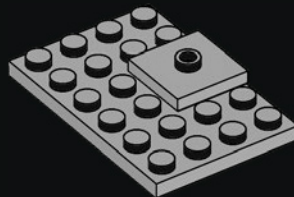
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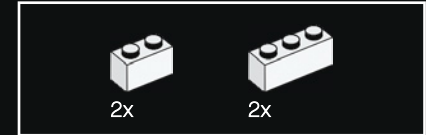
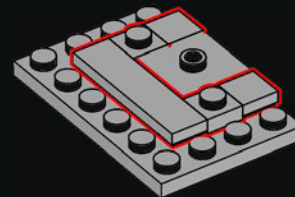




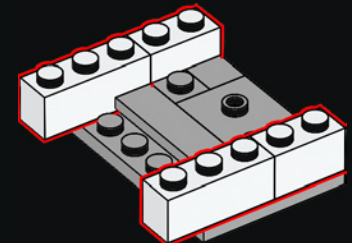
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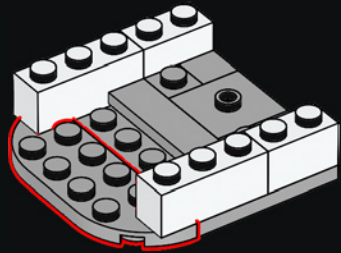


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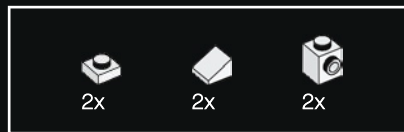
