

Salt Water *FUEL CELL Engine Car KIT*



GREEN ENERGY 



4WB

Assembly & Instruction **Manual**

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Salt Water FUELCELL Engine Car KIT



Ce kit est un concept de voiture à pile à combustible respectueux de l'environnement qui permettra aux enfants de s'initier aux nouvelles formes d'énergie propre. Vous allez être étonné de constater que quelques gouttes d'eau salée suffisent à faire démarrer le moteur de la voiture, comme par magie. Vous allez découvrir le fonctionnement d'un moteur V8 et aussi d'autres activités passionnantes.

GREEN ENERGY

Tous les matériaux utilisés dans ce kit sont respectueux de l'environnement, ne contenant aucune substance toxique et ne posant aucun problème d'élimination.

Outils nécessaires



Récipient



Sel



Bâton



Pince coupante transversale



⊖ Tournevis



⊕ Tournevis

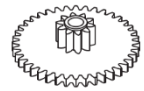
Liste des pièces mécaniques

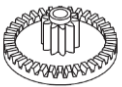
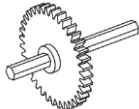
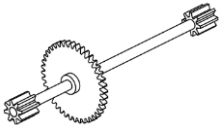
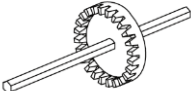
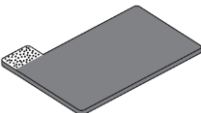
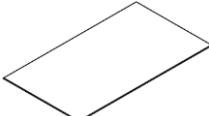
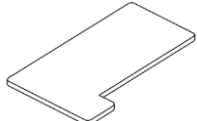
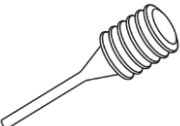
P1	Moteur avec connecteurs
	QTÉ
	1



Ne pas connecter les fils au secteur.

P2	Pignon (jaune)
	QTÉ
	1

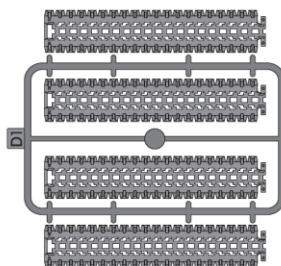
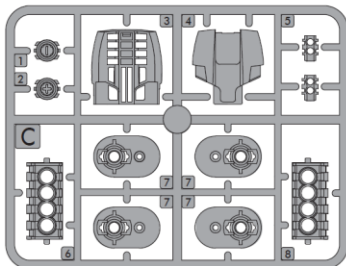
P3	Engrenage (jaune)
	QTÉ
	1

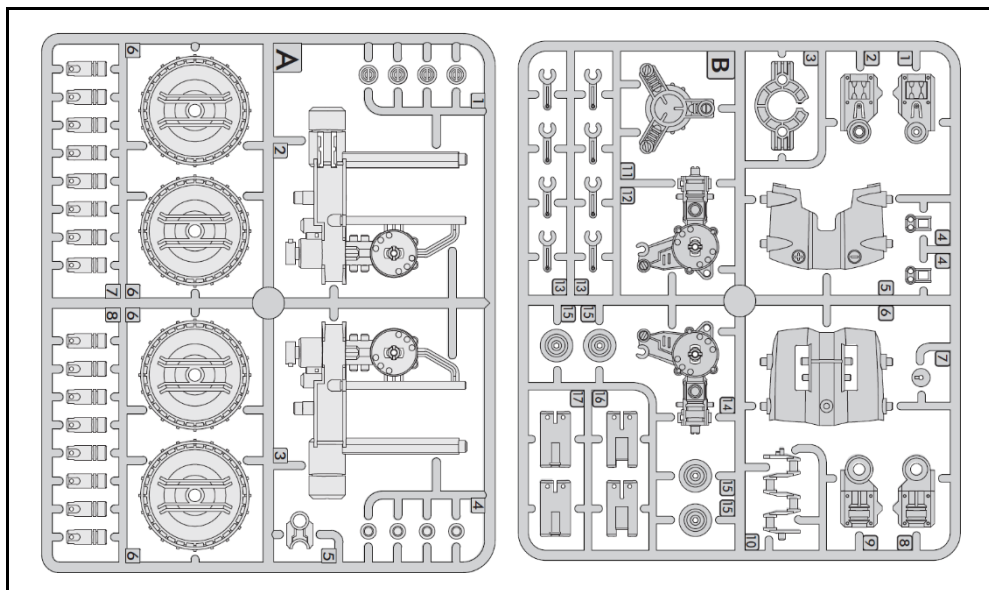
P4 Engrenage (rouge)	 QTÉ 1
P5 Arbre rond	 QTÉ 1
P6 Engrenage et arbre	 QTÉ 1
P7 Arbre de transmission et pignons	 QTÉ 1
P8 Roue plate et arbre	 QTÉ 2
P9 Vis taraudeuse	 QTÉ 1
P10 Cathode à air (noire)	 QTÉ 1
P11 Tissu non tissé	 QTÉ 1 (Rechange : 1 pièce)
P12 Feuille de magnésium	 QTÉ 1 (Rechange : 2 pièces)
P13 Compte-gouttes en plastique	 QTÉ 1



Pièces en plastique

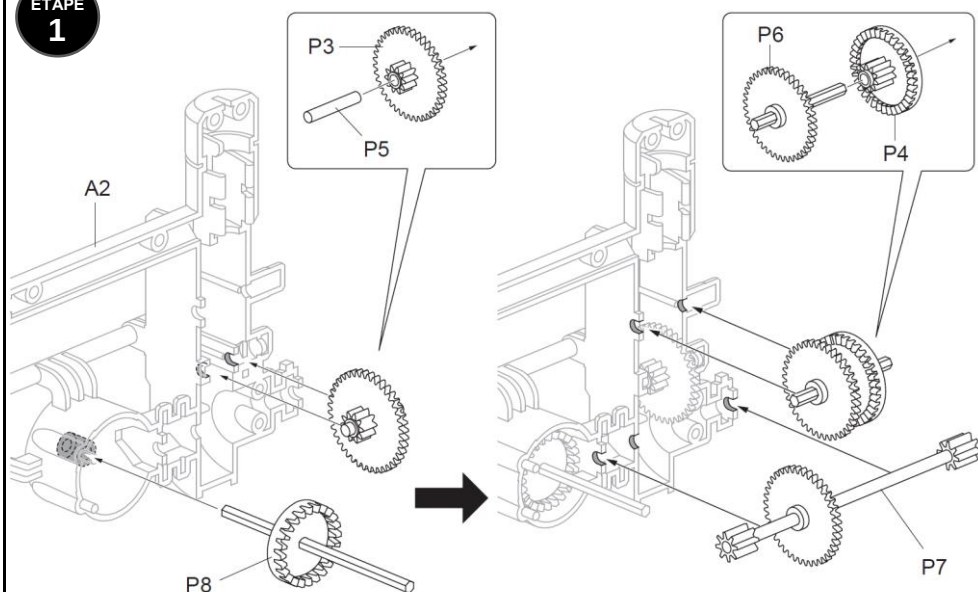
Couper les pièces en plastique si nécessaire. Ne pas les couper à l'avance.



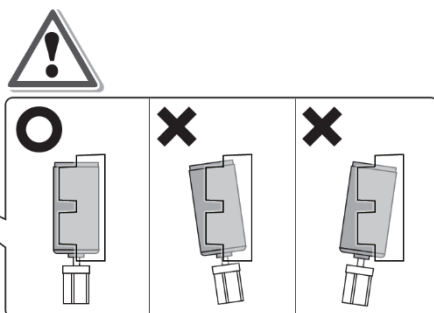
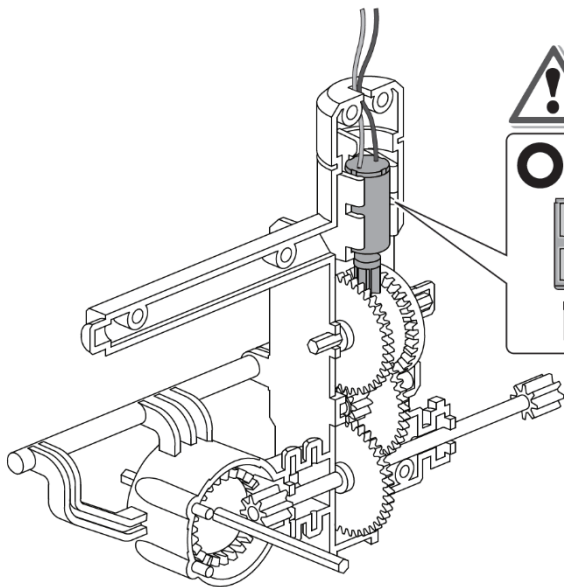
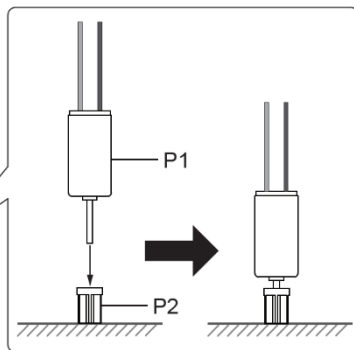
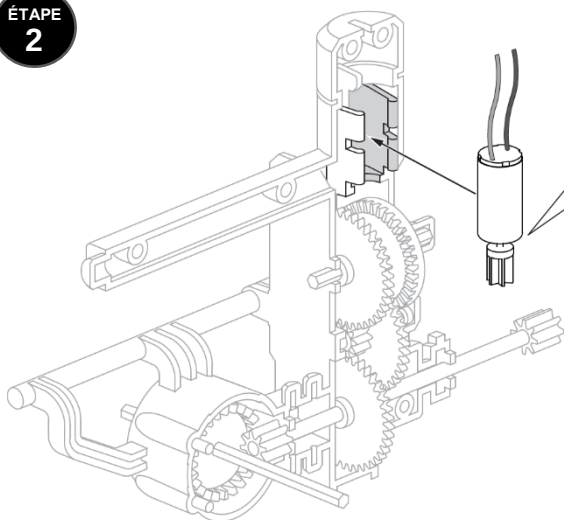


Montage mécanique

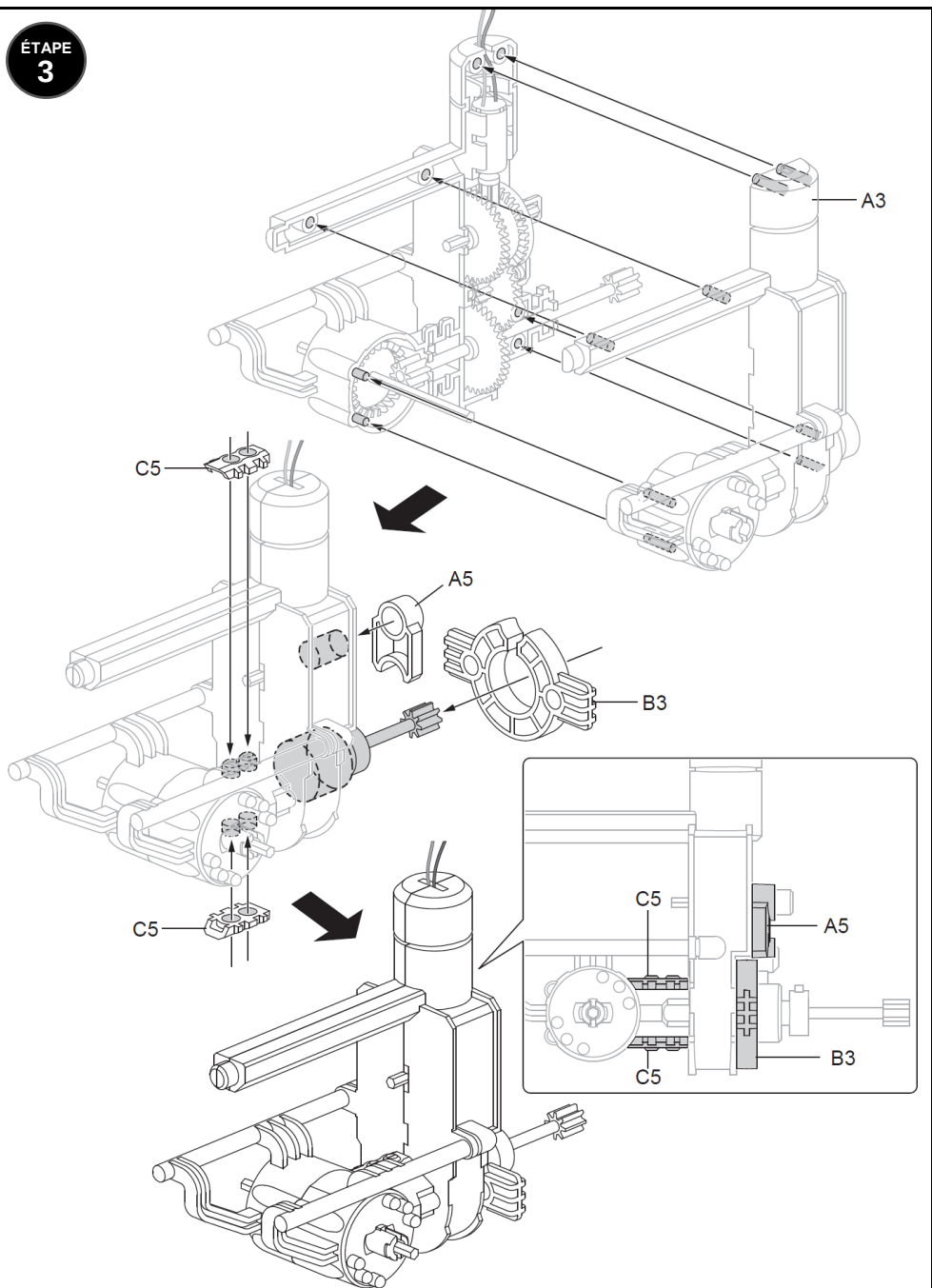
ÉTAPE
1



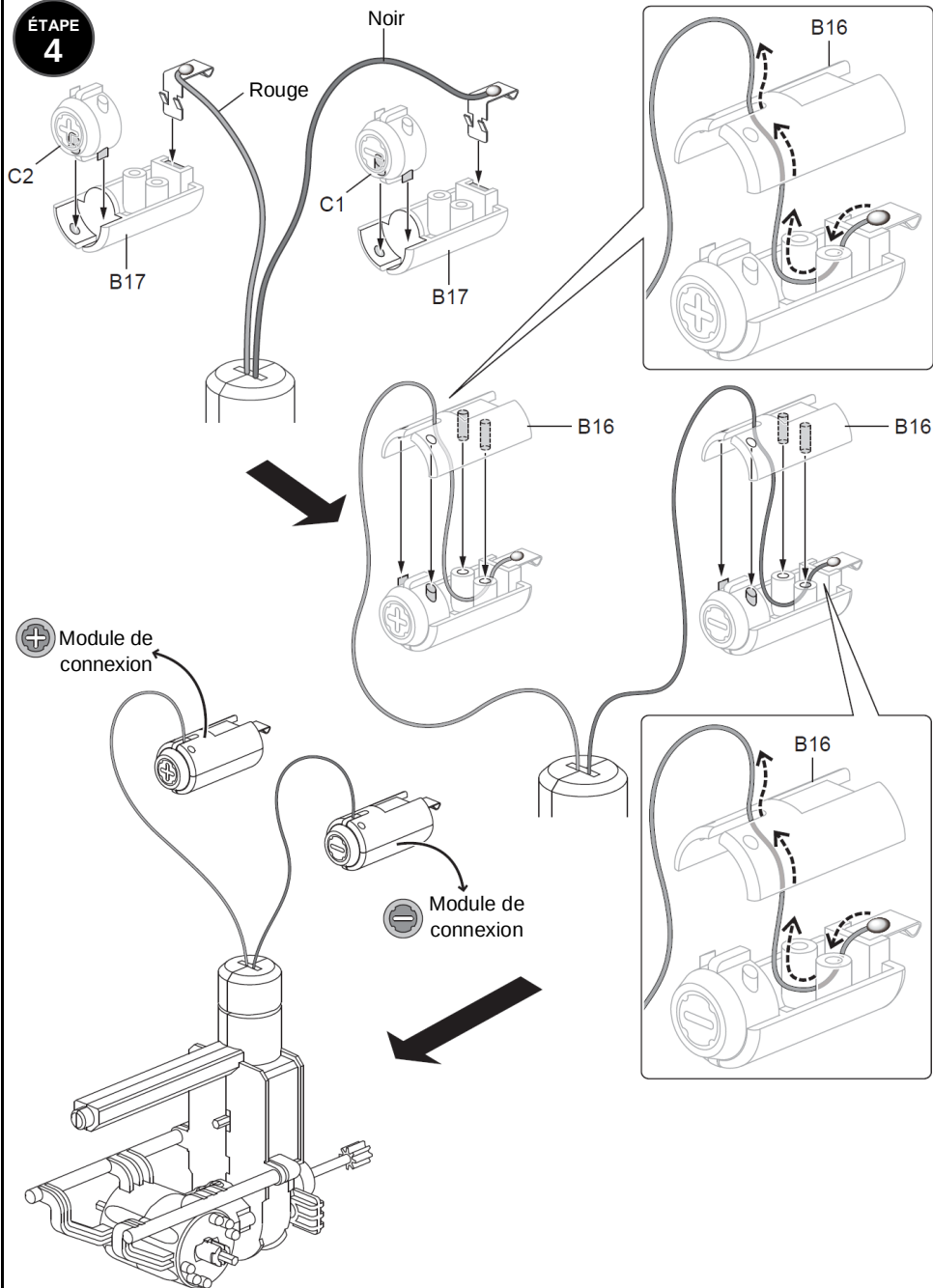
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2



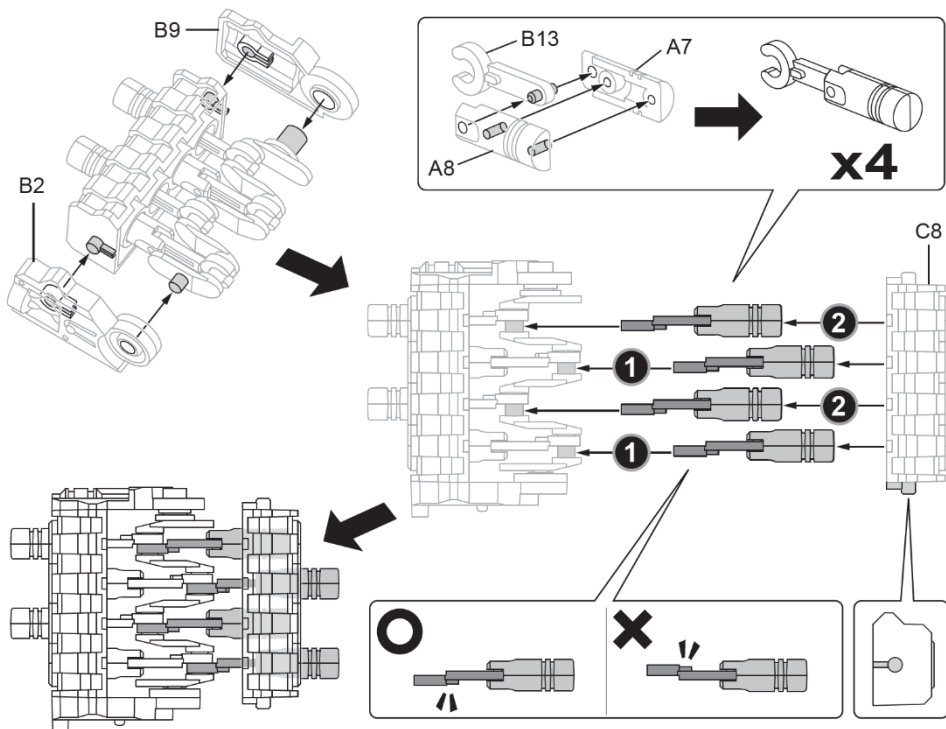
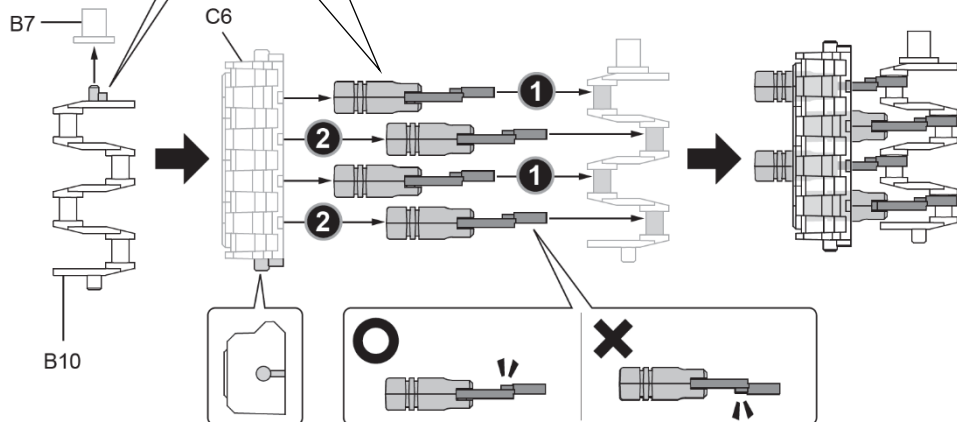
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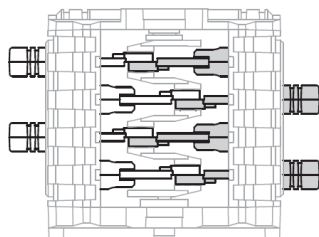
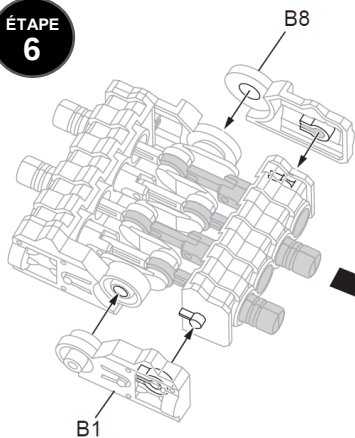
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ÉTAPE
5

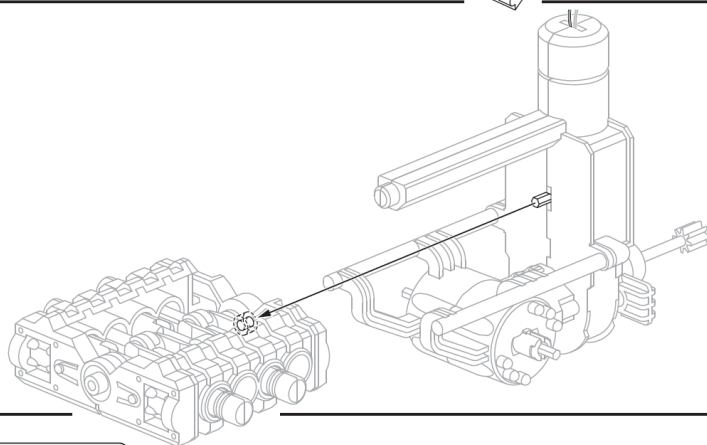


ÉTAPE
6

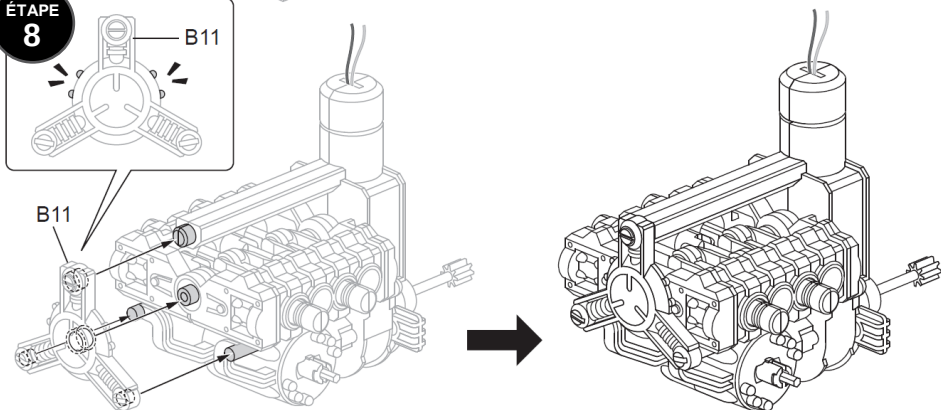


Vue du dessus

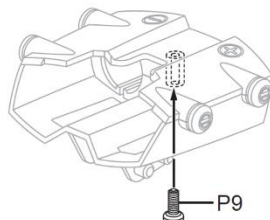
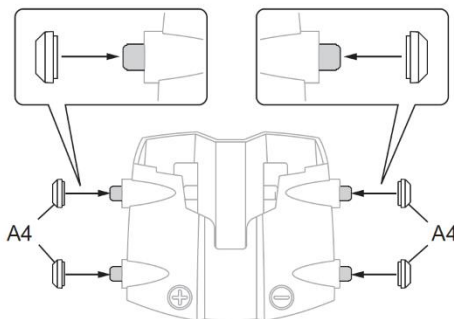
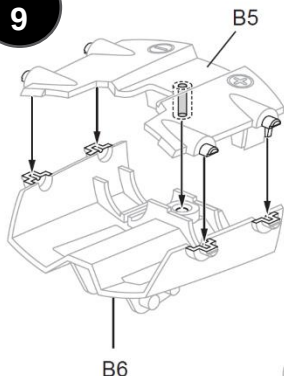
ÉTAPE
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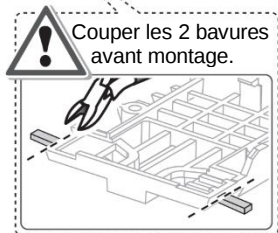
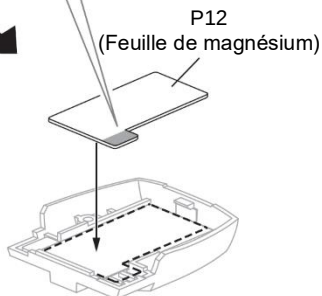
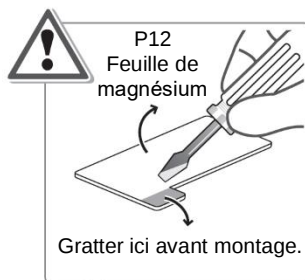
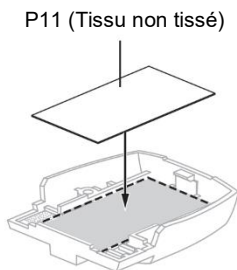
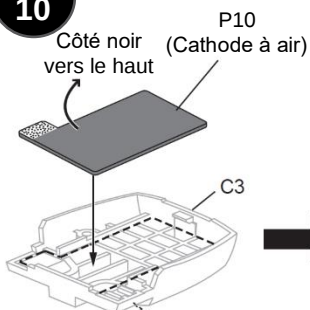
ÉTAPE
8



ÉTAPE 9

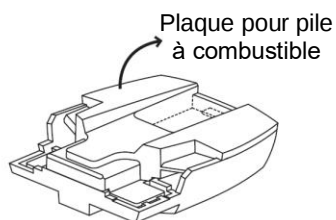
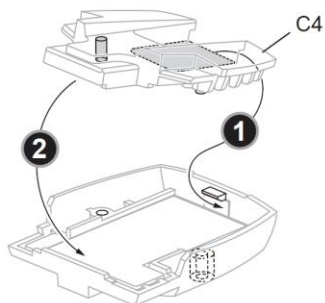


ÉTAPE 10

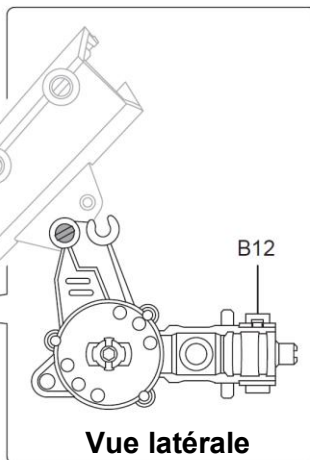
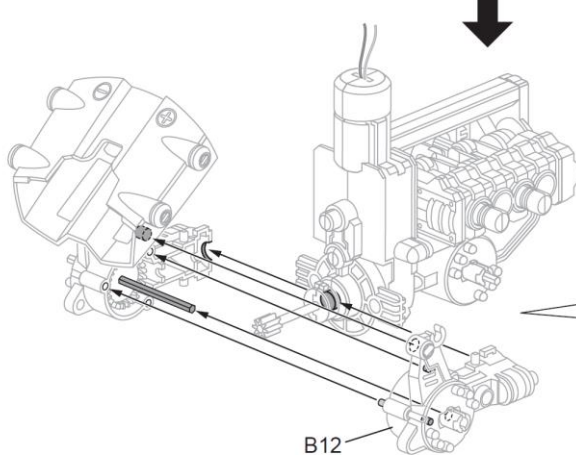
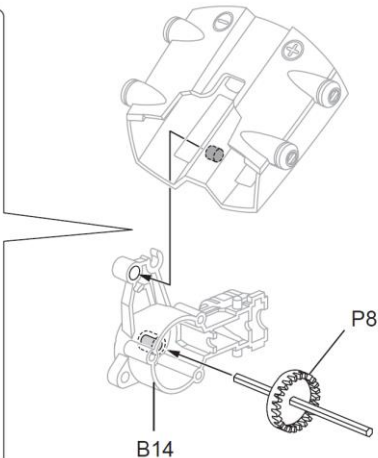
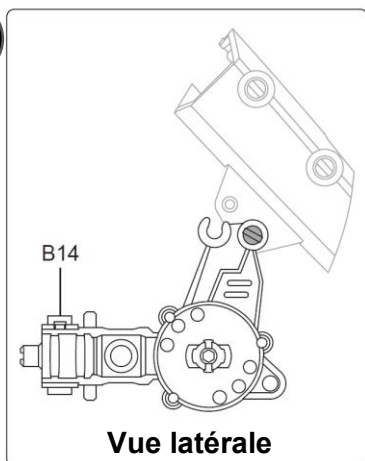


Vérifier que P10, P11, P12 sont placés dans l'ordre et la position corrects.

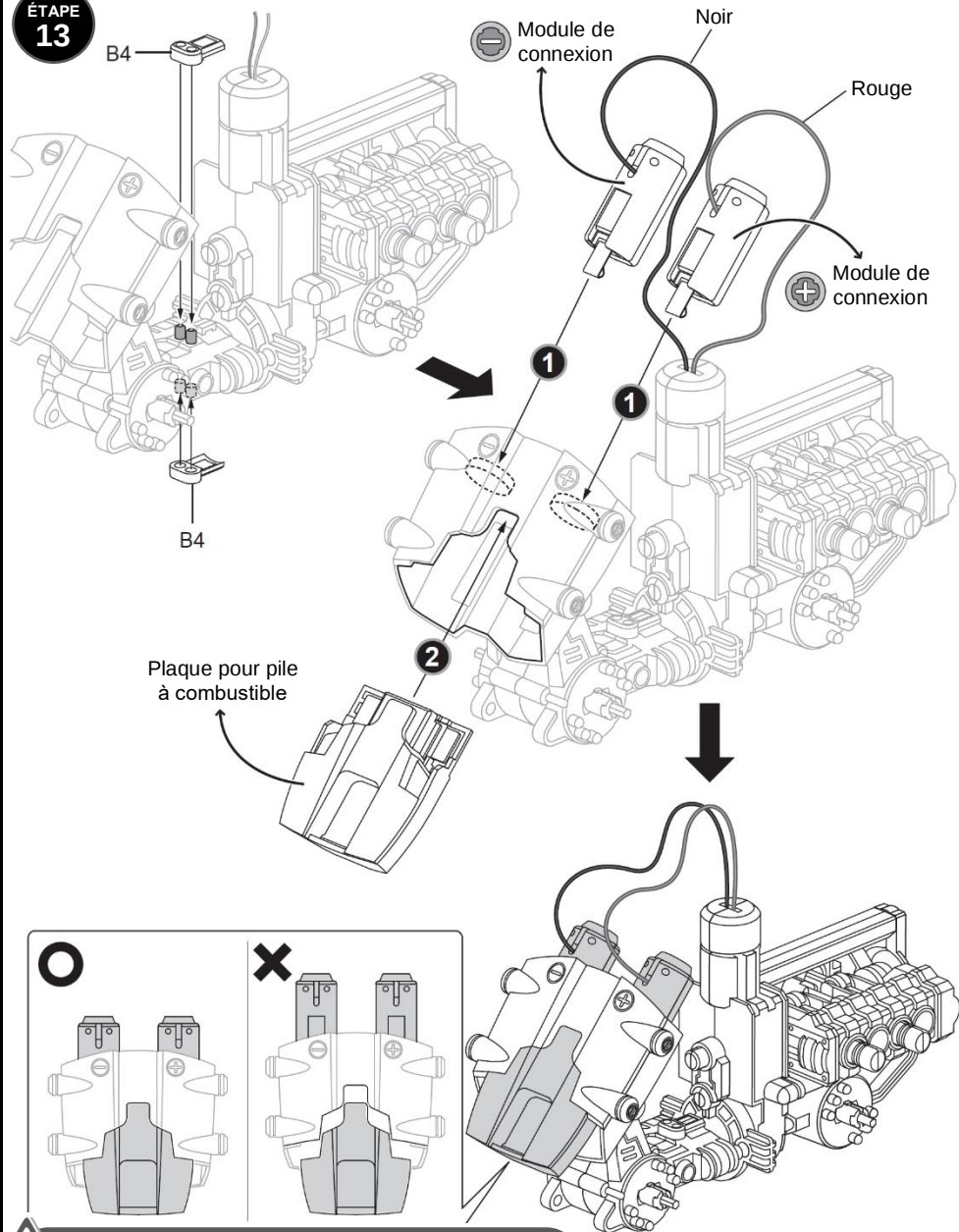
**ÉTAPE
11**



**ÉTAPE
12**

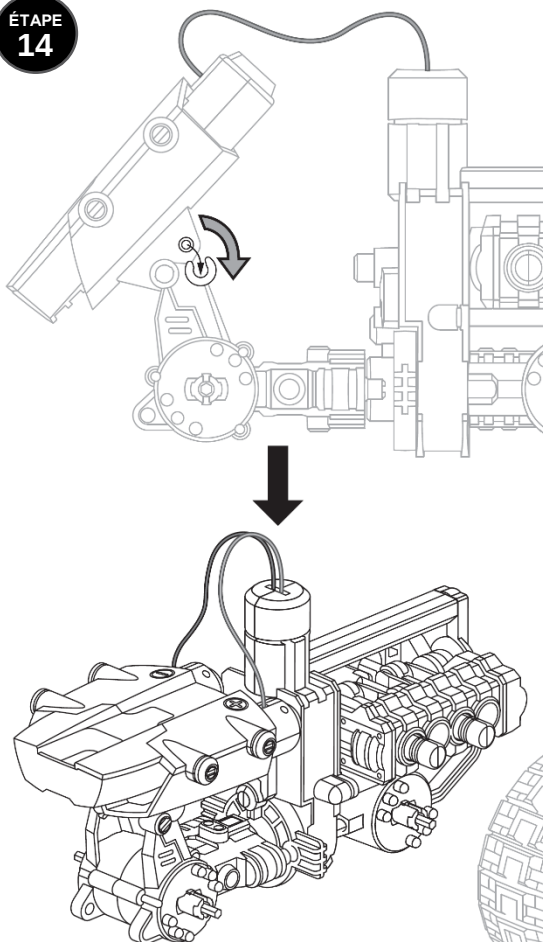


**ÉTAPE
13**

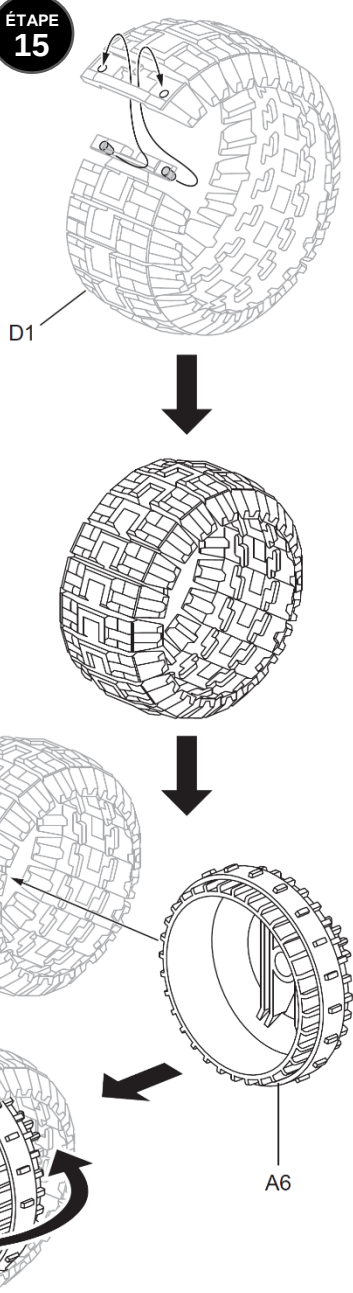


⚠ Veiller à insérer la plaque pour pile à combustible et le module de connexion à l'extrémité.

