

XRAY M18

4WD SHAFT-DRIVE 1/18 MICRO CAR

INSTRUCTION MANUAL



IT'S FUN, IT'S MICRO, IT'S

XRAY[®]

CONGRATULATIONS

The XRAY M18 Micro is a unique 1/18th micro-sized model racing car that is the epitome of high-performance and fine distinctive design. Your M18 offers highest performance, responsive handling, and traditionally exceptional XRAY quality, engineering, and design.

The XRAY M18 enters a new frontier in micro-car design by offering fully-adjustable suspension, responsive shaft-drive drivetrain, and ultra-smooth gear differentials. The superb craftsmanship and attention to detail are clearly evident everywhere on the XRAY M18.

The XRAY M18 was created by blending highest-quality materials and excellent design. The result? A very affordable, durable, high-

performance micro race car that is extremely easy to assemble, drive, and race. On high-speed asphalt tracks or short twisty indoor tracks, whether driving for fun or racing to win, the M18 delivers outstanding performance, speed, and precision handling. M18 can be used for competition micro racing, but is also well suited for novice drivers who choose the XRAY M18 as their entrance into the R/C hobby.

We have made every effort to make these instructions as easy to understand as possible. However, if you have any difficulties, problems, or questions, please do not hesitate to contact the XRAY support team at support@teamxray.com. Also, please visit our web site at www.teamxray.com to find the latest updates, setup information, option parts, and many other goodies. We pride ourselves on taking excellent care of our customers.

R/C TIPS

- Read and fully understand the instruction manual before building.
- Always keep this instruction manual ready at hand for quick reference, even after completing the assembly.
- Make sure all screws are tight. Check them periodically. Make sure that the chassis screws do not protrude from the chassis.
- For the best performance, it is very important that great care is taken to ensure the free movement of all parts.
- Clean all ball-bearings so they move very easily and freely.
- Tap or pre-thread the plastic parts when threading screws.
- Self-tapping screws cut threads into the parts when being tightened.

- Do not use excessive force when tightening the self-tapping screws, or you may strip out the thread in the plastic. We recommended you stop tightening a screw when you feel some resistance.
- Ask your local hobby shop for any advice.
- Please support your local hobby shop. We at XRAY Model Racing Cars support all local hobby dealers. Therefore we ask you, if at all possible, to purchase XRAY products at your hobby dealer and give them your support like we do. If you have difficulty finding XRAY products, please check out www.teamxray.com to get advice, or contact us via email at support@teamxray.com, or contact the XRAY distributor in your country.

QUALITY CERTIFICATE











XRAY MODEL RACING CARS uses only the highest quality materials, the best compounds for molded parts and the most sophisticated manufacturing processes. We guarantee that all parts of a newly-purchased kit are manufactured with the highest regard to quality.



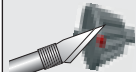



However, due to the many factors inherent in model racecar competition, we cannot guarantee any parts once you start racing the car.

We wish you enjoyment of this high-quality and high-performance micro car and wish you best success on the track!

In line with our policy of continuous product development, the exact specifications of the kit may vary. In the unlikely event of any problems with your new kit, you should contact the model shop where you purchased it, quoting the part number. We do reserve all rights to change any specification without prior notice. All rights reserved.

SYMBOLS USED

Part bags used	Assemble left and right sides the same way	Assemble in the specified order	Pay attention here	Pivot ball type used	Apply instant glue	Ensure smooth non-binding movement	Cut off shaded portion	True-to-scale diagram	Assemble as many times as specified (here twice)
									

Car orientation	Cut off remaining material	Cut off remaining material from all plastic parts.	Tighten screw gently	Self-tapping screws cut threads into the parts when being tightened. Excessive force may permanently damage parts when tightening screws. It is recommended to stop tightening when the part is attached or when some resistance is felt after the threaded portion enters the plastic.					
				CORRECT ✓		WRONG ✗		Overtightened	The threads are stripped.

TOOLS INCLUDED

		
Differential Assembly Tool	Phillips Screwdriver	1.5mm Allen Wrench

TOOLS REQUIRED

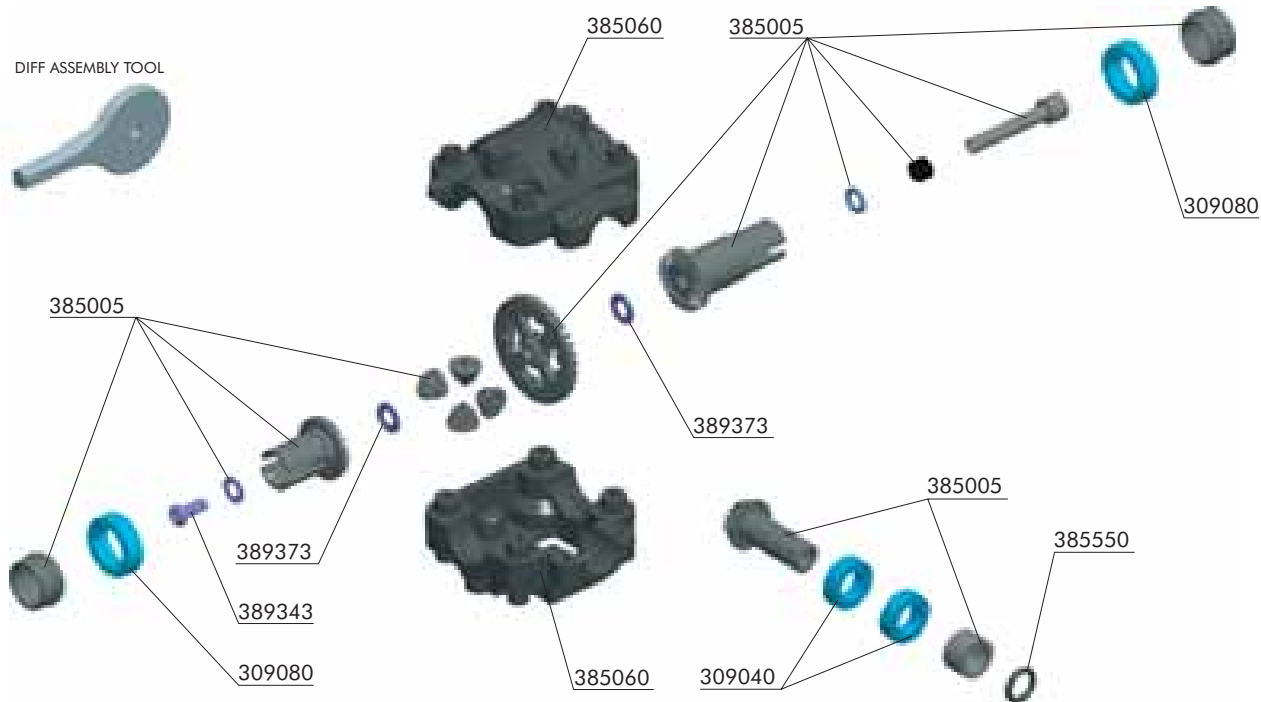
				
Hobby Knife	Side Cutters	Needle-nose Pliers	Curved Scissors	Hole Reamer

EQUIPMENT REQUIRED

									
Transmitter	Micro Motor	Micro Servo	Receiver	Micro Speed Controller	Lexan Paint	CA Glue	5-Cell Micro Battery Pack	[Ni-MH recommended] Battery Charger	(Typically AA type) Transmitter Batteries

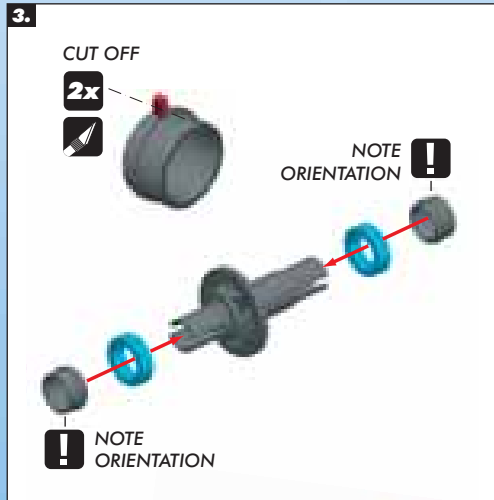
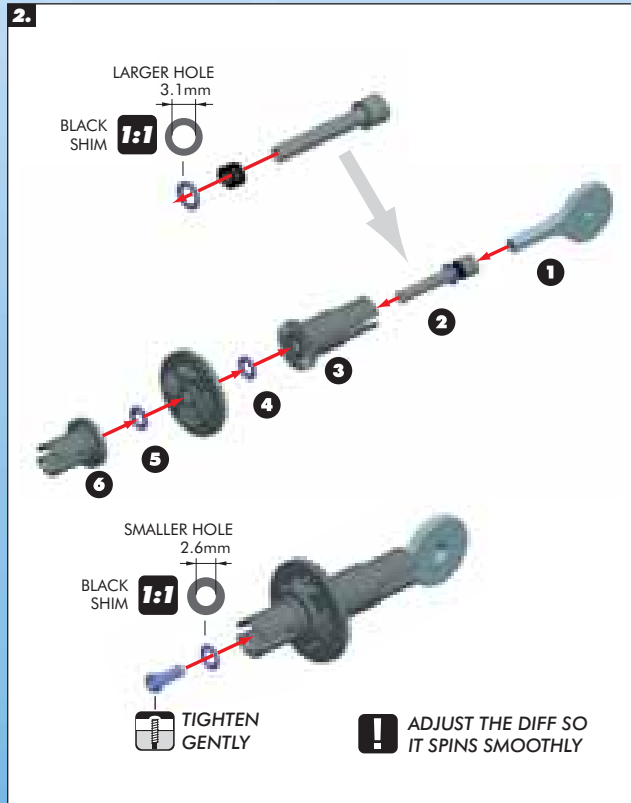
1. FRONT DIFFERENTIAL

DIFF ASSEMBLY TOOL

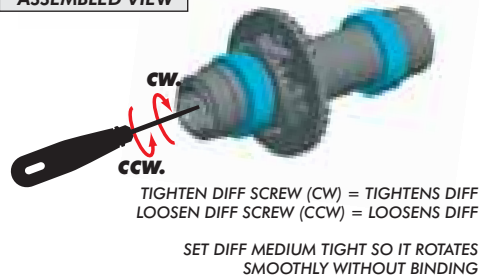


309040	BALL-BEARING MR106ZZ 6x10x3 (2)
309080	BALL-BEARING MR128ZZ 8x12x3.5 (2)
385005	COMPOSITE FRONT GEAR DIFF. + DRIVESHAFT PINION GEAR
385060	GEARBOX CASE

385550	O-RING 4x1 (10)
389343	SCREW PHILLIPS 2.2 x 6 (10)
389373	WASHER S 3x6x0.3 (10)

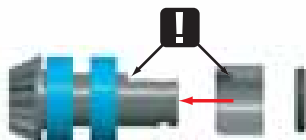
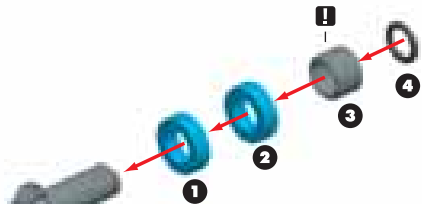


ASSEMBLED VIEW



4.