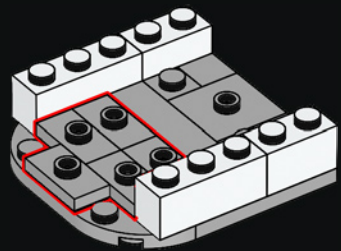




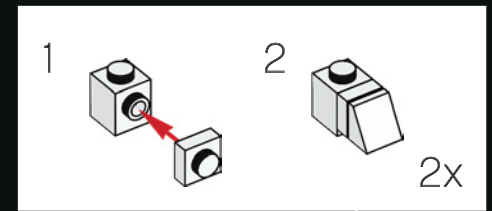
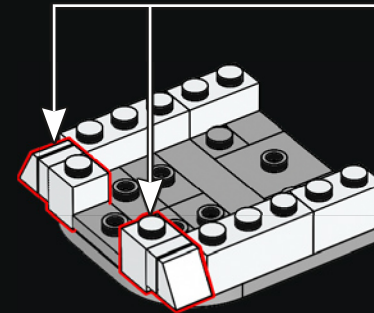
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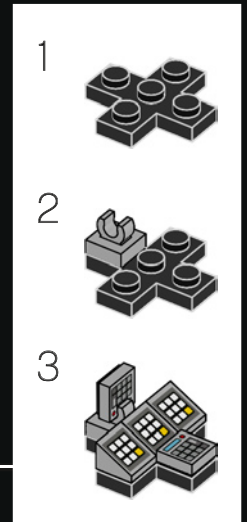
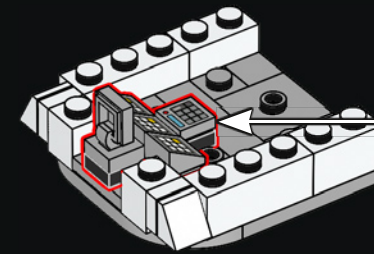
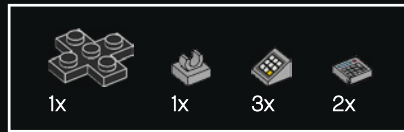
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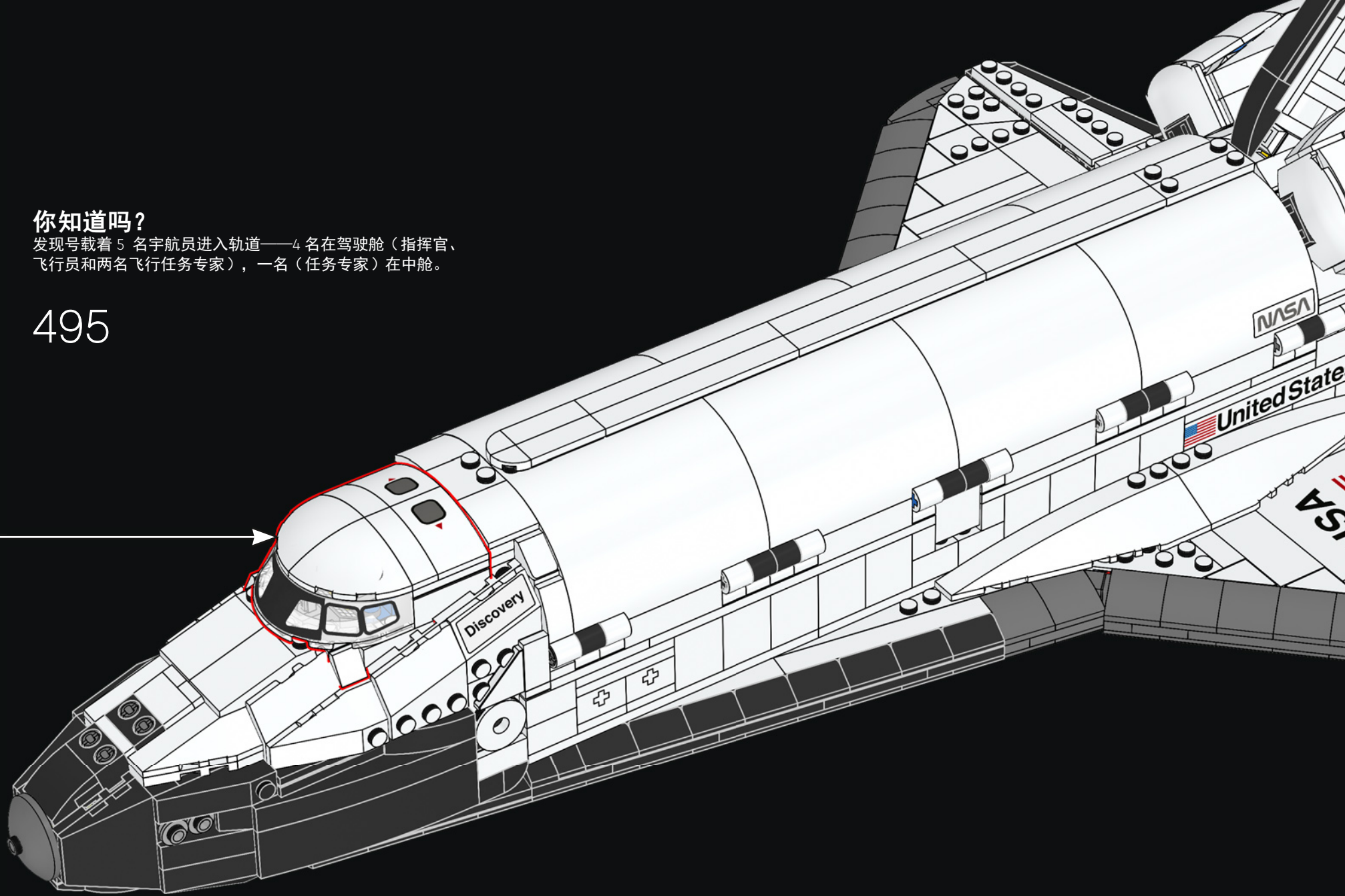