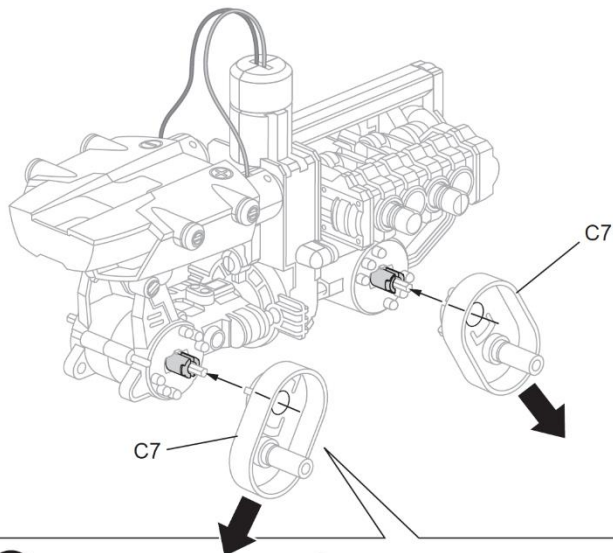
ÉTAPE
14



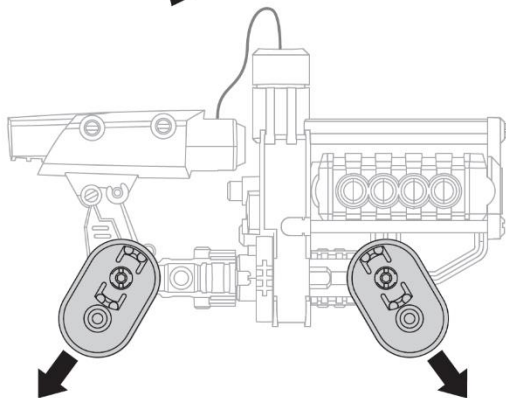
ÉTAPE
15



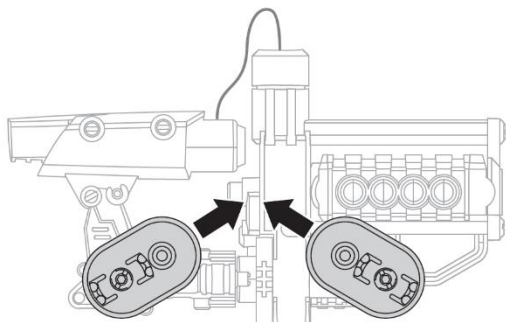
ÉTAPE
16



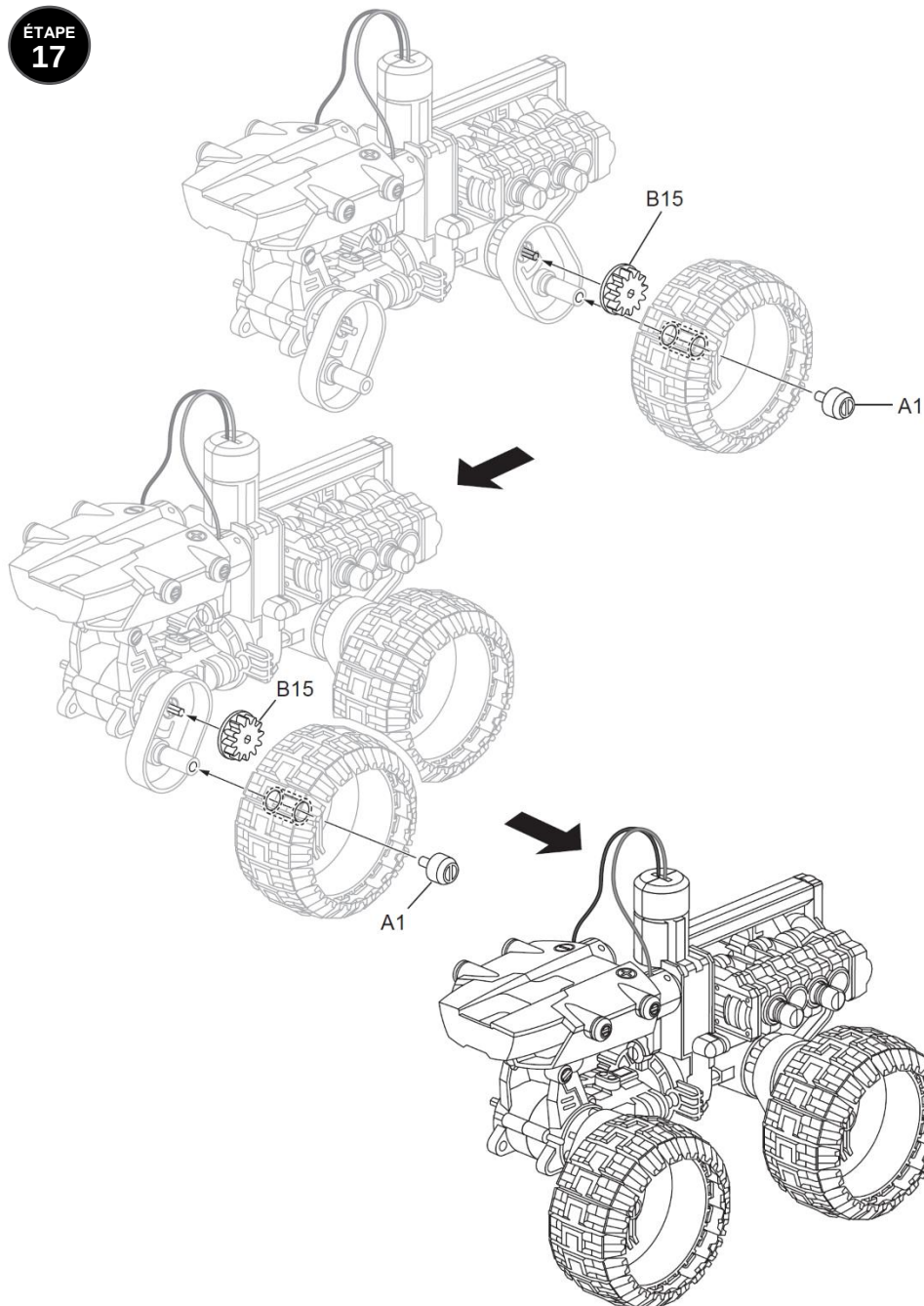
○



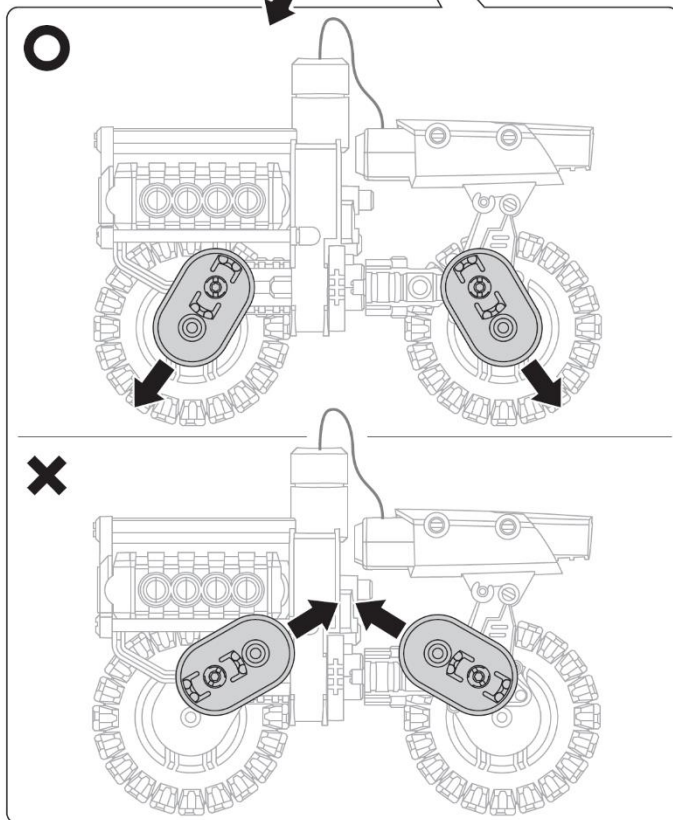
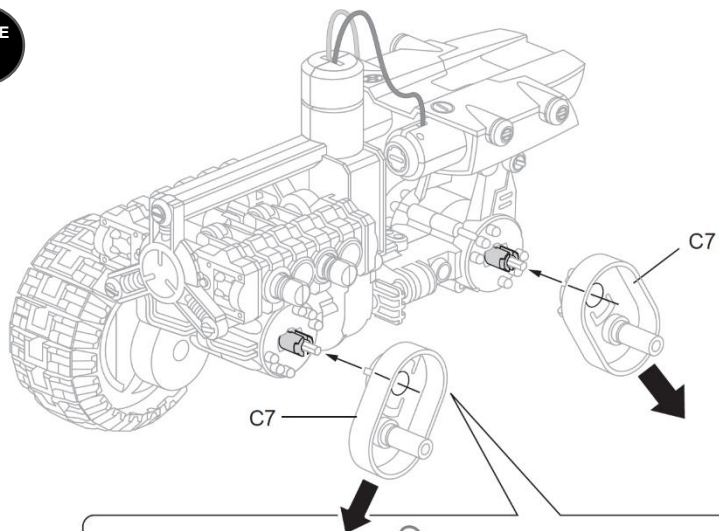
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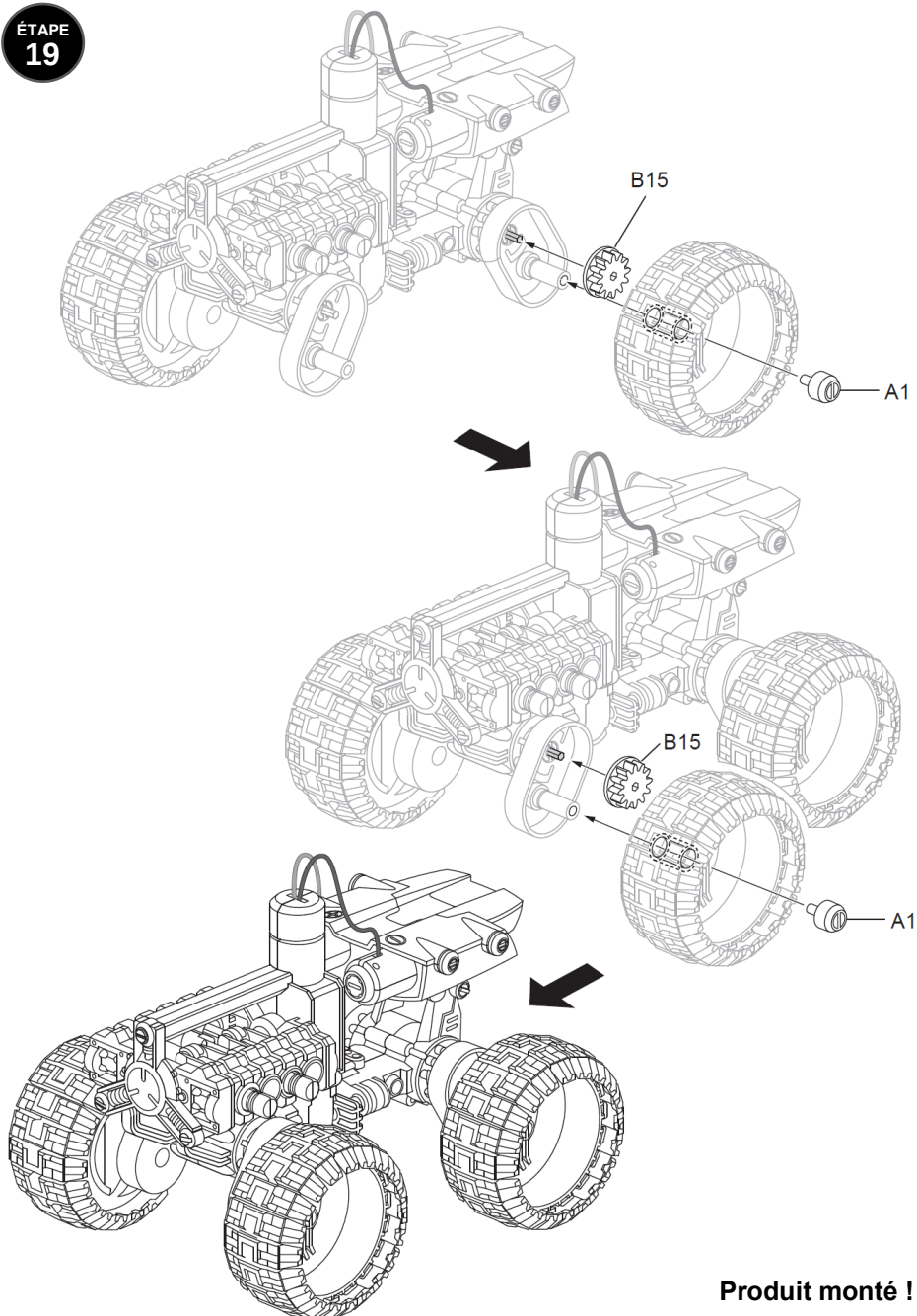
ÉTAPE
17



ÉTAPE
18



ÉTAPE
19



Produit monté !

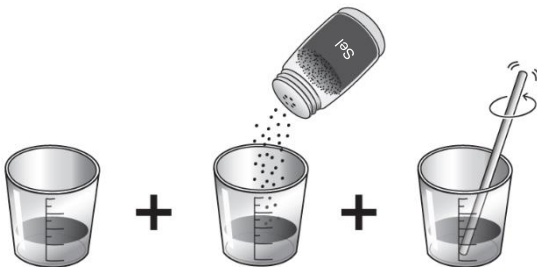
Fonctionnement

- Au bout d'un certain temps (environ 15 minutes) il n'y plus d'eau salée et la voiture commence à ralentir ou à s'arrêter. Ajouter quelques gouttes d'eau salée pour la faire redémarrer (voir figure 3).
- Chaque feuille de magnésium peut fonctionner pendant 4 heures en continu, puis se fragmente. Remplacer la feuille par une nouvelle feuille afin d'alimenter la voiture en énergie. Le kit comprend 3 feuilles de rechange.
- Tous les matériaux utilisés dans ce kit sont respectueux de l'environnement, ne contenant aucune substance toxique et ne posant aucun problème d'élimination.



Lire attentivement les points suivants avant d'utiliser l'appareil !

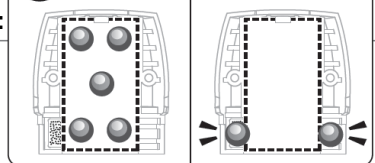
- 1 Comment préparer une solution d'eau salée :** Ajouter du sel à de l'eau du robinet ou de l'eau distillée dans une proportion de **1 (sel) : 5 (eau)**. Tous les pourcentages de 20 % à 99 % d'eau salée peuvent être utilisés, mais le pourcentage de 20 % est le plus efficace.



Eau

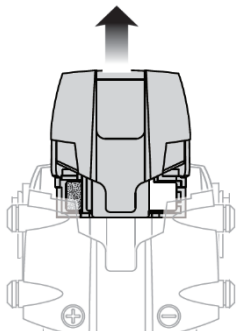


Ne pas ajouter d'eau salée à l'extérieur du tissu non tissé, comme illustré ci-dessous.



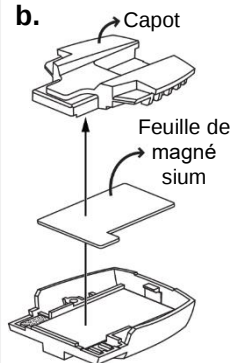
- 2 Comment remplir le moteur avec de l'eau salée :**

a.



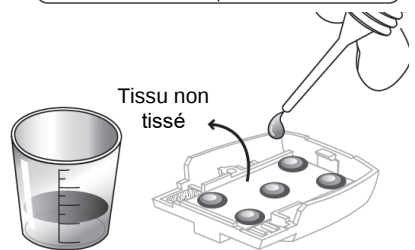
Retirer la plaque pour pile à combustible

b.

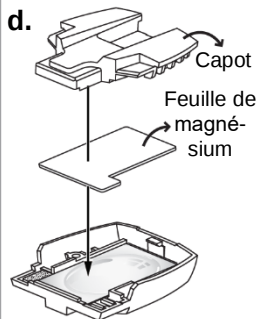


Retirer le capot et la feuille de magnésium

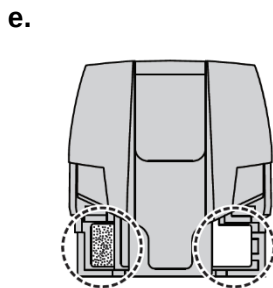
c.



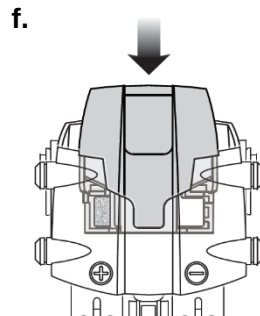
Ajouter l'eau salée sur le tissu non tissé



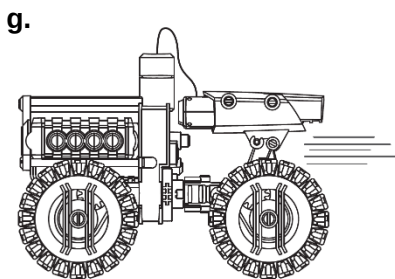
Remonter le capot et la feuille de magnésium



Vérifier que la polarité du connecteur sèche sans eau salée.

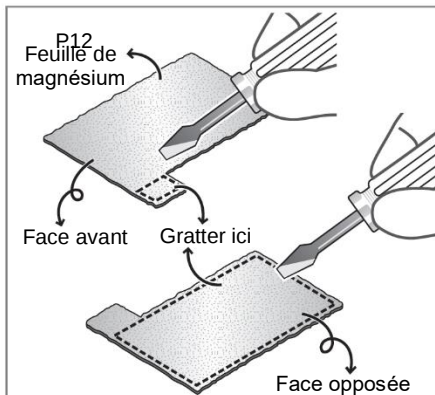
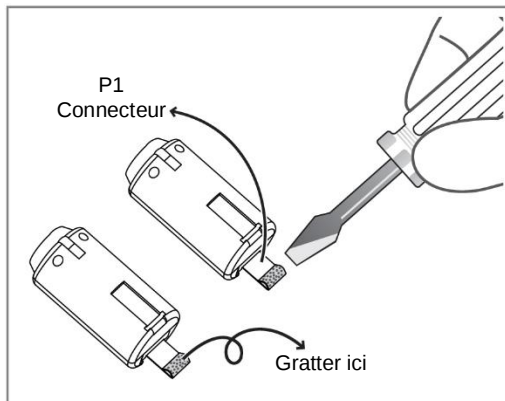


Insérer la plaque pour la pile à combustible

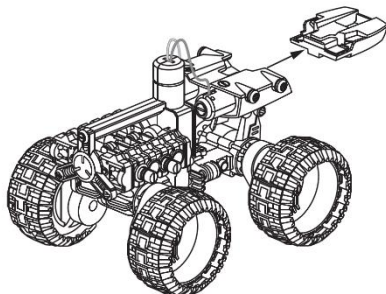


La voiture est maintenant prête à rouler

3 Comment remplir le réservoir d'eau salée : Lorsque la voiture commence à ralentir ou s'arrête, remettre quelques gouttes d'eau salée à l'aide du compte-gouttes comme indiqué au point **2 C**. Et gratter l'oxyde des connecteurs de la batterie et de la feuille de magnésium à l'aide d'un tournevis plat avant de les réutiliser. Voir les schémas ci-dessous :

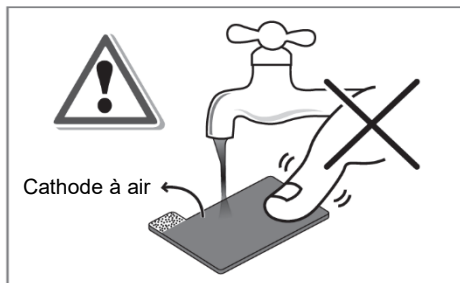
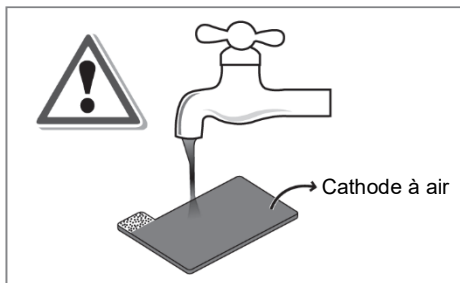


- 4 Comment arrêter la voiture :** Retirer la plaque pour pile à combustible comme indiqué ci-dessous :



- 5 Comment entretenir la plaque pour pile à combustible :** La plaque pour pile à combustible doit être nettoyée après toute période de non-utilisation.

5-1 Rincer délicatement la cathode à air sous l'eau du robinet, ne pas frotter la surface à la main afin de ne pas altérer la qualité de la cathode à air.



5-2 Rincer les parties indiquées ci-dessous et frotter la surface à la main. Vérifier qu'il n'y a pas de résidus de sel. Sécher toutes les parties séparément.



1. Tissu non tissé

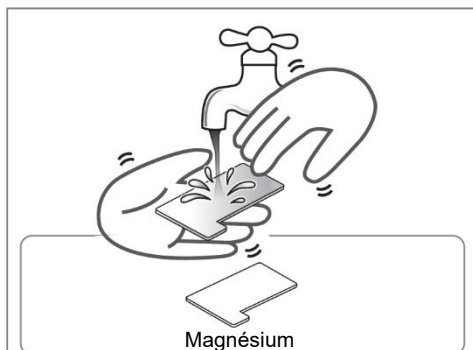


2. Capot

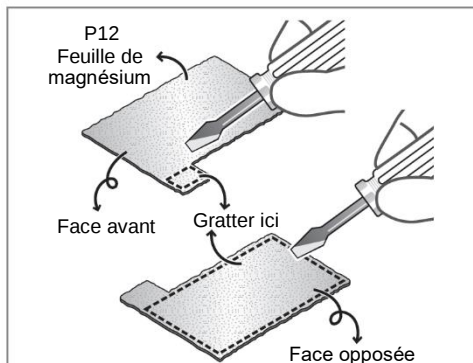


3. Base inférieure

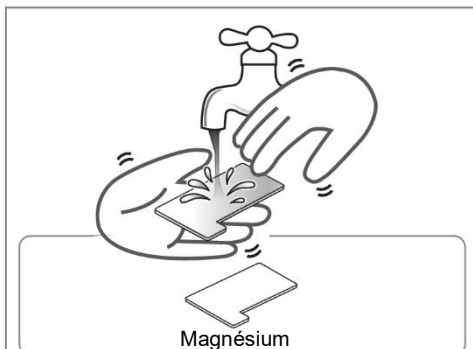
5-3 Rincer et gratter l'oxydation de la feuille de magnésium comme indiqué ci-dessous :



Rincer délicatement la feuille de magnésium



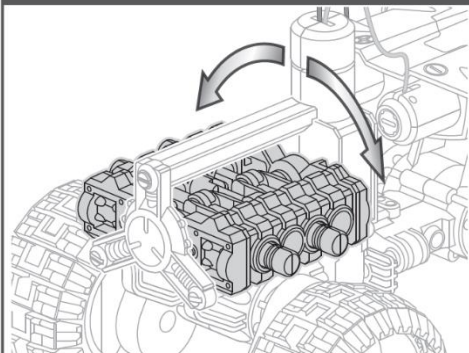
Gratter l'oxydation de la feuille de magnésium



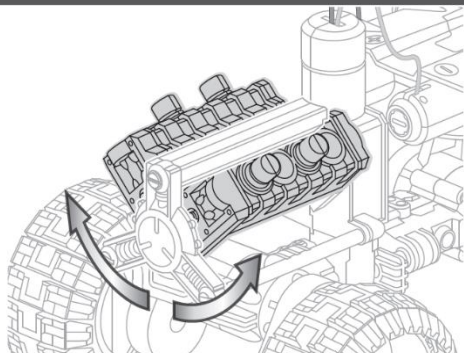
Rincer délicatement la feuille de magnésium et la sécher.

Comment jouer

<1> Passer d'un moteur plat à un moteur en V.

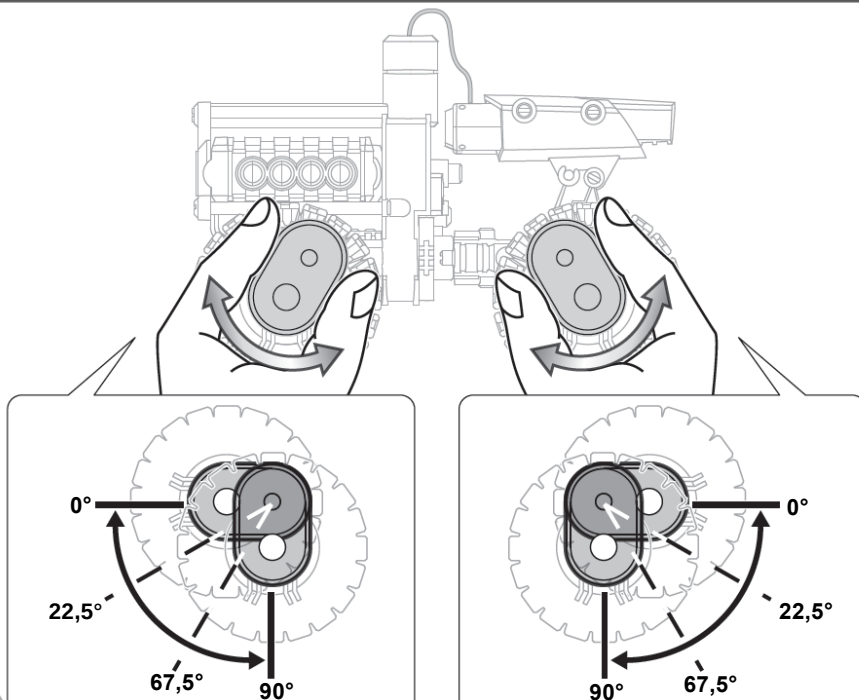


Moteur PLAT



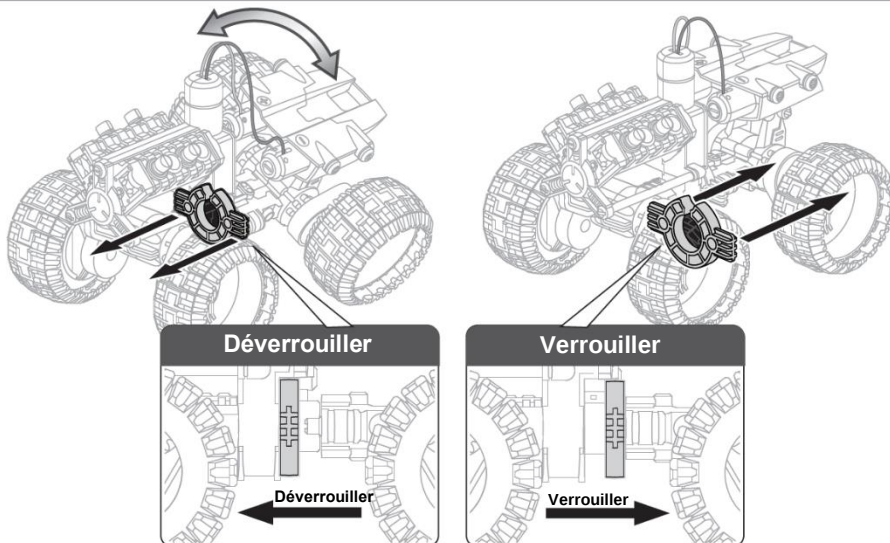
Moteur en V

<2> Régler la hauteur des roues.

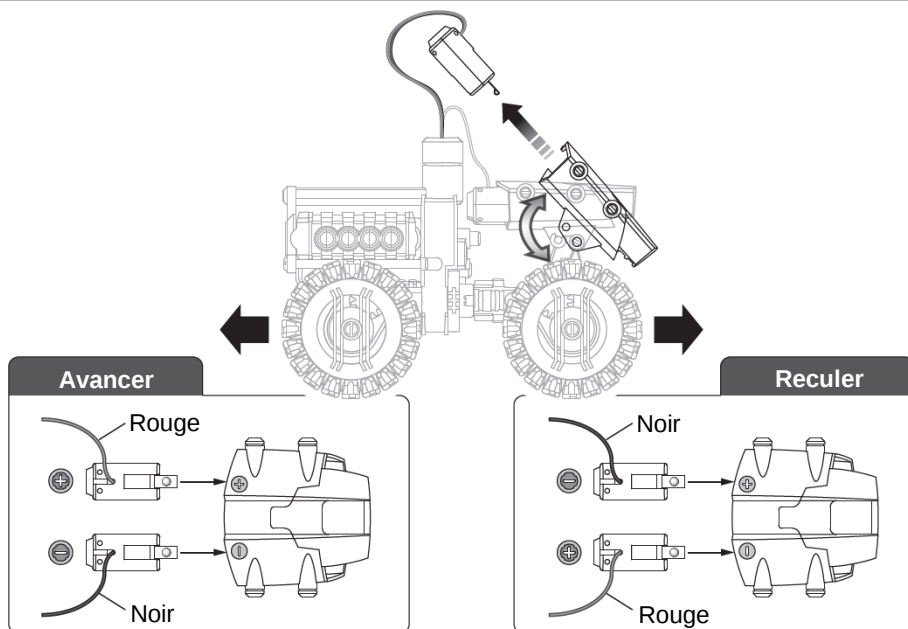


Remarque : Ne pas mettre les roues avant à 0 degrés lorsque le moteur est en configuration plate, car elles risquent de se gêner mutuellement.

<3> Verrouiller ou déverrouiller la carrosserie.



<4> Faire avancer ou reculer la voiture.



Dépannage

Vérifier les étapes ci-dessous si la voiture ne bouge pas après ajout d'eau salée.

- 1 Vérifier que le moteur et les engrenages sont installés dans la bonne position.
- 2 Vérifier que chaque connecteur est placé dans la bonne position (Réf : **ÉTAPE 4**)
- 3 Vérifier que la plaque pour pile à combustible et le module de connexion sont bien insérés. (Réf : **ÉTAPE 13**)
- 4 Installer une nouvelle feuille de magnésium si la feuille en place est effritée comme illustré ci-dessous.



(Nouvelle)

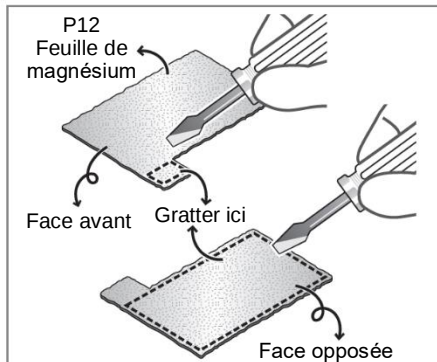
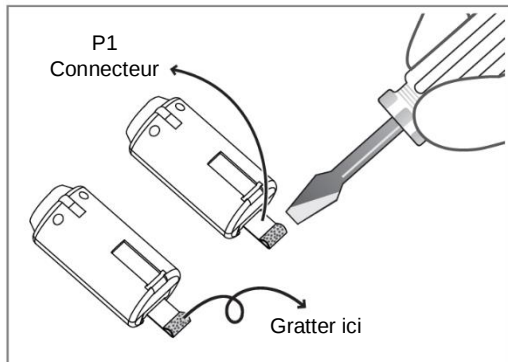


(À remplacer)

- 5 Vérifier que la plaque pour pile à combustible est placée dans l'ordre et la position corrects : cathode à air - tissu non tissé - feuille de magnésium. (Réf : **ÉTAPE 10**)
- 6 Vérifier que le côté noir de la cathode à air est orienté vers le haut. (Réf : **ÉTAPE 10**)
- 7 Le tissu non tissé est également utilisé pour isoler la cathode à air et la feuille de magnésium ; vérifier que les deux parties n'entrent pas en contact l'une avec l'autre, sous peine de provoquer un court-circuit. (Réf : **ÉTAPE 10**)
- 8 **Important** : Si le tissu est totalement sec, démonter la plaque pour pile à combustible et ajouter de l'eau salée conformément à la figure **2 C**. Ne pas ajouter d'eau salée à l'extérieur du tissu non tissé.
- 9 Vérifier que la polarité du connecteur sèche sans eau salée. (Réf : **2 e**)

10 Important : L'eau salée provoque facilement l'oxydation, gratter l'oxyde des connecteurs de la batterie et de la feuille de magnésium à l'aide d'un tournevis plat avant de les réutiliser.

Voir les figures ci-dessous :



CONTENTS

Tools You May Need.....	P.01
Mechanical Parts List.....	P.01
Plastic Parts	P.02
Mechanical Assembly	P.03
How It Works	P.17
How To Play	P.21
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Salt Water FUEL CELL Engine Car KIT



This is a concept of an environmentally and friendly fuel cell engine car kit. The kit will teach children about new forms of clean energy. Be amazed that just by adding a few drops of salt water the car's engine will start to run as if by magic. See how a V8 engine runs. There are other exciting activities to explore.

GREEN ENERGY

All materials used in this kit are environmentally safe and clean, no toxic substances or disposal concerns.

Tools You May Need



Cup



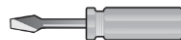
Salt



Stick



Diagonal Cutter

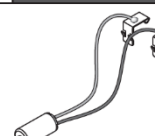


⊖ Screwdriver



⊕ Screwdriver

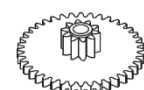
Mechanical Parts List

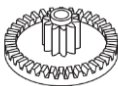
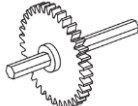
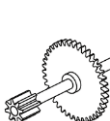
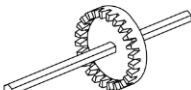
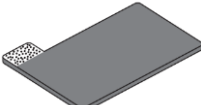
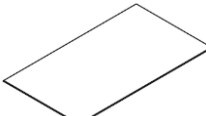
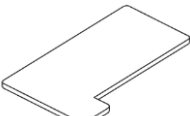
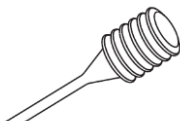
P1	Motor With Connectors	QTY
		1



Don't connect the wires to the mains.

P2	Pinion Gear (Yellow)	QTY
		1

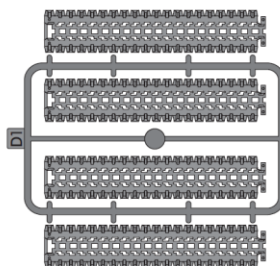
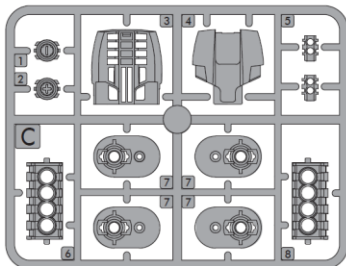
P3	Gear (Yellow)	QTY
		1

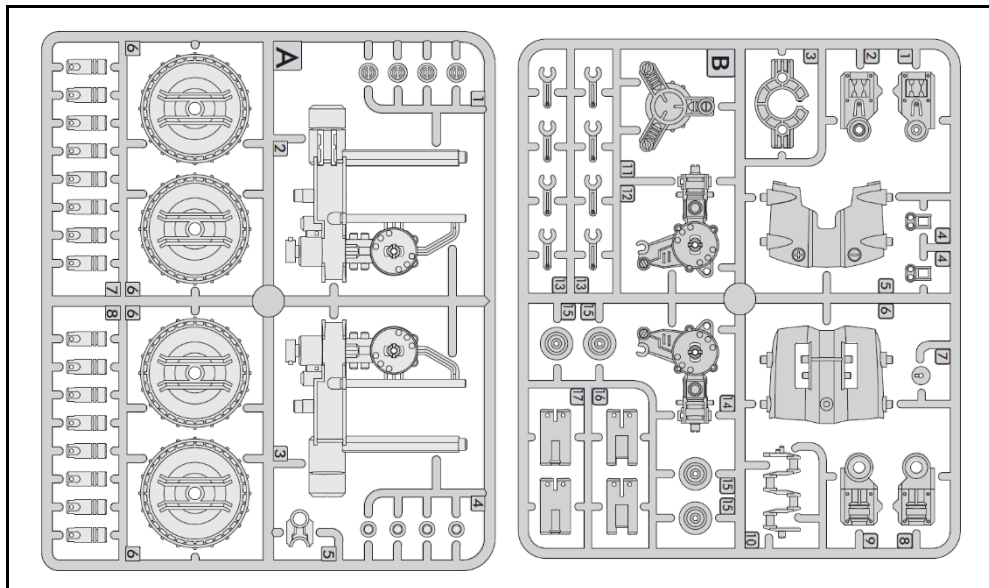
P4	Gear(Red)		QTY	1
P5	Round Shaft		QTY	1
P6	Gear With Shaft		QTY	1
P7	Gear Shaft W/Pinions		QTY	1
P8	Crown Gear With Shaft		QTY	2
P9	Tapping Screw		QTY	1
P10	Air Cathode(Black)		QTY	1
P11	Nonwoven Fabric	 (Spare part:1pc)	QTY	1
P12	Magnesium Sheet	 (Spare parts:2pcs)	QTY	1
P13	Plastic Dropper		QTY	1



Plastic Parts

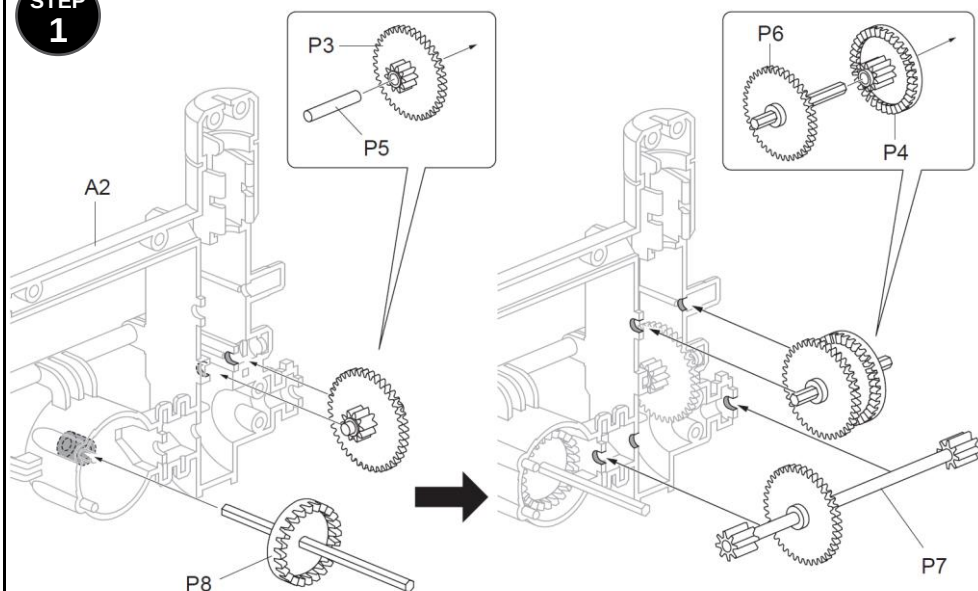
Cut the plastic parts when they are required. Do not cut them in advance.



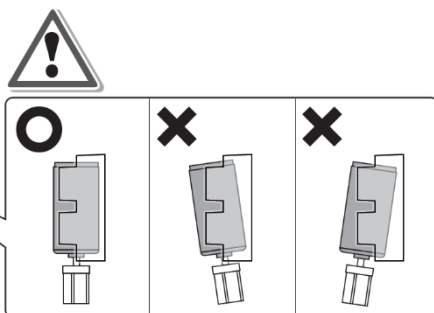
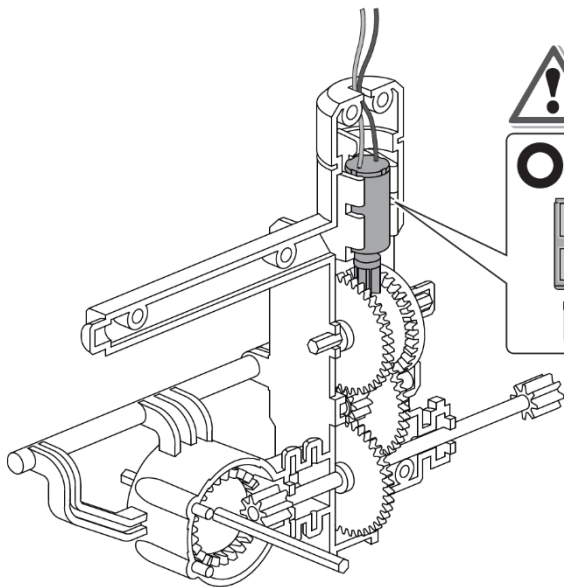
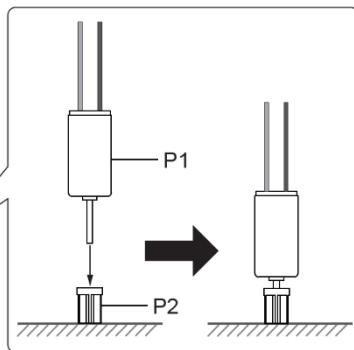
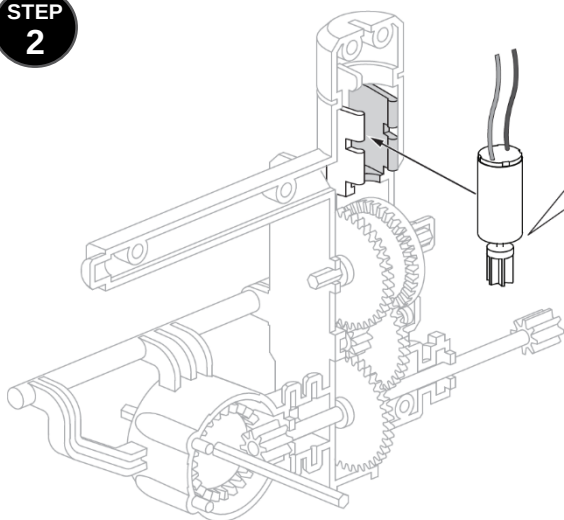