NOTE
ORIENTATION



ASSEMBLED VIEW



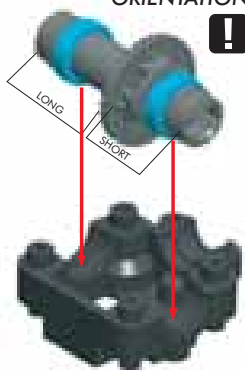
309040
BB 6x10x3



385550
O 4x1

5.

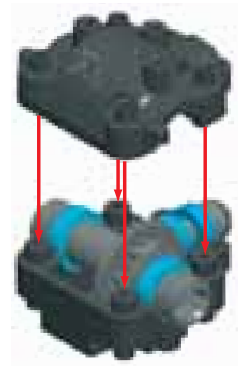
NOTE
ORIENTATION



ORIENTATION



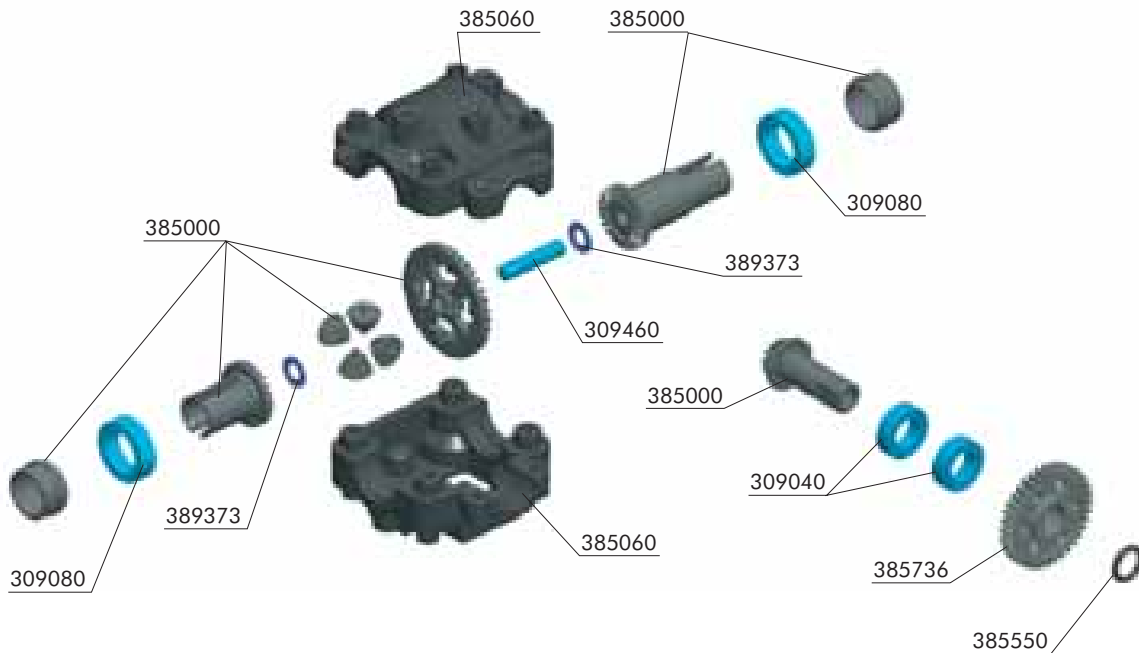
6.



ASSEMBLED VIEW

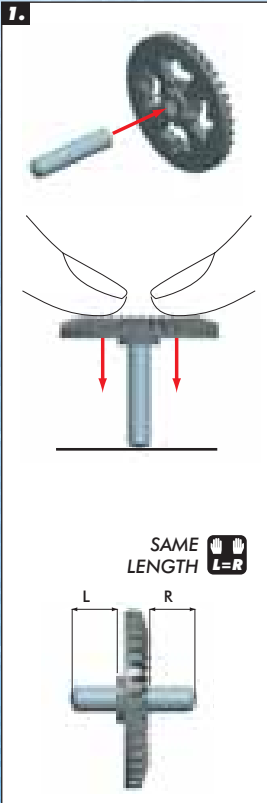


2. REAR DIFFERENTIAL

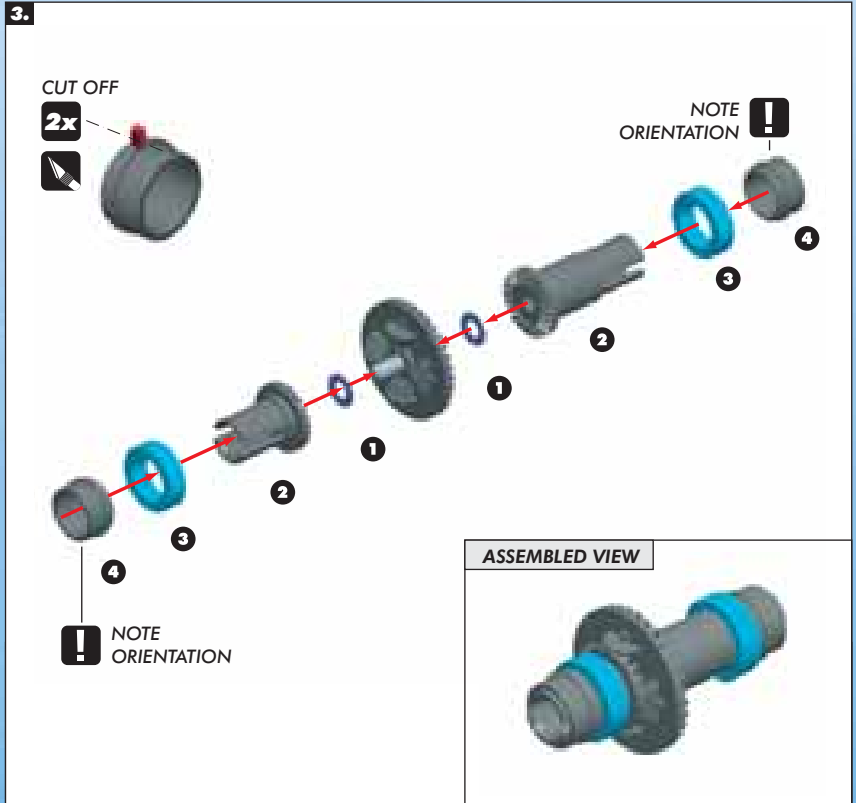


309040 BALL-BEARING MR106ZZ 6x10x3 (2)
 309080 BALL-BEARING MR128ZZ 8x12x3.5 (2)
 309460 PIN 3x16 (10)
 385000 COMPOSITE REAR GEAR DIFF. + DRIVESHAFT PINION GEAR

385060 GEARBOX CASE
 385550 O-RING 4x1 (10)
 385736 SPUR GEAR 36T/48
 389373 WASHER S 3x6x0.3 (10)



309460
P 3x16

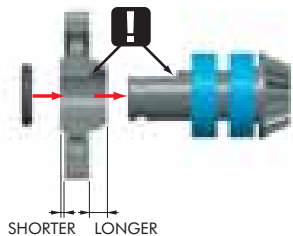
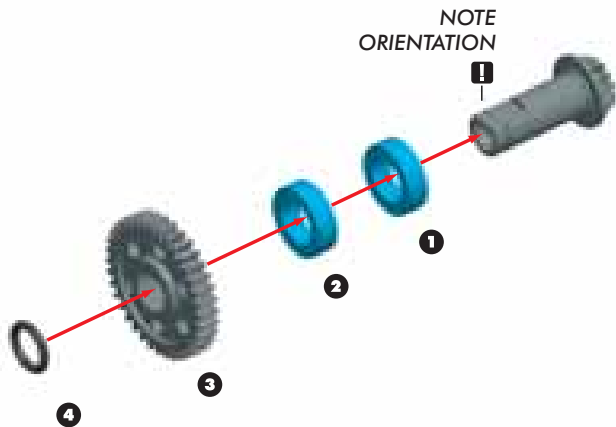


309080
BB 8x12x3.5



389373
SHIM 3x6x0.3

4.



ASSEMBLED VIEW

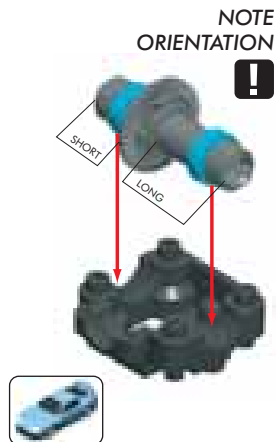


309040
BB 6x10x3



385550
O 4x1

5.



6.



