

PLEASE READ ALL INSTRUCTIONS CAREFULLY BEFORE ASSEMBLY  
组装前请务必仔细阅读说明书



Instruction Manual 使用说明书

## Double-Bearing Pro Adjustable Ball Differential Kit 双轴承专业可调珠差速器套件

No. R-BDK  
数 R-BDK

Proudly designed in Canada and Expertly made in China  
在加拿大精心设计并在中国精心制作



For any wide width 2WD 1/28 chassis  
Compatible with Kyosho MR-03, GL Racing GLR/GT, Atomic MRZ  
适用于任何宽幅2WD 1/28底盘  
与京商MR-03, GL Racing GLR/GT, Atomic MRZ兼容

### Thank You!

This is the latest in differential technology for the 1/28 scale. Unlike conventional adjustable ball bearing differentials, this differential utilizes a thrust bearing to control axial loads. This makes the distribution of power to each wheel more precise, providing a smoother throttle feel and a more consistent driving experience.

### 感谢您选购我们的产品！

本差速器基于最新1/28差速器技术研发而成。与传统的可调节滚珠轴承差速器不同，本差速器利用推力轴承控制轴向载荷。这使得每个车轮获得更精确的动力分配，从而获得了更平稳的油门感觉及更加一致性的驾驶体验

Buy Spare Parts  
or Upgrades  
购买备件或升级



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## CAUTION 警告

It is important that the differential is built correctly and is free from dirt in order for the thrust bearing to function properly. When building the differential, it is important to make sure the axial loads will be placed evenly on the thrust bearing in order to prevent binding in the bearing. It is extremely important that the rear adjustment nut, thrust bearing and front wheel nut are seated correctly so that they run true when the diff is spinning. This will ensure the pressure placed on the thrust bearing is even. If the differential is binding it means that the thrust bearing or the adjustment nut are not correctly aligned. If the differential feels gritty this means that the thrust bearing is dirty or needs replacing. When built correctly, the differential should be extremely smooth, even when the differential is set tight.

要使得推力轴承正常工作，请注意差速器装配正确及保持清洁无污垢。在组装差速器时，务必注意将轴向载荷均匀地施加在推力轴承上，以免装配不正确导致轴承卡顿。需要特别注意的是：正确安装后调节螺母、止推轴承和前轮螺母是差速器运行良好的关键步骤，这样可以确保推力轴承受力均匀。如果差速器运转不顺畅，可能是由于推力轴承或调节螺母未能正确安装。如果差速器有卡滞，可能是由于推力轴承有污物或需要更换。正确安装的差速器会运行非常平滑，即使差速器设置很紧，也会运转极其平滑。