Mechanical Assembly

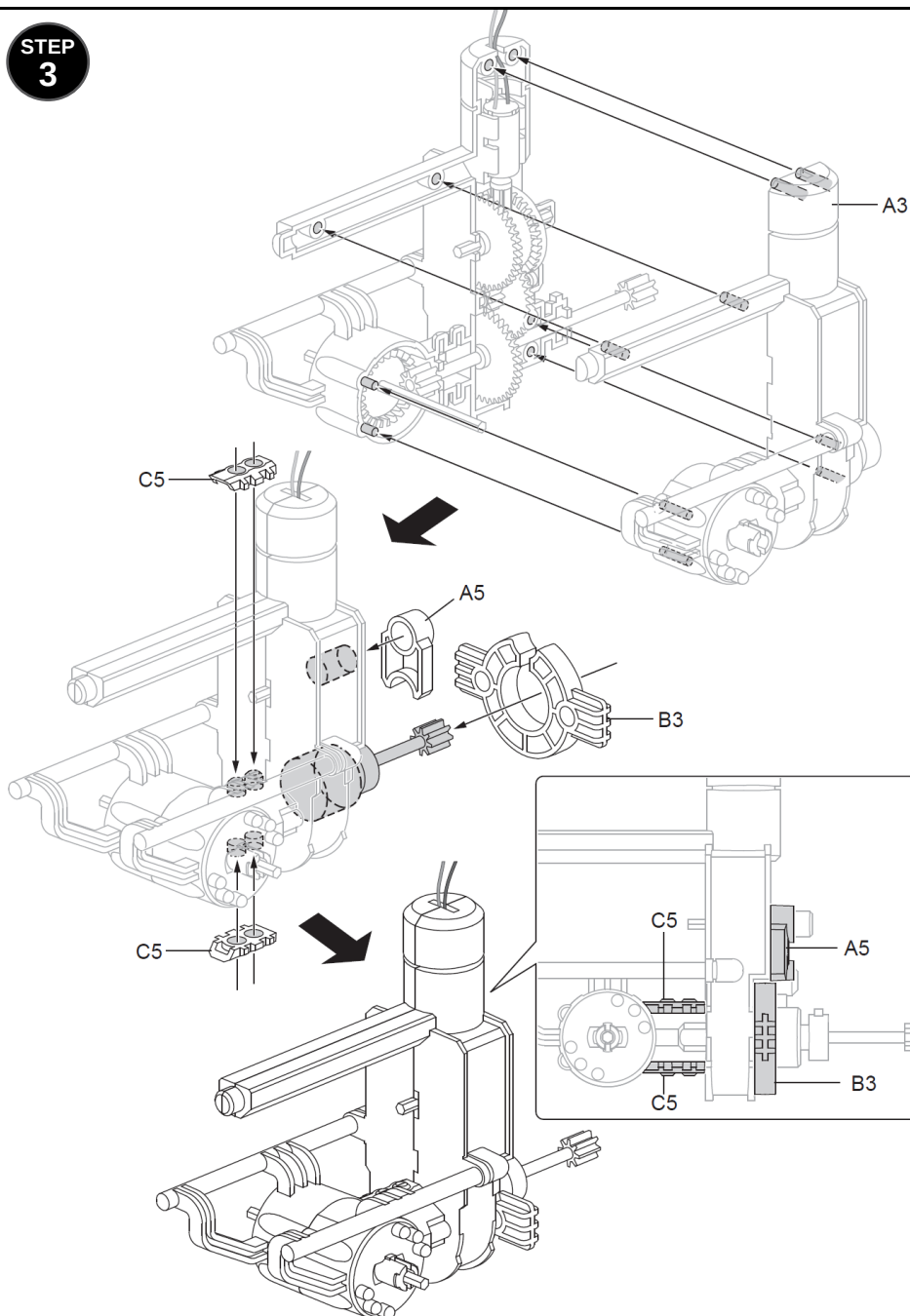
STEP 1



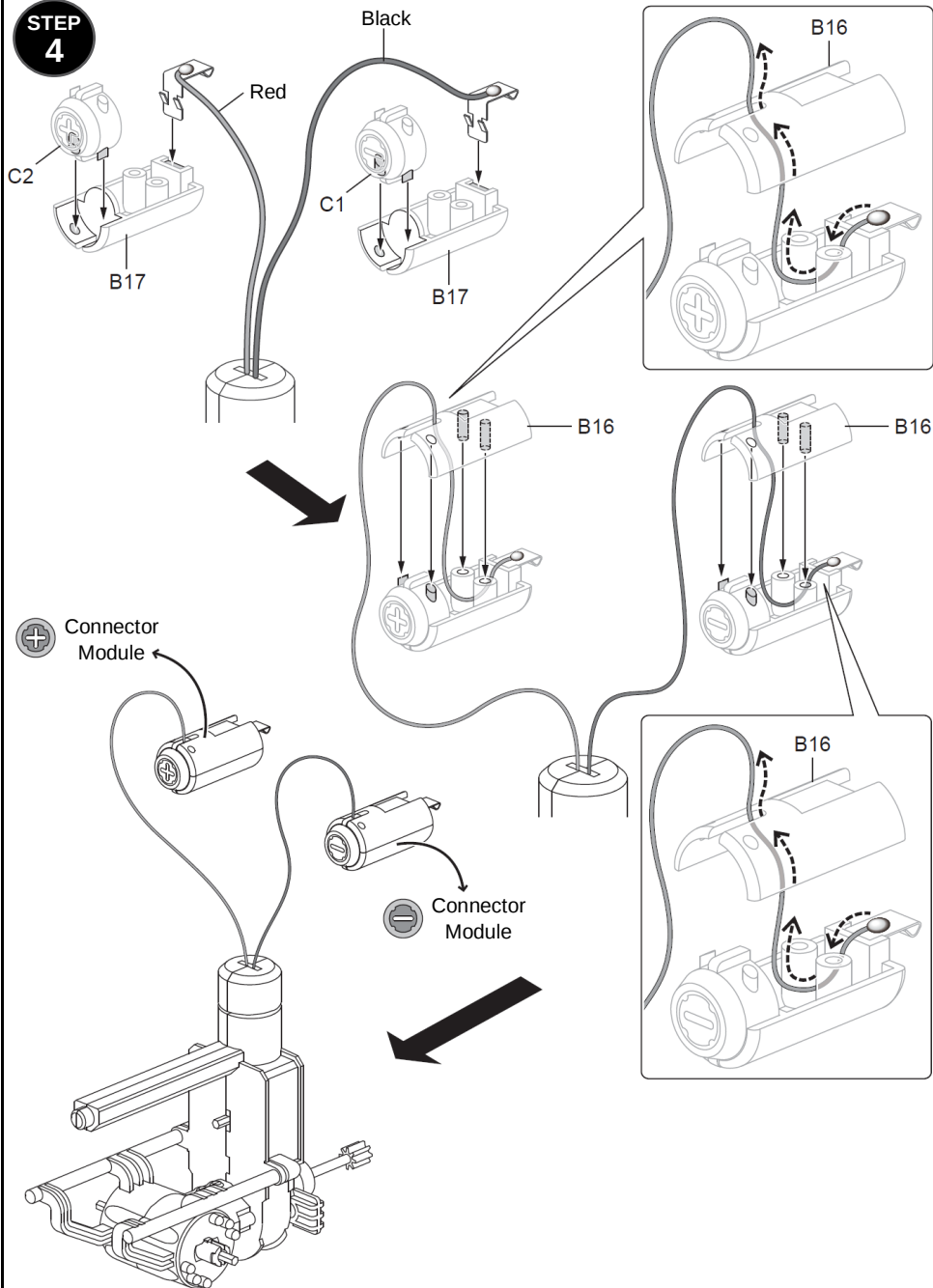
STEP
2

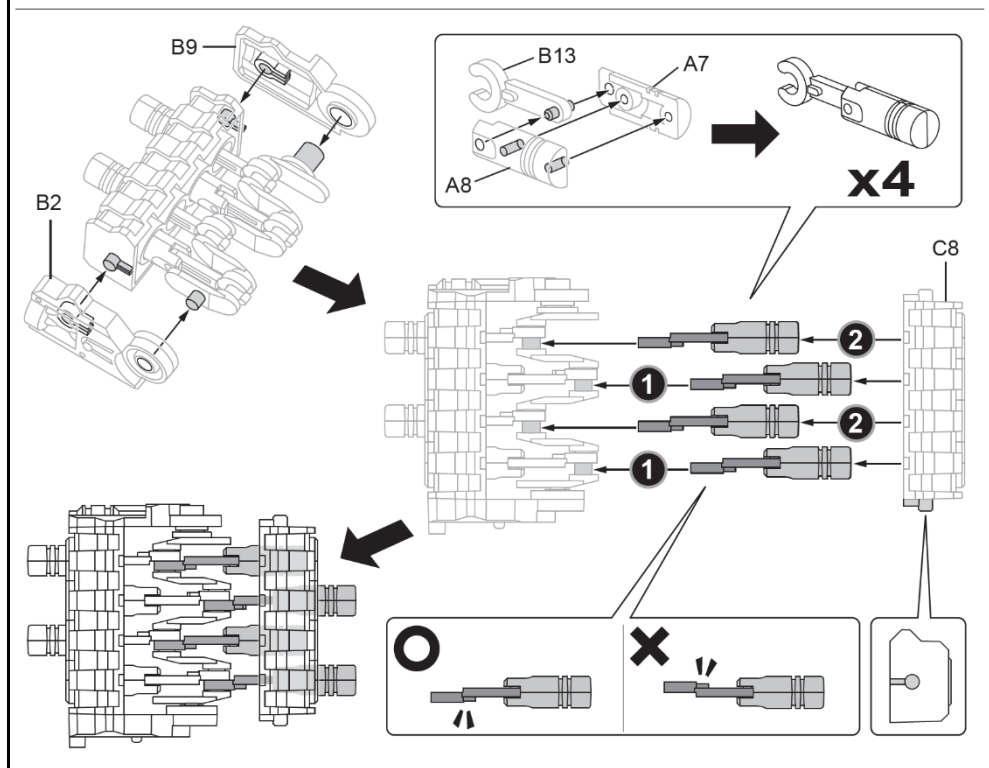
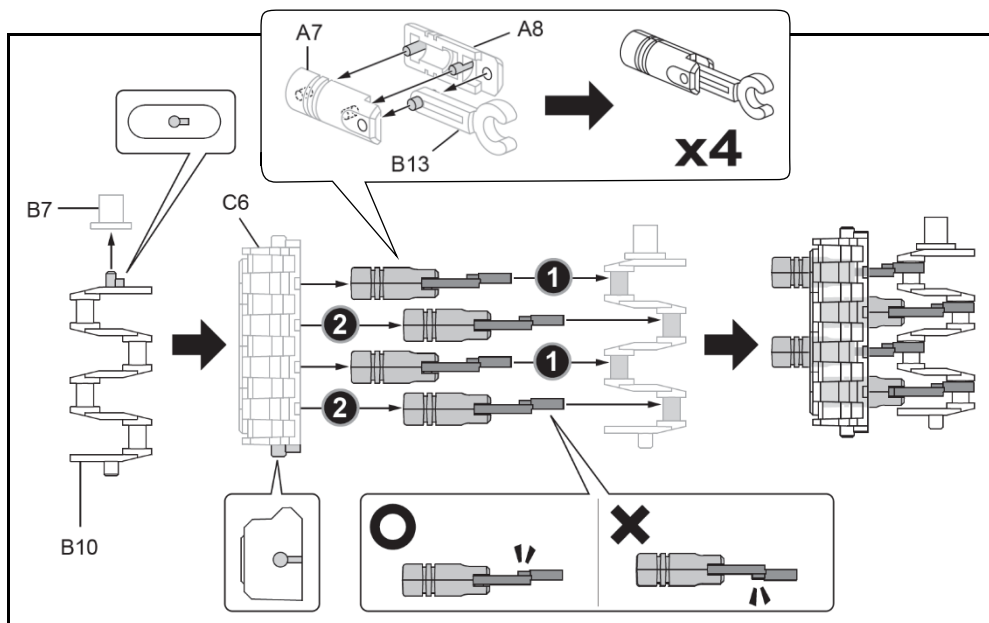


STEP
3

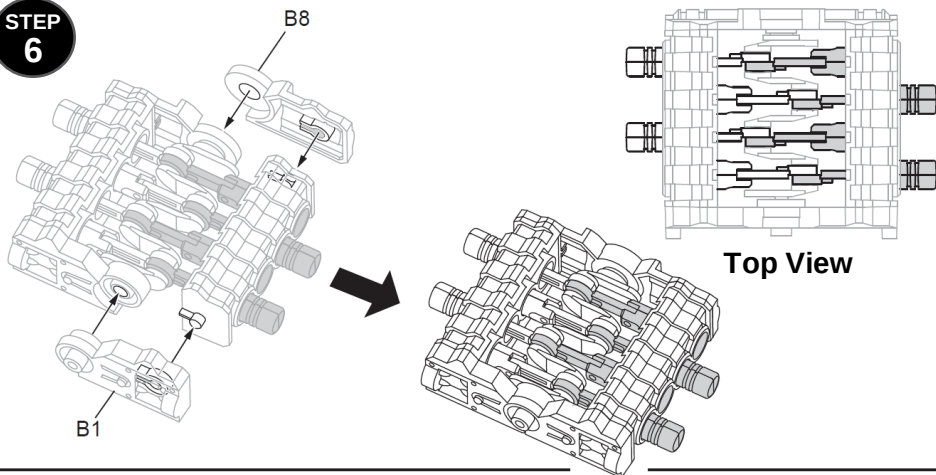


**STEP
4**

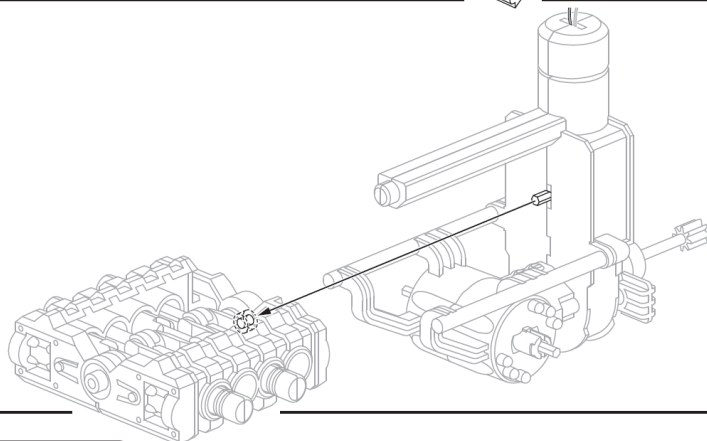




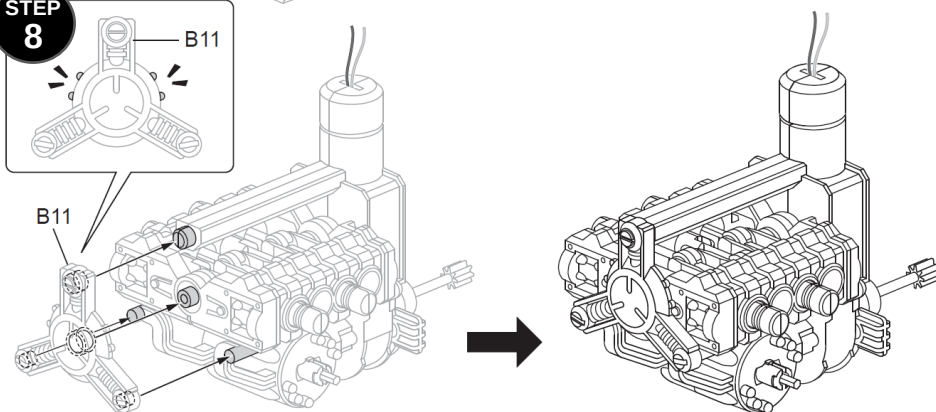
**STEP
6**



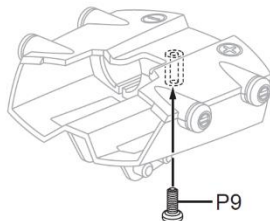
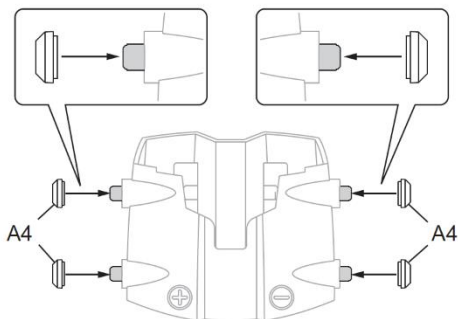
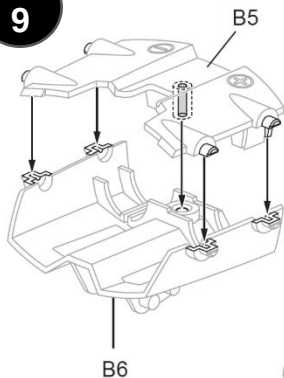
**STEP
7**



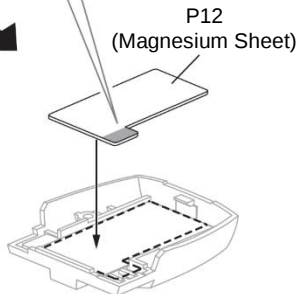
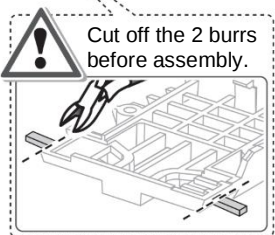
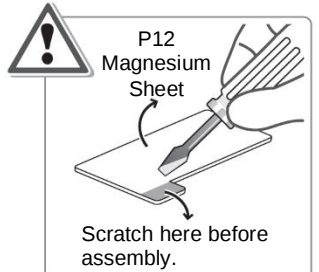
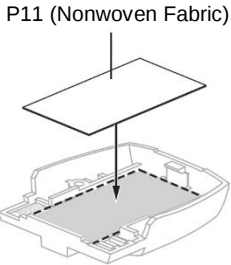
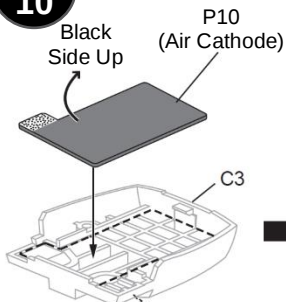
**STEP
8**



STEP 9

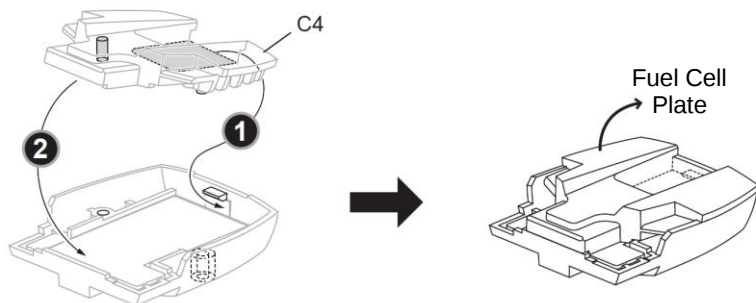


STEP 10

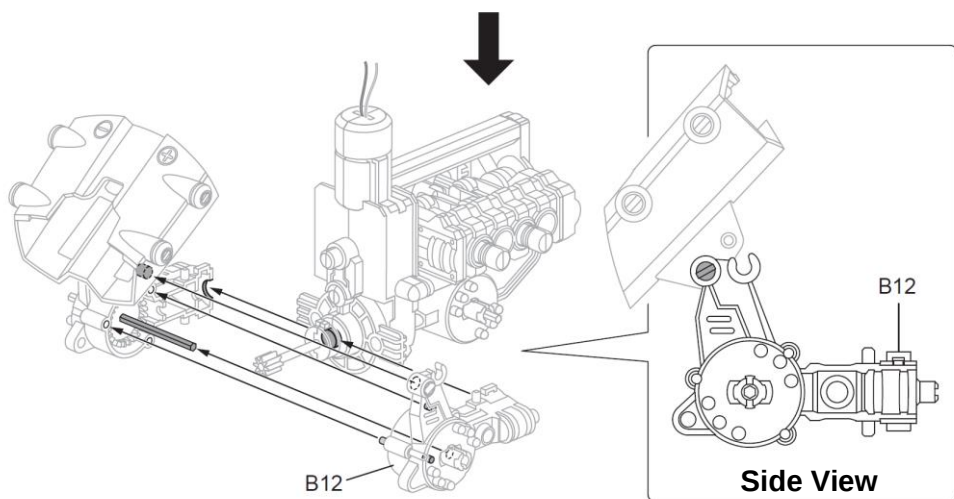
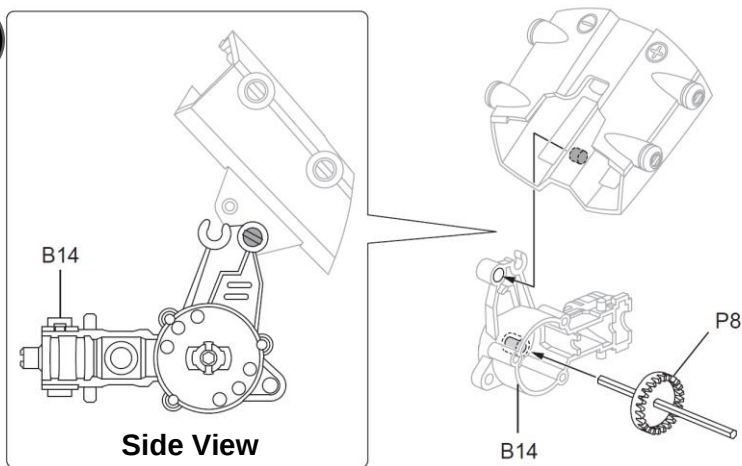


Make sure the P10, P11, P12 placed in correct sequence and position.

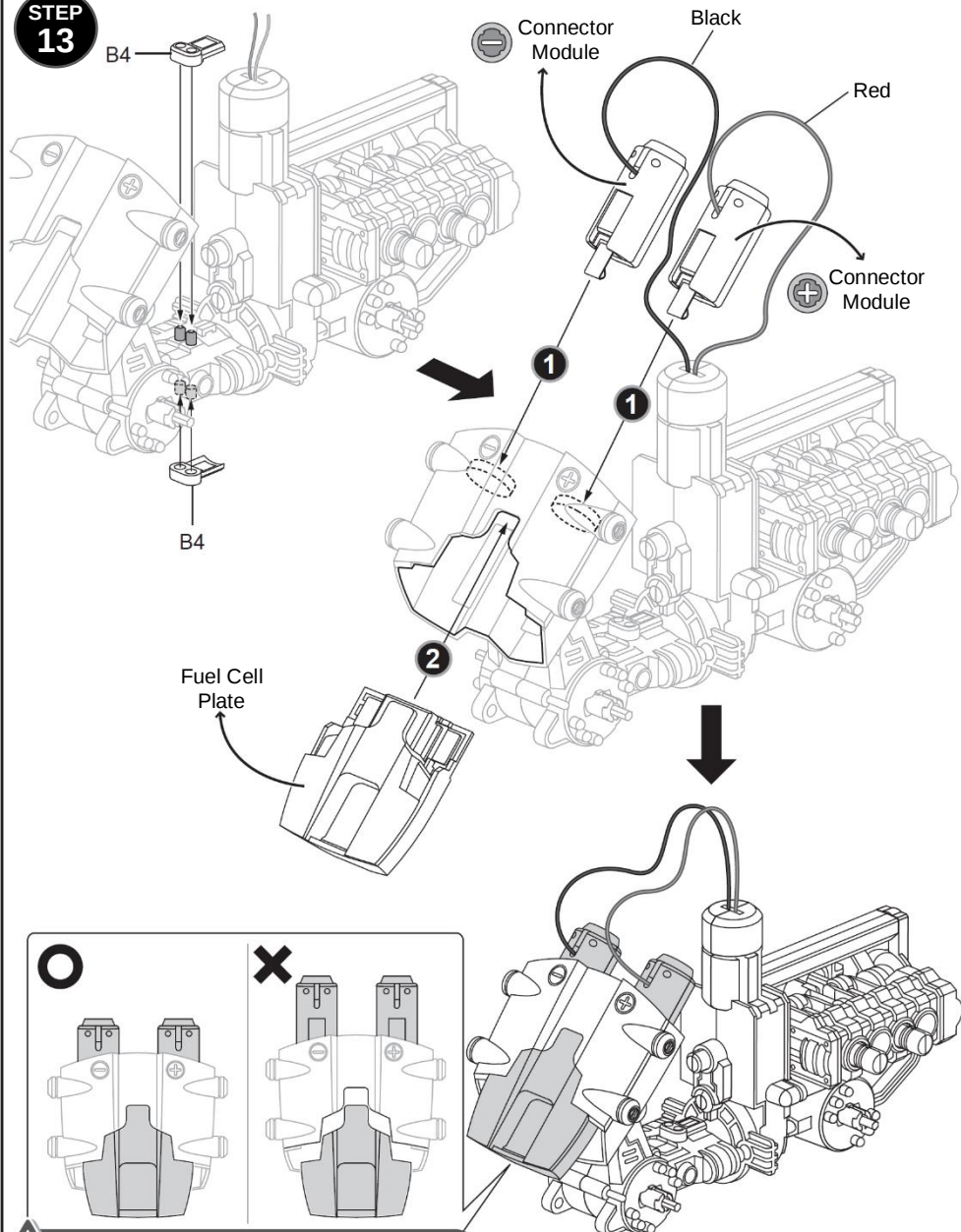
**STEP
11**



**STEP
12**

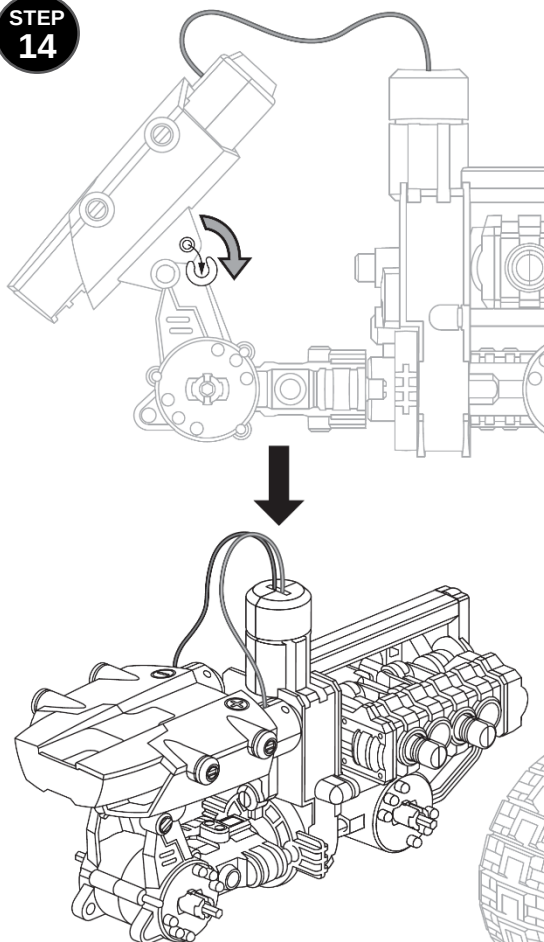


**STEP
13**

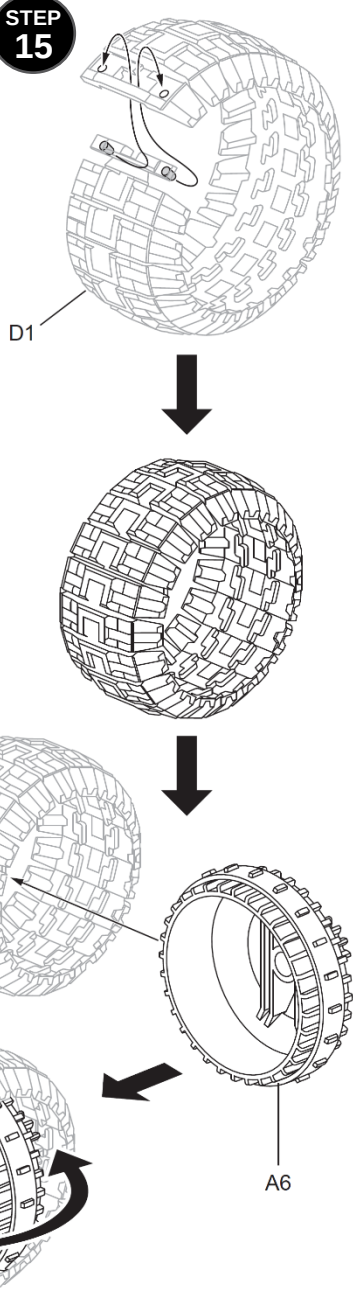


Be sure to insert fuel cell plate and connector module to the end.

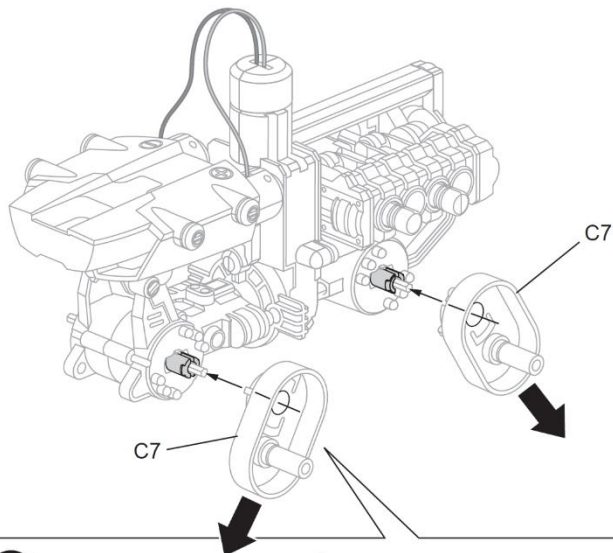
**STEP
14**



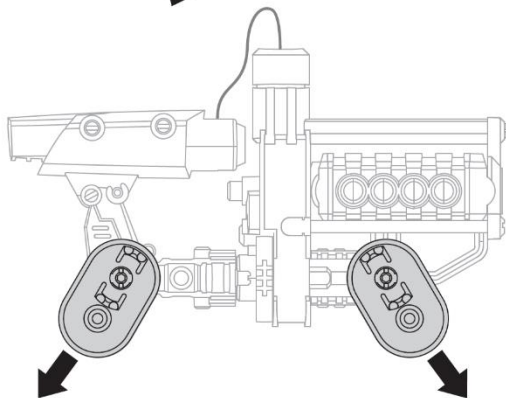
**STEP
15**



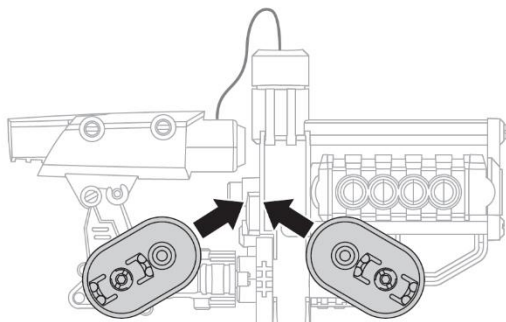
**STEP
16**



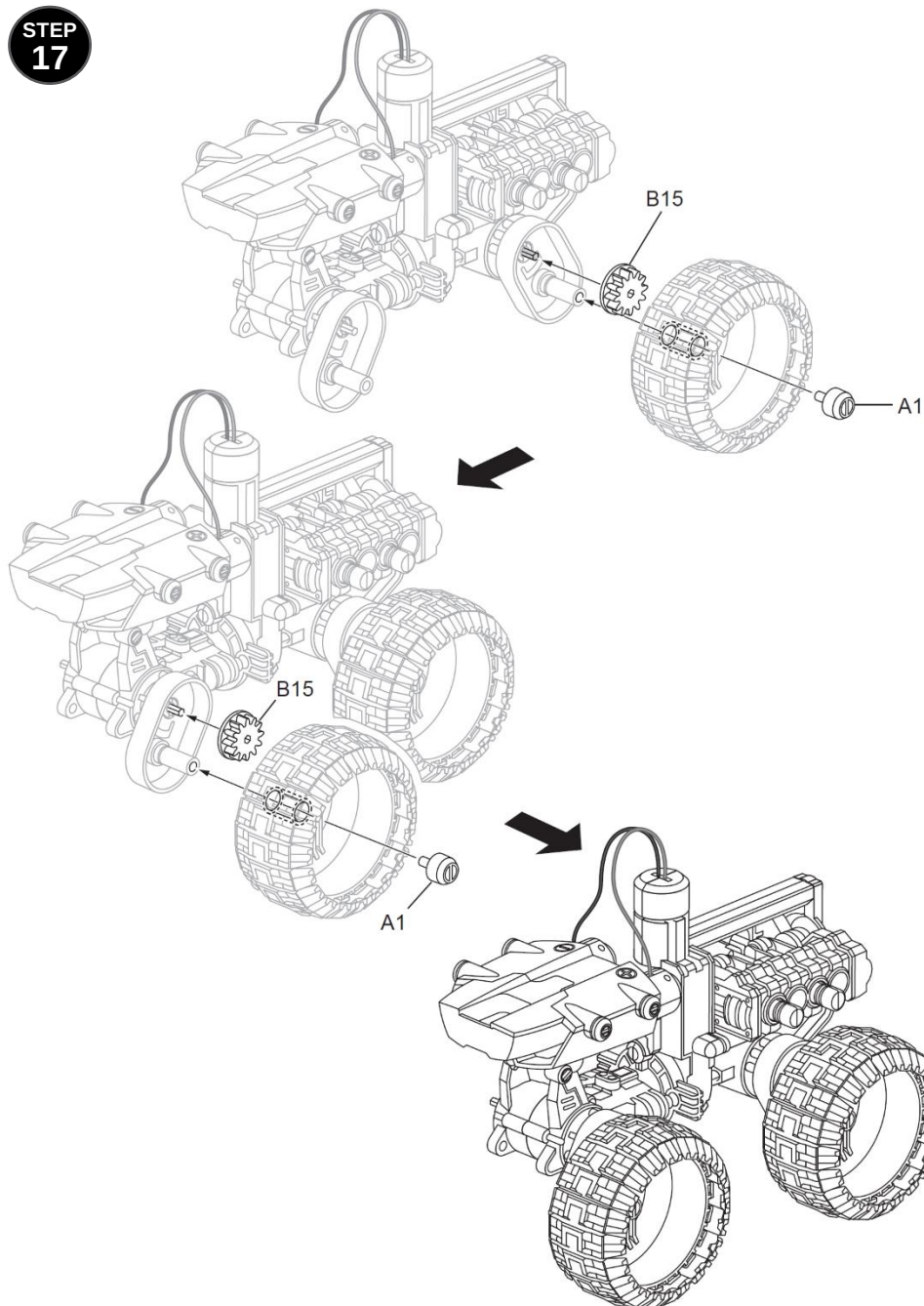
O



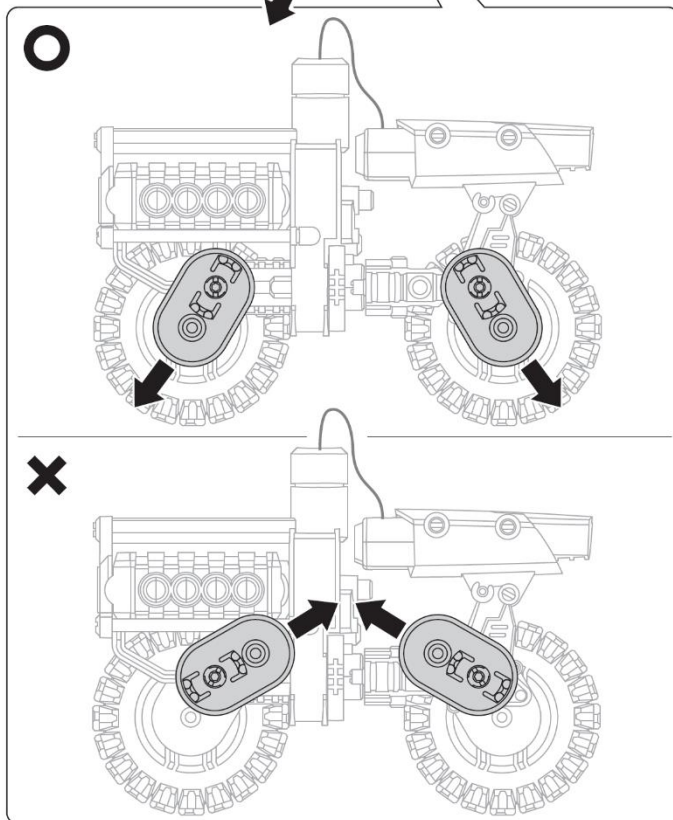
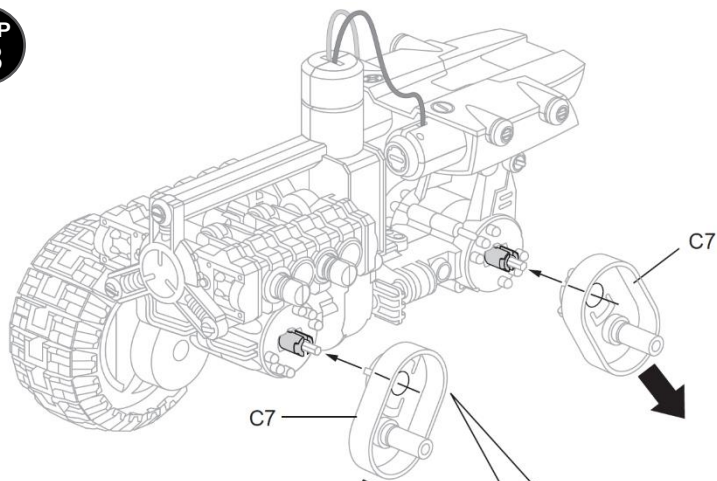
X



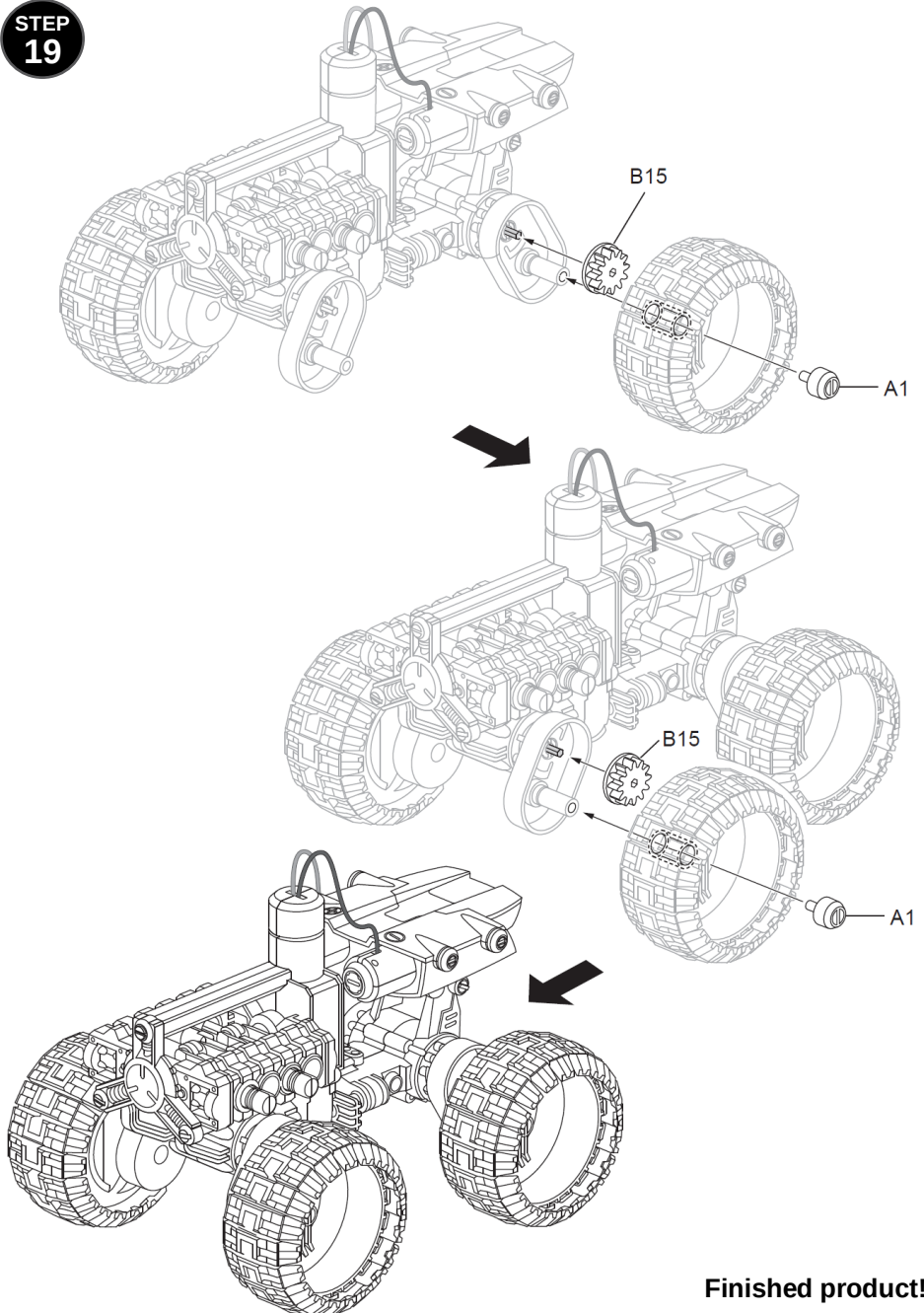
**STEP
17**



**STEP
18**



**STEP
19**



How It Works

- After a period of time the salt water will be exhausted (about 15 minutes), the car will begin to get slower or stop. Add a few more drops of salt water to start it again (as in fig 3)
- Each Magnesium sheet can work for 4 hours continuously, then it will become fragmented. Replace the sheet with a new one to energize the car. The kit includes 3 refills.
- All materials used in this kit are environmentally safe and clean, no toxic substances or disposal concerns.

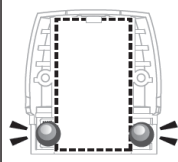
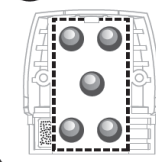


Please pay full attention to the below mentioned before use!

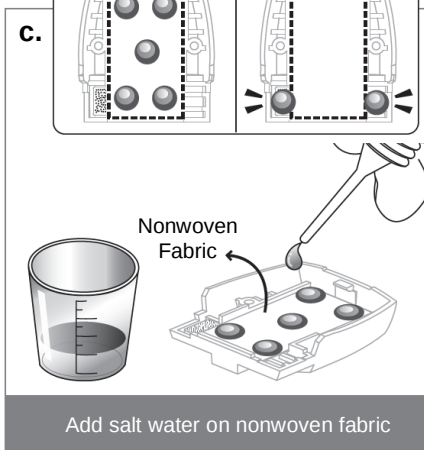
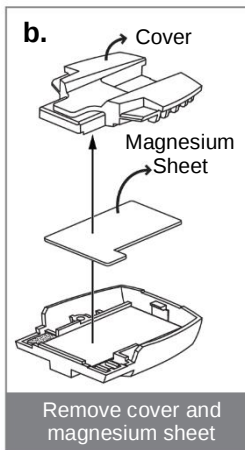
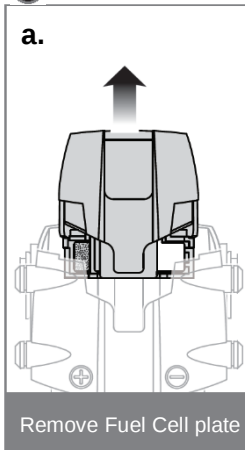
- 1 **How to make salt water solution:** Add salt to tap water or distilled water at ratio of 1(salt) : 5(water). Any percentage ratio from 20% to 99% salt water is workable although the 20% will be the most efficient.

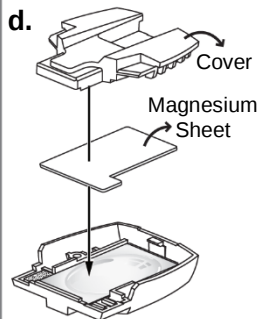


Do not add salt water outside nonwoven fabric as shown below.

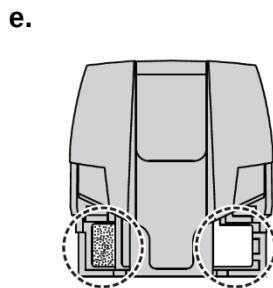


- 2 **How to fill the engine car with salt water:**

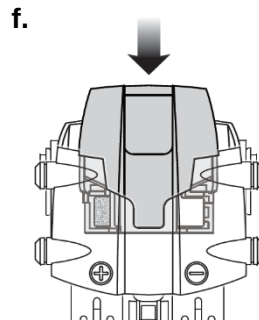




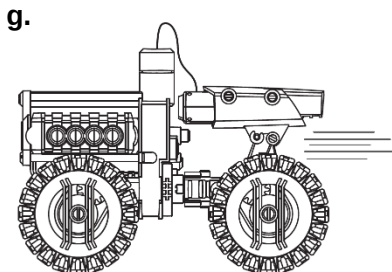
Reassemble cover and magnesium sheet



Make sure the polarity of the connector dry without salt water

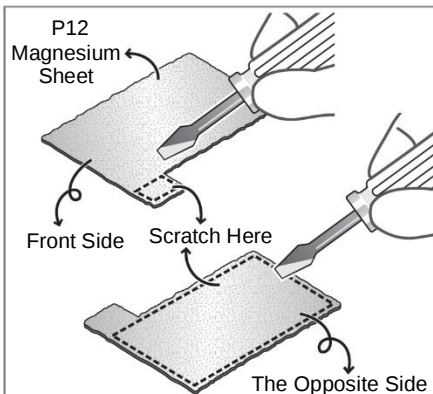
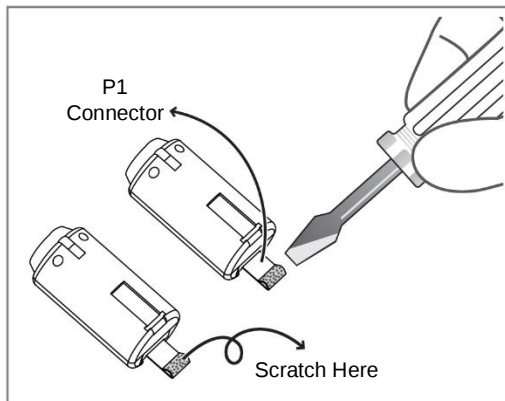


Insert Fuel Cell plate

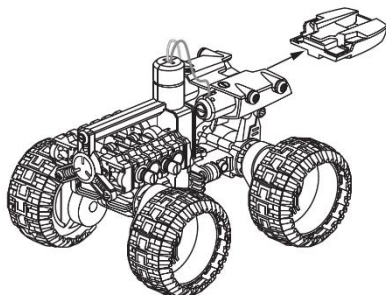


Run your car now

3 How to refill the salt water: When the engine car starts getting slower or stops, reapply a few drops of salt water with the applicator into the position as shown **2 C**. And scratch oxide from the battery connectors and also magnesium sheet by slotted screwdriver before reuse. See below figures:

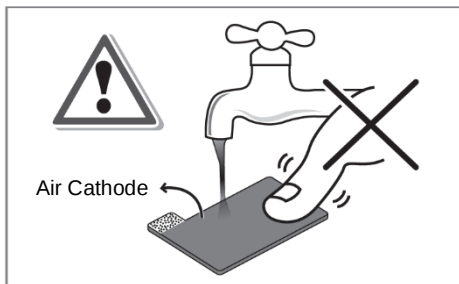
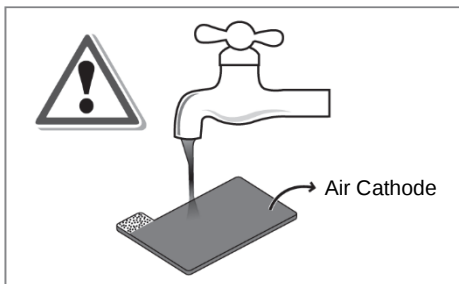


- 4 How to stop the car:** Remove Fuel Cell plate to stop your car as shown below:

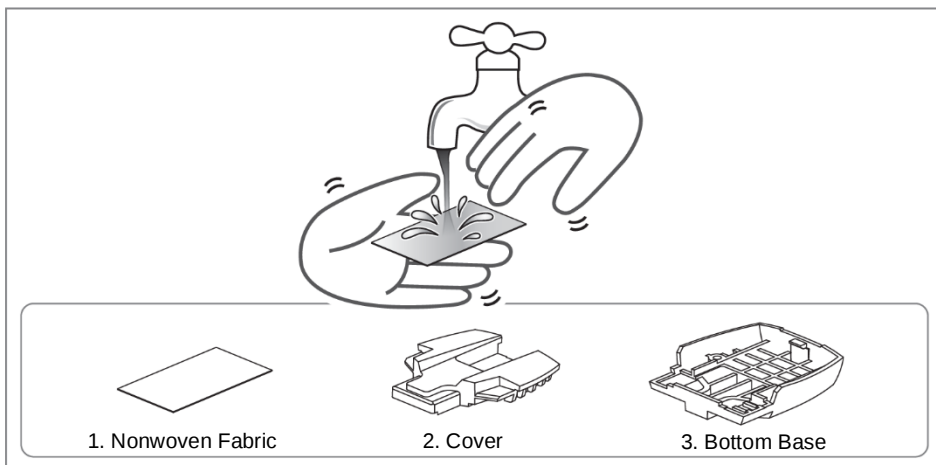


- 5 How to maintain Fuel Cell plate:** It is necessary to clean Fuel Cell plate every time when not in use.