ASSEMBLED VIEW

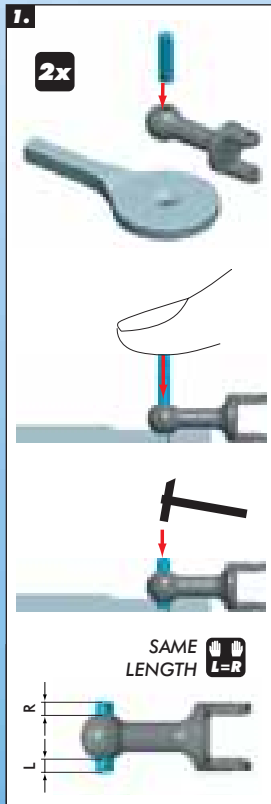


3. REAR SUSPENSION

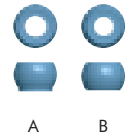
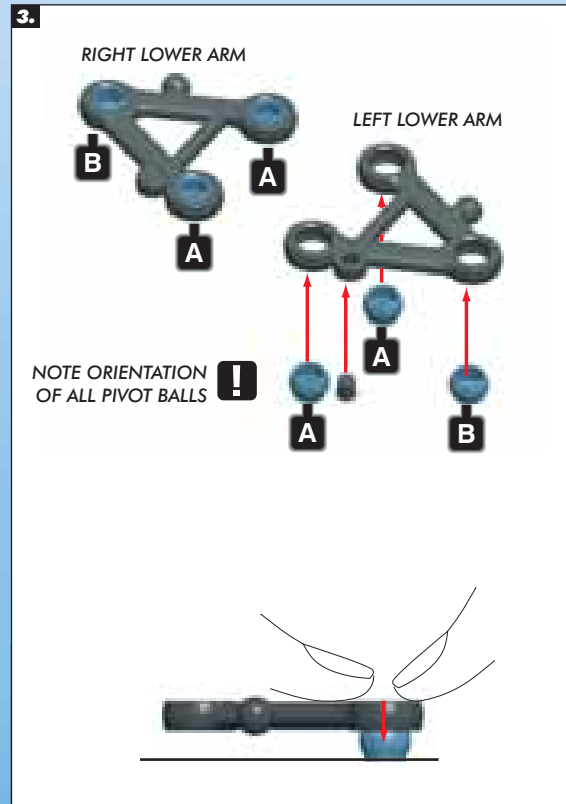
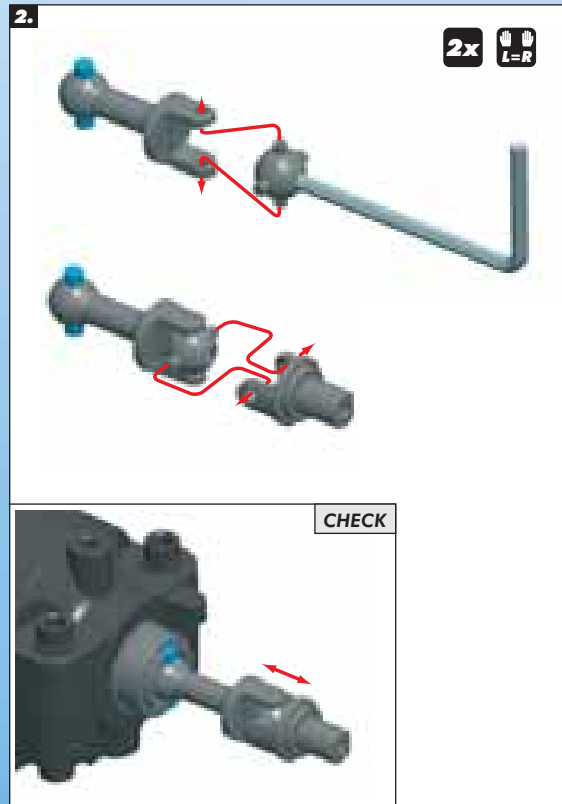


309040	BALL-BEARING MR106ZZ 6x10x3 (2)
309450	PIN 2x8 (10)
381100	COMPOSITE MICRO CHASSIS
382100	SET OF SUSPENSION ARMS, LOWER + UPPER (2+1+1)
382200	COMPOSITE SUSPENSION BLOCK, L+R (2)
383200	SET OF LINKAGES + BALL JOINTS

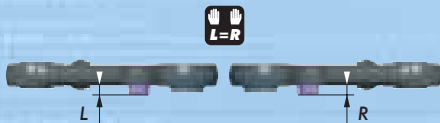
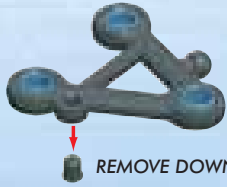
385200	COMPOSITE DRIVE SHAFT - SET (2)
387400	SET OF COMPOSITE PIVOT BALLS
389336	SCREW PHILLIPS FH 2.5x12 (10)
389343	SCREW PHILLIPS 2.2x6 (10)
389344	SCREW PHILLIPS 2.2x8 (10)
389356	SCREW PHILLIPS 2.5x12 (10)
389995	INNER WHEEL ADAPTORS, F+R



309450
P 2x8



TECH TIP ADJUSTABLE DOWNSTOPS

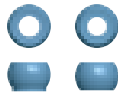
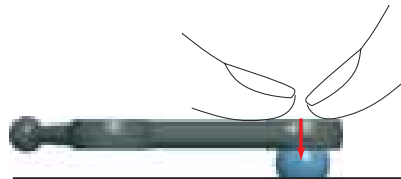
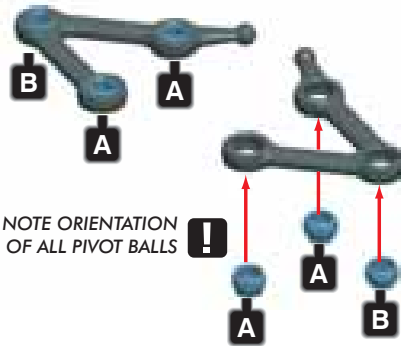


309351
SB M3x4

DOWNSTOP SCREWS
ARE IN LAST BAG

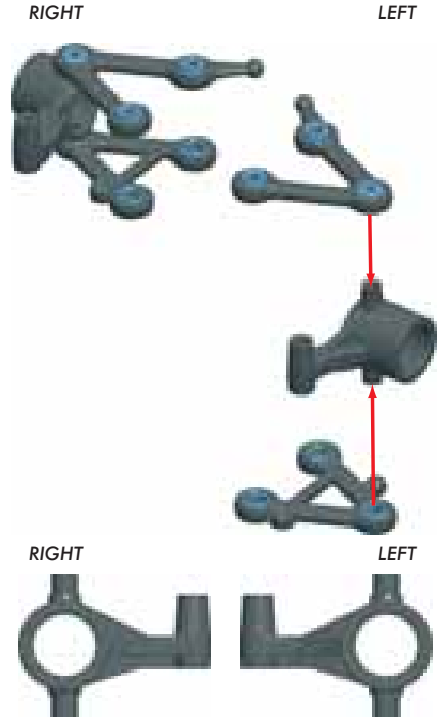


4.



A B

5.



6.

TIGHTEN GENTLY

ORIENTATION

389343
2.2x6

7.

2x **L=R**

309040
BB 6x10x3

8.

! ALIGN TAB AND SLOT BEFORE TIGHTENING SCREW

TIGHTEN SCREW, THEN LOOSEN A LITTLE BIT **!**

CUTAWAY ASSEMBLED VIEW

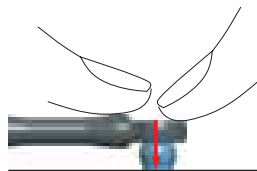
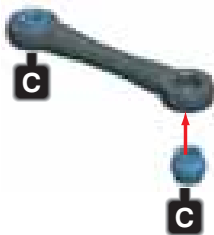
389343
2.2x6

9.



10.

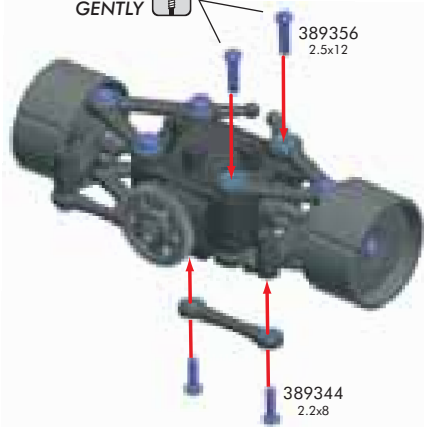
L=R **2x**



C

11.

TIGHTEN GENTLY



ASSEMBLED VIEW

MAKE SURE ARMS MOVE FREELY

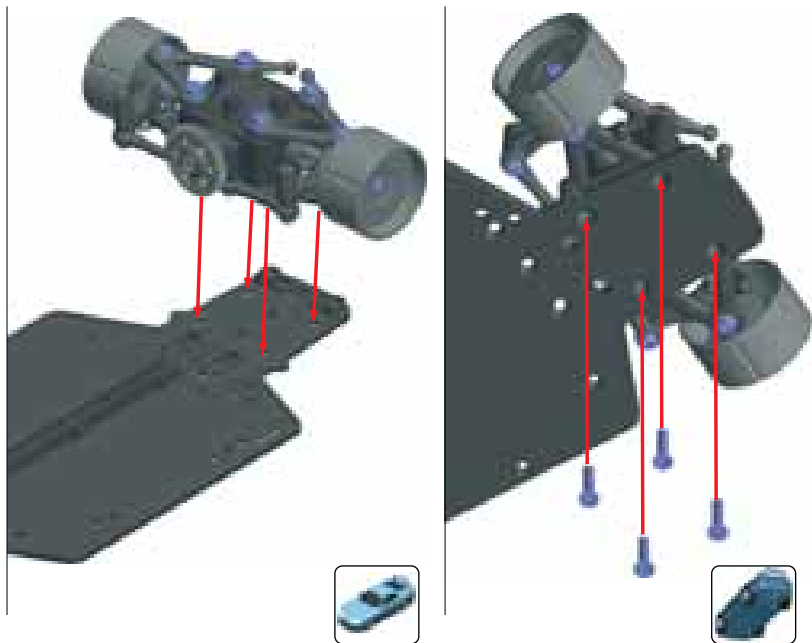


389356
2.5x12

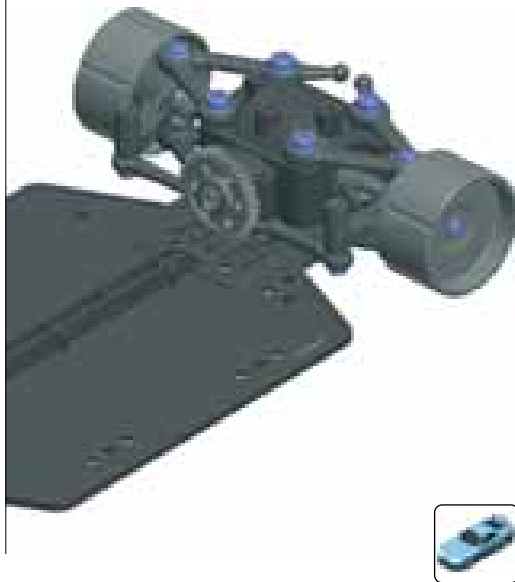


389344
2.2x8

12.

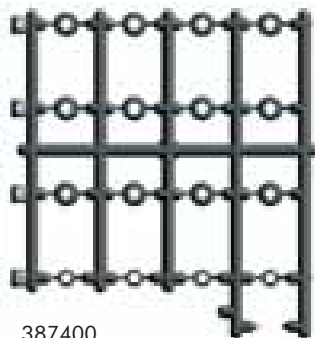


ASSEMBLED VIEW

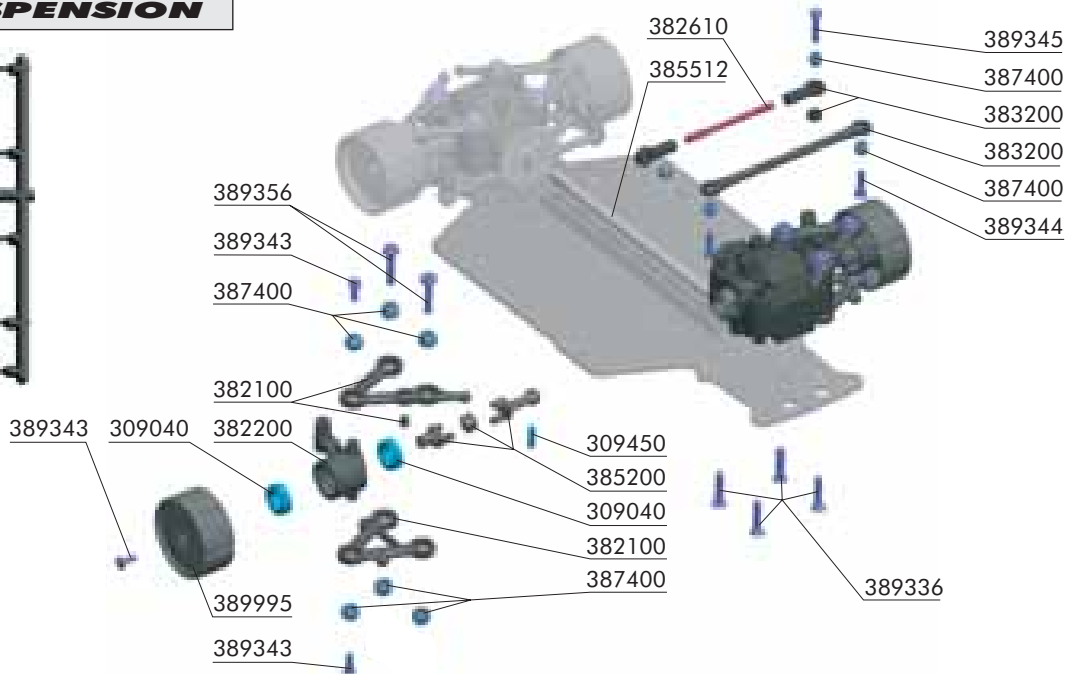


389336
2.5x12

4. FRONT SUSPENSION



387400



BAG



309040 BALL-BEARING MR106ZZ 6x10x3 (2)

309450 PIN 2x8 (10)

382100 SET OF SUSPENSION ARMS, LOWER + UPPER (2+1+1)

382200 COMPOSITE SUSPENSION BLOCK, L+R (2)

382610 ADJ. TURNBUCKLE 34MM

383200 SET OF LINKAGES + BALL JOINTS

385200 COMPOSITE DRIVE SHAFT - SET (2)

385512 ALU MAIN DRIVESHAFT- SILVER

387400 SET OF COMPOSITE PIVOT BALLS

389336 SCREW PHILLIPS FH 2.5x12 (10)

389343 SCREW PHILLIPS 2.2x6 (10)

389344 SCREW PHILLIPS 2.2x8 (10)

389345 SCREW PHILLIPS 2.2x10 (10)

389356 SCREW PHILLIPS 2.5x12 (10)

389995 INNER WHEEL ADAPTORS, F+R

1.

2x

SAME LENGTH **L=R**

R
L

309450
P 2x8

2.

2x **L=R**

CHECK

3.

RIGHT LOWER ARM **LEFT LOWER ARM**

! DO NOT USE DOWNSTOP PIN ON LOWER ARMS

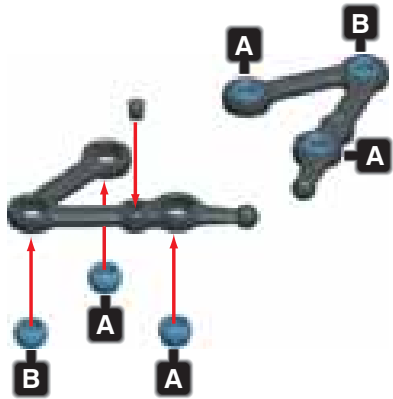
! NOTE ORIENTATION OF ALL PIVOT BALLS

A B

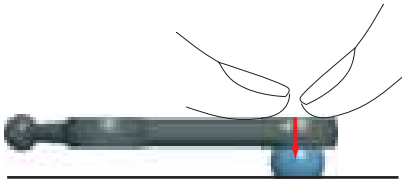
A B

A B

4.



! NOTE ORIENTATION OF ALL PIVOT BALLS



A B

TECH TIP ADJUSTABLE DOWNSTOPS



309351
SB M3x4

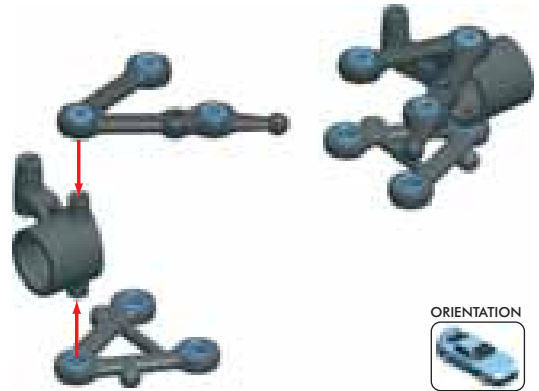
DOWNSTOP SCREWS
ARE IN LAST BAG



5.

RIGHT

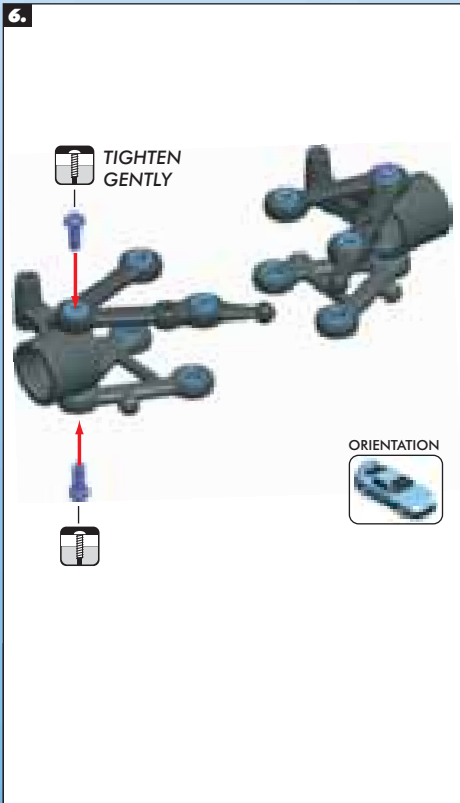
LEFT



RIGHT

LEFT

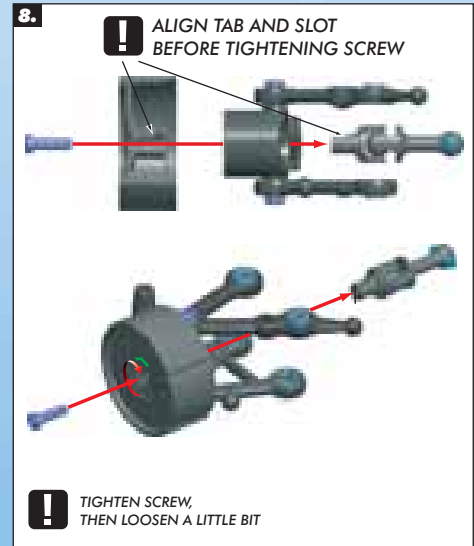




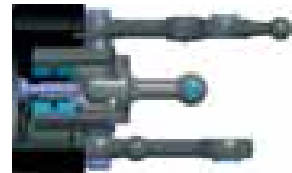
389343
2.2x6



309040
BB 6x10x3

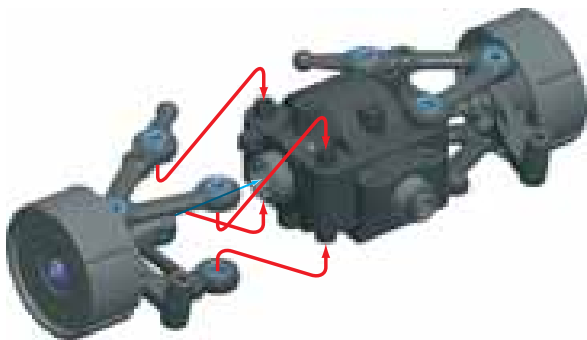


CUTAWAY ASSEMBLED VIEW



389343
2.2x6

9.