## Required Tools 必备工具

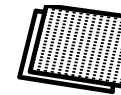


Long Nose Pliers  
长尖嘴钳



1.5mm Allen Key or Wrench  
1.5mm 内六角扳手或扳手

## Optional Tools 选购工具



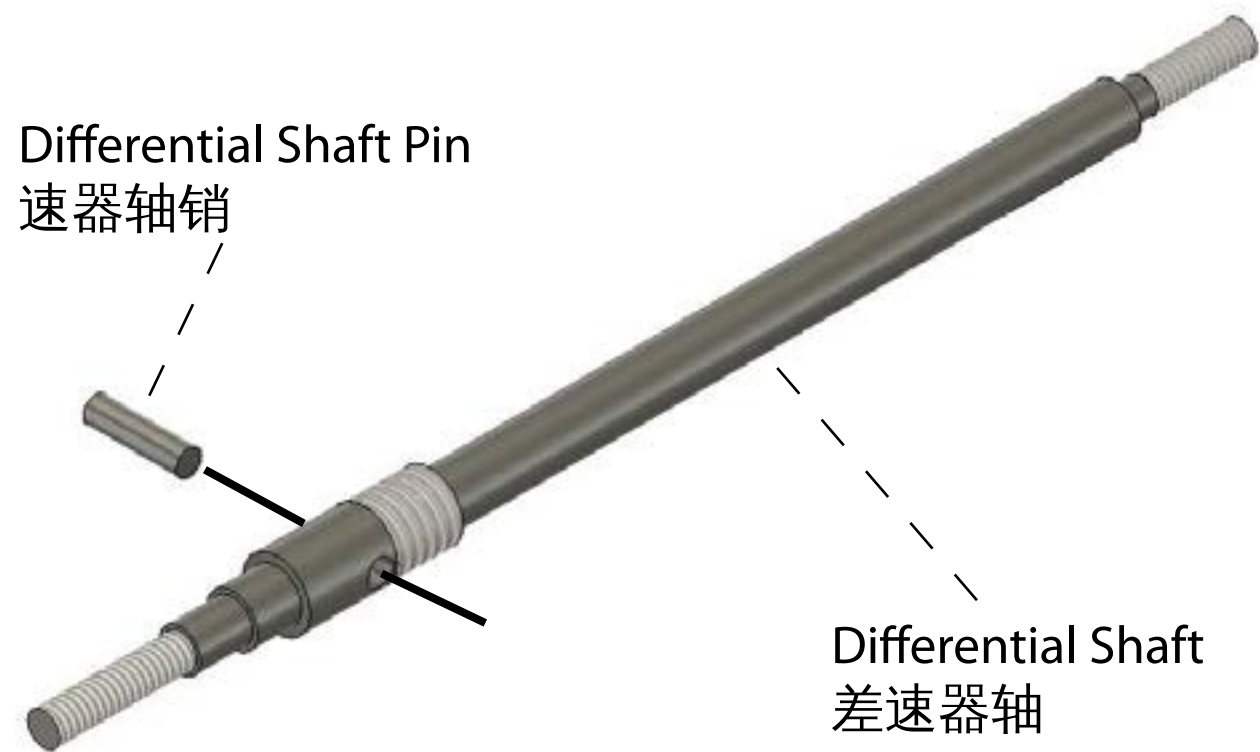
