

GE-730

Pro'sKit®

SPIRAL SPRING science kit

三合一英伦发条时钟先生



Assembly & Instruction Manual 组装说明手册

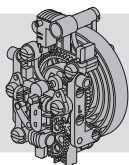
产品介绍

你玩过发条车吗?那你知道发条车是如何驱动的呢?爸爸的机械表总有滴答、滴答的声音又是怎么来的呢?这些秘密就藏在弹簧里 - 在发条装置的中心设有一个螺旋弹簧,当我们旋紧这弹簧时,同时也是在储存动能,而一旦释放被旋紧的弹簧,动能也将被释放并驱动装置!

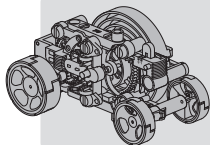
不须马达、不用电池,就连螺丝也不需要,只要一把斜口钳,利用你的巧手与观察力,你会发现这组套可以拼装、拆装再拼装成3种造型-发条机器人、跑跑发条车、滴答定时器。旋紧弹簧后释放,跑跑发条车将出乎你意料之外地驰骋14公尺,让你想输都难!呆萌可爱的发条机器人,走起路来虽然摇摇摆摆,但旋紧一次发条再释放动力,他可是可以前进50公分呢!蛋糕需要烤多久才好?最爱的电视节目再六分钟就要开始,将GE-730组成六分钟滴答定时器,再也不用愁了!

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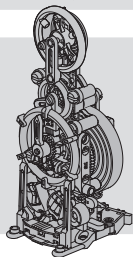
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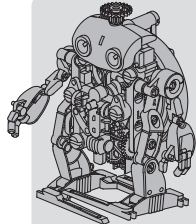
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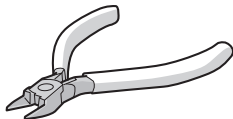
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警告

- 1.本玩具内含小对象，请勿让三岁以下孩童取得，以免放入口中造成窒息。
- 2.儿童使用剪切工具时，请家长指导使用方式，并请在家长监督下使用，以免发生意外。
- 3.为避免婴儿或儿童产生窒息的危险，请于拆卸后立即将塑料袋销毁或远离婴儿及儿童。

自备工具



斜口钳(宝工型号:PM-200 或 PM-202)

零件列表



部分产品含有锐利边角，组装时请特别注意

P1

圆轴(极短)



1:1

1 pc

P2

圆轴(短)



1:1

4 pcs

P3

圆轴(中)



1:1

5 pcs

P4

圆轴(长)



1:1

1 pc

P5

六角轴(短)



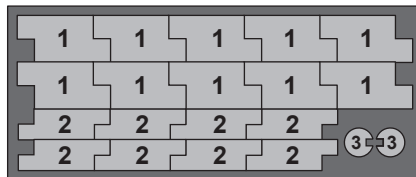
1:1

1 pc

P7

泡棉贴

请保留泡棉贴之夹链袋(编号P10)，以作为收纳其他小零件之用



P6

六角轴(长)

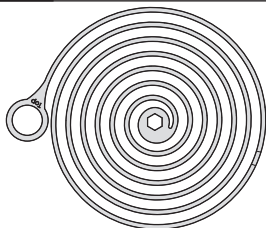


1:1

1 pc

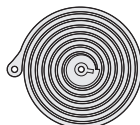
P8

螺旋弹簧



P9

游丝



P10

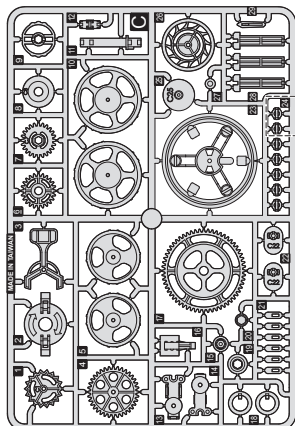
夹链袋



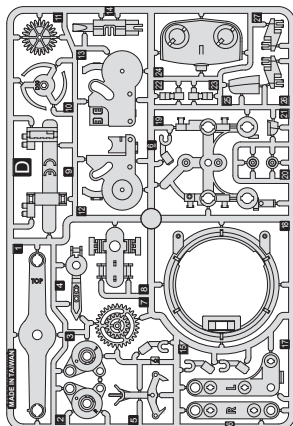
塑膠模型零件

! 请依照组装步骤将所需的零件剪下，事先全数剪下会在组装时造成混淆。

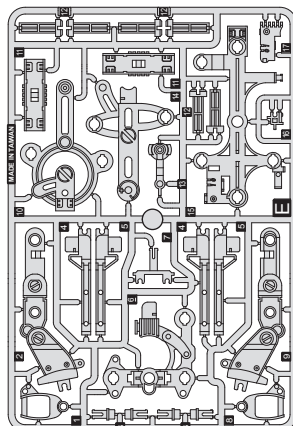
C 黄色



D 蓝色



E 白色



请注意: C24为备品

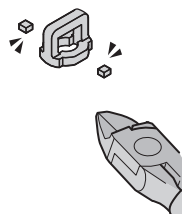
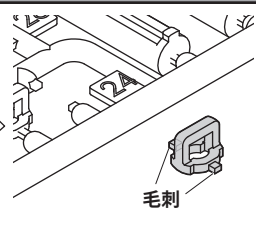
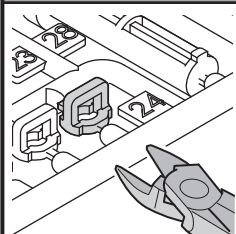
组装前需知



组装注意事项

在开始组装前，请仔细阅读以下说明

去除毛刺



✓
正确



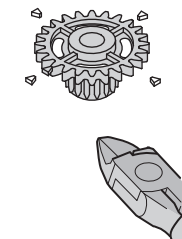
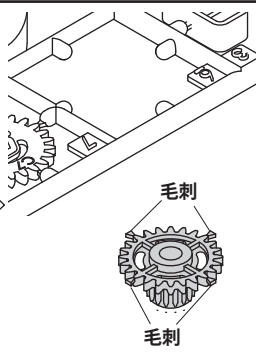
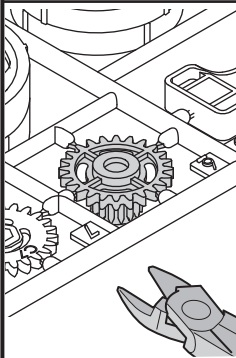
✗
错误



✗
错误



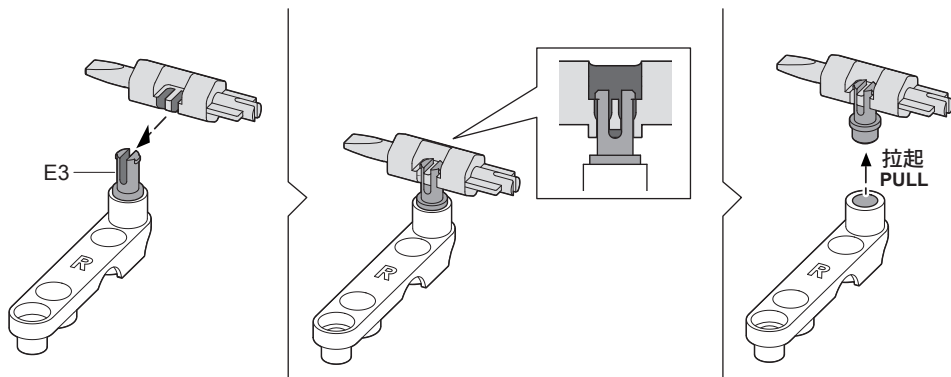
请勿过度剪切非毛刺的塑料零件，以免组装不确实，导致运作不良



D14使用方式

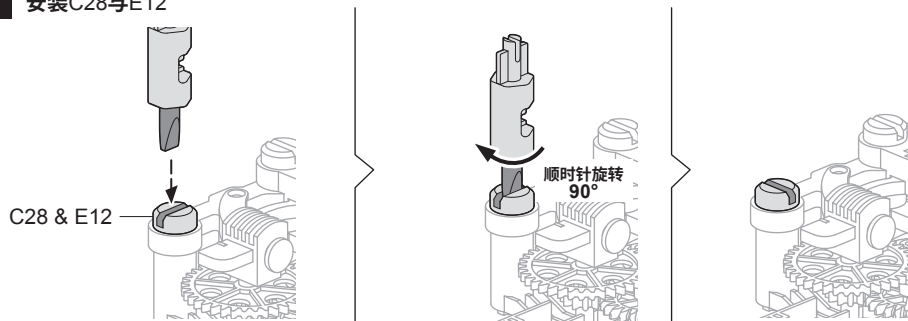


使用中间(如图圈起处)拉起E3

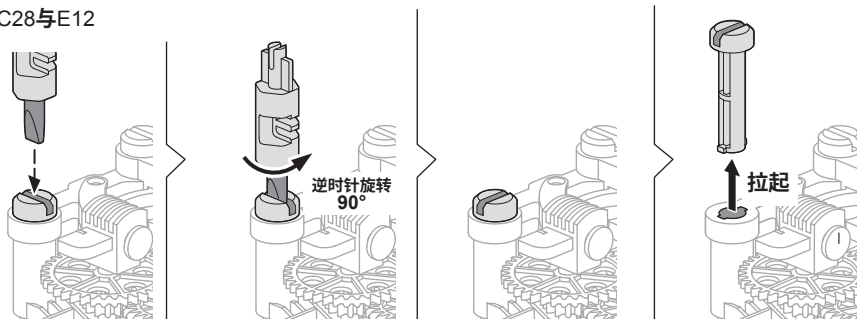


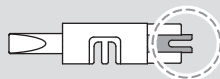
使用D14一字端安装/卸除C28与E12

1 安装C28与E12



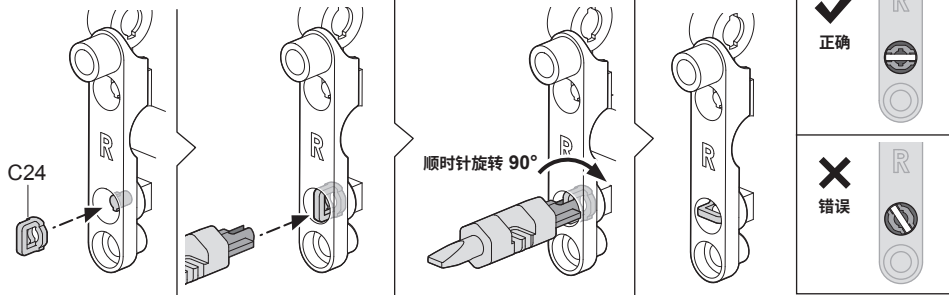
2 卸除C28与E12



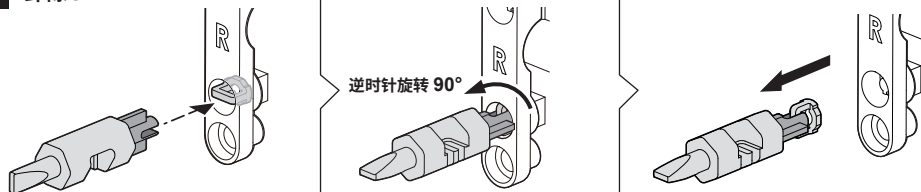


使用D14开口端安装/卸除C24

1 安装C24



2 卸除C24



注意事项

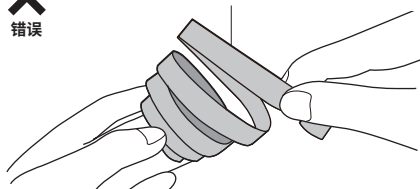


请勿过度拉拔螺旋弹簧，以免造成损坏



错误

P8

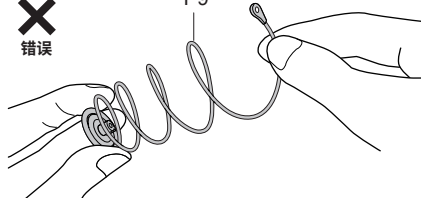


请勿过度拉拔游丝，以免造成损坏



错误

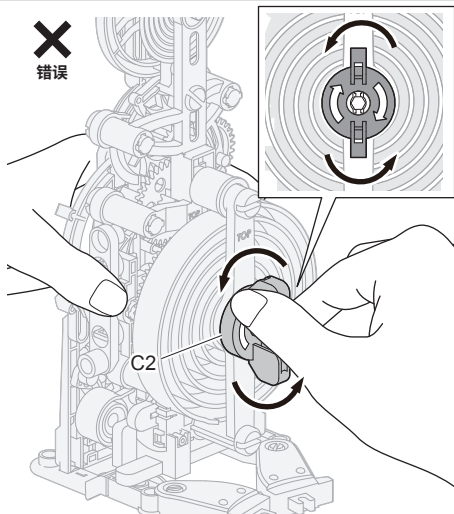
P9



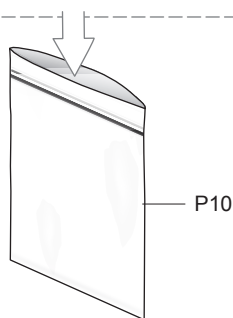
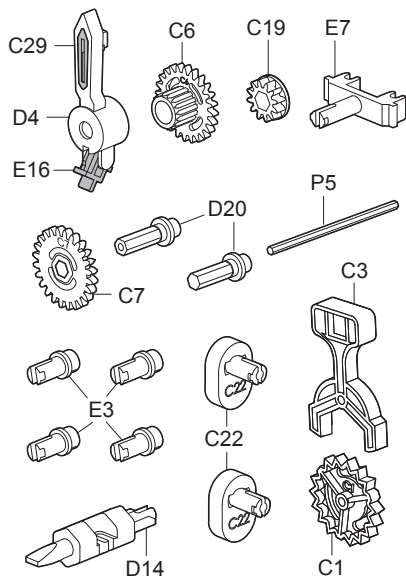
请勿逆时针旋转C2



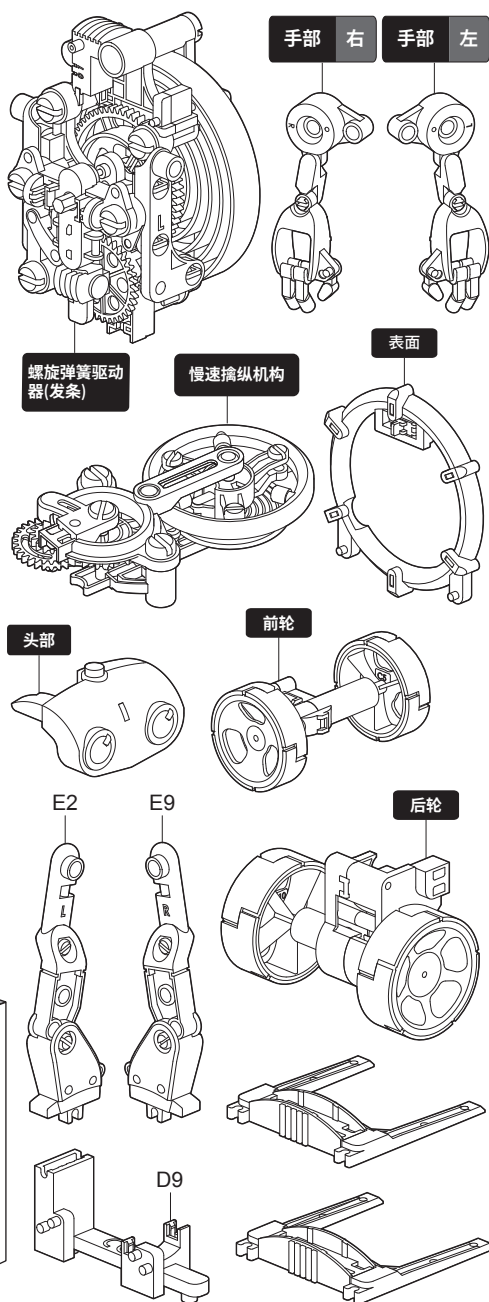
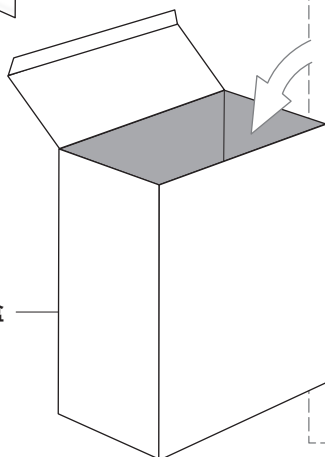
错误



小零件收纳技巧

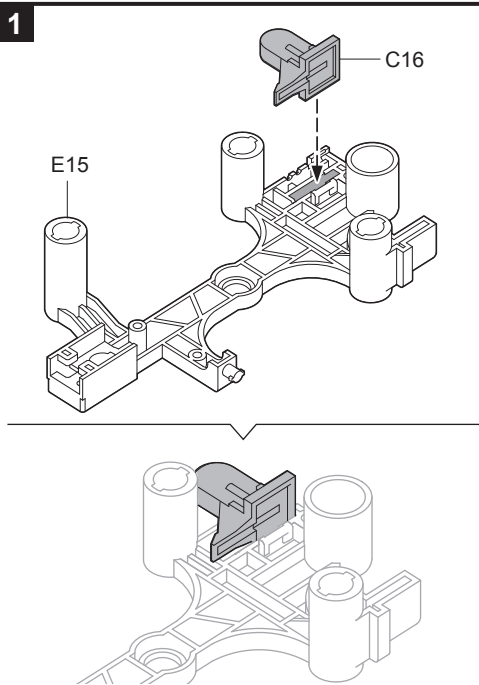


包装外盒

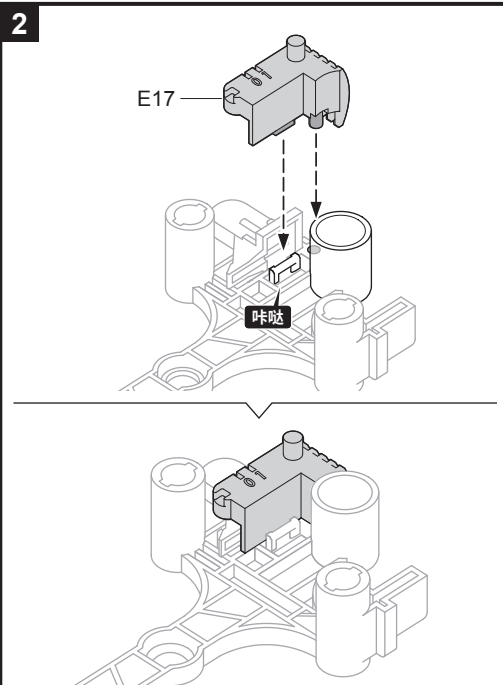


螺旋弹簧驱动器(发条)安装

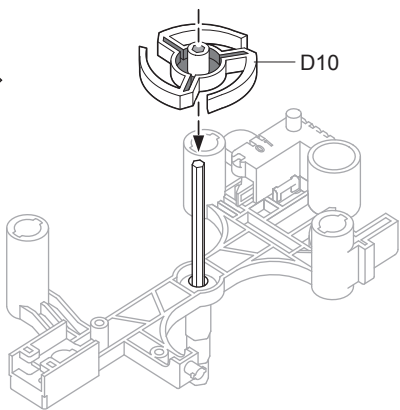
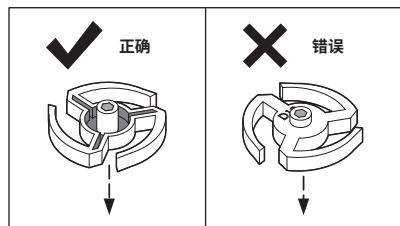
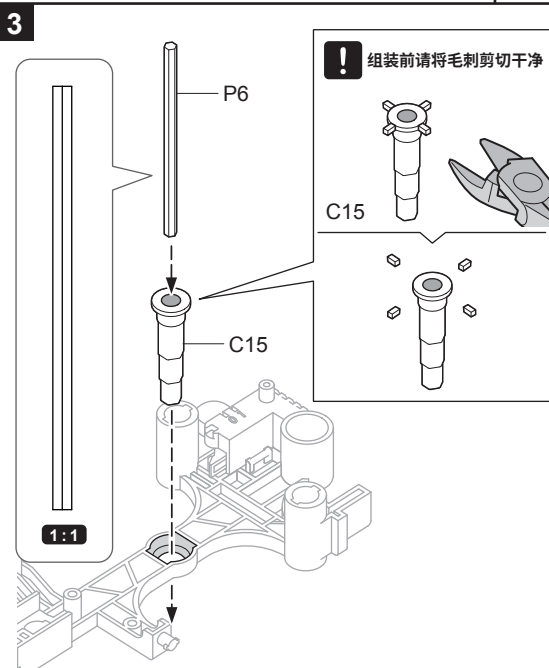
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2

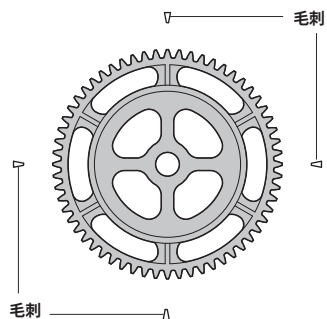


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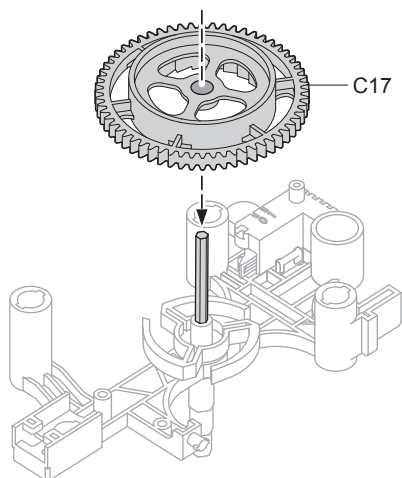
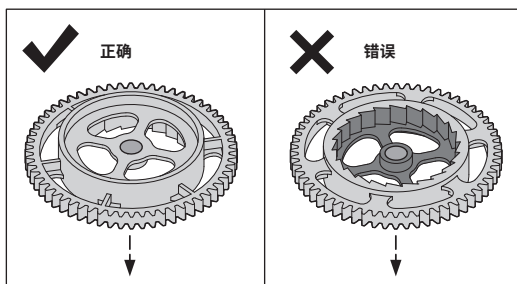
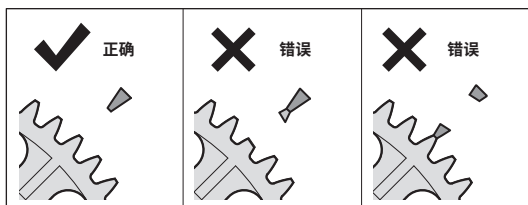