ORIENTATION



10.



4x  TIGHTEN GENTLY

389356
2.5x12



389344
2.2x8



C

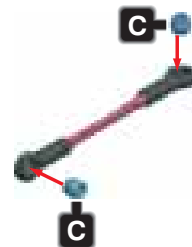
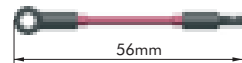


389356
2.5x12



389344
2.2x8

11.



ASSEMBLED VIEW



C

13.



ASSEMBLED VIEW



MAKE SURE ARMS
MOVE FREELY



PLASTIC SHIM

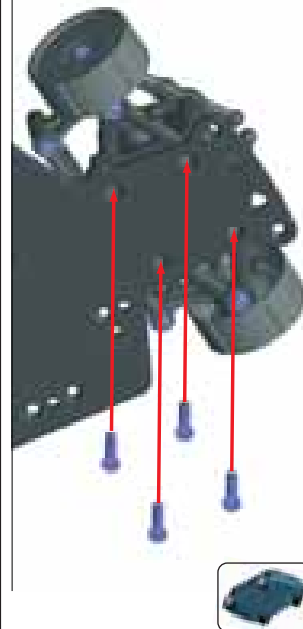
14.



ORIENTATION

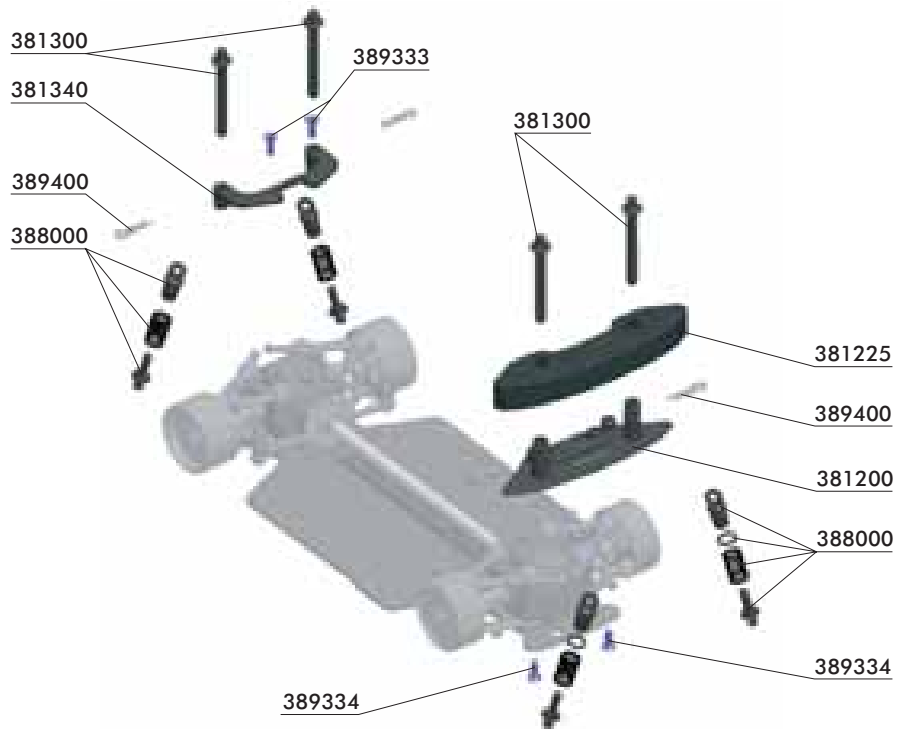


15.



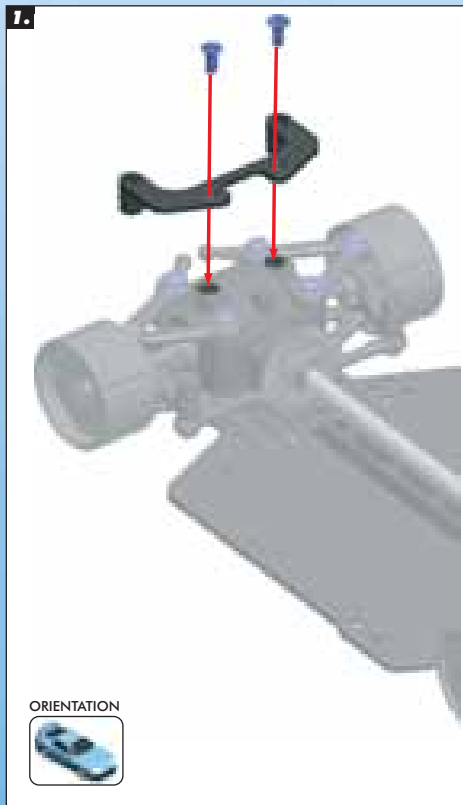
389336
2.5x12

5. FRONT AND REAR FINAL ASSEMBLY

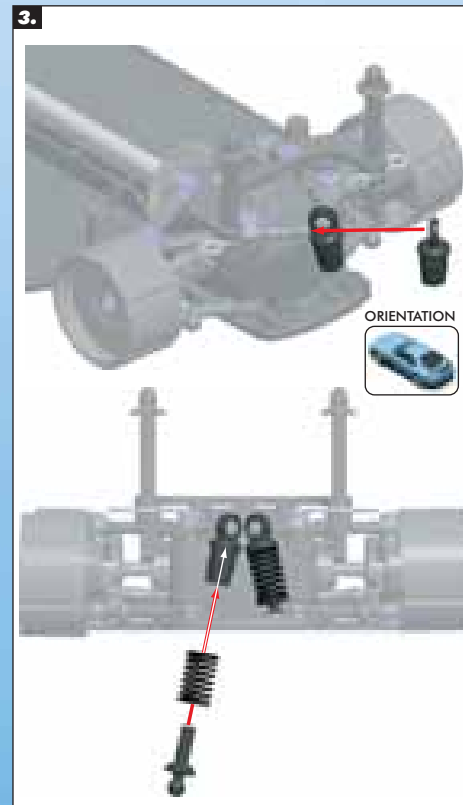
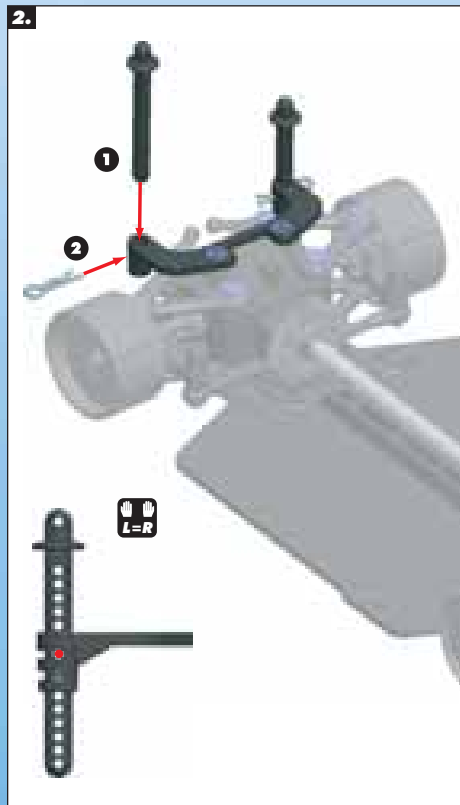


381200 LOWER FRONT BUMPER
 381225 FOAM BUMPER - BLACK
 381300 COMPOSITE BODY POSTS (4) + BODY CLIPS
 381340 COMPOSITE REAR BODY POST HOLDER

388000 COMPOSITE SHOCK BODY SET (4)
 389333 SCREW PHILLIPS FH 2.5 x 6 (10)
 389334 SCREW PHILLIPS FH 2.5 x 8 (10)
 389400 MICRO BODY CLIP

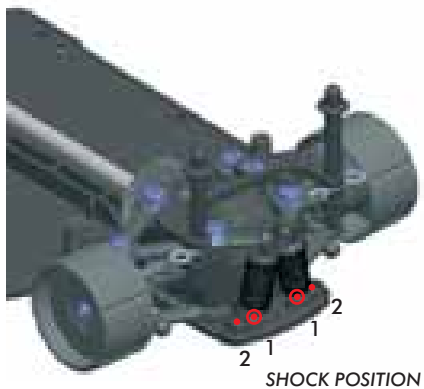


389333
2.5x6



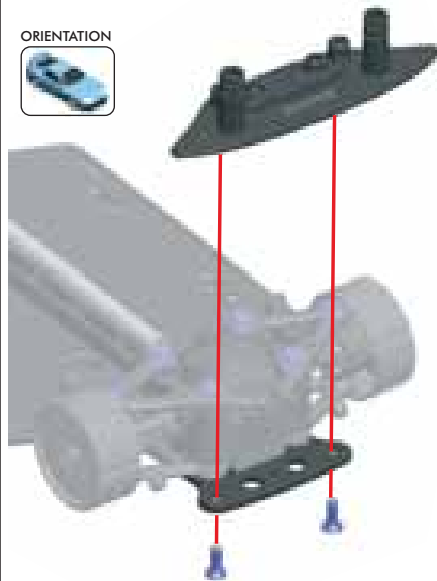
ASSEMBLED VIEW

ORIENTATION



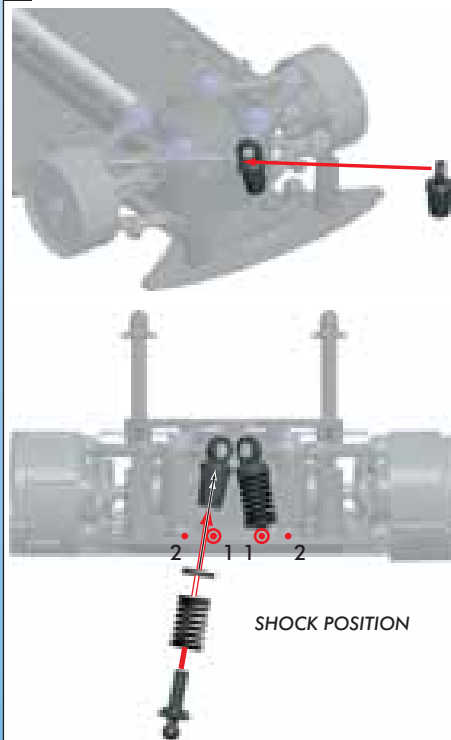
4.