2000 Grit Sandpaper  
2000 号砂纸



Ball Differential Grease  
珠差膏

1

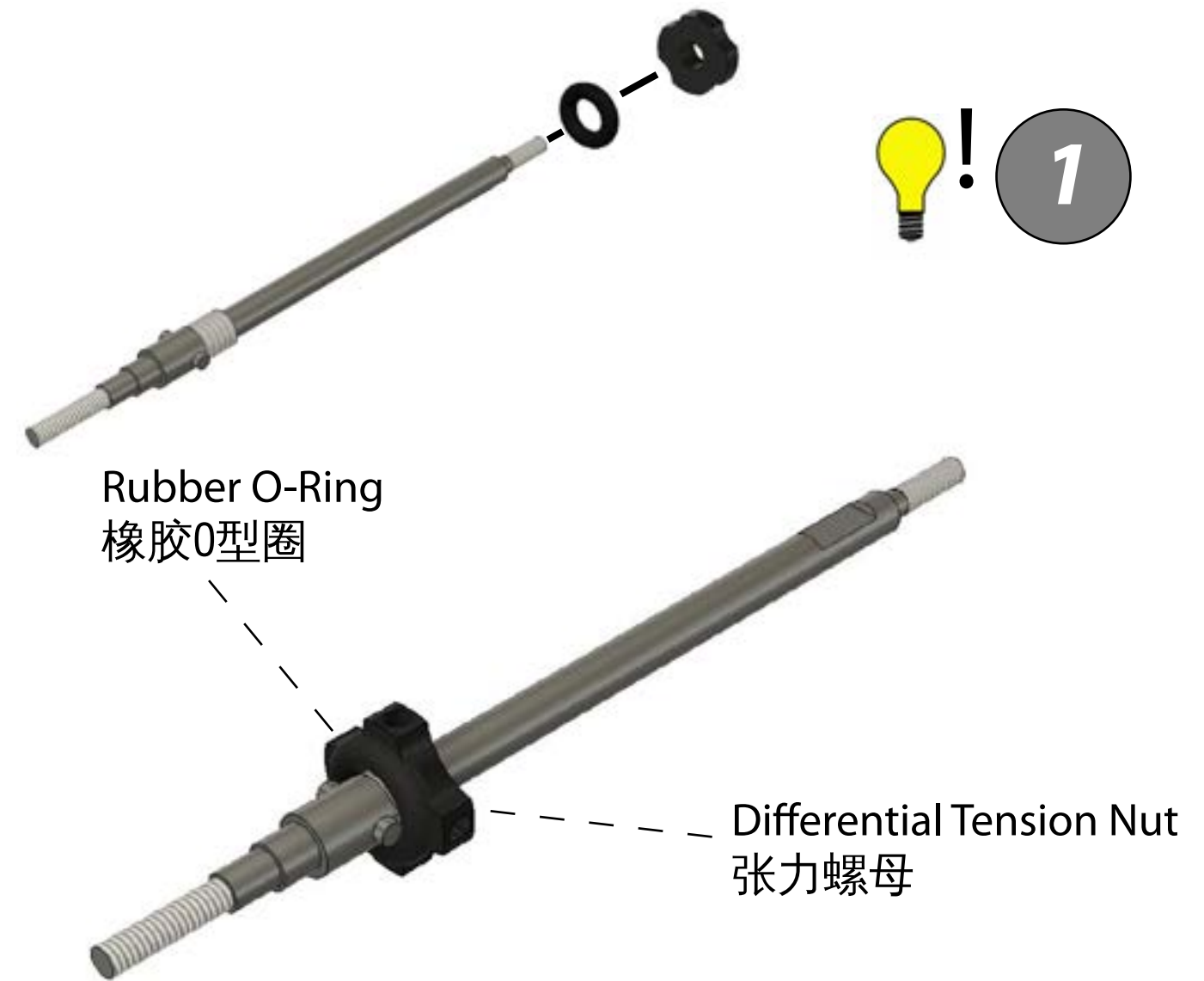
Insert the pin into the differential shaft  
将销钉插入差速器轴中