4

! 组装前请将毛刺剪切干净

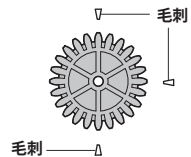


C17

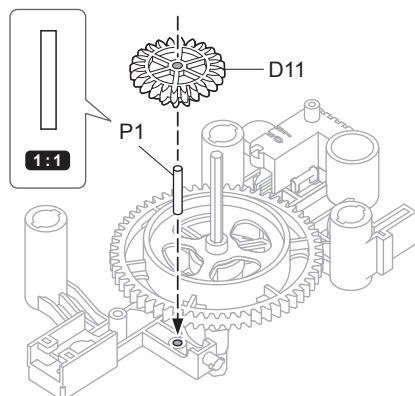
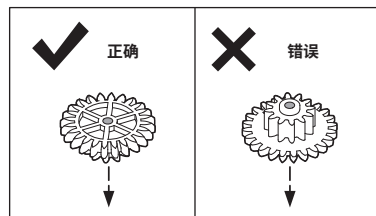


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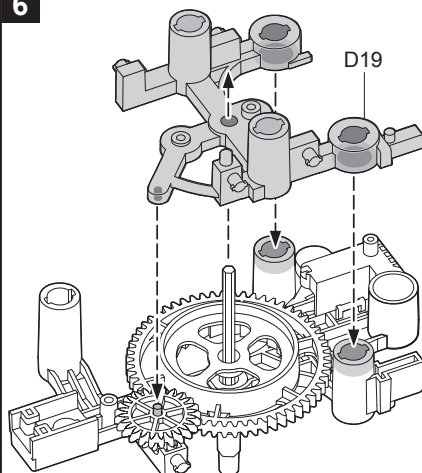
! 组装前请将毛刺剪切干净



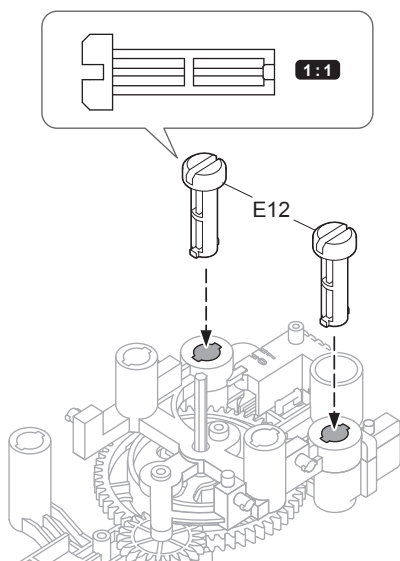
D11



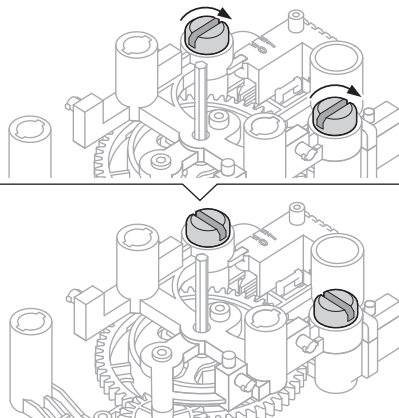
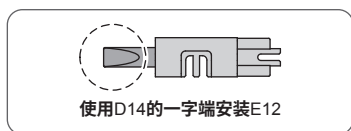
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7



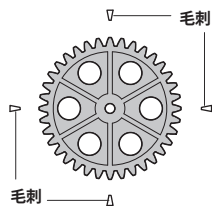
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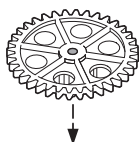
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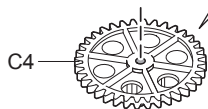
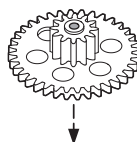
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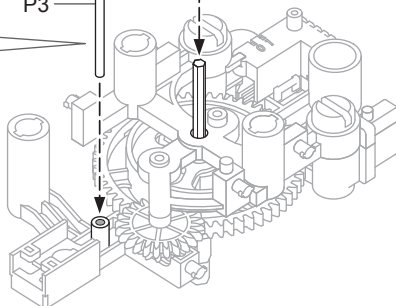
正确



错误



P3

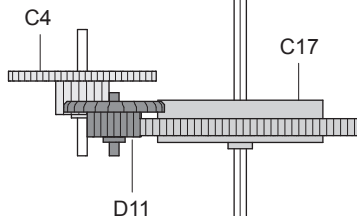
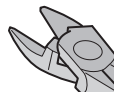


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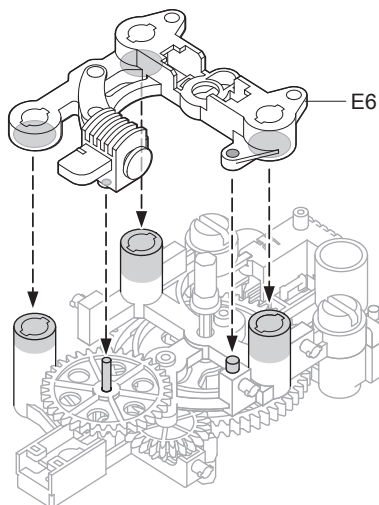


组装前请将毛刺剪切干净

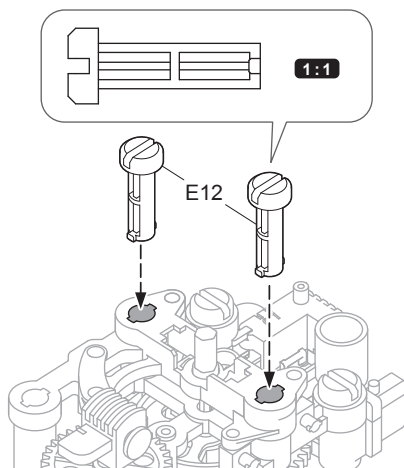
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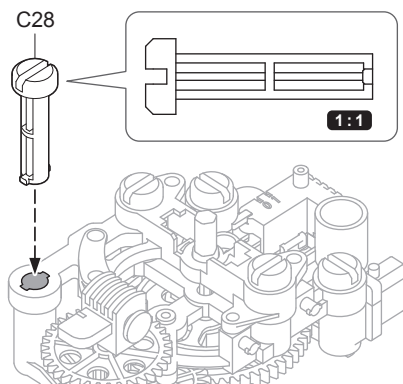
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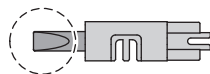
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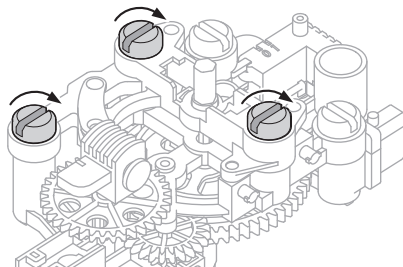
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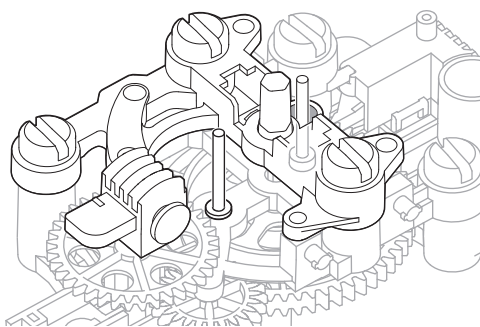
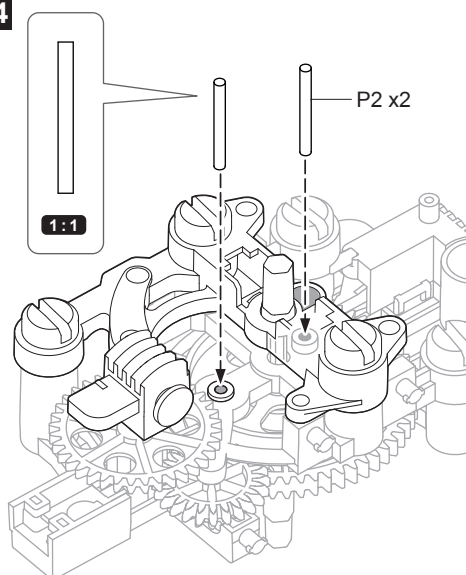
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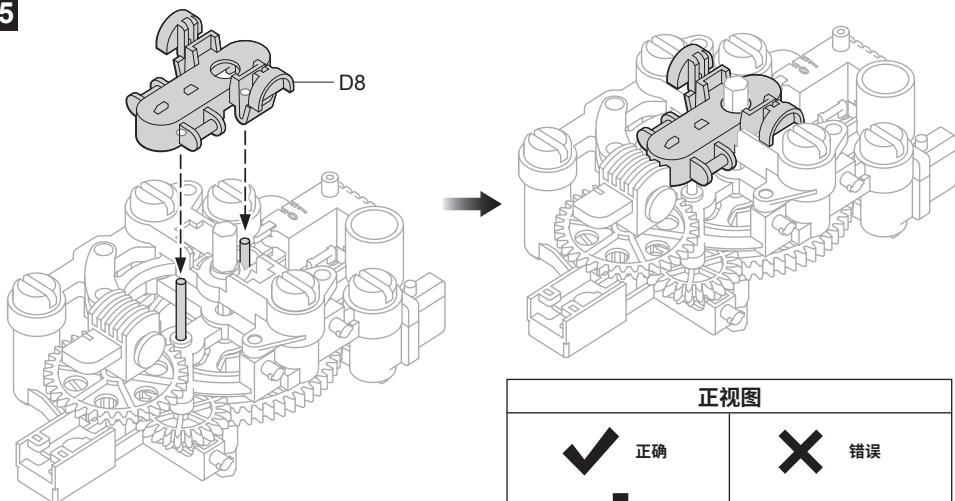
使用D14的一字端安装E12和C28



14



15



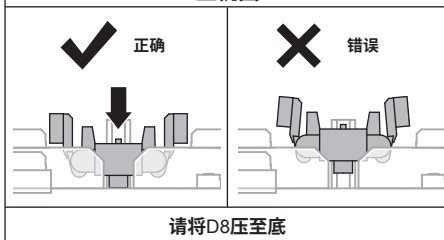
正视图



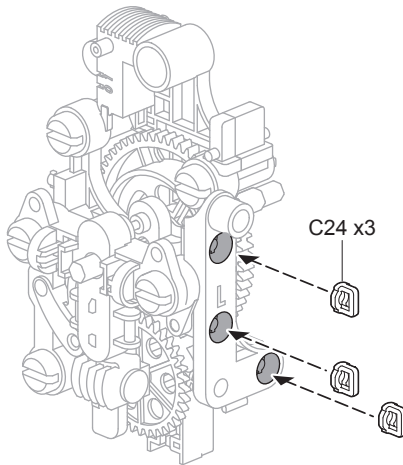
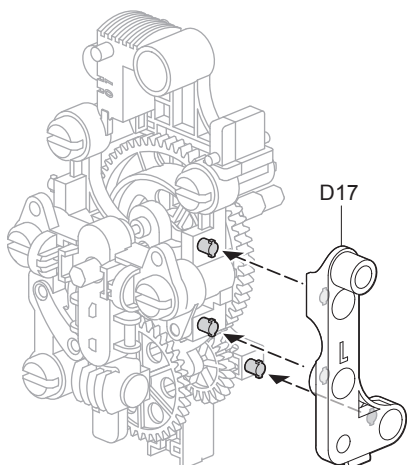
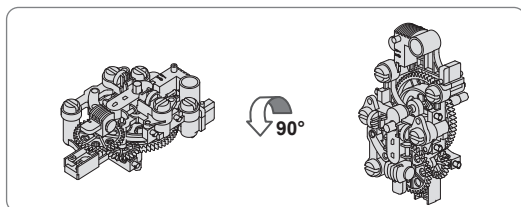
正确



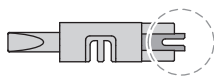
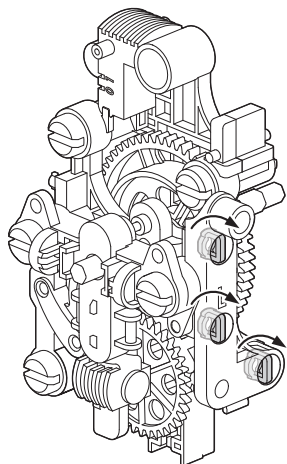
错误



16



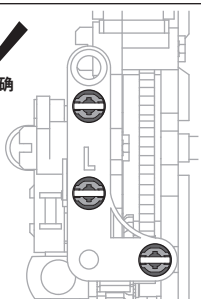
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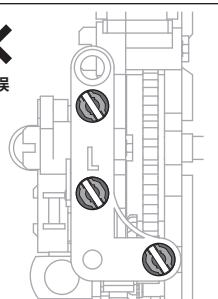
使用D14的开口端安装C24



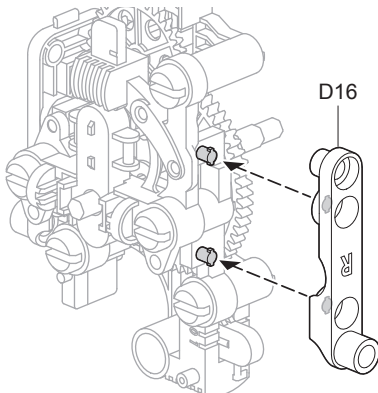
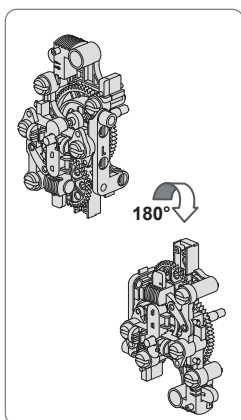
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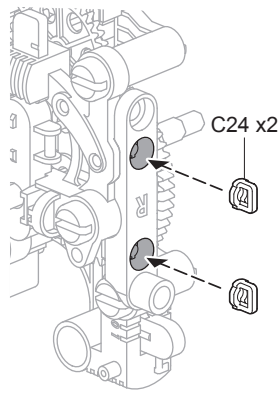
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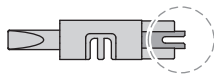
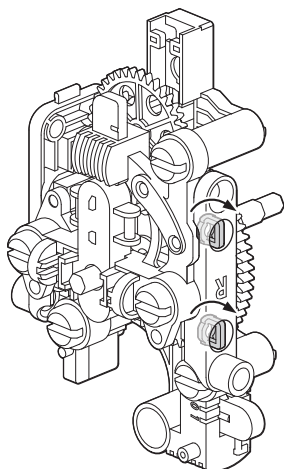
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D16



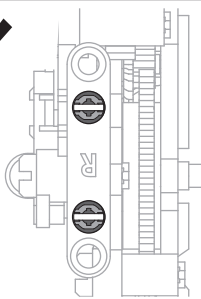
19



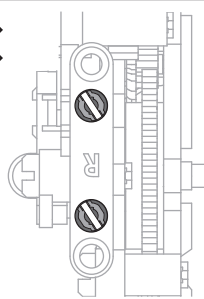
使用D14的开口端安装C24

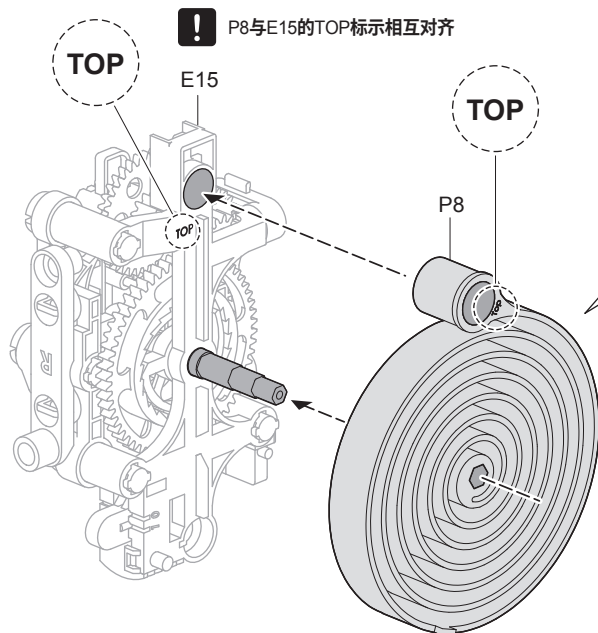
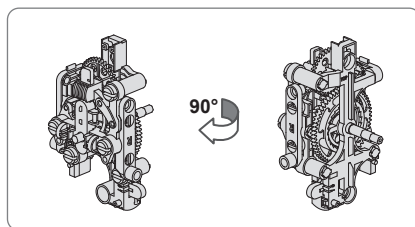


正确



错误



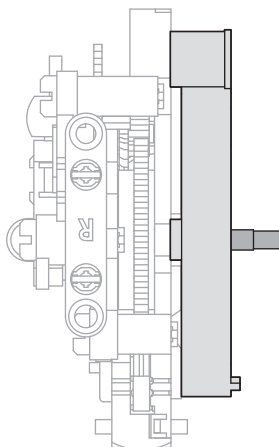
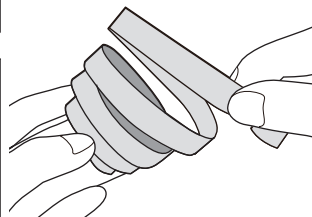


! P8与E15的TOP标示相互对齐

! 请勿过度拉拔螺旋弹簧，
以免造成损坏



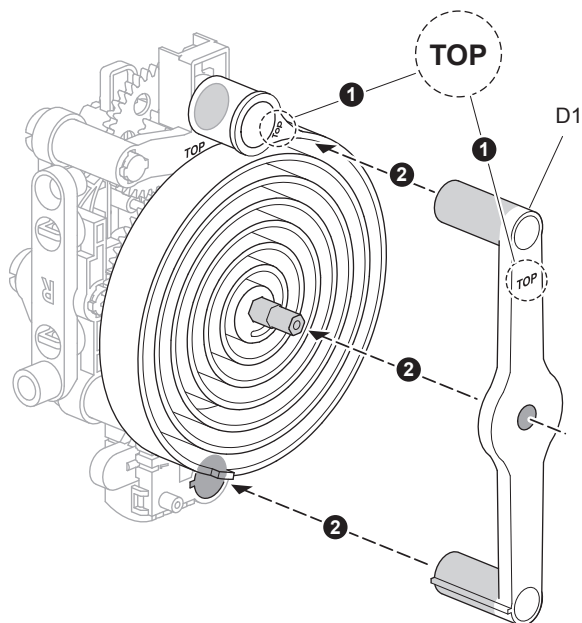
错误



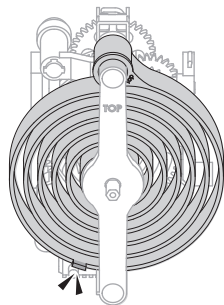
侧视图

21

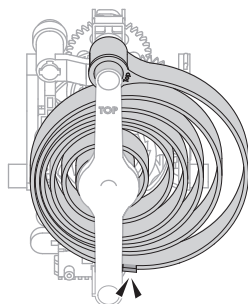
! “TOP” 标示应朝上



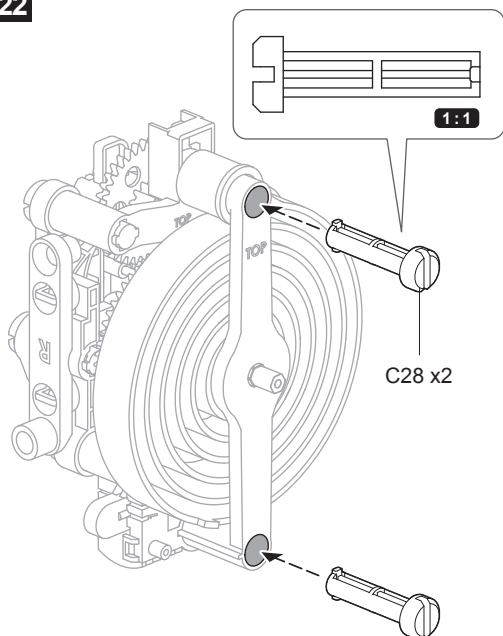
正确



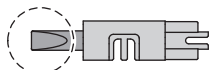
错误



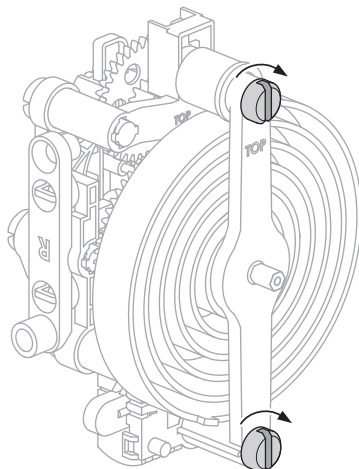
22



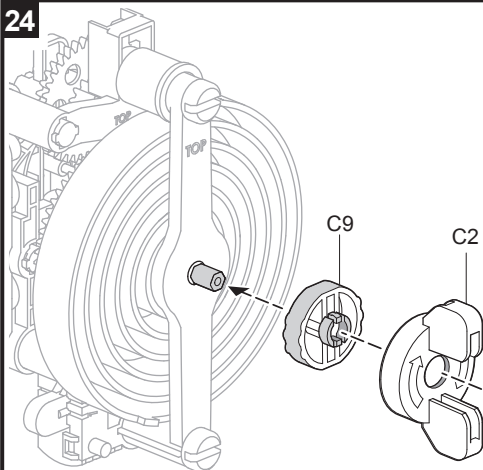
23



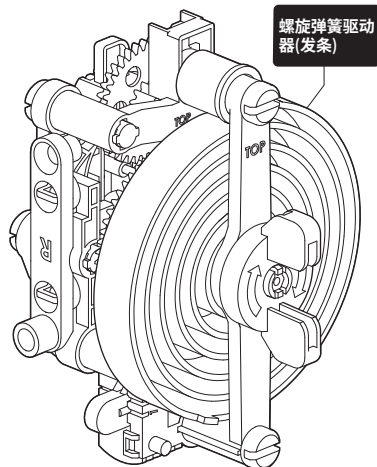
使用D14的一字端安装C28



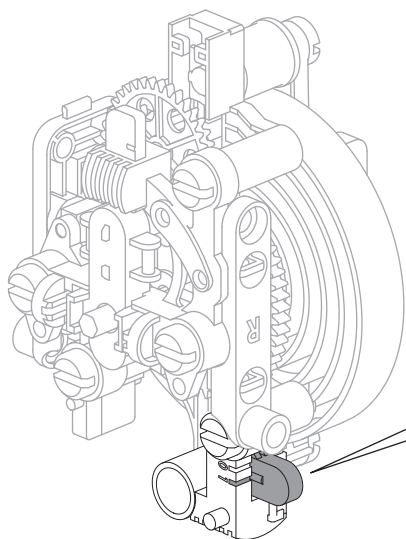
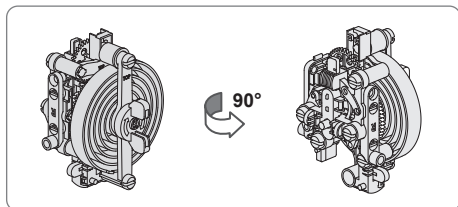
24



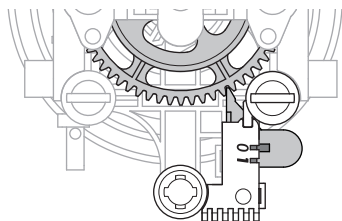
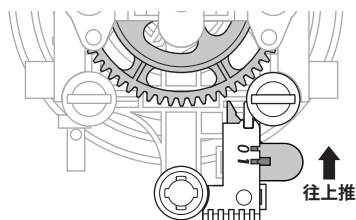
25



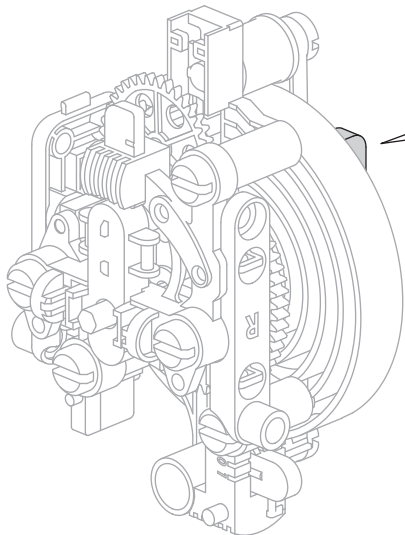
螺旋弹簧驱动器(发条)测试



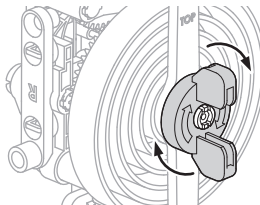
1



将开关切换到“0”以利停止运转



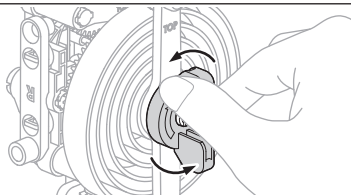
2



顺时针转一圈

✗

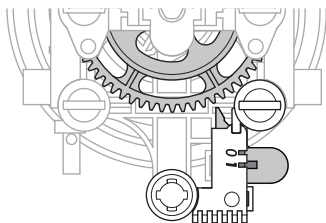
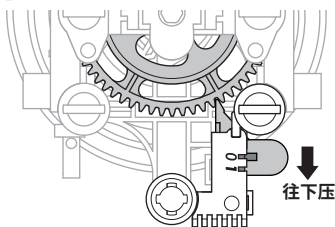
错误



!

请勿逆时针旋转，以免损坏

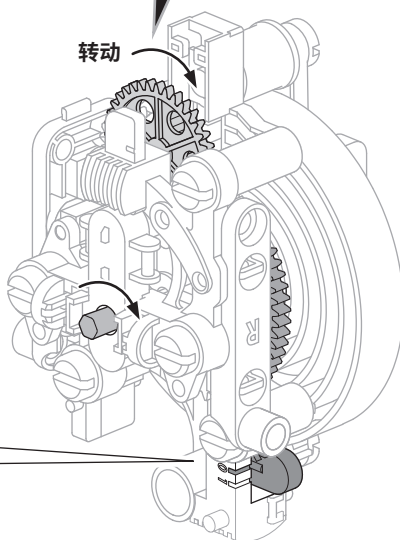
3



将开关切换到“1”以利开始动作

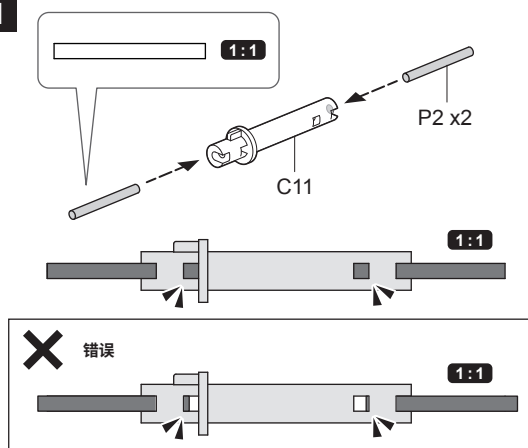
OK

转动

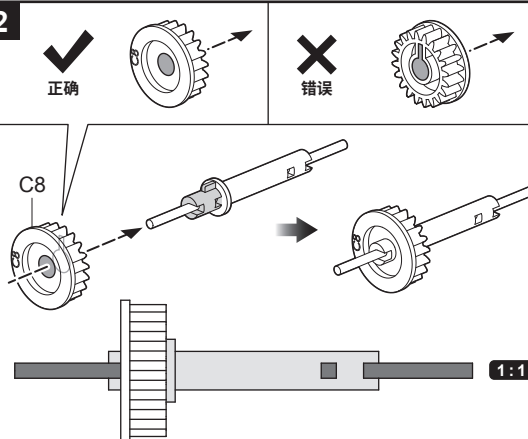


跑跑发条车组装

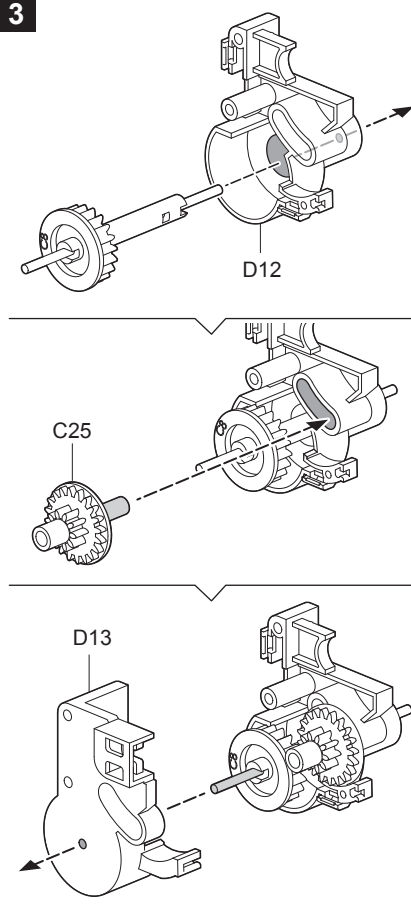
1



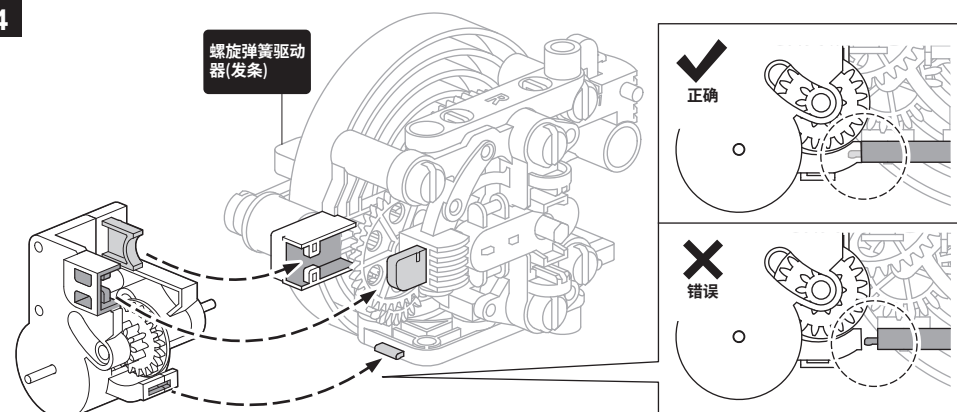
2



3

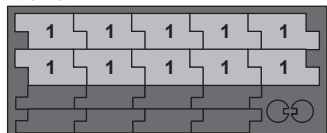


4



5

泡棉贴 P7



P7-① x4

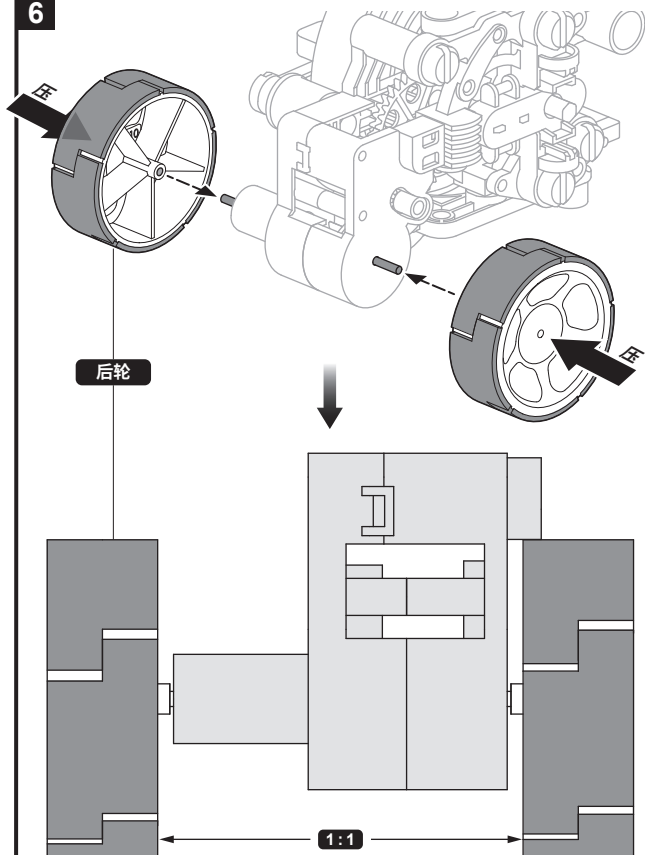
后轮

P7-①

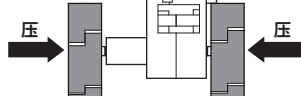
C10

x2

6



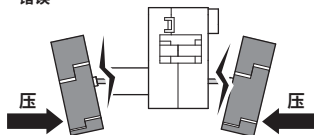
正确

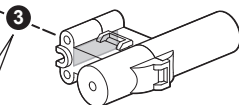
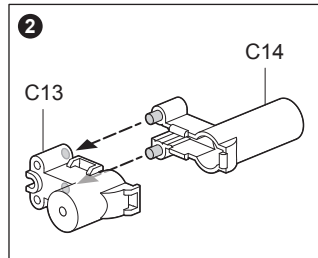
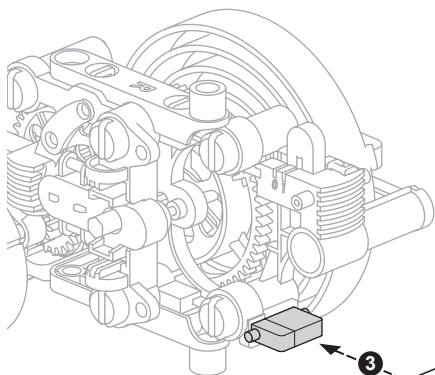
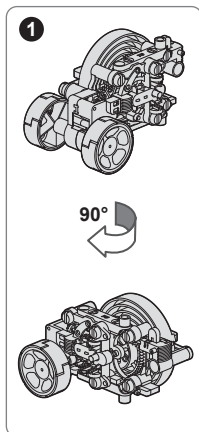


请朝轮胎中心紧压，勿压轮框

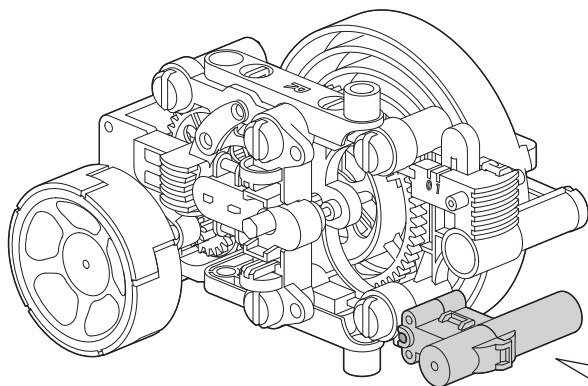
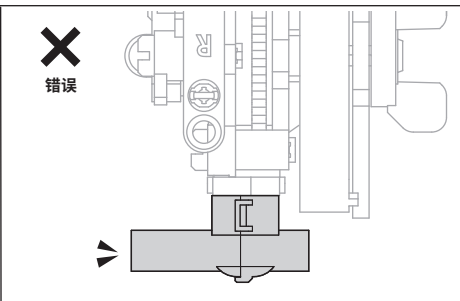
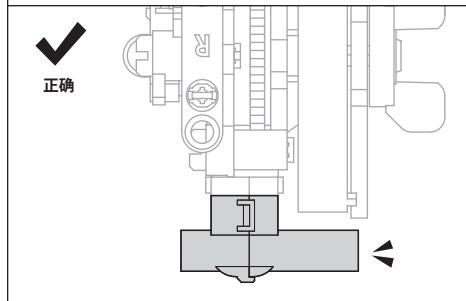


错误

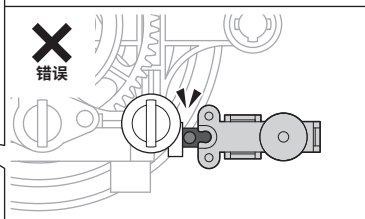
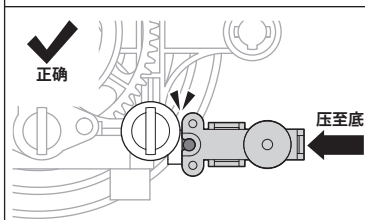




俯视图

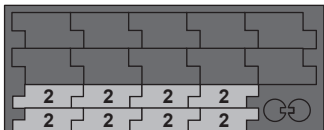


侧视图



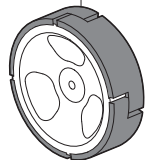
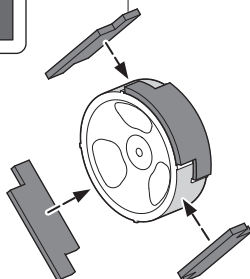
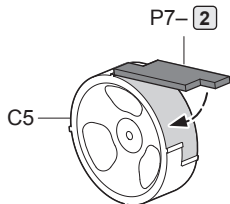
8

泡棉贴 P7



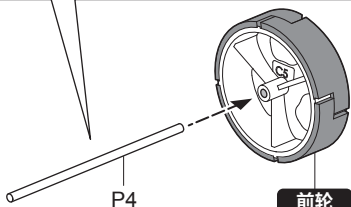
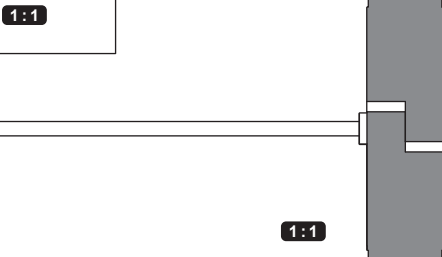
P7-② x3

前轮



x2

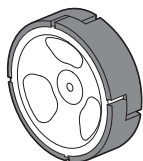
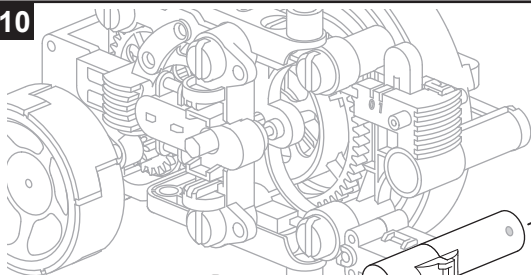
9



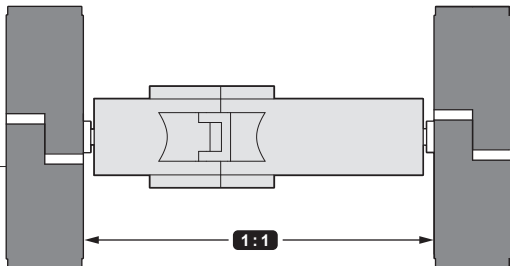
P4

前轮

10

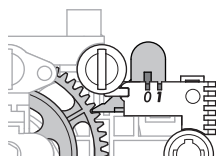
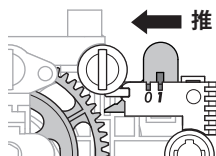
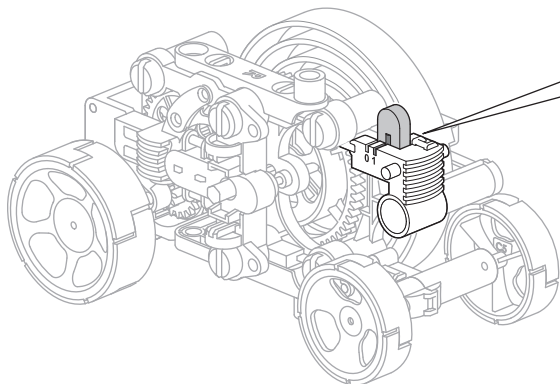


前轮



1:1

1

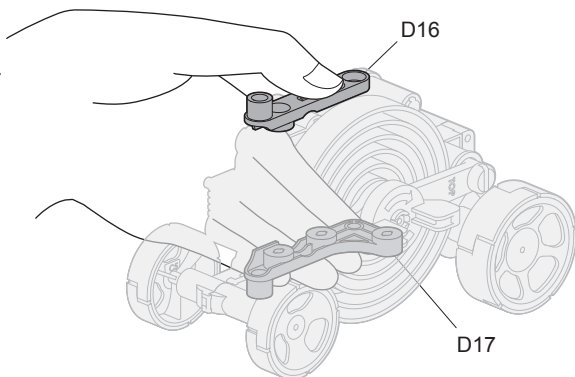


将开关切换到“0”以利锁定动作

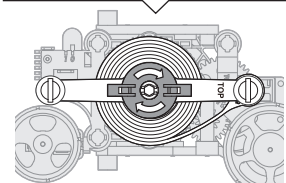
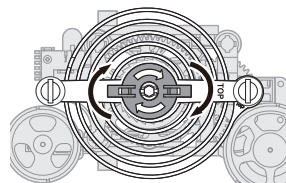
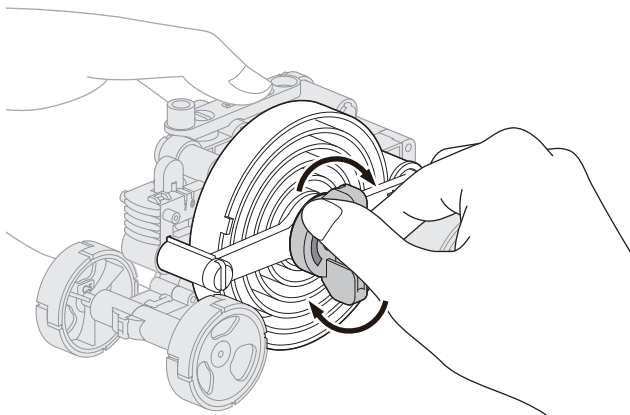
2



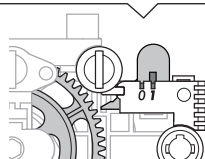
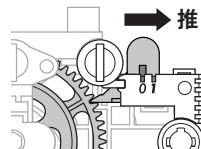
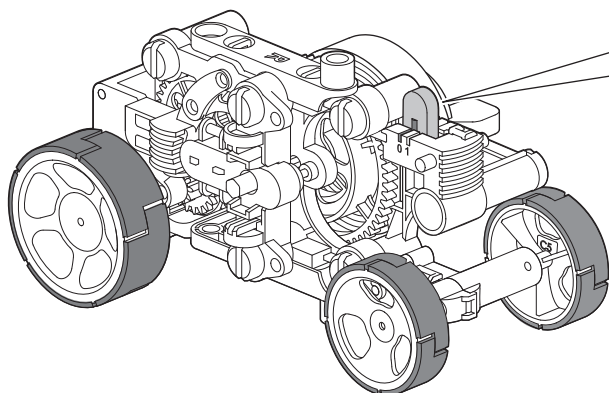
请依图示握住D16 和 D17



3

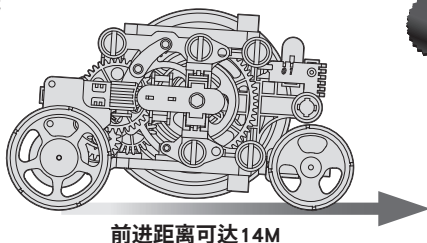


顺时针旋转直到听到“咔”的声音



将开关切换到“1”以利开始动作

5 出发前进



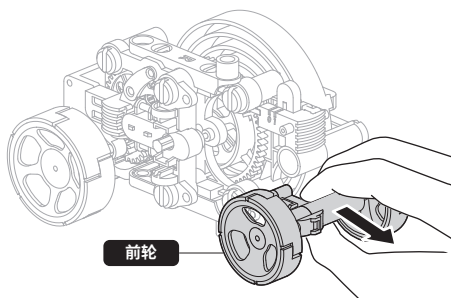
前进距离可达14M



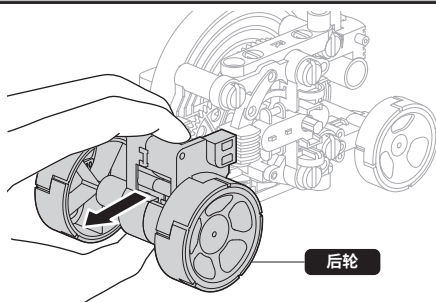
当每次结束游戏后，请将螺旋发条完全解开放松，否则发条可能会变形且失去弹性。放松发条请参考

54页

拆装技巧



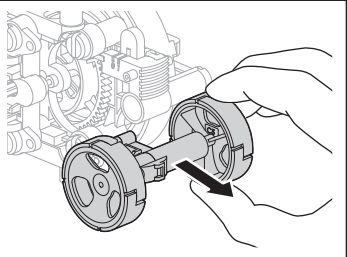
前轮



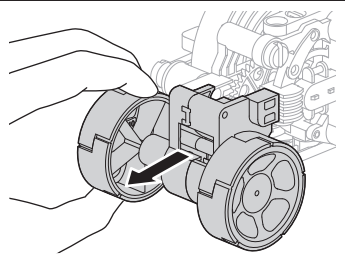
后轮



错误



错误



滴答定时器组装

1

P3

1:1

x4

E14

P3

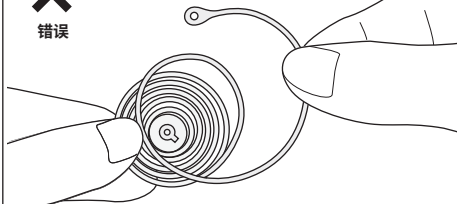
2



请勿过度拉拔游丝，以免造成损坏



错误



正确

C27



错误

侧视图

C27

P9



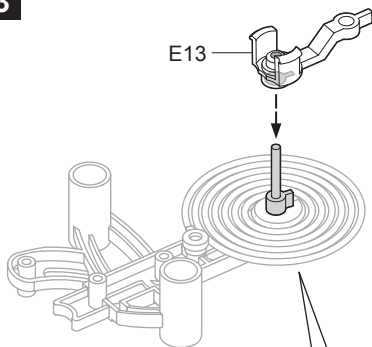
正确



错误

3

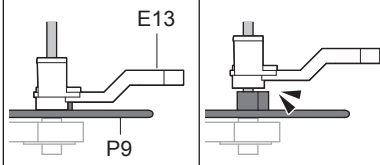
E13



正确



错误



请将E13往P9压到底

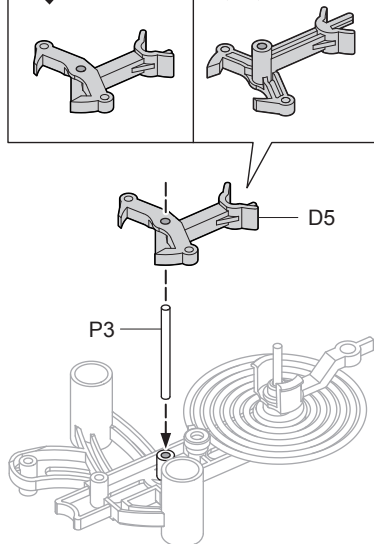
4



正确



错误



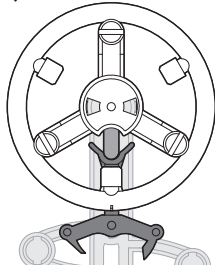
P3

5

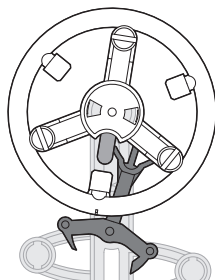
俯视图

请将C23往E13压到底

✓ 正确



✗ 错误



C23

3

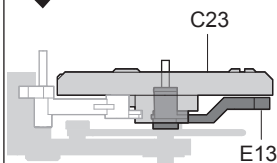
1

2

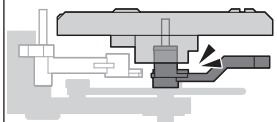
E13

侧视图

✓ 正确



✗ 错误



6

抓住C23, 调整E13让P3和A对齐

C23

E13

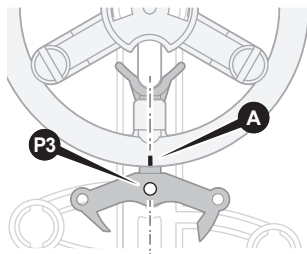
P3

A

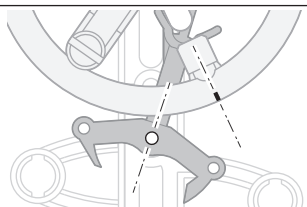
P3

A

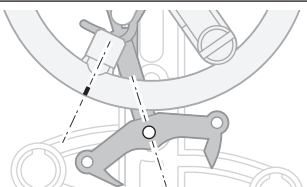
✓ 正确



✗ 错误

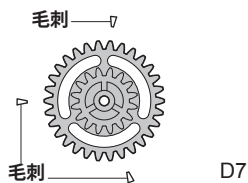


✗ 错误

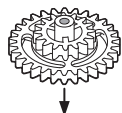


❗ 务必确认手放开C23的时候, P3和A要对齐

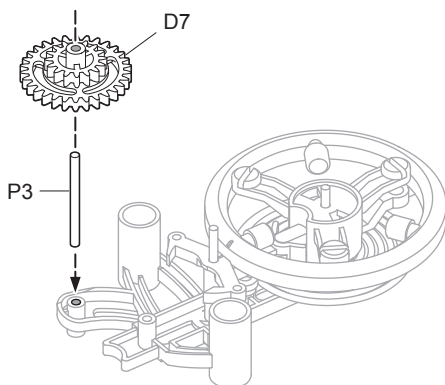
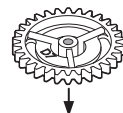
7 组装前请将毛刺剪切干净



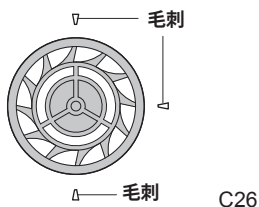
正确



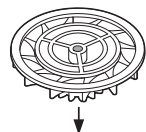
错误



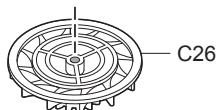
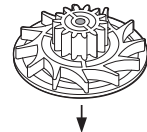
8 组装前请将毛刺剪切干净



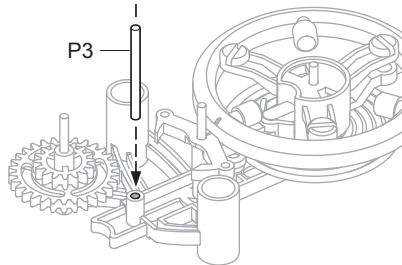
正确



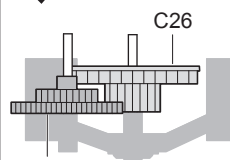
错误



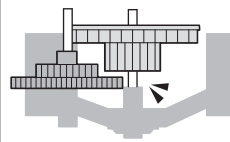
P3



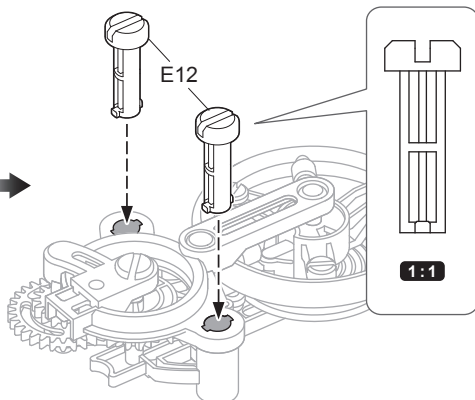
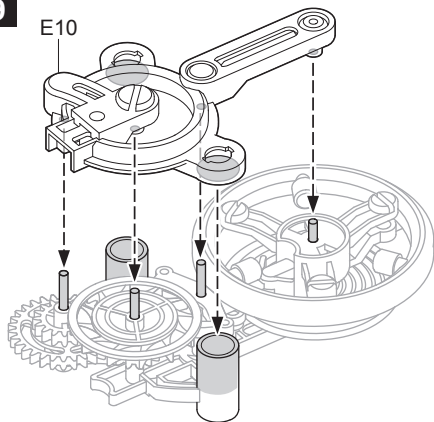
正确



错误



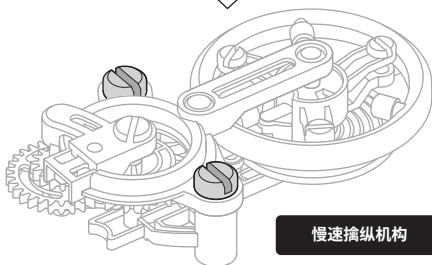
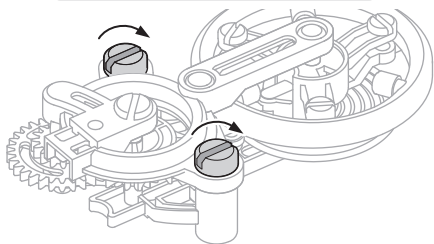
9



10

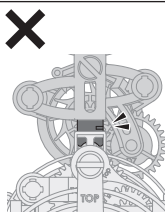
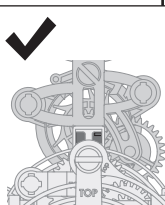
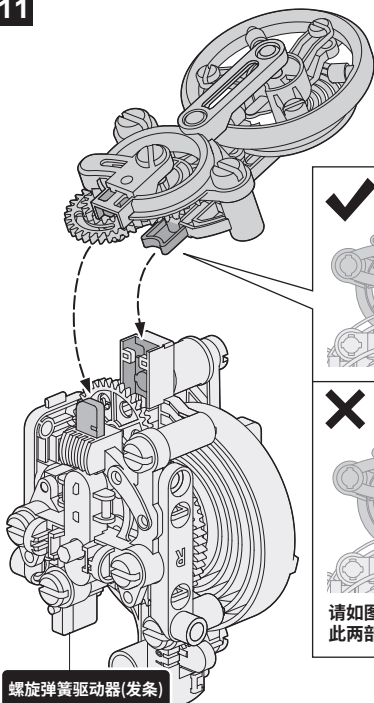


使用D14的一字端安装E12



慢速擒纵机构

11

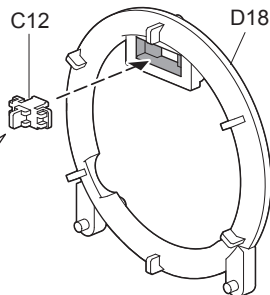
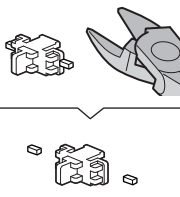


请如图正确安装
此两部分

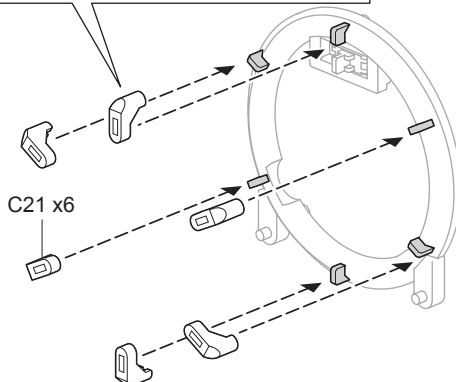
螺旋弹簧驱动器(发条)

12

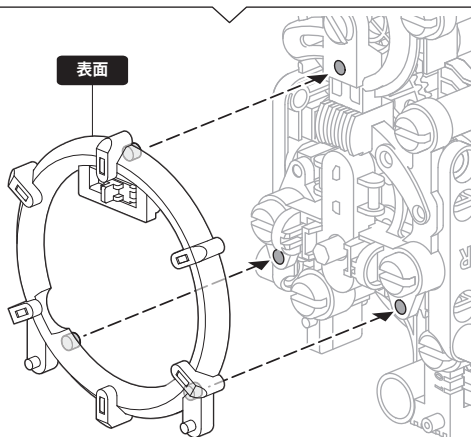
! 组装前请先将
毛刺剪切干净



! 组装前请先将
毛刺剪切干净

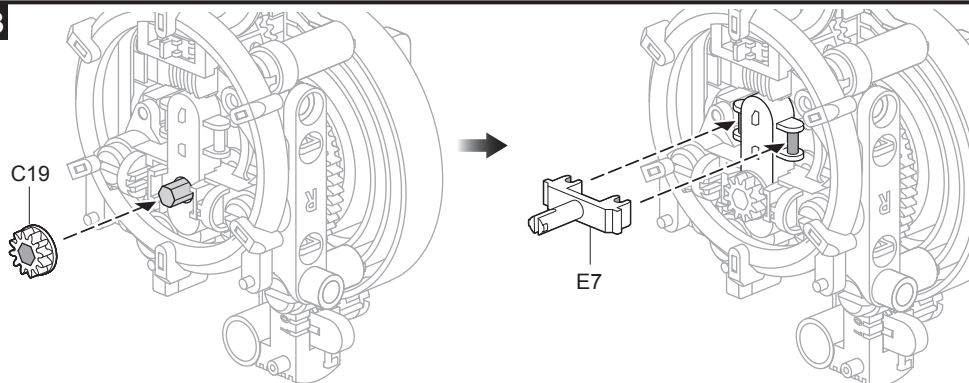


C21 x6



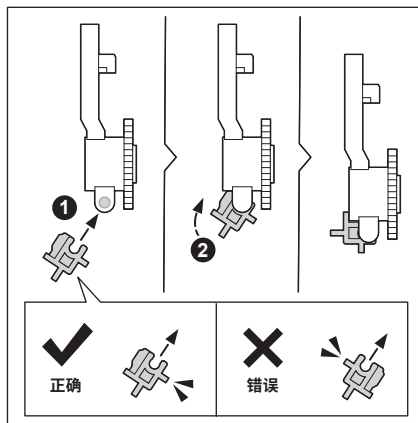
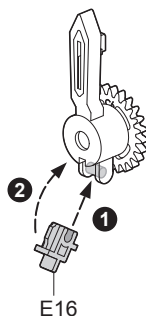
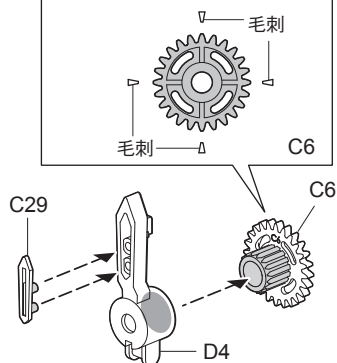
表面

13

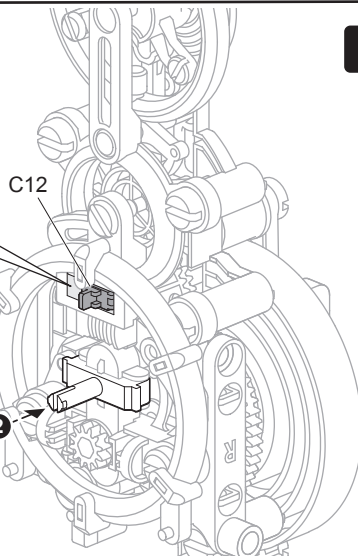
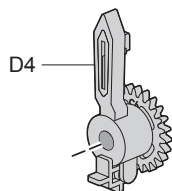
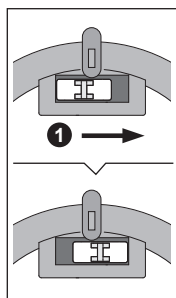


14

! 组装前请将毛刺剪切干净



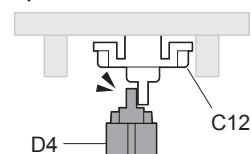
15



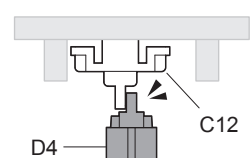
俯视图



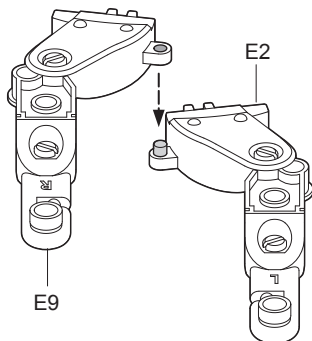
正确



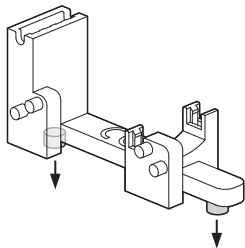
错误



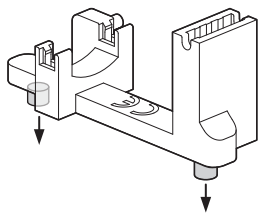
16



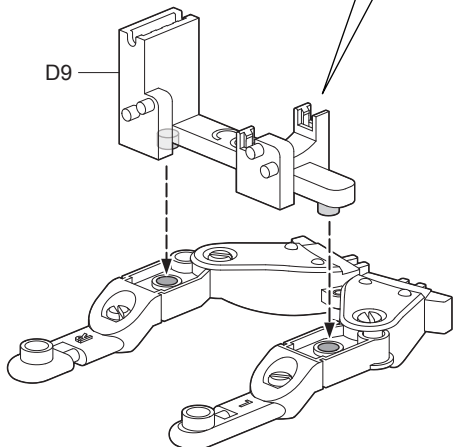
正确



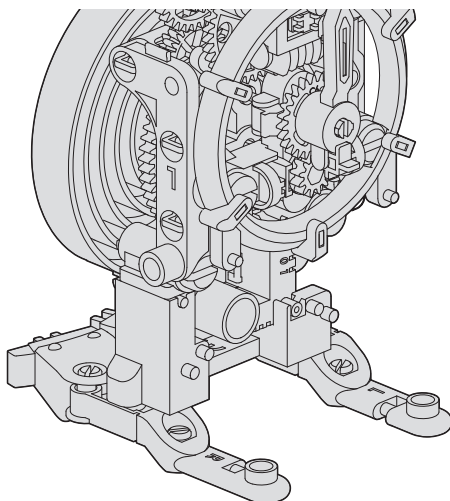
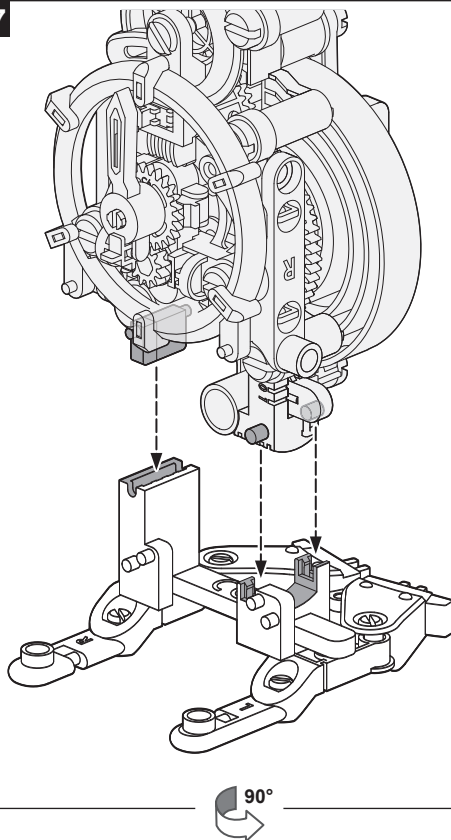
错误



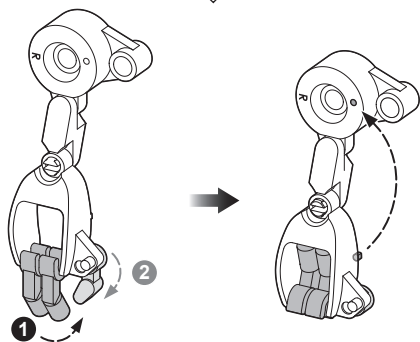
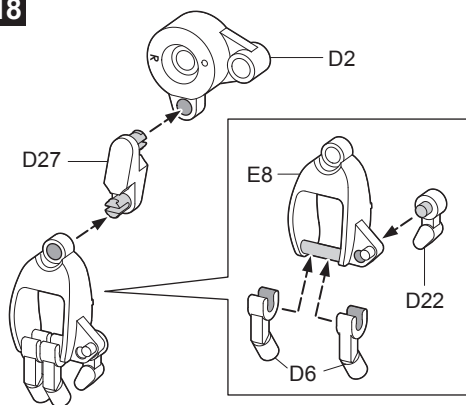
D9



17

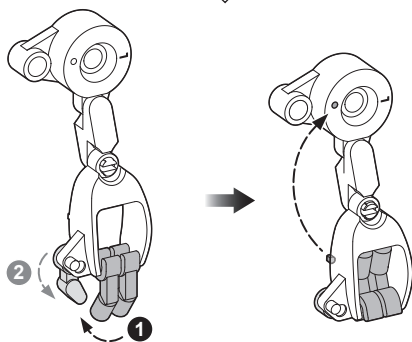
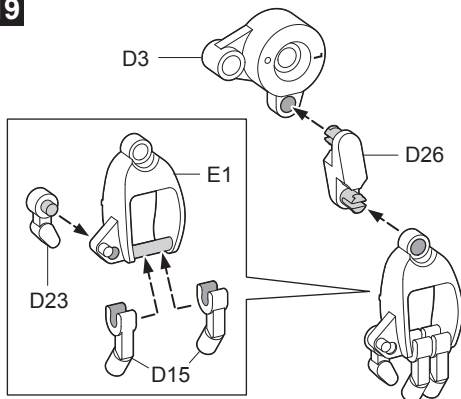


18



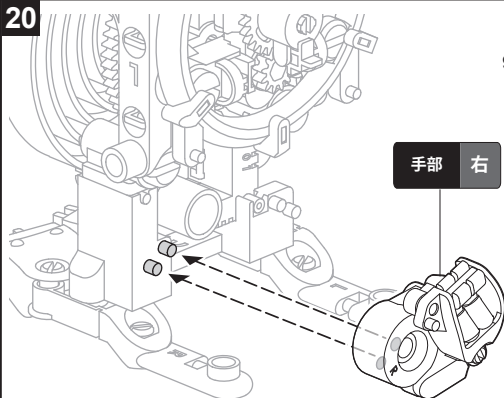
手部 右

19

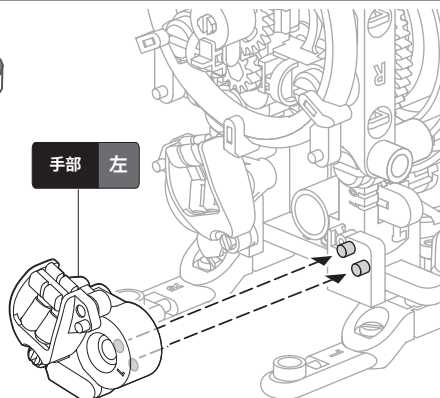


手部 左

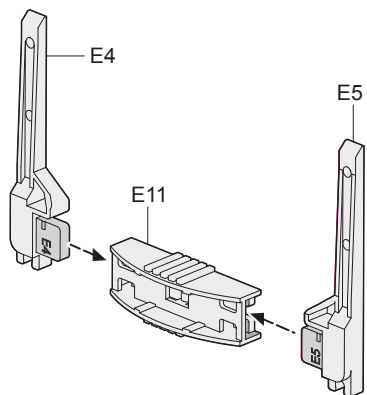
20



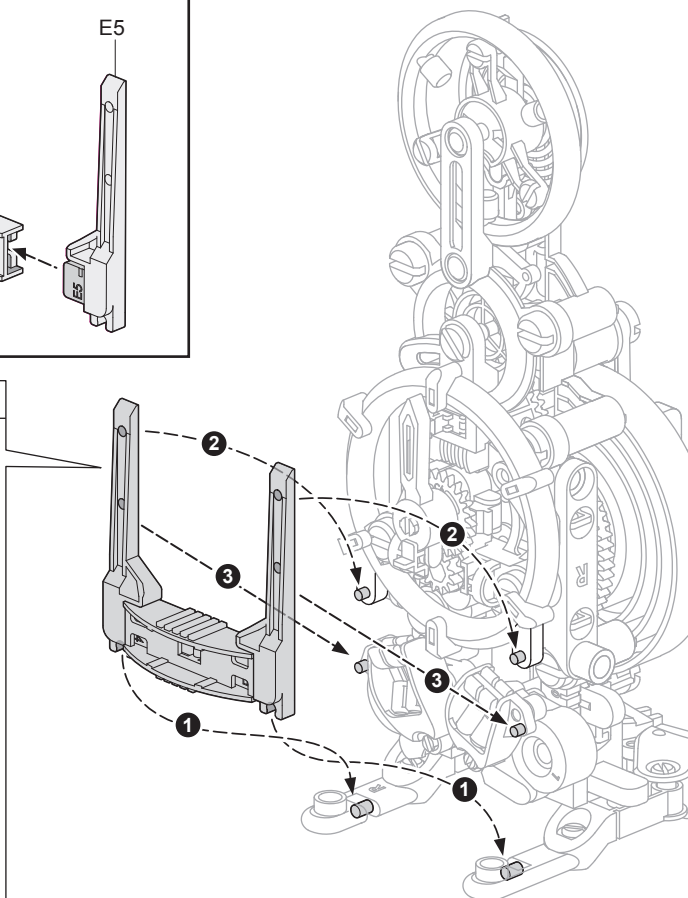
90°



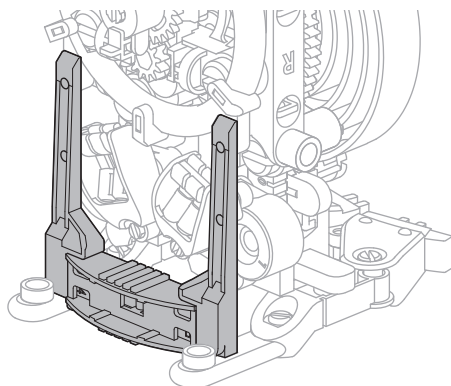
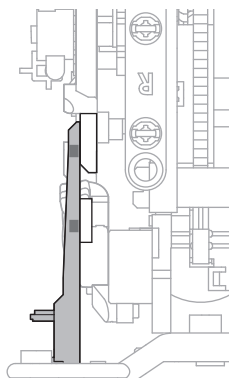
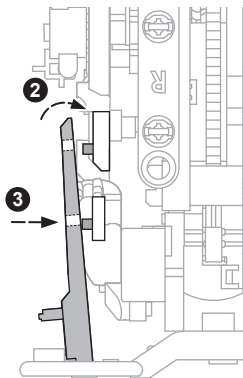
21



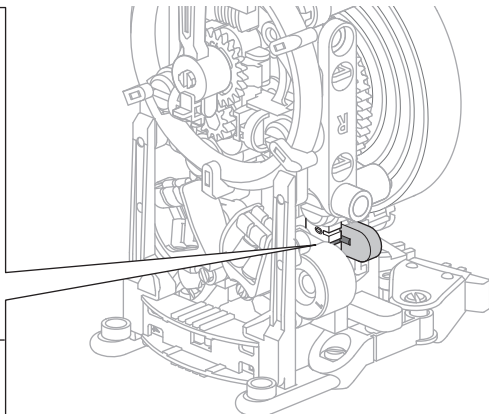
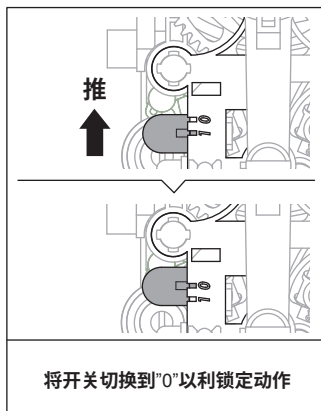
22



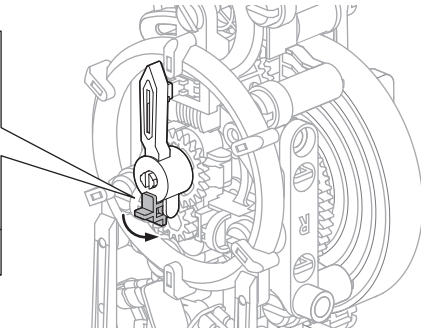
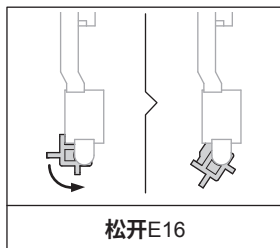
侧视图



1



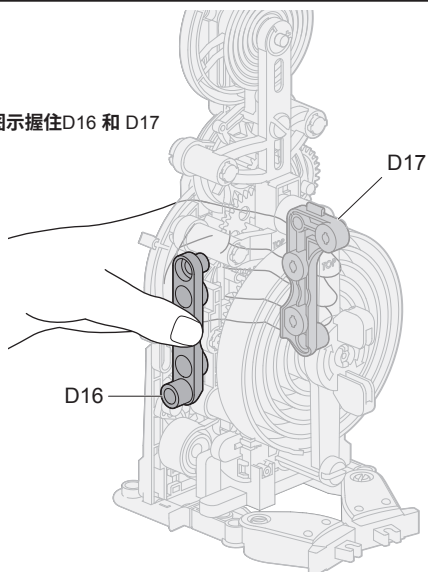
2



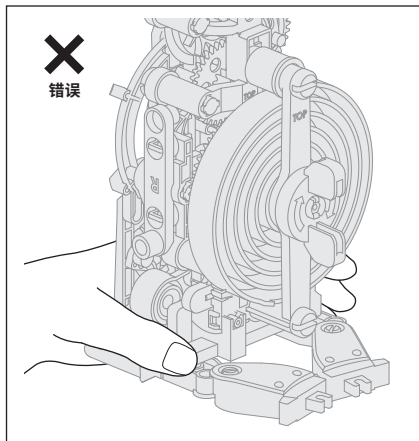
3



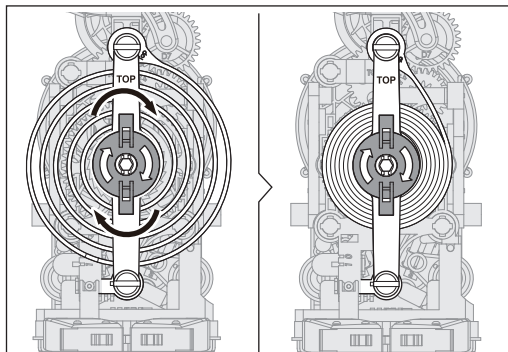
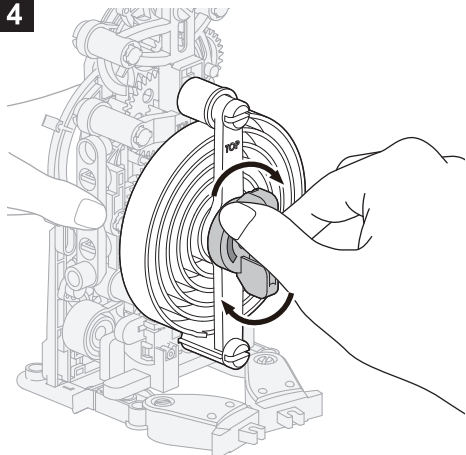
请依图示握住D16 和 D17



错误

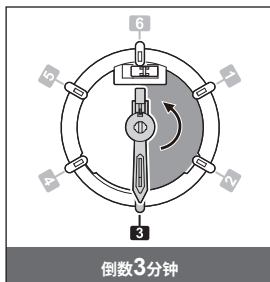
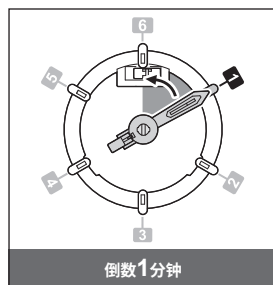
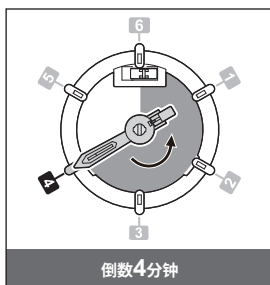
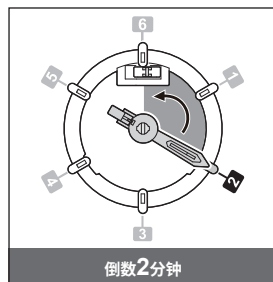
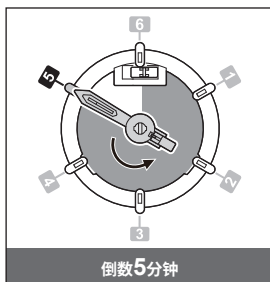
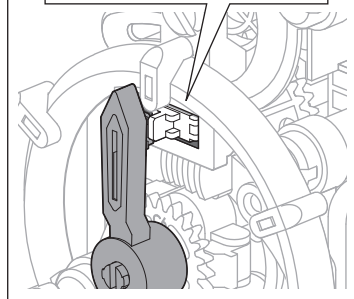
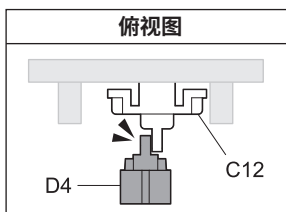
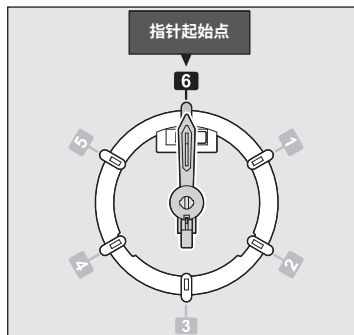


4

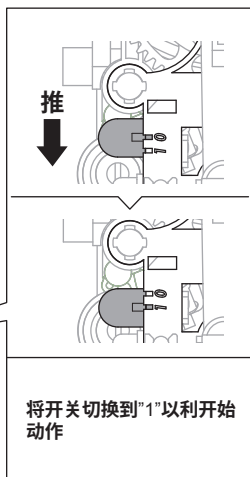
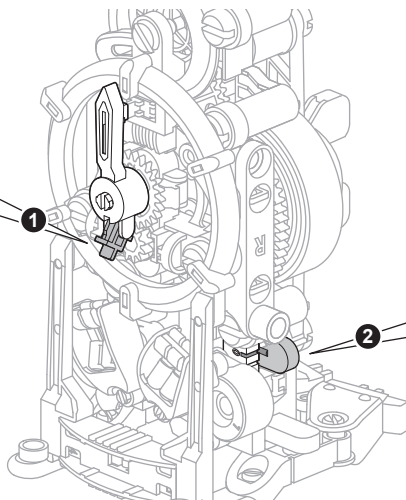
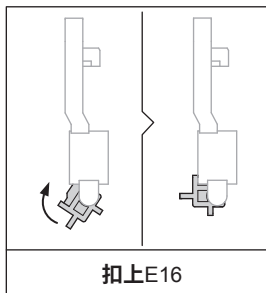


顺时针旋转直到听到“咔”的声音

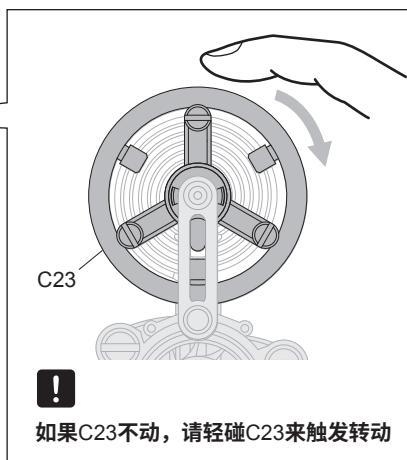
5 将指针调整到想要开始的位置

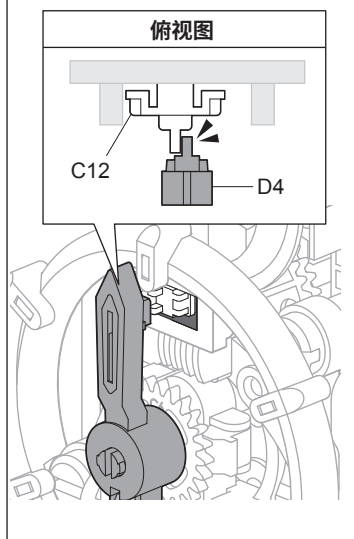
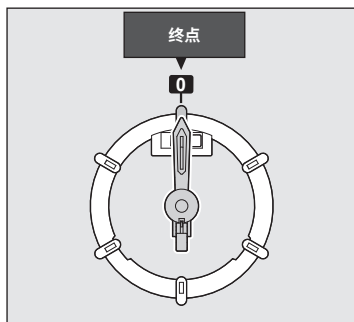


6



7 最多可以倒数6分钟



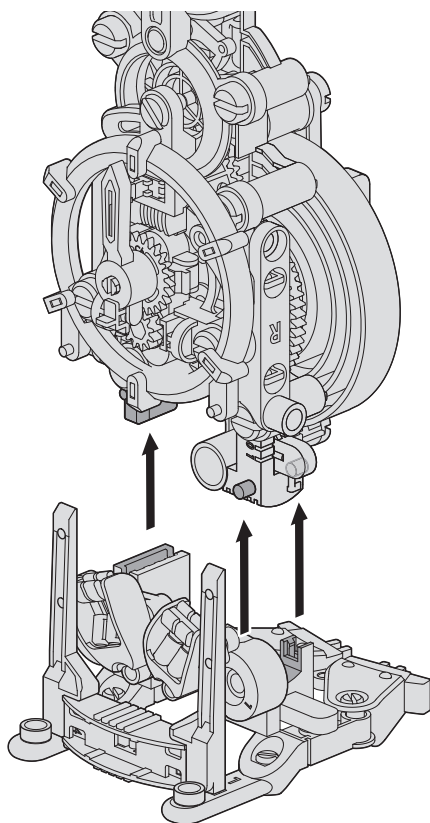
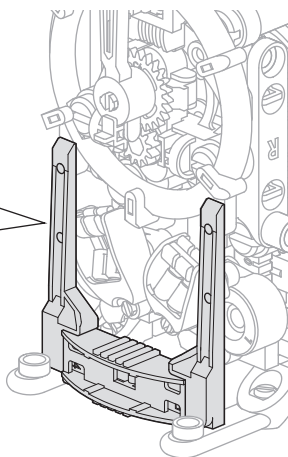
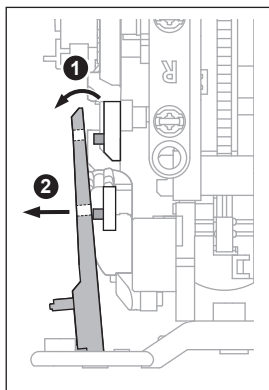


当分针来到终点，慢速擒纵机构
叉会再摆动最多30秒是正常现象

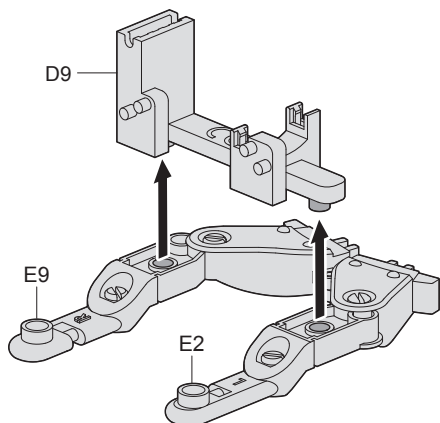
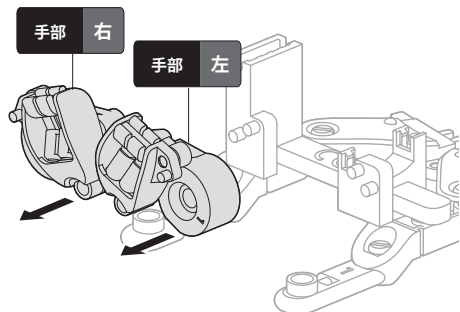
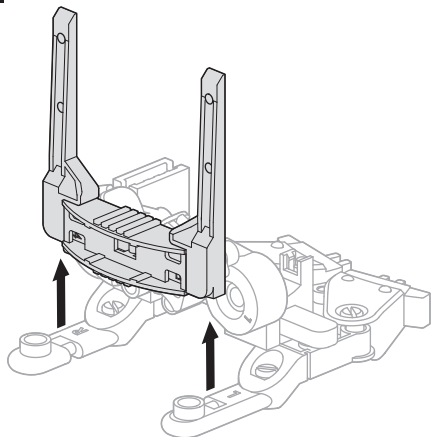


当每次结束游戏后，请将螺旋
发条完全解开放松，否则发条
可能会变形且失去弹性。放松
发条请参考 **55页**

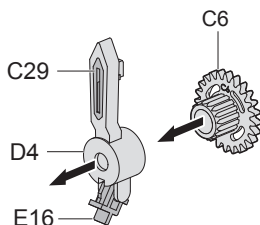
1



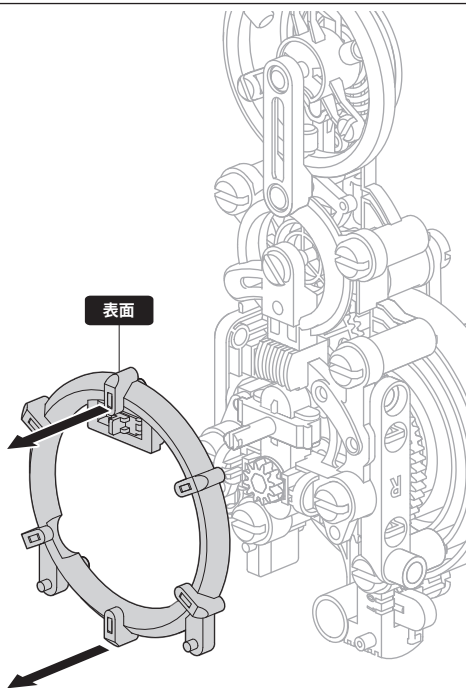
2



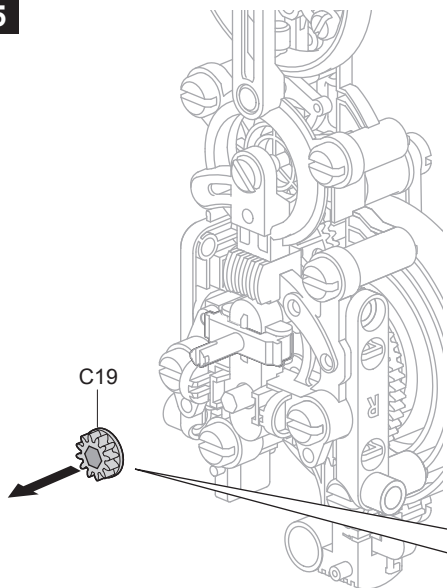
3



4



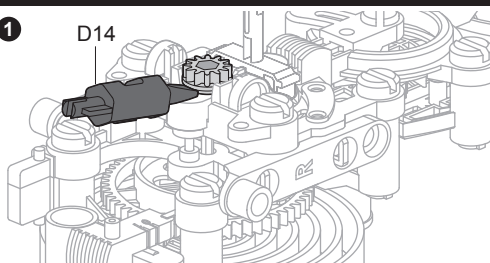
5



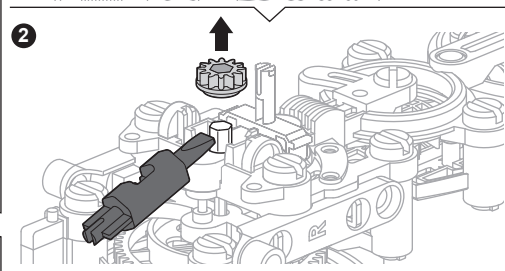
小技巧提醒

1

D14

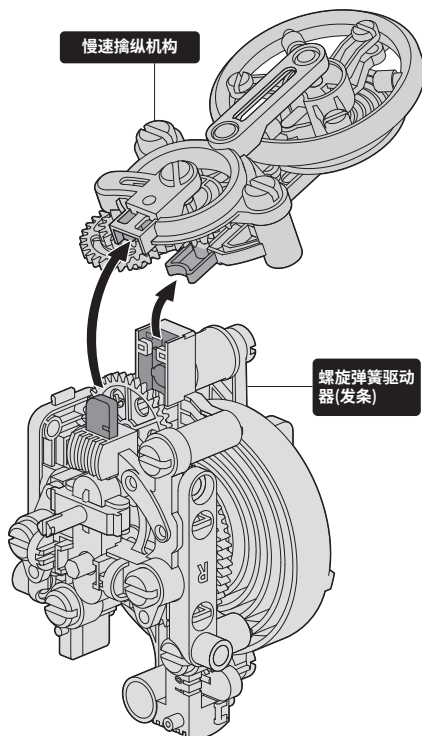


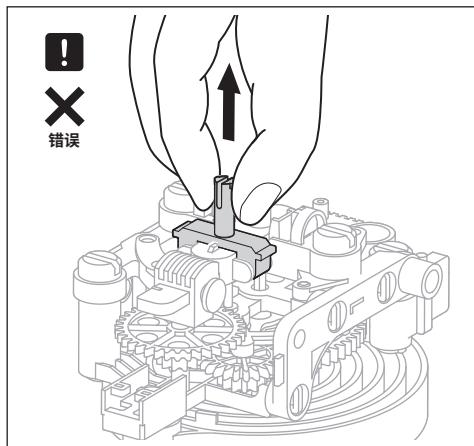
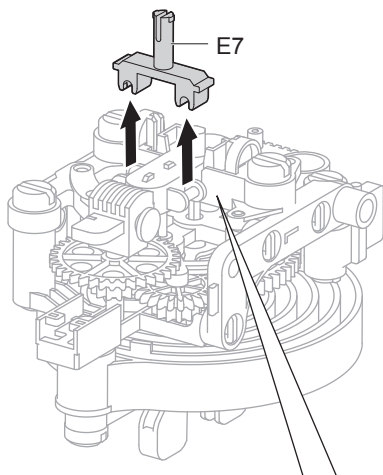
2



6

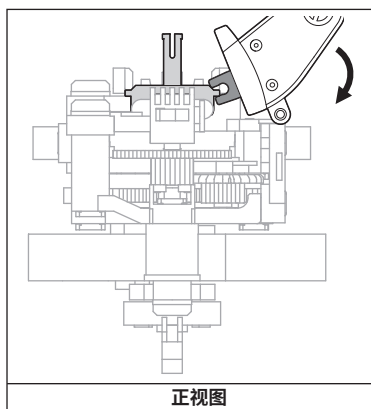
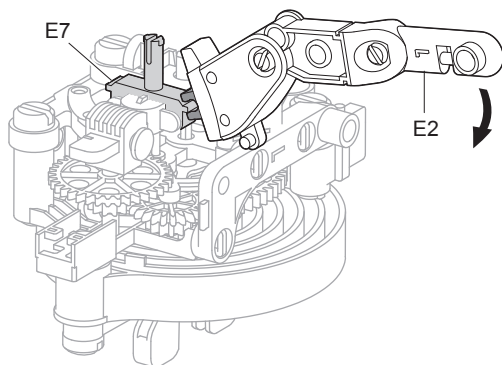
慢速擒纵机构

螺旋弹簧驱动器
(发条)

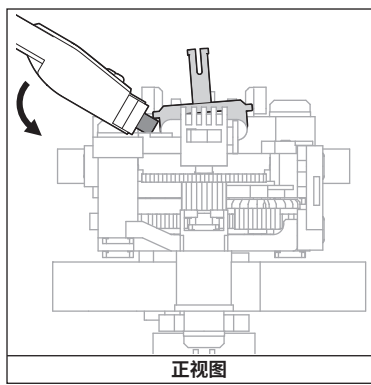
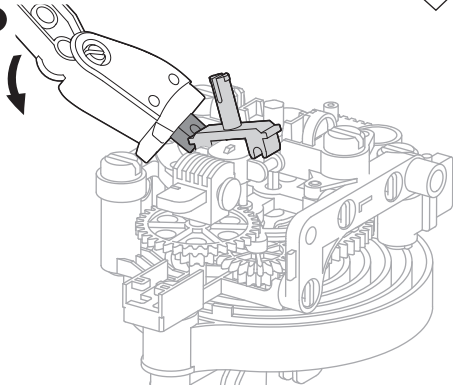


小技巧提醒

1 请用E2来拆卸E7



2



发条机器人安装

身体组装

1



使用D14开口端卸除C24

螺旋弹簧驱动器(发条)

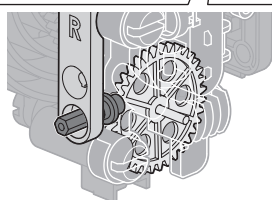
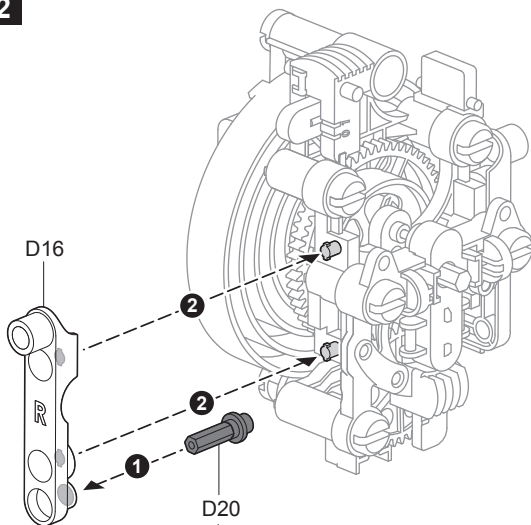


卸除C24x2

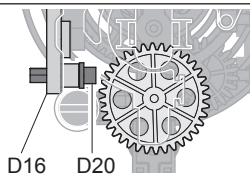


卸除D16

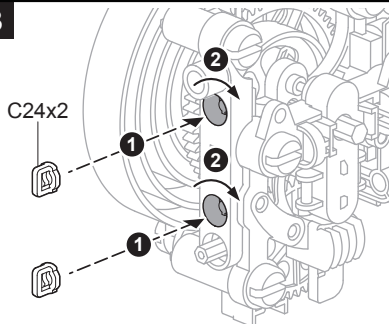
2



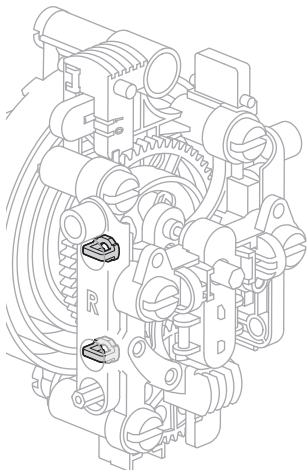
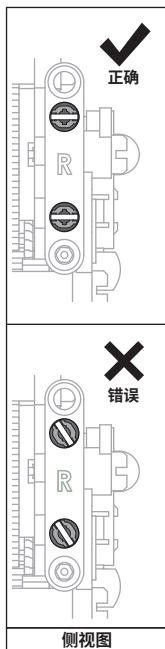
正视图



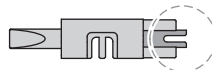
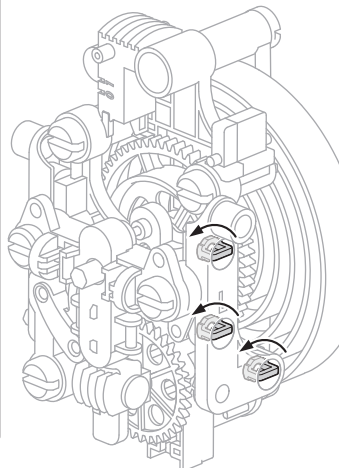
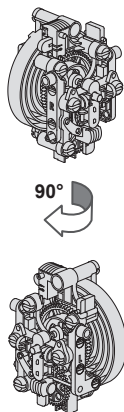
3



使用D14开口端安装C24

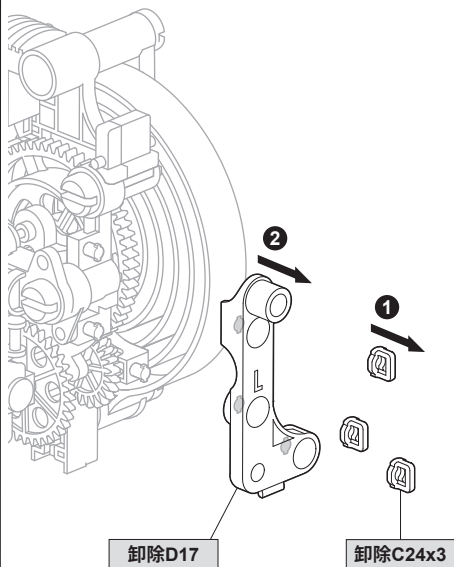


4



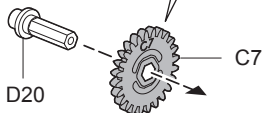
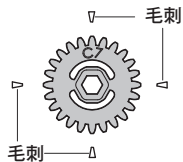
使用D14开口端卸除C24

5



6

⚠ 组装前请先将毛边剪切干净



正确

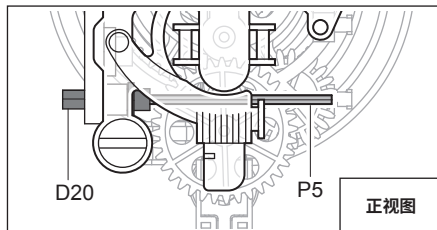
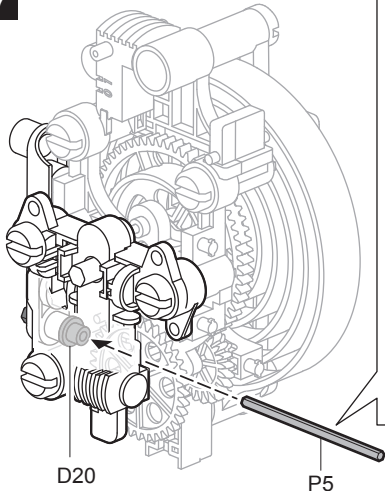


错误

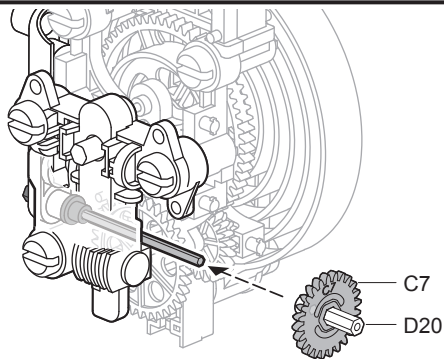


俯视图

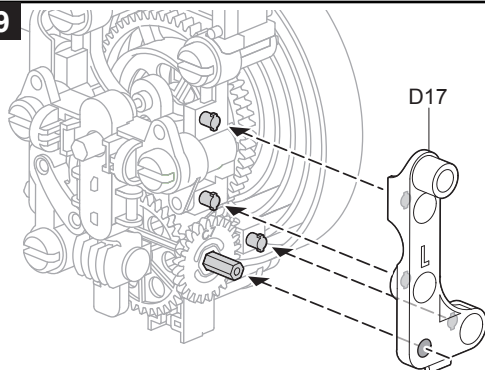
7



8



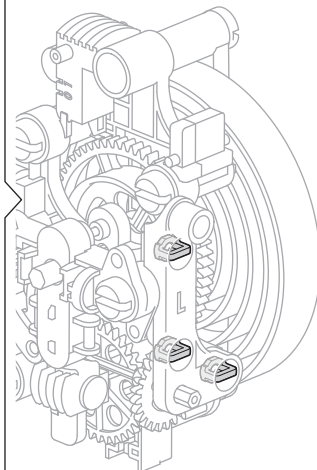
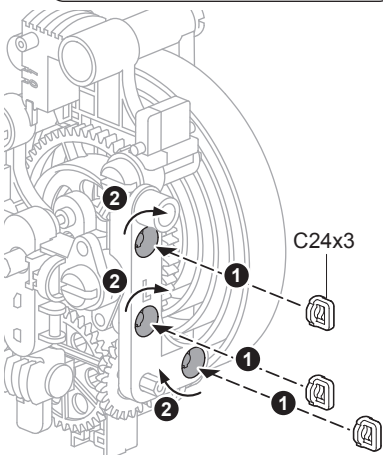
9



10



使用D14开口端安装C24



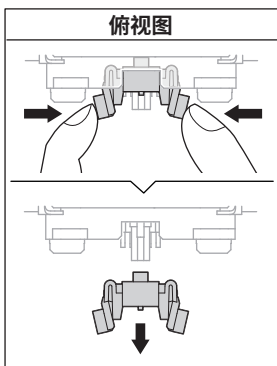
✓
正确

✗
错误

侧视图

11

俯视图

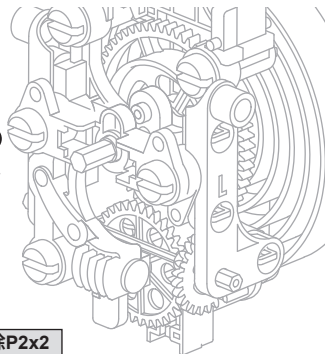


卸除D8

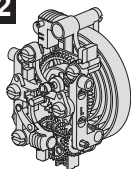
①

②

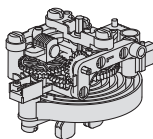
卸除P2x2



12



90°



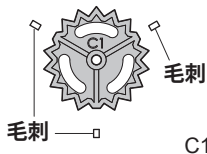
1:1

P2

②

C1

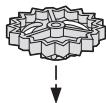
! 组装前请先将毛刺
剪切干净



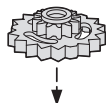
C1



正确



错误

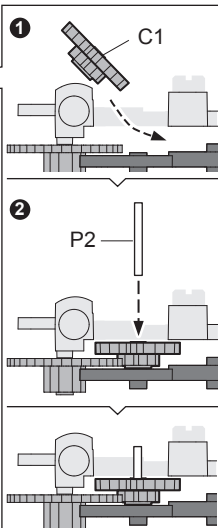


①

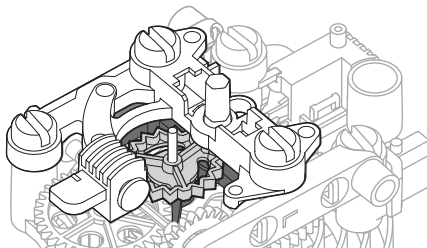
C1

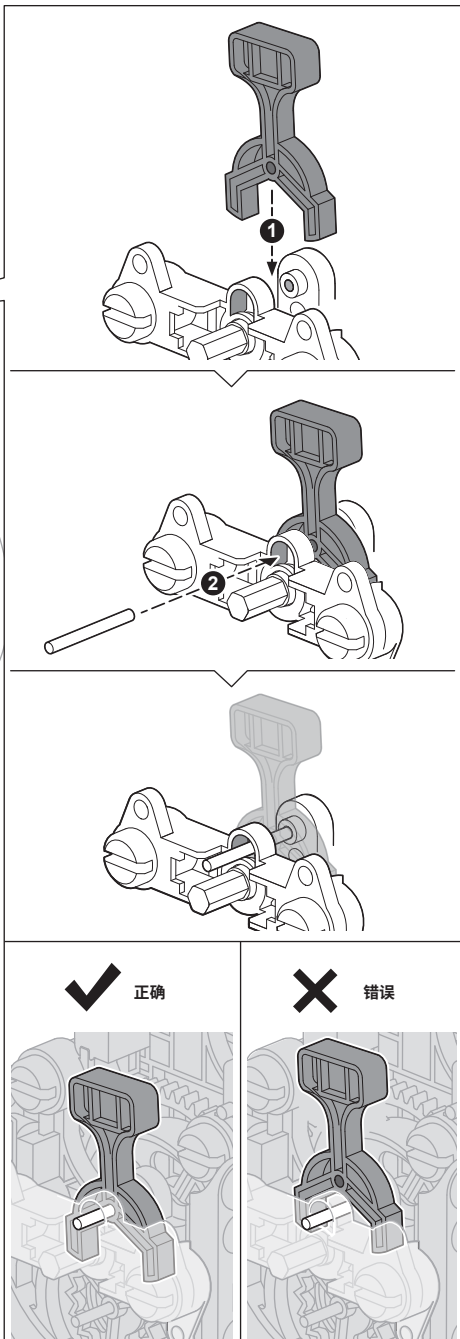
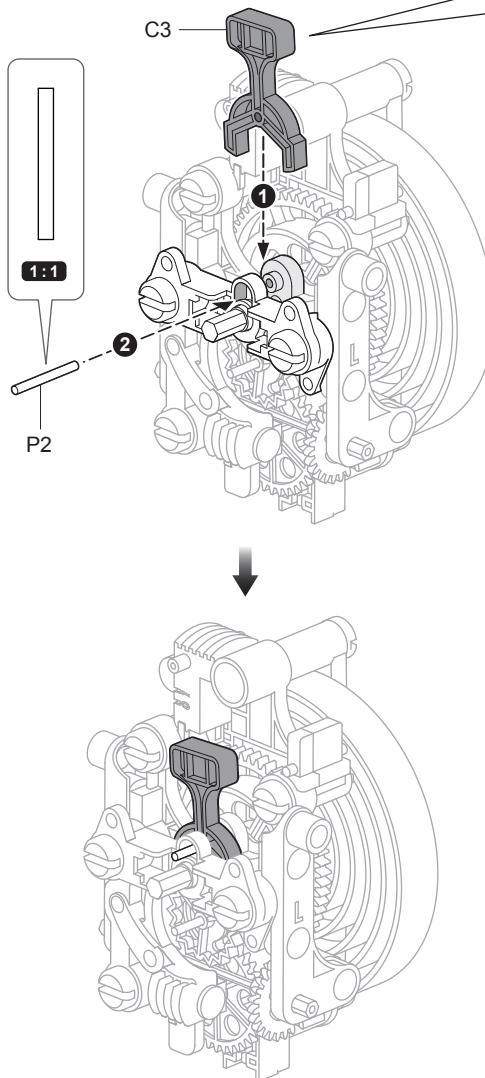
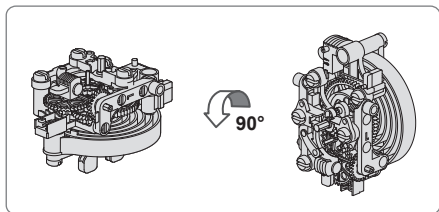
②

P2



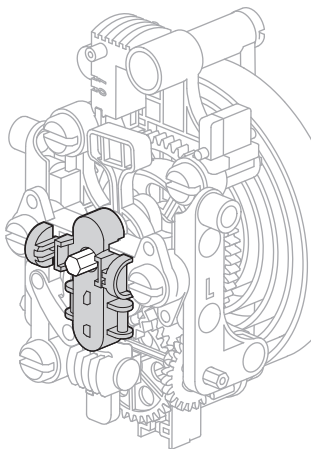
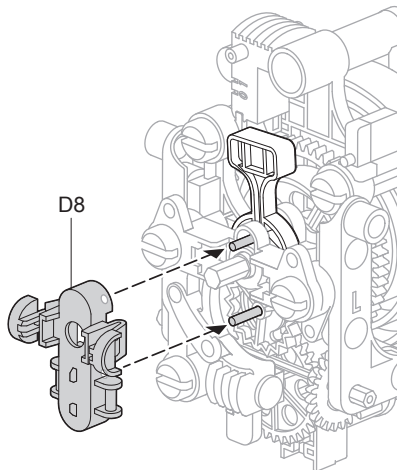
侧视图





14

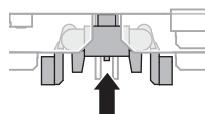
身体组装完成!



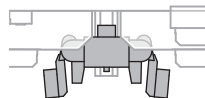
俯视图



正确



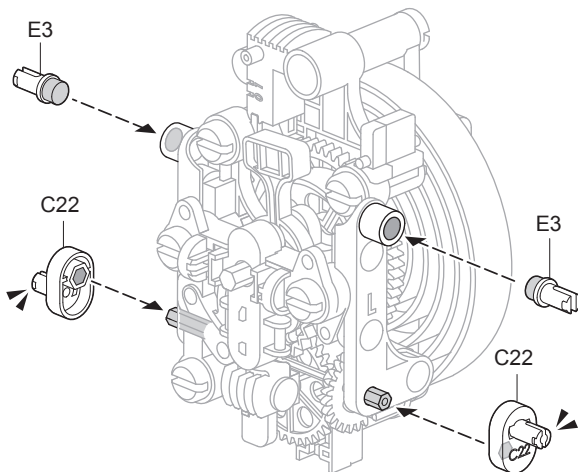
错误



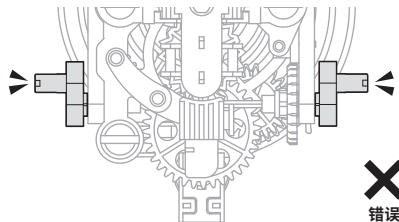
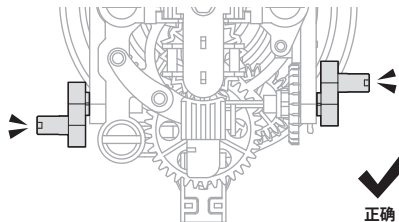
请将D8压紧

头、手、脚组装

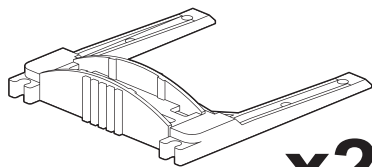
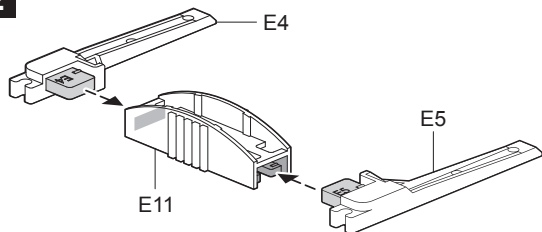
1



正视图

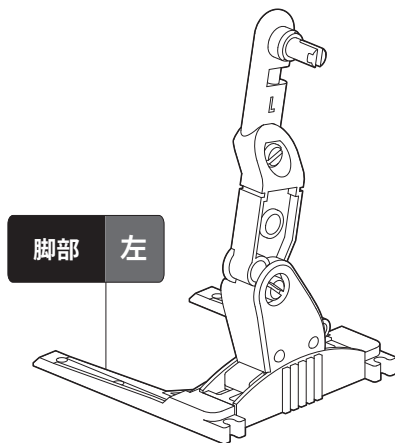
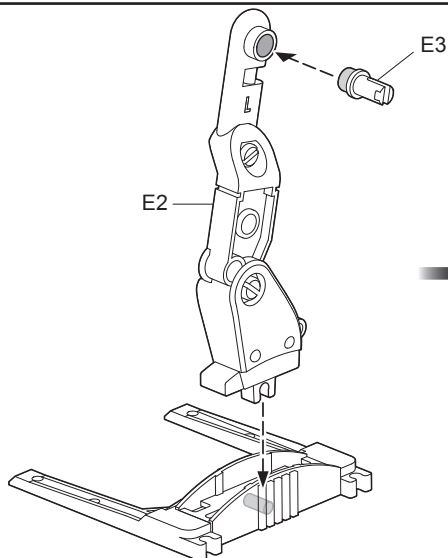


2

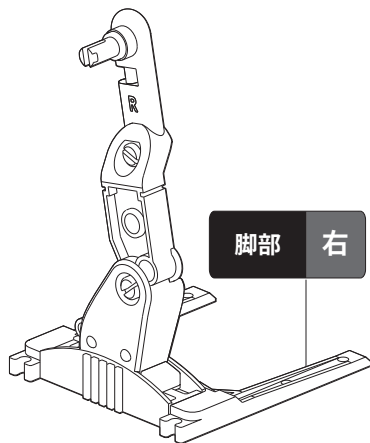
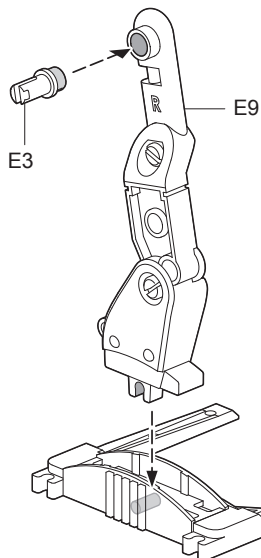


x2

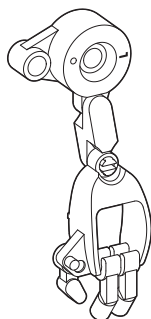
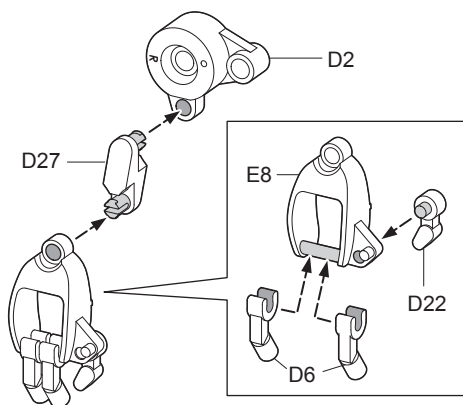
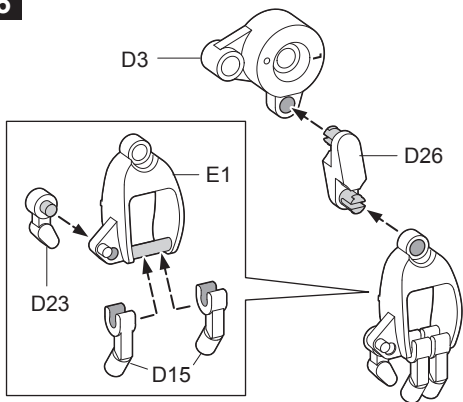
3



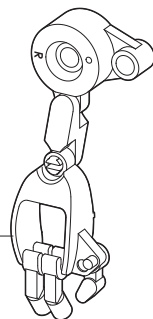
4



5



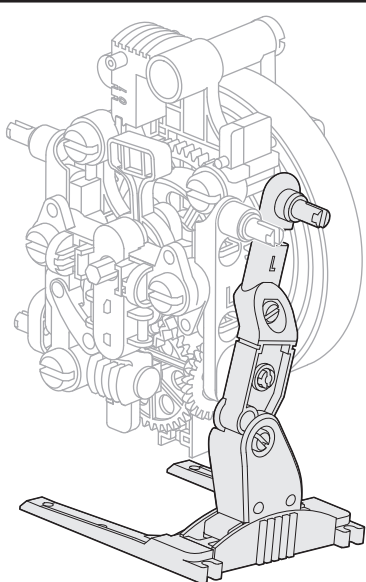
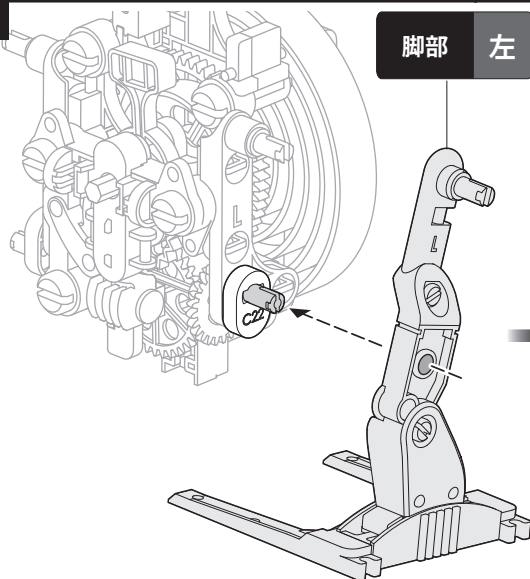
手部 左



手部 右

6

脚部 左

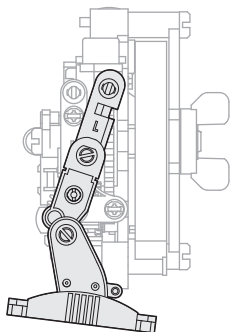


7

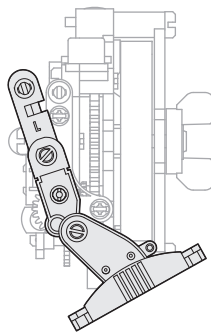
侧视图



正确



错误



8

俯视图

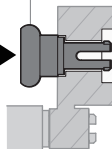


正确

压至底



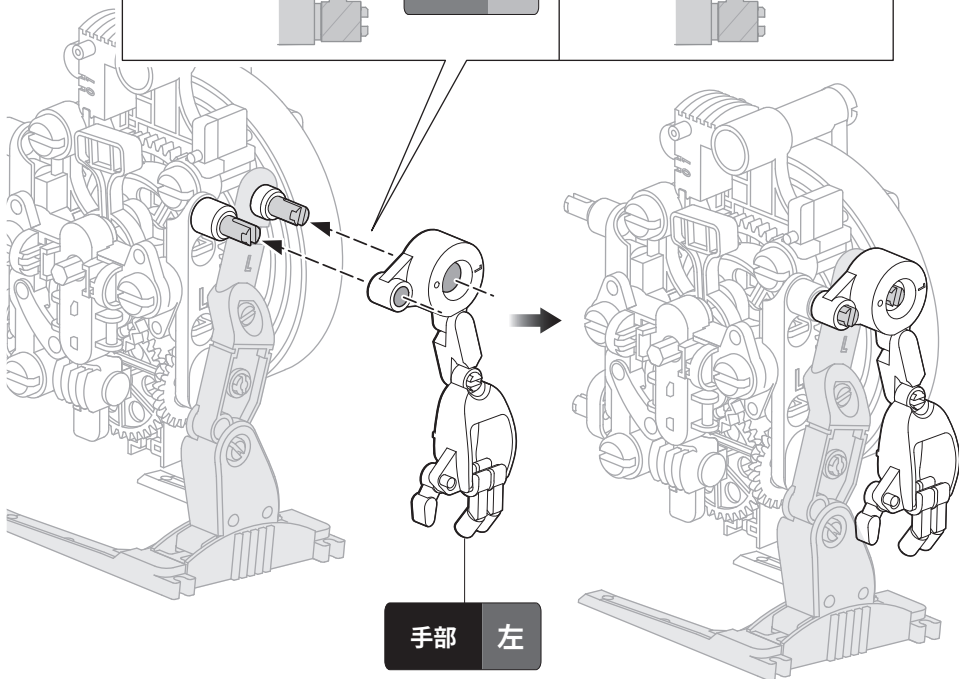
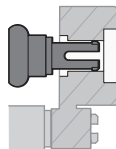
脚部 左

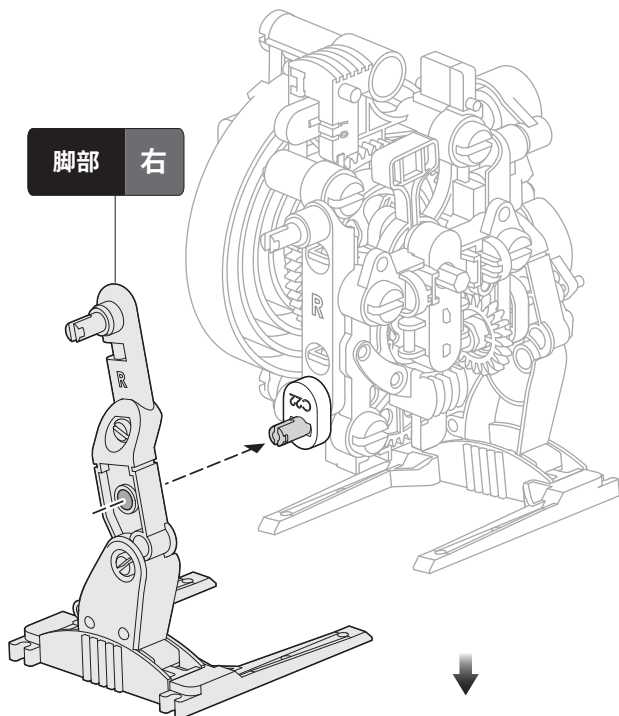
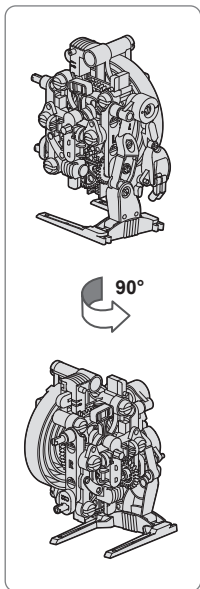


手部 左

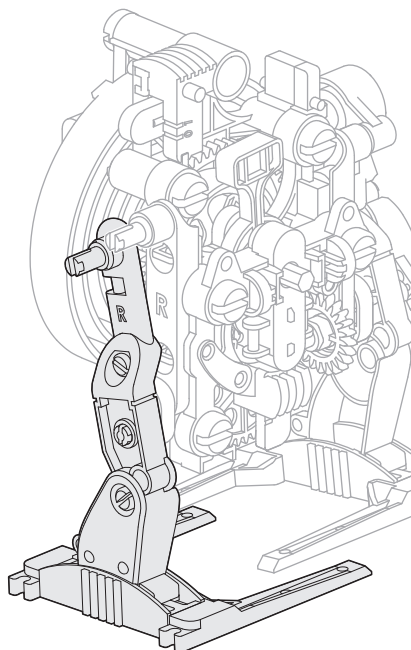
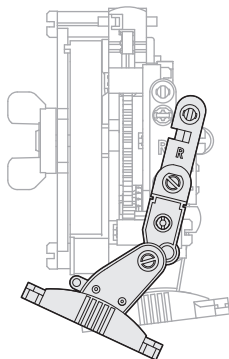
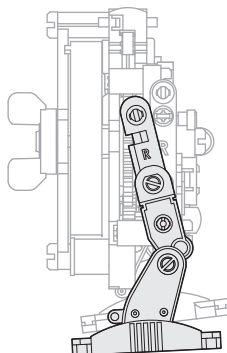


错误





侧视图



俯视图



正确

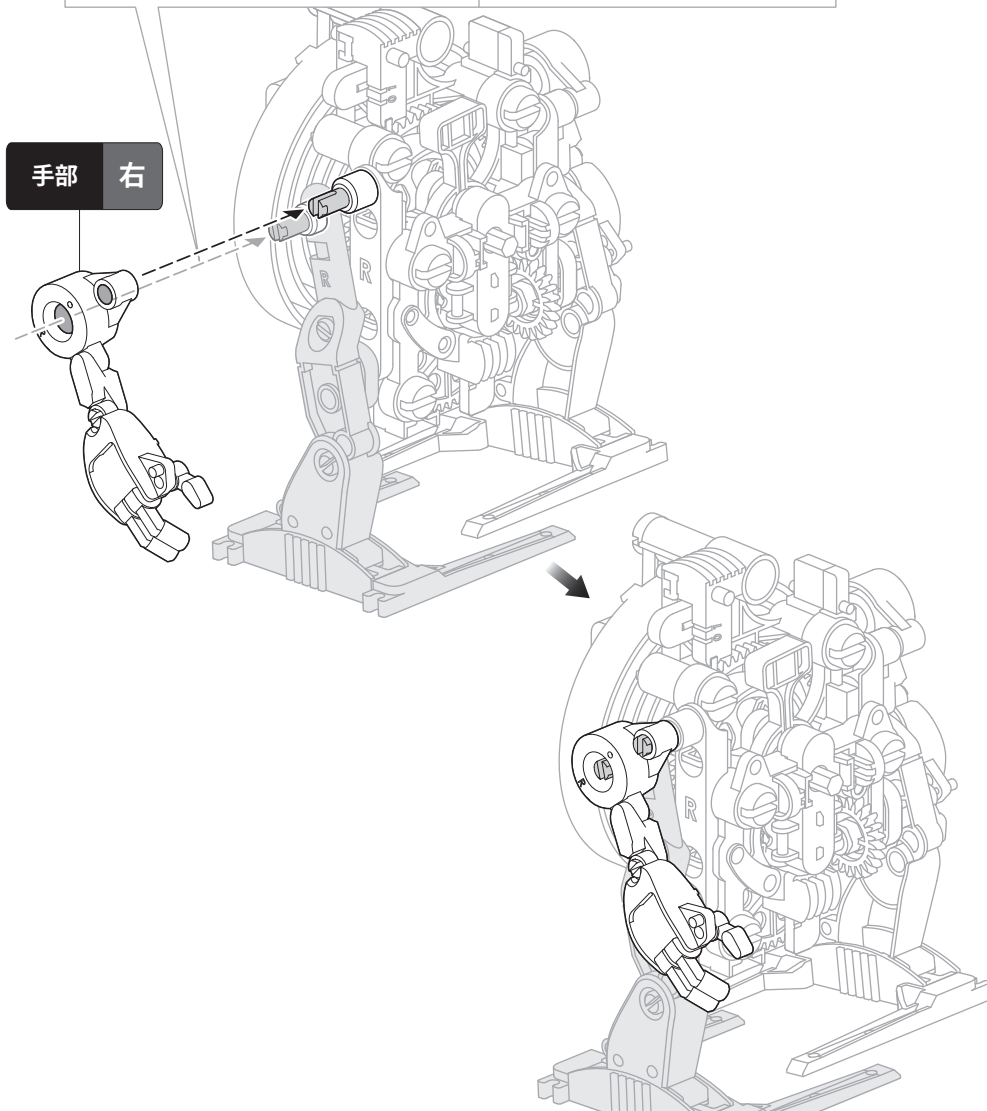
手部 右

脚部 右

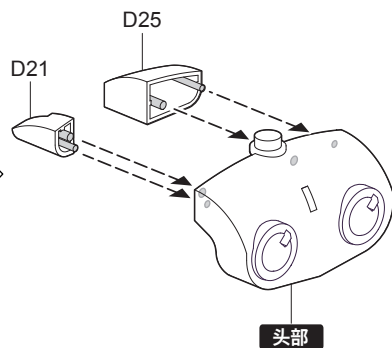
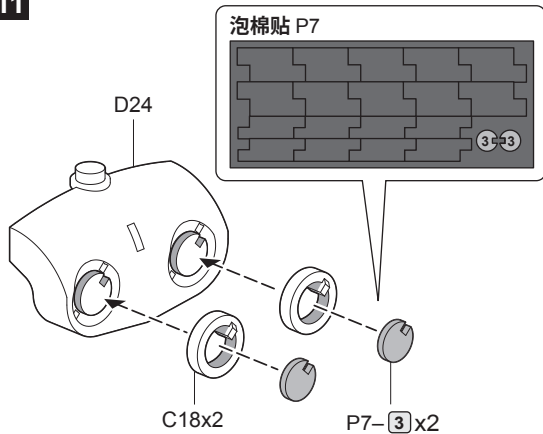
压至底



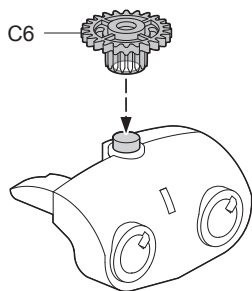
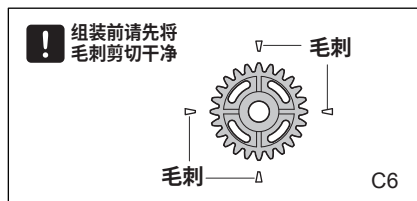
错误



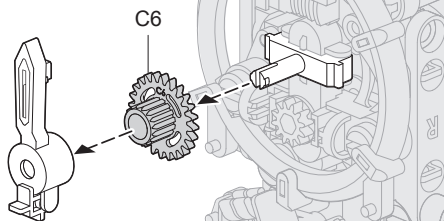
11



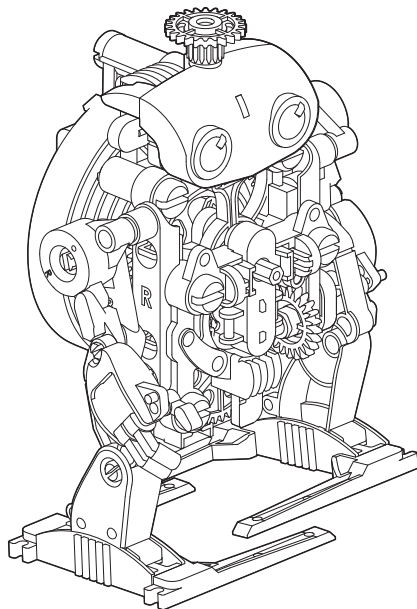
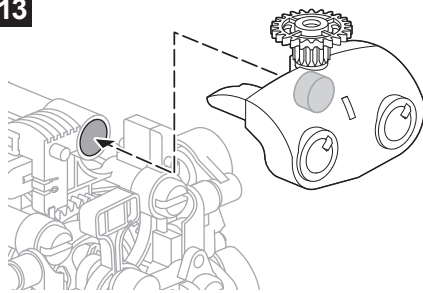
12



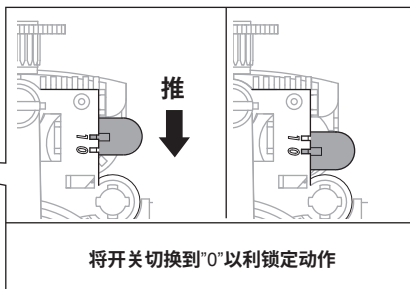
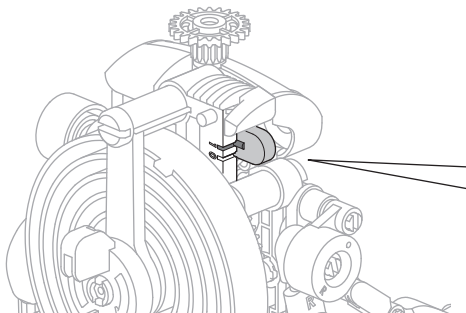
定时器



13



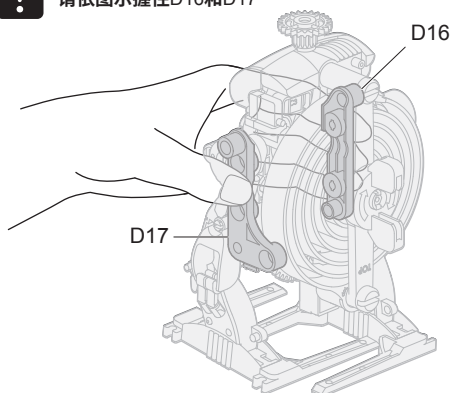
1



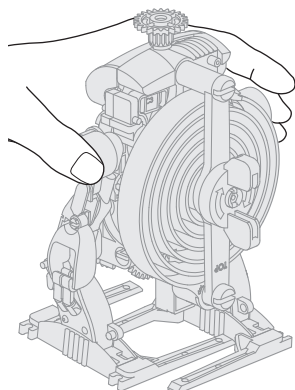
2



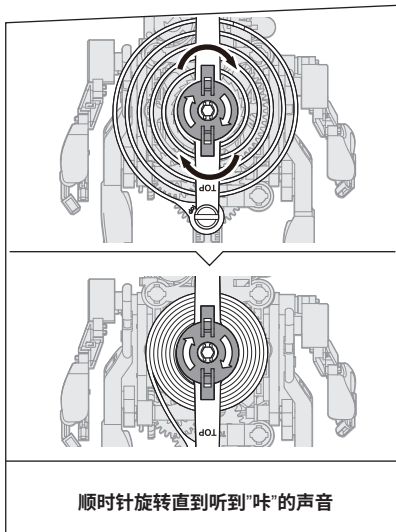
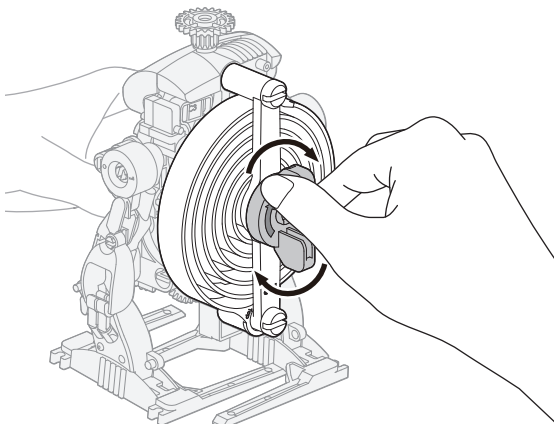
请依图示握住D16和D17



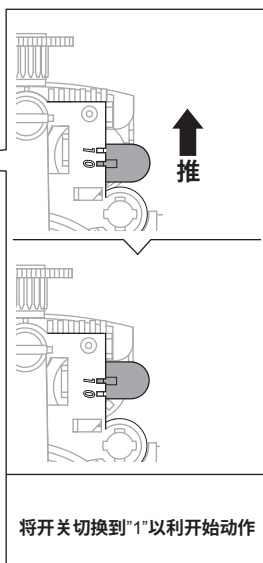
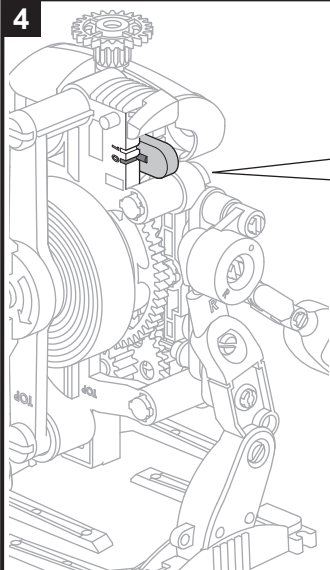
错误



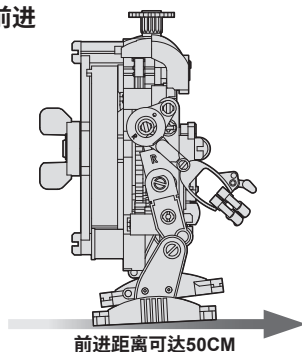
3



4

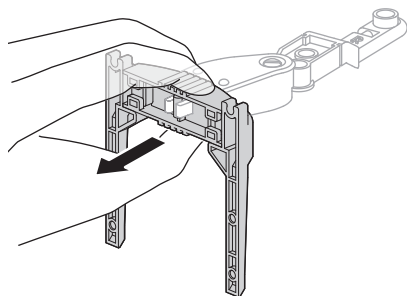


5 前进

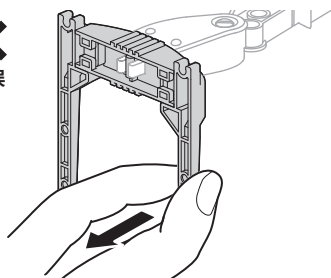


当每次结束游戏后，请将螺旋发条完全解开放松，否则发条可能会变形且失去弹性。放松发条请参考 **55页**

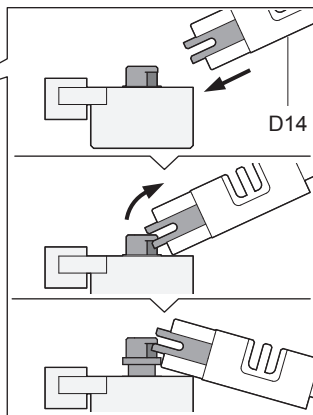
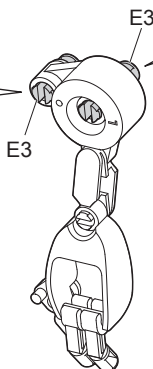
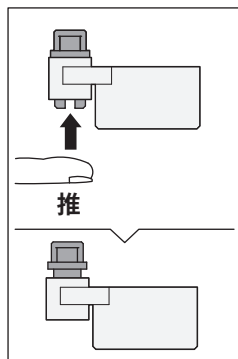
拆装技巧



✗
错误

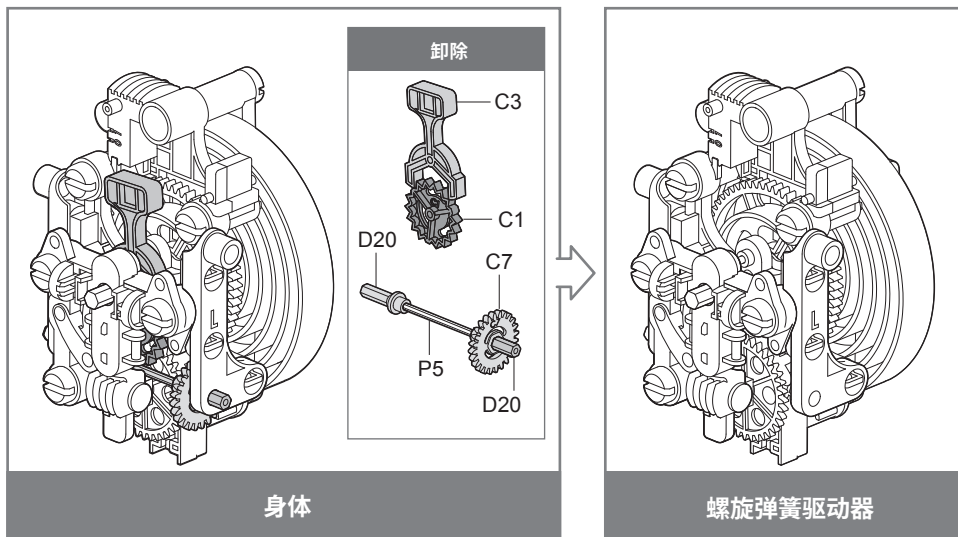


拆除在左手和右手的E3

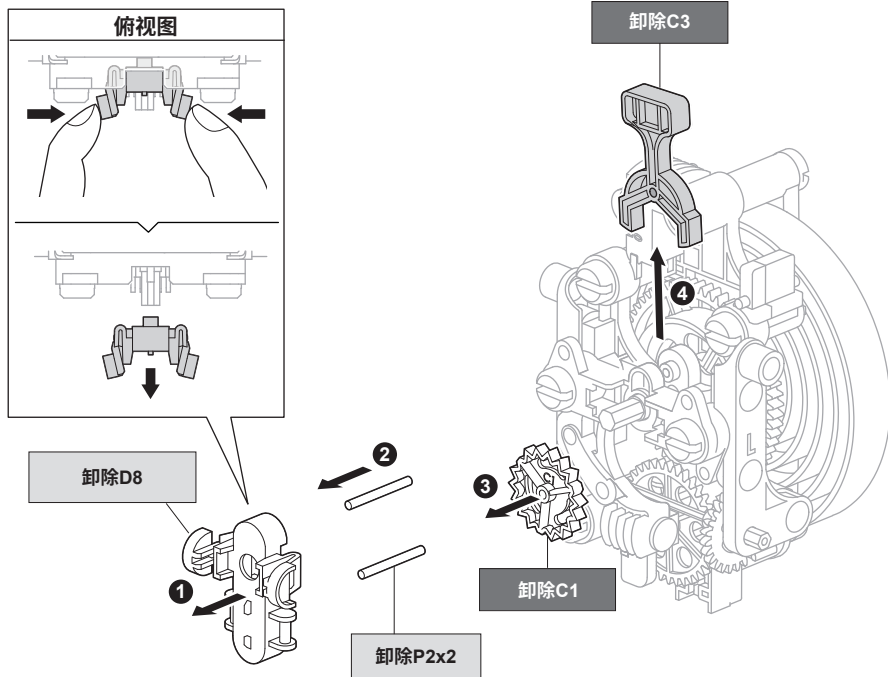


身体与螺旋弹簧结合方式

如果要组装成滴答定时器或是跑发条车，请先将身体转换为螺旋弹簧驱动器



1

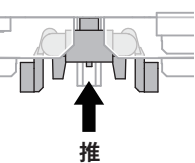


2

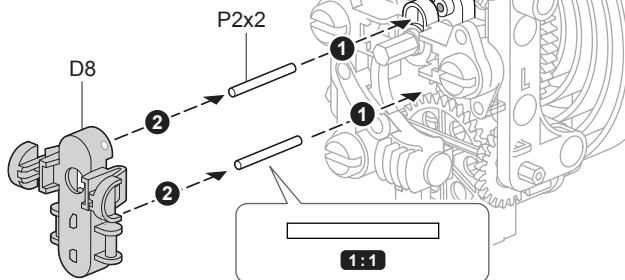
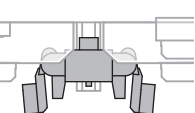
俯视图



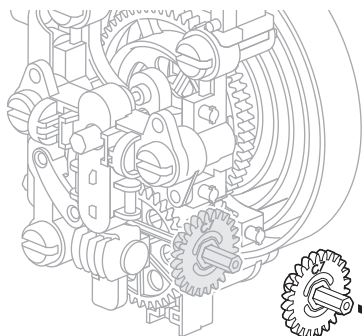
正确



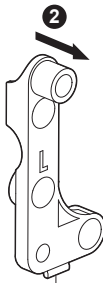
错误



3



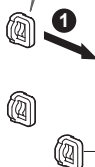
卸除C7和D20



卸除D17

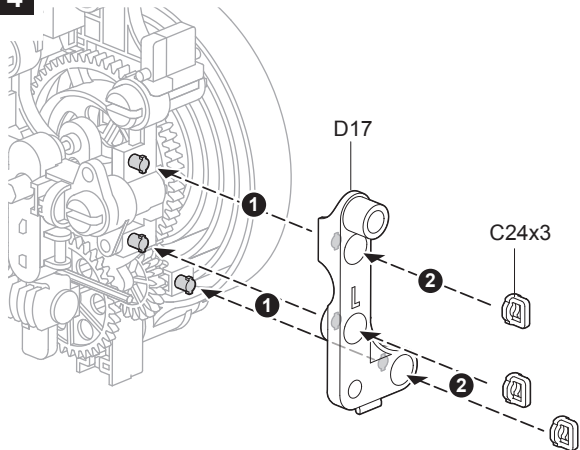


使用D14开口端卸除C24



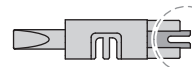
卸除C24x3

4

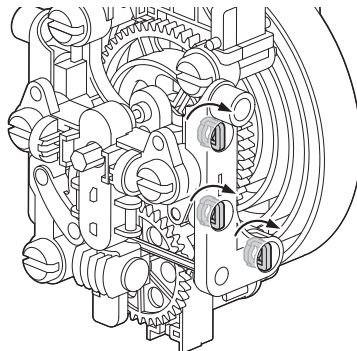


D17

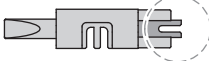
C24x3



使用D14开口端安装C24



5



使用D14开口端卸除C24



卸除 C24x2



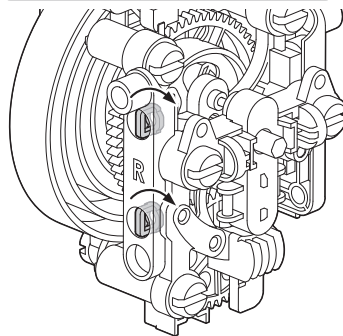
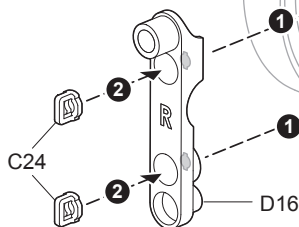
卸除 D16

卸除 D20 & P5

6

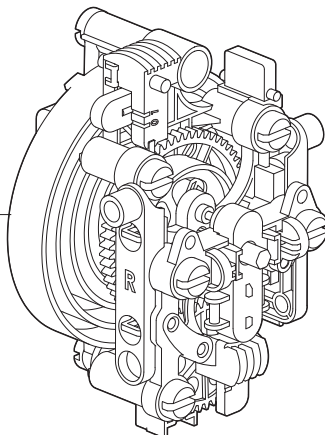


使用D14开口端安装C24



7

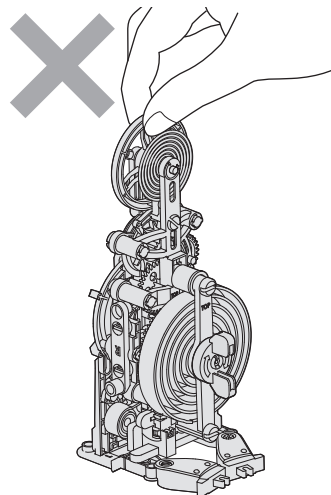
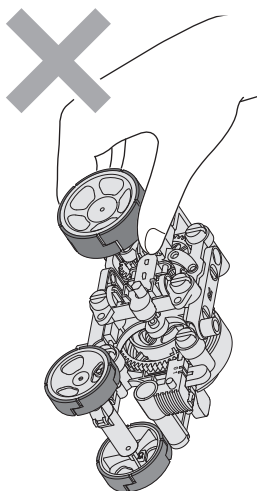
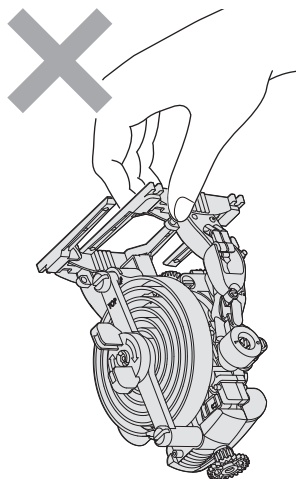
螺旋弹簧驱动器
(发条)



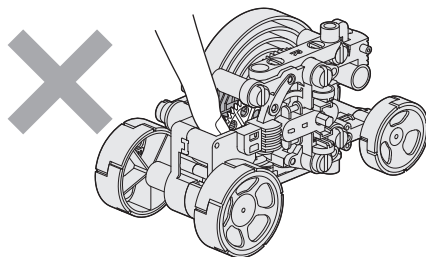


注意事项

请勿如图所示方式拿取，以免损坏

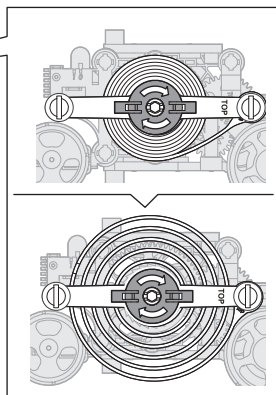
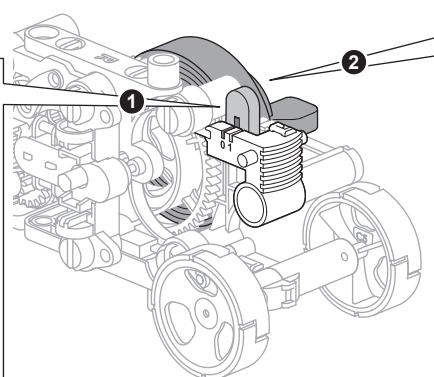
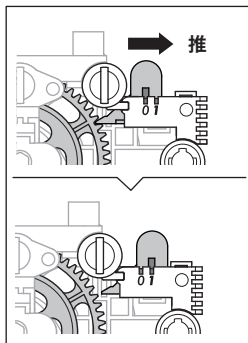


请勿将手指置于部件转动处以免受伤

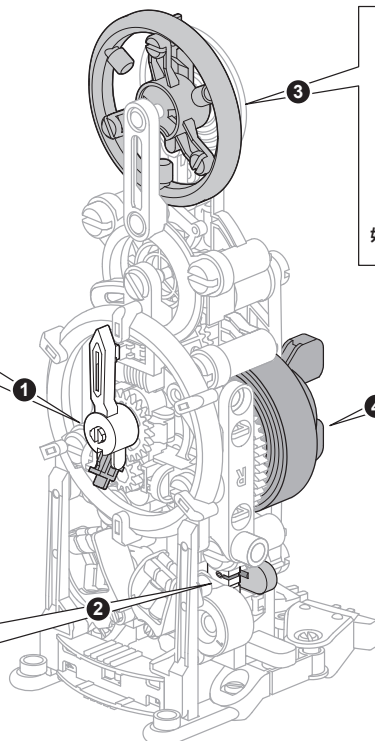
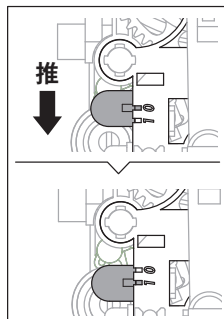
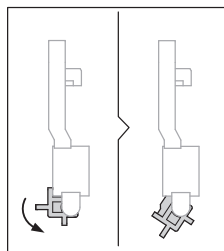


当不再游戏时，请将螺旋弹簧释放完全，避免弹簧变形

跑跑发条车

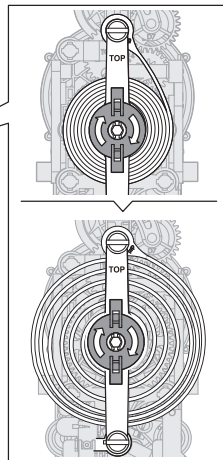


滴答定时器

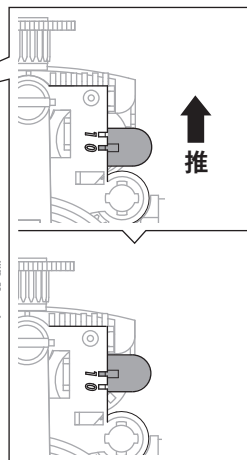
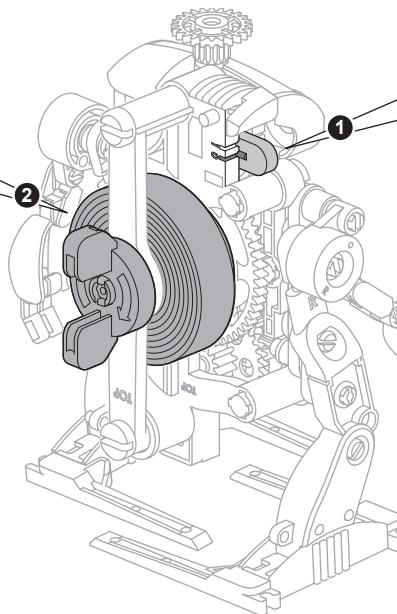
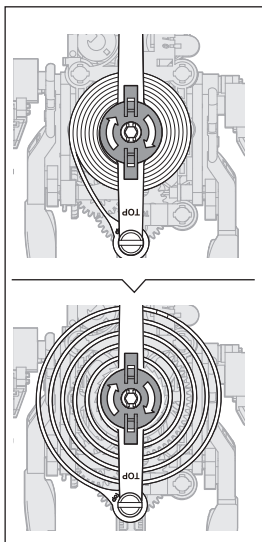


C23

如果C23不会动, 请轻推C23使其动作



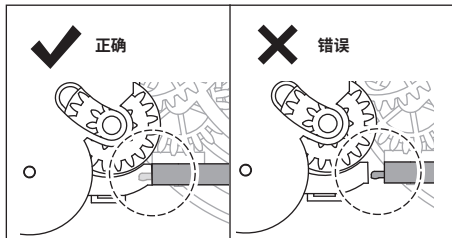
发条机器人



故障排除

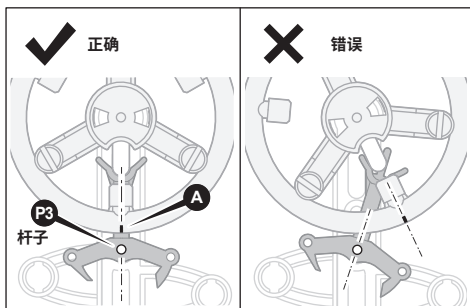
Q 启动螺旋弹簧驱动器(发条)后, 车子却不动该怎么办?

A 请回到第16页, 步骤**3** 确认后轮是否安装正确

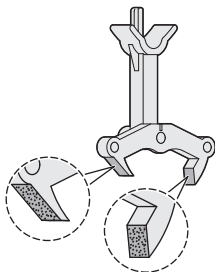


Q 如果定时器运作不顺畅, 我该如何处理?

A1 请确认当手放开C23时, **P3**和**A** 有对齐
(详情请参考23页步骤**6**)

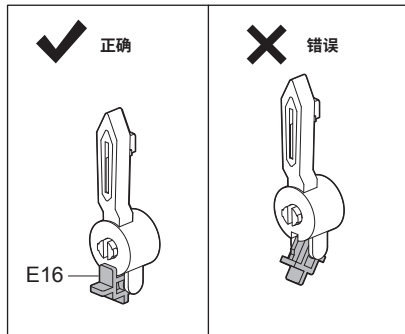


A2 请确认D5上没有异物或灰尘堆积, 如果有的话, 请将D5拆下清洁。清洁时请用面纸或棉花棒轻柔擦拭, 请勿用水直接冲洗。



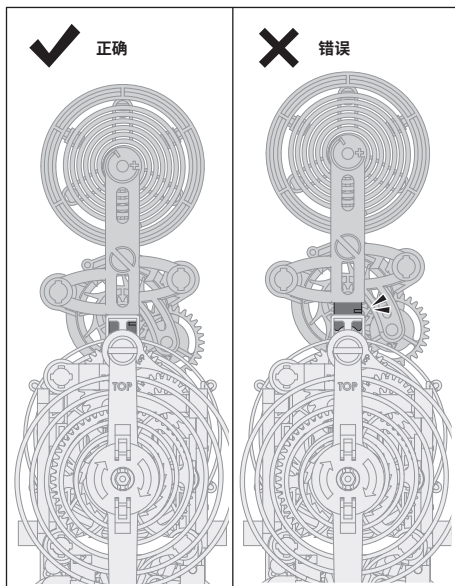
Q 滴答定时器启动但分针却不动该怎么办?

A 请确认E16是否扣上(详见第32页, 步骤**6**)



Q 滴答定时器不运作或是启动后螺旋弹簧驱动器(发条)后弹簧马上完全释放该怎么办?

A 请确认慢速擒纵机构是否与螺旋弹簧驱动器(发条)完全结合(如图示)



若需要购买零件，请参照以下零件表

1. 请留下订购人姓名、寄送地址、联络电话、E-mail
2. 请注明产品名称、产品型号、零件名称、零件型号以及数量
3. 请以传真、E-mail、电话或上宝工购物网
<https://mall.jd.com/Index-714032.html> 订购

制造商:宝工实业股份有限公司

销售公司:上海宝工工具有限公司

上海市浦东新区康桥东路1365弄25号

服务热线:400-1699-629

<https://science.prokits.com.tw>

Email:science@mail.prokits.com.tw

宝工购物网:<https://mall.jd.com/Index-714032.html>

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GE-730 三合一英伦发条时钟先生 零件表

零件型号	零件名称	数量
5GE-73000P1	圆轴(极短)	
5GE-73000P2	圆轴(短)	
5GE-73000P3	圆轴(中)	
5GE-73000P4	圆轴(长)	
5GE-73000P5	六角轴(短)	
5GE-73000P6	六角轴(长)	
5GE-73000P7	泡棉贴	
5GE-73000P8	螺旋弹簧	
5GE-73000P9	游丝	
5GE-73000P10	夹链袋	

 此产品为模型组件拆封修剪或包装不完整，恕不退换



SPIRAL SPRING

..... science kit

三合一英伦发条时钟先生

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