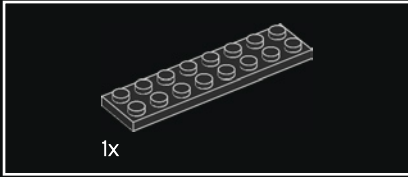
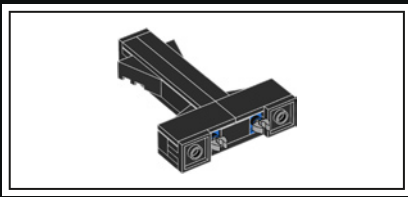


## 你知道吗？

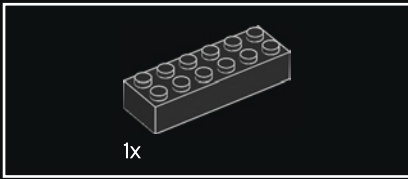
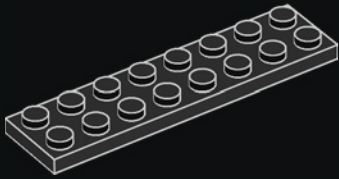
发现号载着 5 名宇航员进入轨道——4 名在驾驶舱（指挥官、飞行员和两名飞行任务专家），一名（任务专家）在中舱。

495

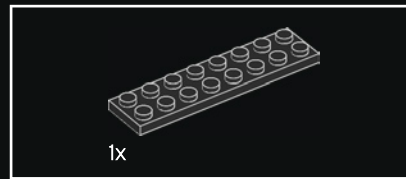
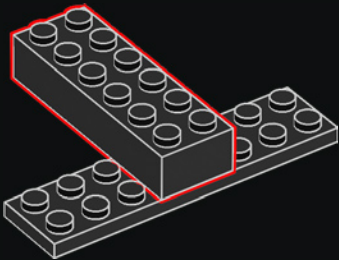