2

From the back of the differential shaft, insert the O-Ring.  
Carefully thread the Tension Nut on the differential shaft. Take care to make sure it runs true on the shaft.

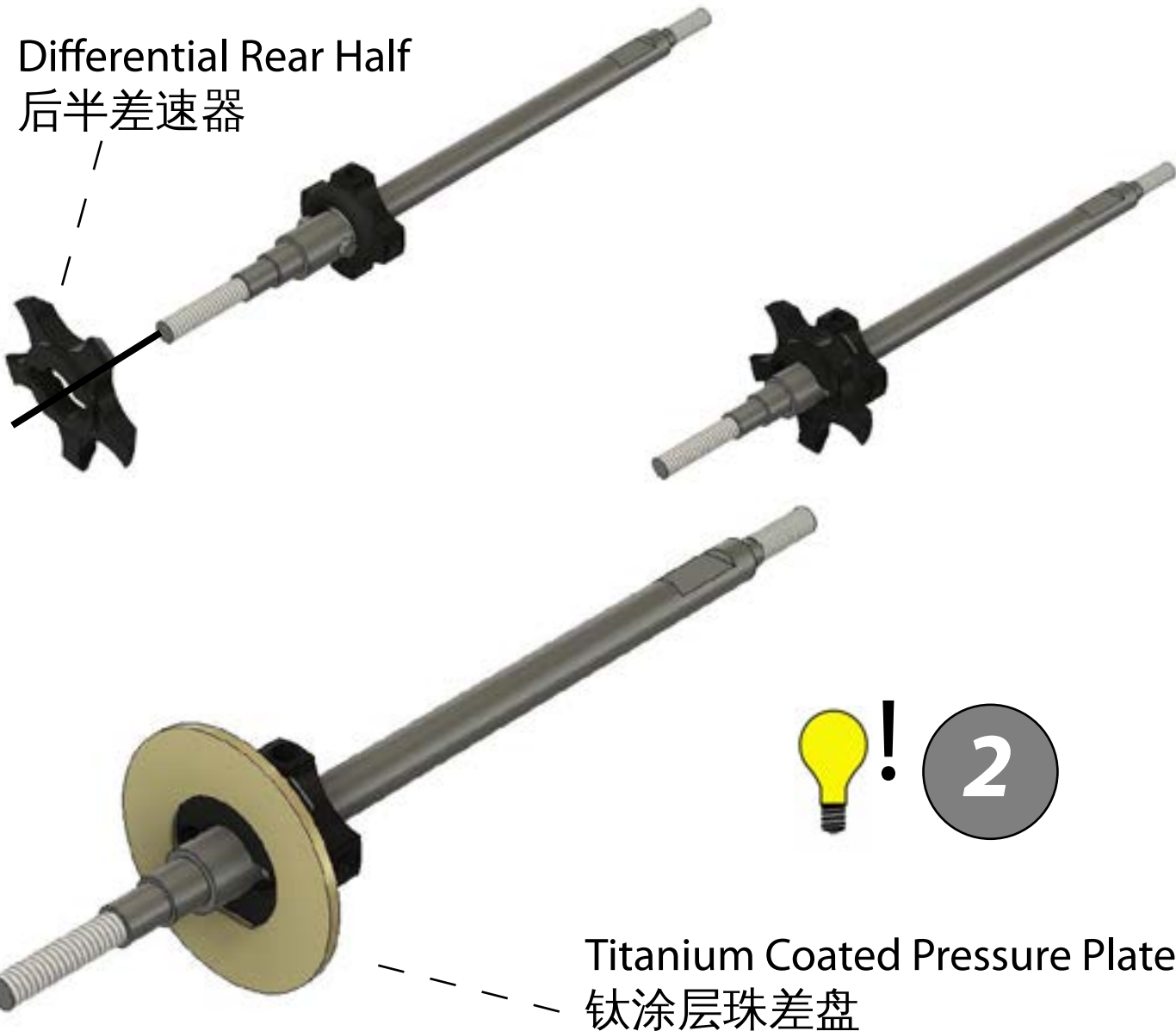
从差速器轴的背面插入O形圈。小心地将差速螺母拧到差速器轴上。请注意确保其在轴上正确运行。



3

From the front of the shaft, insert the differential rear half, making sure it is seated on the pin. Then insert one of the pressure plates onto the differential rear half. Make sure the pressure plate sits flat.

从轴的前部插入差速器后半部，确保其位于销上。然后将一个珠差盘插入差速器后半部。确保压板平放。



4

Push the spur gear bearing into the spur gear. Then insert the spur gear with the bearing onto the shaft. It should rest against the rear pressure plate.

将正齿轮轴承推入正齿轮。然后将正齿轮和轴承插入轴中。齿轮及轴承应紧贴压板。



5

Stand the differential upright and insert the 12 ceramic balls into the 12 holes of the spur gear.

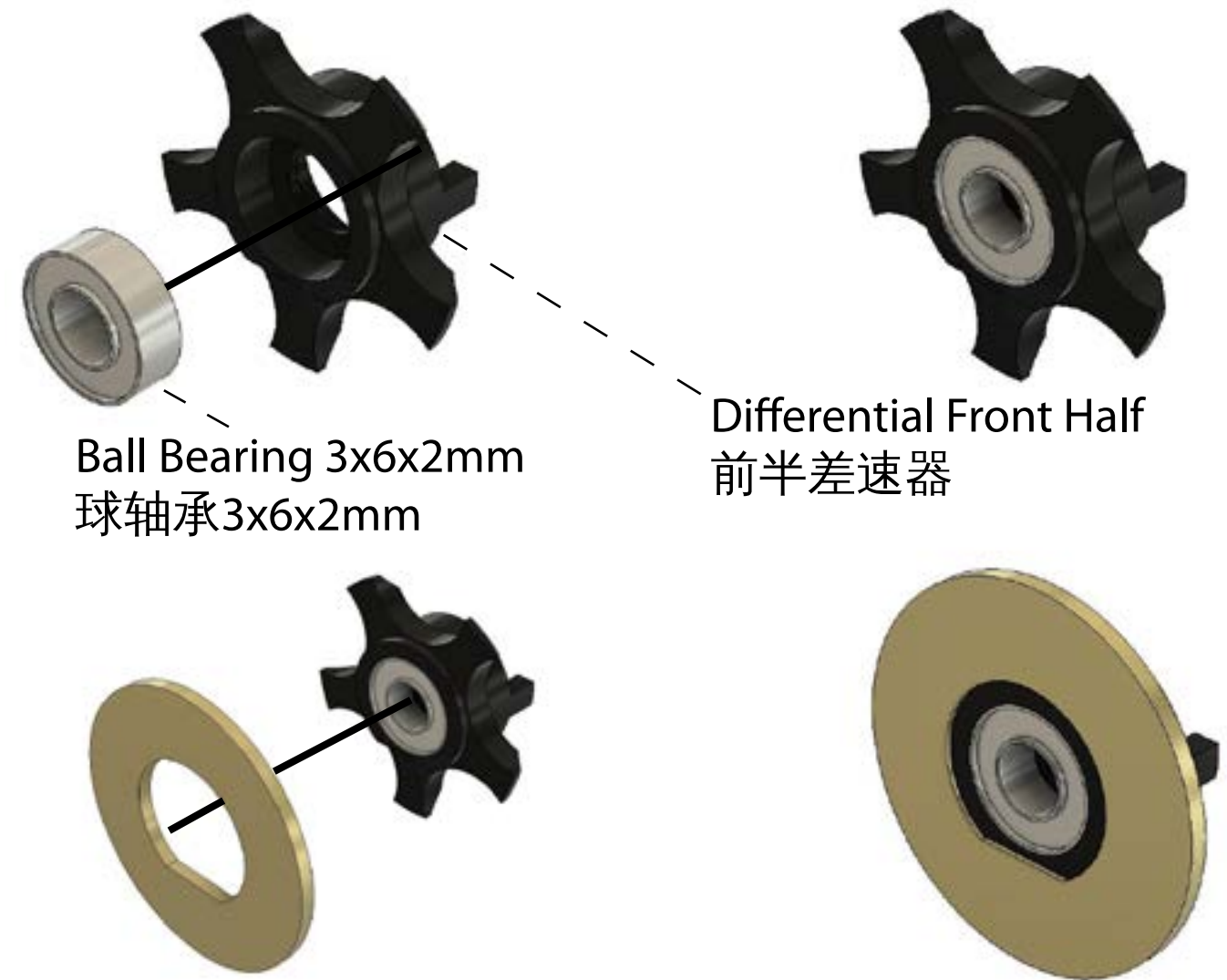
将差速器竖立起，然后将12颗陶瓷珠放入正齿轮的12个孔中。



6

Insert the 3x6x2mm bearing into the rear of the front diff half. Make sure it sits flat in the socket. Place the remaining pressure plate onto the front diff half making sure it sits flat.

将3x6x2mm轴承插入前差速器一半的后部。确保它平放在插座中。将剩余的珠差盘放在前差速器的一半上，确保其平放。



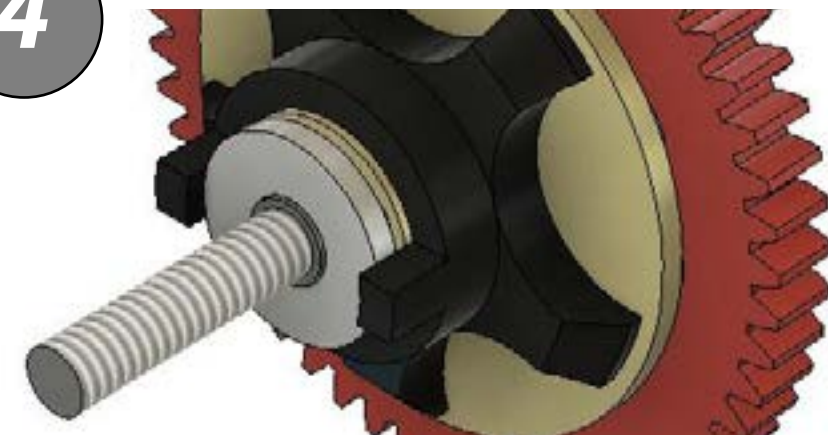
**7**

Install the differential front half assembly unto the shaft.  
将差速器前半组件安装到轴上。

**8**

Insert the lower (larger) bearing race into the front diff half, make sure it sits flat against the front diff half. Now place the thrust bearing balls onto the lower race, finally insert the upper (smaller) bearing race to complete the thrust bearing assembly.