ORIENTATION



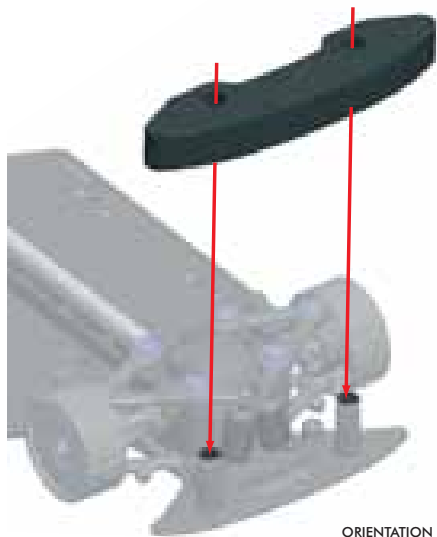
389334
2.5x8

5.



PLASTIC SHIM

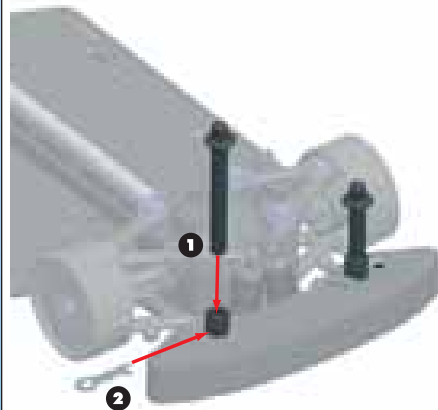
6.



ORIENTATION



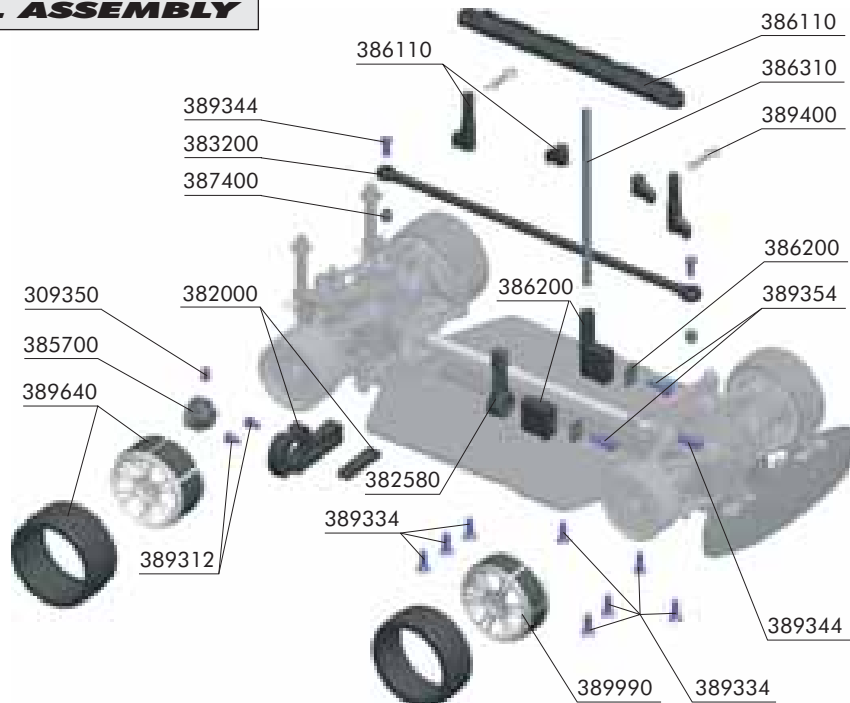
7.



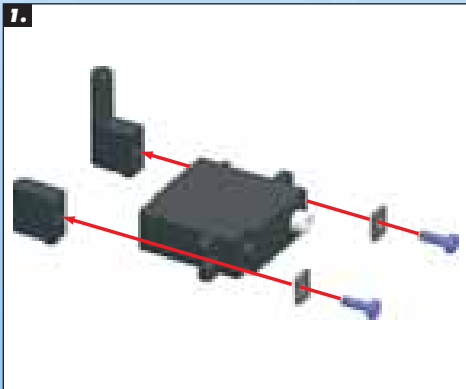
ASSEMBLED VIEW



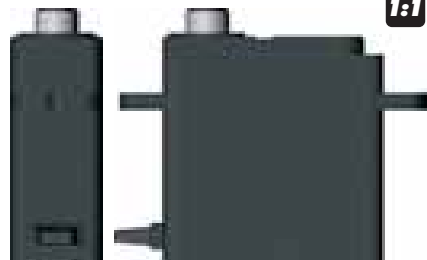
6. FINAL ASSEMBLY



309350	HEX SCREW SB M3x3 (10)	387400	SET OF COMPOSITE PIVOT BALLS
382000	COMPOSITE MOTOR PLATE - SET	389312	SCREW PHILLIPS 2.0 x 4 (10)
382580	COMPOSITE SERVO ARMS - SET	389334	SCREW PHILLIPS FH 2.5 x 8 (10)
383200	SET OF LINKAGES + BALL JOINTS	389344	SCREW PHILLIPS 2.2 x 8 (10)
385700	COMPOSITE PINION SET	389354	SCREW PHILLIPS 2.5 x 8 (10)
386110	COMPOSITE BATTERY HOLDER SET FOR 5 BAT.	389400	MICRO BODY CLIP
386200	COMPOSITE SERVO MOUNT+ ANTENNA HOLDER - SET	389640	RUBBER TIRES + INSERTS F+R, 40 DEG
386310	ANTENNA	389990	XRAY MICRO WHEEL, F+R



USE A MICRO SERVO THAT IS SIMILAR TO OR SMALLER THAN THE SERVO SHOWN



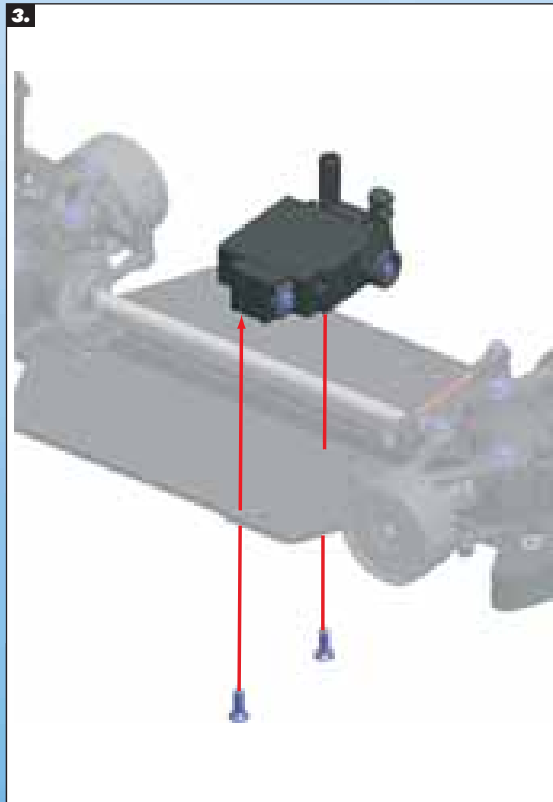
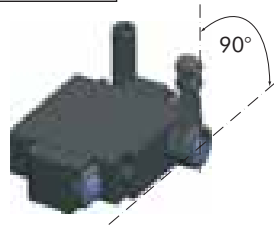
TIP USE THE MICRO SERVO INCLUDED IN XRAY M18 POWER PACK #389100



389354
2.5x8

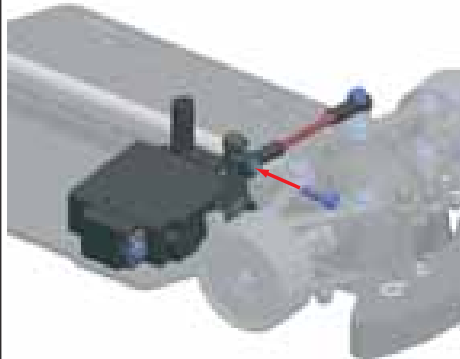


ASSEMBLED VIEW



389334
2.5x8

4.

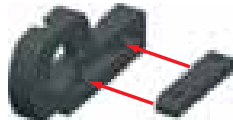


ORIENTATION



389344
2.2x8

5.



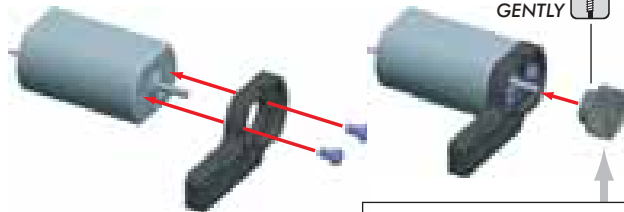
ASSEMBLED VIEW



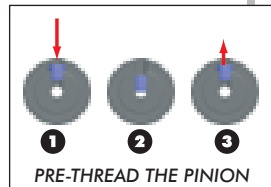
6.

USE MICRO STOCK OR MODIFIED MICRO MOTOR

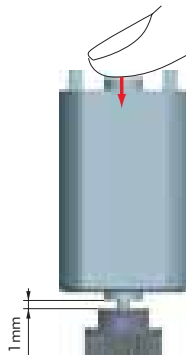
TIGHTEN
GENTLY



TIP USE XRAY MICRO STOCK
MOTOR INCLUDED
IN XRAY M18 POWER
PACK #389100



PRE-THREAD THE PINION



ASSEMBLED VIEW



389312
2x4



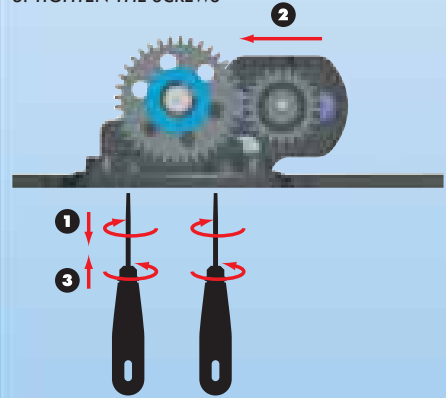
309350
SB M3x3



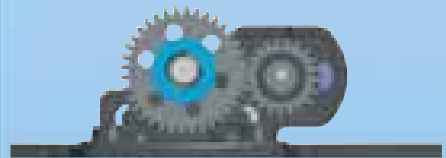
389334
2.5x8

TECH TIP

THE MOTOR STAND IS ADJUSTABLE:
 1. RELEASE SCREWS FROM THE BOTTOM OF CHASSIS
 2. MOVE THE MOTOR STAND AS NEEDED
 3. TIGHTEN THE SCREWS

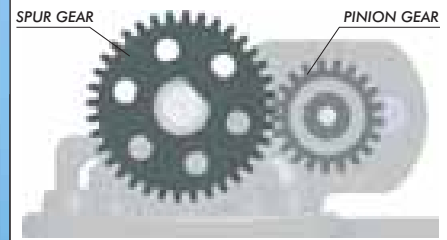


ADJUST MOTOR STAND SO GEARS MESH SMOOTHLY



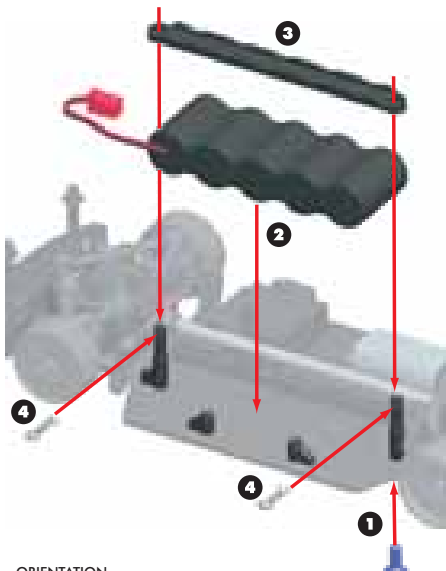
INTERNAL RATIO 1:2.5	SPUR GEAR	PINION GEAR	FINAL RATIO	ACCELERATION ↑ SPEED ↓		
	42	o	14		7.50	
		o	15		7.00	
		o	16		6.56	
		x	17		6.18	
	AVAILABLE OPTION	o	18		5.83	
		36	o		16	5.62
			x		17	5.29
			o		18	5.00
	x		19		4.74	
INCLUDED WITH KIT	x	21	4.29			
	x	23	3.91			

x - INCLUDED WITH KIT
 o - AVAILABLE OPTION



8.

USE 4 OR 5 CELL PACK OF 2/3A BATTERIES



ORIENTATION



TIP

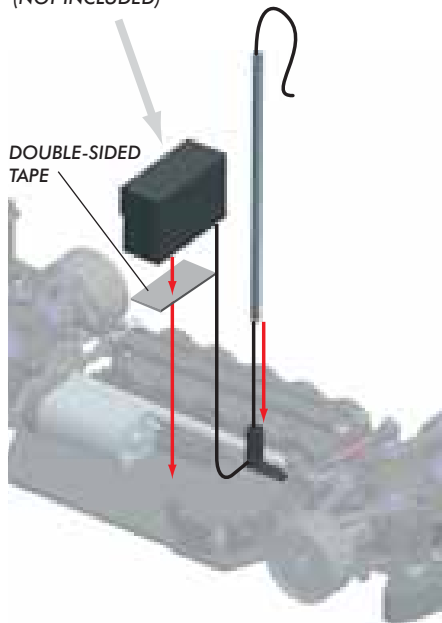
USE MICRO BATTERY PACK INCLUDED IN XRAY M18 POWER PACK #389100



389334
2.5x8

9.

INSTALL RECEIVER (NOT INCLUDED)



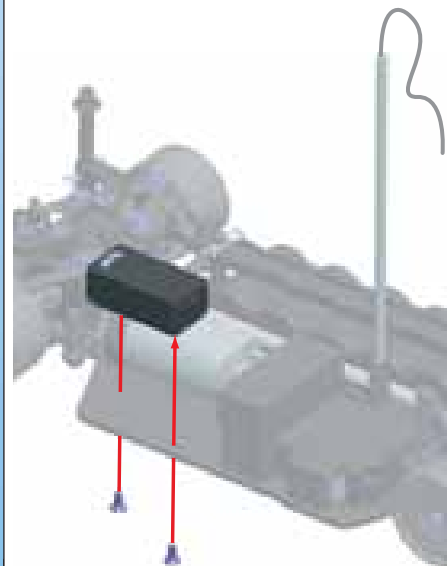
DOUBLE-SIDED TAPE

ORIENTATION



10.

INSTALL MICRO SPEED CONTROL



TIP

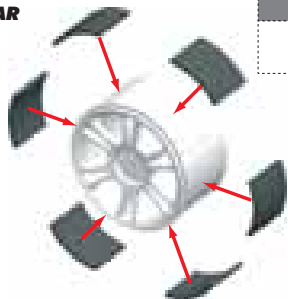
USE MICRO SPEED CONTROL XMC180 INCLUDED IN XRAY M18 POWER PACK #398100



SCREWS INCLUDED WITH XRAY XMC 180 SPEED CONTROL

11.

REAR



LARGER

2x



↑ NO SPACE



FRONT



SMALLER

2x



↑ NO SPACE



BAG



12.

2x



NOTE ORIENTATION

2x



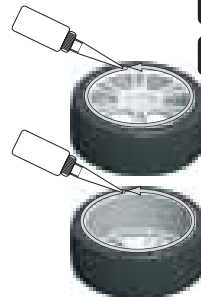
NOTE ORIENTATION

13.

2x



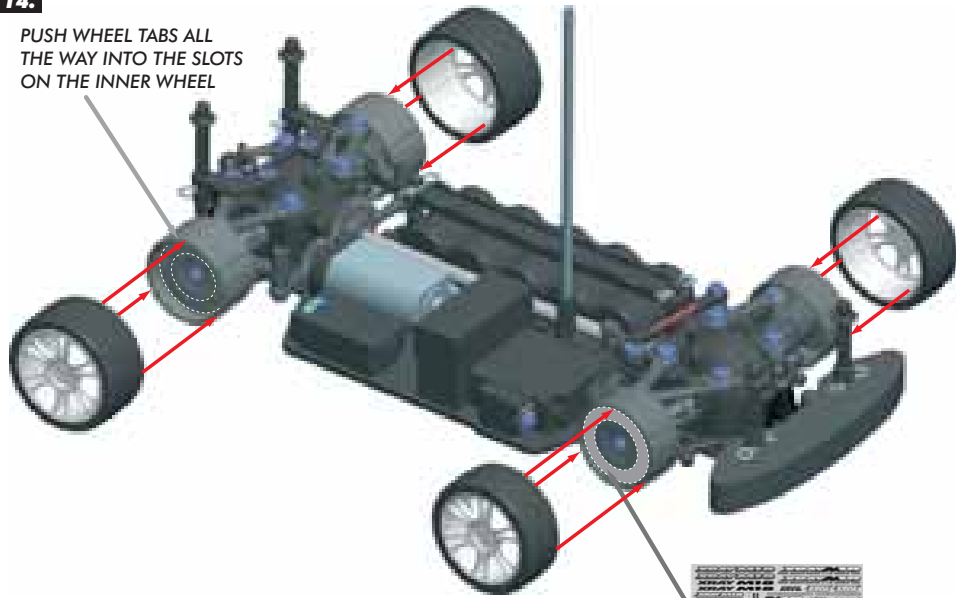
2x



DO NOT USE TOO MUCH GLUE

14.

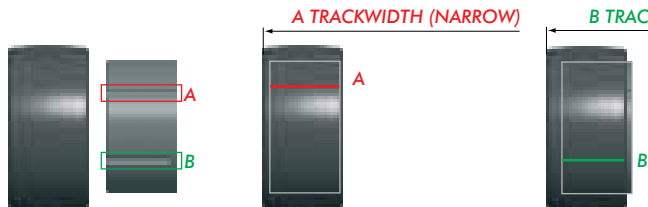
PUSH WHEEL TABS ALL THE WAY INTO THE SLOTS ON THE INNER WHEEL



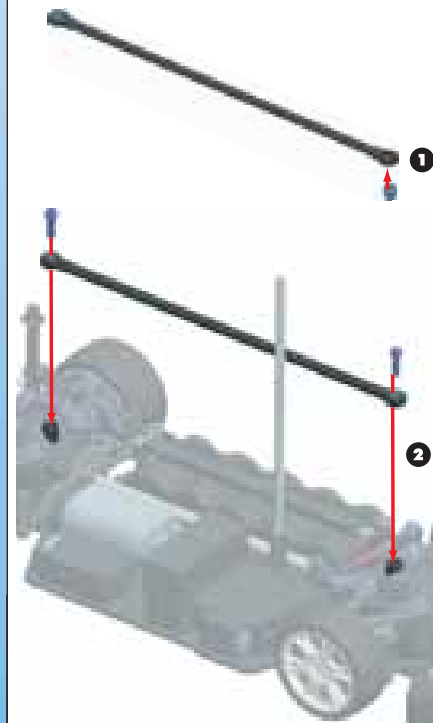
	A	B
FRONT	98mm	101mm
REAR	104mm	107mm



PLACE BRAKE DISKS DECAL ON INNER WHEELS



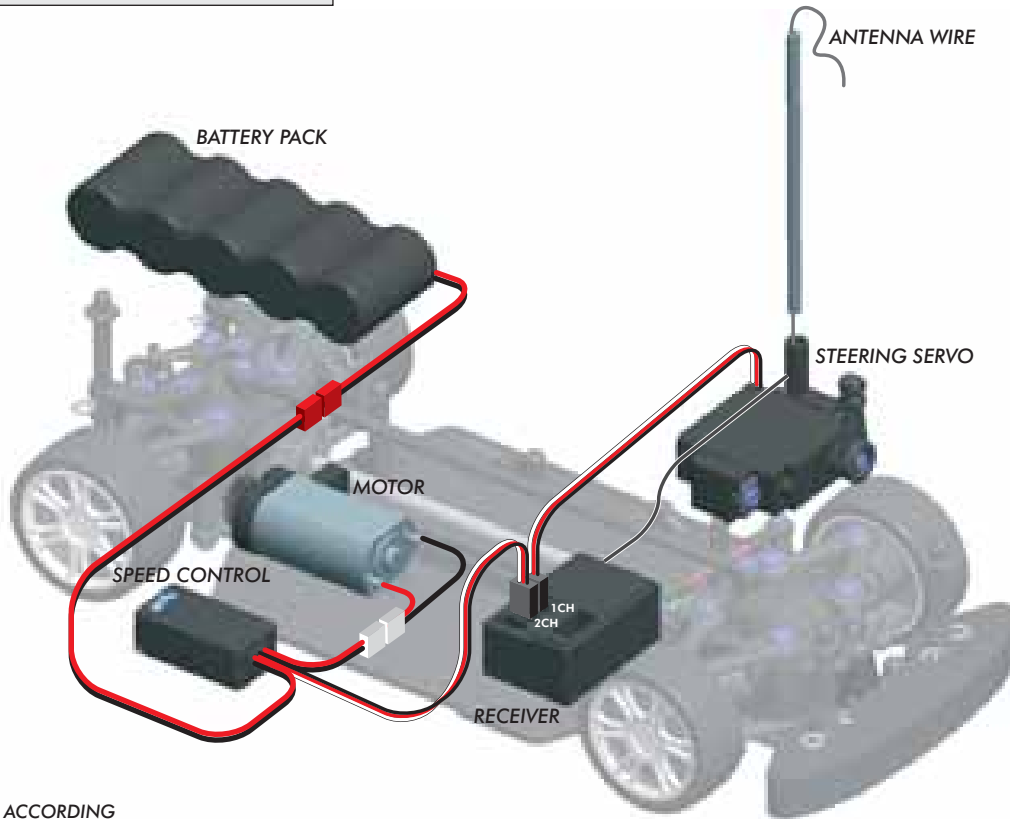
15.



C



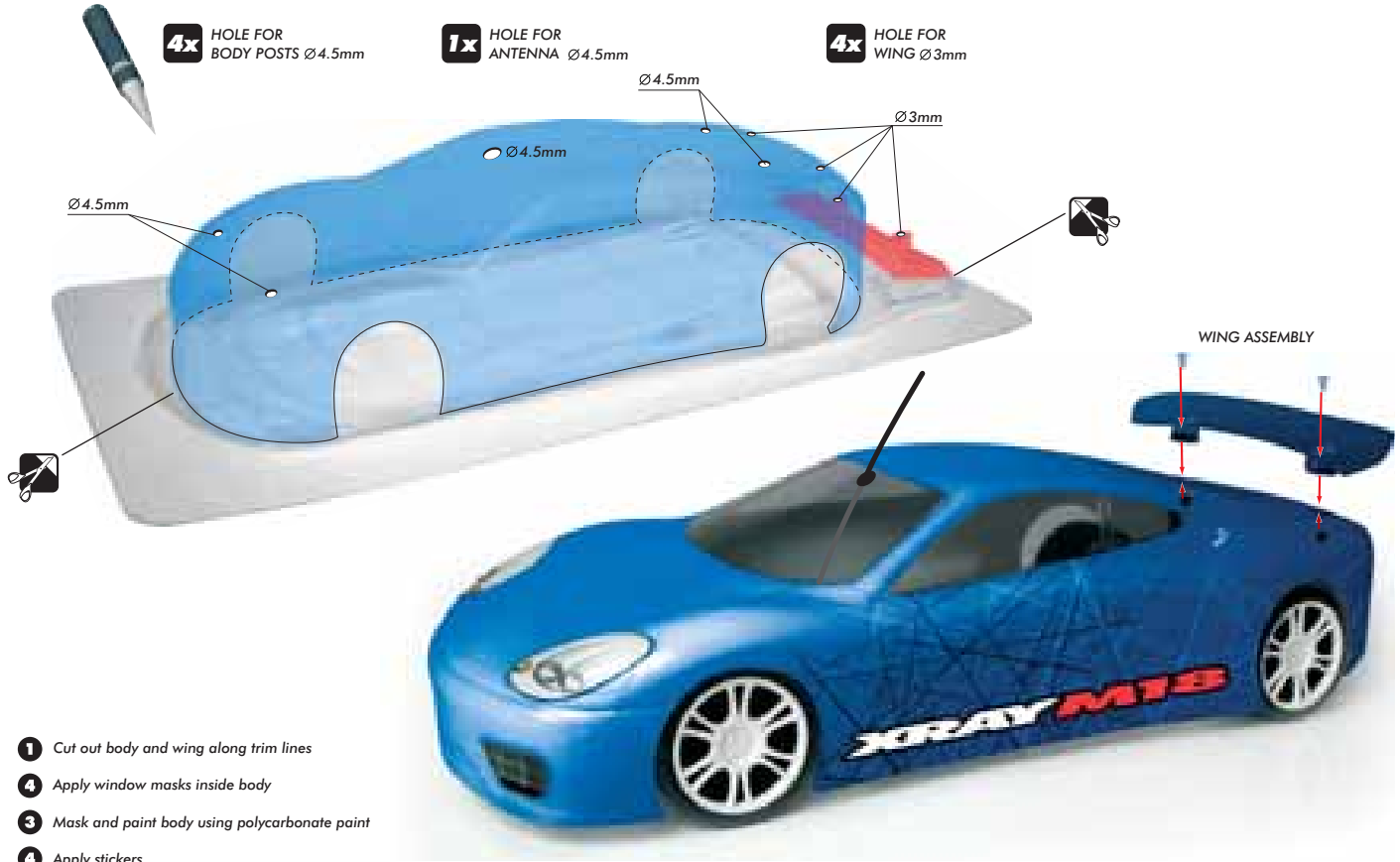
389344
2.2x8



INSTALL ELECTRONICS ACCORDING
TO MANUFACTURER'S INSTRUCTIONS

TIP USE XRAY M18 POWER PACK #389100 THAT INCLUDES ALL
ELECTRONICS REQUIRED FOR OPERATION. (RECEIVER & TRANSMITTER ARE NOT INCLUDED)

BODY MOUNTING



- 1 Cut out body and wing along trim lines
- 4 Apply window masks inside body
- 3 Mask and paint body using polycarbonate paint
- 4 Apply stickers

IMPORTANT NOTES

- This product is not suitable for children except under the direct supervision of an adult.
- Carefully read all manufacturers warnings and cautions for any parts used in the construction and use of your model.
- Assemble this kit only in places away from the reach of very small children.
- First-time builders should seek advice from people who have building experience in order to assemble the model correctly and to allow the model to reach its performance potential.
- Insulate any exposed electrical wiring (using heat shrink tubing or electrical tape) to prevent dangerous short circuits.
- Exercise care when using tools and sharp instruments.
- Take care when building; some parts may have sharp edges.
- Keep small parts out of reach of small children.
- Do not put fingers or any objects inside or near rotating or moving parts.
- Immediately after using your model, do NOT touch equipment or electronic components on the model because they may generate high temperatures.
- Follow the operating instructions for the radio equipment at all times.
- Be sure that your operating frequency is clear before turning on or running your model, and never share the same frequency with somebody else at the same time. Ensure that others are aware of the operating frequency you are using and when you are using it.
- Always turn on your transmitter before you turn on the receiver/speed controller or connect the battery pack. Always turn off the receiver/speed controller or disconnect the battery pack before turning your transmitter off.
- Keep the wheels of the model off the ground when checking the operation of the radio equipment.
- Disconnect the battery pack before storing your model.
- When learning to operate your model, go to an area that has no obstacles that can damage your model if your model suffers a collision.
- Remove any sand, mud, dirt, grass or water before putting your model away.
- Use a recommended charger for the batteries and follow the instructions correctly. Over-charging, incorrect charging, or using inferior chargers can cause the batteries to become dangerously hot.
- Regularly check the charger for potential hazards such as damage to the cable, plug, casing or other defects. Ensure that any damage is rectified before using the charger again.
- Do not allow the transmitter batteries to become low on charge, otherwise you risk losing control of the model.
- Do not allow any metal part to short circuit the batteries, speed control, or other electrical/electronic device on the model.
- If the model behaves strangely, immediately stop the model, check and clear the problem.
- Do not stall the motor. The speed control will fail within seconds if power is applied to the motor when the car cannot move.

DO NOT USE YOUR MODEL:

- Near real cars, animals, or people that are unaware that an R/C car is being driven.
- In places where children and people gather
- In residential districts and parks
- In limited indoor spaces
- In wet conditions
- In the street

Take adequate safety precautions prior to operating this model. You are responsible for this model's assembly and safe operation.

Disregard of the any of the above cautions may lead to accidents, personal injury, or property damage.

XRAY MODEL RACING CARS assumes no responsibility for any injury, damage, or misuse of this product during assembly or operation, nor any addictions that may arise from the use of this product.

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