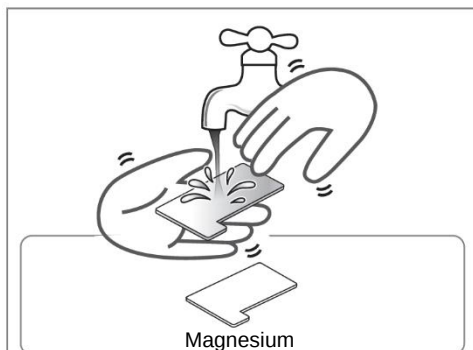
5-1 Gently rinse air cathode under tap water, don't hand rub the surface to ensure the quality of air cathode.



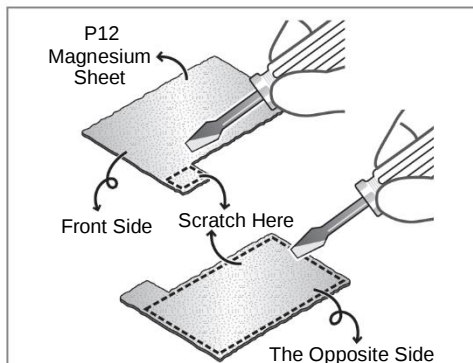
5-2 Flush the parts shown below and hand rub the surface. Make sure that there is no salt residue. Dry all parts separately.



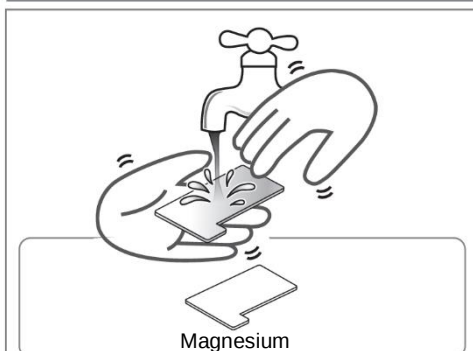
5-3 Flush and scratch the oxidization of the magnesium sheet as shown below:



Gently rinse magnesium sheet



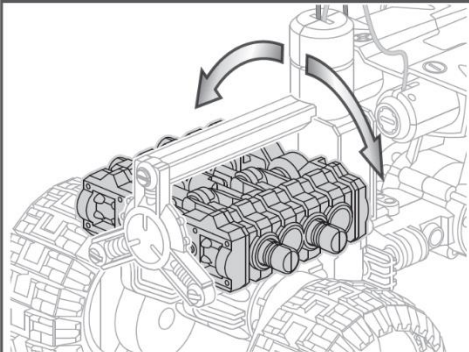
Scratch the oxidization of the magnesium sheet



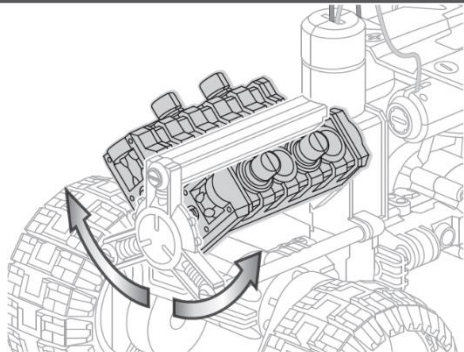
Gently rinse magnesium sheet and dry it

How To Play

<1> Transform from Flat engine to V engine.

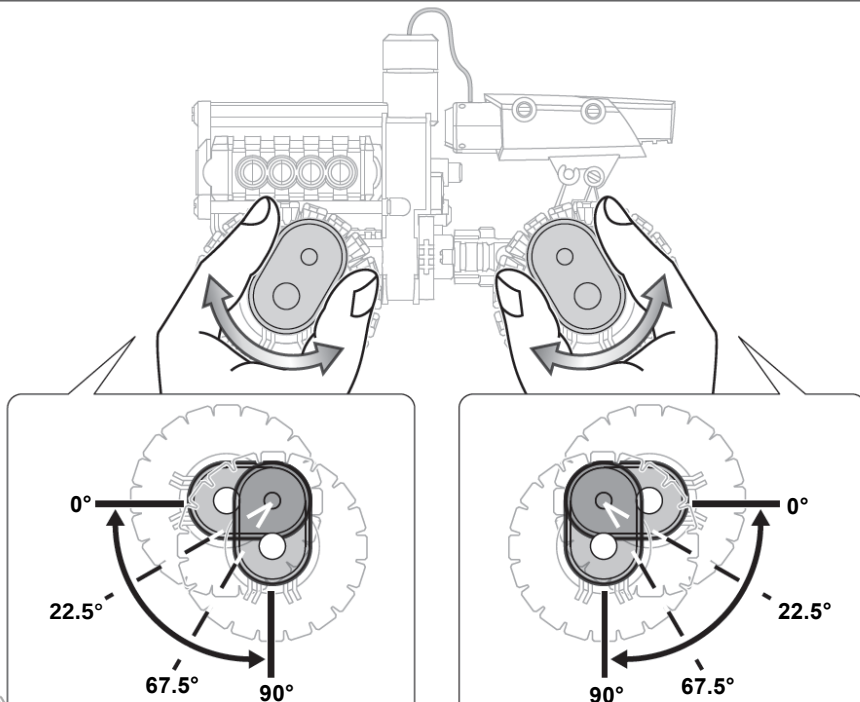


FLAT engine



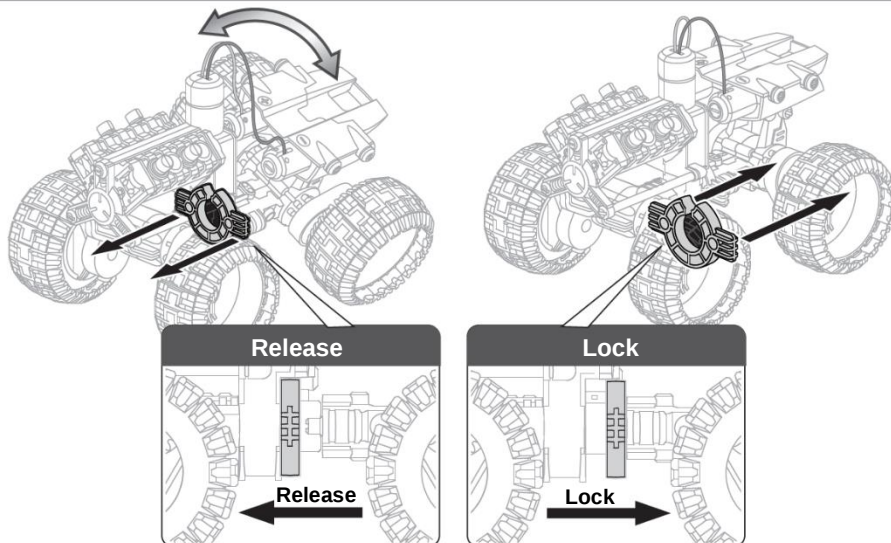
V engine

<2> Adjust height of the wheels.

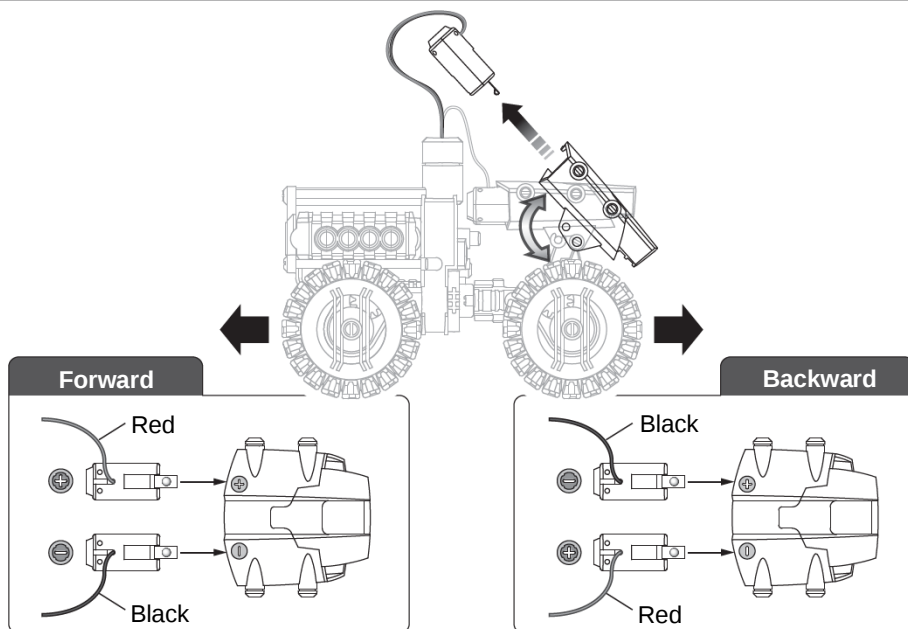


Note: Do not set the front wheels to '0' degree when the engine is in flat type, they may interfere with each other.

<3> Lock or release the car body.



<4> Run the car forward or backward.



Trouble Shooting

Check the steps below if car doesn't move after adding salt water.

- 1** Make sure motor and gears are installed in right position.
- 2** Make sure each connector must be set in right position (Ref: **STEP 4**)
- 3** Make sure Fuel Cell plate and connector module are inserted entirely. (Ref: **STEP 13**)
- 4** Replace a new magnesium sheet if it is eroded as shown below.



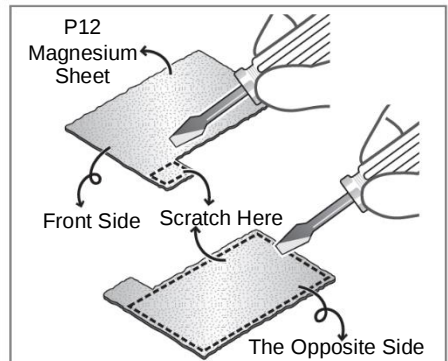
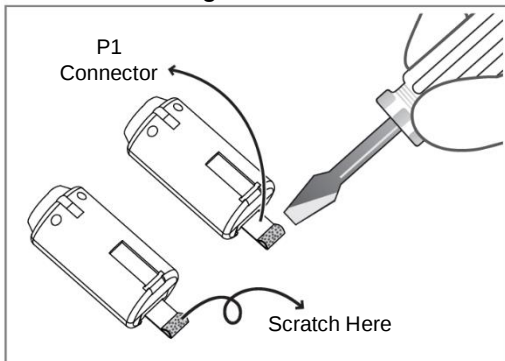
(New)



(Need to replace)

- 5** Make sure that the Fuel Cell plate is placed in the correct sequence and position: air cathode — nonwoven fabric — magnesium sheet. (Ref: **STEP 10**)
- 6** Make sure the air cathode black side is facing up. (Ref: **STEP 10**)
- 7** Nonwoven fabric is also used to isolate air cathode and magnesium sheet, make sure the 2 parts do not come into contact each other or it may cause short circuit. (Ref: **STEP 10**)
- 8 Important:** If the fabric is totally dry, disassemble the Fuel Cell plate and add salt water as per figure **2 C**. Do not add salt water outside nonwoven fabric.
- 9** Make sure the polarity of the connector dry without salt water. (Ref: **2 e**)
- 10 Important:** Salt water will easily cause oxidization, scratch oxide from the battery connectors and also magnesium sheet by slotted screwdriver before reuse.

See below figures:



ÍNDICE

Herramientas que puede necesitar	P.01
Lista de piezas mecánicas	P.01
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Montaje mecánico.....	P.03
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Salt Water Engine Car KIT



Se trata de un modelo de coche con motor de pila de combustible ecológico. Este kit enseñará a los niños nuevas formas de energía limpia. Le resultará sorprendente, pero con solo añadir unas gotas de agua con sal el motor del coche empezará a funcionar como por arte de magia. Vea cómo funciona un motor V8. También podrá descubrir otras actividades emocionantes.

Todos los materiales utilizados en este kit son seguros y limpios desde el punto de vista medioambiental, no contienen sustancias tóxicas y son fáciles de desechar.

Herramientas que puede necesitar



Vaso



Sal



Varilla



Alicates de corte diagonal



− Destornillador



+ Destornillador

Lista de piezas mecánicas

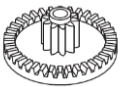
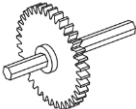
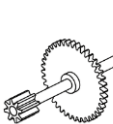
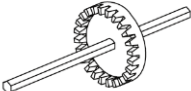
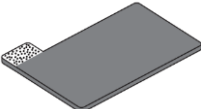
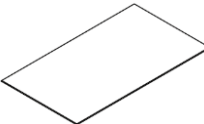
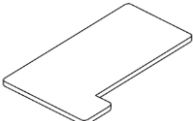
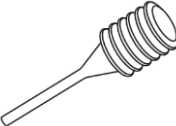
P1	Motor con conectores
	CANT
	1



No conecte los cables a la red eléctrica.

P2	Piñón (Amarillo)
	CANT
	1

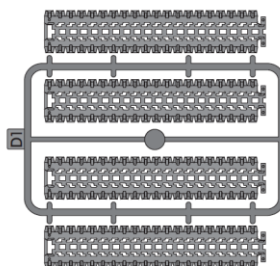
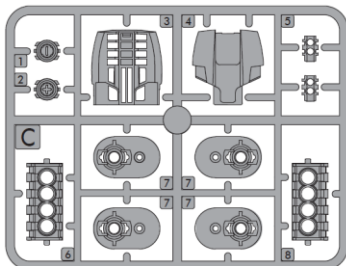
P3	Engranaje (Amarillo)
	CANT
	1

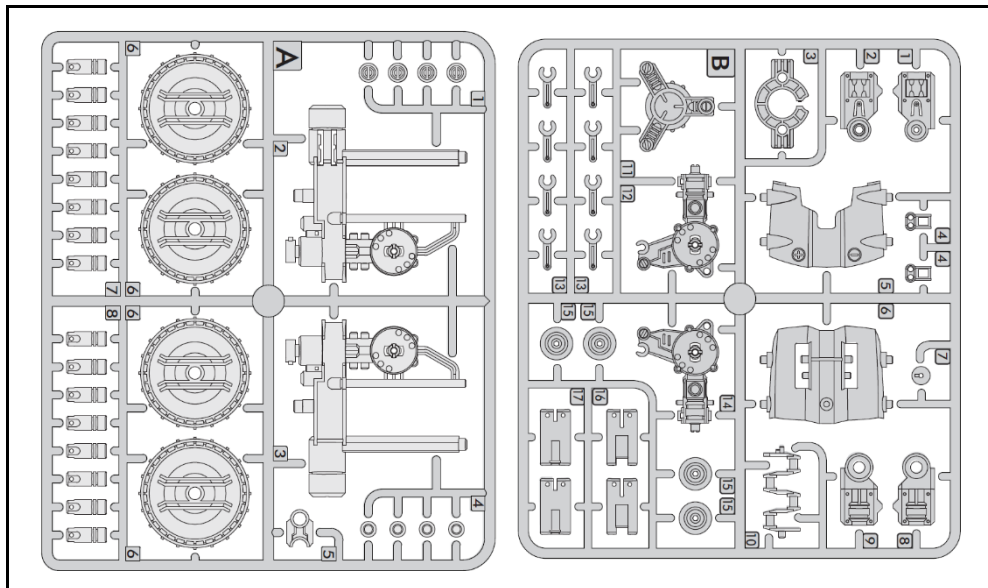
P4 Engranaje (Rojo)  CANT 1	P5 Eje cilíndrico  CANT 1	P6 Engranaje con eje  CANT 1
P7 Engranaje con eje y piñones  CANT 1	P8 Corona dentada con eje  CANT 2	P9 Tornillo de rosca  CANT 1
P10 Cátodo de aire (Negro)  CANT 1	P11 Material no tejido  CANT 1 (Pieza de repuesto:1ud)	P12 Hoja de magnesio  CANT 1 (Piezas de repuesto:2uds)
P13 Cuentagotas de plástico  CANT 1		



Piezas de plástico

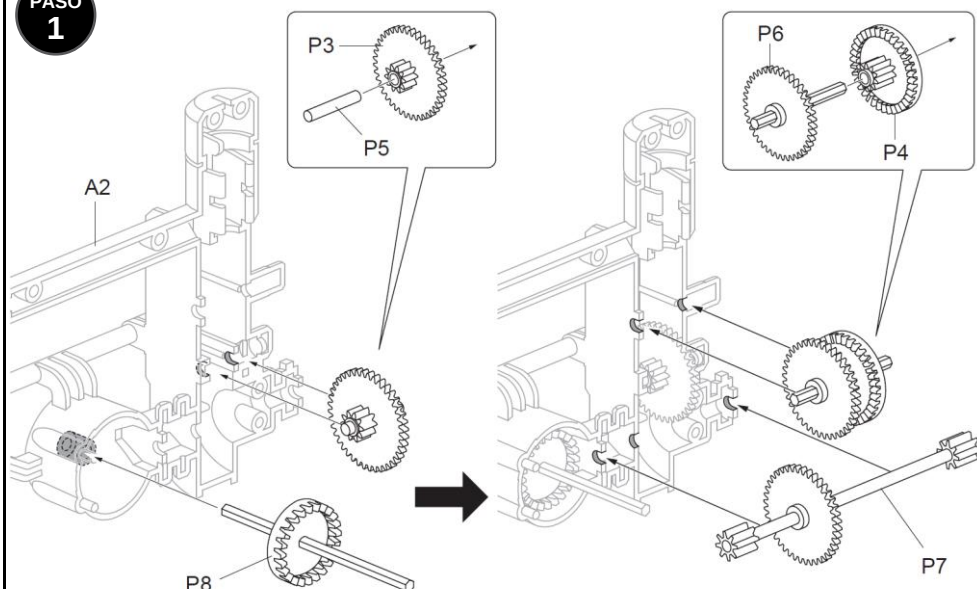
Corte las piezas de plástico cuando sea necesario. No las corte con antelación.



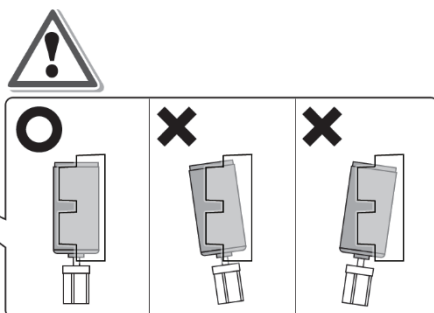
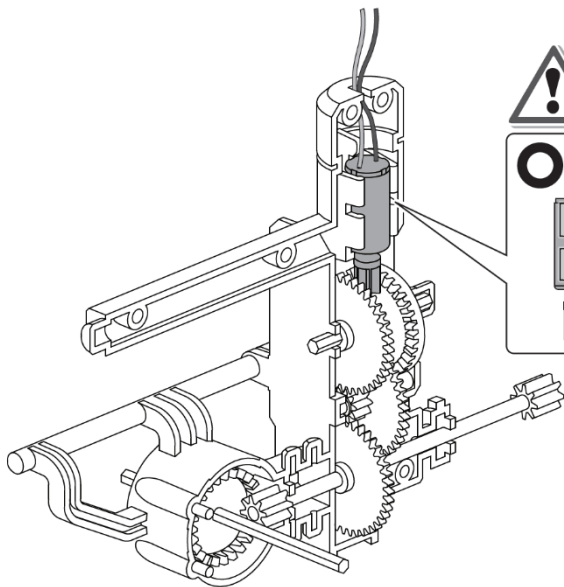
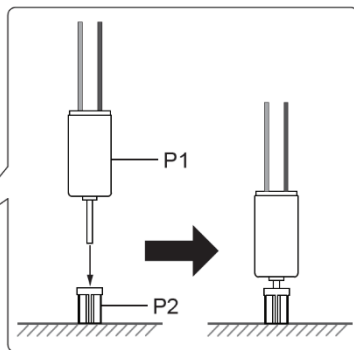
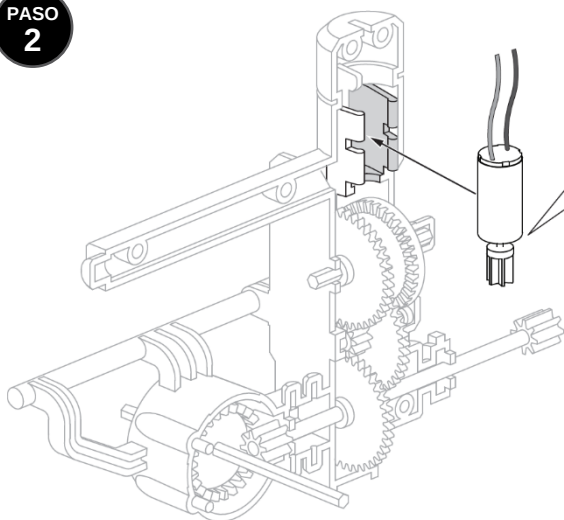


Montaje mecánico

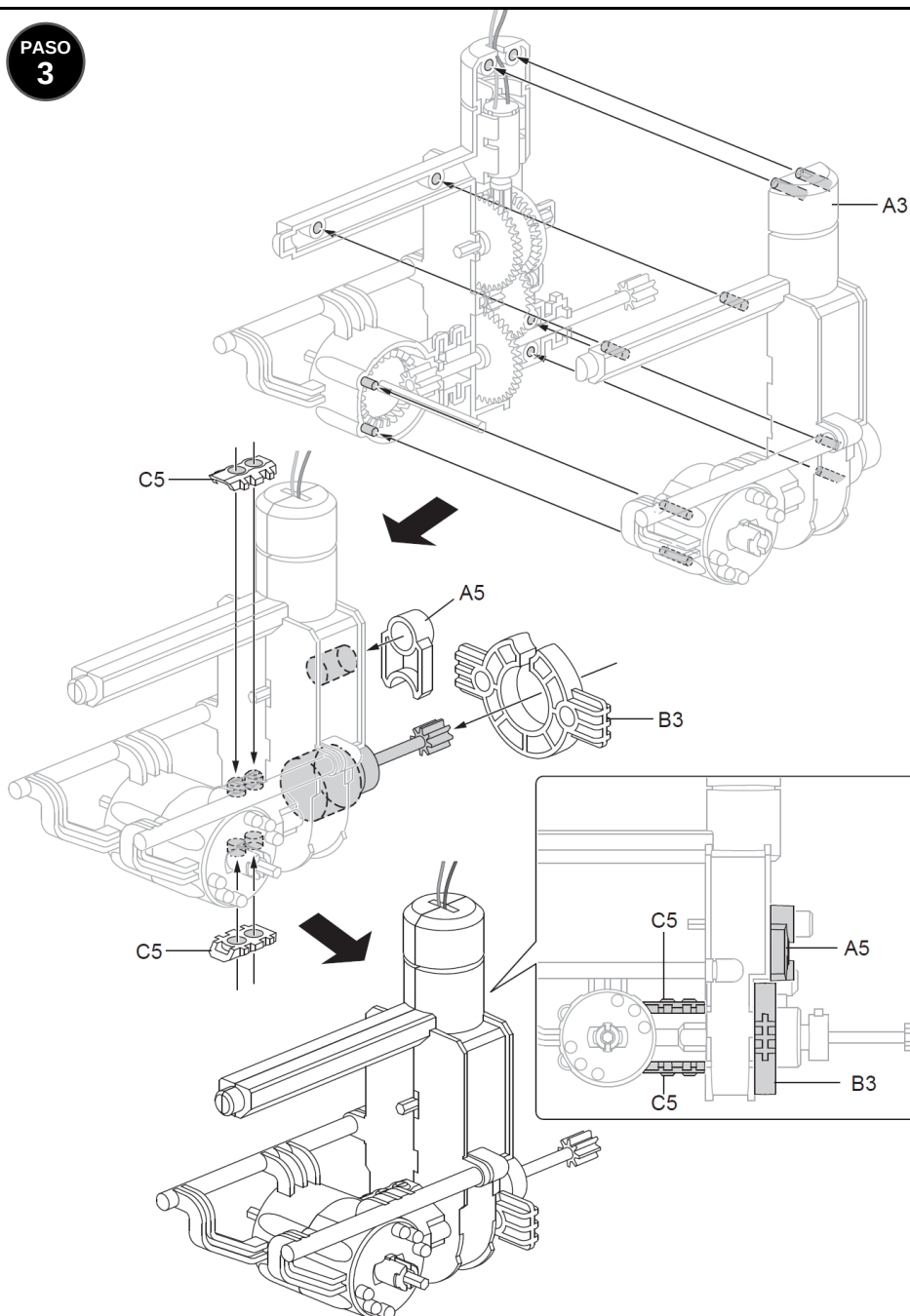
PASO
1



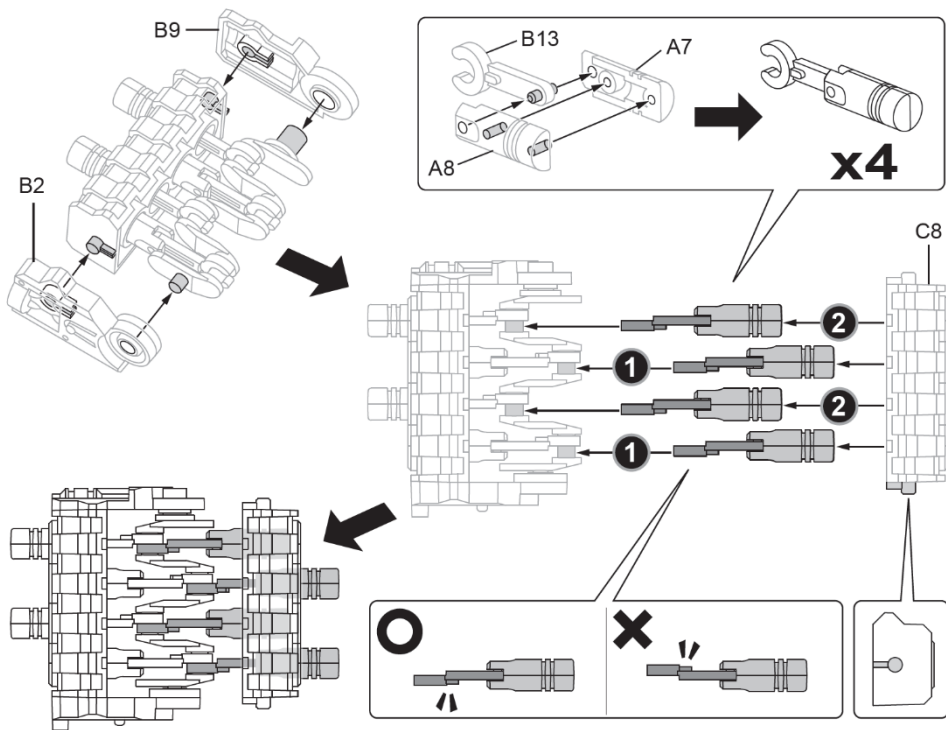
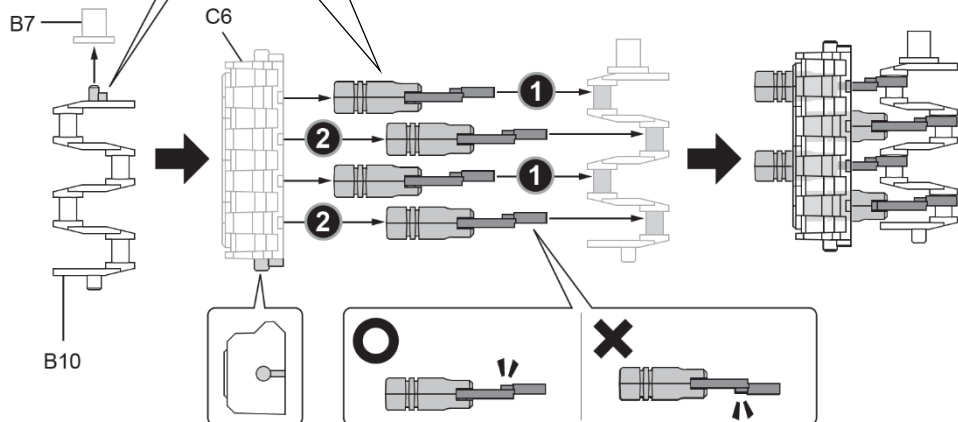
PASO
2



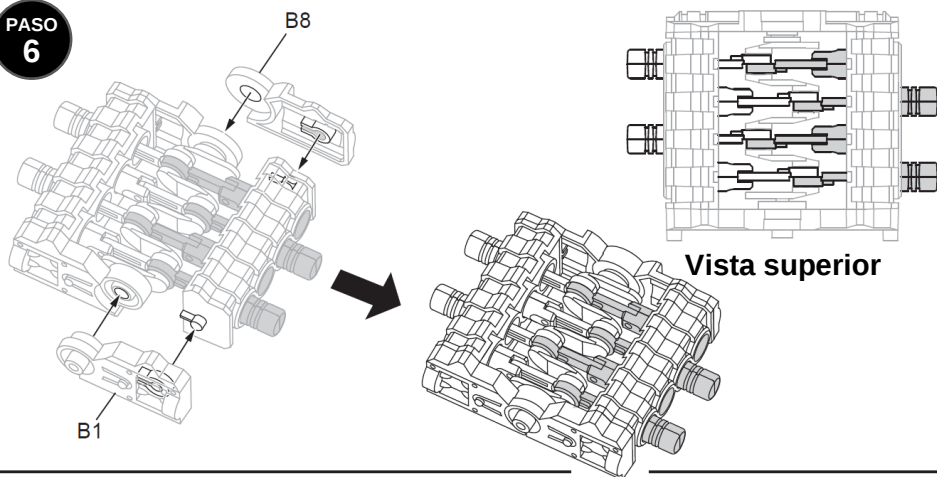
PASO
3



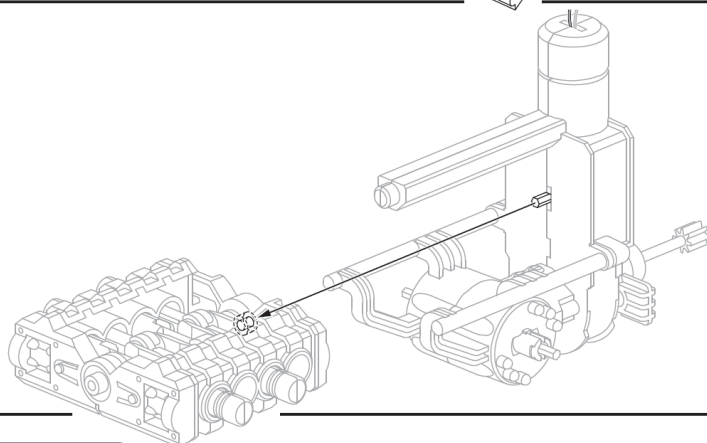
**PASO
5**



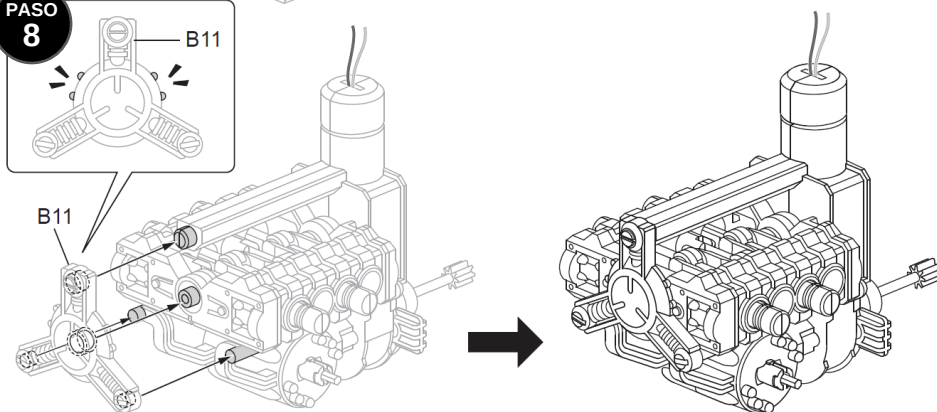
**PASO
6**



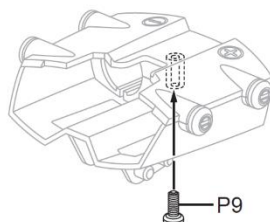
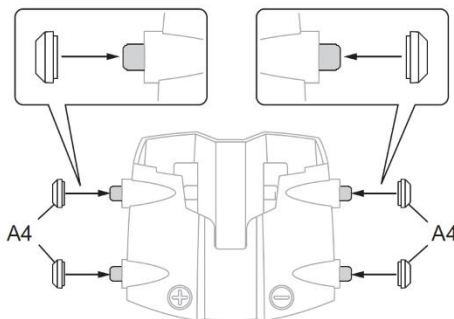
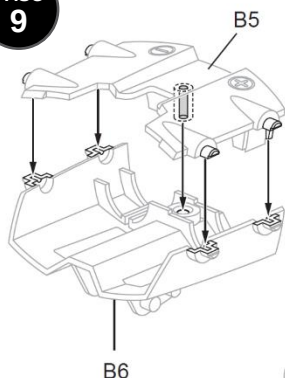
**PASO
7**



**PASO
8**

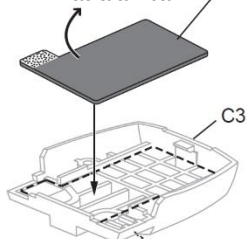


PASO 9

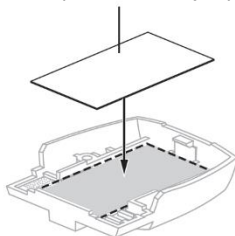


PASO 10

P10
Lado negro
hacia arriba
(Cátodo de aire)



P11 (Material no tejido)

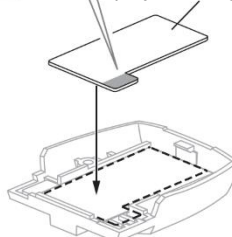


P12
Hoja de
magnesio

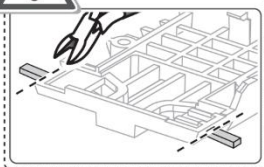


Rasque aquí antes
de montar.

P12
(Hoja de magnesio)

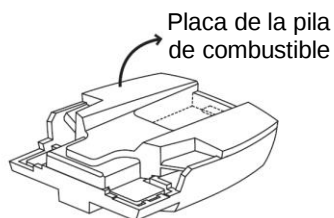
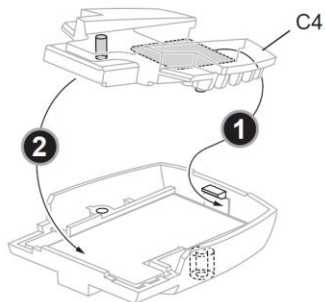


Corte las 2 rebabas
antes de montar.

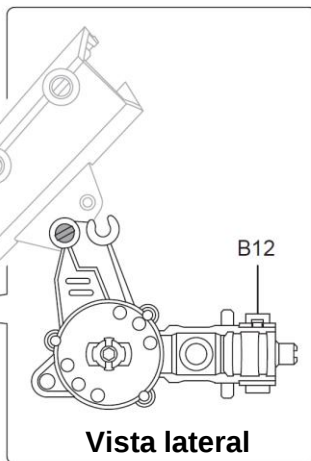
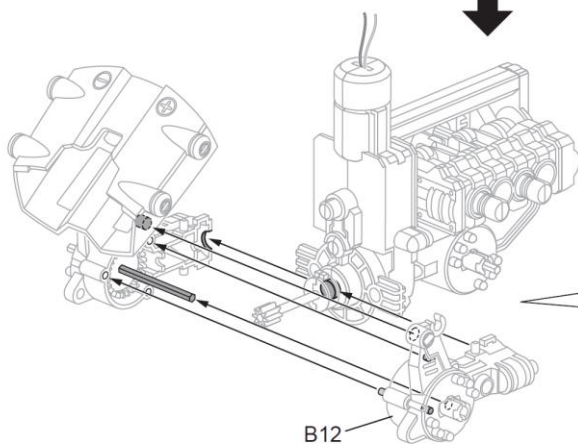
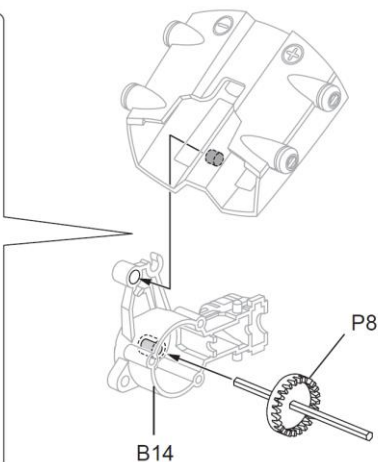
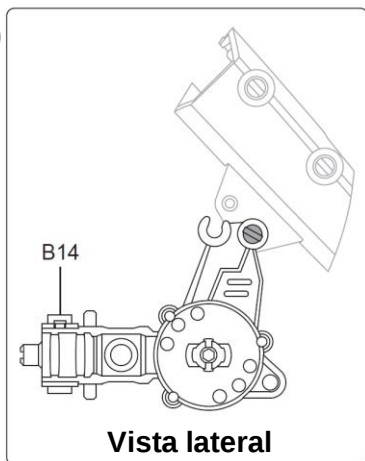


Asegúrese de que P10, P11, P12 se colocan en la secuencia y la posición correctas.