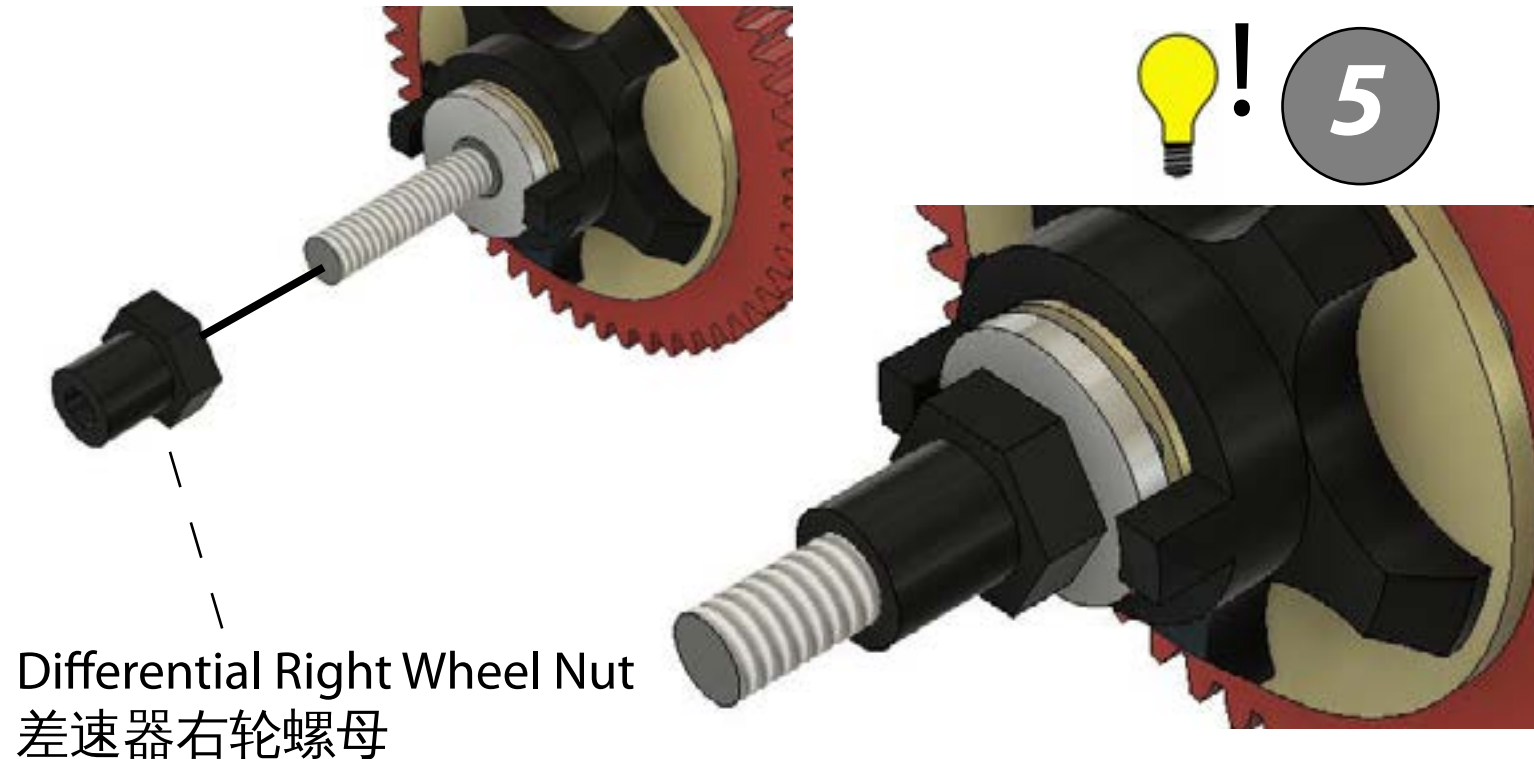
将下部（较大）的轴承座圈插入前半部差速器，确保其平放在前半部差速器上。现在将推力轴承球放在下座圈上，最后插入上（较小的）轴承座圈以完成推力轴承组件。

**4**

9

Screw the differential right wheel nut onto the shaft. You can use pliers to make sure it is snug but not overtight. Check to make sure that the nut has not put pressure against the thrust bearing as this will cause the front differential half to bind. It is important that the thrust bearing rests against the nut and that the pressure placed on the thrust bearing comes from tightening the tension nut.