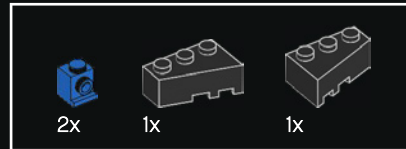
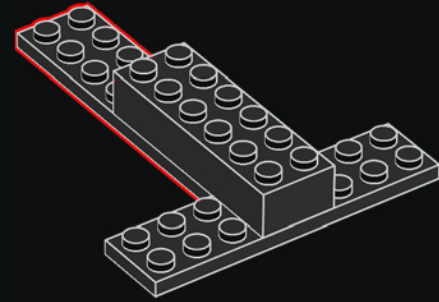
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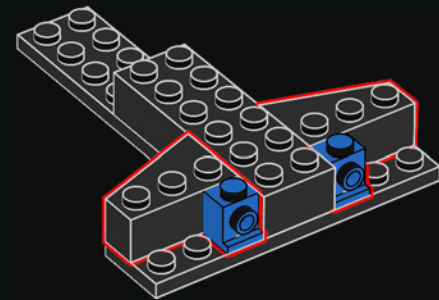
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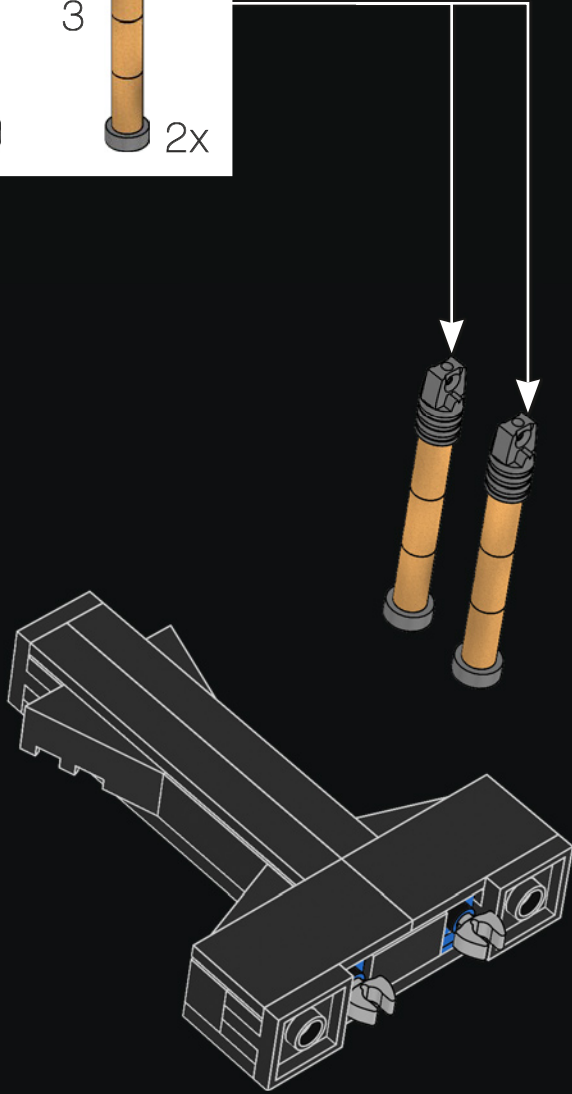
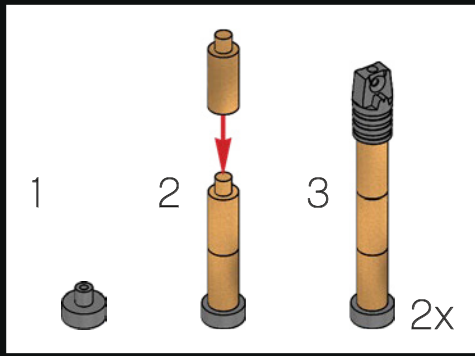
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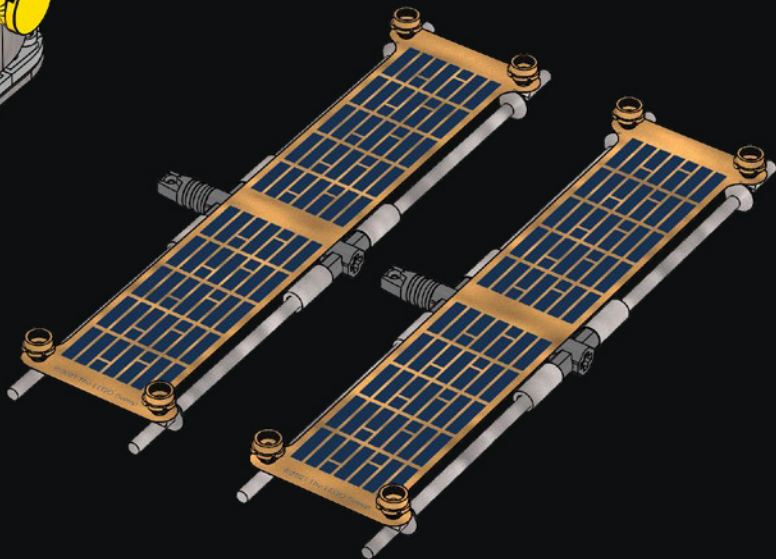
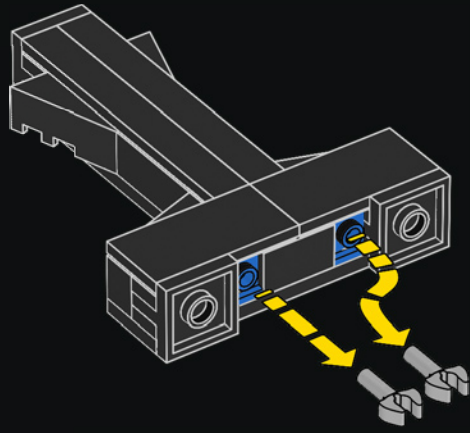
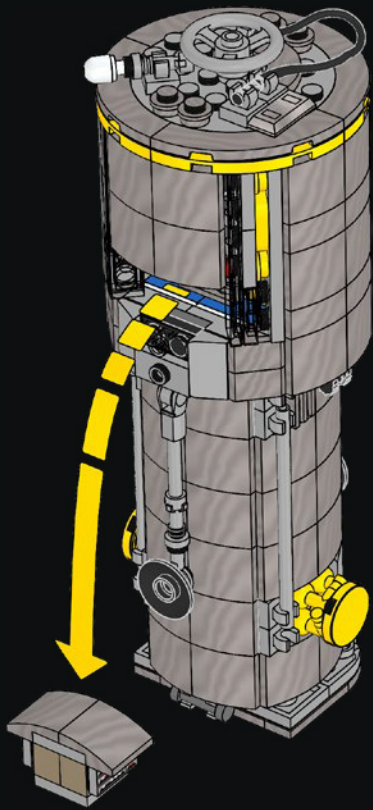