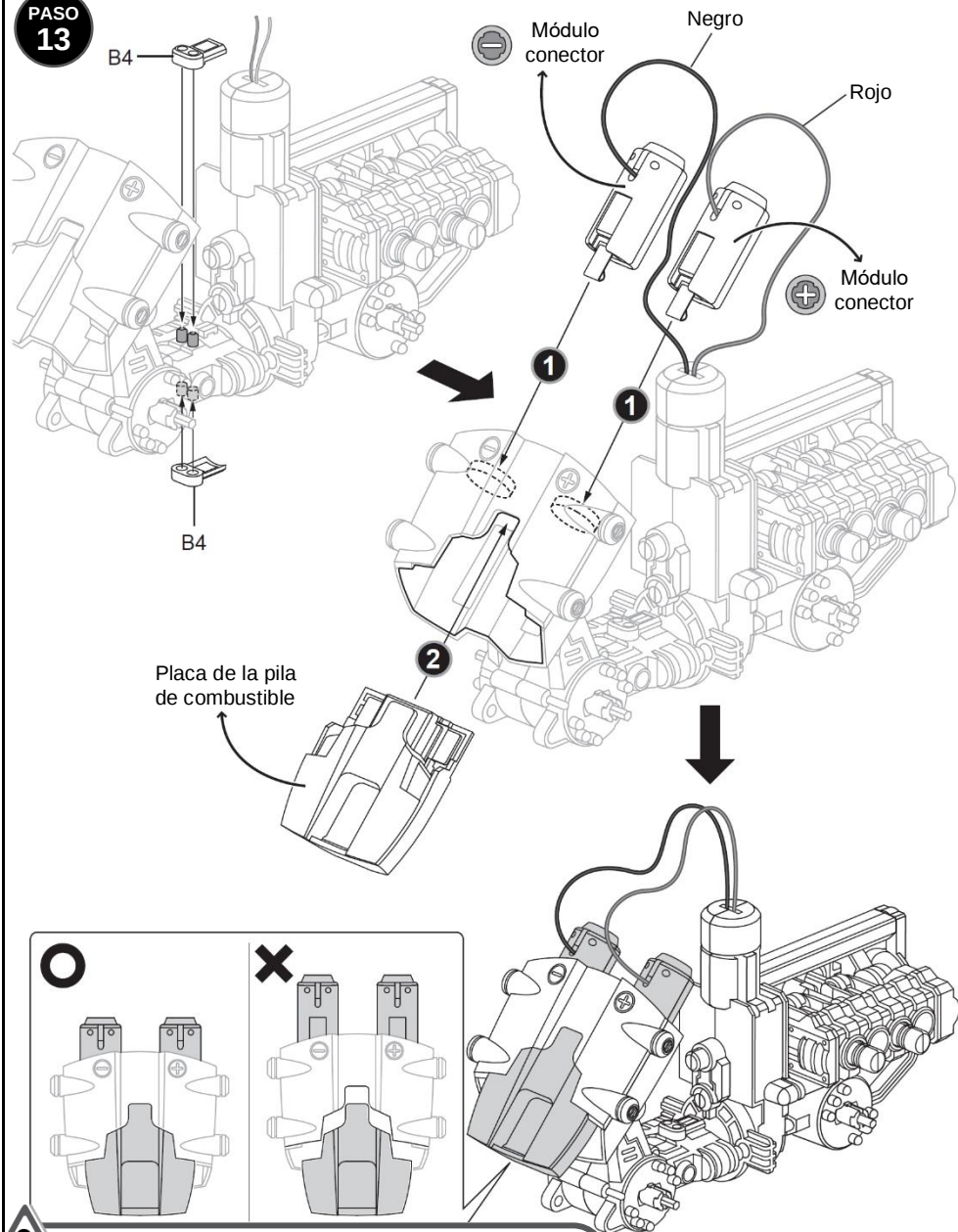
**PASO
11**



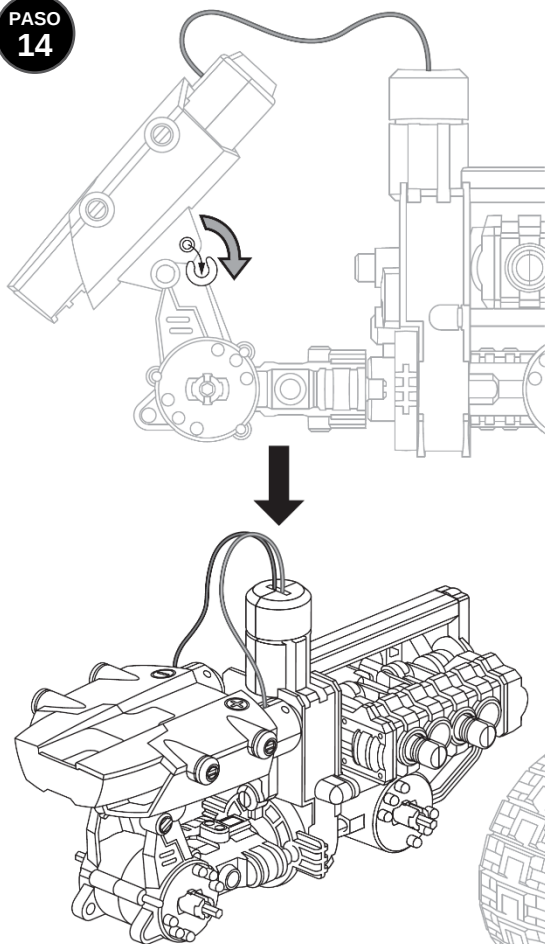
**PASO
12**



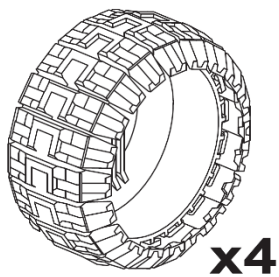
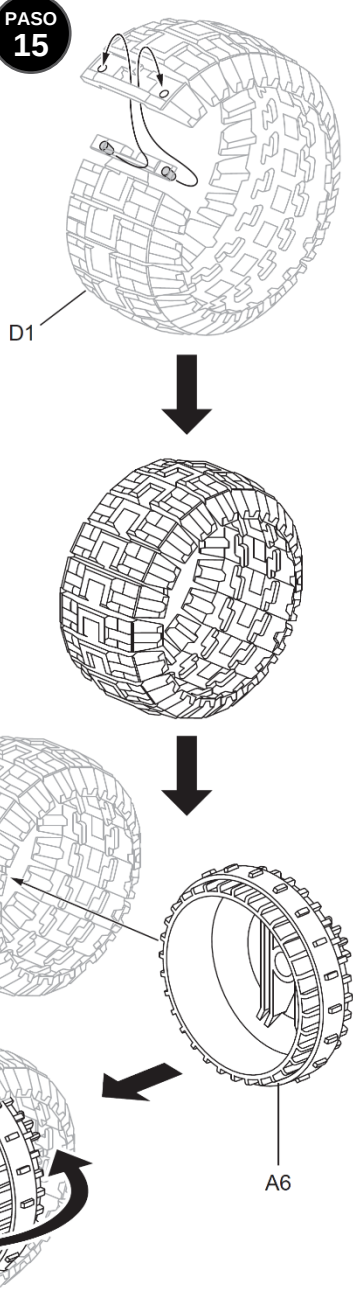
**PASO
13**



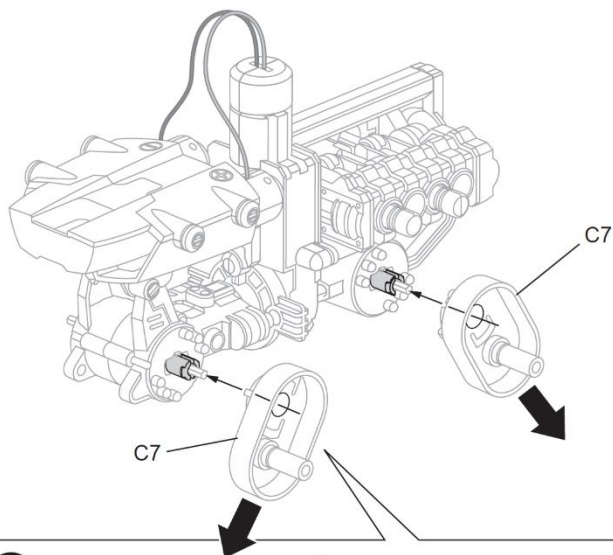
PASO
14



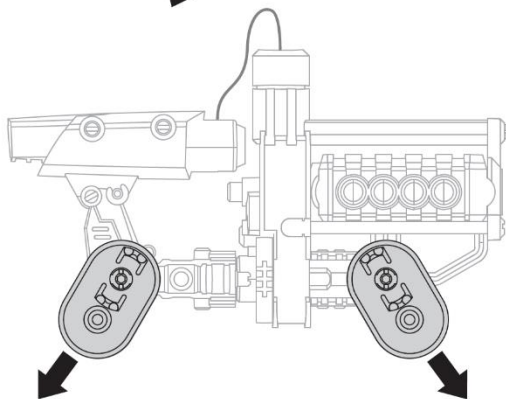
PASO
15



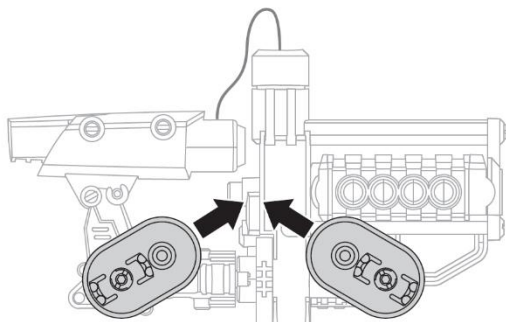
PASO
16



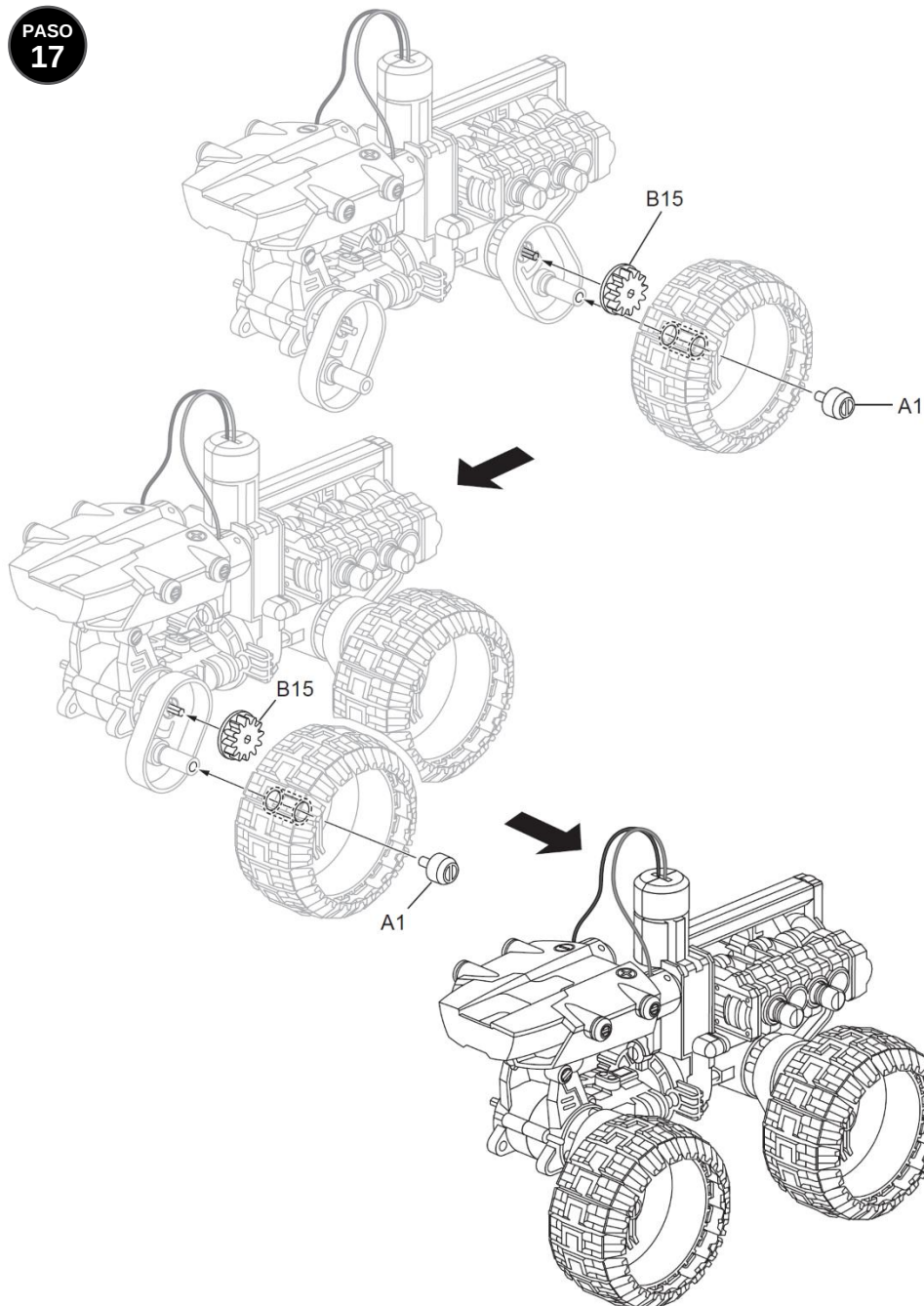
O



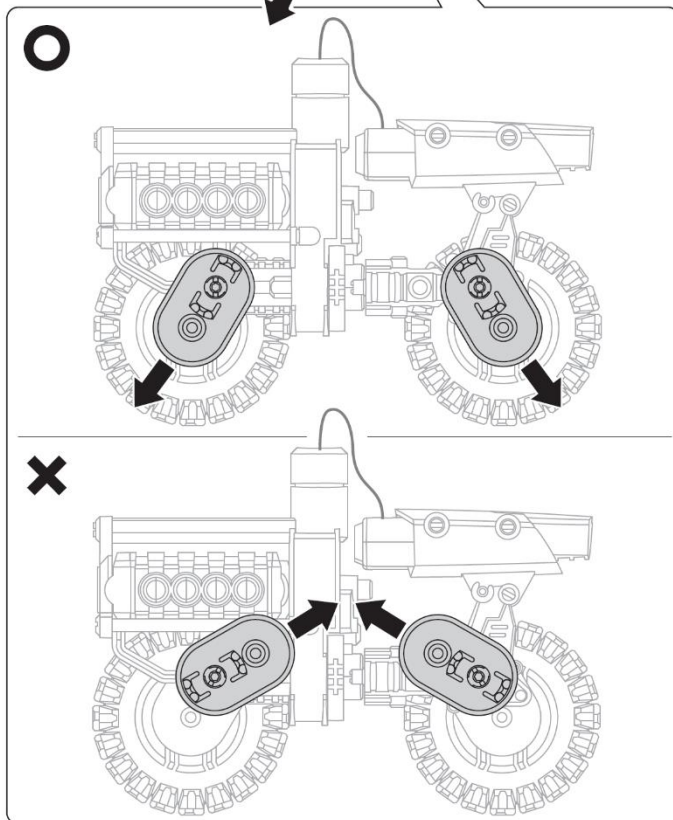
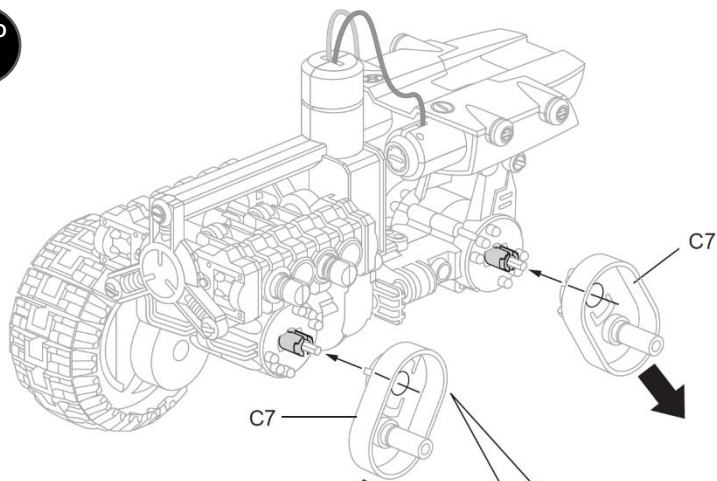
X



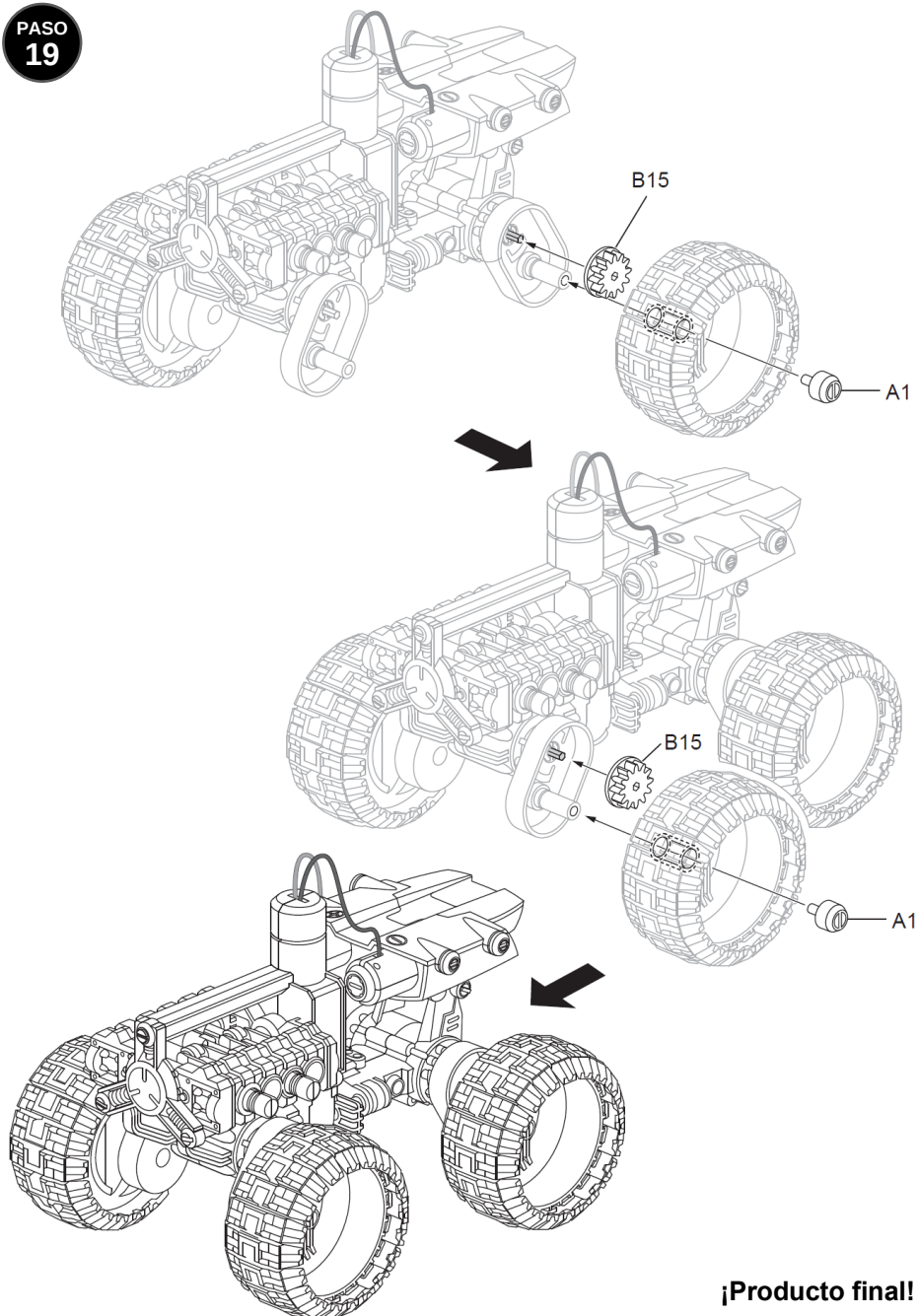
PASO
17



PASO
18



PASO
19



¡Producto final!

Cómo funciona

- Después de un tiempo, el agua con sal se acabará (unos 15 minutos) el coche empezará a ir más lento o se parará. Añada unas gotas más de agua con sal para volver a ponerlo en marcha (como en la imagen 3)
- Cada hoja de magnesio puede funcionar durante 4 horas seguidas, después se fragmentará. Sustituya la hoja por una nueva para darle energía al coche. El kit incluye 3 recambios.
- Todos los materiales utilizados en este kit son seguros y limpios desde el punto de vista medioambiental, no contienen sustancias tóxicas y son fáciles de desechar.



Antes de utilizarlo, lea con atención las siguientes indicaciones.

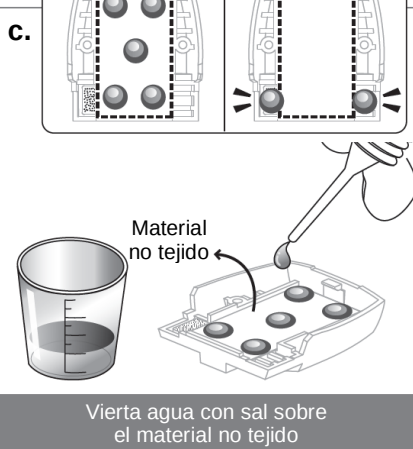
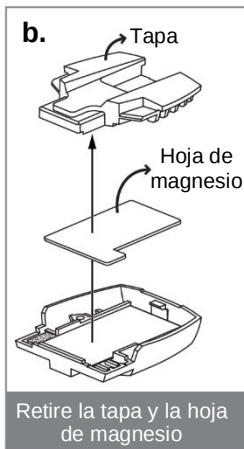
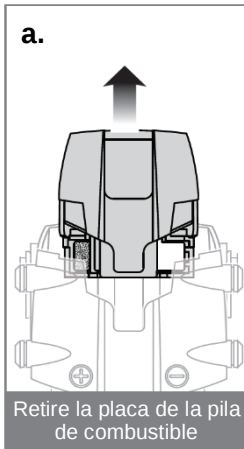
- 1** **Cómo preparar la solución de agua con sal:** añada sal al agua del grifo o al agua destilada en una proporción de **1(sal): 5(agua)**. Cualquier proporción que se encuentre entre el 20 % y el 99 % de agua y sal es válida, aunque el 20 % será la más eficaz.

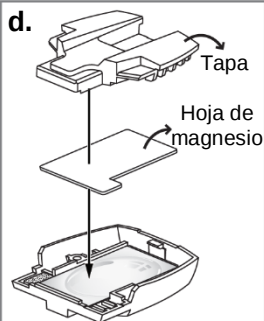


No vierta agua con sal fuera del material no tejido, como se muestra a continuación.

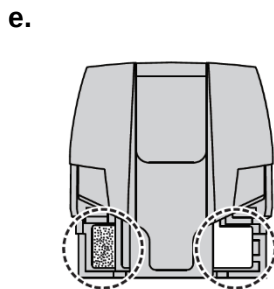


- 2** **Cómo llenar el coche motor con agua con sal:**

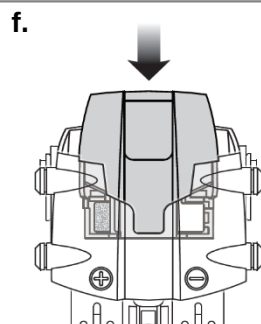




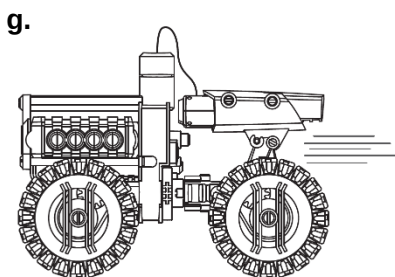
Vuelva a montar la tapa y la hoja de magnesio



Asegúrese de que la polaridad del conector está seca, sin agua con sal

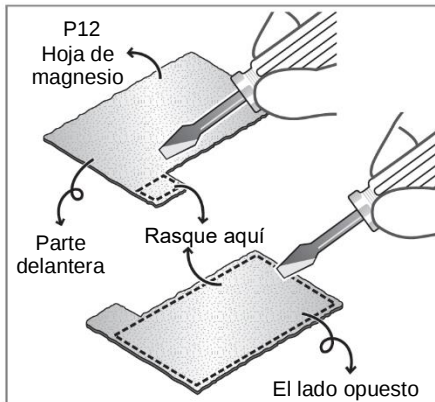
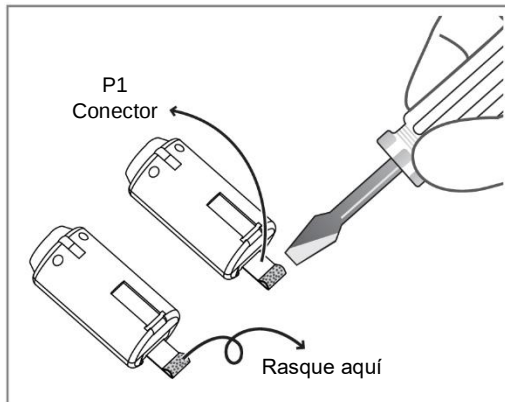


Inserte la placa de la pila de combustible

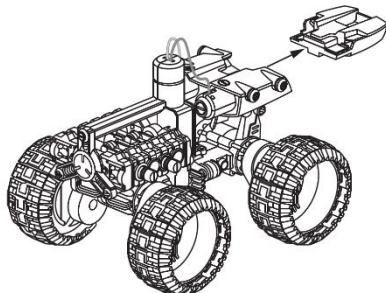


Ponga el coche en marcha

3 **Cómo rellenar de agua con sal:** cuando el coche motor empiece a ir más lento o se pare, vuelva a verter unas gotas de agua con sal con el aplicador en la posición indicada **2C**. Y rasque el óxido de los conectores de la batería y también de la hoja de magnesio con un destornillador plano antes de volver a utilizarlo. Véanse las imágenes siguientes:

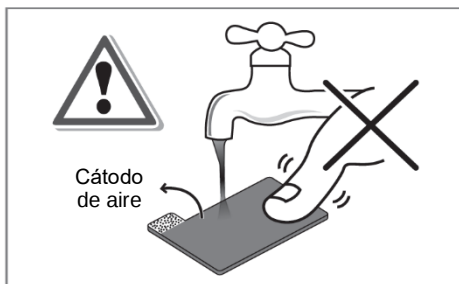
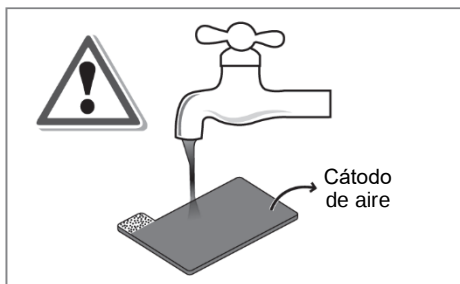


- 4** **Cómo detener el coche:** retire la placa de la célula de combustible para detener el coche como se muestra a continuación:



- 5** **Cómo hacer el mantenimiento de la placa de la pila de combustible:** debe limpiar la placa de la pila de combustible cada vez que deje de utilizarse.

5-1 Enjuague con cuidado el cátodo de aire con agua del grifo, no frote con las manos la superficie para garantizar la calidad del cátodo de aire.



5-2 Enjuague las piezas que se muestran a continuación y frote a mano la superficie. Asegúrese de que no queden restos de sal. Seque todas las piezas por separado.



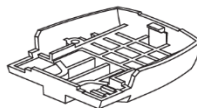
1. Material no tejido



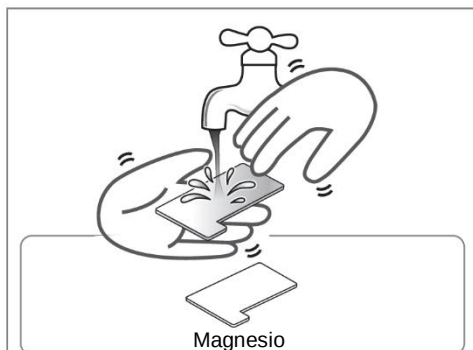
2. Tapa



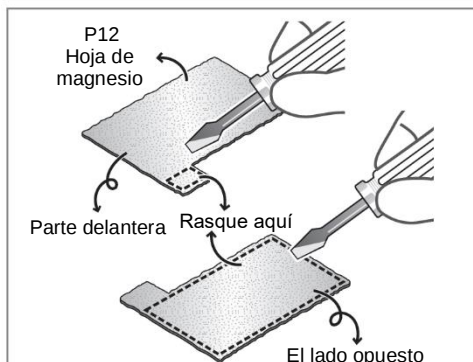
3. Base inferior



5-3 Enjuague y rasque el óxido de la hoja de magnesio como se muestra a continuación:



Enjuague con cuidado la hoja de magnesio



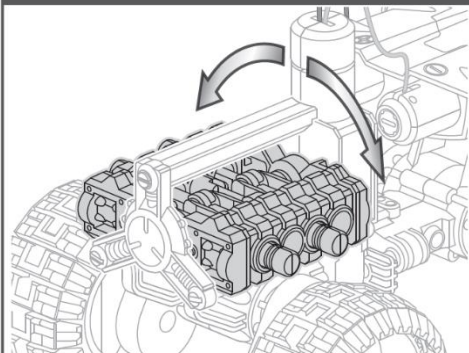
Rasque el óxido de la hoja de magnesio



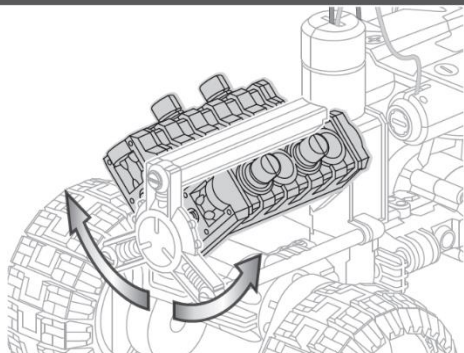
Enjuague con cuidado la hoja de magnesio
y séquela

Cómo jugar

<1> Transforme el motor bóxer en motor en V.

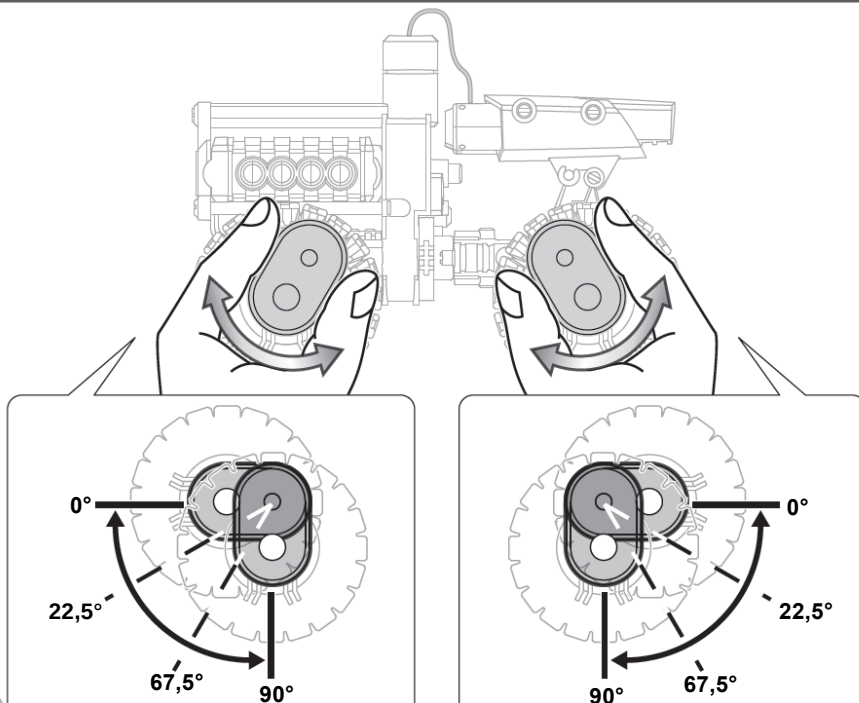


Motor BÓXER



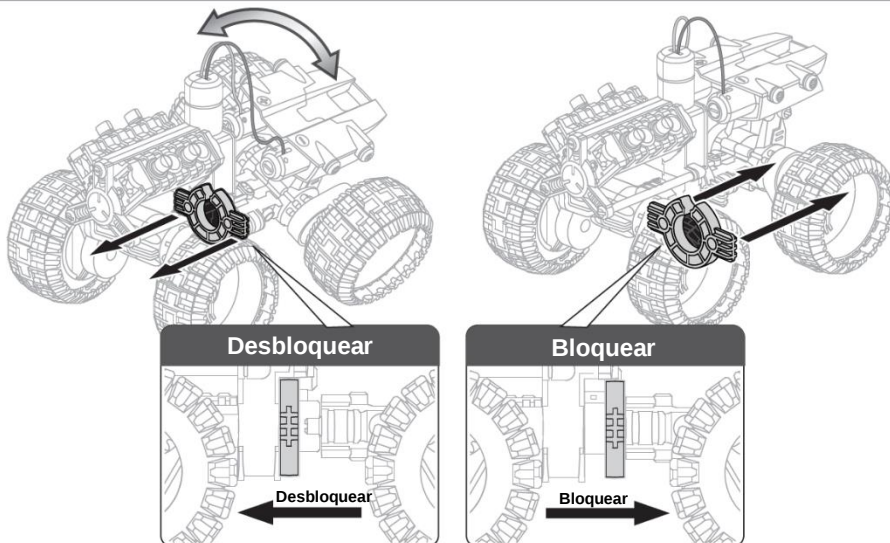
Motor en V

<2> Ajuste la altura de las ruedas.

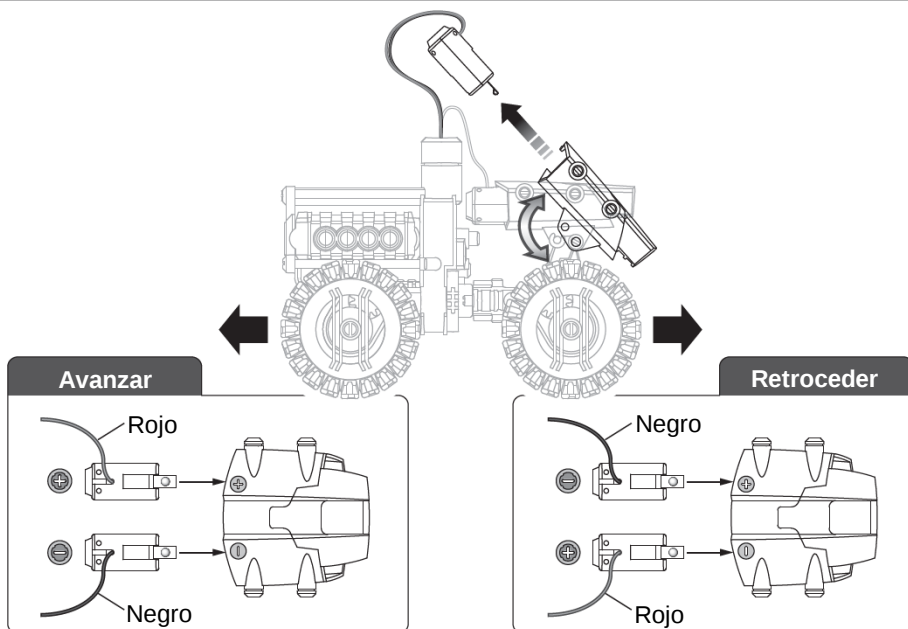


Nota: no posicione las ruedas delanteras a '0' grados cuando el motor esté en modo bóxer, pueden interferir entre sí.

<3> Bloquee o desbloquee la carrocería.



<4> Haga avanzar o retroceder el coche.



Resolución de problemas

Consulte los pasos siguientes si el coche no se mueve después de añadir agua con sal.

- 1** Asegúrese de que el motor y los engranajes estén instalados en la posición correcta.
- 2** Asegúrese de que cada conector esté colocado en la posición correcta (véase: **PASO 4**)
- 3** Asegúrese de que la placa de la pila de combustible y el módulo conector estén bien insertados. (Véase: **PASO 13**)
- 4** Sustituya la hoja de magnesio si está erosionada como se muestra a continuación.



(Nueva)



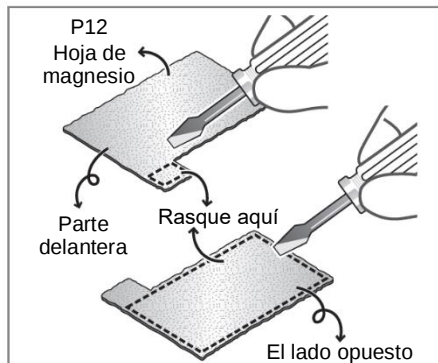
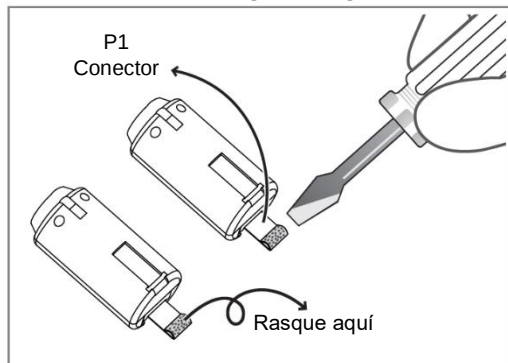
(Necesita ser sustituida)



- 5** Asegúrese de que la placa de la pila de combustible esté colocada en la secuencia y posición correctas: cátodo de aire - material no tejido - hoja de magnesio. (Véase: **PASO 10**)
- 6** Asegúrese de que el lado negro del cátodo de aire esté hacia arriba. (Véase: **PASO 10**)
- 7** El material no tejido también se utiliza para aislar el cátodo de aire y la hoja de magnesio, asegúrese de que las 2 piezas no estén en contacto, ya que pueden causar un cortocircuito. (Véase: **PASO 10**)
- 8 Importante:** si el material no tejido está totalmente seco, desmonte la placa de la pila de combustible y vierta agua con sal según se muestra en la imagen **2 C**. No vierta agua con sal fuera del material no tejido.
- 9** Asegúrese de que la polaridad del conector esté seca, sin agua con sal. (Véase: **2 e**)

10 Importante: el agua con sal provocará fácilmente oxidación, rasque el óxido de los conectores de la batería y también de la hoja de magnesio con un destornillador plano antes de volver a utilizar el coche.

Véanse las imágenes siguientes:



INHOUDSOPGAVE

Gereedschap dat je nodig kan hebben	P.01
Lijst met mechanische onderdelen	P.01
Plastic onderdelen.....	P.02
Mechanische montage	P.03
Hoe het werkt	P.17
Hoe spelen	P.21
Probleemoplossing	P.23



Salt Water

FUELCELL Engine Car KIT



Dit is een concept van een milieuvriendelijke kit voor een wagentje met motor met een brandstofcel. Deze kit leert kinderen over nieuwe vormen van schone energie. Laat je verbazen door het feit dat de motor van de wagen met enkele druppels zout water begint te draaien. Het lijkt wel magie. Ontdek hoe een V8-motor draait. Ontdek ook onze talrijke andere spannende activiteiten.

GREEN ENERGY

Alle materialen die in deze kit worden gebruikt zijn veilig voor het milieu en milieuvriendelijk. Ze bevatten geen giftige stoffen, noch stellen ze problemen voor de afvalverwerking.

Gereedschap dat je nodig kan hebben



Kopje



Zout



Stokje



Zijkniptang

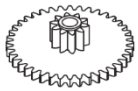


⊖ Schroevendraaier



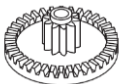
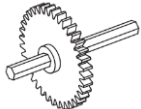
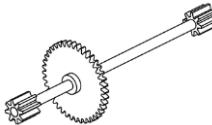
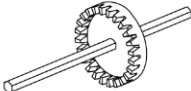
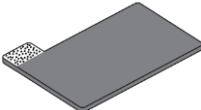
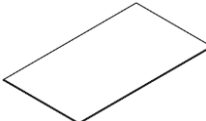
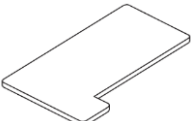
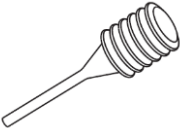
⊕ Schroevendraaier

Lijst met mechanische onderdelen

P1	Motor met connectoren	P2	Rondsel (Geel)	P3	Tandwiel (Geel)
					
HOE-VEEL-HEID		HOE-VEEL-HEID		HOE-VEEL-HEID	
1		1		1	



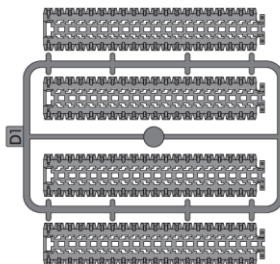
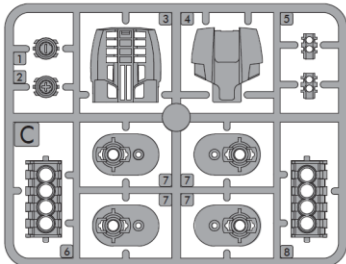
Sluit de draden niet aan op het lichtnet.

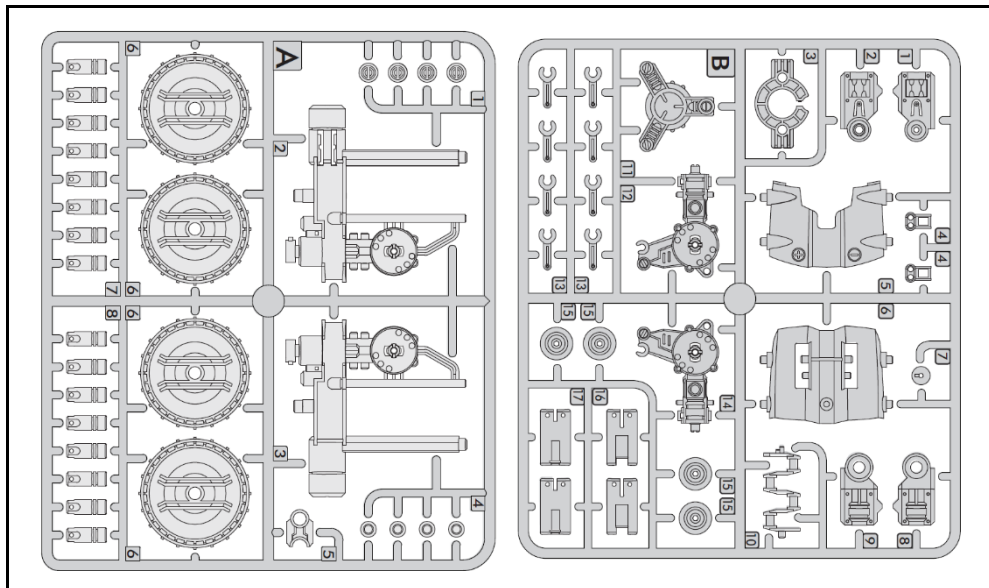
P4 Tandwiel (Rood)  HOE-VEEL-HEID 1	P5 Ronde as  HOE-VEEL-HEID 1	P6 Tandwiel met as  HOE-VEEL-HEID 1
P7 Tandwielas met rondsels  HOE-VEEL-HEID 1	P8 Kroonwiel met as  HOE-VEEL-HEID 2	P9 Parkerschroef  HOE-VEEL-HEID 1
P10 Luchtkathode (Zwart)  HOE-VEEL-HEID 1	P11 Vliesstof  (Reserveonderdeel: 1st) HOE-VEEL-HEID 1	P12 Magnesiumplaat  (Reserveonderdelen: 2st) HOE-VEEL-HEID 1
P13 Plastic druppelaar  HOE-VEEL-HEID 1		



Plastic onderdelen

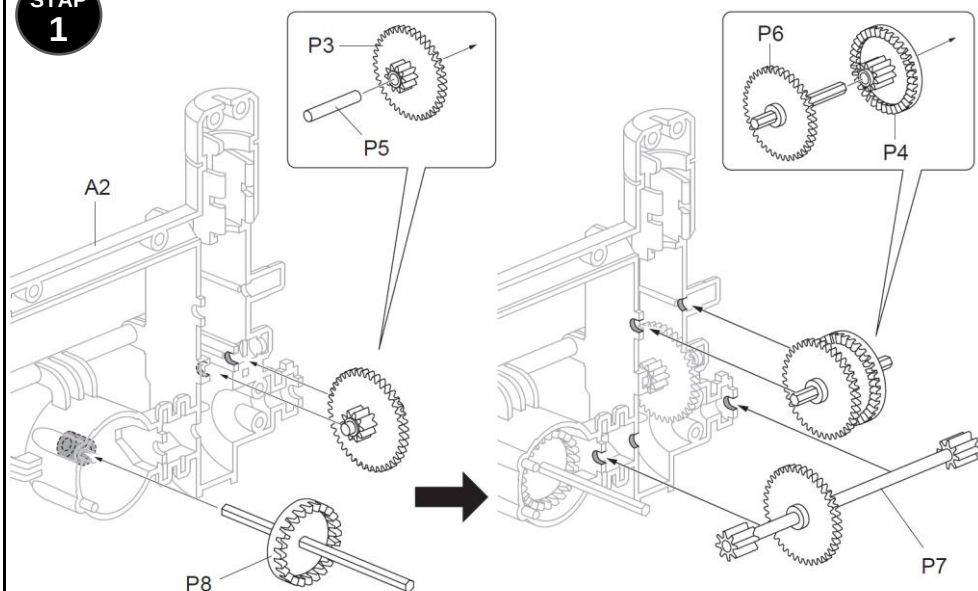
Snij de plastic onderdelen pas wanneer je ze nodig hebt. Snijd ze niet van tevoren.