您可以使用钳子将差速器右轮螺母拧到轴上以确保它紧贴且不会过紧。检查并确保螺母没有对推力轴承施加压力，否则前差速器半部会受约束。应当注意的是：止推轴承应靠在螺母上，且施加在止推轴承的压力来源于拧紧张紧螺母

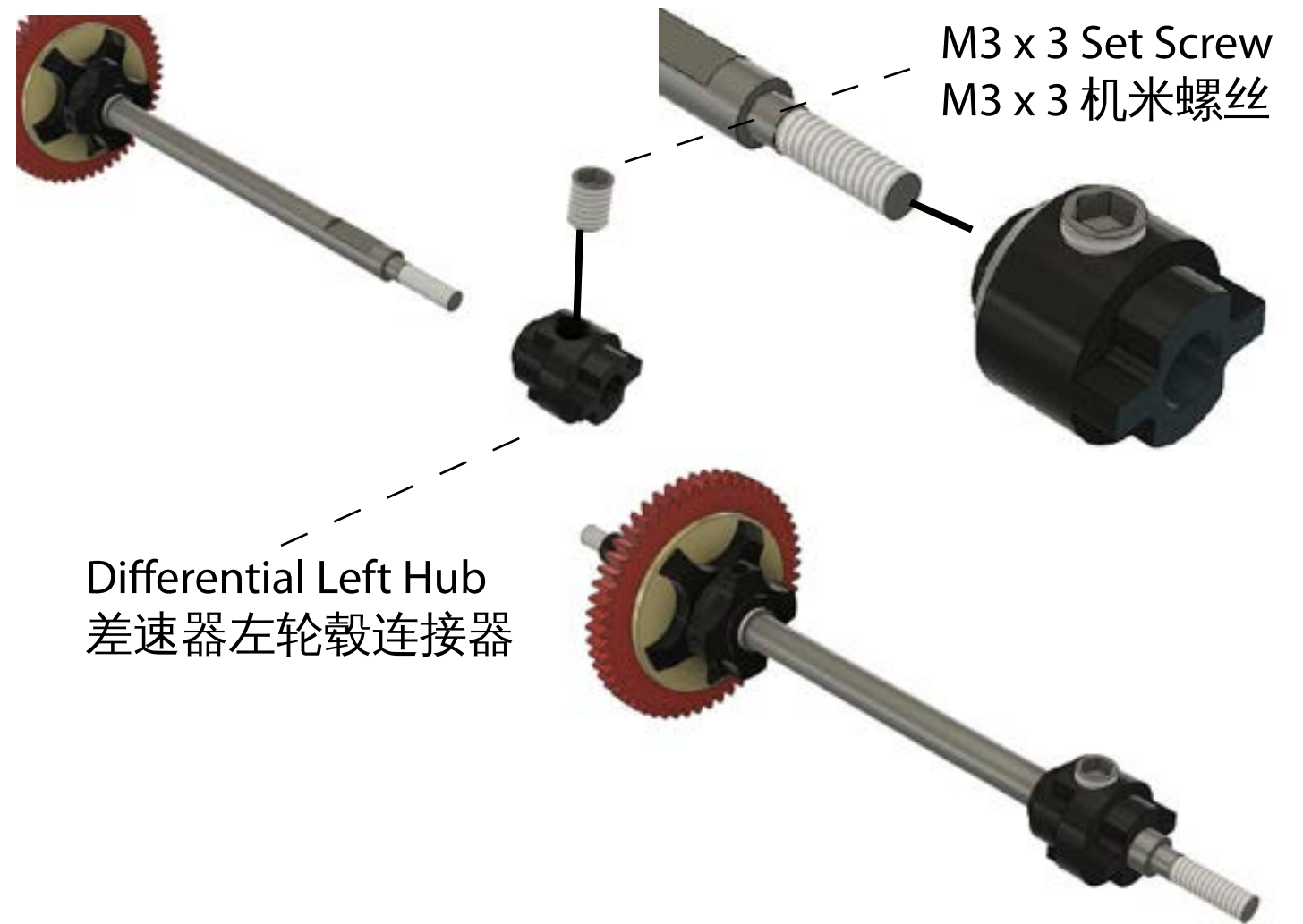


Differential Right Wheel Nut  
差速器右轮螺母

10

Install the differential into your motor mount. Secure the differential in place using the set screw on the left differential hub. There should be no play between the hub and the motor mount bearing, however it should not be so tight that it causes binding with the bearing.

差速器装入马达座中。使用左侧差速器毂上的定位螺钉将差速器固定到位。轮毂和电机安装轴承之间不应有间隙，但其不应过紧而导致与轴承的粘结。



Differential Left Hub  
差速器左轮毂连接器

11

Attach your 0 or + 1mm offset wide rims (wheels) to the completed differential. The differential is 2mm wider on each side when compared to a standard Mini-Z differential. The differential is the same length as a LM differential. Using 0mm offset wide rims is equal to a +2mm offset on a standard Mini-Z differential. Using +1mm wide offset rims is equal to a +3mm offset on a standard Mini-Z differential.

将您的0或+1度宽轮毂安装到装好的差速器上。与标准Mini-Z差速器相比，该差速器的每侧宽2mm。差速器长度与LM差速器的长度相同。使用0度的宽轮毂等于标准Mini-Z差速器上安装的+2度轮毂，使用1度的宽轮毂相当于标准Mini-Z差速器上安装的+3度轮毂







## ! Tips 用牙签在轴承座上涂抹少量珠差脂。您需要不时清洁并重新涂抹润滑脂

No.	Tip	Step
1	<p>It is a good idea to attach the left hub to the differential using the set screw in order to make this process easier as it will allow you to have a grip on the shaft while screwing in the nut. 最好使用紧定螺钉将左轮毂连接到差速器上，以使此过程更容易，因为它允许您在拧紧螺母时握住轴。</p>	2
2	<p>It is common practice to sand the differential pressure plates using 2000 grit sand paper before installing but not required. 可以用2000号砂纸打磨珠差盘，但这并不是必须步骤</p>	3
3	<p>The differential can be run without differential grease, however there will be increased wear on the balls and pressure plates. The benefit is the differential will be less likely to attract dirt which can get stuck in the grease and cause even greater wear and poor performance. If differential grease is used, only a very small amount should be applied to the holes of the spur gear before installing the balls. It is recommended to use a toothpick to apply the grease. 差速器可在无珠差脂的情况下运行，但这会加速滚珠与珠差盘之间的磨损。 但这样做的好处是珠差不会吸附夹杂在润滑脂中的污垢，从而造成更大的磨损和较差的性能。 如果使用珠差脂，则需要安装在安装陶瓷珠之前，尽在正齿轮孔中使用极少量的润滑脂。 建议使用牙签涂抹珠差脂。</p>	5
4	<p>Put a small amount of differential grease onto the bearing race using a toothpick. You will need to clean and reapply the grease from time to time. 用牙签在轴承座上涂抹少量珠差脂。您需要不时清洁并重新涂抹润滑脂</p>	8
5	<p>Remove any sharp corners or burrs from the nut using fine sandpaper as the face of the nut touching the face of the thrust bearing must be the same across the entire surface. 用细砂纸去除螺母上的尖角及毛刺，确保与推力轴承接触的螺母表面与推力轴承表面相同平整</p>	9

## Spare Parts List 零部件清单

Part No.	Description	Qty
R-DBK9T	64 Pitch 9 Tooth Pinion 64P9齿马达齿	1
R-DBK53T	64 Pitch 53 Tooth Spur Gear 64P53齿正齿轮	1
R-DBKFH	Differential Front Half 前半差速器	1
R-DBKSP	Differential Shaft Pin 差速器轴销	1
R-DBKPP	Titanium Coated Pressure Plate 钛涂层珠差盘	2
R-DBKRH	Differential Rear Half 后半差速器	1
R-DBKWN	Differential Right Wheel Nut 差速器右轮螺母	1
R-DBKFDS	Differential Shaft 差速器轴	1
R-DBKSS	M3 x 3 Set Screw M3 x 3 机米螺丝	1

Part No.	Description	Qty
R-DBKTN	Differential Tension Nut 张力螺母	1
R-DBKLN	Differential Left Hub 差速器左轮毂连接器	1
R-DBKFN	Differential Front Half 前半差速器	1
R-DBKTBB	Thrust Ball Bearing 推力球轴承	1
R-DBKBB	Ball Bearing 3x6x2mm 球轴承3x6x2mm	1
R-DBKSBB	Spur Gear bearing 正齿轮轴承	1
R-DBKCB	3/32" Ceramic GR5 Balls (12 pcs) 3/32英寸陶瓷GR5球 (12个)	1
R-DBKOR	Rubber O-Ring 橡胶O型圈	1

Specifications subject to change without notice

规格如有变更，恕不另行通知