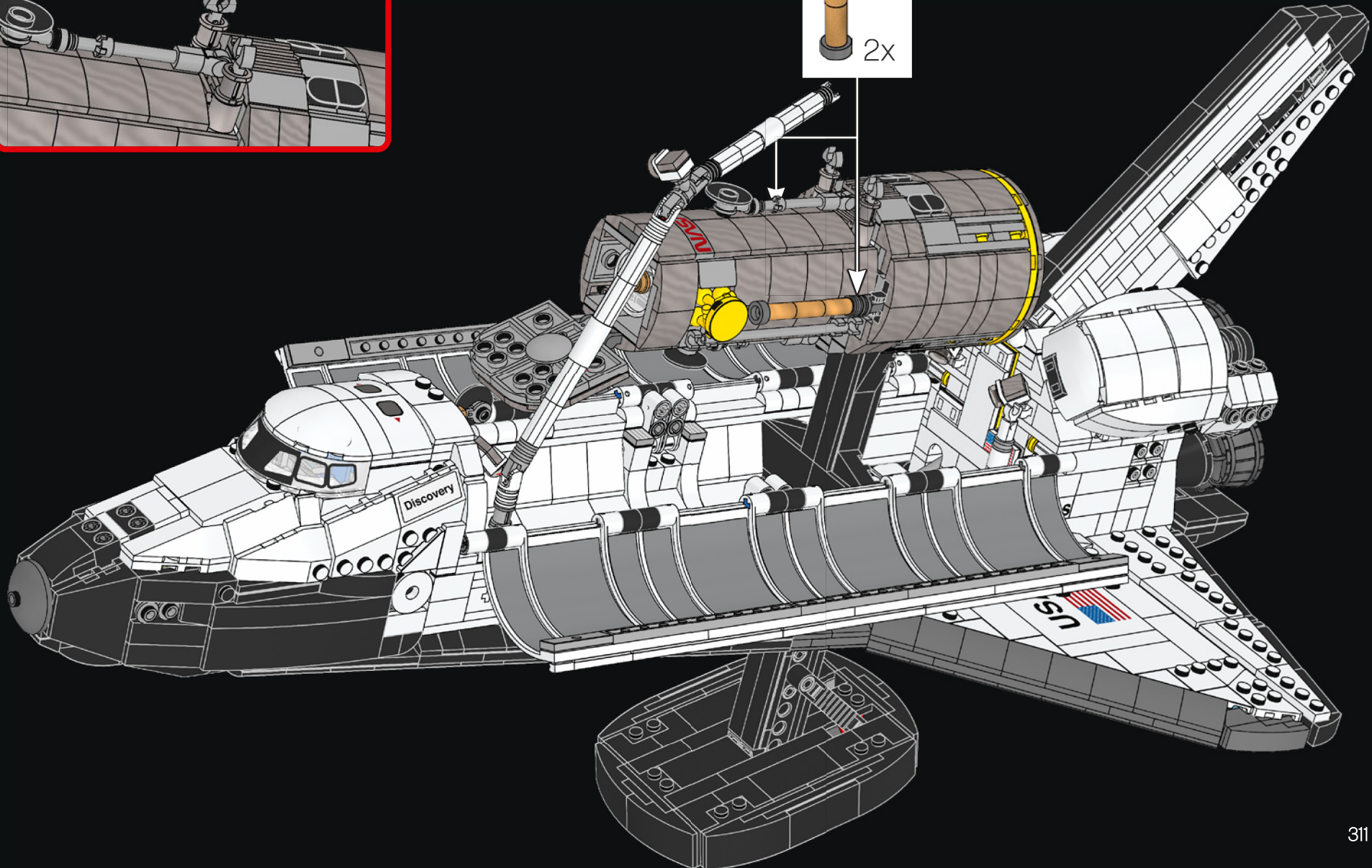
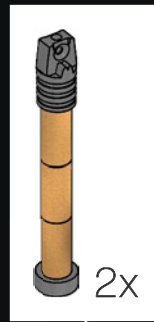
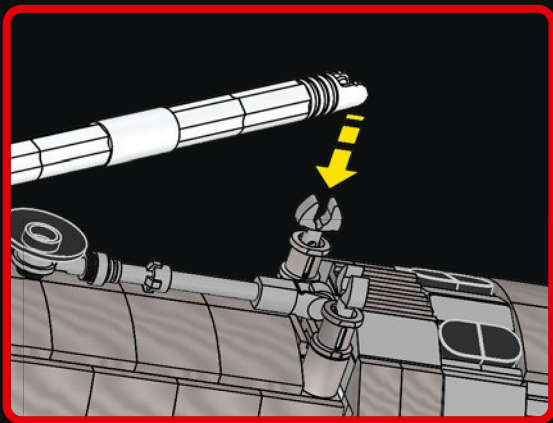


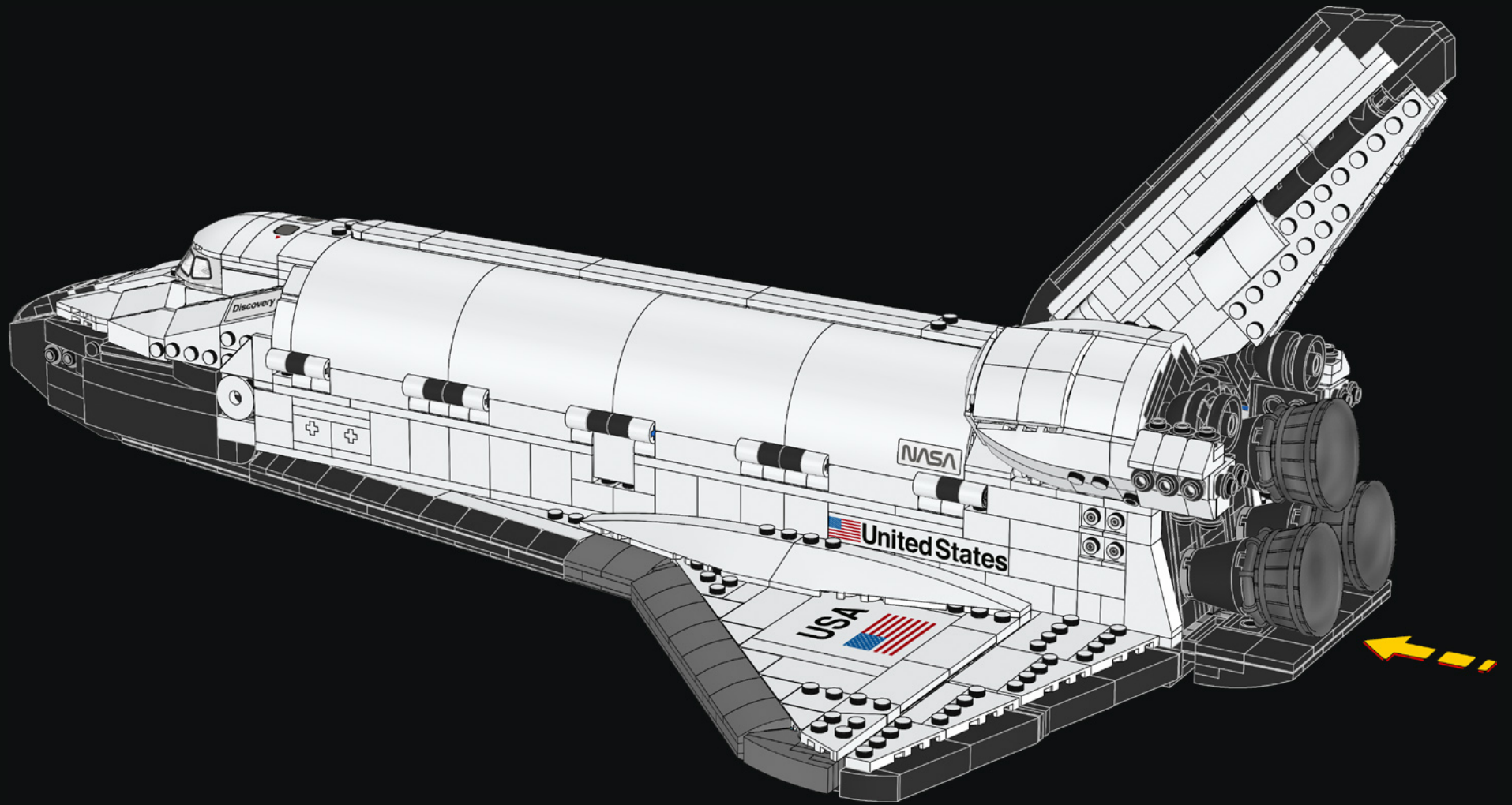


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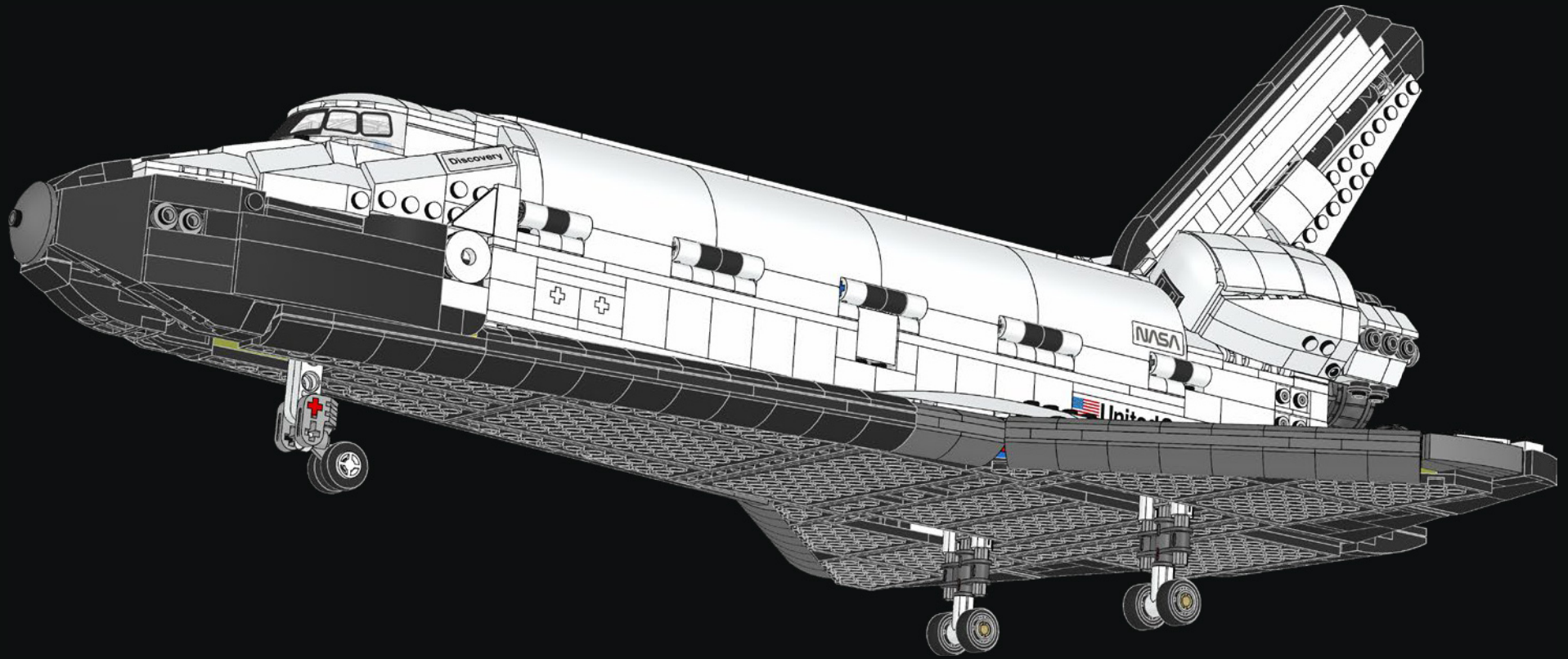