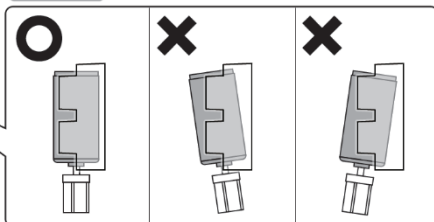
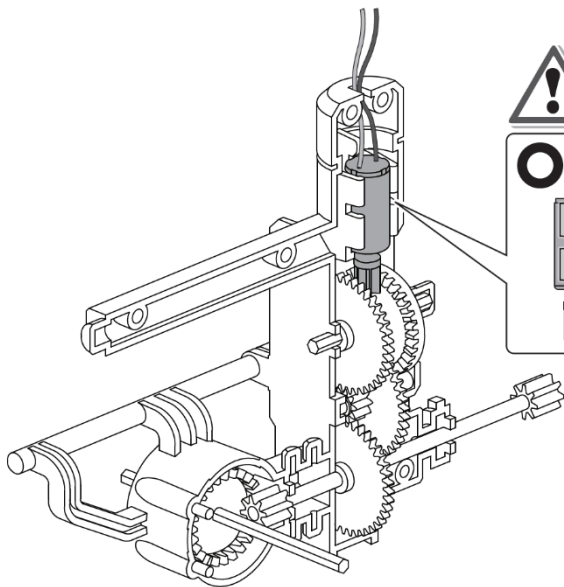
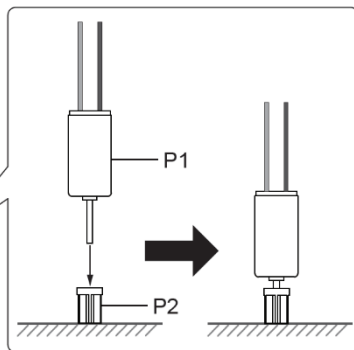
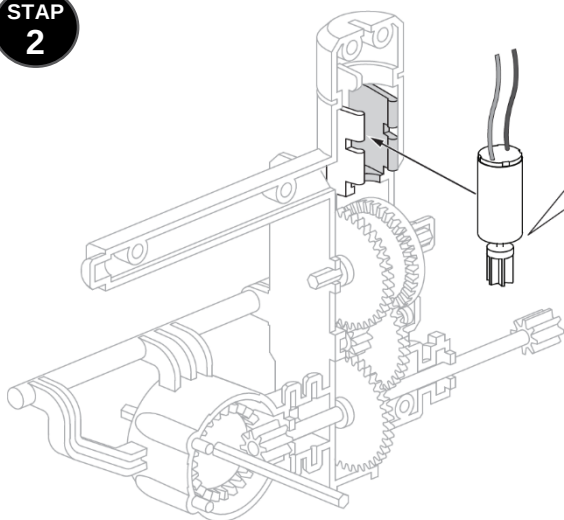


Mechanische montage

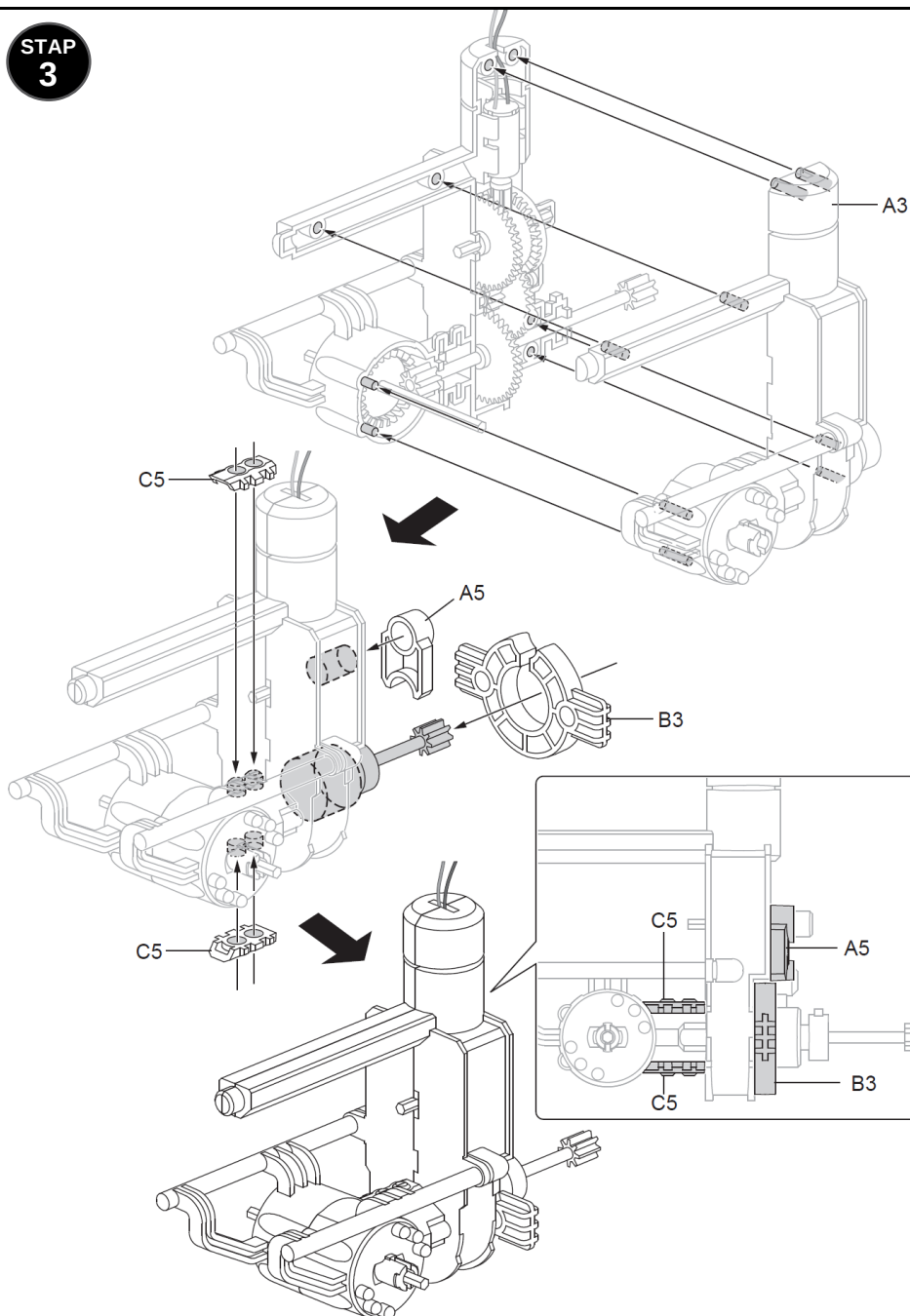
STAP
1



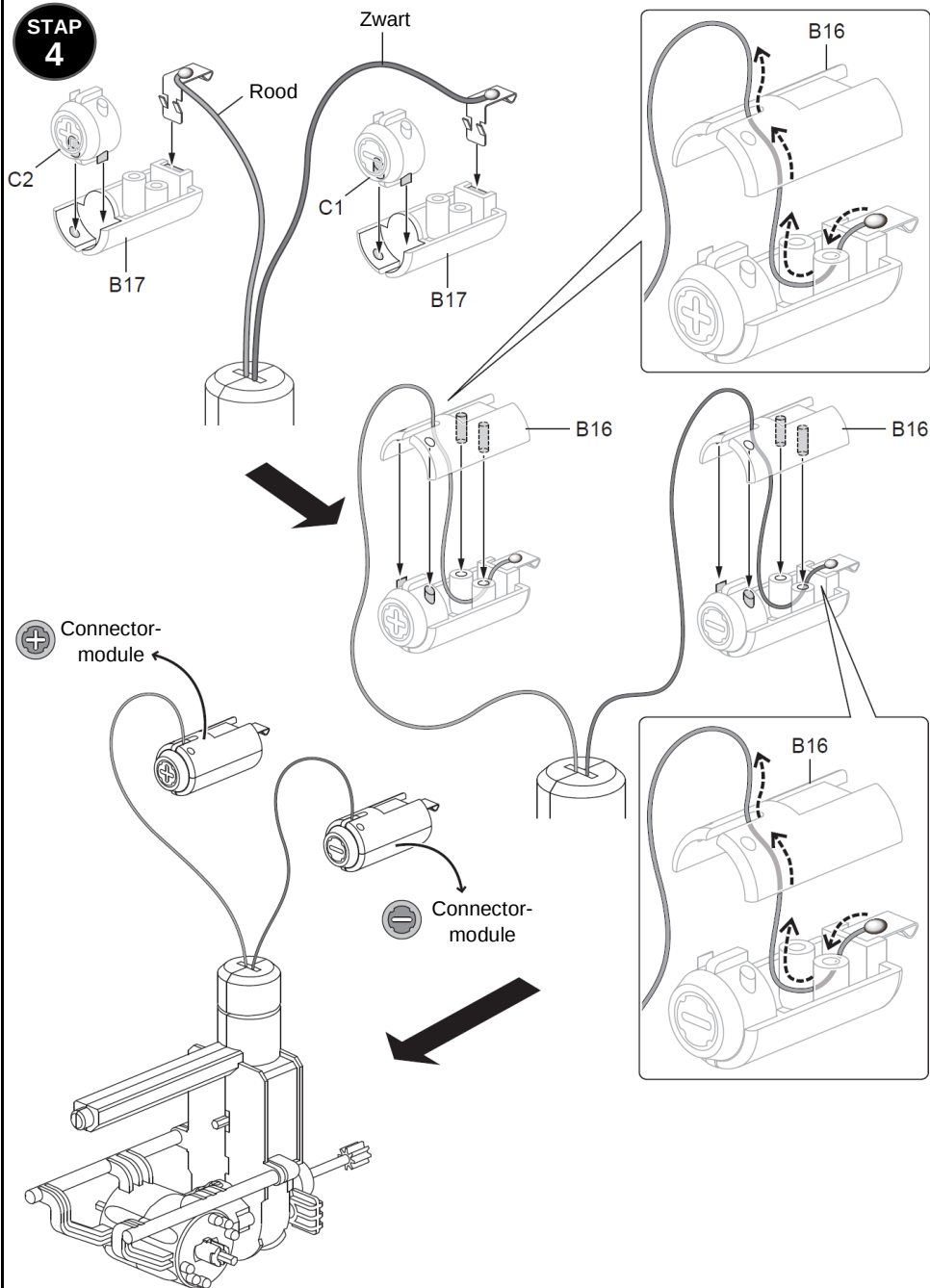
STAP
2



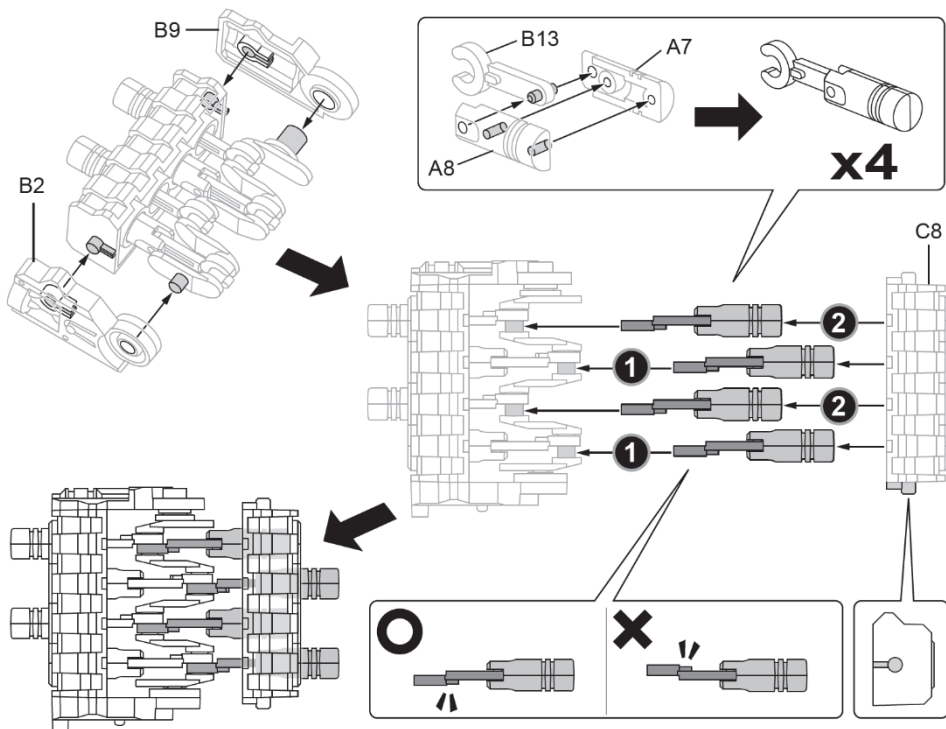
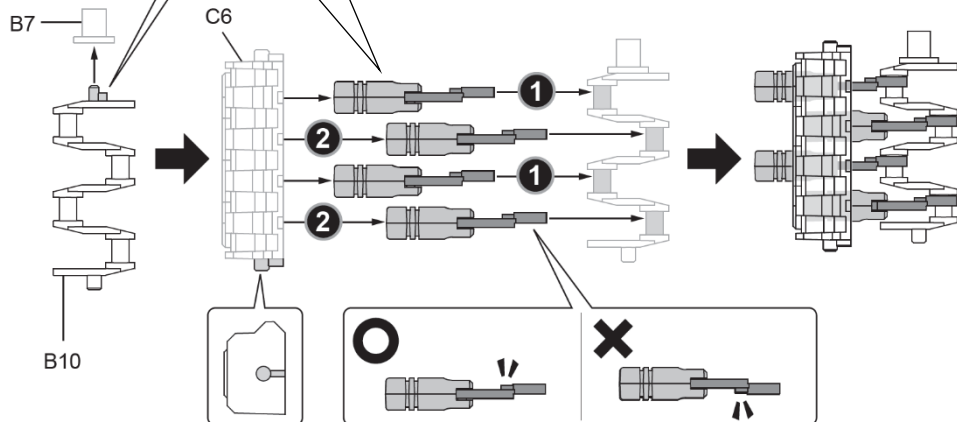
STAP
3



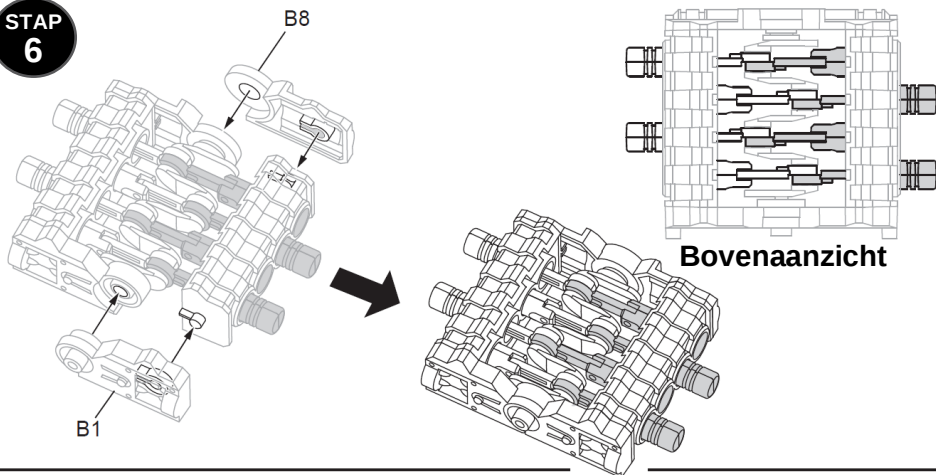
**STAP
4**



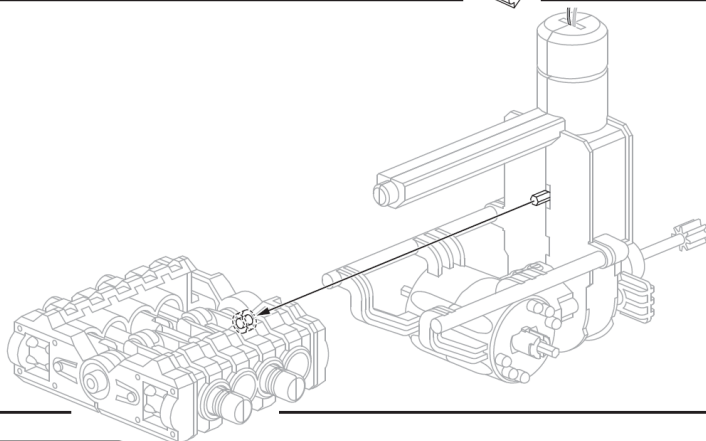
**STAP
5**



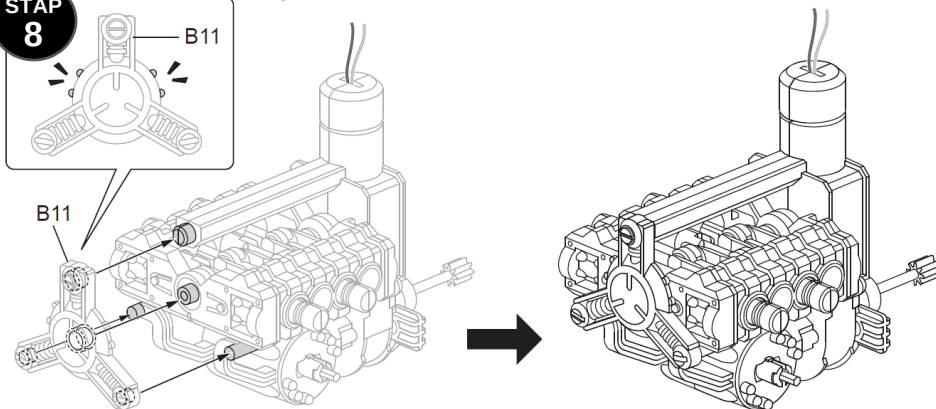
**STAP
6**



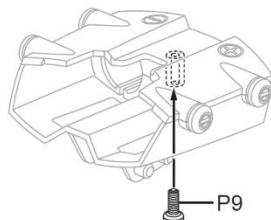
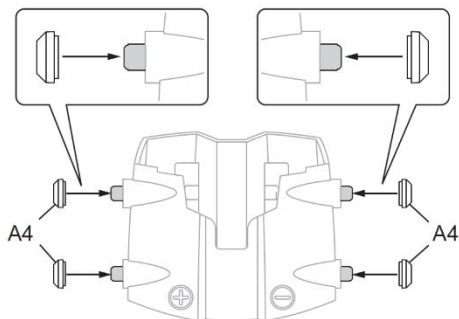
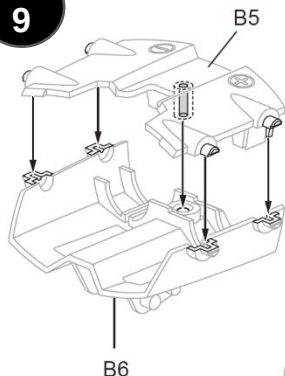
**STAP
7**



**STAP
8**



STAP 9



STAP 10

Zwarte kant naar boven gericht

P10 (Luchtkathode)

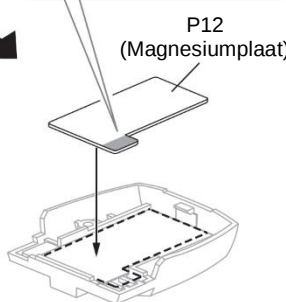
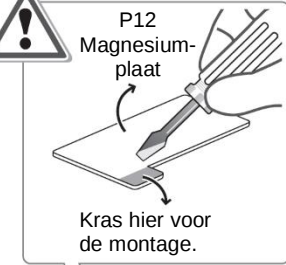
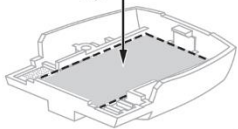
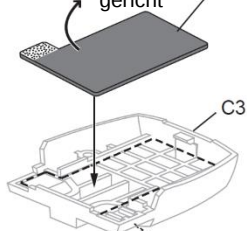
P11 (vliesstof)



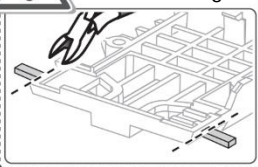
P12 Magnesium-plaat

Kras hier voor de montage.

P12 (Magnesiumplaat)

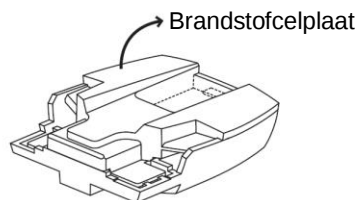
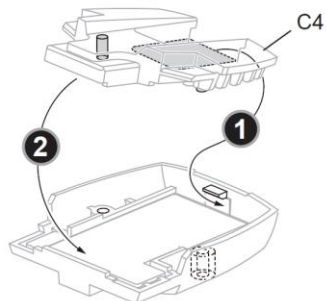


Snijd de 2 bramen af voor de montage.

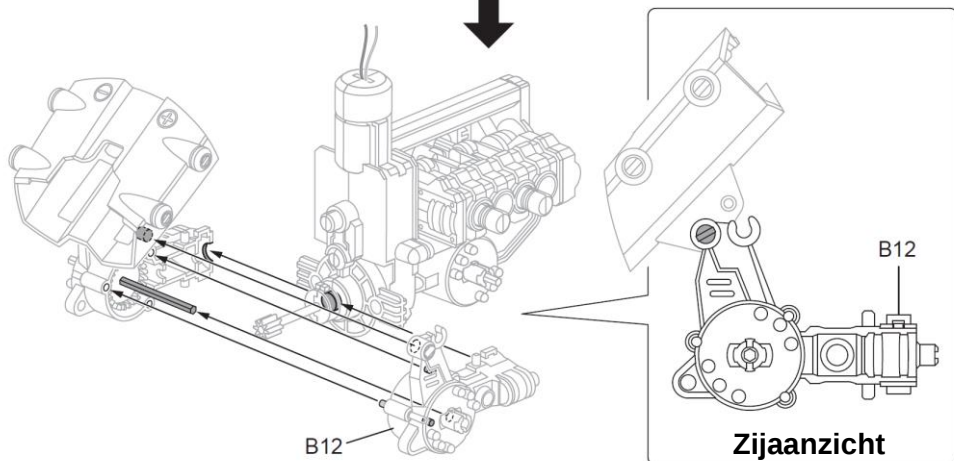
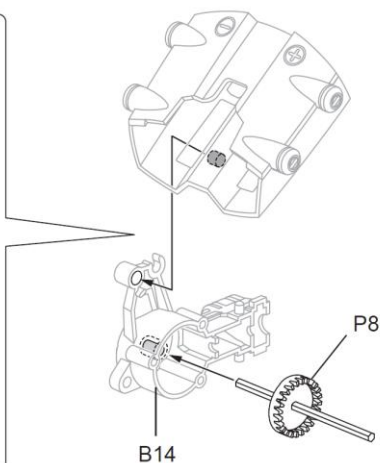
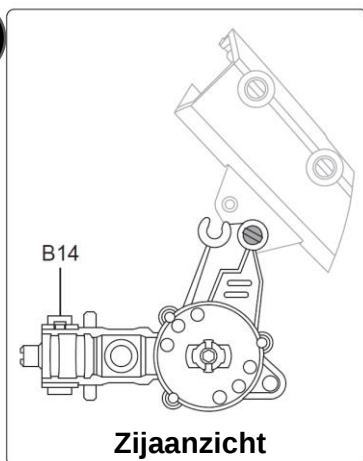


Zorg ervoor dat onderdelen P10, P11, P12 in de juiste volgorde en positie worden geplaatst.

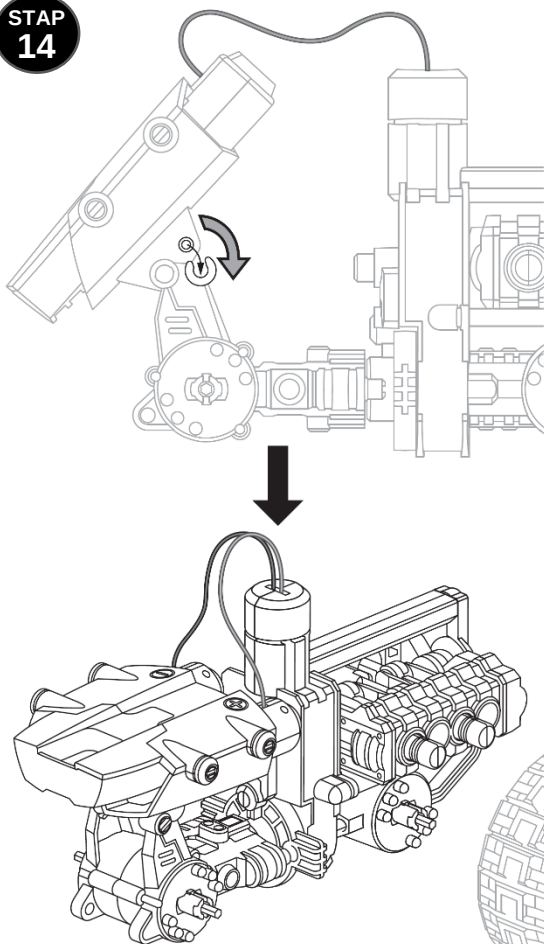
**STAP
11**



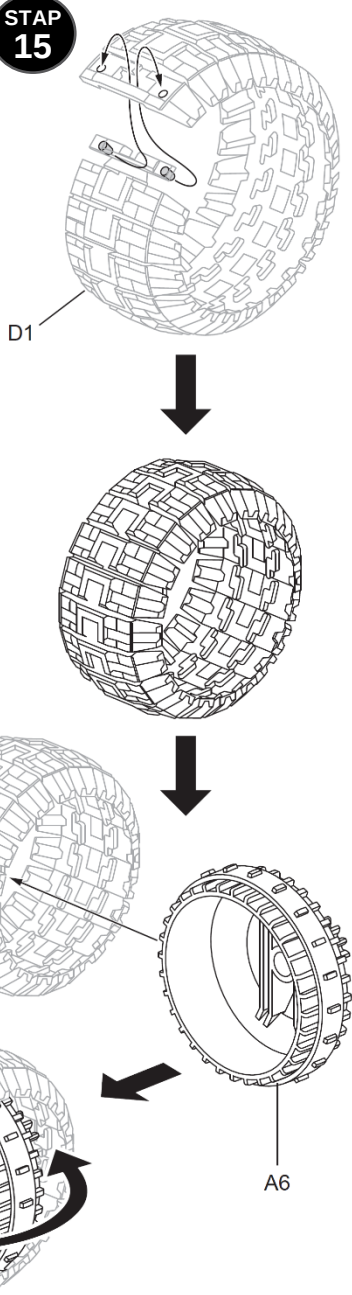
**STAP
12**



STAP
14

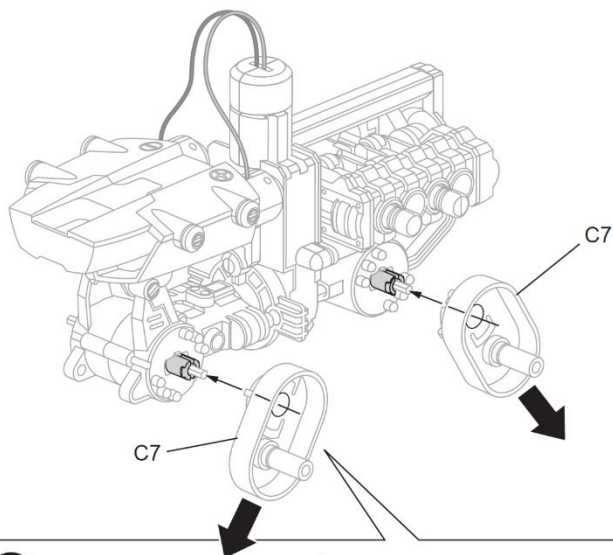


STAP
15

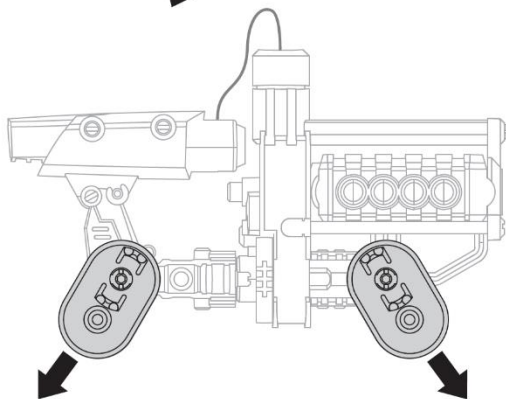


x4

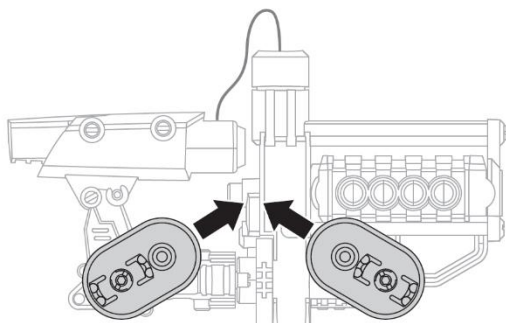
STAP
16



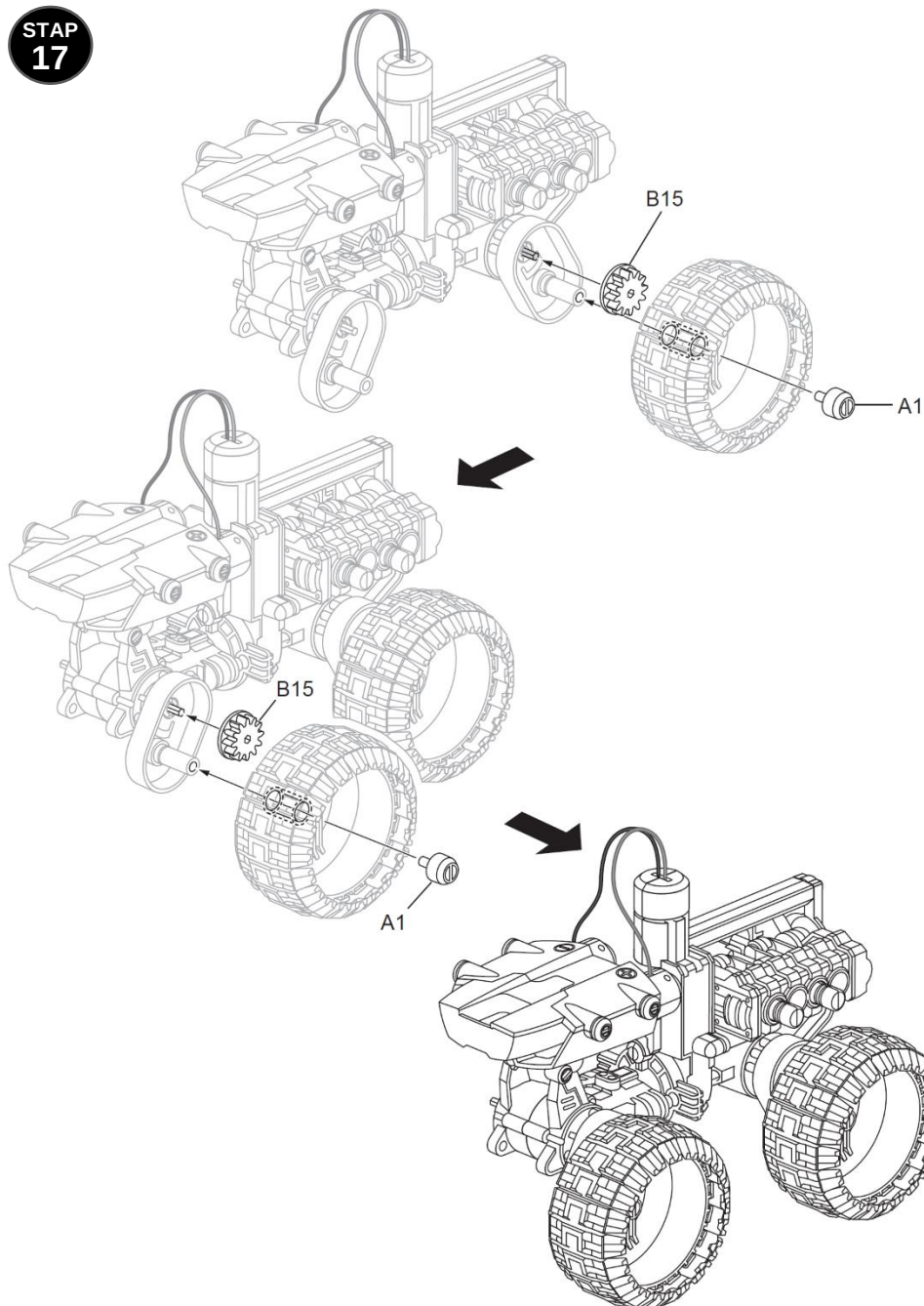
○



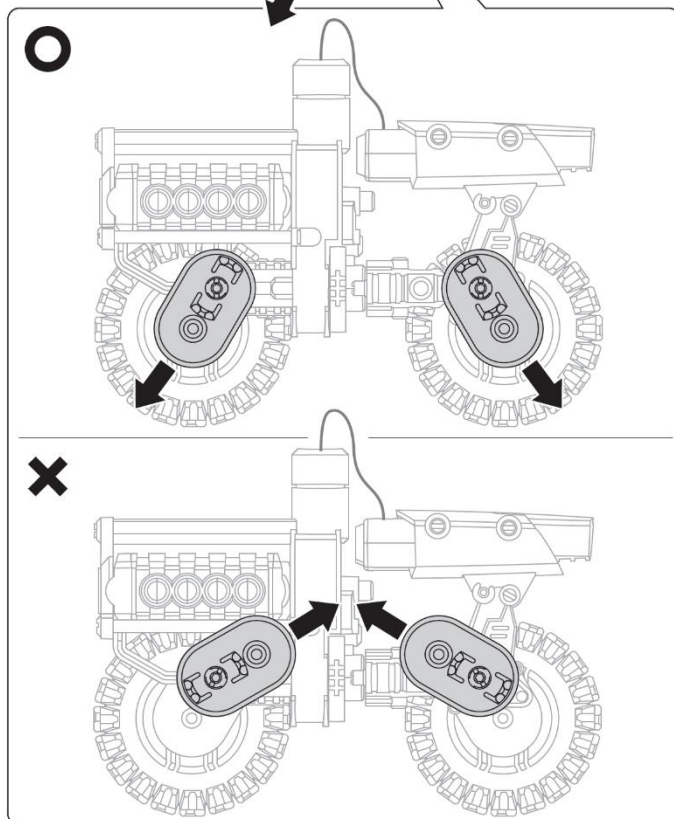
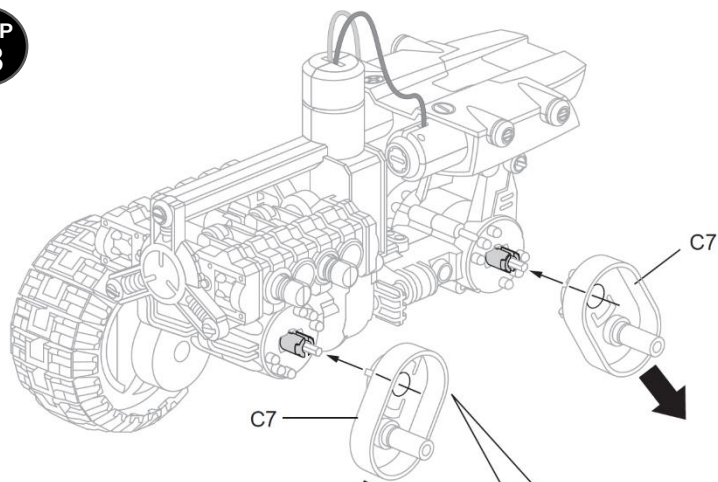
×



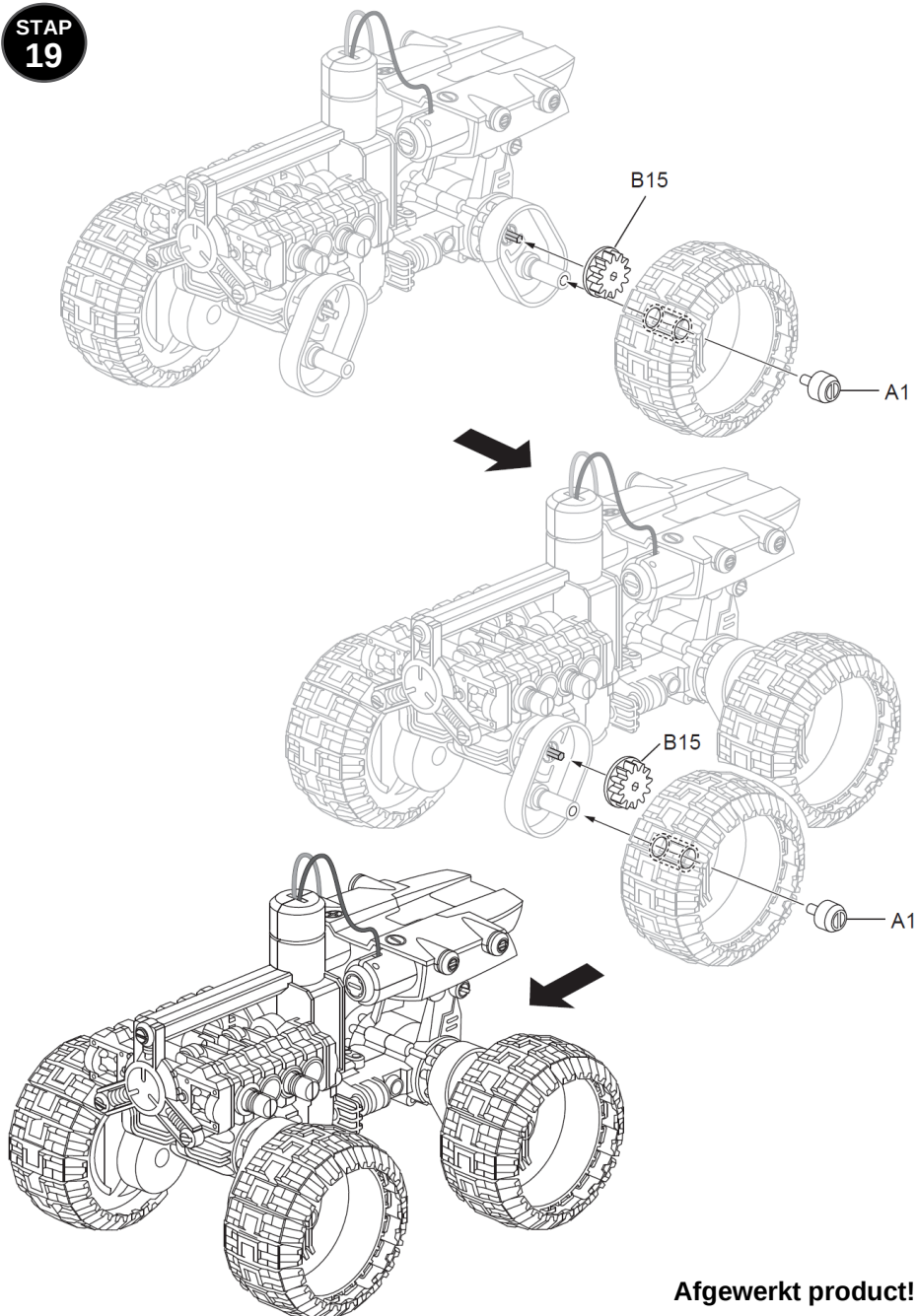
**STAP
17**



STAP
18



**STAP
19**



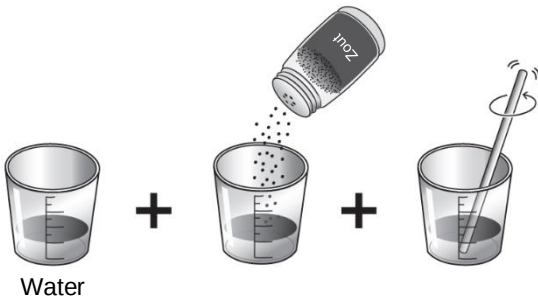
Hoe het werkt

- Na een tijdje is het zout water op (ongeveer 15 minuten) waardoor de auto langzamer zal rijden of tot stilstand zal komen. Voeg nog enkele druppels zout water toe om de wagen opnieuw te starten (zoals in figuur 3)
- Elke magnesiumplaat kan 4 uur onafgebroken werken, daarna zal hij versplinteren. Vervang de plaat door een nieuwe om de auto van stroom te voorzien. De kit bevat 3 navullingen.
- Alle materialen die in deze kit worden gebruikt zijn veilig voor het milieu en milieuvriendelijk. Ze bevatten geen giftige stoffen, noch stellen ze problemen voor de afvalverwerking.

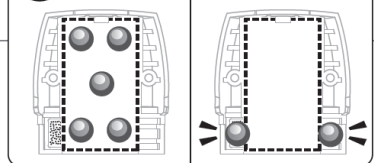


Neem vóór gebruik de onderstaande instructies zorgvuldig door!

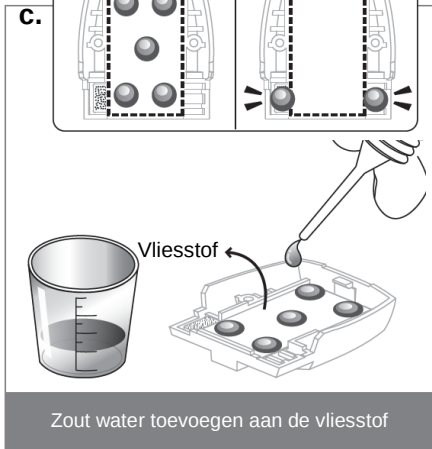
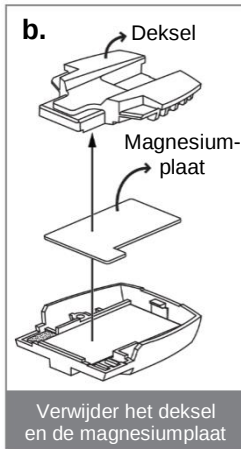
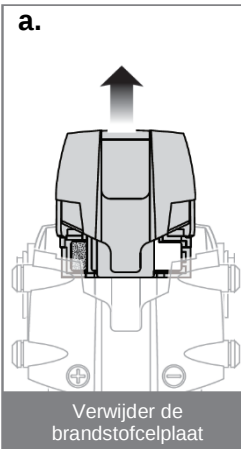
- 1 Hoe een zoutwateroplossing maken:** Voeg zout toe aan kraanwater of gedestilleerd water in een verhouding van **1 deel (zout) : 5 delen (water)**. Elke procentuele verhouding van 20% tot 99% zout water is bruikbaar, maar een verhouding van 20% zal het meest efficiënt zijn.

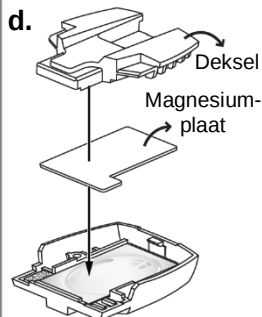


Voeg geen zout water toe buiten de vliesstof zoals hieronder getoond.

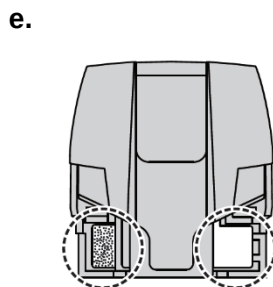


- 2 Hoe de motorwagen vullen met zout water:**

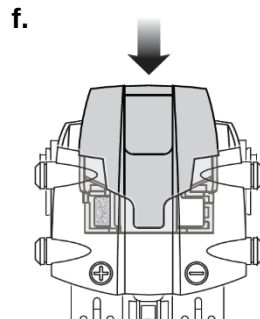




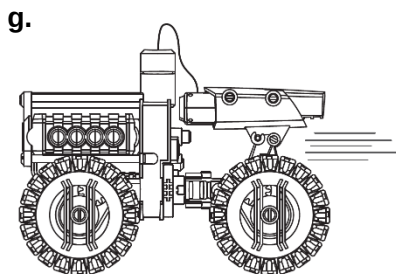
Het deksel en de magnesium-plaat weer in elkaar zetten



Zorg ervoor dat de pool van de connector droog is zonder zout water

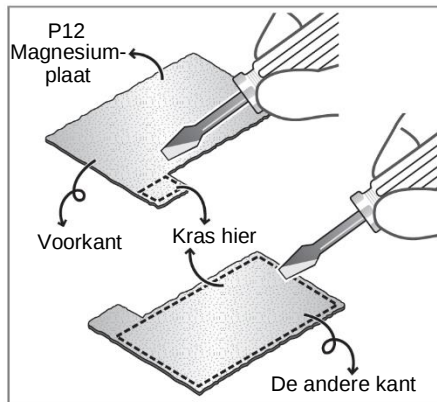
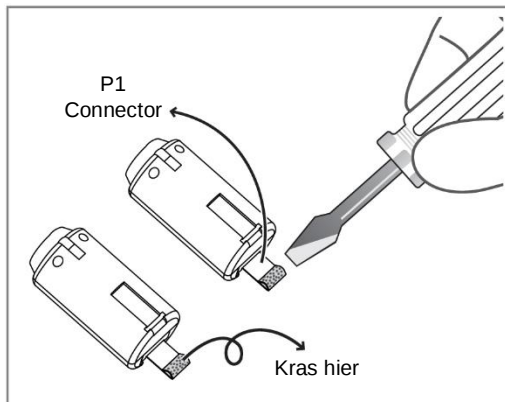


Plaats de brandstofcelplaat

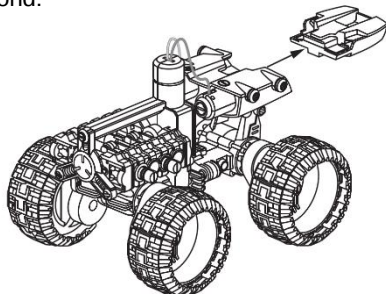


Laat je auto nu rijden

3 Hoe het zout water bijvullen: Wanneer de motorwagen trager gaat rijden of volledig stopt, breng dan opnieuw enkele zout water aan met behulp van de applicator, zoals getoond op figuur **2 C**. En kras oxidatie van de batterijconnectoren en magnesiumplaat met een platte schroevendraaier om ze opnieuw te gebruiken. Zie onderstaande figuren:

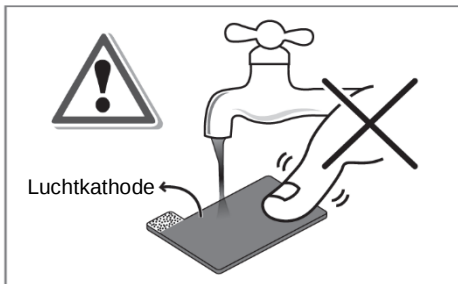
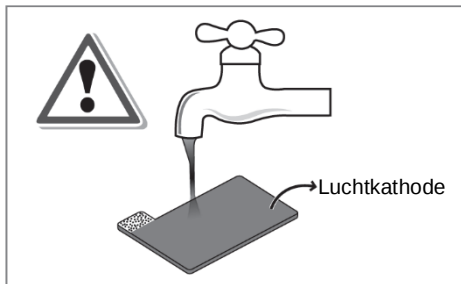


- 4 Hoe de auto stoppen:** Verwijder de brandstofcelplaat om je auto te stoppen zoals hieronder wordt getoond:



- 5 Hoe de brandstofcelplaat onderhouden:** Je moet de brandstofcelplaat telkens schoonmaken als deze niet in gebruik is.

5-1 Spoel de luchtkathode voorzichtig af onder kraanwater, wrijf niet met de hand over het oppervlak om de kwaliteit van de luchtkathode te waarborgen.



5-2 Spoel de hieronder getoonde onderdelen en wrijf met de hand over het oppervlak. Zorg ervoor dat er geen zoutresten achterblijven. Droog alle onderdelen afzonderlijk.



1. Vliesstof

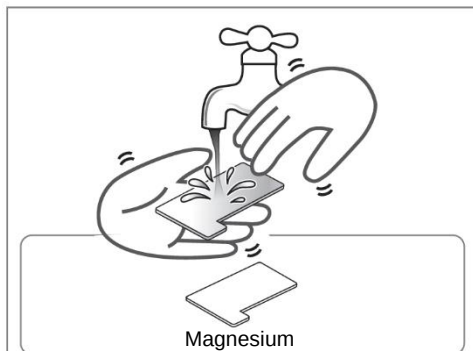


2. Deksel

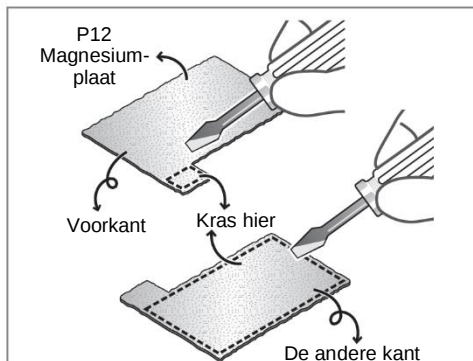


3. Bodembasis

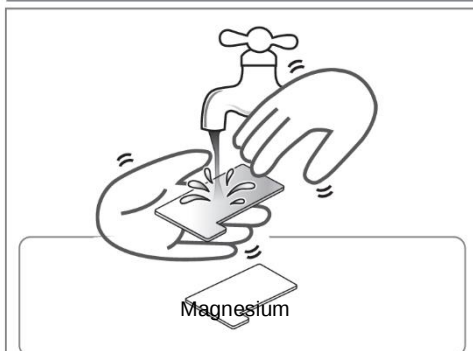
5-3 Spoel en kras de oxidatie van de magnesiumplaat zoals hieronder wordt getoond:



Spoel de magnesiumplaat voorzichtig af



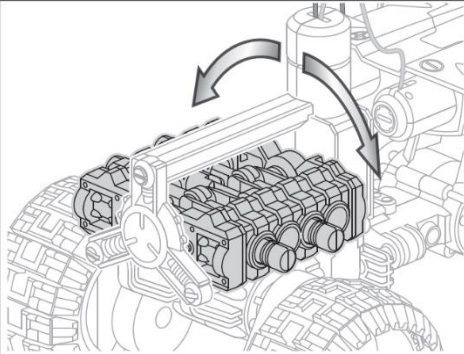
Kras de oxidatie van de magnesiumplaat



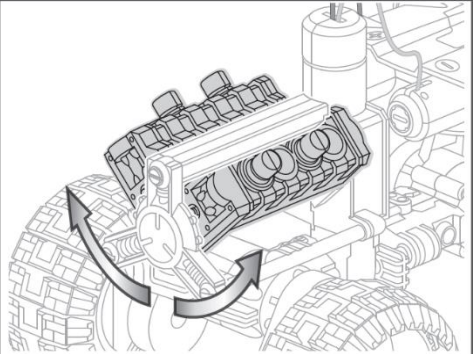
Spoel de magnesiumplaat voorzichtig af en droog hem

Hoe spelen

<1> Van vlakke motor naar V-motor transformeren.

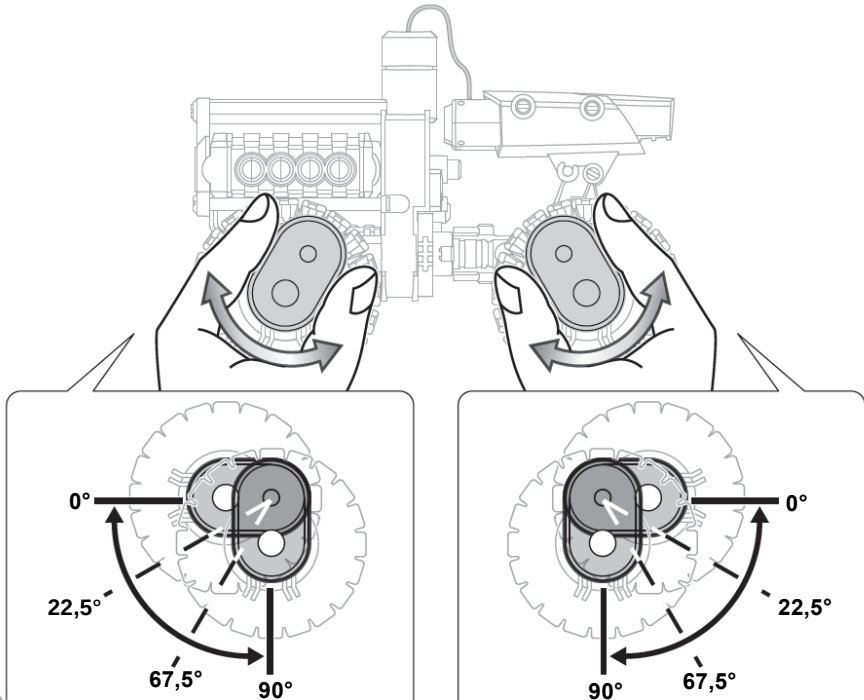


VLAKKE motor



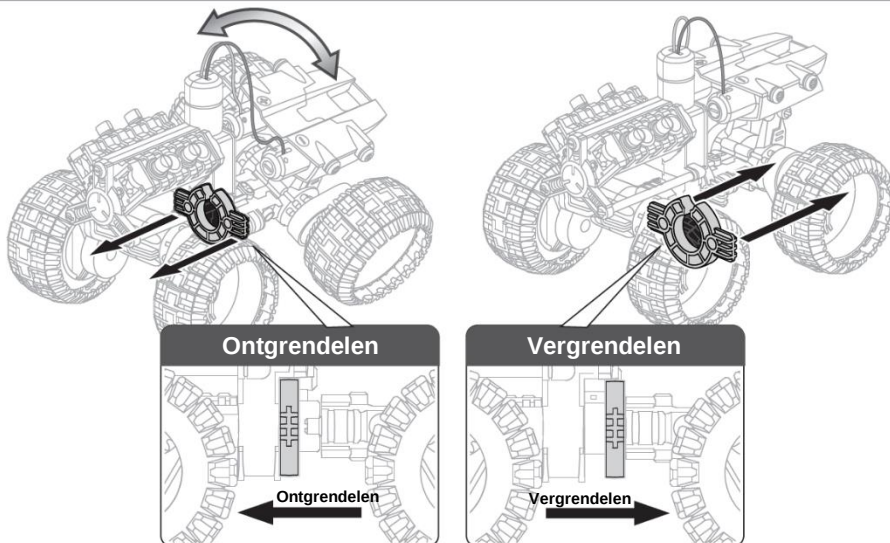
V-motor

<2> De hoogte van de wielen aanpassen.

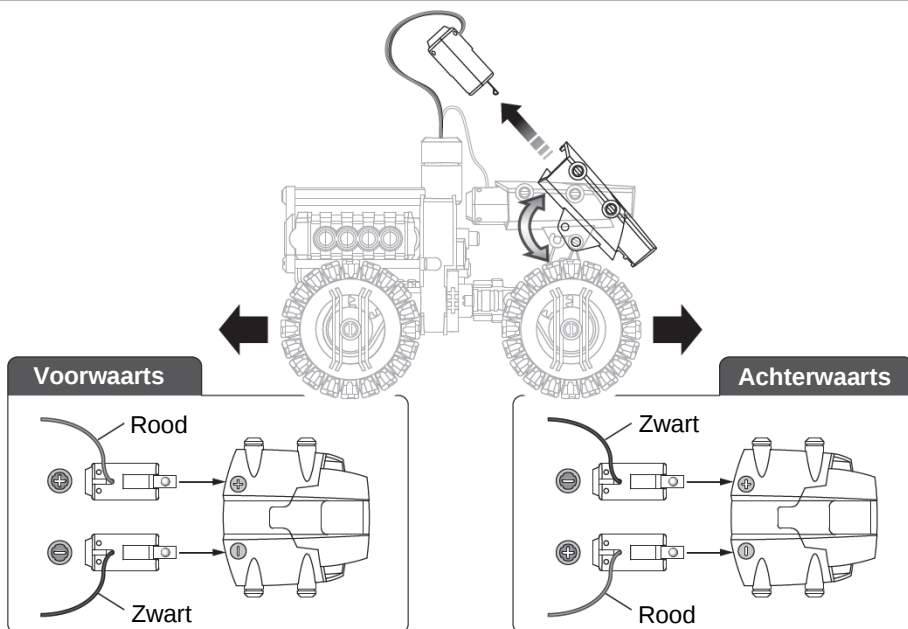


Opmerking: Zet de voorwielen niet op '0' graden wanneer de motor in vlakke stand staat, want dan kunnen ze elkaar hinderen.

<3> Vergrendel of ontgrendel de carrosserie.



<4> Laat de auto voor- of achterwaarts rijden.



Probleemoplossing

Controleer de onderstaande stappen als de auto niet beweegt nadat je zout water hebt toegevoegd.

- 1** Controleer of de motor en de tandwielen in de juiste positie zijn geïnstalleerd.
- 2** Zorg ervoor dat elke connector in de juiste positie is geplaatst (Ref.: **STAP 4**)
- 3** Zorg ervoor dat de brandstofcelplaat en de connectormodule volledig in elkaar zitten. (Ref.: **STAP 13**)
- 4** Vervang een nieuwe magnesiumplaat als deze is geërodeerd zoals hieronder wordt getoond.



(Nieuw)



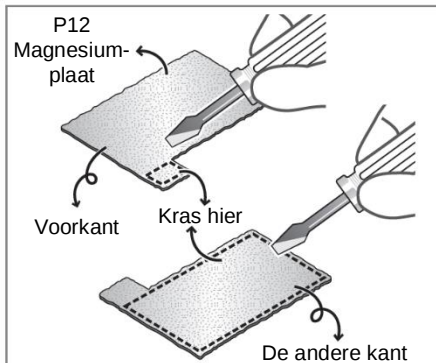
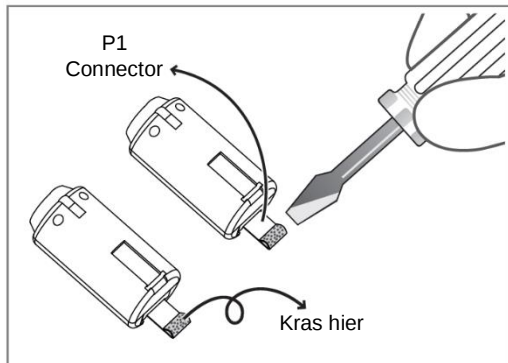
(Moet worden vervangen)



- 5** Zorg ervoor dat de brandstofcelplaat in de juiste volgorde en positie wordt geplaatst: luchtkathode - vliesstof - magnesiumplaat. (Ref.: **STAP 10**)
- 6** Zorg ervoor dat de zwarte kant van de luchtkathode naar boven is gericht. (Ref.: **STAP 10**)
- 7** Vliesstof wordt ook gebruikt om de luchtkathode en magnesiumplaat te isoleren, zorg ervoor dat de 2 delen niet met elkaar in contact komen, anders kan er kortsluiting ontstaan. (Ref.: **STAP 10**)
- 8 Belangrijk:** Als de stof volledig droog is, demonteer dan de brandstofcelplaat en voeg zout water toe zoals getoond op figuur **2 C**. Voeg geen zout water toe buiten de vliesstof.
- 9** Zorg ervoor dat de pool van de connector droog is zonder zout water. (Ref.: **2 e**)

10 Belangrijk: Zout water veroorzaakt gemakkelijk oxidatie, kras de oxidatie van de batterijconnectoren en ook van de magnesiumplaat met een platte schroevendraaier om deze opnieuw te gebruiken.

Zie onderstaande figuren:



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Lista de peças mecânicas.....	P.01
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Salt Water

FUELCELL Engine Car KIT



Este é um conceito de um kit de veículo com um motor de célula de combustível ecológico. O kit irá ensinar as crianças sobre novas formas de energias não poluentes. Surpreenda-se com o facto de, ao adicionar algumas gotas de água salgada, o motor do veículo começará a funcionar como que por magia. Veja como funciona um motor V8. Existem outras atividades interessantes para explorar.

GREEN ENERGY

Todos os materiais utilizados neste kit são seguros e ecológicos, sem substâncias tóxicas ou preocupações de eliminação.

Ferramentas que pode necessitar



Taça



Sal



Vareta



Turquês

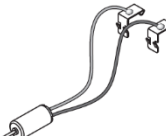
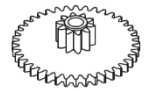


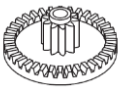
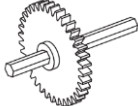
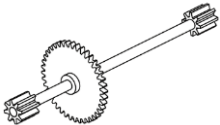
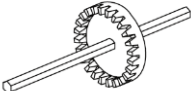
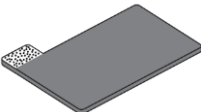
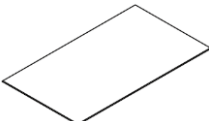
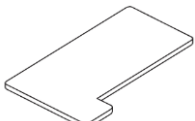
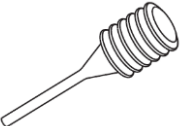
⊖ Chave de fendas



⊕ Chave de parafusos

Lista de peças mecânicas

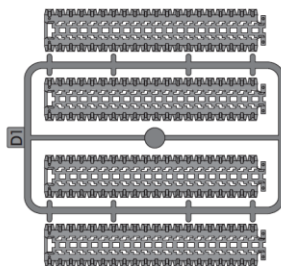
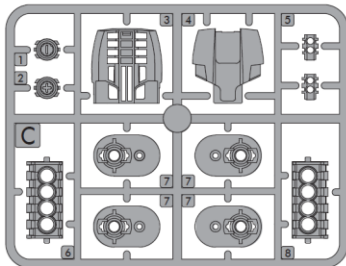
P1	Motor com conectores		QUANTIDADE
			1
 Não ligar os fios à rede elétrica.			
P2	Engrenagem de pinhão (amarelo)		QUANTIDADE
			1
P3	Engrenagem (amarelo)		QUANTIDADE
			1

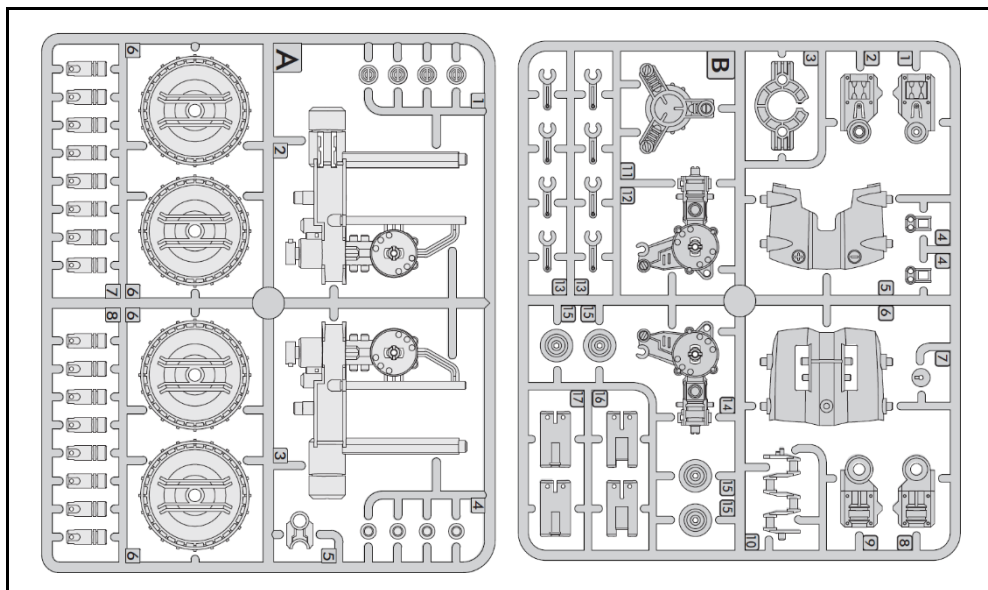
P4 Engrenagem (vermelho)	 QUAN- TIDADE 1
P5 Eixo redondo	 QUAN- TIDADE 1
P6 Engrenagem com veio	 QUAN- TIDADE 1
P7 Eixo de engrenagem com pinhões	 QUAN- TIDADE 1
P8 Roda de coroa com veio	 QUAN- TIDADE 2
P9 Parafuso de rosca	 QUAN- TIDADE 1
P10 Cátodo aéreo (preto)	 QUAN- TIDADE 1
P11 Tecido não tecido	 QUAN- TIDADE 1 (Peça sobressalente:1)
P12 Folha de magnésio	 QUAN- TIDADE 1 (Peças sobressalentes: 2)
P13 Conta-gotas de plástico	 QUAN- TIDADE 1



Peças de plástico

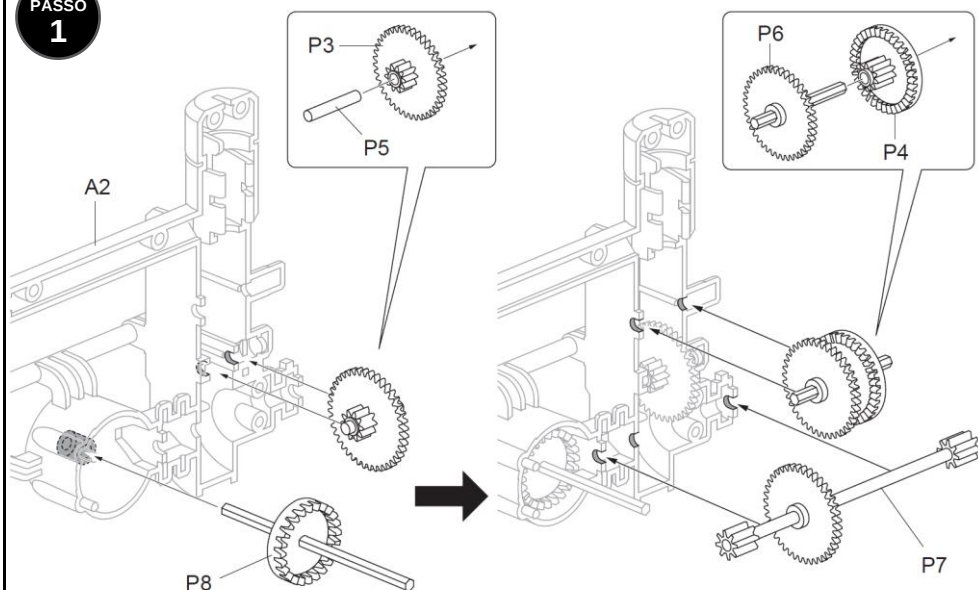
Corte as peças de plástico quando for necessário. Não as corte antecipadamente.



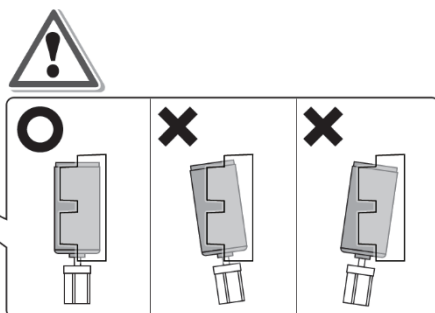
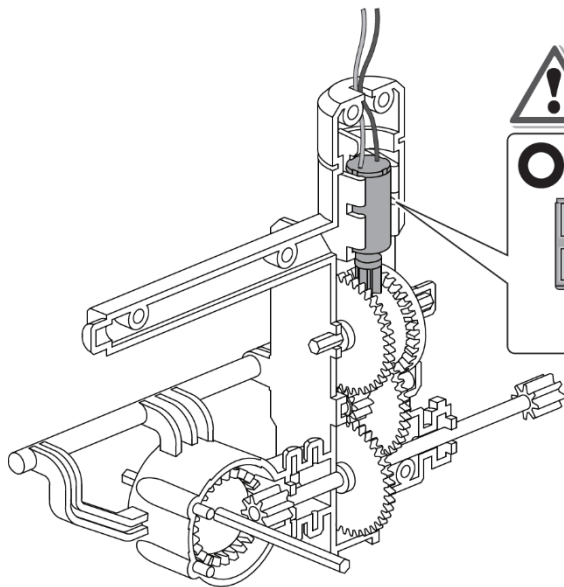
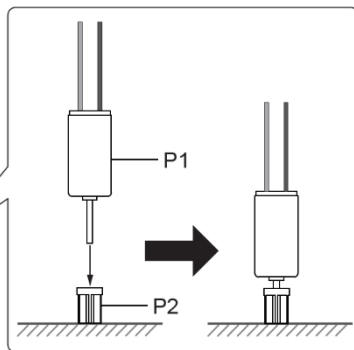
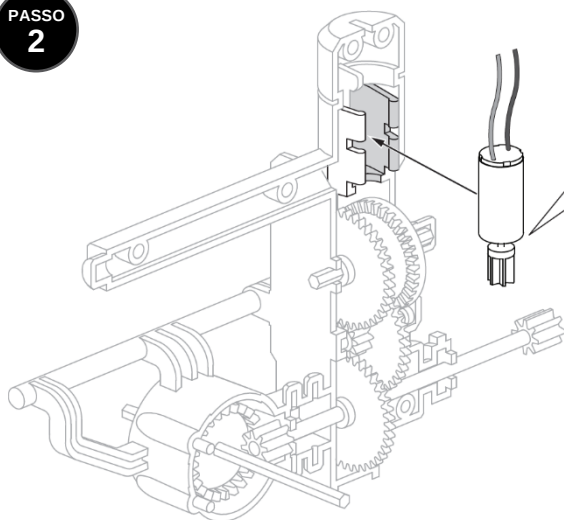


Montagem mecânica

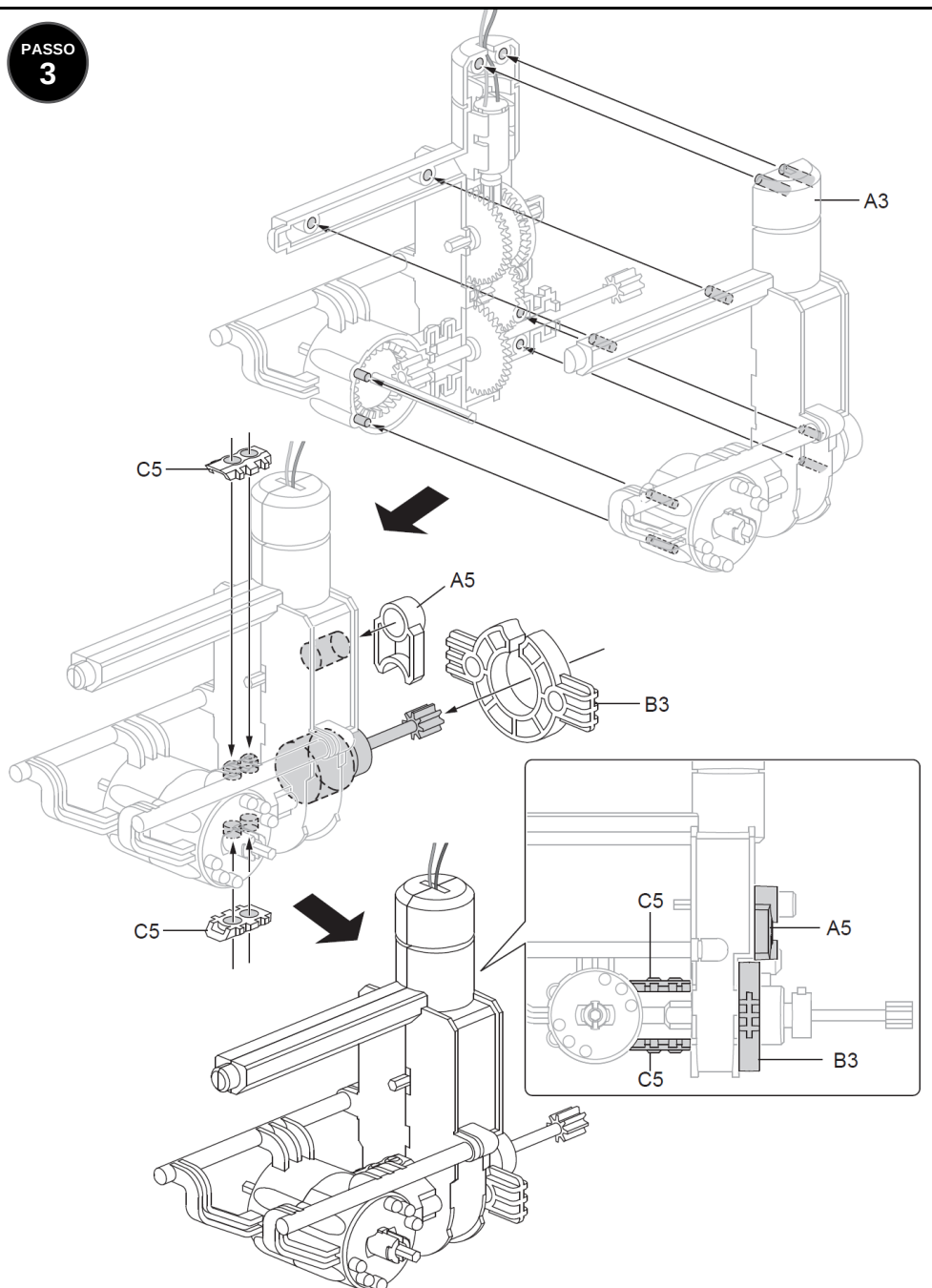
PASSO
1



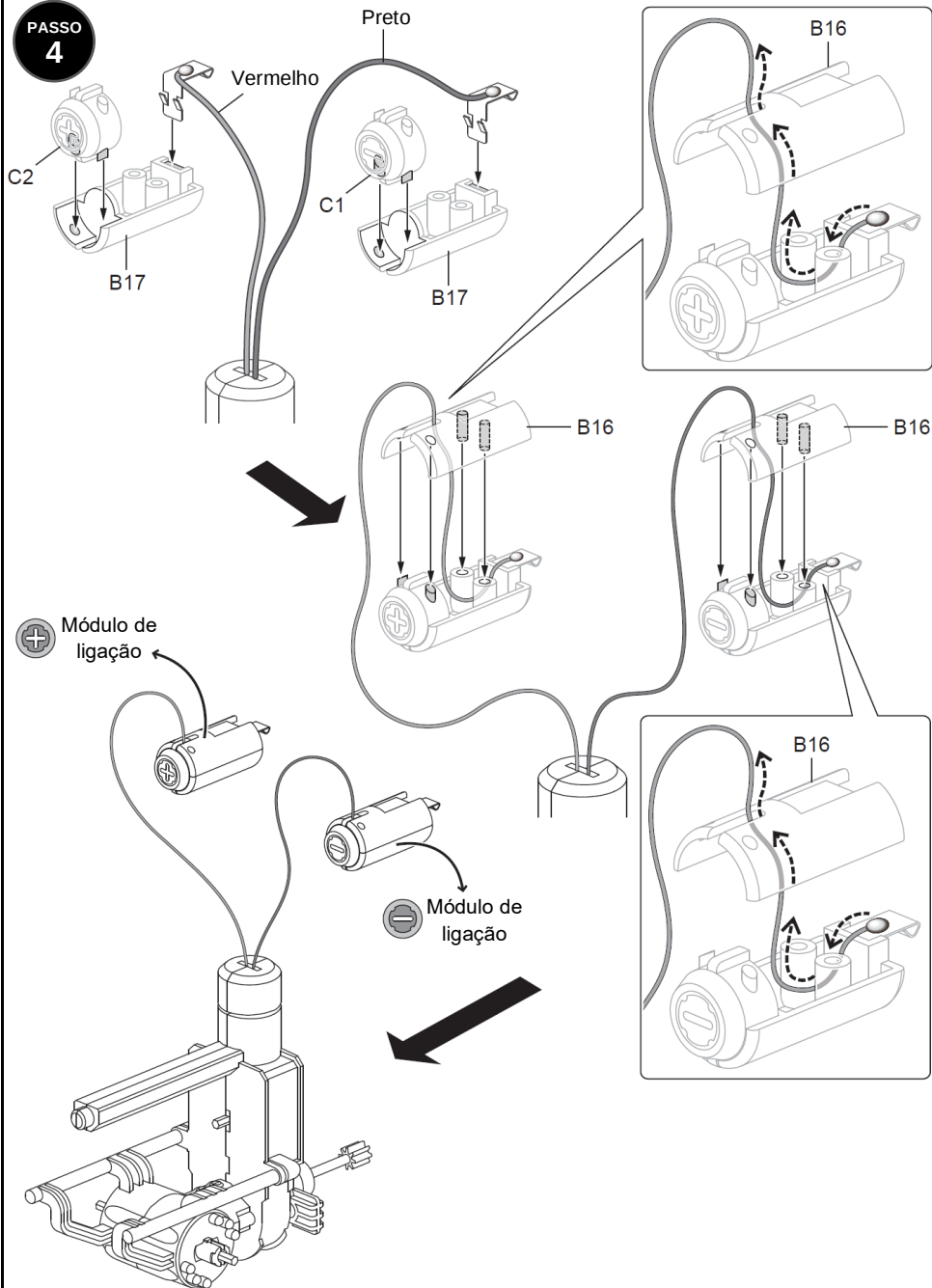
PASSO
2



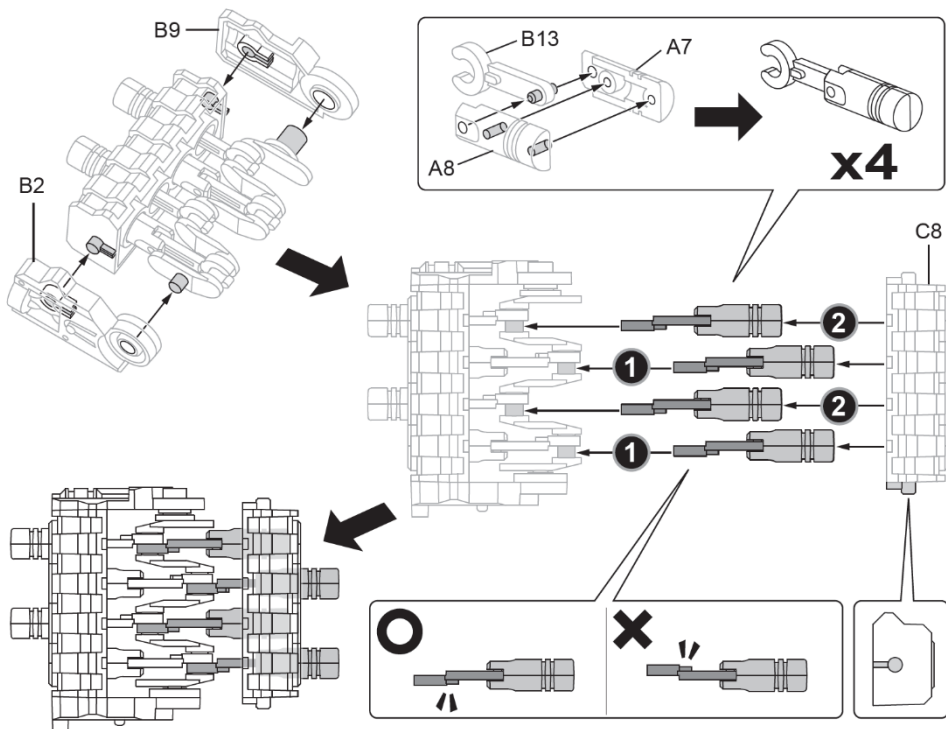
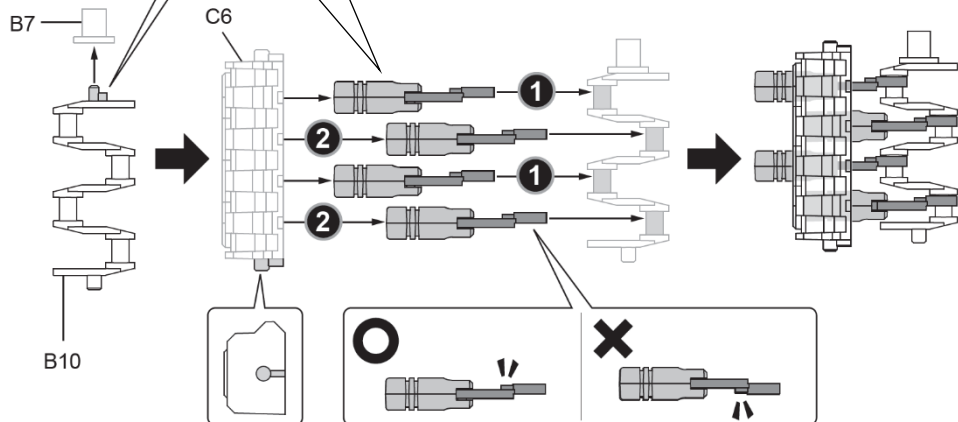
PASSO
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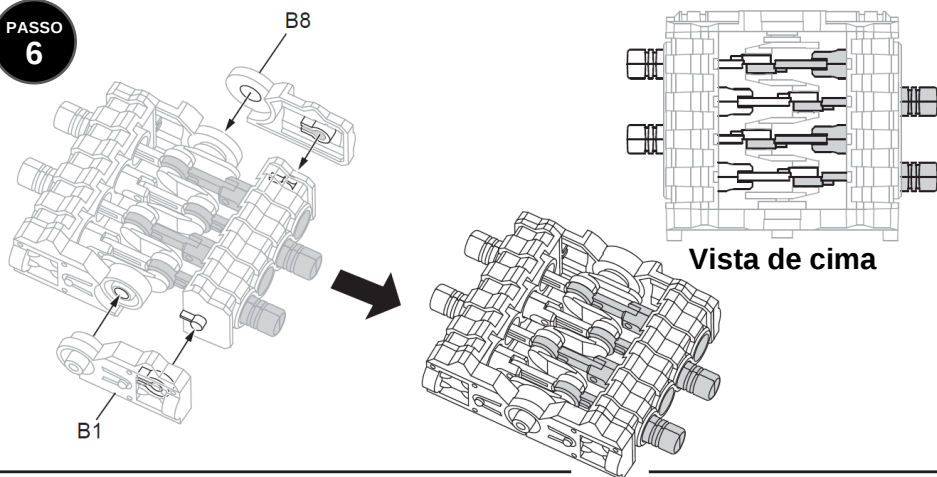
PASSO
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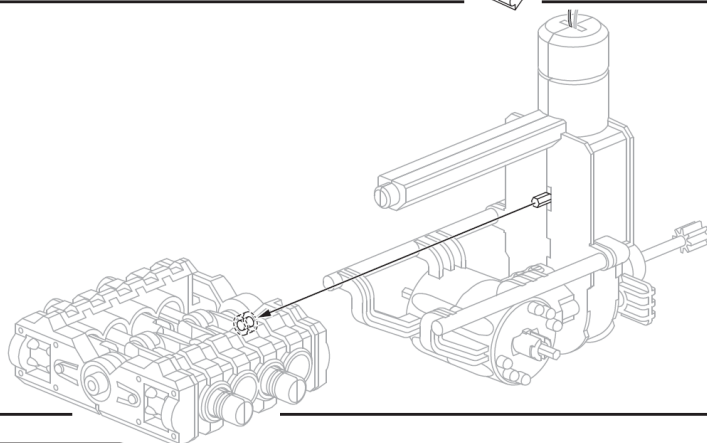
**PASSO
5**



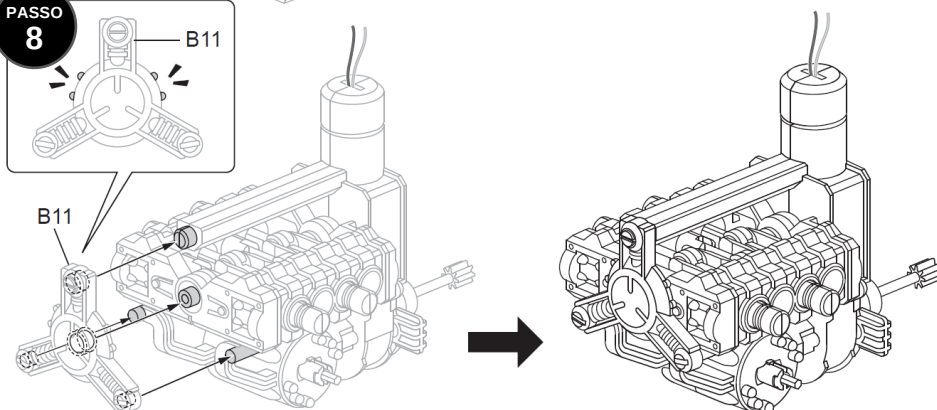
PASSO
6



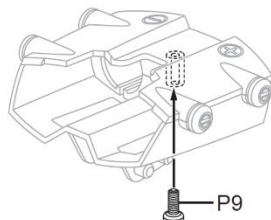
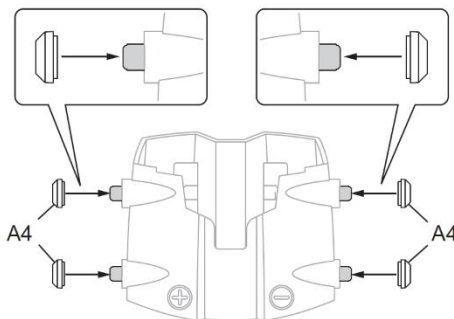
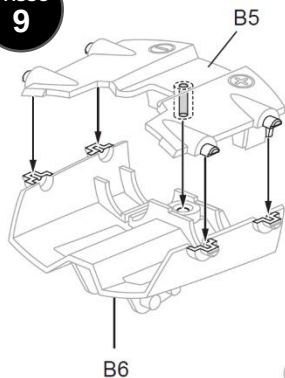
PASSO
7



PASSO
8

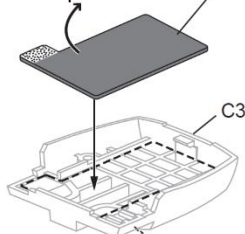


PASSO 9

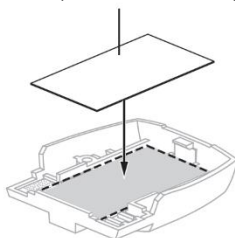


PASSO 10

P10
Lado preto
para cima



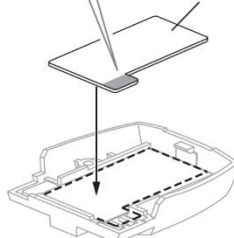
P11 (Tecido não tecido)



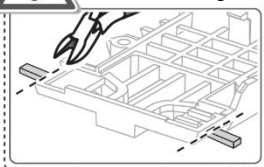
P12
Folha de
magnésio



P12
(Folha de magnésio)

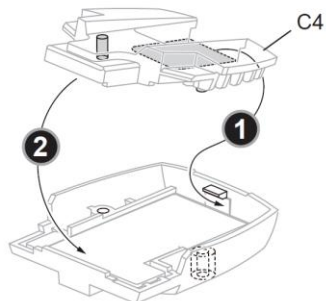


Corte as 2 rebarbas
antes da montagem.