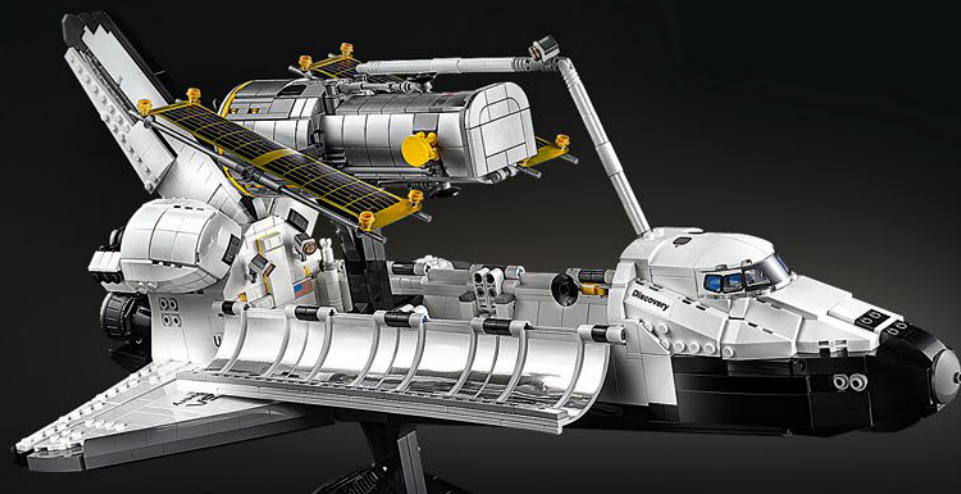
**NASA**  
Space Shuttle Discovery STS-31

Manufacturer	LEGO
Year	2011
Part Number	21309
Price	\$199.99
Weight	1.5 kg
Length	28 cm
Width	10 cm
Height	15 cm



**NASA** **esa**  
Hubble Space Telescope

Manufacturer	LEGO
Year	2011
Part Number	21310
Price	\$199.99
Weight	1.5 kg
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Width	10 cm
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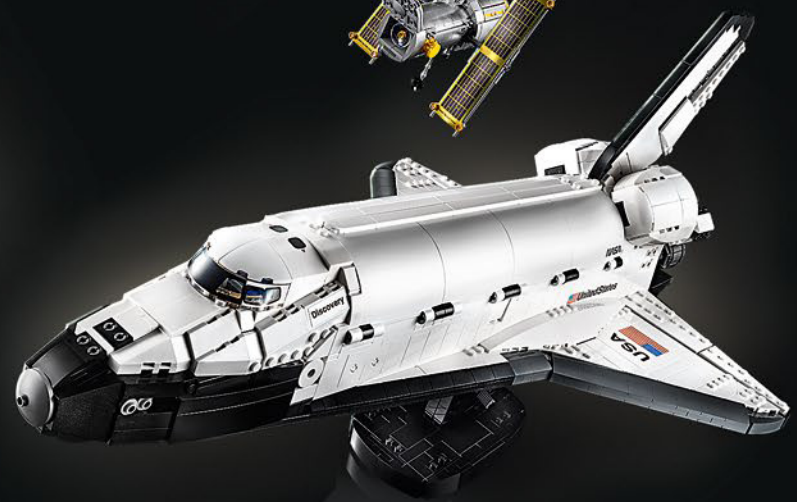


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# FEEDBACK AND WIN



## FEEDBACK AND WIN

Your feedback will help shape the future development of this product series.

Please visit:

## FEEDBACK UND GEWINNEN

Dein Feedback trägt zur Weiterentwicklung dieser Produktreihe bei.

Geh auf:

## COMMENTEZ ET GAGNEZ

Vos commentaires nous aideront à concevoir les futurs produits de cette gamme.

Rendez-vous sur :

## COMENTA Y GANA

Tu opinión nos ayudará a dar forma al desarrollo de esta serie de productos en el futuro.

Visita:

## 反馈有奖

您的反馈将有助于我们在今后改进本系列产品。

请访问：

[LEGO.com/productfeedback](https://www.lego.com/productfeedback)

By completing, you will automatically enter a drawing to win a LEGO® set.

Terms & Conditions apply.

Durch Ausfüllen nimmst du automatisch an der Verlosung eines LEGO® Preises teil.

Es gelten die Teilnahmebedingungen.

En envoyant vos commentaires, vous serez automatiquement inscrit(e) à un tirage au sort qui vous permettra de remporter un prix LEGO®.

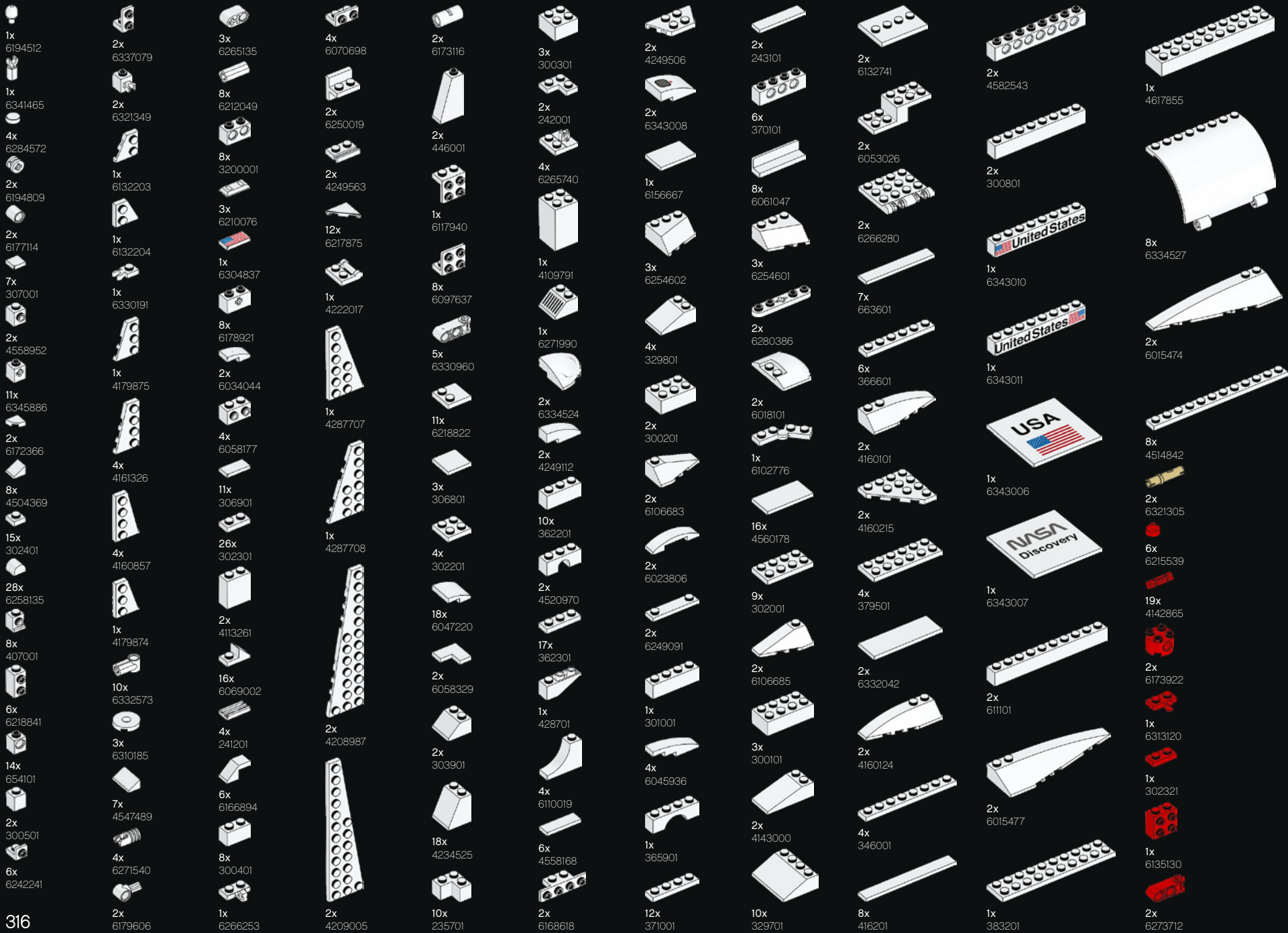
Offre soumise à conditions.

Al contestar, participarás automáticamente en el sorteo y podrás ganar un set LEGO®.

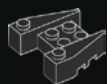
Sujeto a Términos y Condiciones.

完成我们的反馈调查，即可自动进入抽奖环节，赢取乐高®套装。

适用《条款和条件》。







1x  
6290416



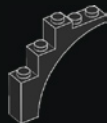
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2x  
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4x  
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2x  
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2x  
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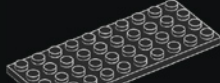
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3x  
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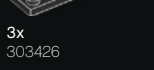
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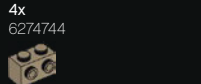
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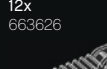
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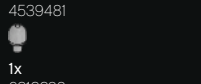
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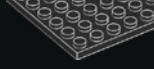
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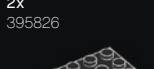
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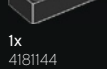
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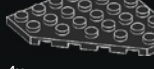
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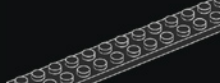
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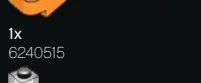
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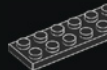
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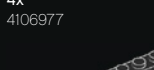
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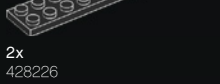
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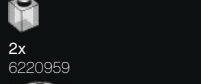
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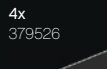
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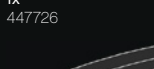
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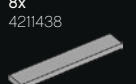
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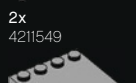
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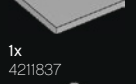
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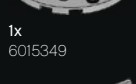
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