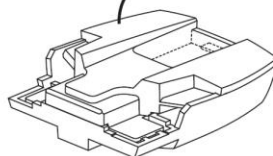


Certifique-se de que as P10, P11 e P12 são colocadas na sequência e posição corretas.

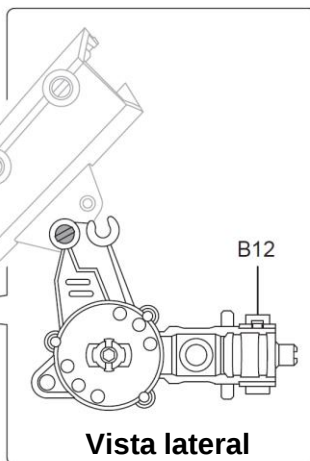
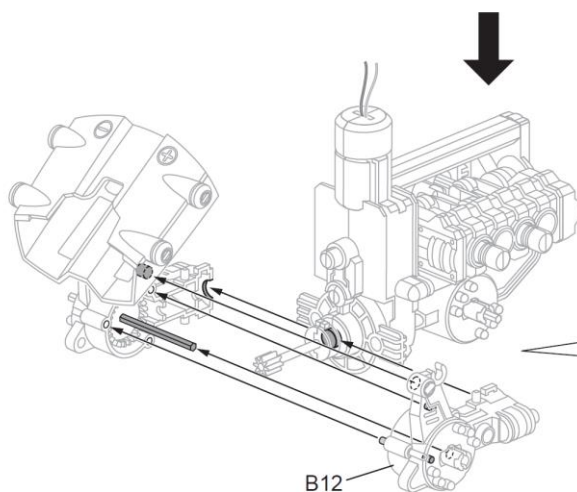
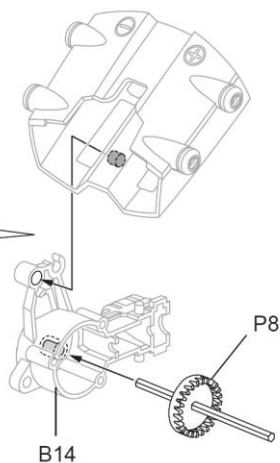
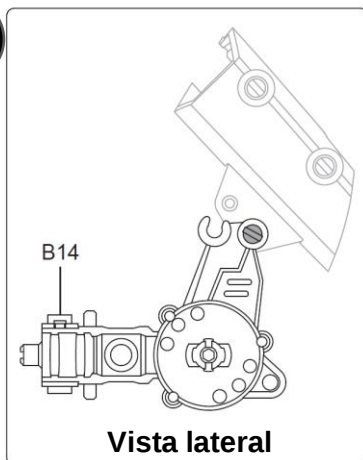
PASSO
11



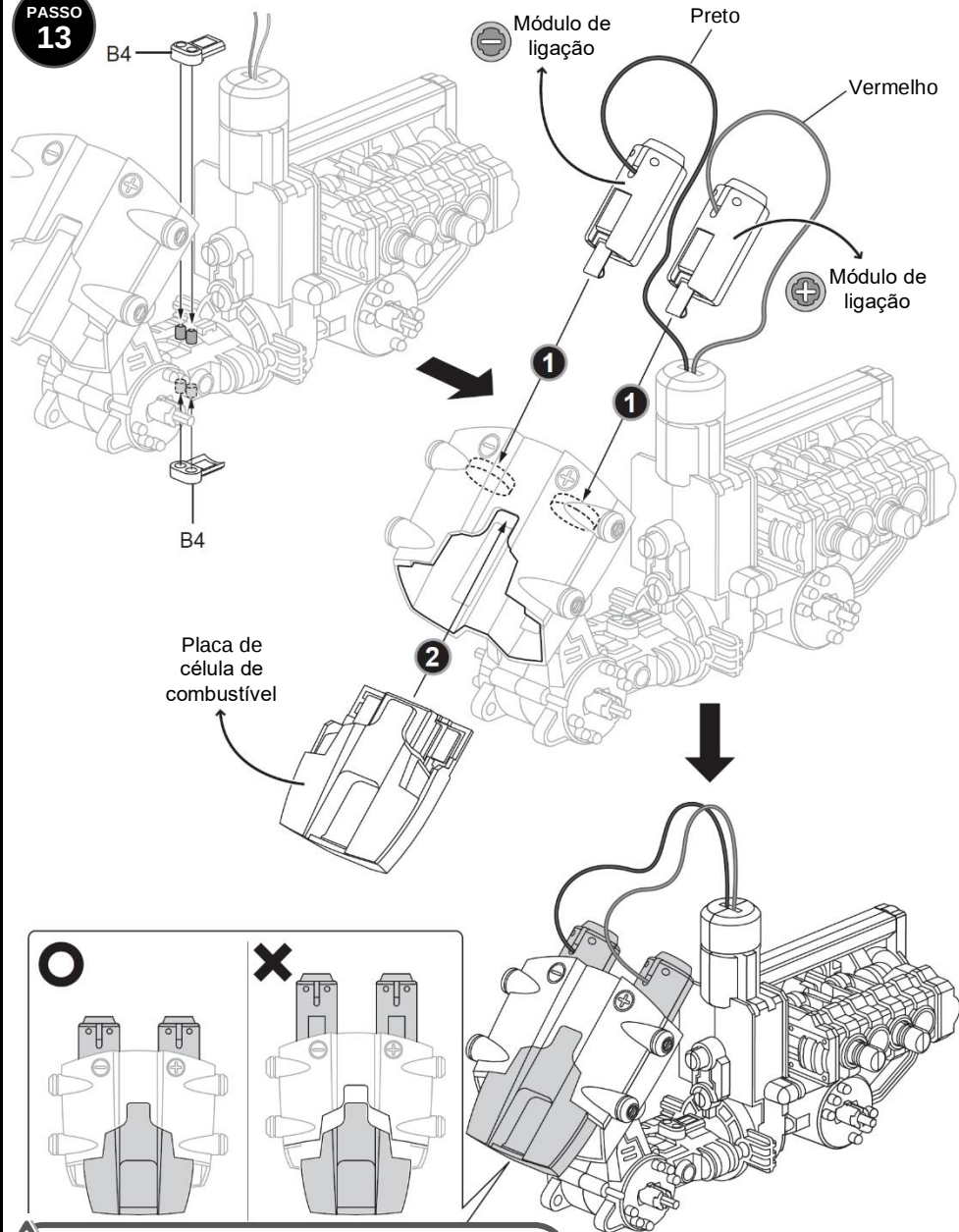
Placa de célula
de combustível



PASSO
12

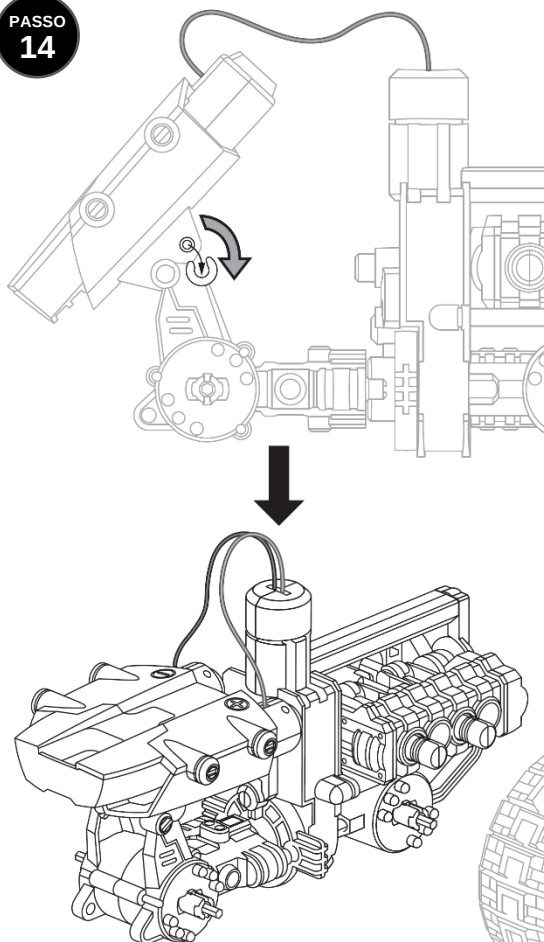


PASSO
13

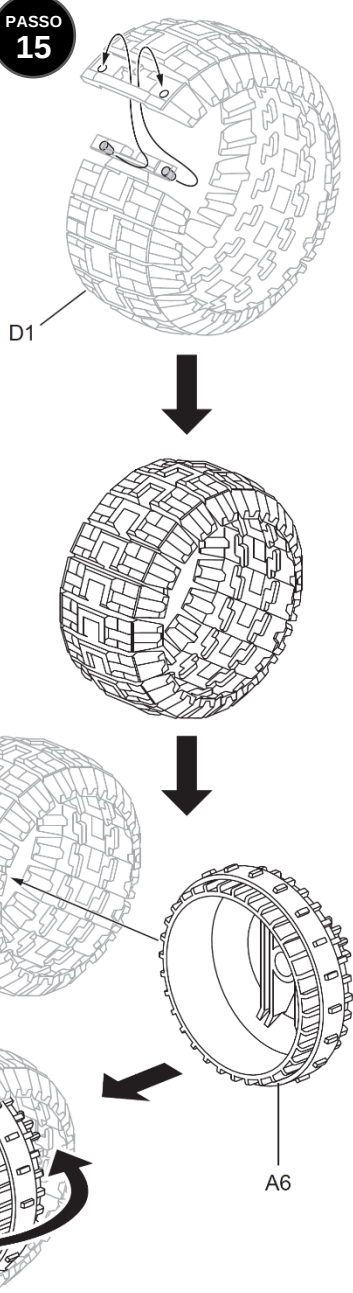


Certifique-se de que insere a placa de célula de combustível e o módulo de ligação até ao fim.

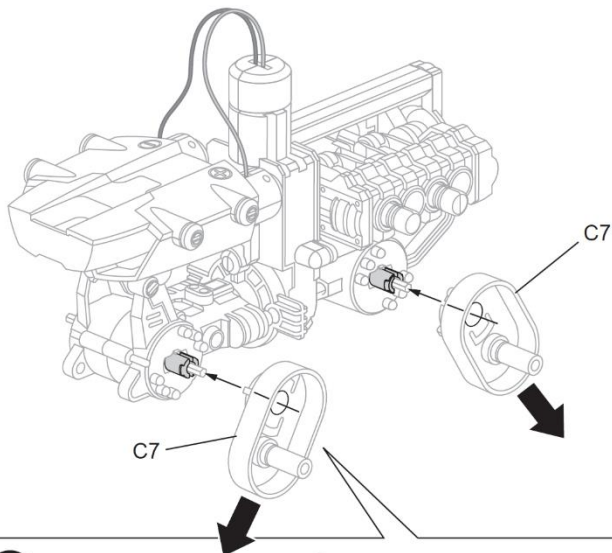
PASSO
14



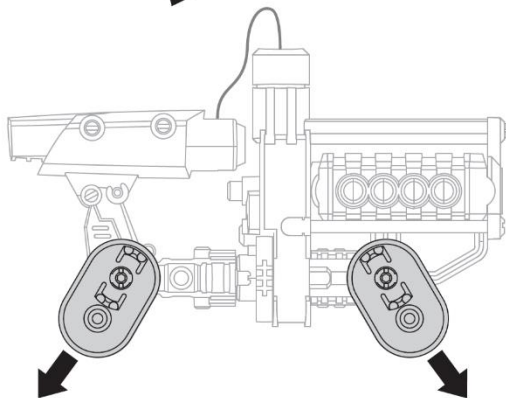
PASSO
15



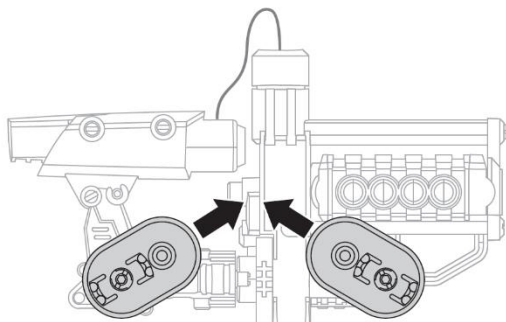
PASSO
16



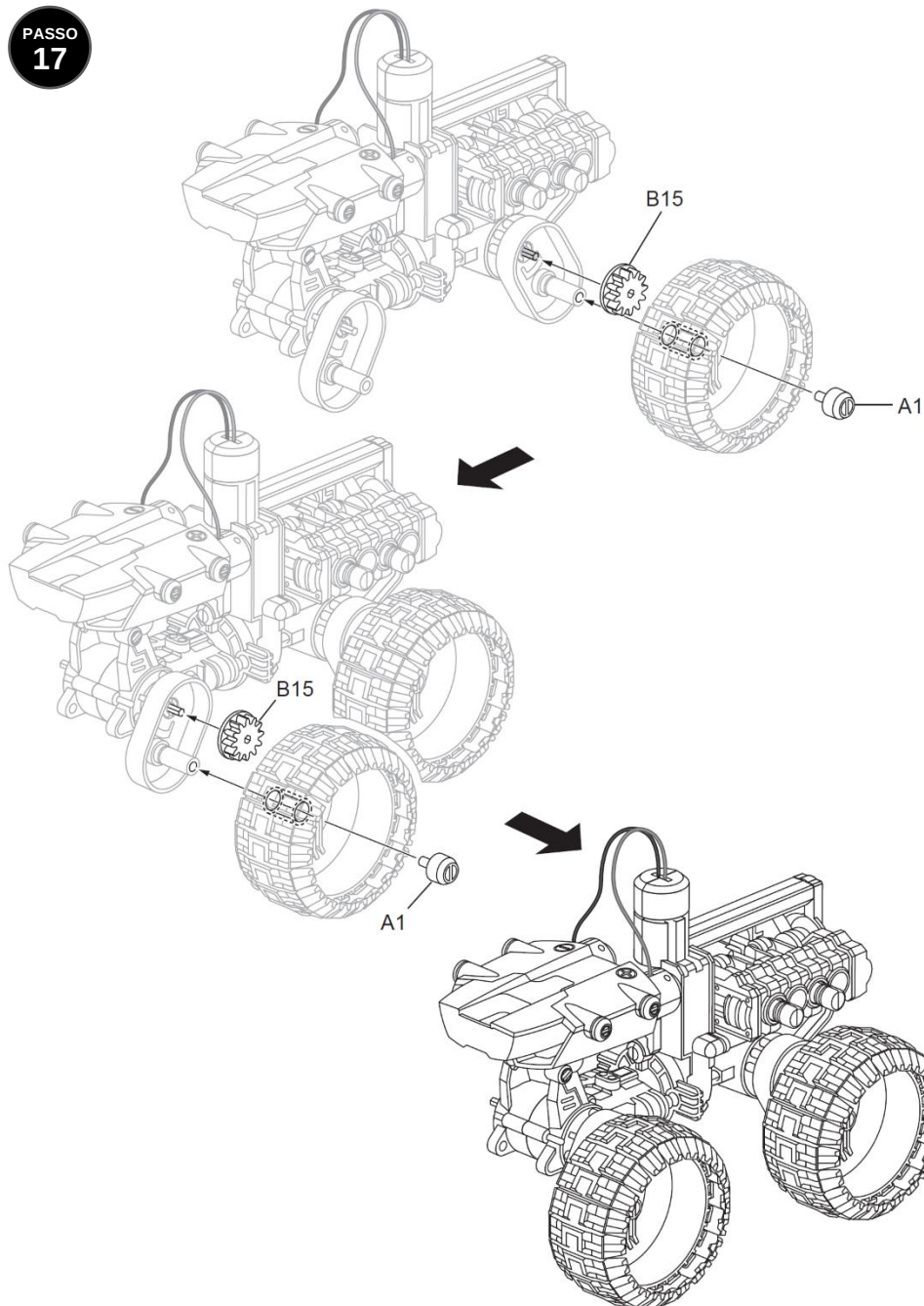
○



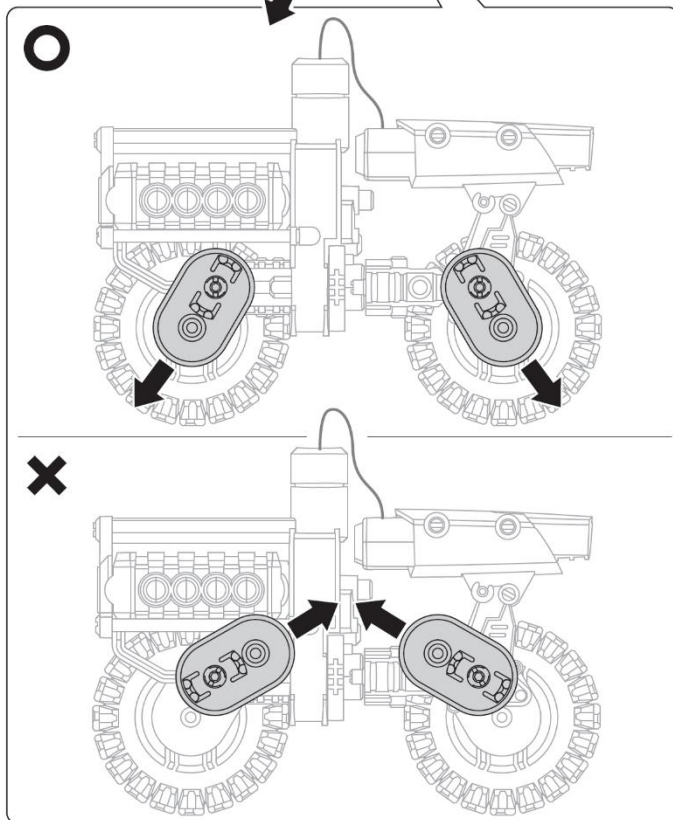
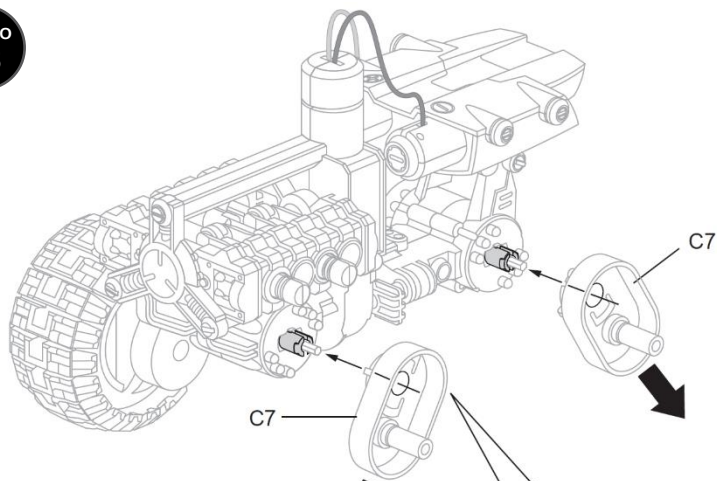
×



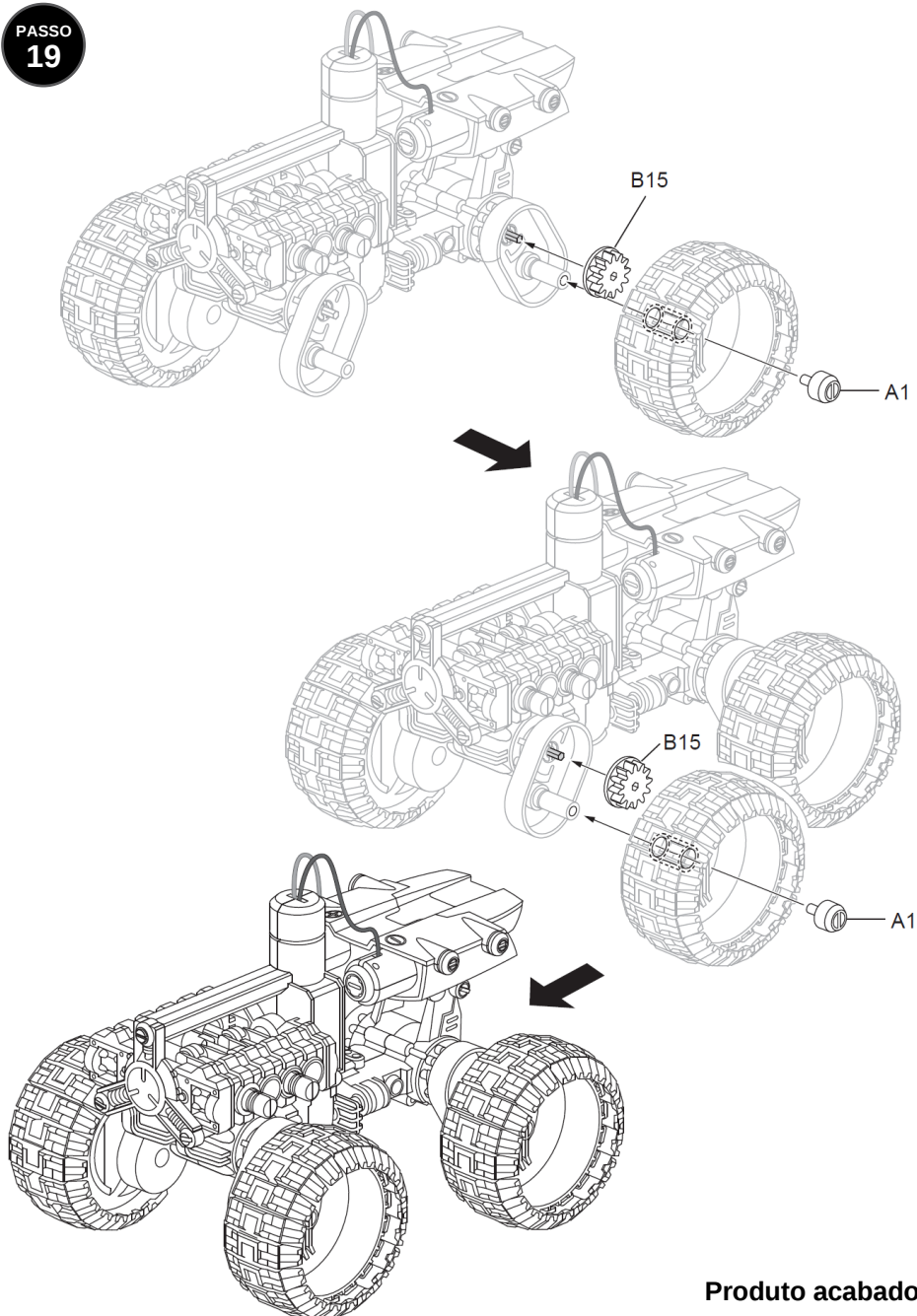
PASSO
17



PASSO
18



PASSO
19



Produto acabado!

Como funciona

- Ao fim de algum tempo, a água salgada esgota-se (cerca de 15 minutos) e o veículo começa a ficar mais lento ou para. Acrescente mais algumas gotas de água salgada para o voltar a pôr a trabalhar (como na figura 3)
- Cada folha de magnésio pode funcionar durante 4 horas seguidas, depois fragmenta-se. Substitua a folha por uma nova para dar energia ao veículo. O kit inclui 3 recargas.
- Todos os materiais utilizados neste kit são seguros e ecológicos, sem substâncias tóxicas ou preocupações de eliminação.



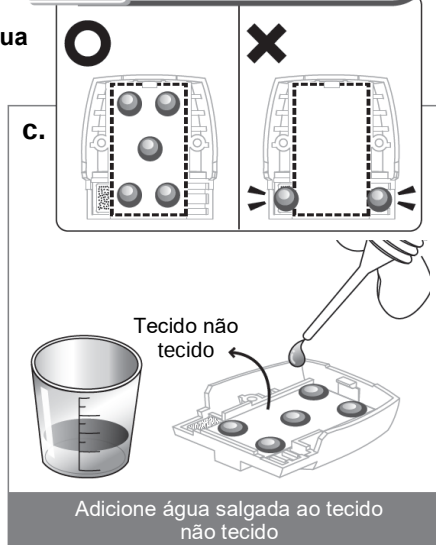
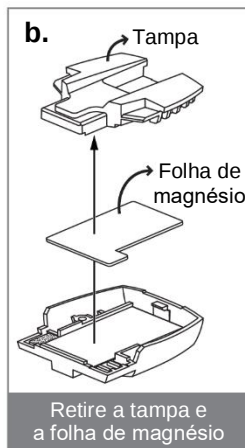
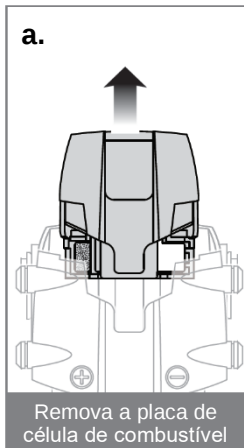
Antes de utilizar o produto, preste atenção aos pontos abaixo!

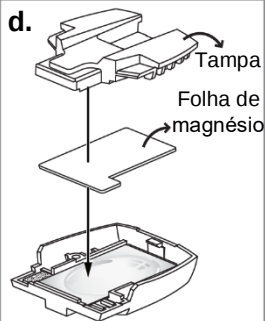
- 1 Como fazer uma solução de água salgada:** Adicione sal à água da torneira ou à água destilada na proporção de **1 (sal) : 5 (água)**. Qualquer percentagem entre 20% e 99% de água salgada é viável, se bem que 20% será a mais eficiente.



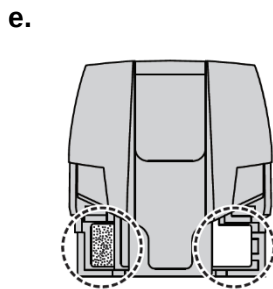
Não adicione água salgada na parte exterior do tecido não tecido, como se mostra abaixo.

- 2 Como encher o veículo do motor com água salgada:**

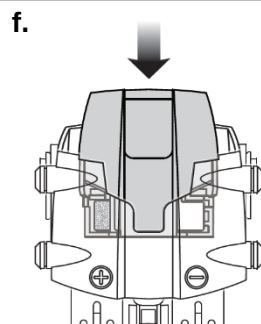




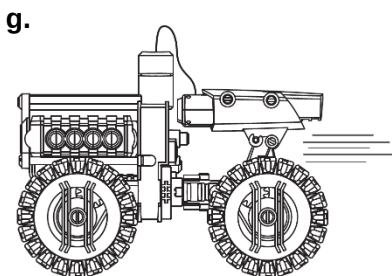
Voltar a colocar a tampa e a folha de magnésio



Certifique-se de que a polaridade do conector seca sem água salgada

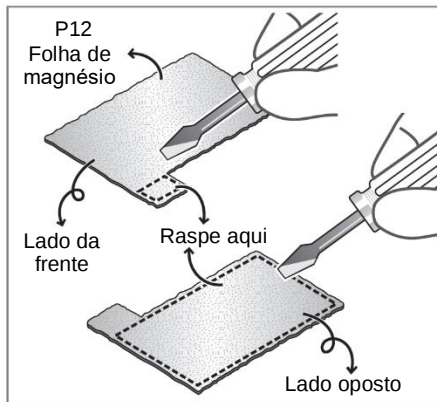
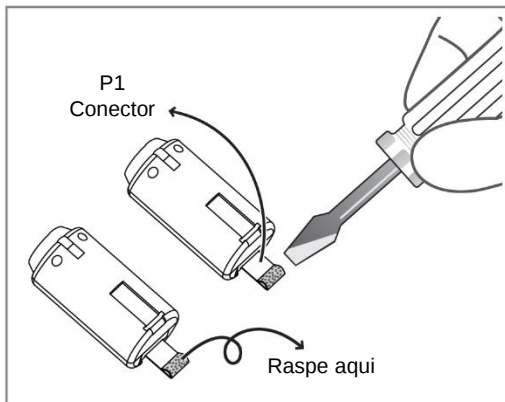


Insira a placa de célula de combustível

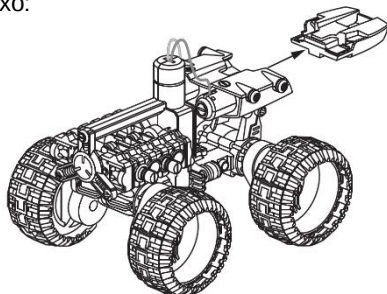


Agora ponha o veículo a trabalhar

3 Como voltar a encher a água salgada: Quando o veículo do motor começar a ficar mais lento ou parar, volte a colocar algumas gotas de água salgada com o aplicador na posição como mostrado em **2 C**. E raspe o óxido dos conectores da bateria e também da folha de magnésio com uma chave de fendas antes de os reutilizar. Ver figuras abaixo:

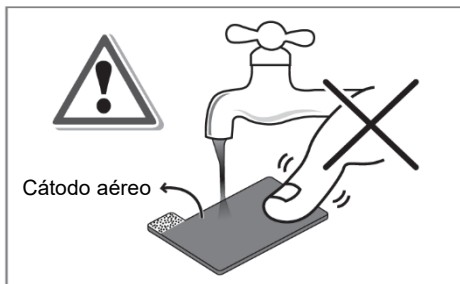
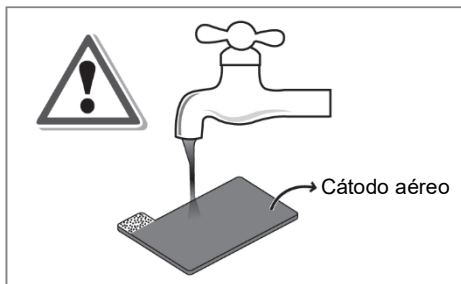


- 4 Como parar o veículo:** Retire a placa de célula de combustível para parar o veículo, como se mostra abaixo:



- 5 Como manter a placa de célula de combustível:** É necessário limpar a placa de célula de combustível sempre que não estiver a ser utilizada.

5-1 Passe o cátodo aéreo por água da torneira com cuidado, não esfregue a superfície com a mão para garantir a qualidade do cátodo aéreo.



5-2 Lave as peças mostradas abaixo e esfregue a superfície à mão. Certifique-se de que não existem resíduos de sal. Seque todas as peças em separado.

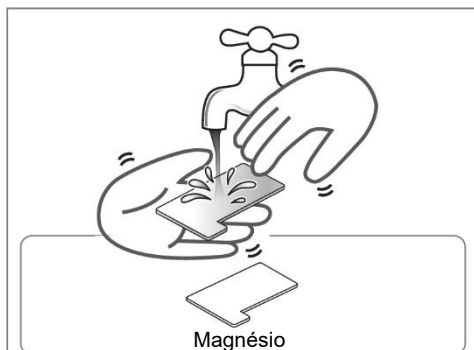


1. Tecido não tecido

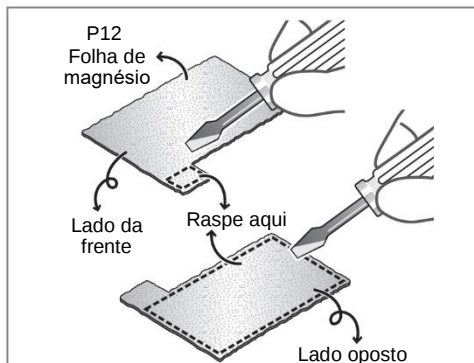
2. Tampa

3. Base inferior

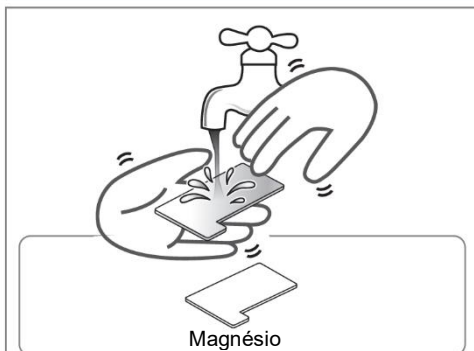
5-3 Lave e raspe a oxidação da folha de magnésio como se mostra abaixo:



Passa a folha de magnésio por água com cuidado



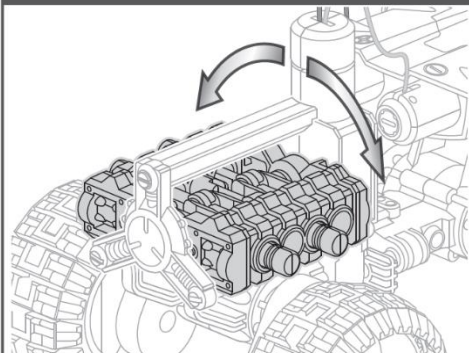
Raspe a oxidação da folha de magnésio



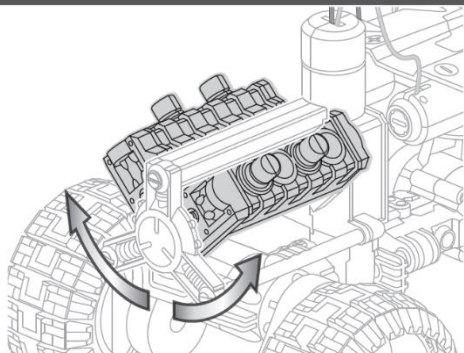
Passa a folha de magnésio por água com cuidado e seque-a

Como brincar

<1> Transforme o motor horizontal em motor em V.

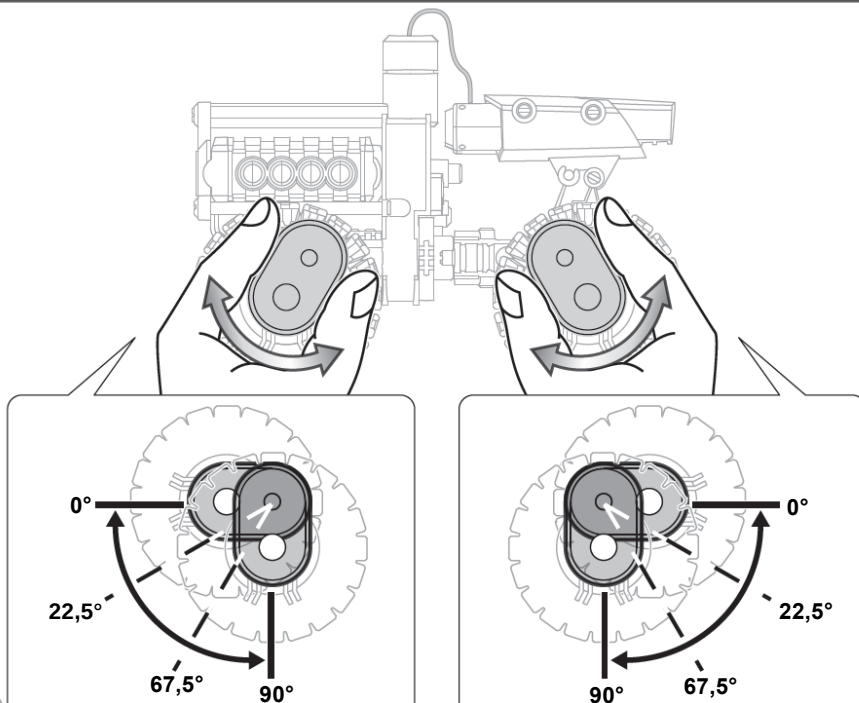


Motor HORIZONTAL



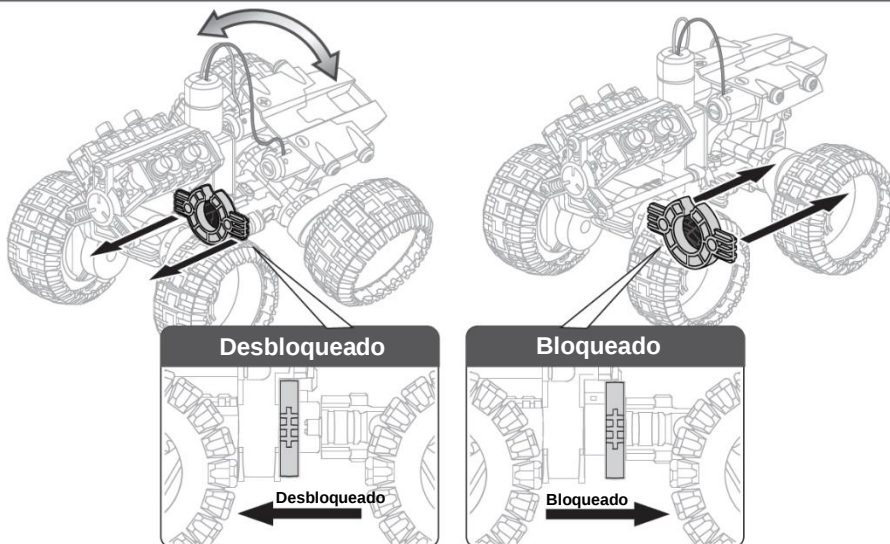
Motor em V

<2> Ajuste a altura das rodas.

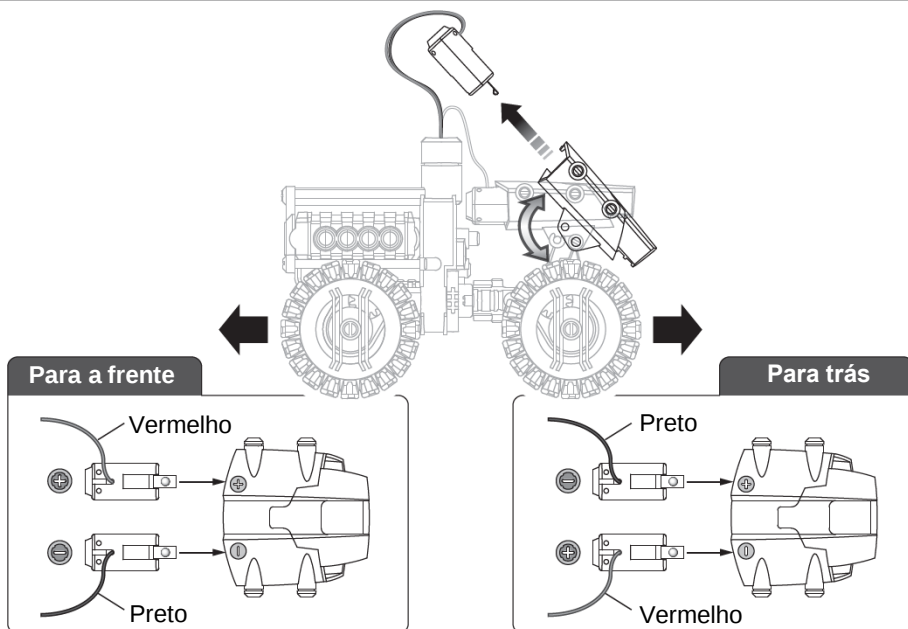


Nota: Não ajuste as rodas dianteiras no grau "0" quando o motor for do tipo horizontal porque podem interferir umas com as outras.

<3> Bloqueie ou desbloqueie a carroçaria do veículo.



<4> Desloque o carro para a frente ou para trás.



Resolução de problemas

Verifique os passos abaixo se o automóvel não se mover depois de adicionar a água salgada.

- 1** Certifique-se de que o motor e as engrenagens estão instalados na posição correta.
- 2** Certifique-se de que cada conector é colocado na posição correta (Ref.: **PASSO 4**)
- 3** Certifique-se de que a placa de célula de combustível e o módulo de ligação estão inseridos na totalidade. (Ref.: **PASSO 13**)
- 4** Substitua uma folha de magnésio nova se estiver desgastada, como se mostra abaixo.



(Nova)



(É necessário substituir)



- 5** Certifique-se de que a placa de célula de combustível é colocada na sequência e posição corretas: cátodo aéreo - tecido não tecido - folha de magnésio. (Ref.: **PASSO 10**)
- 6** Certifique-se de que o lado preto do cátodo aéreo está virado para cima. (Ref.: **PASSO 10**)
- 7** O tecido não tecido também é utilizado para isolar o cátodo aéreo e a folha de magnésio, certifique-se de que as duas peças não entram em contacto uma com a outra, caso contrário poderá provocar um curto-circuito. (Ref.: **PASSO 10**)
- 8 Importante:** Se o tecido estiver totalmente seco, desmonte a placa de célula de combustível e adicione água salgada de acordo com a figura **2 C**. Não adicione água salgada no lado exterior do tecido não tecido.
- 9** Certifique-se de que a polaridade do conector seca sem água salgada. (Ref.: **2 e**)

10 Importante: A água salgada provoca facilmente a oxidação, raspe o óxido dos conectores da bateria e também da folha de magnésio com uma chave de fendas antes de a reutilizar.

Ver figuras abaixo:

