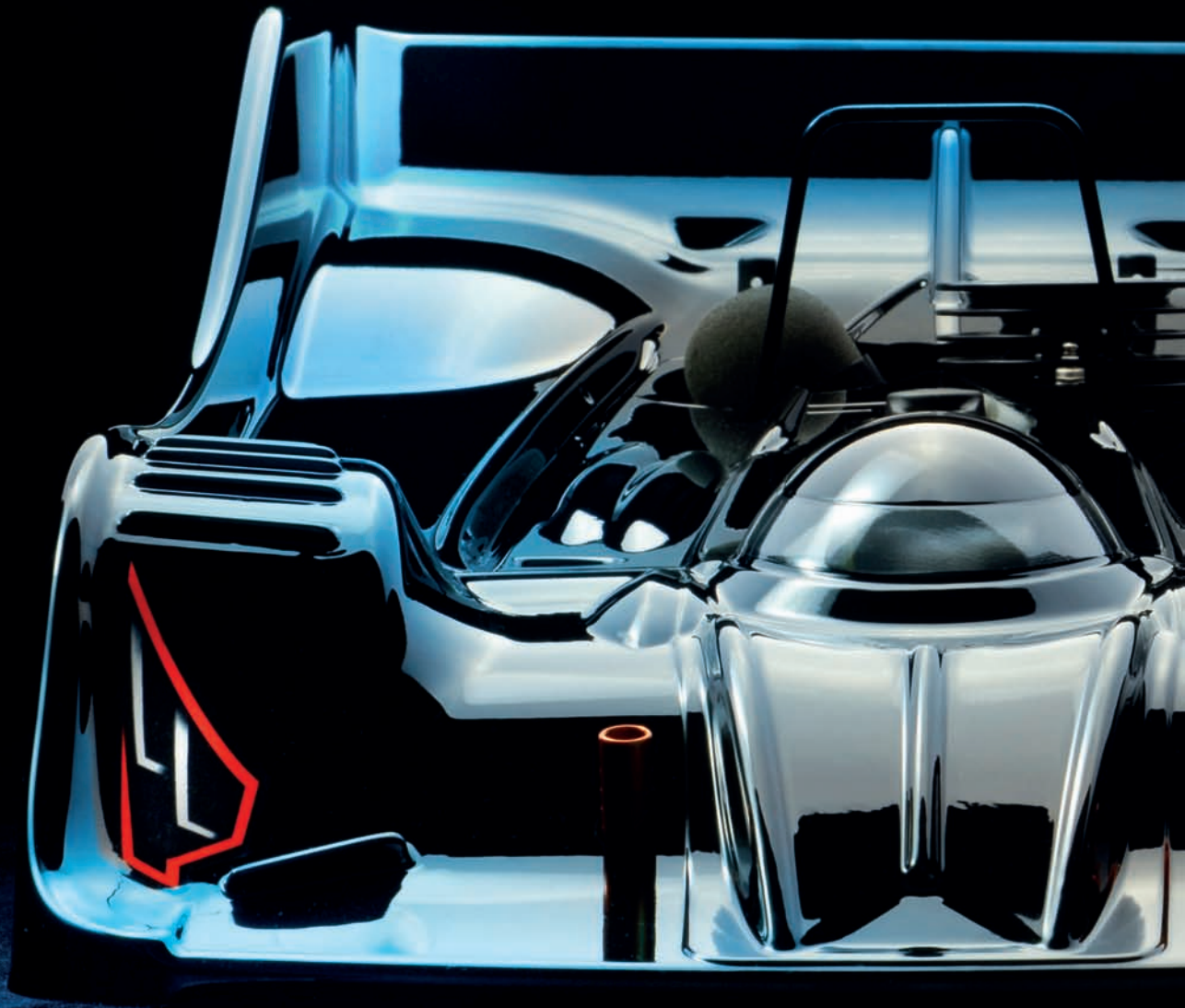


1/8 LUXURY NITRO ON-ROAD CAR

# XRAY RX8



*INSTRUCTION MANUAL*

*XRAY RX8.3 & XRAY RX8E.3*

## BEFORE YOU START

This is a high-competition, high-quality RC car intended for persons aged 16 years and older with previous experience building and operating RC model racing cars. This is not a toy; it is a precision racing model. This model racing car is not intended for use by beginners, inexperienced customers, or by children without direct supervision of a responsible, knowledgeable adult. If you do not fulfill these requirements, please return the kit in unused and unassembled form back to the shop where you have purchased it.

Before building and operating your XRAY, **YOU MUST** read through all of the operating instructions and instruction manual and fully understand them to get the maximum enjoyment and prevent unnecessary damage. Read

## CUSTOMER SUPPORT

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 [info@teamxray.com](mailto:info@teamxray.com). Also, please visit our Web site at [www.teamxray.com](http://www.teamxray.com) to find the latest updates, set-up information, option parts, and many other goodies. We pride ourselves on taking excellent care of our customers.

You can join thousands of XRAY fans and enthusiasts in our online community at: [www.teamxray.com](http://www.teamxray.com)

carefully and fully understand the instructions before beginning assembly.

Make sure you review this entire manual, download and use set-up book from the web, and examine all details carefully. If for some reason you decide this is not what you wanted or expected, **do not continue any further**. Your hobby dealer can not accept your kit for return or exchange after it has been partially or fully assembled.

Contents of the box may differ from pictures. In line with our policy of continuous product development, the exact specifications of the kit may vary without prior notice.

### XRAY Europe

K Výstavisku 6992  
91101 Trenčín  
Slovakia, EUROPE  
Phone: +421-32-7401100  
Fax: +421-32-7401109  
Email: [info@teamxray.com](mailto:info@teamxray.com)

### XRAY USA

RC America, 2030 Century Center Blvd #15  
Irving, TX 75062  
USA  
Phone: (214) 744-2400  
Fax: (214) 744-2401  
Email: [xray@rcamerica.com](mailto:xray@rcamerica.com)

## FAILURE TO FOLLOW THESE INSTRUCTIONS WILL BE CONSIDERED AS ABUSE AND/OR NEGLECT.

## SAFETY PRECAUTIONS

**WARNING:** This product contains a chemical known to the state of California to cause cancer and birth defects or other reproductive harm.

**CAUTION: CANCER HAZARD**

Wash thoroughly after using. **DO NOT** use product while eating, drinking or using tobacco products. May cause chronic effects to gastrointestinal tract, CNS, kidneys, and blood. **MAY CAUSE BIRTH DEFECTS.**

When building, using and/or operating this model always wear protective glasses and gloves.

Take appropriate safety precautions prior to operating this model. You are responsible for this model's assembly and safe operation! Please read the instruction manual before building and operating this model and follow all safety precautions. Always keep the instruction manual at hand for quick reference, even after completing the assembly. Use only genuine and original authentic XRAY parts

for maximum performance. Using any third party parts on this model will void warranty immediately.

Improper operation may cause personal and/or property damage. XRAY and its distributors have no control over damage resulting from shipping, improper construction, or improper usage. XRAY assumes and accepts no responsibility for personal and/or property damages resulting from the use of improper building materials, equipment and operations. By purchasing any item produced by XRAY, the buyer expressly warrants that he/she is in compliance with all applicable federal, state and local laws and regulation regarding the purchase, ownership and use of the item. The buyer expressly agrees to indemnify and hold harmless XRAY for all claims resulting directly or indirectly from the purchase, ownership or use of the product. By the act of assembling or operating this product, the user accepts all resulting liability. If the buyer is not prepared to accept this liability, then he/she should return this kit in new, unassembled, and unused condition to the place of purchase.

## IMPORTANT NOTES - GENERAL

- This product is not suitable for children under 16 years of age without the direct supervision of a responsible and knowledgeable 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 and users 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.
- Exercise care when using tools and sharp instruments.
- Take care when building, as some parts may have sharp edges.
- Keep small parts out of reach of small children. Children must not be allowed to put any parts in their mouth, or pull vinyl bag over their head.
- Read and follow instructions supplied with paints and/or cement, if used (not included in kit).
- Immediately after using your model, do NOT touch equipment on the model such as the motor and speed controller, because they generate high temperatures. You may seriously burn yourself seriously touching them.
- Follow the operating instructions for the radio equipment at all times.
- Do not put fingers or any objects inside rotating and moving parts, as this may cause damage or serious injury as your finger, hair, clothes, etc. may get caught.
- 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.
- Use a transmitter designed for ground use with RC cars. Make sure that no one else is using the same frequency as yours in your operating area. Using the same frequency at the same time, whether it is driving, flying or sailing, can cause loss of control of the RC model, resulting in a serious accident.
- Always turn on your transmitter before you turn on the receiver in the car. Always turn off the receiver 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.
- If the model behaves strangely, immediately stop the model, check and clear the problem.
- To prevent any serious personal injury and/or damage to property, be responsible when operating all remote controlled models.
- The model car is not intended for use on public places and roads or areas where its operation can conflict with or disrupt pedestrian or vehicular traffic.
- Because the model car is controlled by radio, it is subject to radio interference from many sources that are beyond your control. Since radio interference can cause momentary loss of control, always allow a safety margin in all directions around the model in order to prevent collisions.
- Do not use your model:
  - Near real cars, animals, or people that are unaware that an RC 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
  - In areas where loud noises can disturb others, such as hospitals and residential areas.
  - At night or anytime your line of sight to the model may be obstructed or impaired in any way.

To prevent any serious personal injury and/or damage to property, please be responsible when operating all remote controlled models.

## IMPORTANT NOTES - NITRO ENGINES

- Always test the brakes and the throttle before starting your engine to avoid losing control of the model.
- Make sure the air filter is clean and oiled.
- Never run your engine without an air filter. Your engine can be seriously damaged if dirt and debris get inside the engine.
- For proper engine break-in, please refer to the manual that came with the engine.
- Do not run near open flames or smoke while running your model or while handling fuel.
- Some parts will be hot after operation. Do not touch the exhaust or the engine until they have cooled. These parts may reach 275°F during operation!

**XRAY**

## **IMPORTANT NOTES - ELECTRICAL**

- Insulate any exposed electrical wiring (using heat shrink tubing or electrical tape) to prevent dangerous short circuits. Take maximum care in wiring, connecting and insulating cables. Make sure cables are always connected securely. Check connectors for if they become loose. And if so, reconnect them securely. Never use R/C models with damaged wires. A damaged wire is extremely dangerous, and can cause short-circuits resulting in fire. Please have wires repaired at your local hobby shop.
- Low battery power will result in loss of control. Loss of control can occur due to a weak battery in either the transmitter or the receiver. Weak running battery may also result in an out of control car if your car's receiver power is supplied by the running battery. Stop operation immediately if the car starts to slow down.
- When not using RC model, always disconnect and remove battery.
- Do not disassemble battery or cut battery cables. If the running battery short-circuits, approximately 300W of electricity can be discharged, leading to fire or burns. Never disassemble battery or cut battery cables.
- Use a recommended charger for the receiver and transmitter batteries and follow the instructions correctly. Over-charging, incorrect charging, or using

inferior chargers can cause the batteries to become dangerously hot. Recharge battery when necessary. Continual recharging may damage battery and, in the worst case, could build up heat leading to fire. If battery becomes extremely hot during recharging, please ask your local hobby shop for check and/or repair and/or replacement.

- 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. Modifying the charger may cause short-circuit or overcharging leading to a serious accident. Therefore do not modify the charger.
- Always unplug charger when recharging is finished.
- Do not recharge battery while battery is still warm. After use, battery retains heat. Wait until it cools down before charging.
- Do not allow any metal part to short circuit the receiver batteries or other electrical/electronic device on the model.
- Immediately stop running if your RC model gets wet as may cause short circuit.
- Please dispose of batteries responsibly. Never put batteries into fire.

## **IMPORTANT NOTES - NITRO FUEL**

- Handle fuel only outdoors. Never handle nitro fuel indoors, or mix nitro fuel in a place where ventilation is bad.
- Only use nitro fuel for R/C models. Do not use gasoline or kerosene in R/C models as it may cause a fire or explosion, and ruin your engine.
- Nitro fuel is highly flammable, explosive, and poisonous. Never use fuel indoors or in places with open fires and sources of heat.
- Always keep the fuel container cap tightly shut.
- Always read the warning label on the fuel container for safety information.
- Nitro-powered model engines emit poisonous vapors and gasses. These vapors irritate eyes and can be highly dangerous to your health. We recommend wearing rubber or vinyl gloves to avoid direct contact with nitro fuel.
- Nitro fuel for RC model cars is made of the combination of the methyl alcohol,

castor or synthetic oil, nitro methane etc. The flammability and volatility of these elements is very high, so be very careful during handling and storage of nitro fuel.

- Keep nitro fuel away from open flame, sources of heat, direct sunlight, high temperatures, or near batteries.
- Store fuel in a cool, dry, dark, well-ventilated place, away from heating devices, open flames, direct sunlight, or batteries. Keep nitro fuel away from children.
- Do not leave the fuel in the carburetor or fuel tank when the model is not in use. There is danger that the fuel may leak out.
- Wipe up any spilled fuel with a cloth.
- Be aware of spilled or leaking fuel. Fuel leaks can cause fires or explosions.
- Do not dispose of fuel or empty fuel containers in a fire. There is danger of explosion.

## **R/C & BUILDING TIPS**

- Make sure all fasteners are properly tightened. Check them periodically.
- Make sure that 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 because 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](http://www.teamxray.com) to get advice, or contact us via email at [info@teamxray.com](mailto:info@teamxray.com), or contact the XRAY distributor in your country.

## **WARRANTY**

XRAY guarantees this model kit to be free from defects in both material and workmanship within 30 days of purchase. The total monetary value under warranty will in no case exceed the cost of the original kit purchased. This warranty does not cover any components damaged by use or modification or as a result of wear. Part or parts missing from this kit must be reported within 30 days of purchase. No part or parts will be sent under warranty without proof of purchase. Should you find a defective or missing part, contact the local distributor. Service and customer support will be provided through local hobby store where you have purchased the kit, therefore make sure to purchase any XRAY products at your local hobby store. This model racing car is considered to be a high-performance racing vehicle. As such this vehicle will be used in an extreme range of conditions and situations, all which may cause premature wear or failure of any component. XRAY has no control over usage of vehicles once they leave the dealer, therefore XRAY can only offer warranty against all manufacturer's defects in materials, workmanship, and assembly at point of sale and before use. No warranties are expressed or implied that cover damage caused by what is considered normal use, or cover or imply how long any model cars' components or electronic components will last before requiring replacement.

Due to the high performance level of this model car you will need to periodically maintain and replace consumable components. Any and all warranty coverage will not cover replacement of any part or component damaged by neglect, abuse, or improper or unreasonable use. This includes but is not limited to damage from

crashing, chemical and/or water damage, excessive moisture, improper or no maintenance, or user modifications which compromise the integrity of components. Warranty will not cover components that are considered consumable on RC vehicles. XRAY does not pay nor refund shipping on any component sent to XRAY or its distributors for warranty. XRAY reserves the right to make the final determination of the warranty status of any component or part.

### **Limitations of Liability**

XRAY makes no other warranties expressed or implied. XRAY shall not be liable for any loss, injury or damages, whether direct, indirect, special, incidental, or consequential, arising from the use, misuse, or abuse of this product and/or any product or accessory required to operate this product. In no case shall XRAY's liability exceed the monetary value of this product.

**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. All rights reserved.**

## **QUALITY CERTIFICATE**

XRAY MODEL RACING CARS uses only the highest quality materials, the best compounds for molded parts and the most sophisticated manufacturing processes of TQM (Total Quality Management). 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. Products which have been worn out, abused, neglected or improperly operated will not be covered under warranty. We wish you enjoyment of this high-quality and high-performance RC 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.**

# COLOR INDICATIONS

At the beginning of each section is an exploded view of the parts to be assembled. There is also a list of all the parts and part numbers that are related to the assembly of that section.

The part descriptions are color-coded to make it easier for you to identify the source of a part. Here are what the different colors mean:

**STYLE A** - indicates parts that are included in the bag marked for the section.

**STYLE B** - indicates parts that are included in the box.

**STYLE C** - indicates parts that are already assembled from previous steps.

# SYMBOLS USED

Apply threadlock	Ensure smooth non-binding movement	Detail	Assemble in the specified order	Part bags used
Apply oil	Cut off remaining material	Pay attention here	Assembly view	Assemble left and right sides the same way
Apply grease	Assemble as many times as specified	Follow tip here	Optional parts	Number of teeth

# TOOLS REQUIRED

 Phillips 3.5mm	 Slotted Screwdriver 4.0mm	 Arm Reamer 3mm/4mm
 Allen 1.5 / 2.0 / 2.5 / 3.0mm	 Allen Ball 2.5mm	 Exhaust Spring / Caster Clip Remover

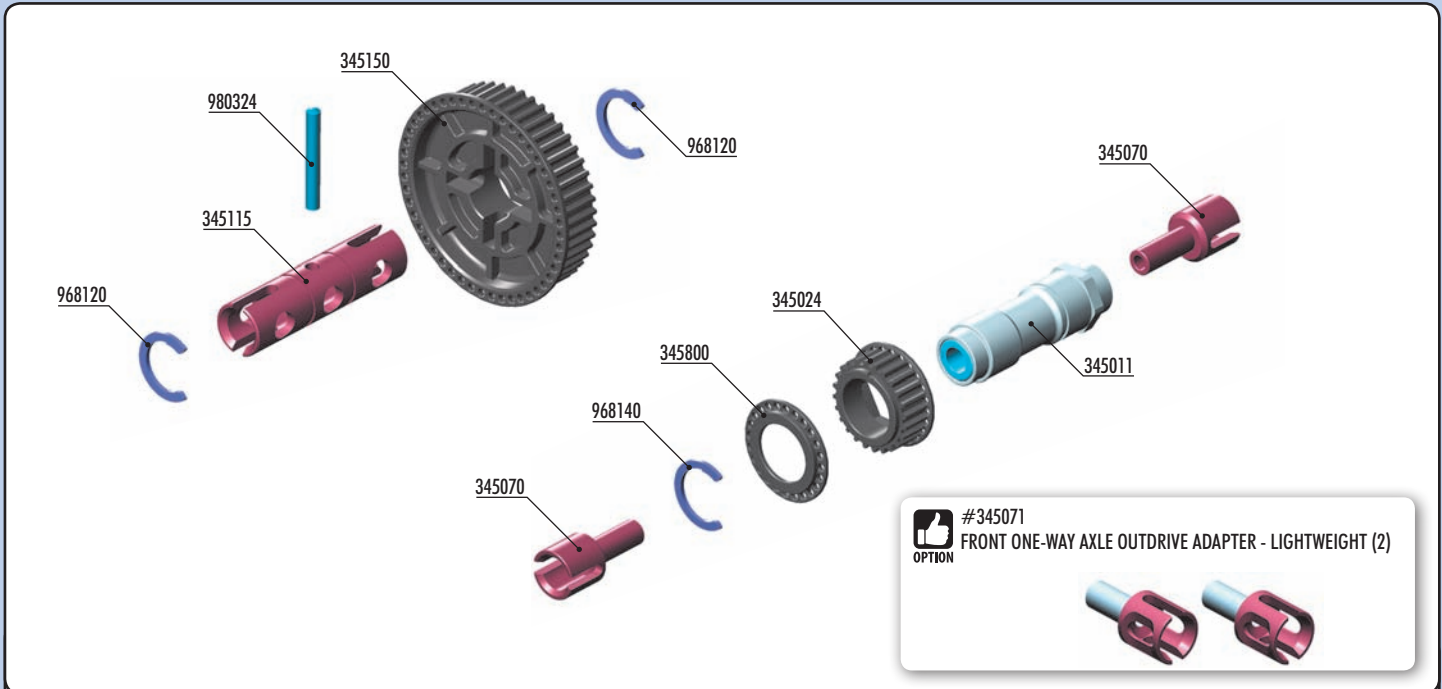
  

 Turnbuckle Tools (HUDY #181091 3.0/4.0mm)	 Turnbuckle Tools (HUDY #181030 - 3.0mm)	 Professional Multi Tool (HUDY #183011)	 Ball Joint Wrench (HUDY #181110)	 Flywheel Tool (HUDY #182010)	 Alu Pinion Gear Tool (XRAY #349903)
 Pliers (HUDY #189020)	 Scissors (HUDY #188990)	 Side Cutters (HUDY #189010)	 Pocket Hobby Knife (HUDY #188981)	 Wrench Glowplug/Clutchnut (HUDY #107581)	 Reamer (HUDY #107602) (HUDY #107601)

# EQUIPMENT REQUIRED

 Transmitter	 Receiver	 Steering & Throttle Servos	 Engine	 Starter Box (HUDY #104400) & Battery Pack	 Glowplug Igniter
 Exhaust	 Manifold	 Lexan® Paint	 Bodyshell	 Battery Charger	 Receiver Battery Pack
 Wheels & Tires	 Tire Truer (HUDY #102003)	 Model R/C Car Fuel (nitromethane)	 Personal Transponder	 Air Filter	 Air Filter Oil (HUDY #106240)
 CA Glue	 Engine After Run Oil (HUDY #106250)	 One-Way Lube (HUDY #106231)	 Threadlock	 Graphite Grease (HUDY #106210)	 Bearing Oil (HUDY #106230)

# 1. FRONT ONE-WAY & REAR SOLID AXLE



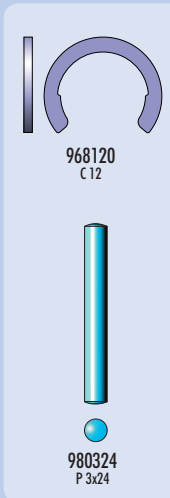
**BAG**

**01**

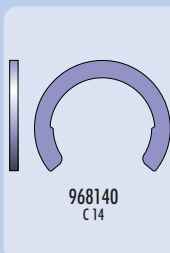
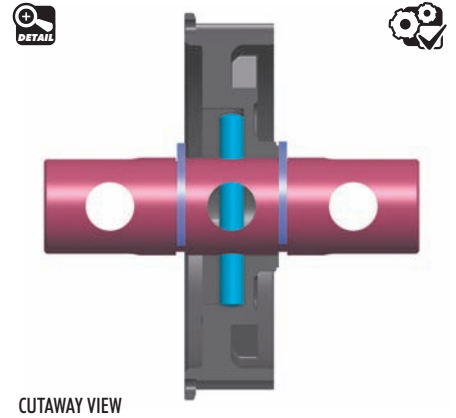
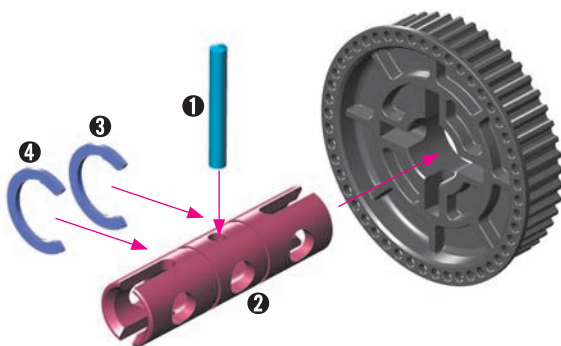
- 345001 FRONT ONE-WAY - HARDCOATED + LIGHTWEIGHT ADAPTERS
- 345011 FRONT ONE-WAY AXLE - BLACK COATED
- 345024 COMPOSITE FRONT ONE-WAY AXLE PULLEY 24T
- 345070 FRONT ONE-WAY AXLE OUTDRIVE ADAPTER - HUDY SPRING STEEL™ (2)
- 345115 REAR SOLID AXLE SHAFT - LIGHTWEIGHT - HUDY SPRING STEEL™
- 345150 COMPOSITE REAR SOLID AXLE PULLEY 48T
- 345800 COMPOSITE BELT PULLEY COVER SET

- 968120 C-CLIP 12 (10)
- 968140 C-CLIP 14 (10)
- 980324 PIN 3x24 (10)

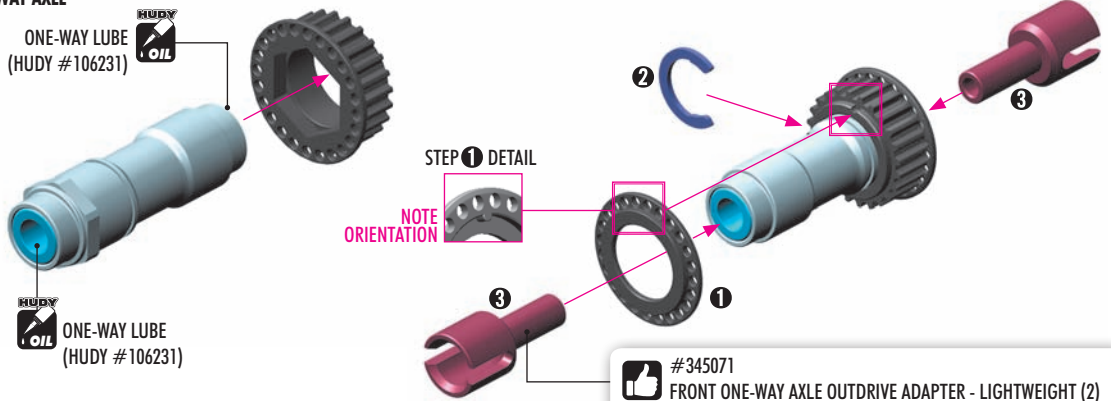
#345071  
FRONT ONE-WAY AXLE OUTDRIVE ADAPTER - LIGHTWEIGHT (2)  
OPTION



## REAR SOLID AXLE



## FRONT ONE-WAY AXLE

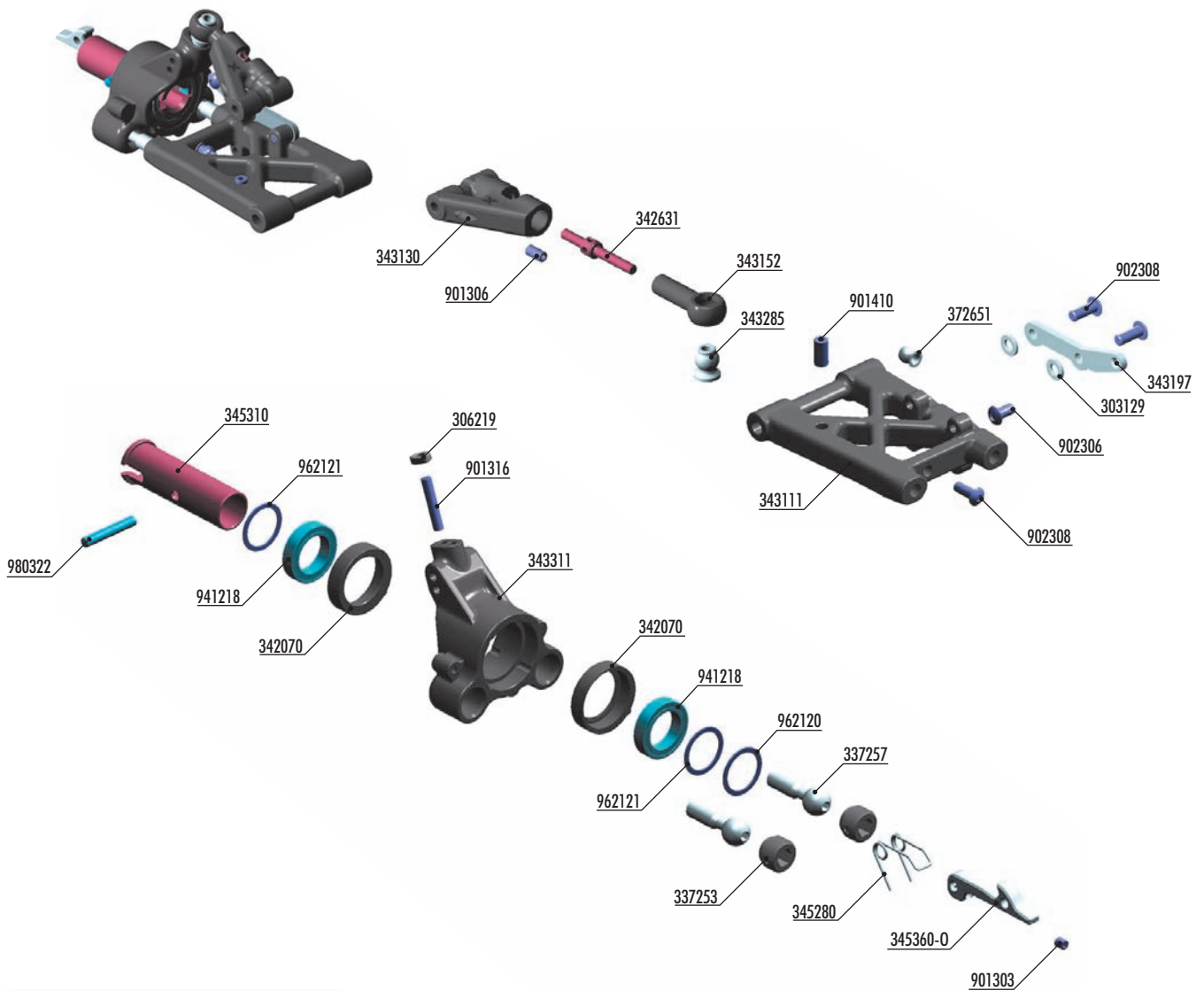


#345071  
FRONT ONE-WAY AXLE OUTDRIVE ADAPTER - LIGHTWEIGHT (2)  
OPTION



## 2. REAR SUSPENSION

2x L=R



**ADJUSTING NUT**

OPTION	Part #	Material	Included
	#337253	COMPOSITE	INCLUDED
	#337252	ALU	OPTION

**#345301**  
REAR CVD DRIVE SHAFT SET  
HUDY SPRING STEEL™

**#345290**  
ALU SHIM 12x15x1.0MM (4)

**SUSPENSION UPPER ARMS**

OPTION	Part #	Material	Included
	#343130	MEDIUM	INCLUDED
	#343131	HARD	OPTION
	#343132	GRAPHITE	OPTION

**#345312**  
ALU REAR CVD DRIVE AXLE  
SWISS 7075 T6 - HARDCOATED

**#345370**  
GRAPHITE REAR AERO DISC  
1.6mm - SET

**SUSPENSION LOWER ARMS**

OPTION	Part #	Material	Included
	#343111	MEDIUM	INCLUDED
	#343112	HARD	OPTION
	#343113	GRAPHITE	OPTION

**BAG**  
02.1

303129	COMPOSITE SET OF SHIMS 3x 3x6x1MM; 1x 3x6x2MM (2)	343197	ALU EXTENSION FOR SUSPENSION ARM - REAR LOWER - 7075 T6 (2)	901303	HEX SCREW SB M3x3 (10)
306219	COMPOSITE SET OF SERVO SHIMS (4)	343285	PIVOT BALL 6.8MM (2)	901306	HEX SCREW SB M3x6 (10)
337253	COMPOSITE ADJUSTING NUT M10x1 (4)	343311	COMPOSITE UPRIGHT REAR FOR AERO DISC	901316	HEX SCREW SB M3x16 (10)
337257	STEEL PIVOT BALL 8.4 MM (2)	345280	WHEEL SPRING (2)	901410	HEX SCREW SB M4x10 (10)
342070	COMPOSITE SET OF BUSHINGS (2)	345310	REAR WHEEL AXLE - HUDY SPRING STEEL™	902306	HEX SCREW SH M3x6 (10)
342631	ADJ. TURNBUCKLE L/R 28 MM - HUDY SPRING STEEL™ (2)	345360-0	ALU REAR WHEEL LOCK - SWISS 7075 T6 - ORANGE (2)	902308	HEX SCREW SH M3x8 (10)
343111	SUSPENSION ARM FOR EXTENSION - REAR LOWER	345370	GRAPHITE REAR AERODYNAMIC DISC 1.6MM - SET (OPTION)	962120	WASHER S 12x15x0.5 (10)
343130	COMPOSITE SUSPENSION ARM REAR UPPER	372651	PIVOT BALL UNIVERSAL 4.9 MM - HUDY SPRING STEEL™ (2)	962121	WASHER S 12x15x1.0 (10)
343152	UPPER BALL JOINT 5.8MM - SHORT & LONG (2+2)	941218	BALL-BEARING 12x18x4 RUBBER SEALED - OIL (2)	980322	PIN 3x22 (10)

## 2. REAR SUSPENSION

10

303129  
SHIM 3x6x1

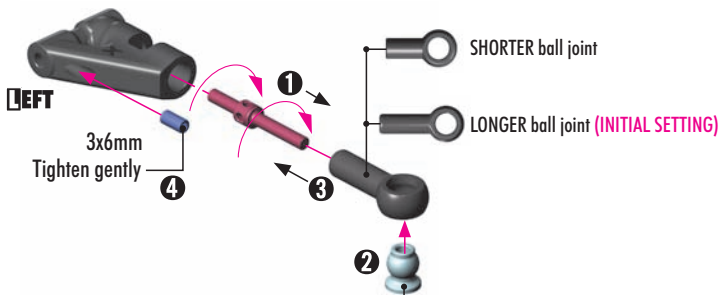
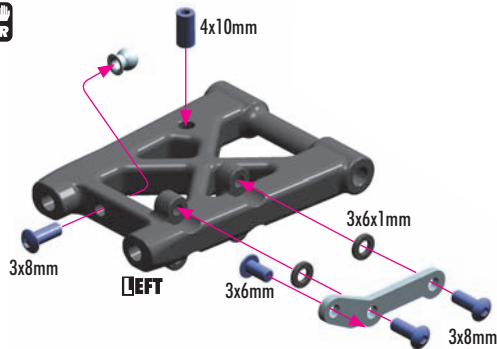
901306  
SB M3x6

901410  
SB M4x10

902306  
SH M3x6

902308  
SH M3x8

2x



**TIP** Install the pivot balls with Professional Multi Tool (HUDY #183011)

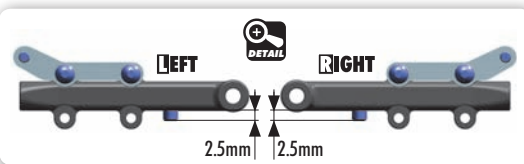


**OPTION**

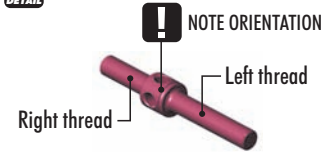
SUSPENSION UPPER ARMS			
#343130	MEDIUM	INCLUDED	
#343131	HARD	OPTION	
#343132	GRAPHITE	OPTION	

**OPTION**

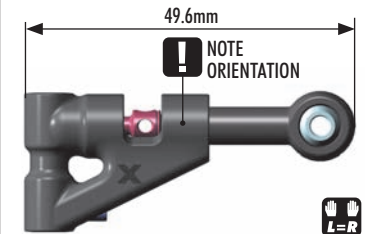
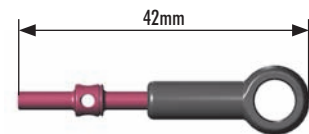
SUSPENSION LOWER ARMS			
#343111	MEDIUM	INCLUDED	
#343112	HARD	OPTION	
#343113	GRAPHITE	OPTION	



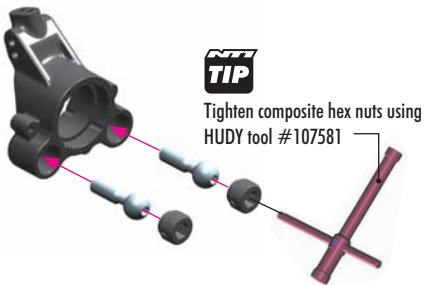
**DETAIL**



**DETAIL STEP 1**



2x



**PIVOT BALLS MUST MOVE FREELY**

During initial assembly, tighten each composite hex nut until the pivot ball starts to bind, then loosen slightly. Verify that the pivot balls move freely.

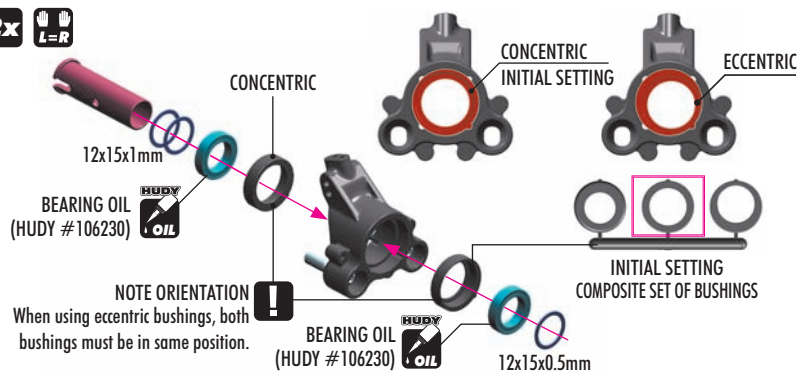
**DETAIL**

**OPTION**

ADJUSTING NUT		
#337253	COMPOSITE	INCLUDED
#337252	ALU	OPTION



2x



**#345290**  
ALU SHIM 12x15x1.0MM (4)



**#345301**  
REAR CVD DRIVE SHAFT SET HUDY SPRING STEEL™

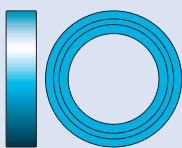


**#345312**  
ALU REAR CVD DRIVE AXLE SWISS 7075 T6 - HARDCOATED



**DETAIL**

SHIM		
IN	INITIAL SETTING	OUT
1+1	INITIAL SETTING	0.5
1+0.5		1
1		1+0.5
0.5		1+1
0		1+1+0.5



941218  
BB 12x18x4



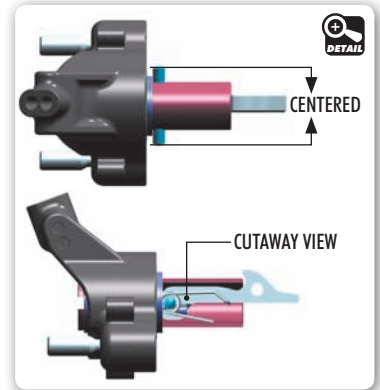
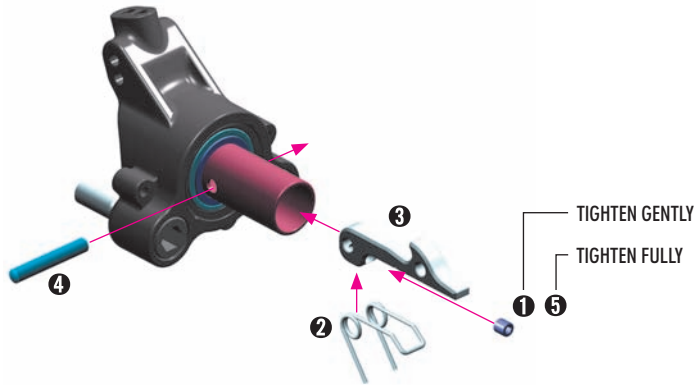
962120 S 12x15x0.5  
962121 S 12x15x1.0

## 2. REAR SUSPENSION

901303  
SB M3x3

980322  
P 3x22

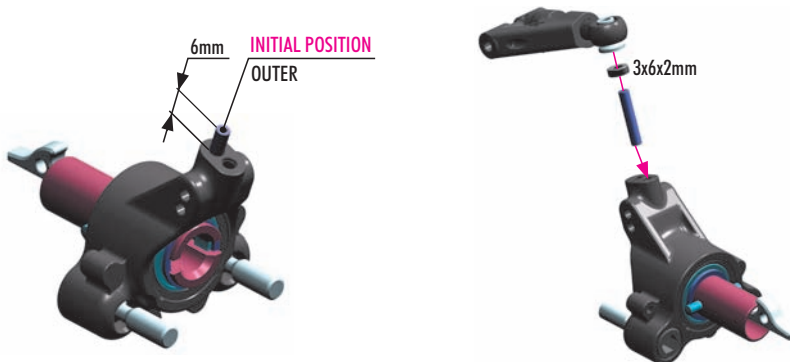
2x L=R



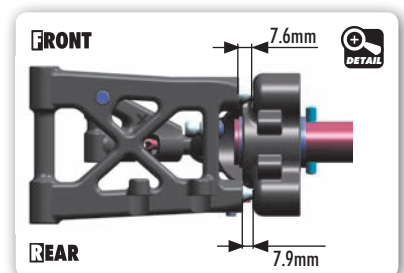
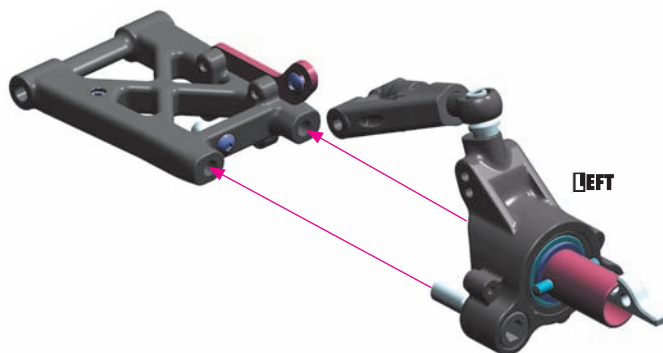
10  
306219  
SHIM 3x6x2

901316  
SB M3x16

2x L=R

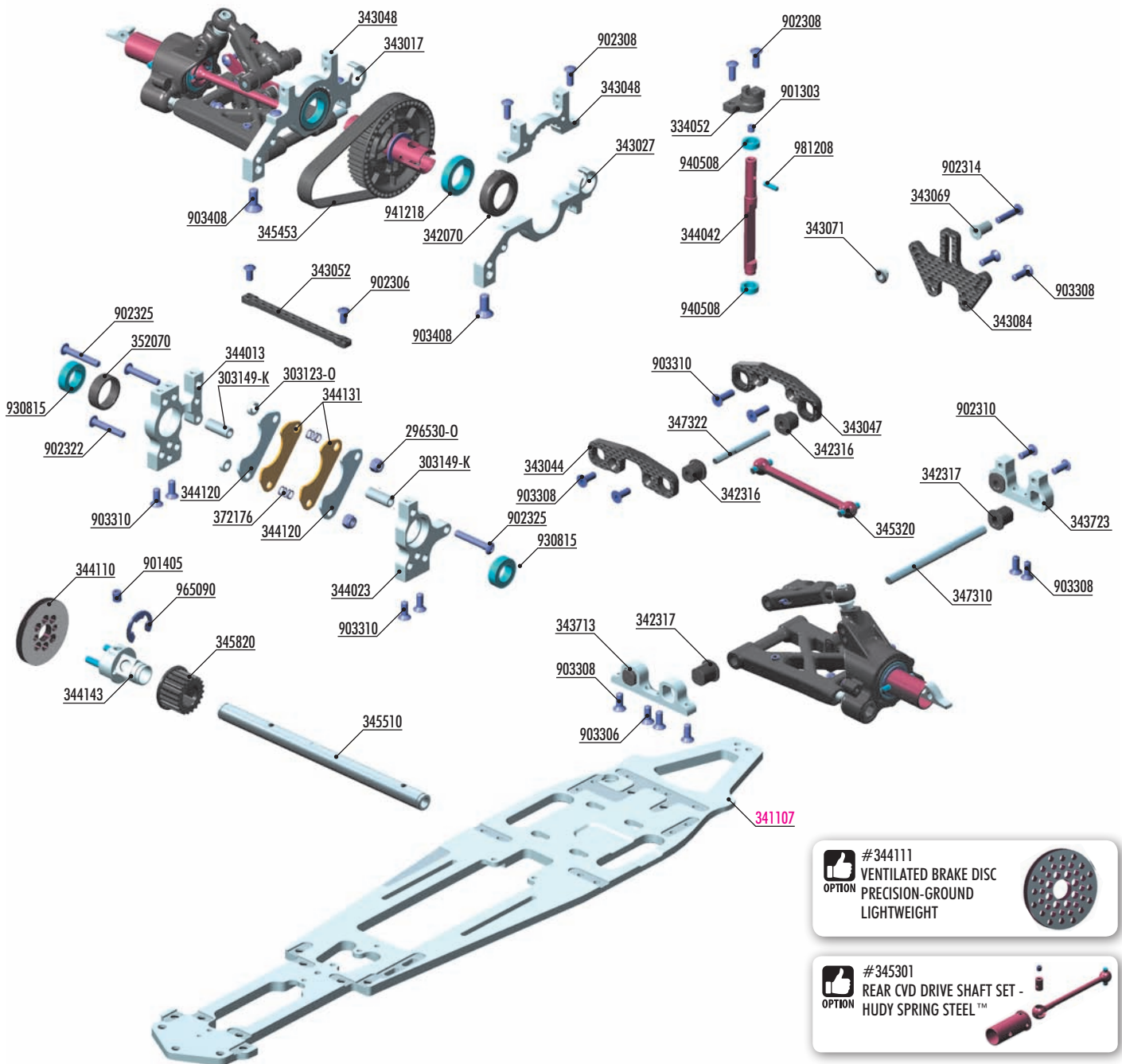


2x L=R





## 2. REAR SUSPENSION

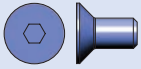


**BAG**

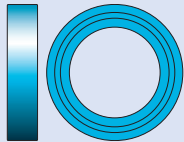
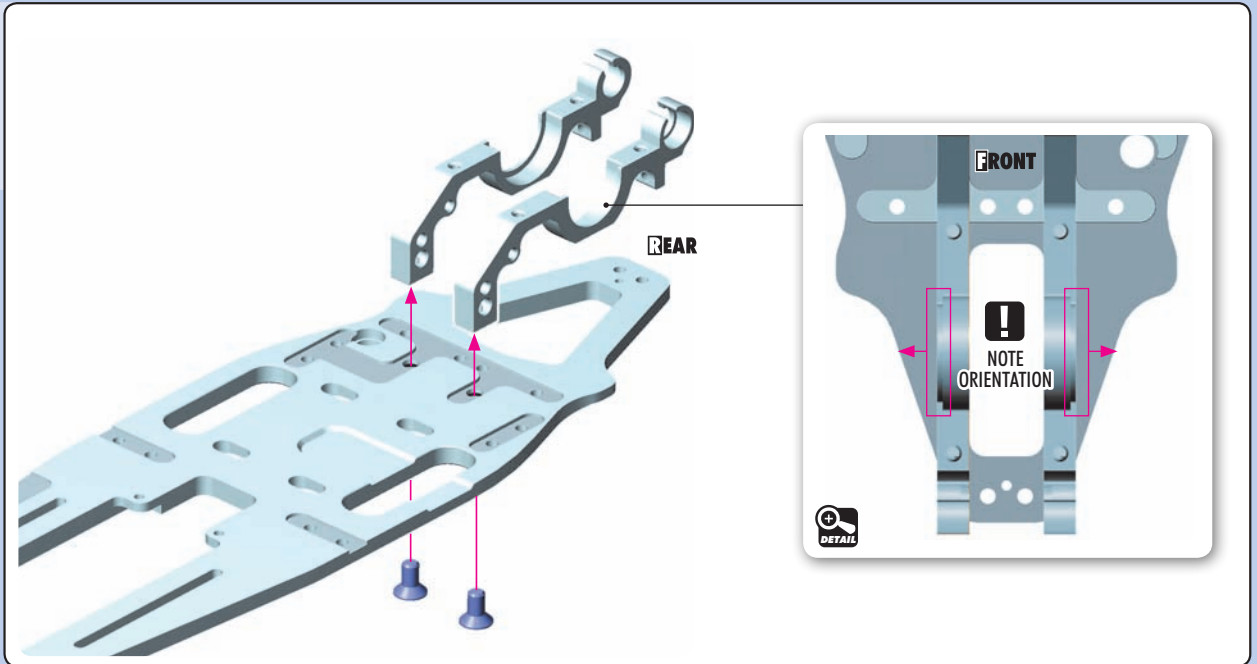
**02.2**

296530-0	ALU NUT M3 - ORANGE (10)	345510	2-SPEED SHAFT 8MM - SUPER LIGHTWEIGHT - HUDY SPRING STEEL™
303123-0	ALU SHIM 3x6x2.0MM - ORANGE (10)	345820	COMPOSITE 2-SPEED BELT PULLEY 20T - CENTER
303149-K	ALU BUSHING 3x5x13.2MM - BLACK (2)	347310	REAR LOWER INNER PIVOT PIN (2)
334052	COMPOSITE BRAKE UPPER PLATE	347322	REAR UPPER INNER PIVOT PIN WITH FLAT SPOT (2)
342070	COMPOSITE SET OF BUSHINGS (2)	352070	COMPOSITE BEARING HUB FOR DIFF (4)
342316	COMPOSITE REAR UPPER SUSP. ECCENTRIC BUSHING (4)	372176	SPRING 4.25 COILS 3.6x6x0.4MM; C=1.5 - GOLD (SOFT) (8)
342317	COMPOSITE REAR LOWER SUSP. ECCENTRIC BUSHING (4)		
343017	ALU LOWER BULKHEAD REAR - SWISS 7075 T6 - RIGHT	901303	HEX SCREW SB M3x3 (10)
343027	ALU LOWER BULKHEAD REAR - SWISS 7075 T6 - LEFT	901405	HEX SCREW SB M4x5 (10)
343044	GRAPHITE REAR UPPER ARM HOLDER 3.5MM - FRONT	902306	HEX SCREW SH M3x6 (10)
343047	GRAPHITE REAR UPPER ARM HOLDER 3.5MM - REAR	902308	HEX SCREW SH M3x8 (10)
343048	ALU UPPER CLAMP REAR - SWISS 7075 T6 - (L+R)	902310	HEX SCREW SH M3x10 (10)
343052	GRAPHITE REAR BULKHEAD BRACE 2.5MM	902314	HEX SCREW SH M3x14 (10)
343069	STEEL BUSHING (2)	902322	HEX SCREW SH M3x22 (10)
343071	BELT TENSIONER SET - STEEL	902325	HEX SCREW SH M3x25 (10)
343084	GRAPHITE SHOCK TOWER REAR	903306	HEX SCREW SFH M3x6 (10)
343713	ALU REAR LOWER SUSPENSION HOLDER - FRONT - RF - BLACK	903308	HEX SCREW SFH M3x8 (10)
343723	ALU REAR LOWER SUSPENSION HOLDER - REAR - RR - BLA CK	903310	HEX SCREW SFH M3x10 (10)
344013	ALU BRAKE STAND - SWISS 7075 T6 - SET	903408	HEX SCREW SFH M4x8 (10)
344023	ALU 2-SPEED HOLDER - SWISS 7075 T6	930815	BALL-BEARING 8x14x4 STEEL SEALED - OIL (2)
344042	BRAKE CAM POST - STEEL	940508	BALL-BEARING 5x8x2.5 RUBBER SEALED - OIL (2)
344110	VENTILATED BRAKE DISC - PRECISION-GROUND	941218	BALL-BEARING 12x18x4 RUBBER SEALED - OIL (2)
344120	STEEL BRAKE PAD - HARDENED (2)	965090	E-CLIP 9 (10)
344131	BRAKE PAD "SLS" (2)	981208	PIN 2x8 (10)
344143	BRAKE DISK ADAPTER - LIGHTWEIGHT - 7075 T6 - HARD COATED		
345320	REAR DRIVE SHAFT 61MM - HUDY SPRING STEEL™	<b>341107</b>	<b>CHASSIS 5MM - CNC MACHINED - SWISS 7075 T6</b>
345453	LOW FRICTION DRIVE BELT REAR 8.0 x 201 MM		

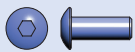
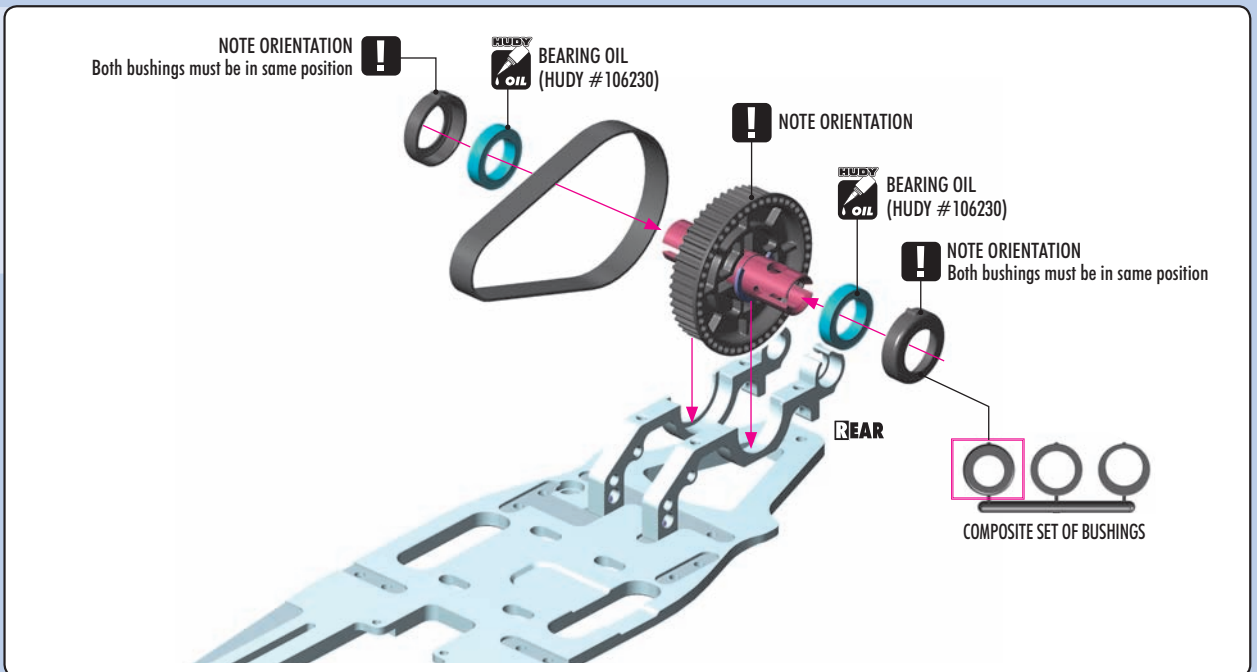
## 2. REAR SUSPENSION



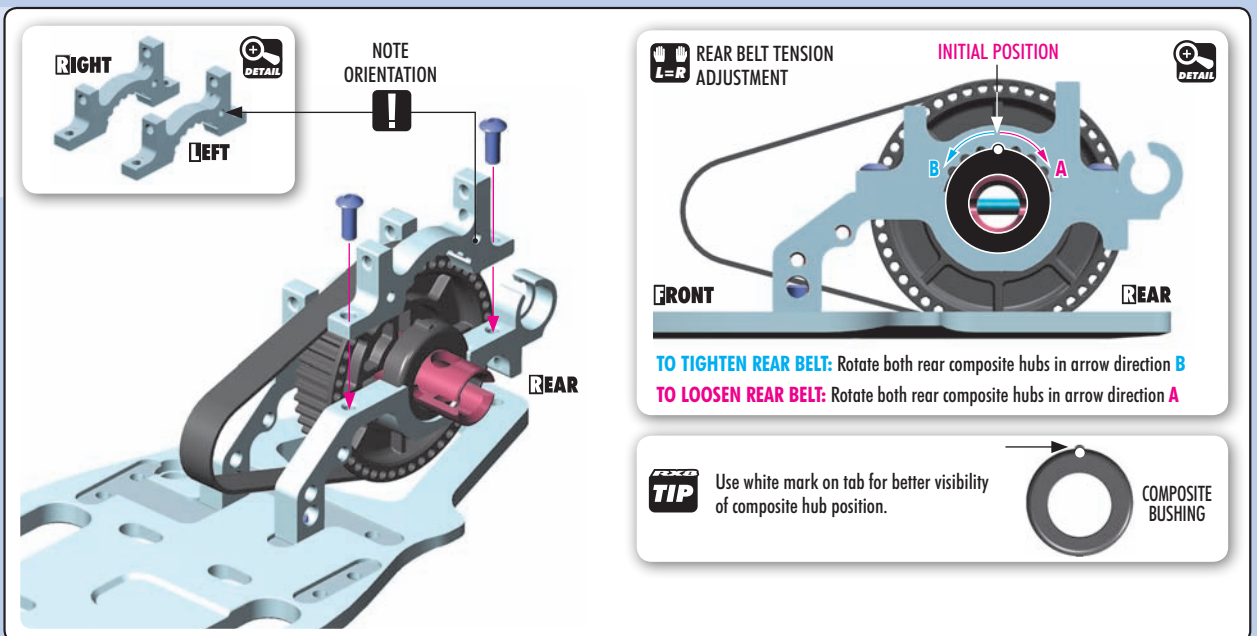
903408  
SFH M4x8



941218  
BB 12x18x4



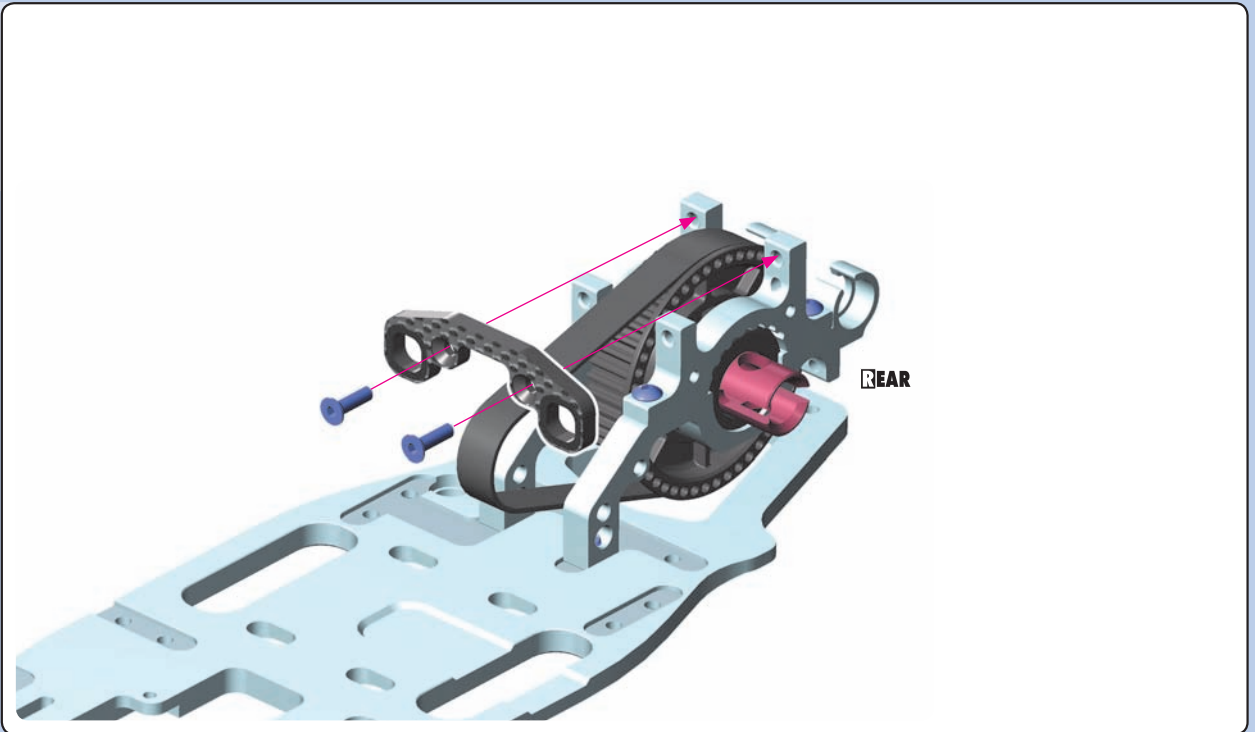
902308  
SH M3x8



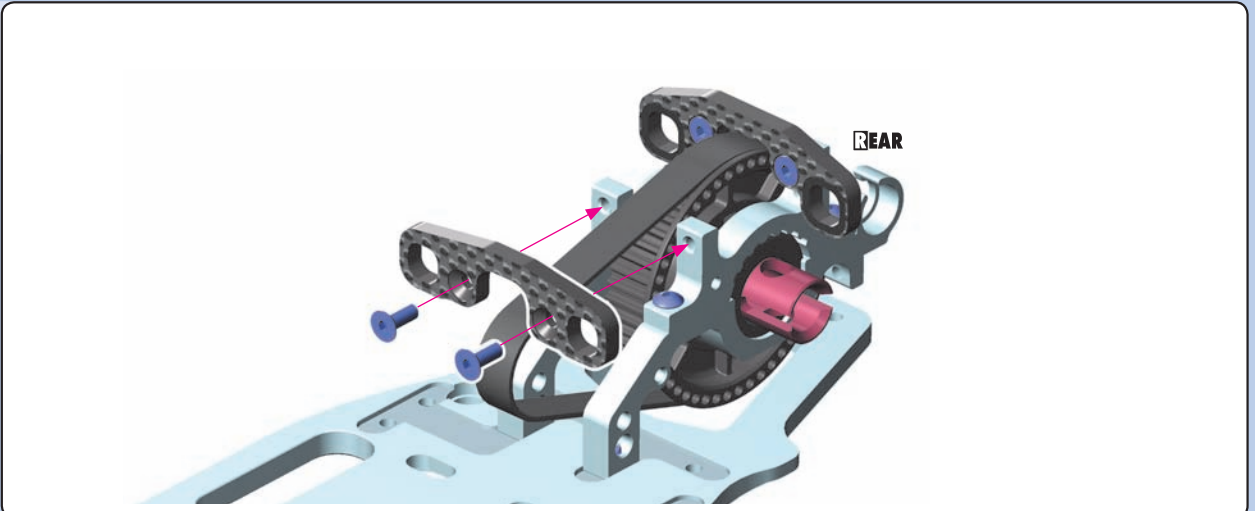
## 2. REAR SUSPENSION



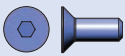
903310  
SFH M3x10



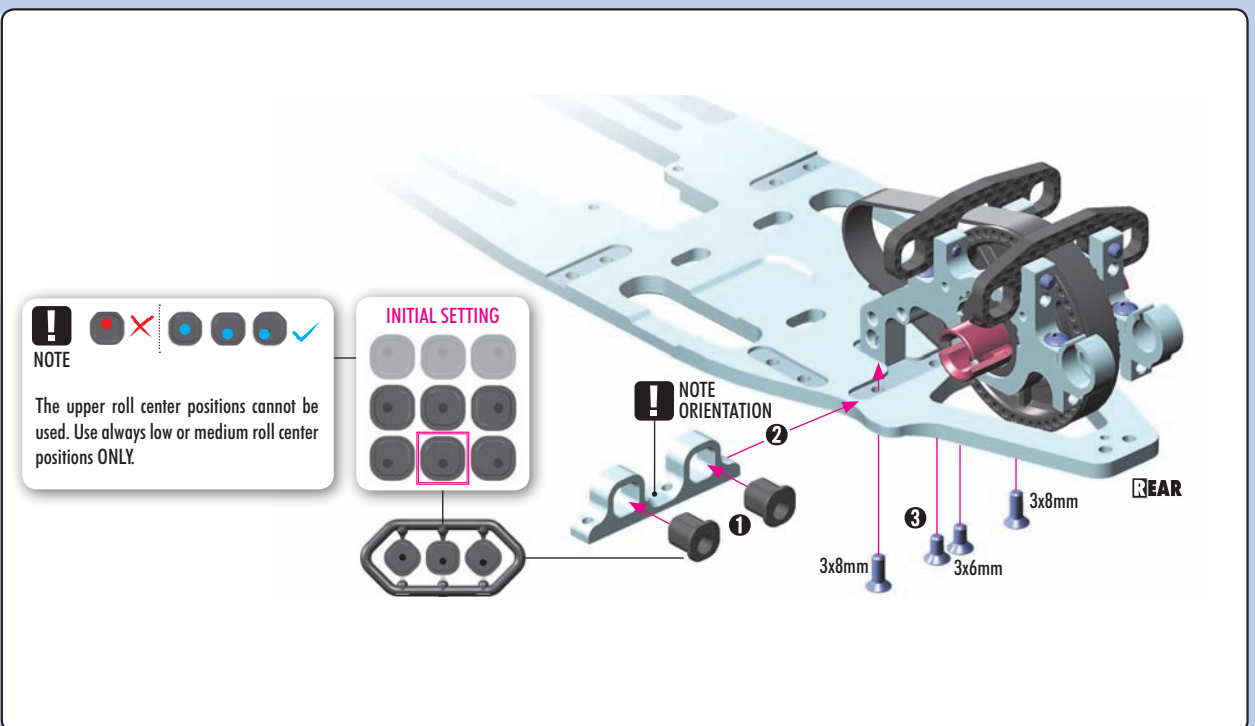
903308  
SFH M3x8



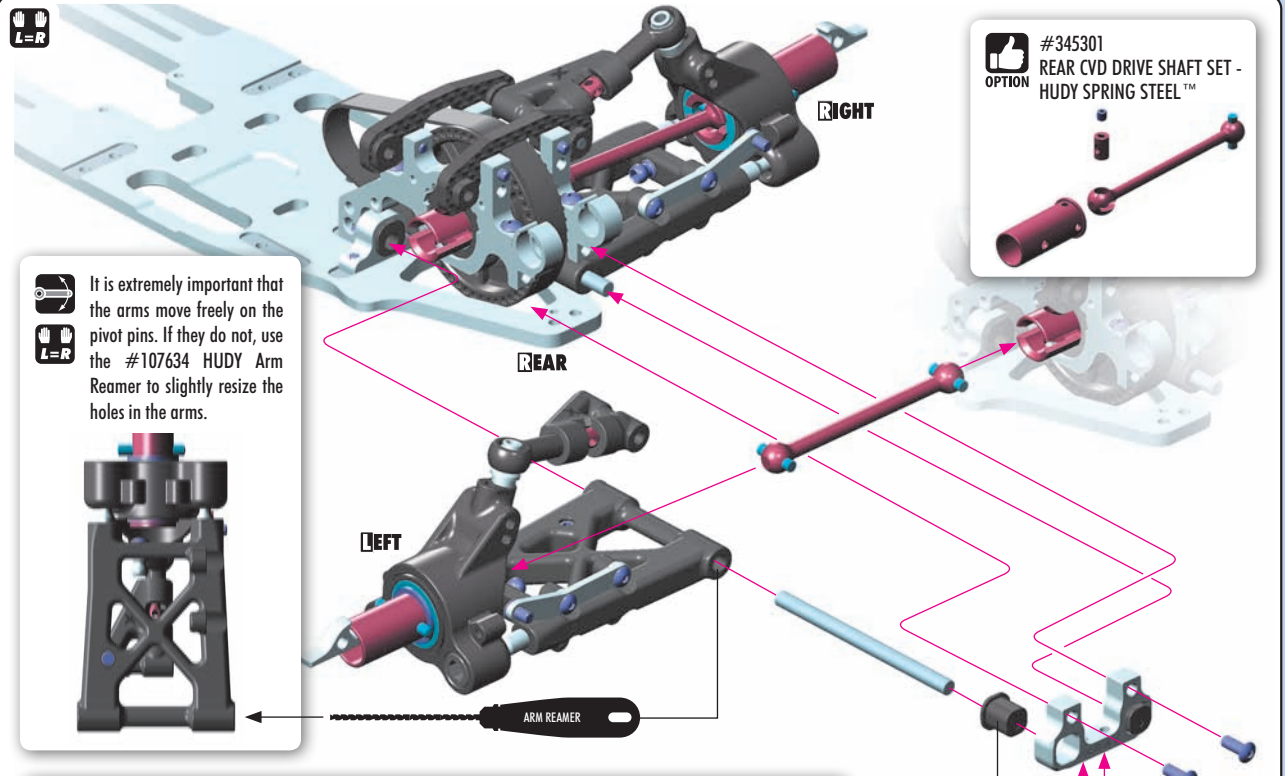
903306  
SFH M3x6



903308  
SFH M3x8



## 2. REAR SUSPENSION

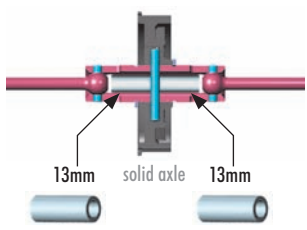


It is extremely important that the arms move freely on the pivot pins. If they do not, use the #107634 HUDY Arm Reamer to slightly resize the holes in the arms.

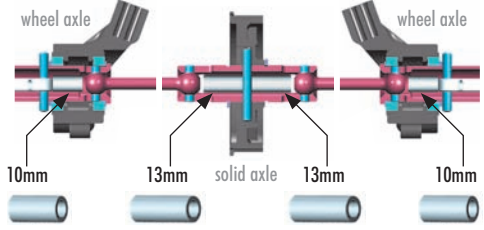


**TIP** When using wider rear TRACK WIDTH, we recommend to put fuel tube between the into the solid axle from both sides before inserting the drive shaft to make sure that the drive shaft will not fall out. We recommend to use 260mm rear track width as INITIAL SETTING.

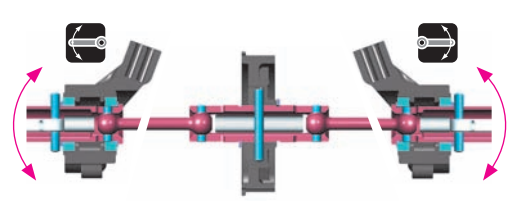
If you use the rear width wider than 261mm, we recommend to use 13mm wide tube from each side of the solid axle.



If you use the rear width wider than 264mm, we recommend to use 13mm wide tube from each side of the solid axle and 10mm wide tube inside of the rear wheel axle.



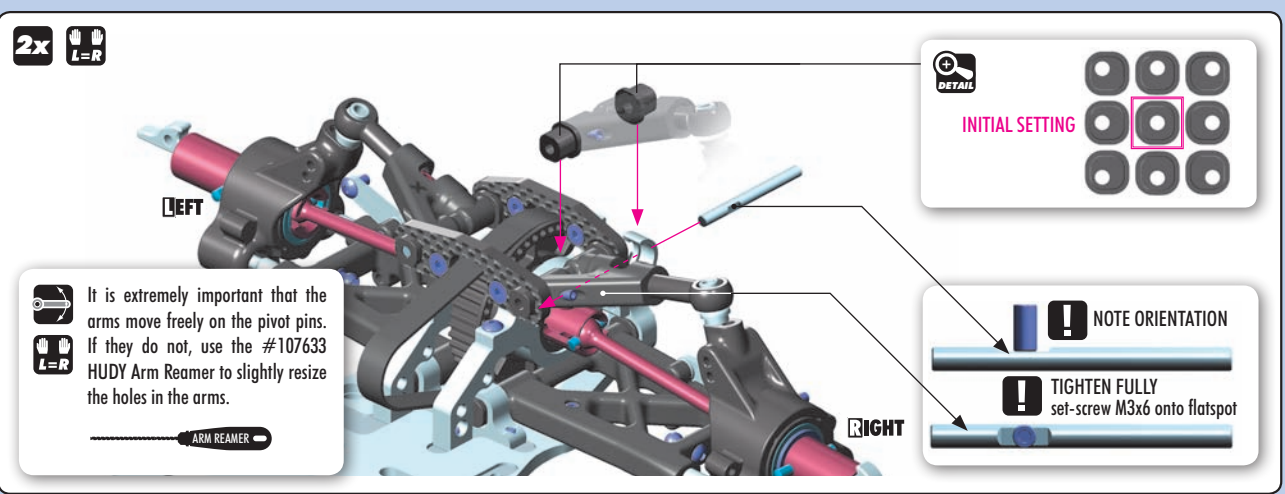
**IT IS VERY IMPORTANT** that the drive shaft has axial play otherwise without play, the whole suspension will not move freely and it will have very negative impact on the car handling.



**Eccentric bushings**

**INITIAL SETTING**

The upper roll center positions cannot be used. Use always low or medium roll center positions ONLY.



It is extremely important that the arms move freely on the pivot pins. If they do not, use the #107633 HUDY Arm Reamer to slightly resize the holes in the arms.



## 2. REAR SUSPENSION



296530-0  
N M3



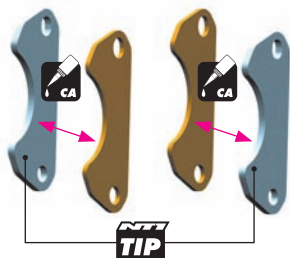
303123-0  
SHIM 3x6x2



902322  
SH M3x22

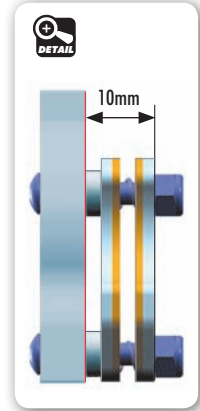
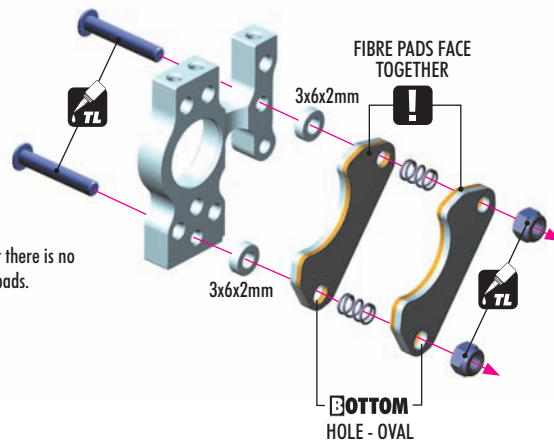
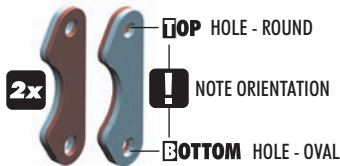


902322  
SH M3x22



Roughen steel plates with sandpaper  
before gluing fibre pads

We recommend gluing the brake pads to the steel pads, however there is no  
performance difference between glued & unglued brake pads.



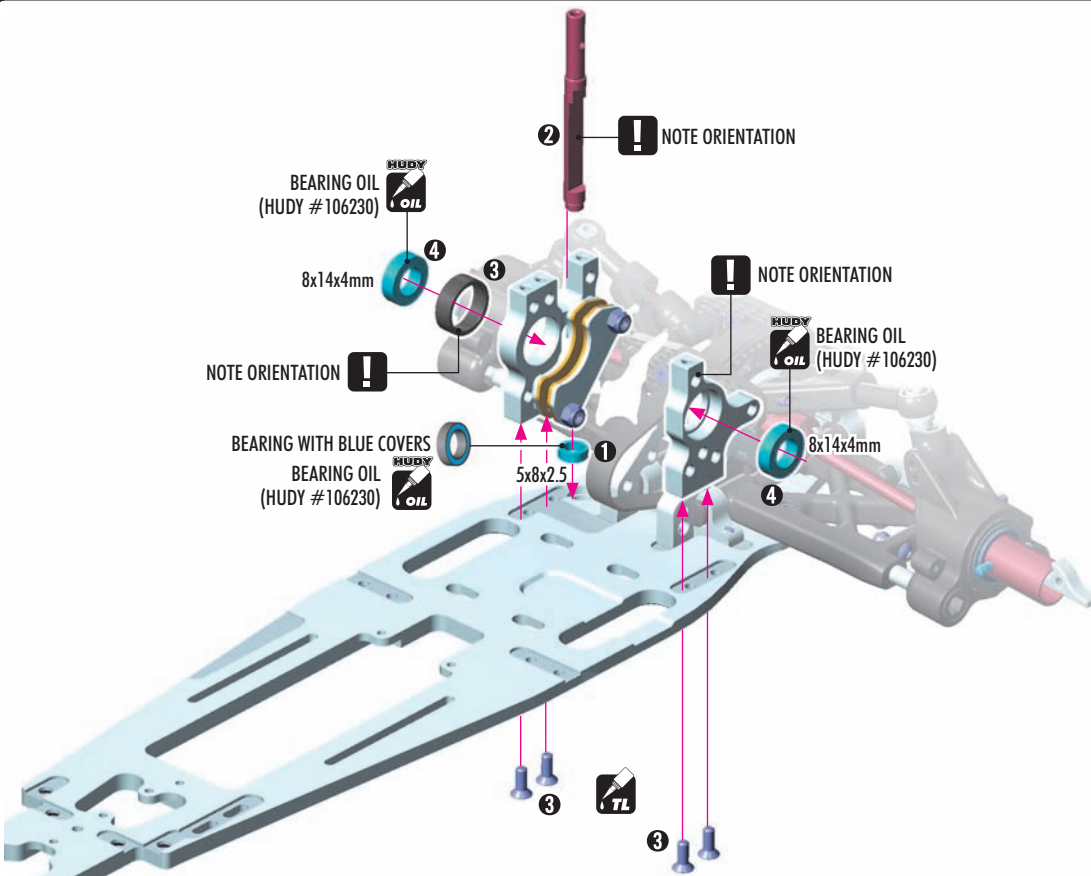
903310  
SFH M3x10



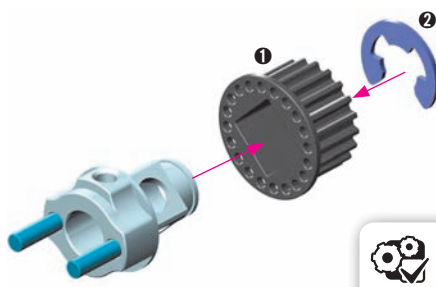
940508  
BB 5x8x2.5



930815  
BB 8x14x4



965070  
C7



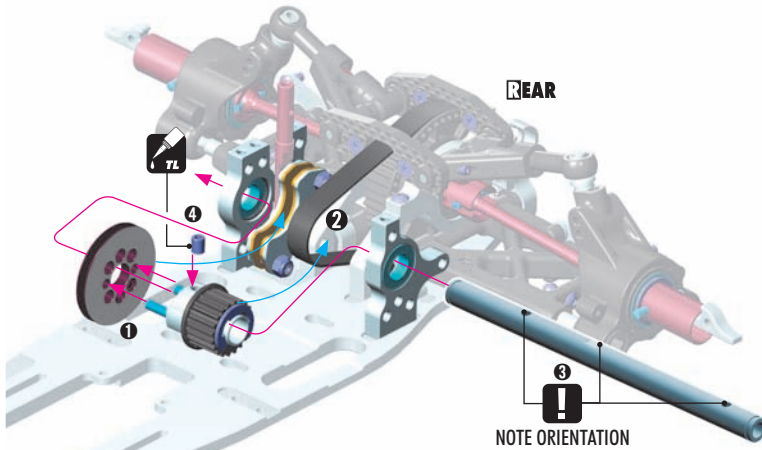
**#345801-0**  
**LOW FRICTION COMPOSITE BELT PULLEY SET - GRAPHITE**  
OPTION  
BELT PULLEY 20T - 2-SPEED CENTER  
BELT PULLEY 18T - ø8 REAR  
BELT PULLEY 18T - ø6 CENTER  
BELT PULLEY 28T - FRONT  
BELT PULLEY 29T - FRONT



## 2. REAR SUSPENSION



901405  
SB M4x5

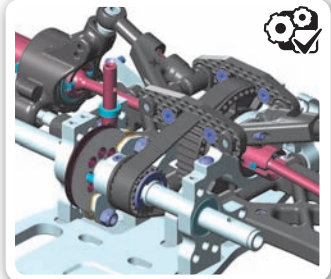
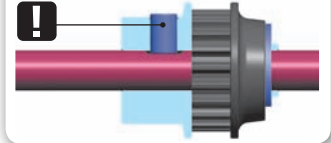


#344111  
VENTILATED BRAKE DISC  
- PRECISION - GROUND -  
LIGHTWEIGHT



### STEP 4 DETAIL

Tighten set-screw onto flat spot.



901303  
SB M3x3



902306  
SH M3x6



902308  
SH M3x8



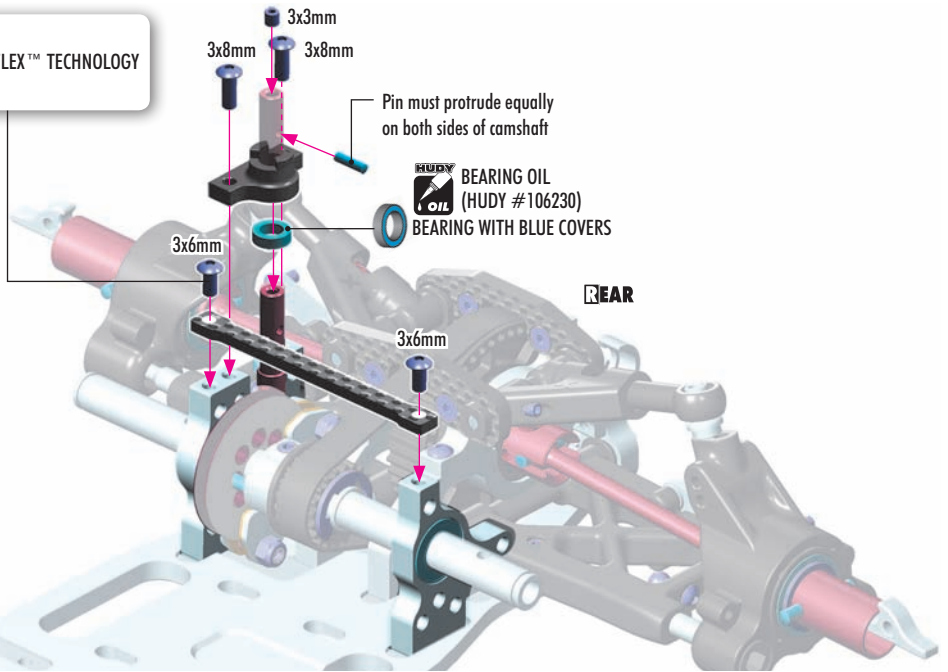
940508  
BB 5x8x2.5



981208  
P 2x8



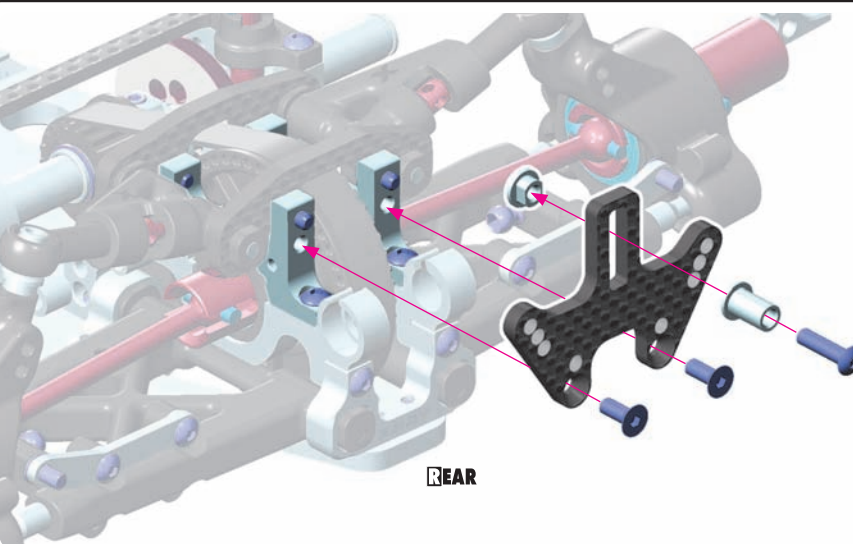
These screws are part of the  
REAR SUSPENSION MULTI-FLEX™ TECHNOLOGY  
(see page 15)



902314  
SH M3x14

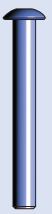


903308  
SFH M3x8

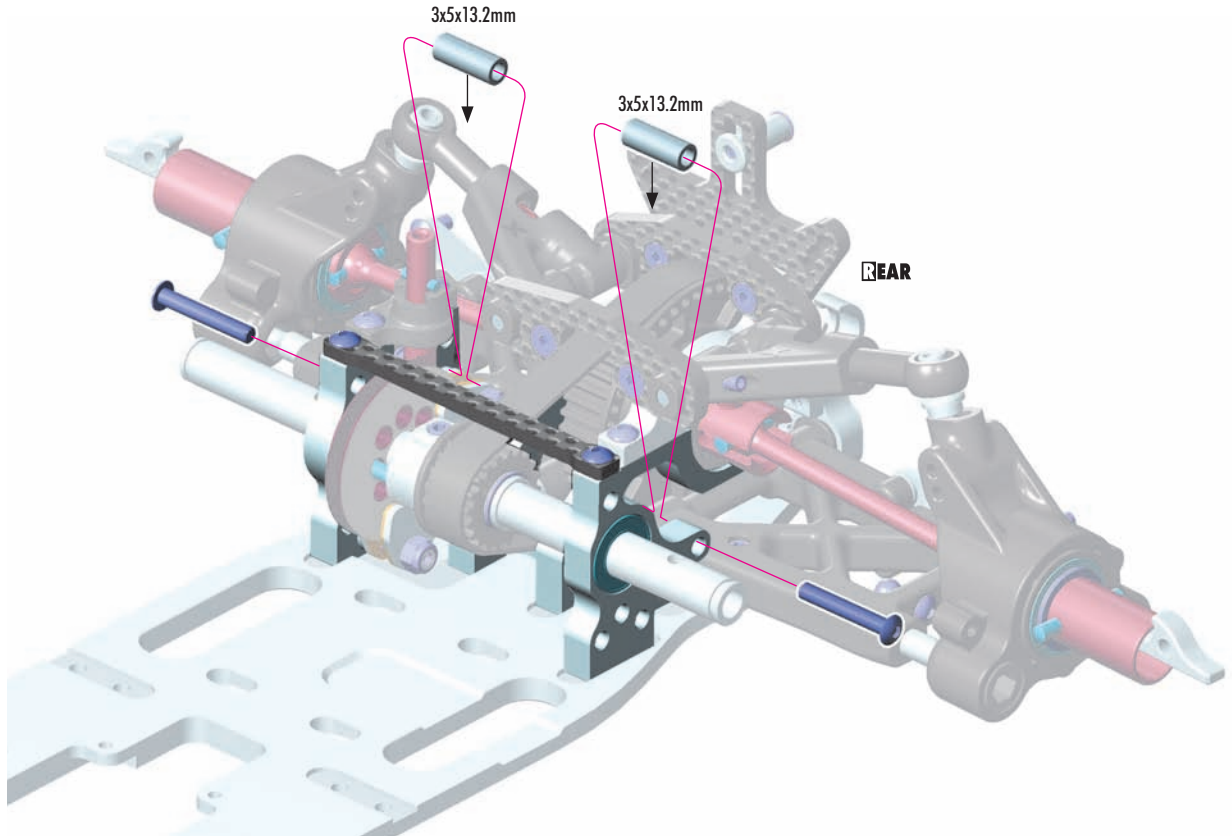




303149-K  
SHIM 3x5x13.2



902325  
SH M3x25

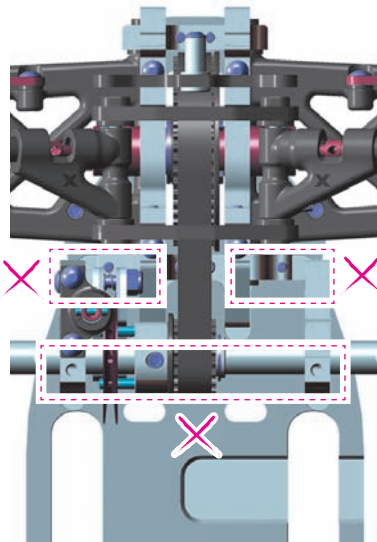


### REAR SUSPENSION MULTI-FLEX™ TECHNOLOGY

The all-new rear suspension design features Multi-Flex™ quick adjustment to easily adapt the handling of the car to particular track conditions and tires used. There are 3 different flex characteristics to choose from.

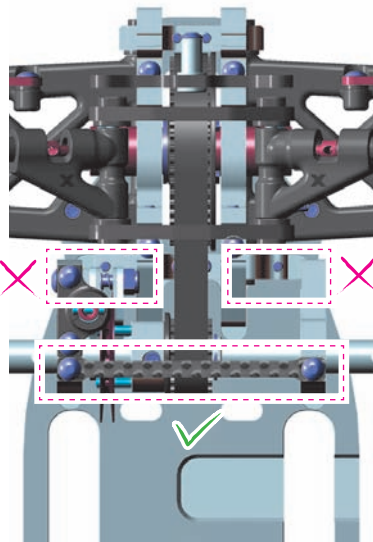
#### ALTERNATIVE 1 SOFT

Graphite brace and posts are not used. This allows maximum flex of the rear suspension and generates maximum rear traction. Recommended for low-traction tracks.



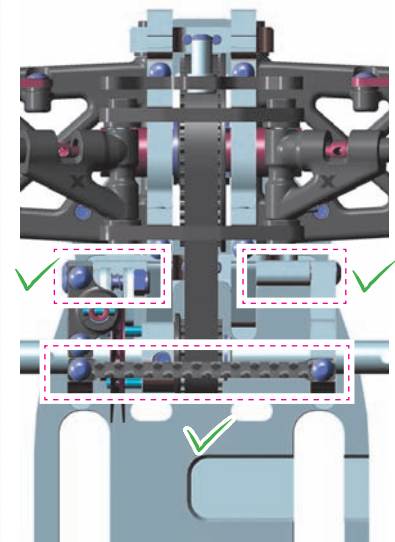
#### ALTERNATIVE 2 MEDIUM

Graphite brace connected to 2-speed bulkheads without posts. This slightly reduces the flex of the rear suspension and improves out-of-corner steering and rotation of the car, but also slightly decreases rear traction. Recommended for medium-traction tracks.



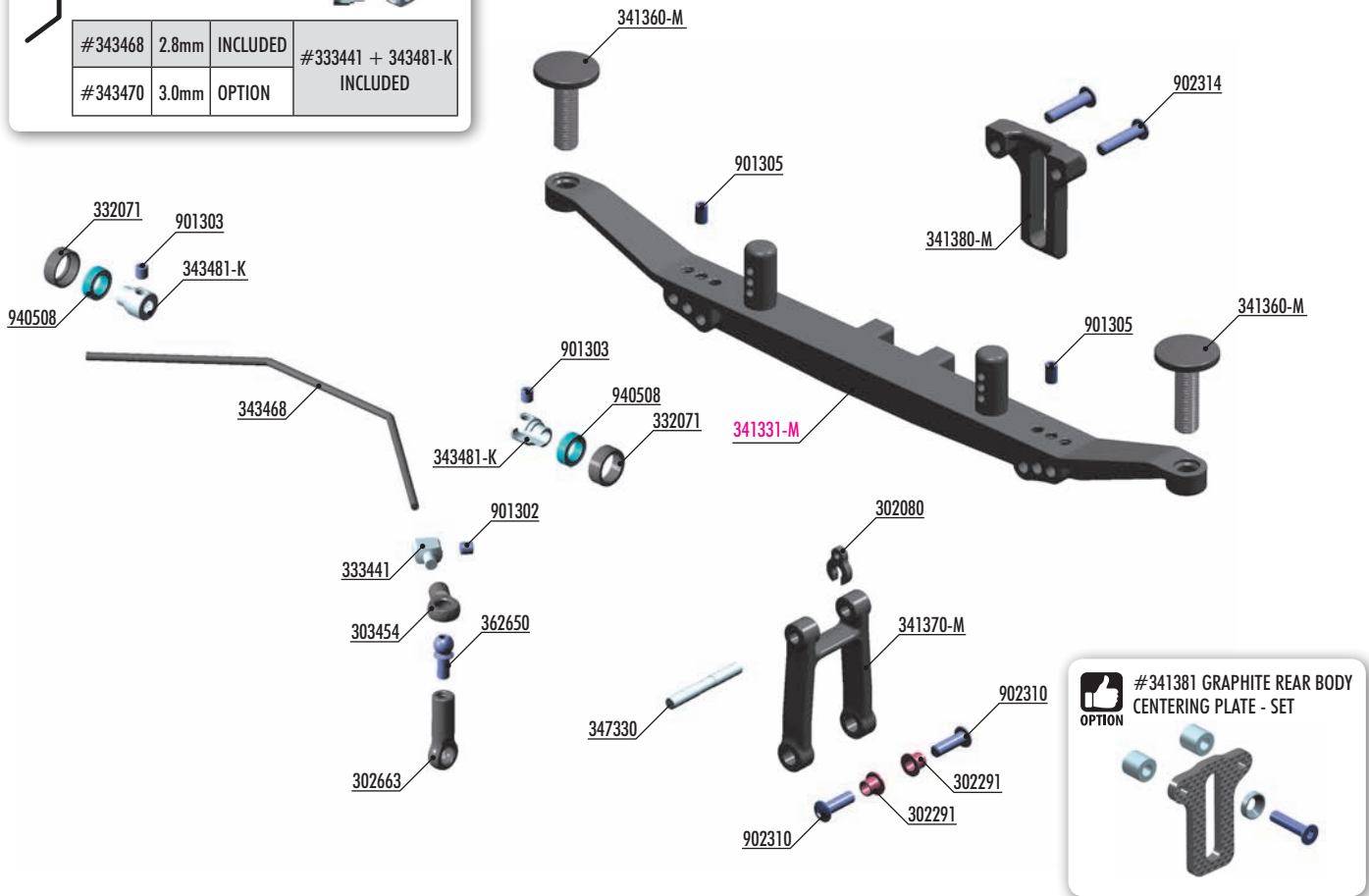
#### ALTERNATIVE 3 STIFF (INITIAL SETTING)

Graphite brace connected to 2-speed bulkheads with posts. This connects the entire rear suspension together, creating a stiff frame which allows the car to rotate more and improves out-of-corner steering. Recommended for high-traction tracks.



## 2. REAR SUSPENSION

REAR ANTI-ROLL BARS			COLLARS	
#343466	2.6mm	OPTION	#333442 + 343482-K	OPTION
#343468	2.8mm	INCLUDED	#333441 + 343481-K	INCLUDED
#343470	3.0mm	OPTION		

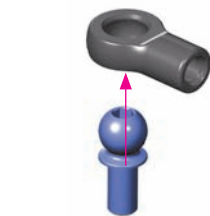


**BAG**

**02.3**

- |          |   |          |  |
|----------|---|----------|--|
| 302080   | CASTER CLIPS SET 4+3+2+1 MM (2)               | 362650   | BALL END 4.9MM WITH THREAD 6MM (2)           |
| 302291   | STEEL STEERING BUSHING (2+2)                  | 901302   | HEX SCREW SB M3x2.5 (10)                     |
| 302663   | COMPOSITE BALL JOINT 4.9MM - OPEN - V2 (8)    | 901303   | HEX SCREW SB M3x3 (10)                       |
| 303454   | BALL JOINT 4.9MM - OPEN (4)                   | 901305   | HEX SCREW SB M3x5 (10)                       |
| 332071   | COMPOSITE BALL-BEARING HUB (4)                | 902310   | HEX SCREW SH M3x10 (10)                      |
| 333441   | ALU ANTI-ROLL BAR COLLAR $\phi$ 3.0 (2)       | 902314   | HEX SCREW SH M3x14 (10)                      |
| 341360-M | COMPOSITE REAR BODY HOLDER SCREW - MEDIUM (2) | 940508   | BALL-BEARING 5x8x2.5 RUBBER SEALED - OIL (2) |
| 341370-M | COMPOSITE REAR BODY HOLDER ARM - MEDIUM       |          |  |
| 341380-M | COMPOSITE REAR BODY CENTERING PLATE - MEDIUM  |          |  |
| 343468   | ANTI-ROLL BAR REAR 2.8 MM                     |          |  |
| 343481-K | ALU CUTTED ANTI-ROLL BAR COLLAR - BLACK (2)   |          |  |
| 347330   | REAR BODY HOLDER ARM PIN (2)                  |          |  |
|          |   | 341331-M | COMPOSITE REAR BODY HOLDER - HIGHER - MEDIUM |

**2x**

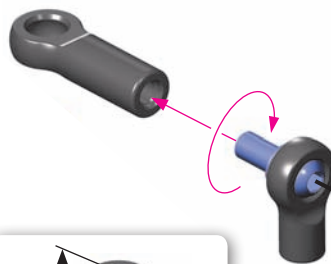


6mm THREAD

**TIP** Install the pivot balls with Professional Multi Tool (HUDY #183011)



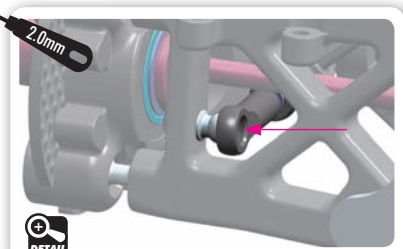
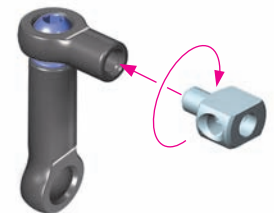
**2x**



26mm



**2x**

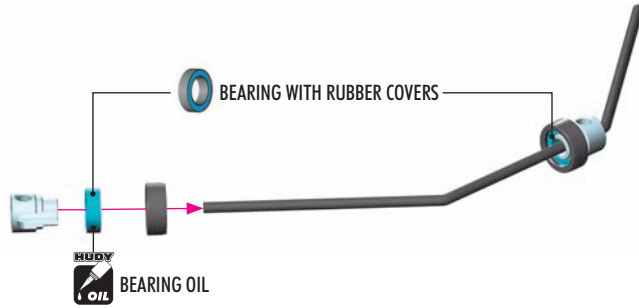




## 2. REAR SUSPENSION

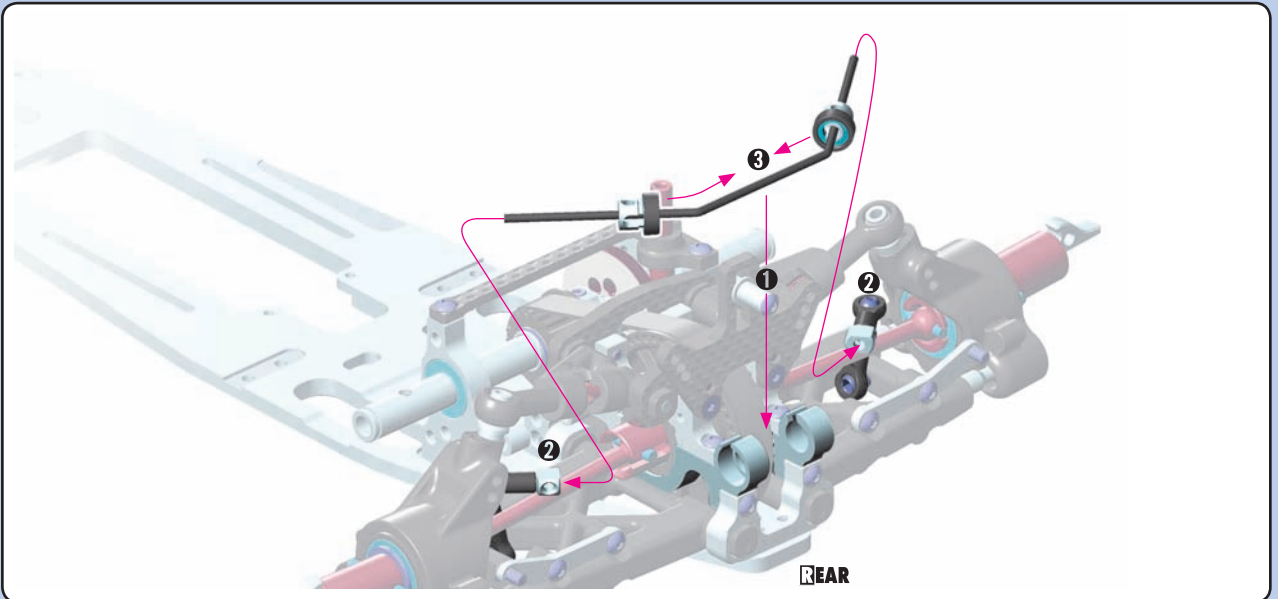


940508  
BB 5x8x2.5



OPTION

REAR ANTI-ROLL BARS			COLLARS	
#343466	2.6mm	OPTION	#333442 + 343482-K	OPTION
#343468	2.8mm	INCLUDED	#333441 + 343481-K	INCLUDED
#343470	3.0mm	OPTION		



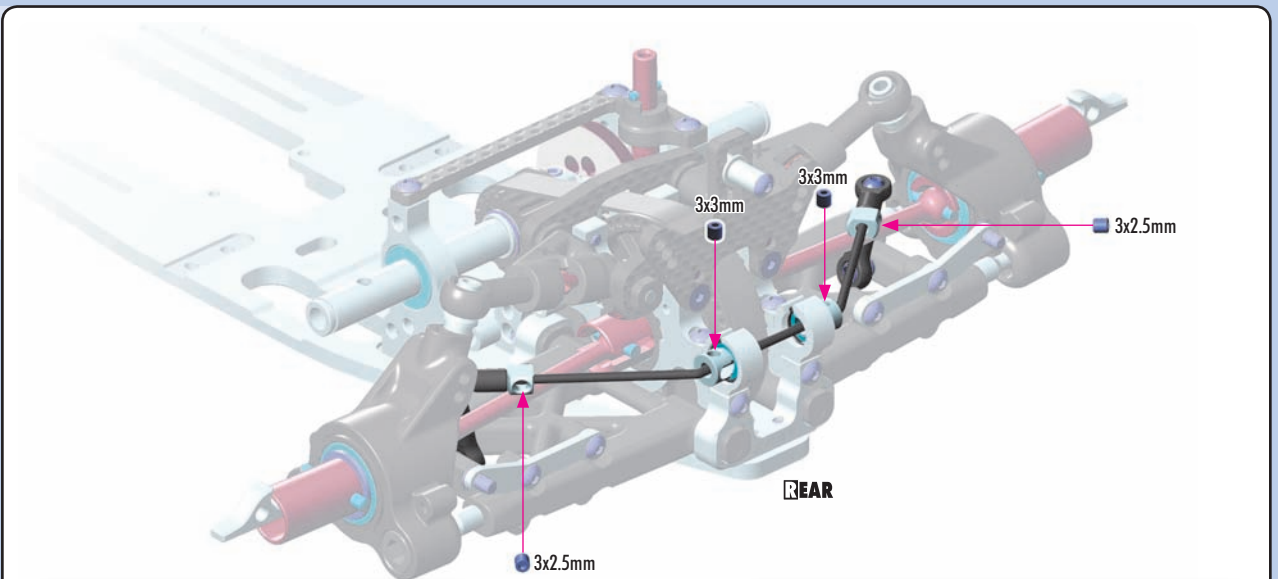
REAR



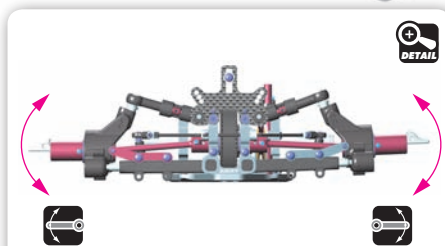
901302  
SB M3x2.5



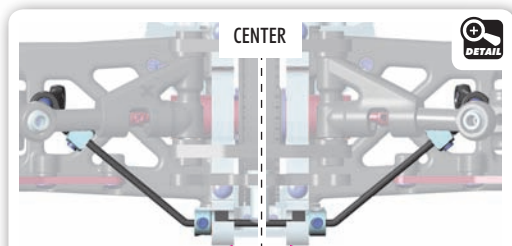
901303  
SB M3x3



REAR



When the bars are set, verify that both sides move at the same time. If they do, the bars are set up correctly. If not, make sure that both downstops are the same and that the bar wire is flat.



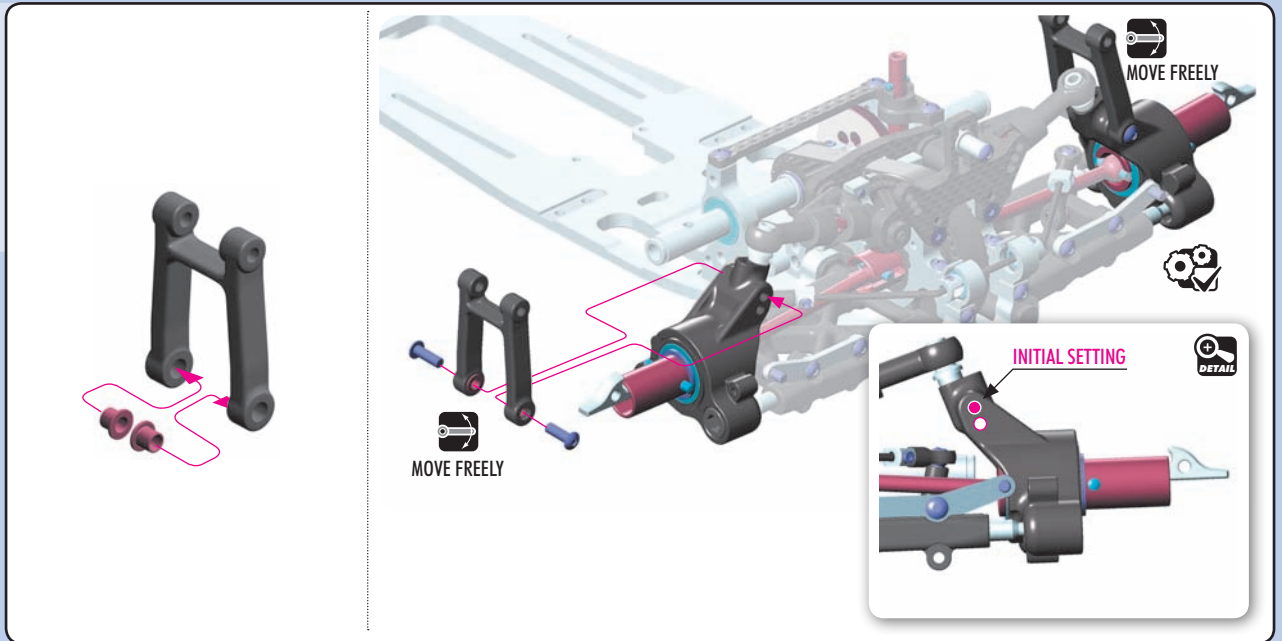
Set the bar into the center, remove the play in the bushings, and tighten the setscrews fully.

REAR

## 2. REAR SUSPENSION



902310  
SH M3x10

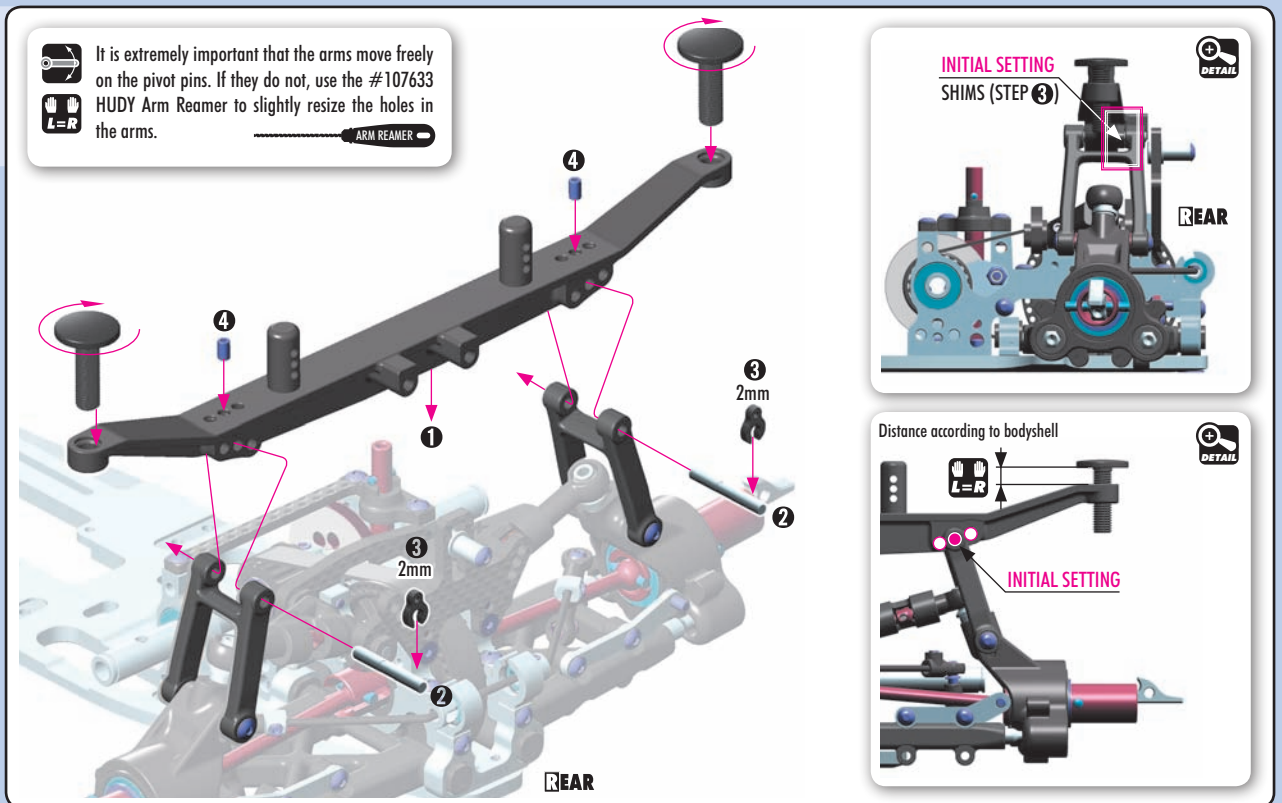


901305  
SB M3x5

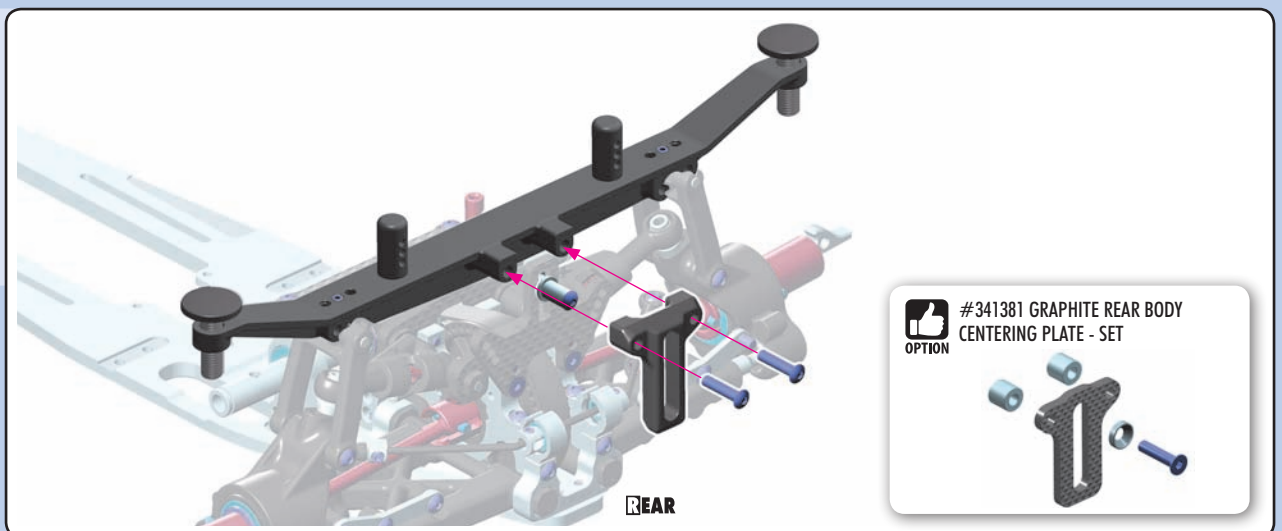


It is extremely important that the arms move freely on the pivot pins. If they do not, use the #107633 HUDY Arm Reamer to slightly resize the holes in the arms.

ARM REAMER



902314  
SH M3x14



# 3. REAR TRANSMISSION

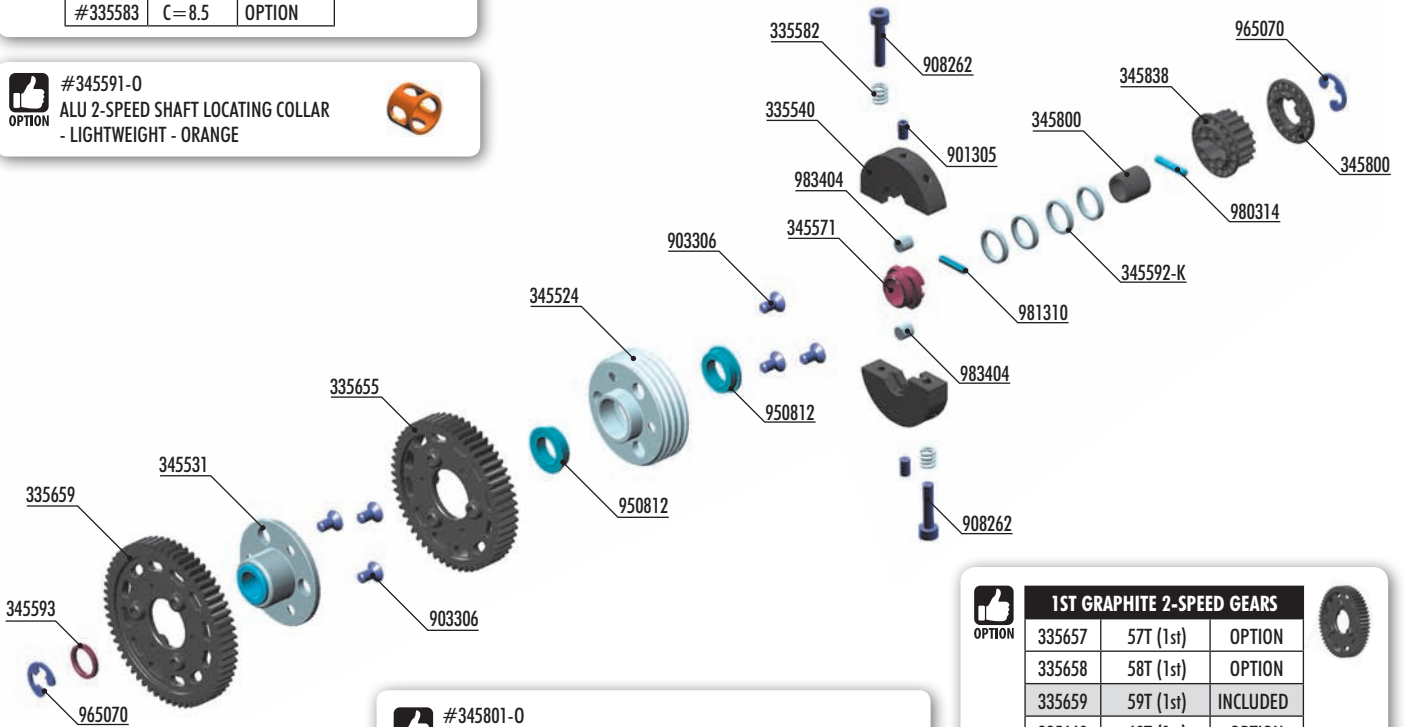


## GEAR BOX SPRING

#335581	C=7.8	OPTION
#335582	C=10.4	INCLUDED
#335583	C=8.5	OPTION



#345591-0  
ALU 2-SPEED SHAFT LOCATING COLLAR  
- LIGHTWEIGHT - ORANGE



#345801-0  
LOW FRICTION COMPOSITE BELT PULLEY SET - GRAPHITE

- BELT PULLEY 20T - 2-SPEED CENTER
- BELT PULLEY 18T - ø8 REAR
- BELT PULLEY 18T - ø6 CENTER
- BELT PULLEY 28T - FRONT
- BELT PULLEY 29T - FRONT



## 1ST GRAPHITE 2-SPEED GEARS

335657	57T (1st)	OPTION
335658	58T (1st)	OPTION
335659	59T (1st)	INCLUDED
335660	60T (1st)	OPTION



## 2ND GRAPHITE 2-SPEED GEARS

335653	53T (2nd)	OPTION
335654	54T (2nd)	OPTION
335655	55T (2nd)	INCLUDED

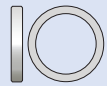


## BAG



- 335540 COMPOSITE 2-SPEED GEAR BOX SHOE SET
- 335655 GRAPHITE 2-SPEED GEAR 55T (2nd)
- 335659 GRAPHITE 2-SPEED GEAR 59T (1st)
- 335582 SPRING FOR GEAR BOX - HARD (2)
- 345524 CARRIER FOR 2-SPEED GEAR (2nd) - SMALL
- 345531 ALU DRIVE FLANGE WITH ONE-WAY BEARING - SMALL - 7075 T6
- 345571 ADAPTER 2-SPEED SMALL
- 345592-K ALU 2-SPEED SHAFT SHIM - BLACK (2)
- 345593 STEEL 2-SPEED SHAFT SHIM (2)
- 345800 COMPOSITE BELT PULLEY COVER SET
- 345838 COMPOSITE SIDE BELT PULLEY 18T ø8 - REAR

- 901305 HEX SCREW SB M3x5 (10)
- 903306 HEX SCREW SFH M3x6 (10)
- 908262 HEX SCREW SOCKET HEAD CAP M2.5x12 (10)
- 950812 BALL-BEARING 8x12x3.5 FLANGED - STEEL SEALED - OIL (2)
- 965070 E-CLIP 7 (10)
- 980314 PIN 3x14 (10)
- 981310 PIN 3x10 (10)
- 983404 ROLLER PIN 4x4 MM (2)



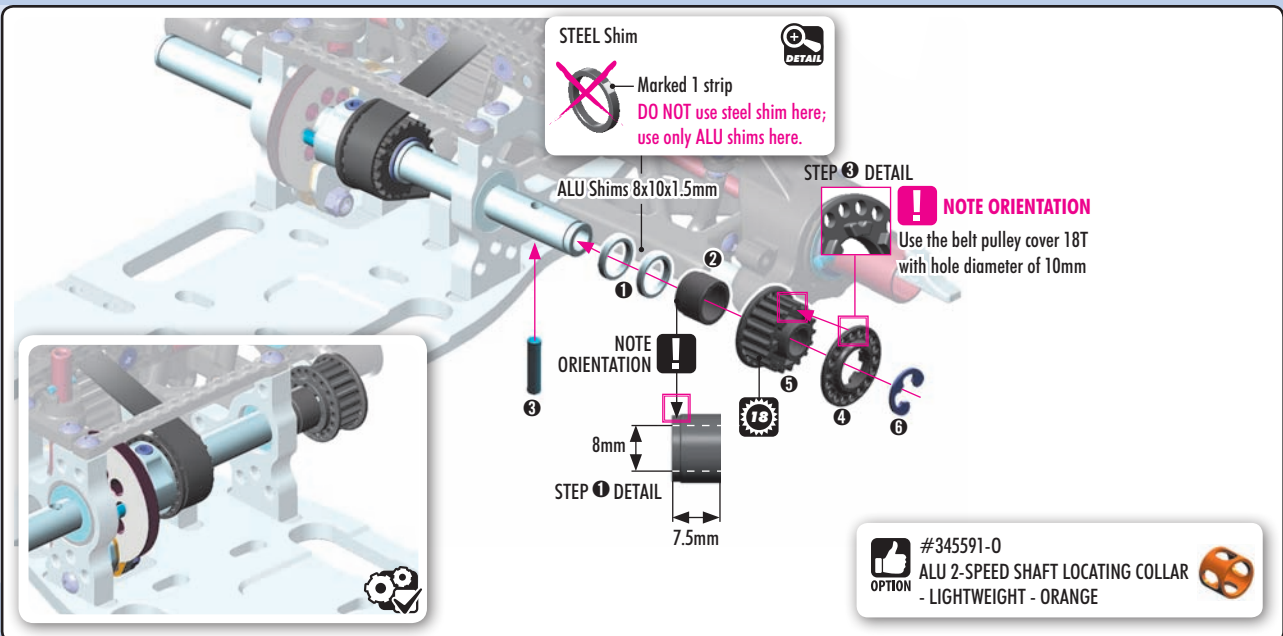
345592-K  
ALU SHIM 8x10x1.5



965070  
C7



980314  
P 3x14



#345591-0  
ALU 2-SPEED SHAFT LOCATING COLLAR  
- LIGHTWEIGHT - ORANGE



# 3. REAR TRANSMISSION



901305  
SB M3x5



908262  
SCH M2.5x12

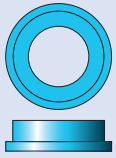


983404  
RP 4x4

GEAR BOX SPRING			
OPTION	#335581	C=7.8	OPTION
	#335582	C=10.4	INCLUDED
	#335583	C=8.5	OPTION



903306  
SFH M3x6



950812  
BB 8x12x4

### 2ND GEAR

### 1ST GEAR



34592-K  
ALU SHIM 8x10x1.5



34593  
STEEL SHIM 8x10x1.5



965070  
C7

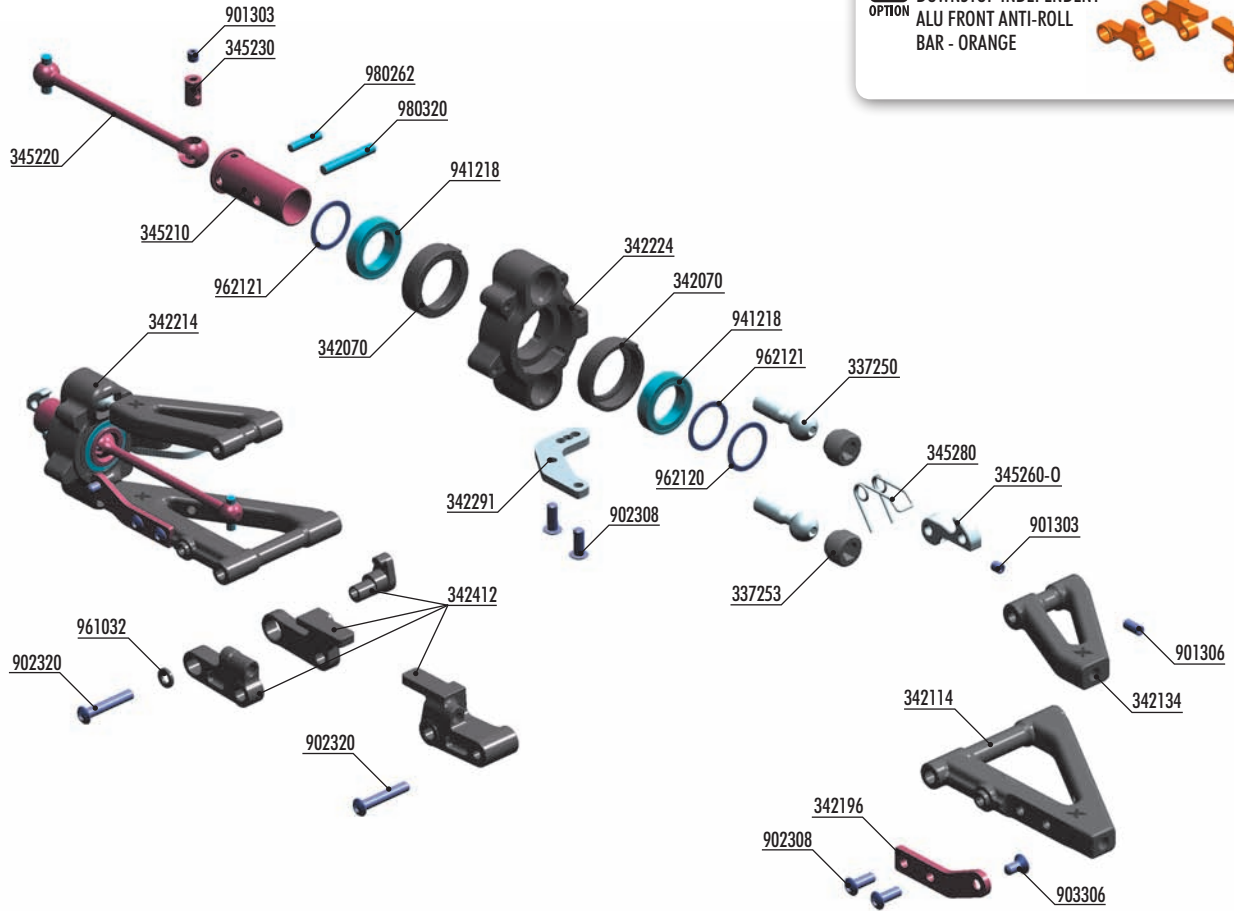


981310  
P 3x10

# 4. FRONT SUSPENSION


**OPTION** #345270 GRAPHITE FRONT AERODYNAMIC DISC 1.6mm - SET 

**OPTION** #342401-0 DOWNSTOP INDEPENDENT ALU FRONT ANTI-ROLL BAR - ORANGE 




**OPTION** **FRONT SUSPENSION UPPER ARMS**

#342131	MEDIUM	OPTION
#342132	HARD	OPTION
#342133	GRAPHITE	OPTION
#342134	SOFT	INCLUDED




**OPTION** **FRONT SUSPENSION LOWER ARMS**


#342114	MEDIUM	INCLUDED
#342115	GRAPHITE	OPTION



**OPTION** **STEERING BLOCKS**


#342214	RIGHT	INCLUDED
#342215	RIGHT	OPTION
#342224	LEFT	INCLUDED
#342225	LEFT	OPTION



**OPTION** #345212 ALU FRONT CVD DRIVE AXLE - SWISS 7075 T6 - HARDCOATED 

**OPTION** **FRONT BLADE ANTI-ROLL BARS**

#342440	FEMALE	OPTION
#342450	MALE	OPTION



**BAG**

**04.1**

- |          |  |        |  |
|----------|--|--------|--|
| 337250   | STEEL PIVOT BALL 8.4 MM (2)                              | 901303 | HEX SCREW SB M3x3 (10)                       |
| 337253   | COMPOSITE ADJUSTING NUT M10x1 (4)                        | 901306 | HEX SCREW SB M3x6 (10)                       |
| 342070   | COMPOSITE SET OF BUSHINGS (2)                            | 902308 | HEX SCREW SH M3x8 (10)                       |
| 342114   | SUSPENSION ARM FOR WIRE ANTI-ROLL BAR - FRONT            | 902320 | HEX SCREW SH M3x20 (10)                      |
| 342134   | COMPOSITE SUSPENSION ARM FRONT UPPER - SHORT - SOFT      | 903306 | HEX SCREW SFH M3x6 (10)                      |
| 342196   | STEEL EXTENSION FOR SUSPENSION ARM - FRONT LOWER (L + R) | 941218 | BALL-BEARING 12x18x4 RUBBER SEALED - OIL (2) |
| 342214   | COMPOSITE STEERING BLOCK FOR AERO DISC - RIGHT           | 961032 | WASHER S 3.2 (10)                            |
| 342224   | COMPOSITE STEERING BLOCK FOR AERO DISC - LEFT            | 962120 | WASHER S 12x15x0.5 (10)                      |
| 342291   | ALU EXTENSION FOR STEERING BLOCK - SWISS 7075 T6 (2)     | 962121 | WASHER S 12x15x1.0 (10)                      |
| 342412   | COMPOSITE FRONT ANTI-ROLL BAR HOLDERS                    | 980262 | PIN 2.5x12 (10)                              |
| 345210   | FRONT WHEEL AXLE - HUDY SPRING STEEL™                    | 980320 | PIN 3x20 (10)                                |
| 345220   | FRONT CVD DRIVE SHAFT 71MM - HUDY SPRING STEEL™          |        |  |
| 345230   | DRIVE SHAFT COUPLING - HUDY SPRING STEEL™                |        |  |
| 345260-0 | ALU FRONT WHEEL LOCK - SWISS 7075 T6 - ORANGE (2)        |        |  |
| 345280   | WHEEL SPRING (2)   |        |  |

# 4. FRONT SUSPENSION

**2x**

Tighten the composite hex nuts using HUDY tool #107581 **TIP**

**PIVOT BALLS MUST MOVE FREELY**  
During initial assembly, tighten each composite hex nut until the pivot ball starts to bind, then loosen slightly. Verify that the pivot balls move freely.

ADJUSTING NUT			
OPTION	#337253	COMPOSITE	INCLUDED
	#337252	ALU	OPTION

PIVOT BALLS			
OPTION	#337250	STEEL	INCLUDED
	#337251	ALU	OPTION
	#337255	TITANIUM	OPTION

STEERING BLOCKS			
OPTION	#342214	RIGHT	INCLUDED
	#342215	RIGHT	OPTION
	#342224	LEFT	INCLUDED
	#342225	LEFT	OPTION

**902308**  
SH M3x8

**2x**

**NOTE ORIENTATION**

**901303**  
SB M3x3

**980262**  
P 2.5x12

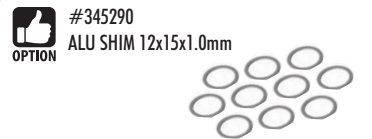
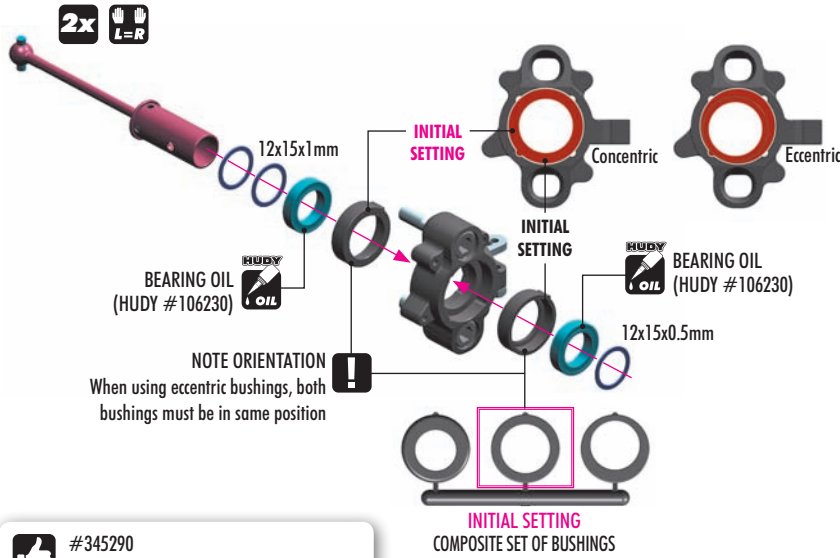
**2x**

**GRAPHITE GREASE (HUDY #106210)**

**STEP 5 DETAIL**  
Tighten the screw fully when the pin is installed.

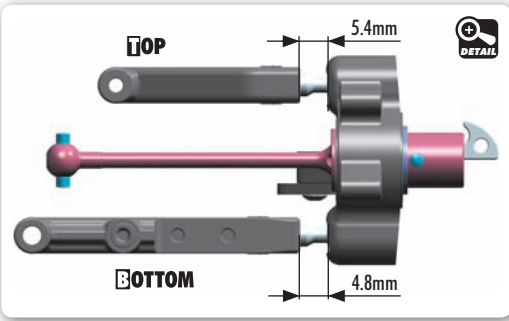
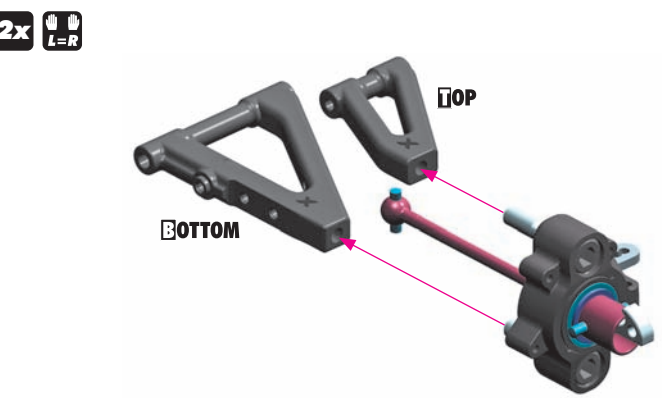
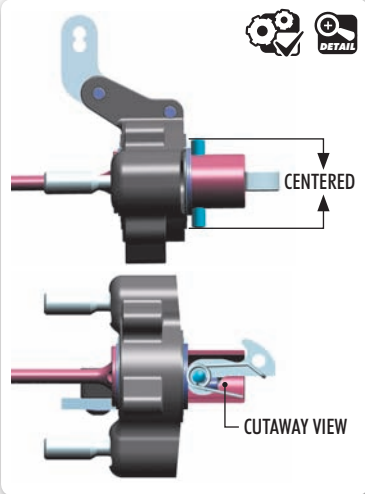
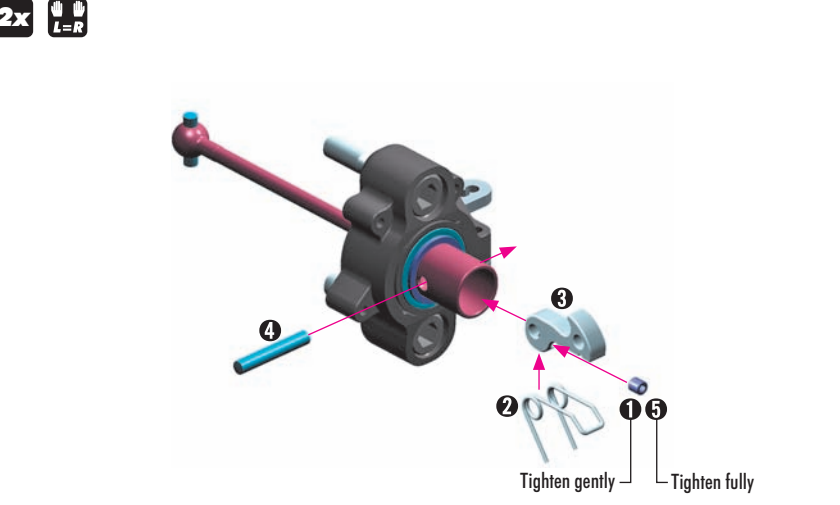
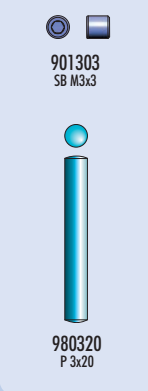
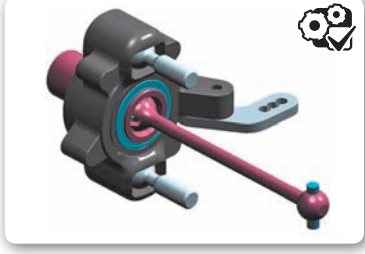
**#345212 ALU FRONT CVD DRIVE AXLE - SWISS 7075 T6 - HARDCOATED**

# 4. FRONT SUSPENSION



**SHIM** **SHIM**

INNER	INITIAL SETTING	OUTER
1+1		0.5
1+0.5		1
1		1+0.5
0.5		1+1
0		1+1+0.5



**OPTION**

FRONT SUSPENSION UPPER ARMS		
#342131	MEDIUM	OPTION
#342132	HARD	OPTION
#342133	GRAPHITE	OPTION
#342134	SOFT	INCLUDED

**OPTION**

FRONT SUSPENSION LOWER ARMS		
#342114	MEDIUM	INCLUDED
#342115	GRAPHITE	OPTION

# 4. FRONT SUSPENSION



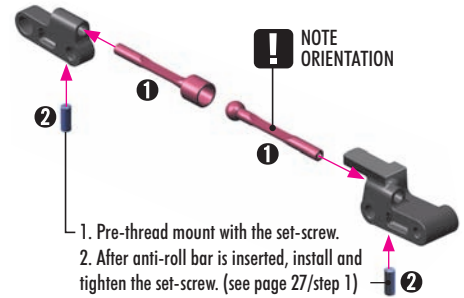
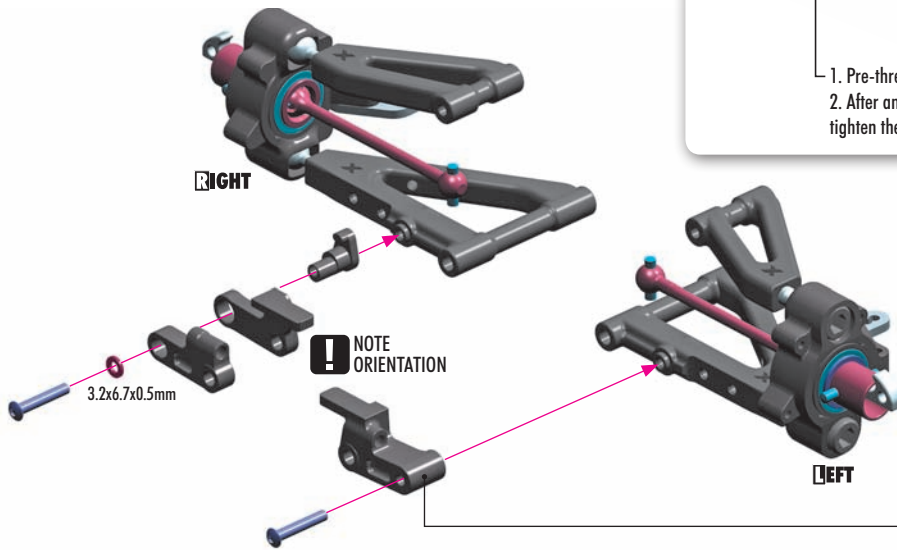
902320  
SH M3x20



961032  
S3.2

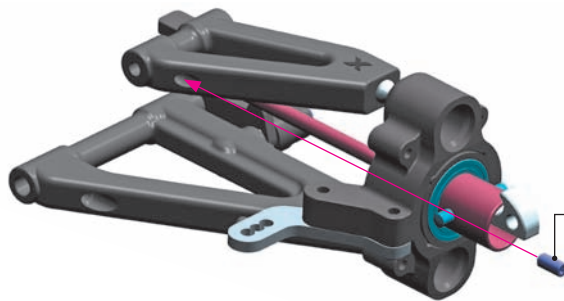
**IMPORTANT**  
Install all mount parts, regardless of the type of front anti-roll bar used (blade or wire). See page 27.

**OPTION** **ALTERNATIVE 2: BLADE ANTI-ROLL BAR**  
Install these blade parts **ONLY** when using the blade-type front anti-roll bar. See page 30.  
**DO NOT** install the blade parts when using the wire-type front anti-roll bar.



901306  
SB M3x6

**2x** **L=R**



TIGHTEN GENTLY, tighten fully when the drive pins are assembled. (Page 29, step 1)

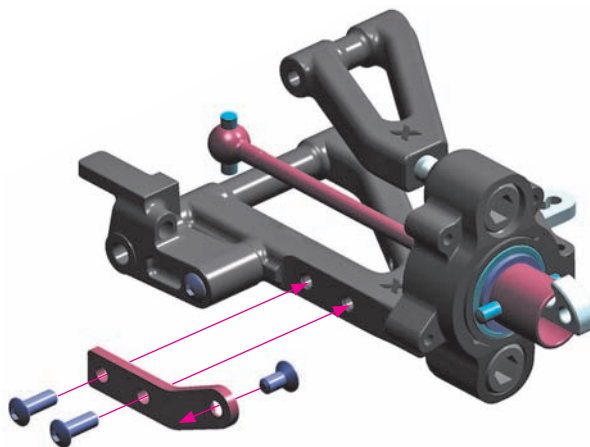


902308  
SH M3x8



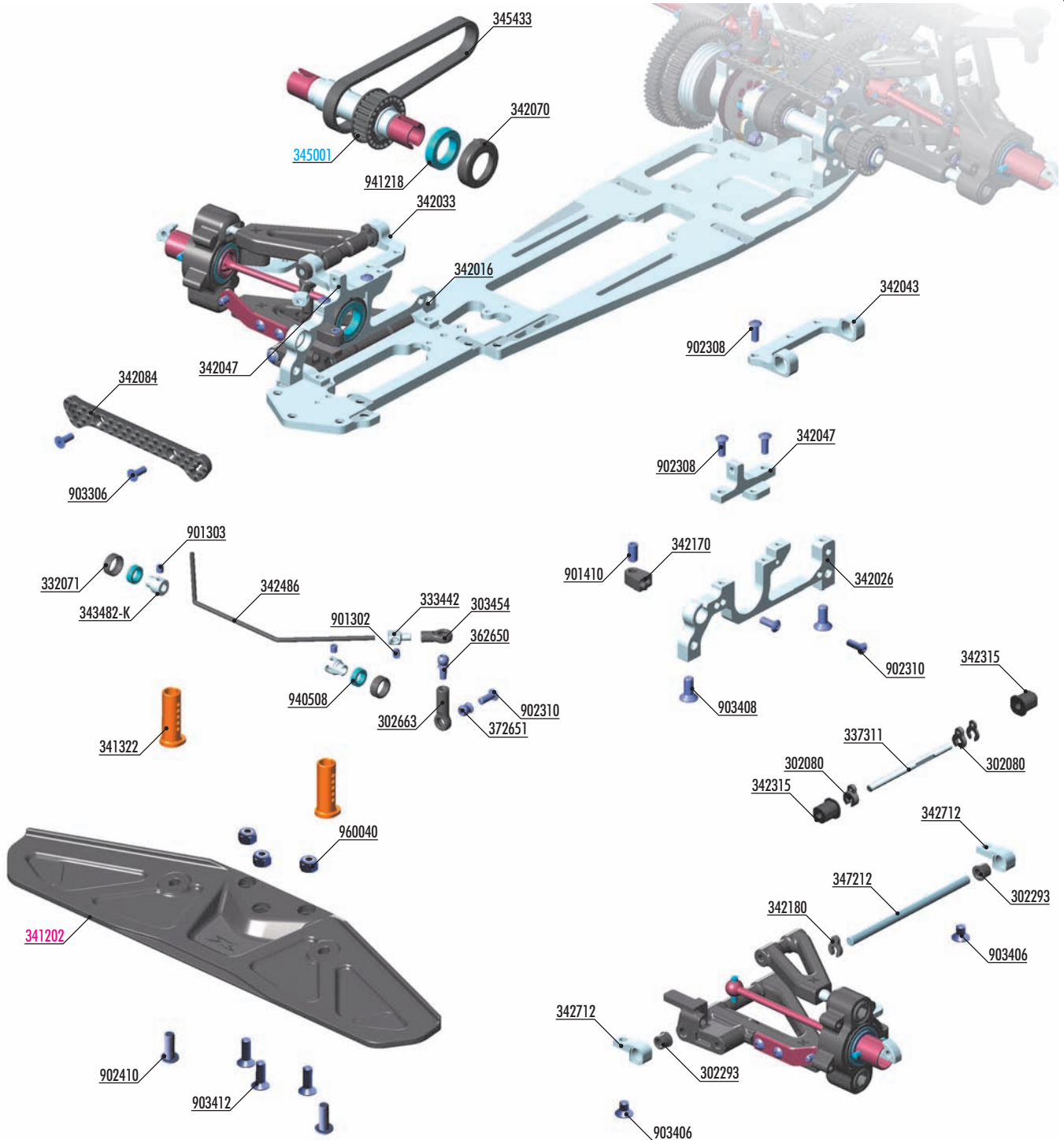
903306  
SFH M3x6

**2x** **L=R**





# 4. FRONT SUSPENSION



**BAG**

**04.2**

- 302080 COMPOSITE CASTER CLIPS SET 4 + 3 + 2 + 1 MM (2)
- 302293 C-HUB BUSHING COMPOSITE - V2 (4)
- 302663 COMPOSITE BALL JOINT 4.9MM - OPEN - V2 (8)
- 303454 BALL JOINT 4.9MM - OPEN (4)
- 332071 COMPOSITE BALL-BEARING HUB (4)
- 333442 ALU ANTI-ROLL BAR COLLAR ø2.6 (2)
- 337311 PIVOT PIN WITH FLAT SPOT (2)
- 341322 ALU FRONT BODY POST - SHORT - SWISS 7075 T6 (2)
- 342016 ALU LOWER BULKHEAD FRONT - SWISS 7075 T6 - RIGHT
- 342026 ALU LOWER BULKHEAD FRONT - SWISS 7075 T6 - LEFT
- 342033 ALU UPPER ARM HOLDER RIGHT - SWISS 7075 T6 - SET
- 342043 ALU UPPER ARM HOLDER LEFT - SWISS 7075 T6 - SET
- 342047 ALU UPPER CLAMP FRONT - SWISS 7075 T6 - (L+R)
- 342070 COMPOSITE SET OF BUSHINGS (2)
- 342084 GRAPHITE SHOCK TOWER FRONT
- 342170 COMPOSITE SUSPENSION ARM DOWNSTOP (2)
- 342180 COMPOSITE LOWER SUSP. ARM CLIPS (2)
- 342315 COMPOSITE FRONT UPPER SUSP. ECCENTRIC BUSHING (4)
- 342486 ANTI-ROLL BAR FRONT 2.6 MM
- 342712 ALU LOWER FRONT SUSPENSION HOLDER (1) - BLACK - 7075 T6
- 343482-K ALU CUTTED ANTI-ROLL BAR COLLAR ø2.7 - BLACK (2)

- 345433 LOW FRICTION DRIVE BELT FRONT 6.0 x 207 MM
- 347212 FRONT LOWER INNER PIVOT PIN (2)
- 362650 BALL END 4.9MM WITH THREAD 6MM (2)
- 372651 PIVOT BALL UNIVERSAL 4.9 MM - HUDY SPRING STEEL (2)
- 901302 HEX SCREW SB M3x2.5 (10)
- 901303 HEX SCREW SB M3x3 (10)
- 901410 HEX SCREW SB M4x10 (10)
- 902308 HEX SCREW SH M3x8 (10)
- 902310 HEX SCREW SH M3x10 (10)
- 902410 HEX SCREW SH M4x10 (10)
- 903306 HEX SCREW SFH M3x6 (10)
- 903406 HEX SCREW SFH M4x6 (10)
- 903408 HEX SCREW SFH M4x8 (10)
- 903412 HEX SCREW SFH M4x12 (10)
- 940508 BALL-BEARING 5x8x2.5 RUBBER SEALED - OIL (2)
- 941218 BALL-BEARING 12x18x4 RUBBER SEALED - OIL (2)
- 960040 NUT M4 (10)

**341202 COMPOSITE BUMPER - DOWNFORCE**

**345001 FRONT ONE-WAY - HARDCOATED + LIGHTWEIGHT ADAPTERS**

# 4. FRONT SUSPENSION

**901410**  
 SB M4x10

**902310**  
 SH M3x10

**903408**  
 SFH M4x8

**2x** **L=R**

**NOTE ORIENTATION**

**NOTE ORIENTATION**

**NOTE ORIENTATION**

**NOTE ORIENTATION**

**NOTE ORIENTATION**

**FRONT**

**DETAIL**

**DETAIL**

**L=R**

3.5mm

**941218**  
 BB 12x18x4

**NOTE ORIENTATION**

**BEARING OIL (HUDY #106230)**

**NOTE ORIENTATION**

**NOTE ORIENTATION**

**NOTE ORIENTATION**

**NOTE ORIENTATION**

**NOTE ORIENTATION**

**Both bushings must be in same position**

**BEARING OIL (HUDY #106230)**

**INITIAL SETTING**  
**COMPOSITE SET OF BUSHINGS**

**L=R**

**FRONT**

**902308**  
 SH M3x8

**2x** **L=R**

**NOTE ORIENTATION**

**NOTE ORIENTATION**

**NOTE ORIENTATION**

**NOTE ORIENTATION**

**FRONT**

**DETAIL**

**NOTE ORIENTATION**

**903306**  
 SFH M3x6

**NOTE ORIENTATION**

**FRONT**

# 4. FRONT SUSPENSION

The RX8 kit includes wire anti-roll bar system. Blade anti-roll bar is available as an option part.

**Wire anti-roll bar (Alternative 1)** page 27

is recommended for long, fast tracks when maximum cornering speed is needed. With the blade anti-roll bar, the car will not dive in the corners and will maintain maximum speed. Follow the "Alternative 1" assembly steps described immediately below.

**Blade anti-roll bar (Alternative 2) OPTIONAL** go to page 30

is recommended for smaller, technical tracks when fast direction changes and side weight changes are needed. Follow the "Alternative 2" assembly steps starting on page 30; DO NOT assemble the blade bar as described immediately below.

## ALTERNATIVE 1 (WIRE ANTI-ROLL BAR) - INITIAL SETTING

**2x**

6mm THREAD

**TIP** Install the pivot balls with Professional Multi Tool (HUDY #183011)

26mm

2.0mm

DETAIL

**903406 SFH M4x6**

**2x L=R**

RIGHT

FRONT

FRONT

LEFT

FORWARD ARM POSITION Shim behind arm.

2mm

(INITIAL SETTING) REARWARD ARM POSITION Shim in front of arm

HUDY GRAPHITE GREASE #106210

It is extremely important that the arms move freely on the pivot pins. If they do not, use the #107634 HUDY Arm Reamer to slightly resize the holes in the arms.

ARM REAMER

**IMPORTANT!** The position of the front arm directly influences the steering Ackermann (angle of the steering linkages). When the arm is moved to rearward position (shim in front of the arm), the angle of the steering linkages changes and gives less Ackermann. By decreasing the Ackermann, the car gets more turn-in & increased steering at corner exit, but less cornering speed. The Ackermann can be changed by the Quick-Saver™ (see page 33).

**902308 SH M3x8**

**2x L=R**

NOTE ORIENTATION

4mm

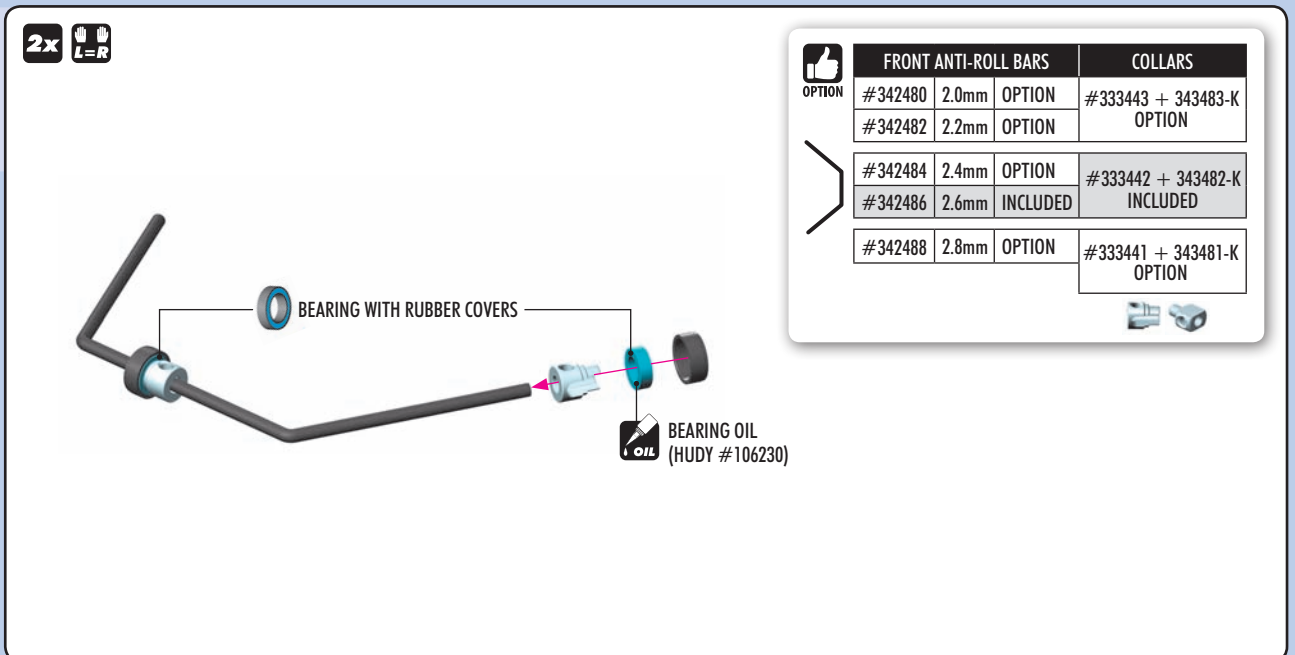
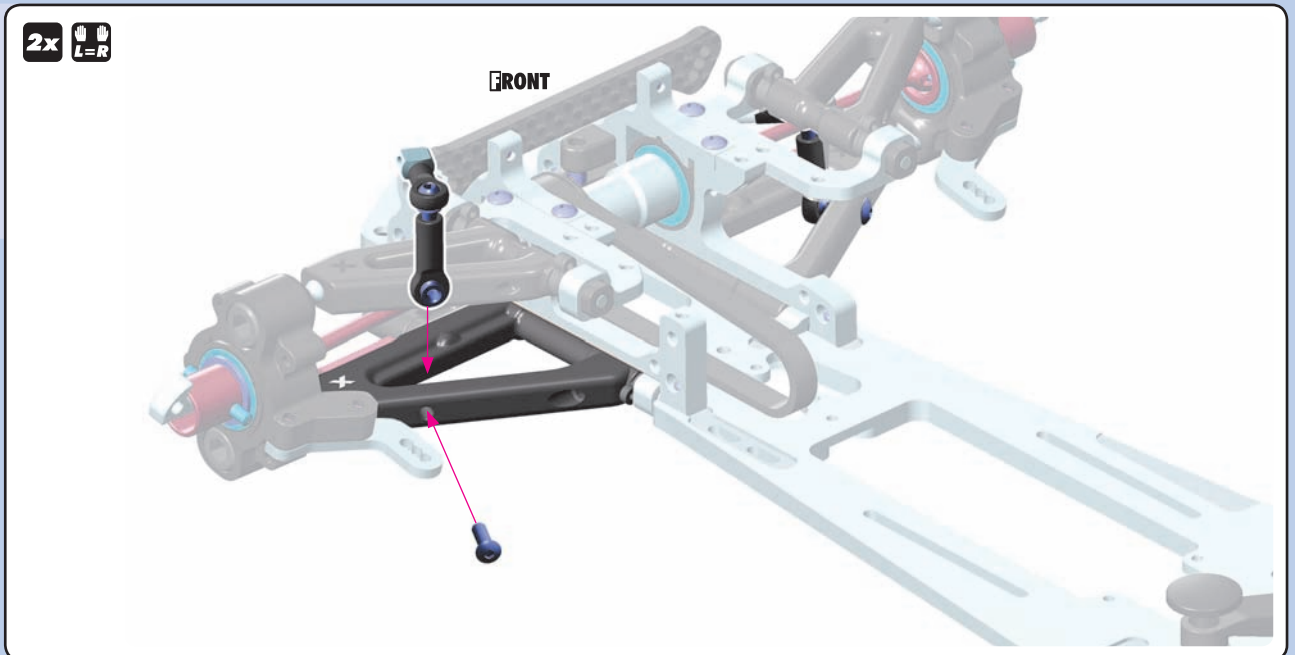
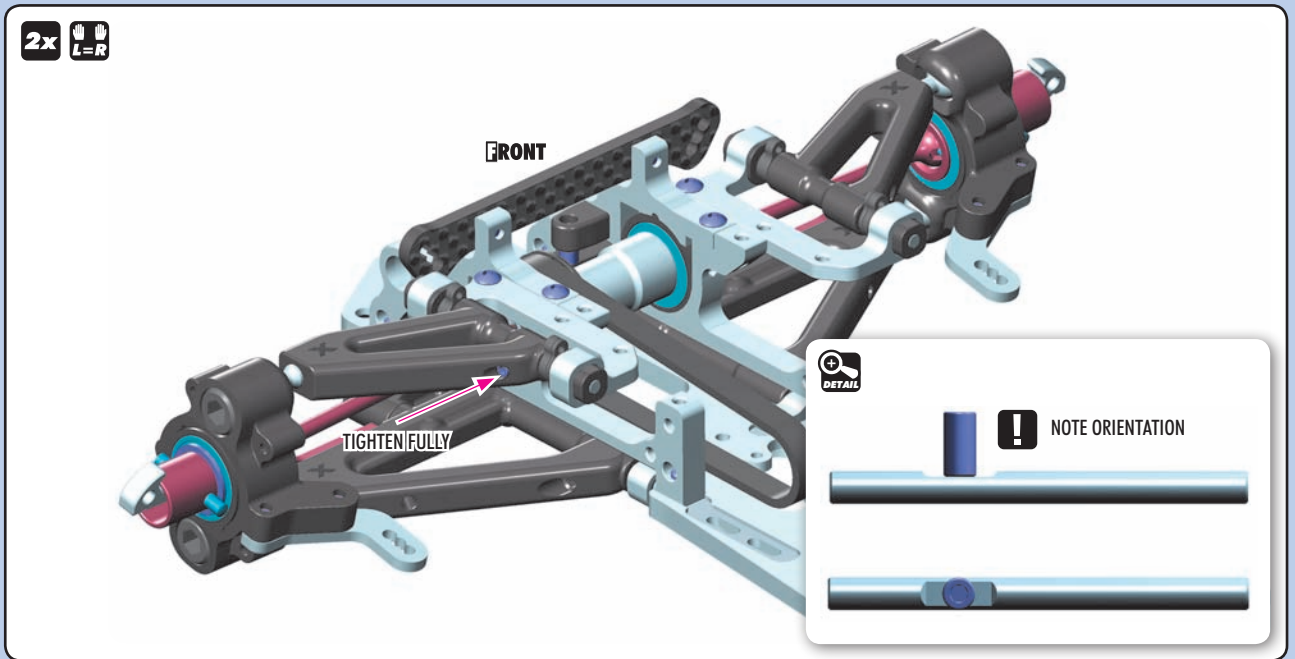
3mm

1mm

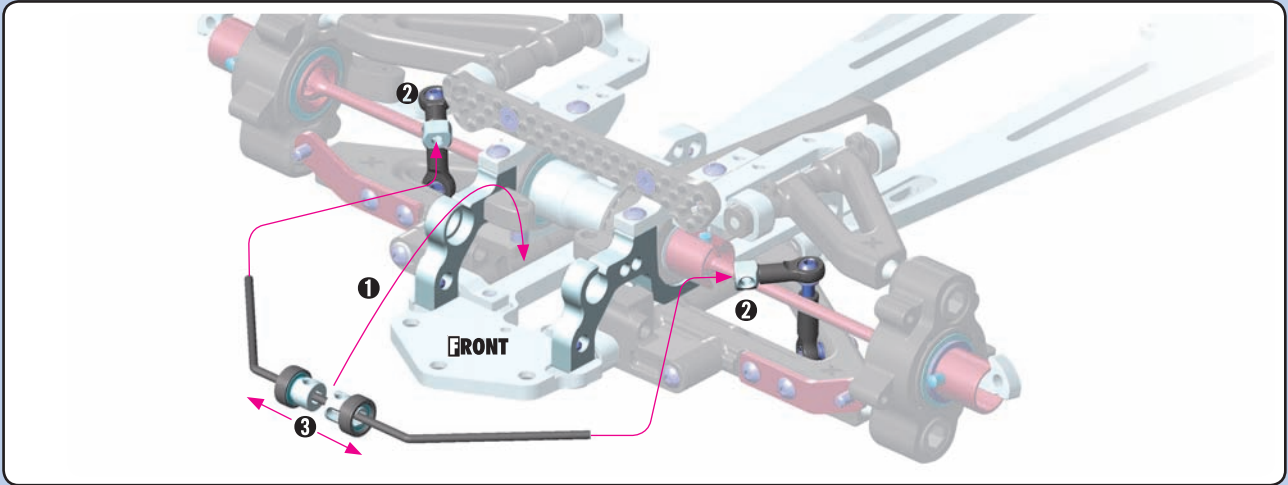
(INITIAL SETTING) Use 0mm suspension holders

COMPOSITE SET OF BUSHINGS INITIAL SETTING

# 4. FRONT SUSPENSION



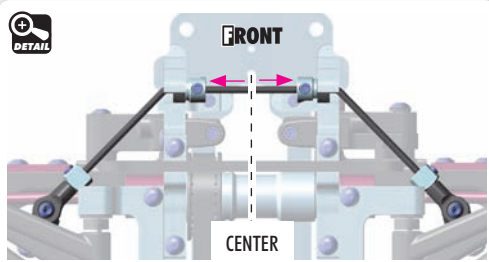
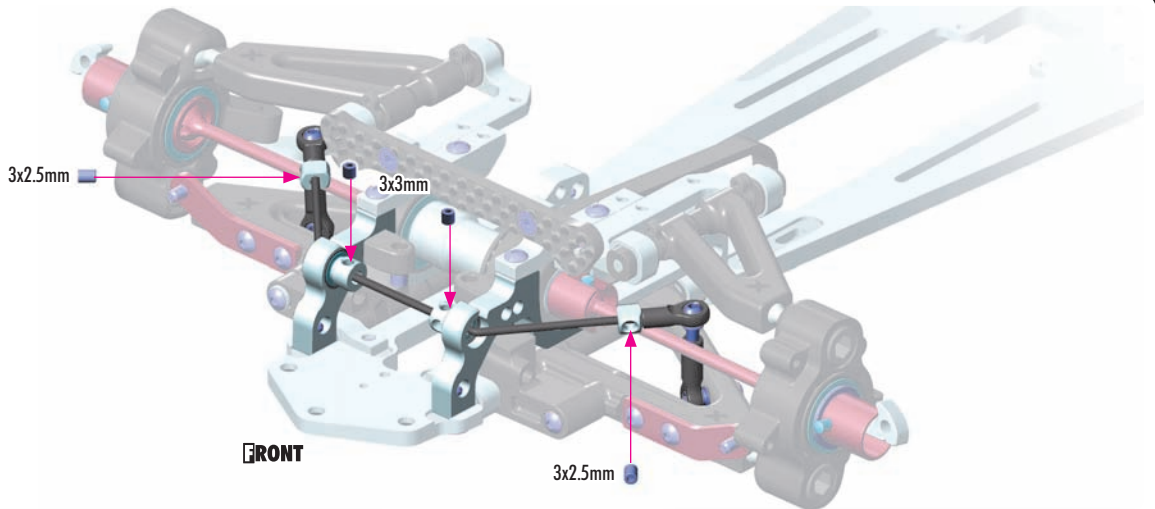
# 4. FRONT SUSPENSION



901302  
SB M3x2.5

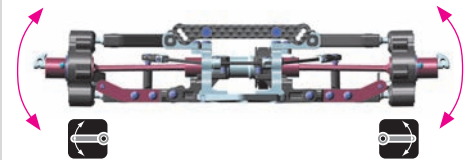


901303  
SB M3x3



Set the bar into the center, remove the play in the bushings, and tighten the set-screws fully.

When the bars are set, verify that both sides move at the same time. If they do, the bars are set up correctly. If not, make sure that both downstops are the same and that the bar wire is flat. If the sides still do not move at the same time, adjust the length of the bar holders.



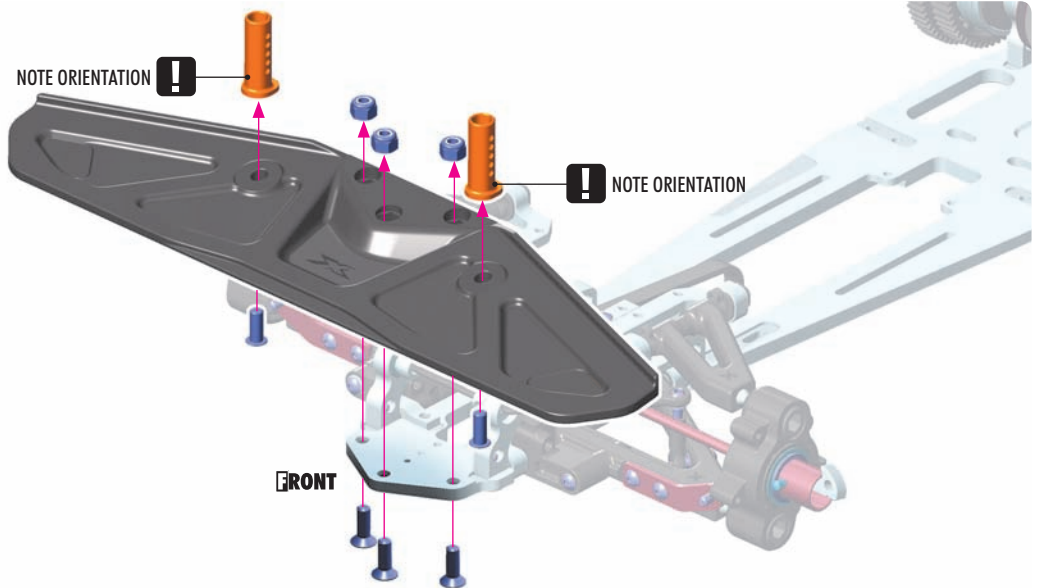
902410  
SH M4x10



903412  
SFH M4x12



960040  
N M4



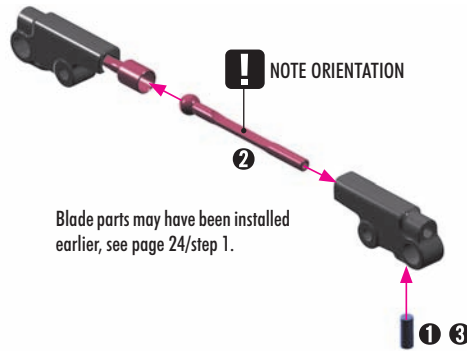
# 4. FRONT SUSPENSION



## ALTERNATIVE 2 (BLADE ANTI-ROLL BAR) - OPTION

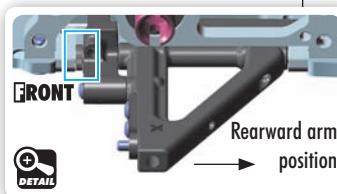
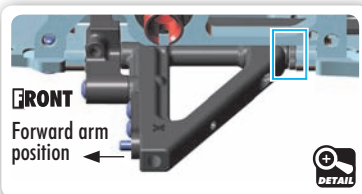
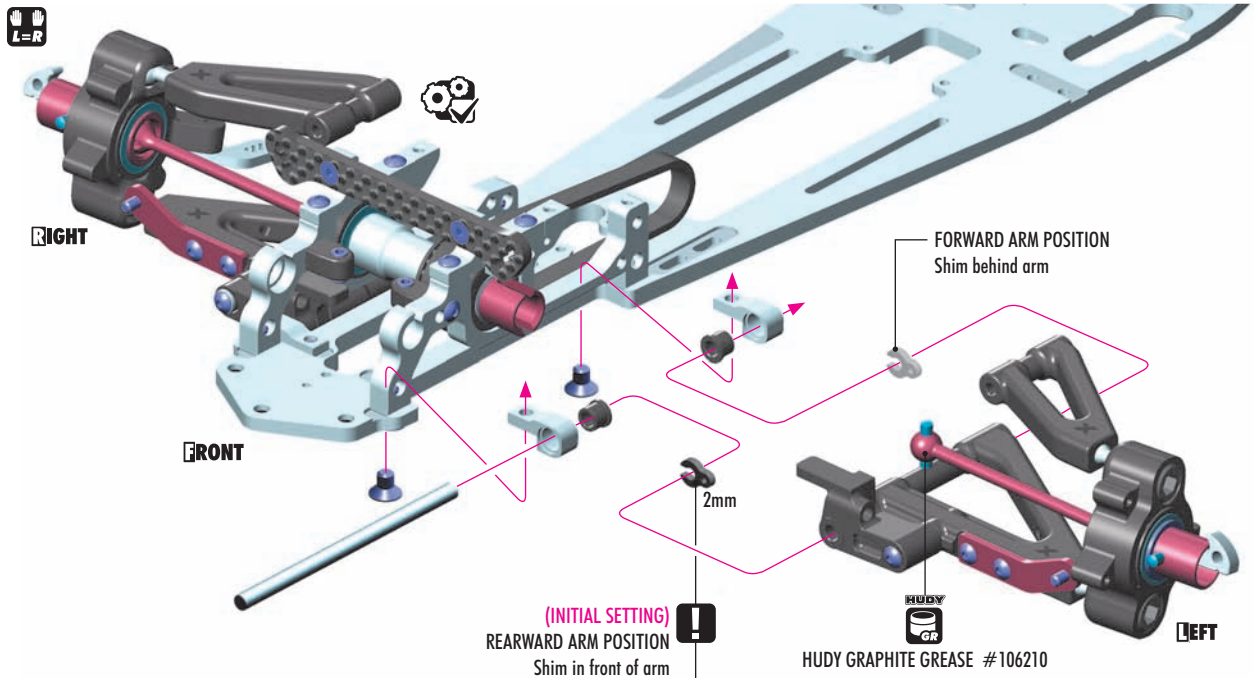


- 1 Pre-thread mount with the set-screw
- 2 After anti-roll bar is inserted, install and tighten the set-screw



Blade parts may have been installed earlier, see page 24/step 1.

FRONT BLADE ANTI-ROLL BARS		
#342440	FEMALE	OPTION
#342450	MALE	OPTION

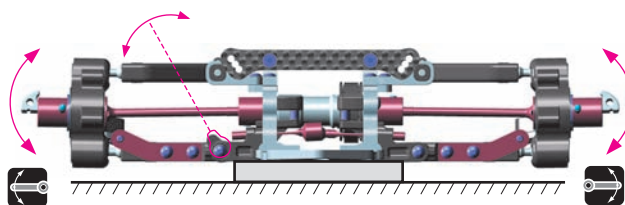


It is extremely important that the arms move freely on the pivot pins. If they do not, use the #107634 HUDY Arm Reamer to slightly resize the holes in the arms.

### IMPORTANT!

The position of the front arm directly influences the steering Ackermann (angle of the steering linkages). When the arm is moved to rearward position (shim in front of the arm), the angle of the steering linkages changes and gives less Ackermann. By decreasing the Ackermann, the car gets more turn-in & increased steering at corner exit, but less cornering speed. The Ackermann can be changed by the Quick-Saver™ (see page 33).

When the bar is set, verify that both sides move at the same time. If they do, the bars are set up correctly. If not, make sure that both downstops are the same. If the arms still do not move at the same time, gently loosen the screw which holds eccentric bushing and adjust the bushing until both arms move at the same time.



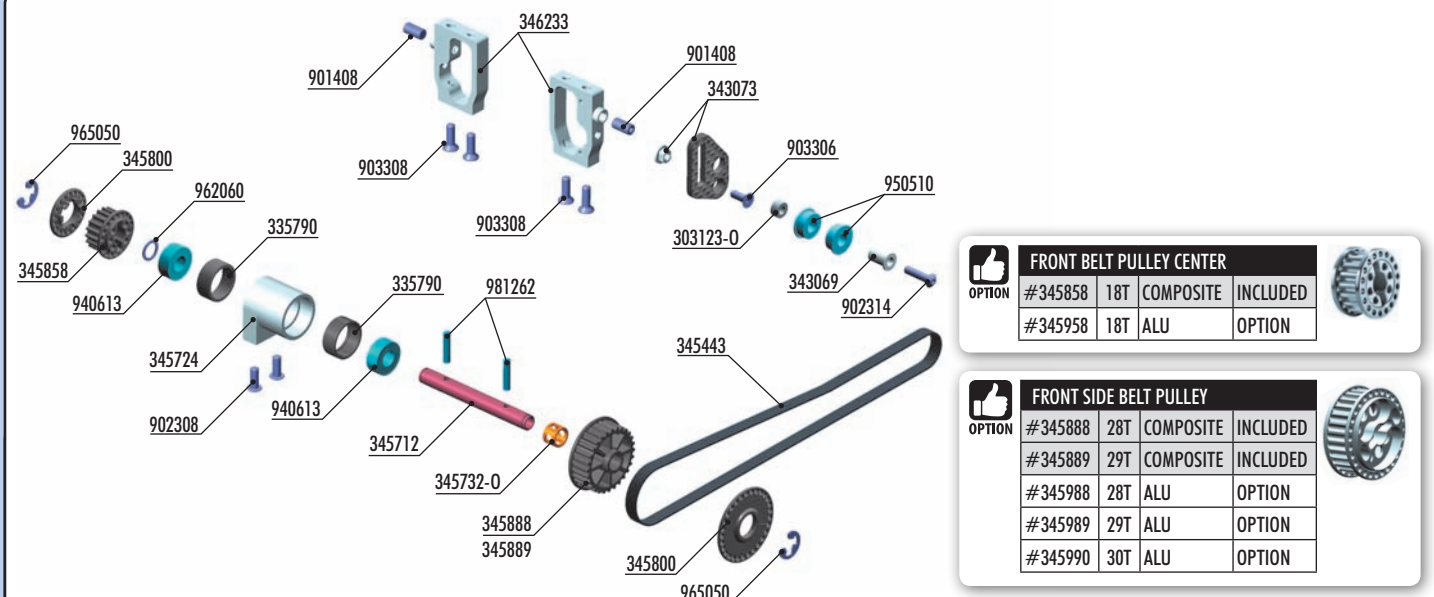
Ensure that the suspension arms move freely. Ensure that the eccentric holders move freely.

Do not insert ball into cup too deeply or bars will bind during operation



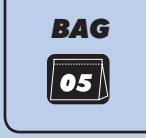
Each anti-roll bar blade has a hex hole at its end. Use a 1.5mm hex wrench to adjust the blades.

# 5. FRONT TRANSMISSION

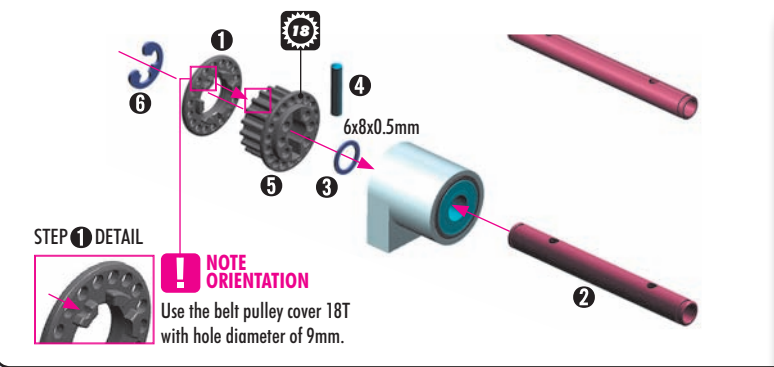
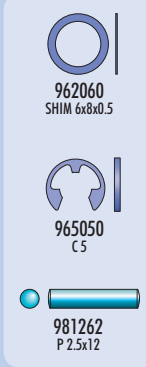
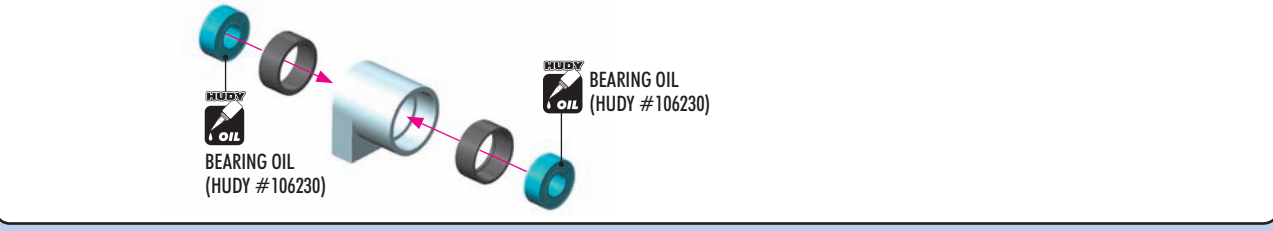
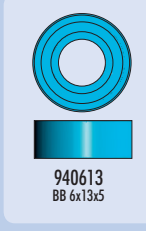


FRONT BELT PULLEY CENTER				
OPTION	#345858	18T	COMPOSITE	INCLUDED
	#345958	18T	ALU	OPTION

FRONT SIDE BELT PULLEY				
OPTION	#345888	28T	COMPOSITE	INCLUDED
	#345889	29T	COMPOSITE	INCLUDED
	#345988	28T	ALU	OPTION
	#345989	29T	ALU	OPTION
	#345990	30T	ALU	OPTION



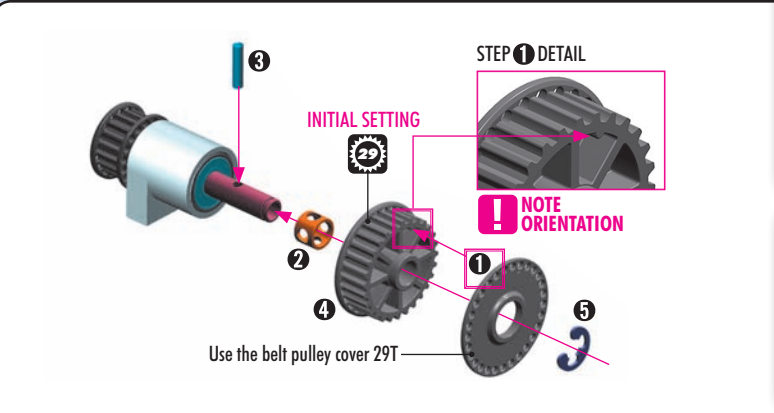
- |          |   |        |  |
|----------|---|--------|--|
| 303123-0 | ALU SHIM 3x6x2.0MM - ORANGE (10)                                | 346233 | ALU RADIO PLATE MOUNT - BLACK - SWISS 7075 T6 (2)    |
| 335790   | COMPOSITE BALL-BEARING BUSHING FOR MIDDLE SHAFT (2)             | 901408 | HEX SCREW SB M4x8 (10)                               |
| 343069   | STEEL BUSHING (2)   | 902308 | HEX SCREW SH M3x8 (10)                               |
| 343073   | BELT TENSIONER SET - STEEL                                      | 902314 | HEX SCREW SH M3x14 (10)                              |
| 345443   | LOW FRICTION DRIVE BELT SIDE 6.0 x 435 MM                       | 903306 | HEX SCREW SFH M3x6 (10)                              |
| 345712   | FRONT MIDDLE SHAFT - LIGHTWEIGHT - HUDY SPRING STEEL™           | 903308 | HEX SCREW SFH M3x8 (10)                              |
| 345724   | ALU FRONT MIDDLE SHAFT HOLDER - BLACK - SWISS 7075 T6           | 940613 | BALL-BEARING 6x13x5 RUBBER SEALED - OIL (2)          |
| 345732-0 | ALU MIDDLE SHAFT LOCATING COLLAR - SHORT - LIGHTWEIGHT - ORANGE | 950510 | BALL-BEARING 5x10x4 FLANGED - STEEL SEALED - OIL (2) |
| 345800   | COMPOSITE BELT PULLEY COVER SET                                 | 962060 | WASHER S 6x8x0.5 (10)                                |
| 345858   | COMPOSITE FRONT BELT PULLEY 18T ø6 - CENTER                     | 965050 | E-CLIP 5 (10)  |
| 345888   | COMPOSITE SIDE BELT PULLEY 28T - FRONT                          | 981262 | PIN 2.5x12 (10)                                      |
| 345889   | COMPOSITE SIDE BELT PULLEY 29T - FRONT                          |        |  |



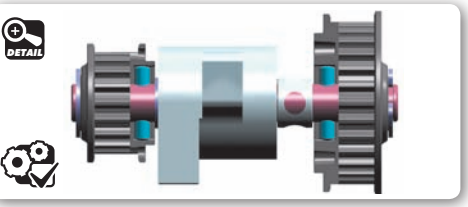
OPTION #345801-0  
LOW FRICTION COMPOSITE BELT PULLEY SET - GRAPHITE

BELT PULLEY 20T - 2-SPEED CENTER  
BELT PULLEY 18T - ø8 REAR  
BELT PULLEY 18T - ø6 CENTER  
BELT PULLEY 28T - FRONT  
BELT PULLEY 29T - FRONT

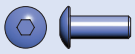
FRONT BELT PULLEY CENTER				
OPTION	#345858	18T	COMPOSITE	INCLUDED
	#345958	18T	ALU	OPTION



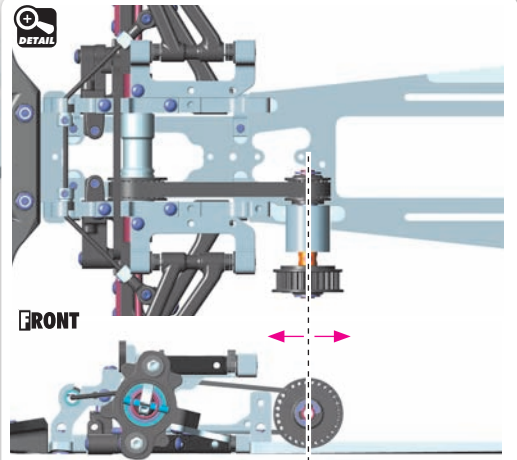
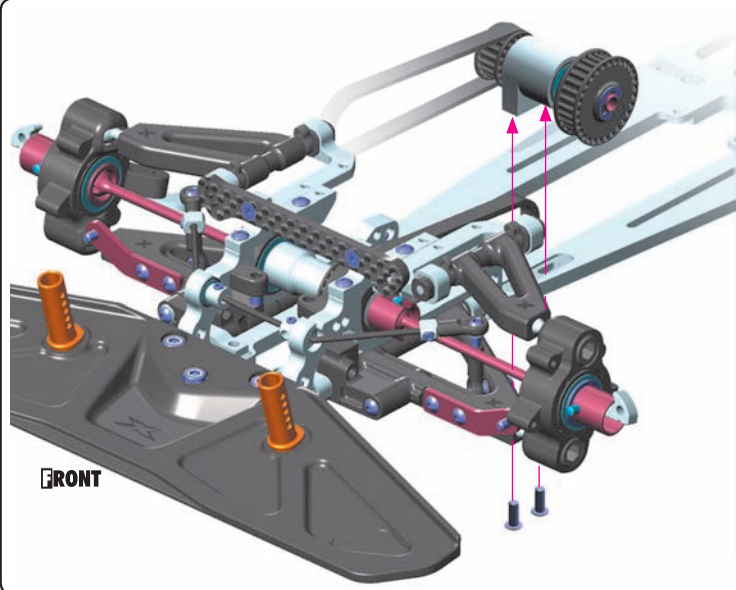
FRONT SIDE BELT PULLEY				
OPTION	#345888	28T	COMPOSITE	INCLUDED
	#345889	29T	COMPOSITE	INCLUDED
	#345988	28T	ALU	OPTION
	#345989	29T	ALU	OPTION
	#345990	30T	ALU	OPTION



# 5. FRONT TRANSMISSION



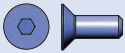
902308  
SH M3x8



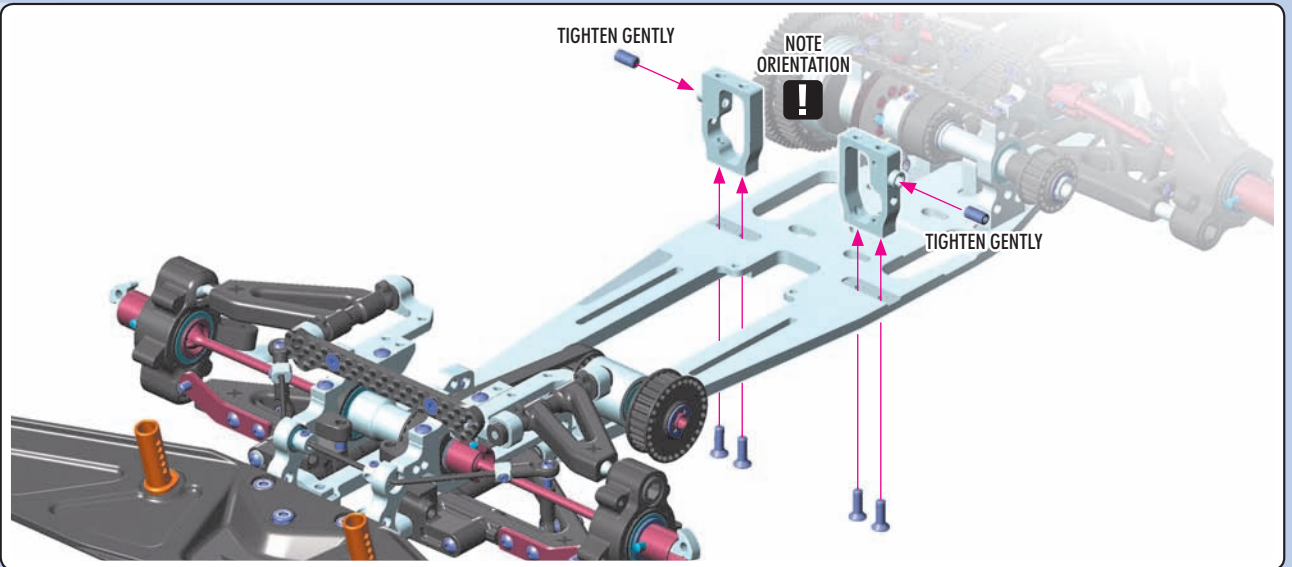
Adjust the tension of the front & side belt by moving the front middle shaft holder.



901408  
SB M4x8



903308  
SFH M3x8



303123-0  
SHIM 3x6x2



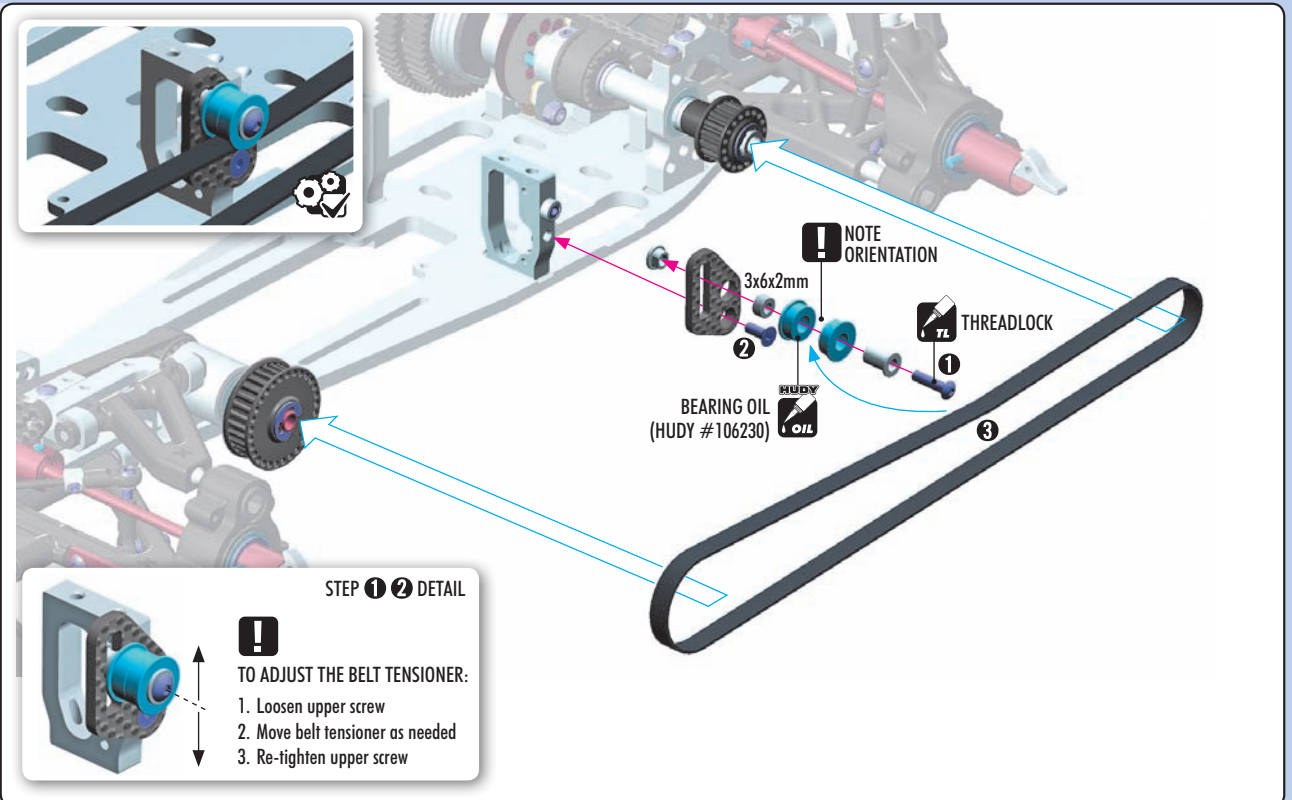
902314  
SH M3x14



903306  
SFH M3x6



950510  
BB 5x10x4



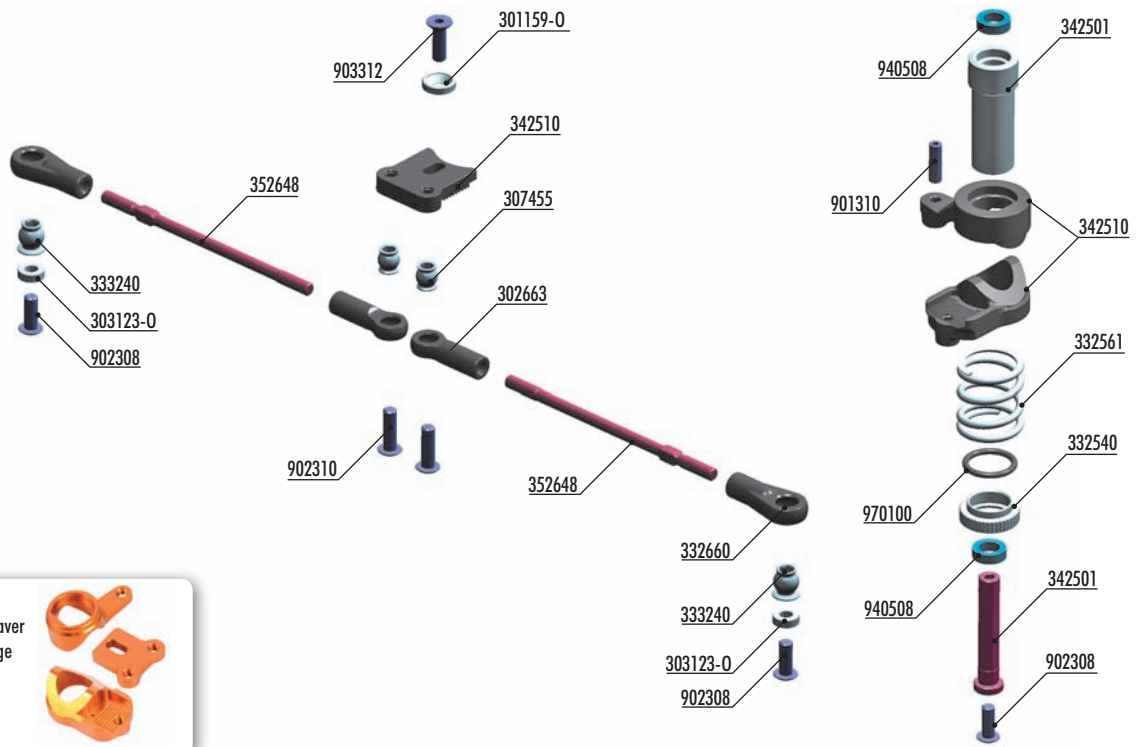
STEP 1 2 DETAIL



TO ADJUST THE BELT TENSIONER:

1. Loosen upper screw
2. Move belt tensioner as needed
3. Re-tighten upper screw





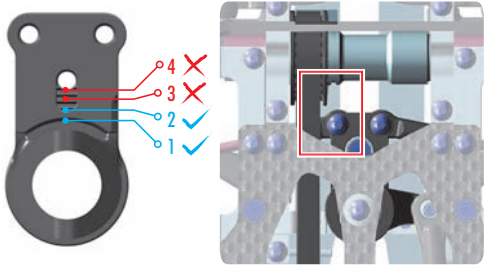
### BAG

06

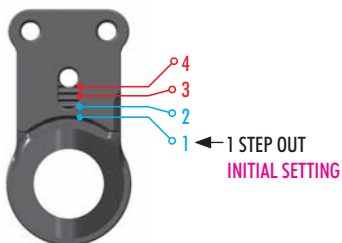
301159-0	ALU COUNTERSUNK SHIM - ORANGE (4)	342510	COMPOSITE SERVO SAVER
302663	COMPOSITE BALL JOINT 4.9MM - OPEN - V2 (8)	352648	ADJ. TURNBUCKLE M3 L/R 62 MM - HUDY SPRING STEEL (2)
303123-0	ALU SHIM 3x6x2.0MM - ORANGE (10)	901310	HEX SCREW SB M3x10 (10)
307455	PIVOT BALL 4.9 MM DOUBLE BEVEL SHOULDERS (10)	902308	HEX SCREW SH M3x8 (10)
332540	ALU SERVO SAVER ADJUSTABLE NUT	902310	HEX SCREW SH M3x10 (10)
332561	SERVO SAVER SPRING C=14	903312	HEX SCREW SFH M3x12 (10)
332660	COMPOSITE STEERING & SERVO BALL JOINT 5.8 MM (4+2)	940508	BALL-BEARING 5x8x2.5 RUBBER SEALED - OIL (2)
333240	BALL UNIVERSAL 5.8 MM HEX (4)	970100	O-RING 10 x 1.5 (10)
342501	SERVO SAVER COMPLETE SET		



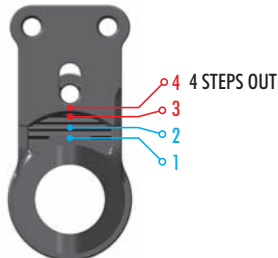
**USE ONLY ACKERMANN POSITIONS 1 OR 2.**  
DO NOT use Ackerman positions 3 or 4; these can be used ONLY after modifying the ball joint & one-way pulley so that they do not touch.



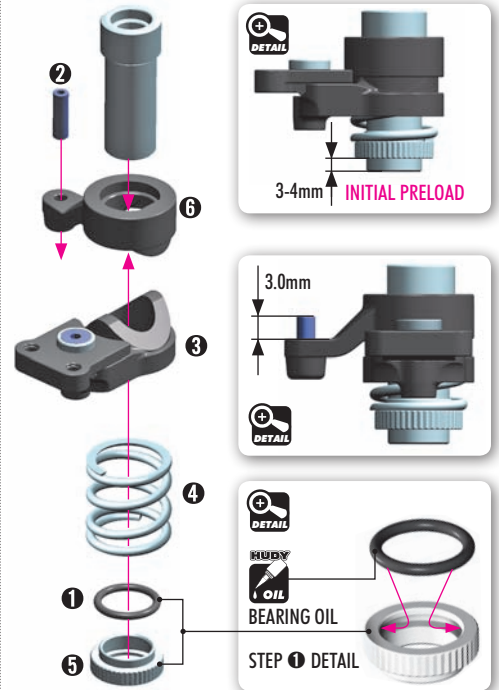
THERE ARE 4 DIFFERENT ACKERMANN SETTINGS POSSIBLE WITH THE QUICK-SAVER™  
For initial Ackermann setting, use Step 1 (2nd shortest length).



**STEP 1** gives the most Ackermann and makes the car understeer more into & out of corners. It offers good cornering speed and creates very good traction mainly in chicanes, because the car will be more stable. Recommended for tracks with long sweepers where a lot of cornering speed is needed.



**STEP 4** gives the least Ackermann and creates a lot of steering into & out of corners. However, the car is more difficult to drive in chicanes because there is less traction and stability. Recommended for tracks where a lot of in-corner steering is needed.



# 6. STEERING

**2x**

**TIP** Install the pivot balls with Professional Multi Tool (HUDY #183011)

**TIP** BALL JOINT WRENCH (HUDY #181110)

NOTE ORIENTATION

NOTE ORIENTATION

NOTE ORIENTATION

LEFT

RIGHT

42.5mm

42.5mm

**902310**  
SH M3x10

NOTE ORIENTATION

NOTE ORIENTATION

**902308**  
SH M3x8

**940508**  
BB 5x8x2.5

BEARING WITH BLUE RUBBER COVERS

BEARING OIL (HUDY #106230)

BEARING WITH BLUE RUBBER COVERS

BEARING OIL (HUDY #106230)

2

1

3

**2x**

**303123-0**  
SHIM 3x6x2

**902308**  
SH M3x8

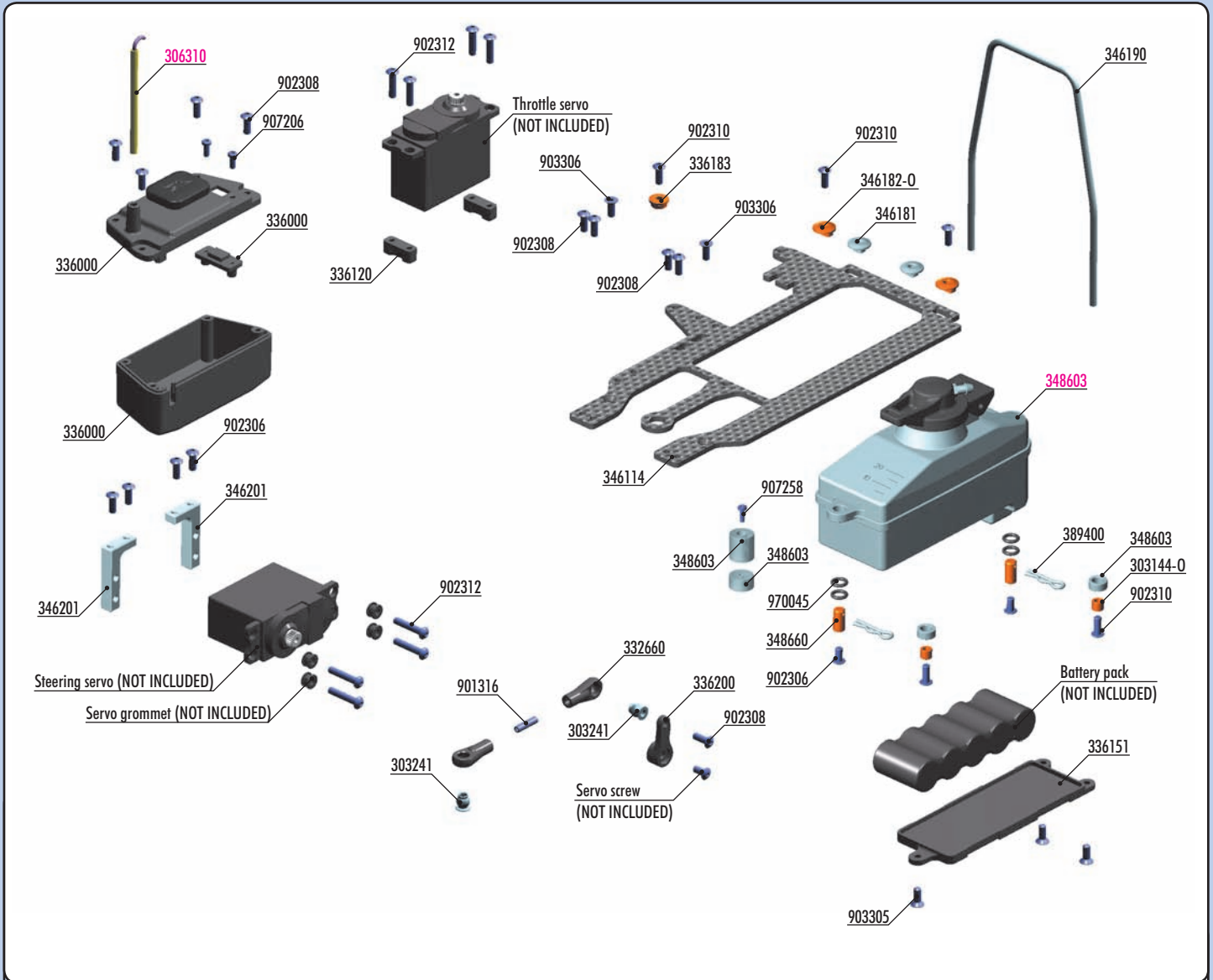
FRONT

INITIAL SETTING

3x6x2mm

By adding shims, the car becomes less responsive, but easier to drive.

# 7. FUEL TANK & ELECTRONICS



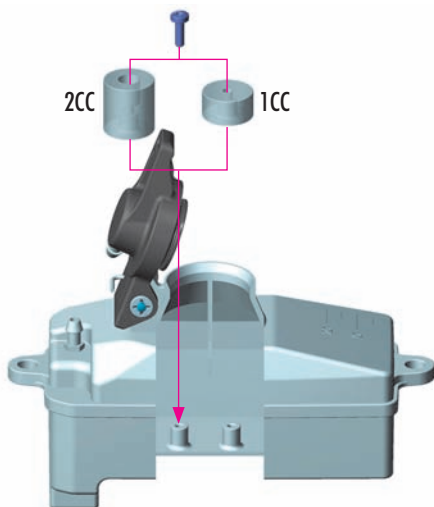
**BAG**

**07**

- |   |   |                                     |
|---|---|-------------------------------------|
| 303144-O ALU SHIM 3x5x4.0MM - ORANGE (10)                 | 346181 ALU RADIO PLATE TWEAK BUSHING HARDCOATED (2) | 902310 HEX SCREW SH M3x10 (10)      |
| 303241 BALL UNIVERSAL 5.8 MM HEX (4)                      | 346182-O ALU RADIO PLATE BUSHING FIXED - ORANGE (2) | 902312 HEX SCREW SH M3x12 (10)      |
| 332660 COMPOSITE STEERING & SERVO BALL JOINT 5.8 MM (4+2) | 346190 ROLL-OVER BAR                                | 903305 HEX SCREW SFH M3x5 (10)      |
| 336000 COMPOSITE RECEIVER CASE                            | 346201 ALU SERVO MOUNT - BLACK - SWISS 7075 T6 (2)  | 903306 HEX SCREW SFH M3x6 (10)      |
| 336120 COMPOSITE STEERING SERVO HOLDER - SET - V2         | 348660 ALU FUEL TANK MOUNT (2)                      | 907206 SCREW PHILLIPS M2x6 (10)     |
| 336151 COMPOSITE BATTERY PLATE                            | 389400 MICRO BODY CLIP (10)                         | 907258 SCREW PHILLIPS M2.5x8 (10)   |
| 336183 ALU RADIO PLATE MULTI-FLEX™ BUSHING                | 901316 HEX SCREW SB M3x16 (10)                      | 970045 O-RING 4.5x1.5 (10)          |
| 336200 COMPOSITE STEERING SERVO ARMS - SET                | 902306 HEX SCREW SH M3x6 (10)                       | <b>306310 ANTENNA TUBE (2)</b>      |
| 346114 GRAPHITE RADIO PLATE                               | 902308 HEX SCREW SH M3x8 (10)                       | <b>348603 FUEL TANK 125CC - SET</b> |



907258  
SP 2.5x8

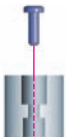


The fuel tank has a larger fuel volume and includes **OPTIONAL** tank inserts for decreasing the volume of the tank. Using the inserts allows you to adjust the volume of fuel inside the tank; this works in conjunction with variables such as fuel filter capacity and/or length of fuel line to ensure you have the legal fuel volume limit for racing.

Tube holders are easily connected to the fuel tank by screws. Using screws is much more secure than using glue to attach the holders to the fuel tank.

### 2CC FUEL TANK INSERT

The larger insert decreases the fuel tank volume by 2cc, and is recommended for use when the fuel filter is used.



NOTE ORIENTATION



### 1CC FUEL TANK INSERT

The smaller insert decreases the fuel tank volume by 1cc.



NOTE ORIENTATION



NOTE: The fuel tank insert can be easily mounted to the bottom of the fuel tank using the provided screw, when the fuel tank cap is opened fully.

# 7. FUEL TANK & ELECTRONICS



303144-0  
SHM 3x5x4



902306  
SH M3x6



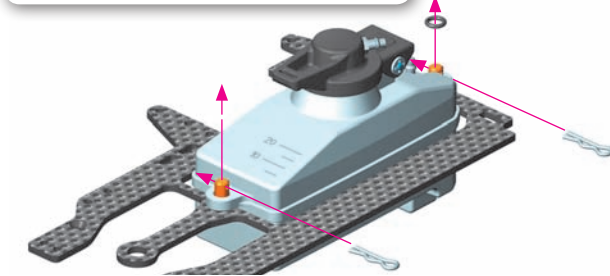
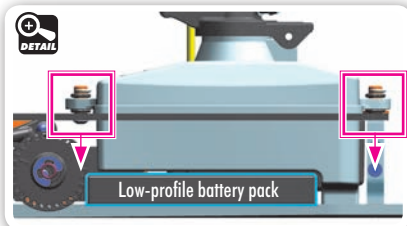
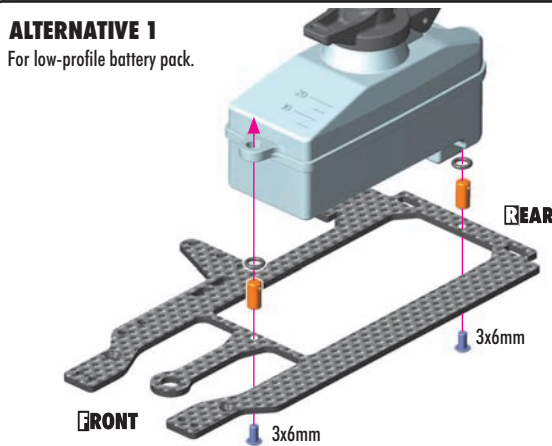
902310  
SH M3x10



970045  
0.4.5x1.5

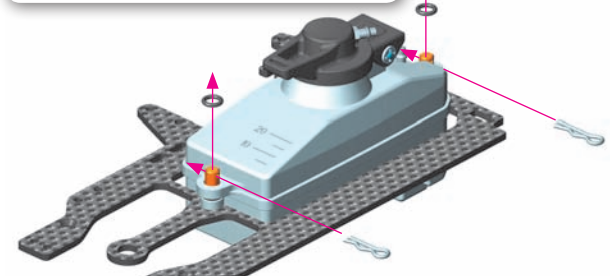
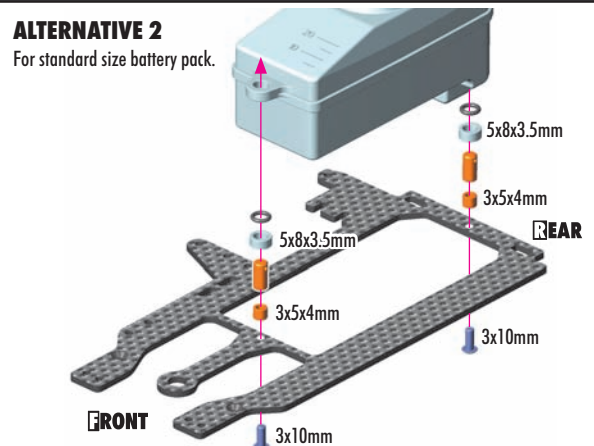
## ALTERNATIVE 1

For low-profile battery pack.

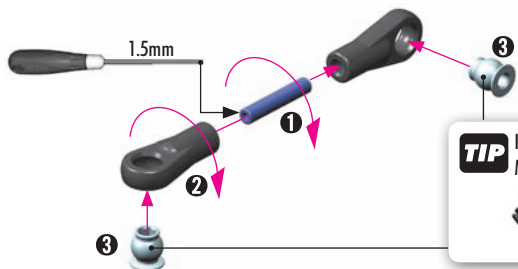


## ALTERNATIVE 2

For standard size battery pack.



901316  
SB M3x16



**TIP** Install the pivot balls with Professional Multi Tool (HUDY #183011)



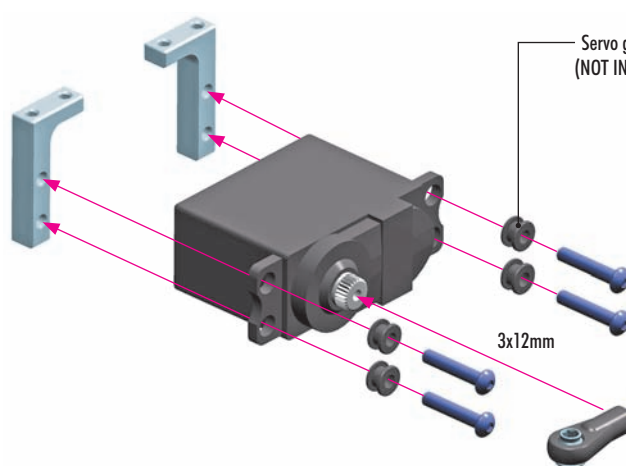
approx. 6.0mm  
Note the 90° angle difference between the ball joints



902308  
SH M3x8

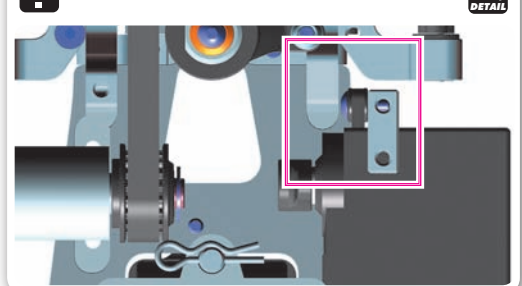


902312  
SH M3x12



Servo grommet  
(NOT INCLUDED)

**!** Make sure that servo does not touch the bulkhead.



**TL** THREAD LOCK

3x8mm

Servo screw  
(NOT INCLUDED)



### ALU SERVO HORNS - OFFSET

#293491	KO, Sanwa - 23T
#293492	Hitec - 24T
#293493	Futaba - 25T



### CLAMP ALU SERVO HORNS - OFFSET

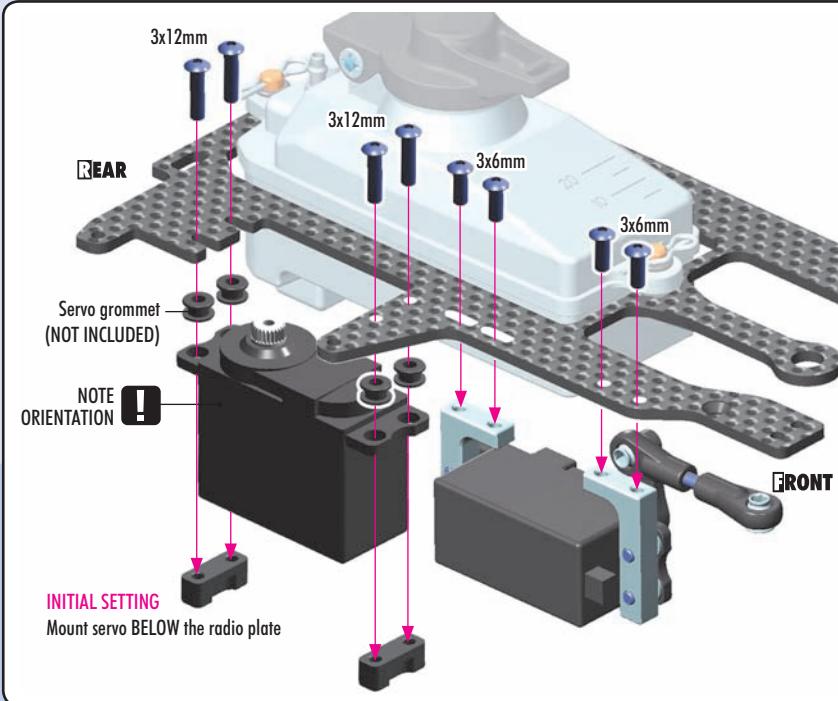
#293401	KO, Sanwa - 23T
#293402	Hitec - 24T
#293403	Futaba - 25T



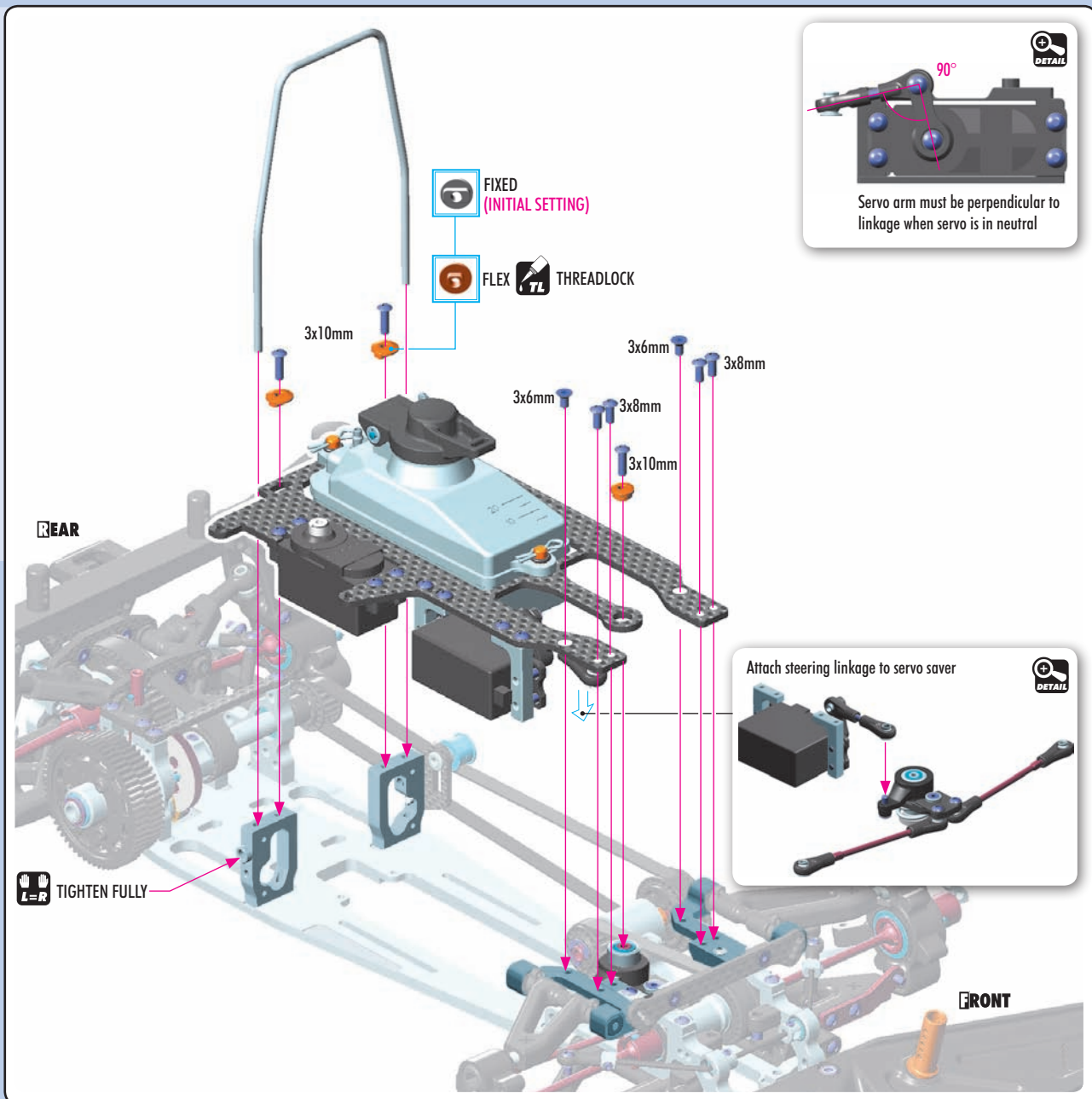
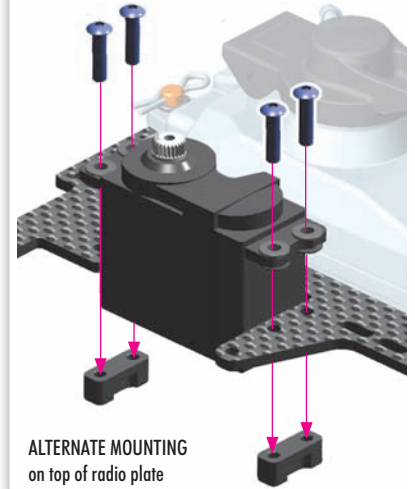
For more in-corner steering and better steering response, aluminum servo horns may be used.

Use appropriate servo arm:  
K - (23T) = KO, JR, Airtronics  
H - (24T) = Futaba,  
F - (25T) = Hitec

# 7. FUEL TANK & ELECTRONICS



**NOTE** When big servo and/or thick servo grommets are used, the servo can touch the chassis if is mounted from the bottom of the radio plate. In this case, mount servo from the top of the radio plate.



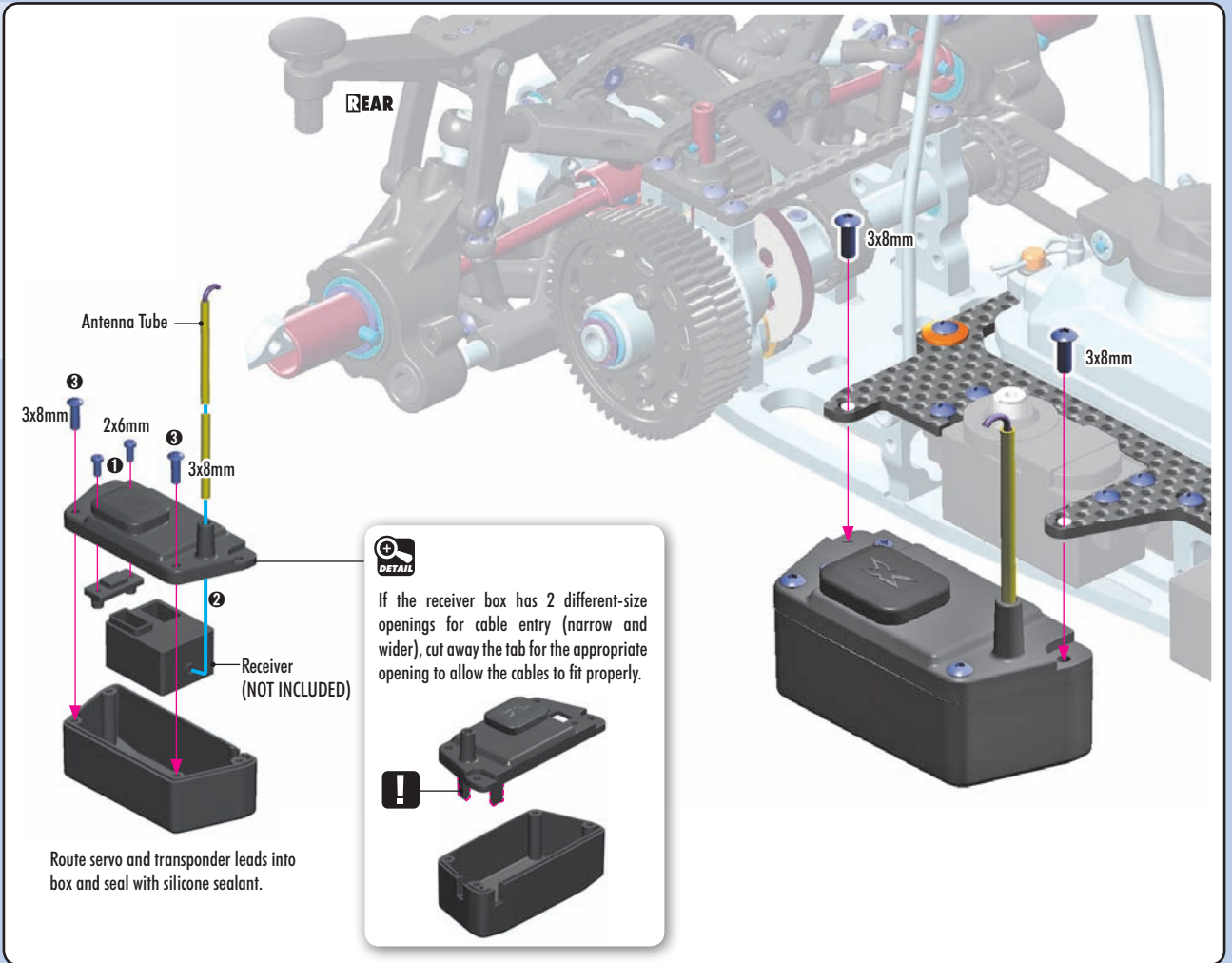
# 7. FUEL TANK & ELECTRONICS



902308  
SH M3x8

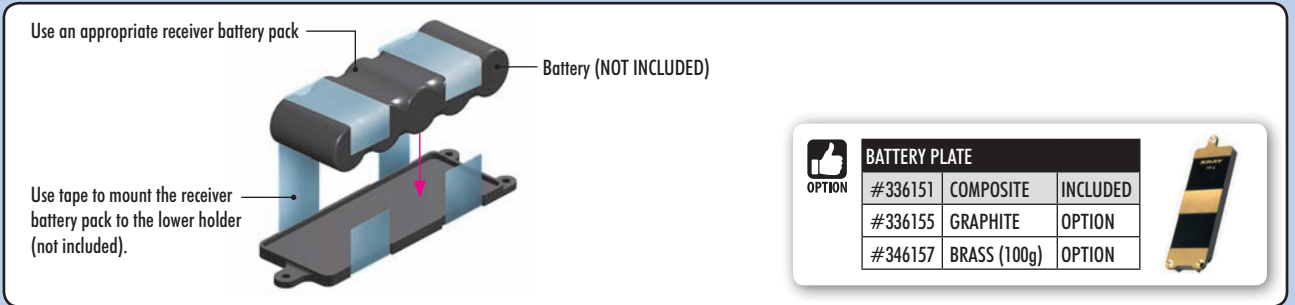


907206  
2x6




**DETAIL**

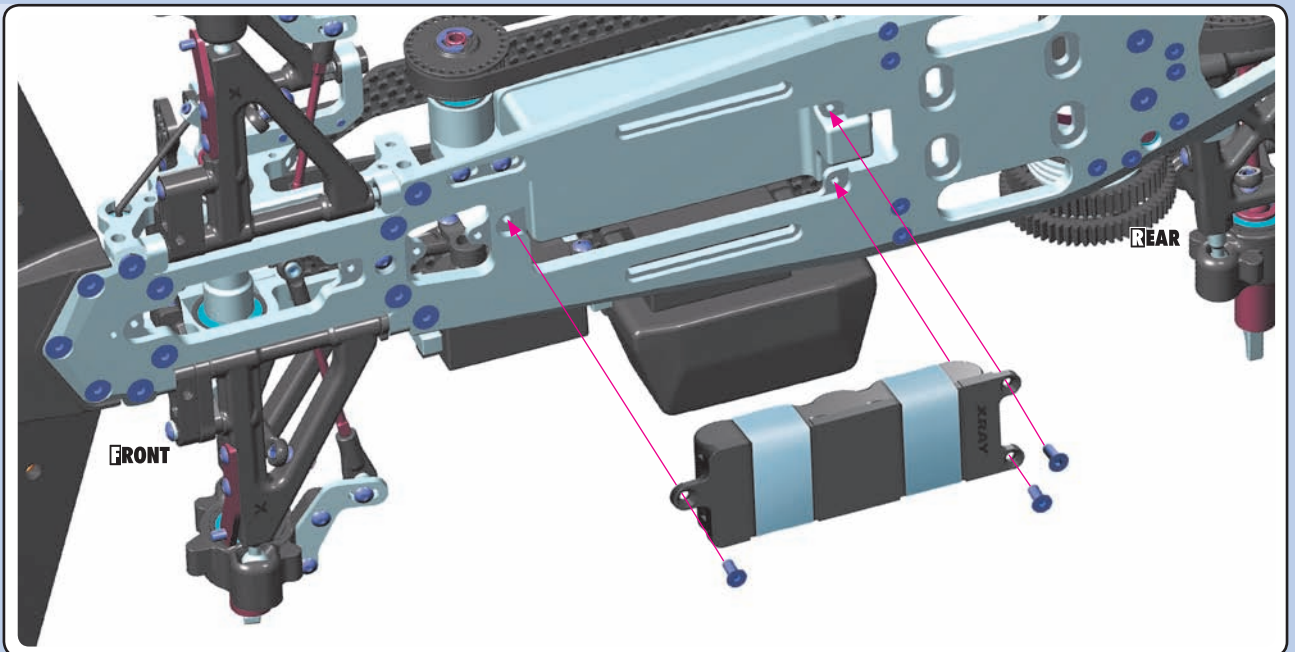
If the receiver box has 2 different-size openings for cable entry (narrow and wider), cut away the tab for the appropriate opening to allow the cables to fit properly.



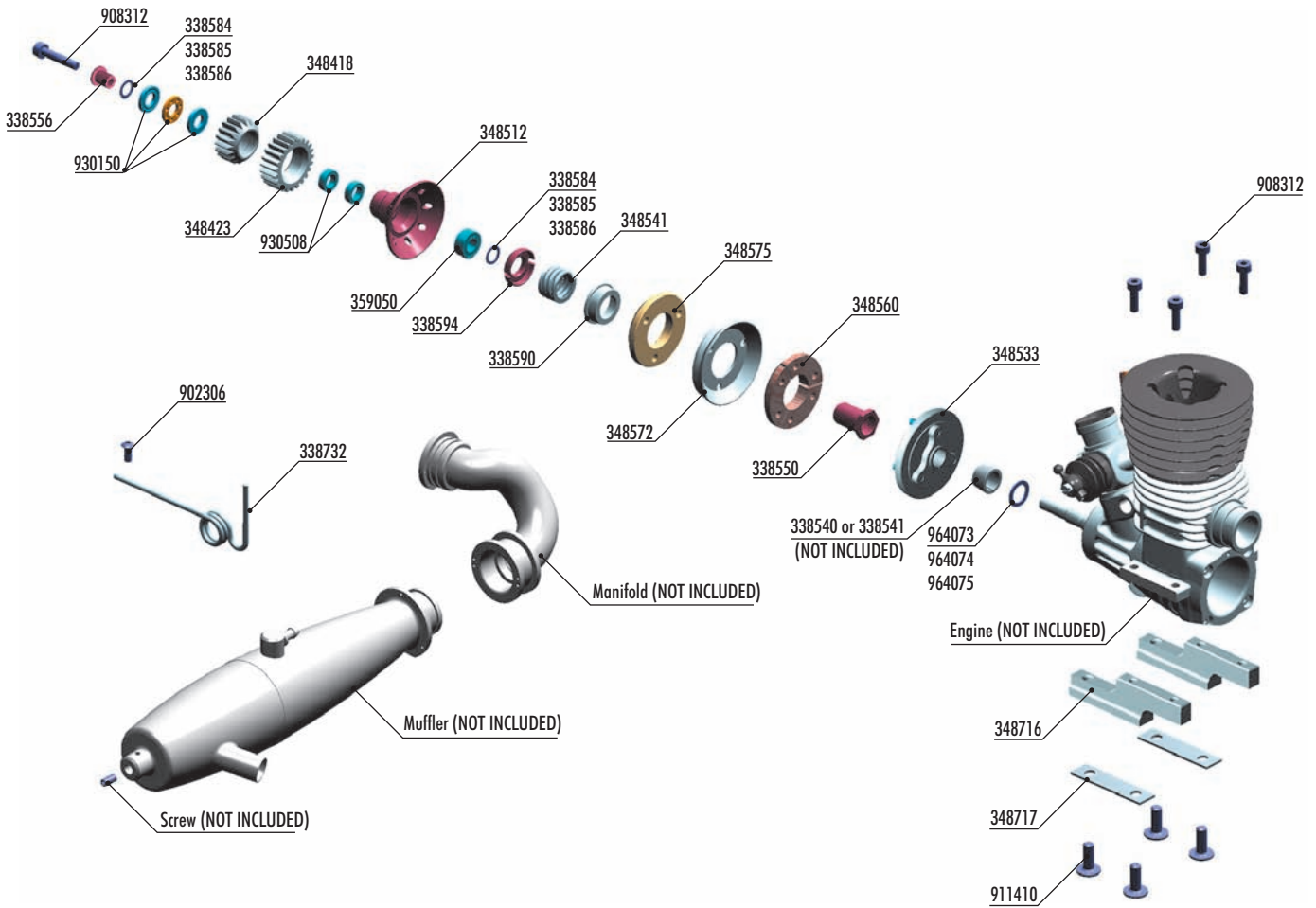
BATTERY PLATE			
OPTION	#336151	COMPOSITE	INCLUDED
	#336155	GRAPHITE	OPTION
	#346157	BRASS (100g)	OPTION




903305  
SFH M3x5



# 8. ENGINE & CLUTCH



OPTION	1ST XCA HARDCOATED PINION GEAR		
#348417	17T (1st)	OPTION	
#348418	18T (1st)	INCLUDED	
#348419	19T (1st)	OPTION	

OPTION	2ST XCA HARDCOATED PINION GEAR		
#348422	22T (2nd)	OPTION	
#348423	23T (2nd)	INCLUDED	
#348424	24T (2nd)	OPTION	
#348425	25T (2nd)	OPTION	



338540	FLYWHEEL COLLAR 7MM - NOVAROSSÌ (OPTION)
338541	FLYWHEEL COLLAR 6MM - PICCO (OPTION)
338550	FLYWHEEL NUT - HUDY SPRING STEEL™
338556	THRUSTBEARING COLLAR - HUDY SPRING STEEL™
338584	SHIM 5x7x0.2 (10)
338585	SHIM 5x7x0.3 (10)
338586	SHIM 5x7x0.5 (10)
338590	CLUTCH SPRING CUP - ALU 7075 T6
338594	CLUTCH PRELOAD ADJ. NUT - HUDY SPRING STEEL™
338732	EXHAUST MOUNTING WIRE - EXTRA-LONG
348418	XCA ALU PINION GEAR 18T (1ST) - 7075 T6 - HARDCOATED - LARGE
348423	XCA ALU PINION GEAR 23T (2ND) - 7075 T6 - HARDCOATED - LARGE
348502	XCA (XRAY CENTRIFUGAL-AXIAL) CLUTCH SET - REVERSE - SMALL
348512	XCA CLUTCHBELL FOR SMALLER PINION GEARS - HUDY STEEL
348533	FLYWHEEL - FLAT - HARDCOATED
348541	CLUTCH SPRING - ULTRA-STABLE

348560	CLUTCH FLYWEIGHT SET
348572	ALU CLUTCH DISK - CONICAL - SWISS 7075 T6
348575	CLUTCH SHOE - YELLOW
348716	ALU ENGINE MOUNT (2)
348717	STAINLESS STEEL ENGINE MOUNT SHIM (2)
359050	CLUTCH BELL BALL-BEARING 5x10x4 (2)
902306	HEX SCREW SH M3x6 (10)
908312	HEX SCREW SOCKET HEAD CAP M3x12 (10)
911410	HEX SCREW FLANGED SH M4x10 (10)
930150	CARBIDE AXIAL THRUSTBEARING F5-10 5x10x4
930508	BALL-BEARING 5x8x2.5 STEEL SEALED - OIL (2)
964073	WASHER S 7x10x0.2 (10)
964074	WASHER S 7x10x0.3 (10)
964075	WASHER S 7x10x0.5 (10)

# 8. ENGINE & CLUTCH



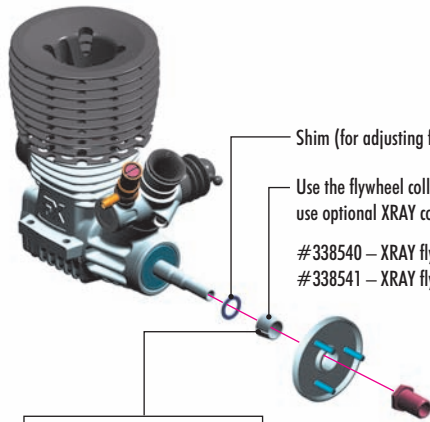
964073  
S7x10x0.2



964074  
S7x10x0.3



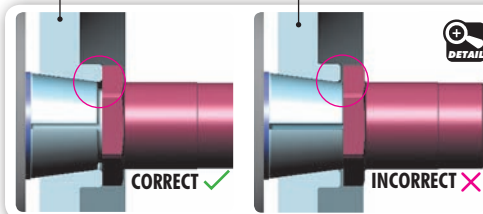
964075  
S7x10x0.5



Shim (for adjusting flywheel distance)

Use the flywheel collar that comes with your engine, or use optional XRAY collars:

#338540 – XRAY flywheel collar for Ø6mm crankshafts  
#338541 – XRAY flywheel collar for Ø7mm crankshafts

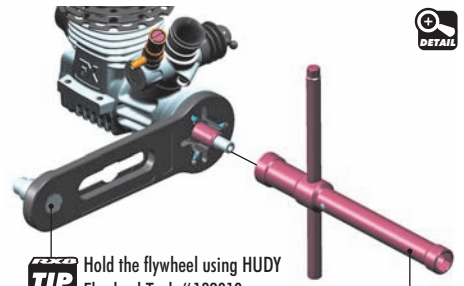


CORRECT ✓

INCORRECT ✗

The flywheel collar must stay inside the flywheel.

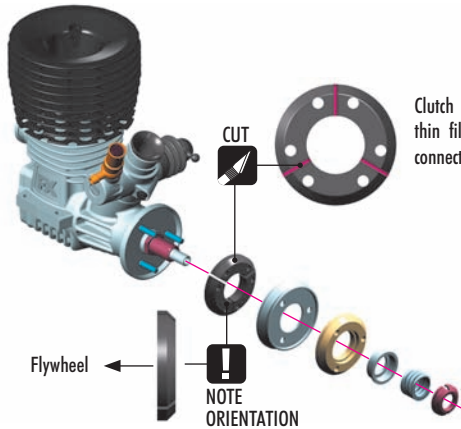
If the flywheel collar is too long – if it is flush with the flywheel or protrudes slightly – remove a small amount of material from the end, or use an XRAY collar.



**TIP** Hold the flywheel using HUDY Flywheel Tool #182010

Tighten the clutch nut using HUDY tool #107581

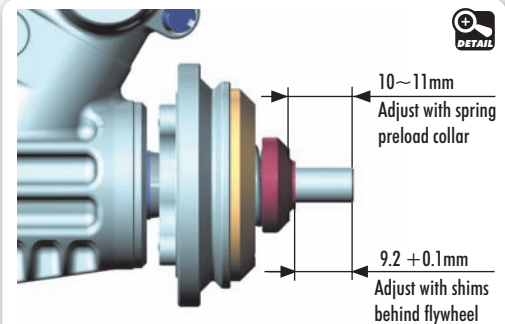
**TIP**



Clutch weights are machined as 1 piece, with thin film connecting the pieces together. Cut the connecting film to separate the 3 shoes.

CUT

NOTE ORIENTATION



10~11mm  
Adjust with spring preload collar

9.2 + 0.1mm  
Adjust with shims behind flywheel



INITIAL POSITION FOR FLYWHEEL PINS



OPTION #348576 #CLUTCH SHOE - RED



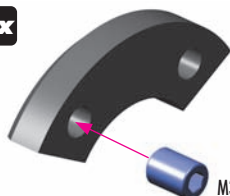
## TECH TIP FOR EXTRA BOTTOM-END POWER

For extra bottom-end power, thread a M3x4 set-screw (#901304) into each clutch flyweight as shown. The set-screw will add more weight to the end of the flyweight which will cause the flyweight to open harder, giving more bottom-end power. This is recommended for high-traction tracks where bottom-end power is required.

### IMPORTANT!

Install set-screw into free (non-pivot) end of flyweight.

3x



#901304 NOT INCLUDED

After inserting the set-screw, some excess material may come out of the hole. REMOVE this excess material with a knife.



CUTAWAY VIEW

## TECH TIP FOR RX8 CLUTCH SHOE

To ensure that the RX8 clutch shoe works properly and for a long time, it is very important to run in the clutch shoe.

Please follow these run-in steps to help ensure proper clutch operation:



- 1 Install clutch according to manual.
- 2 Check that the spring preload is not too much; for run-in process use less preload.
- 3 When you start the engine, the clutch should start engage under low RPM. If the clutch engages only under high RPM, stop the engine and loosen the spring preload collar. Repeat until the clutch engages under low RPM.
- 4 Run in the clutch shoe on the track, or on the starter box if you have only limited time. (We recommend running it in on the track.)
- 5 Run in the clutch shoe for 1 tank of fuel using a soft preload setting, and then after that slightly tighten the spring preload. DO NOT run in the clutch shoe under high RPM.
- 6 Continue this process until the clutch shoe is properly run in; this will be indicated by a dark and glossy surface colour on the top of the clutch shoe.





338584  
S 5x7x0.2



338585  
S 5x7x0.3



338586  
S 5x7x0.5



359050  
BB 5x10x4



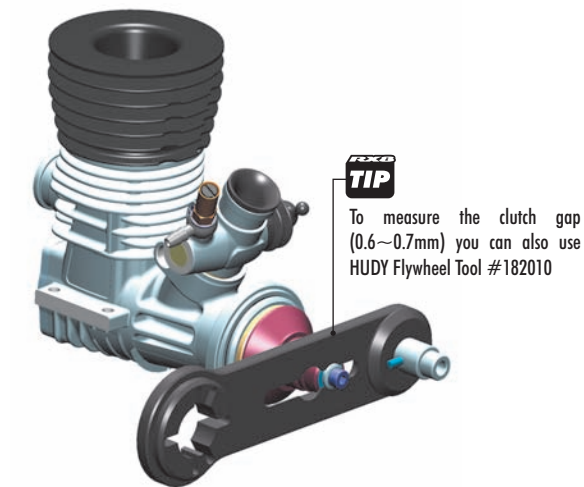
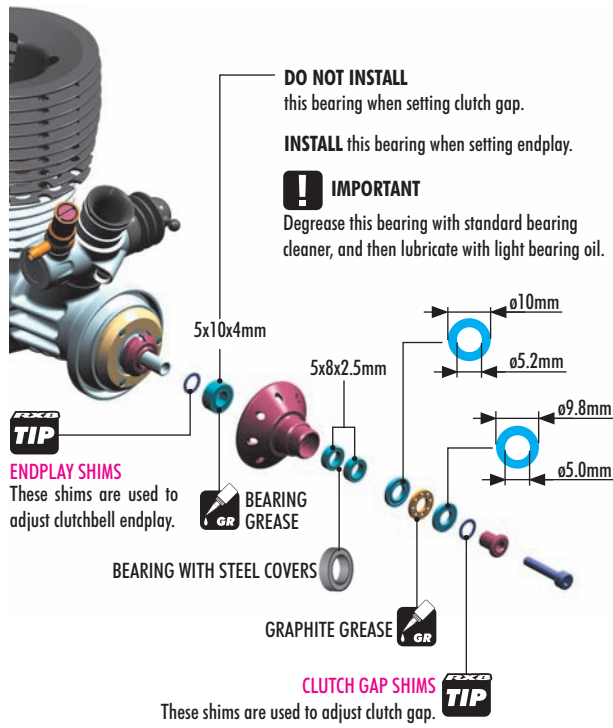
908312  
SCH M3x12



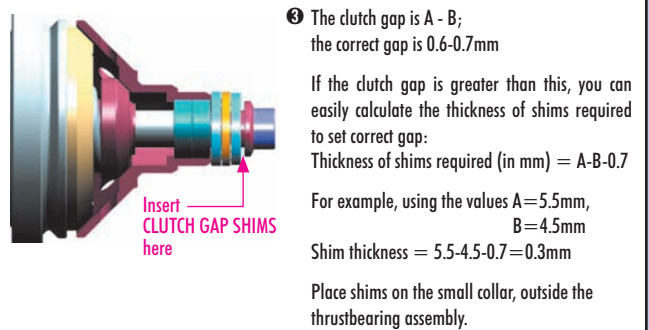
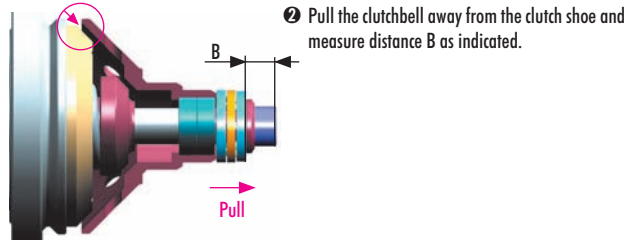
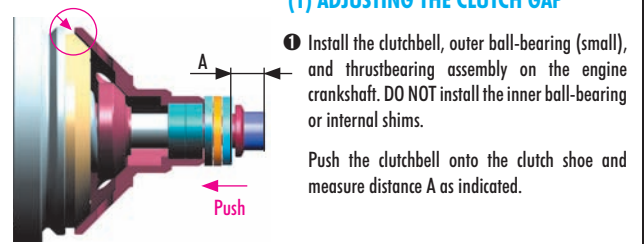
930150  
BA 5x10



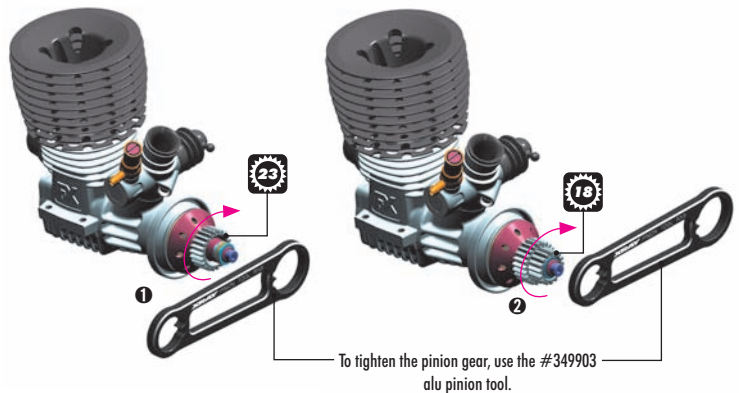
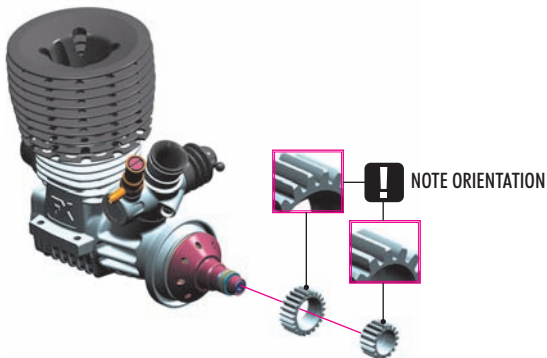
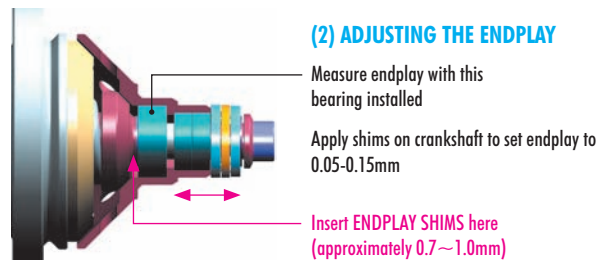
930508  
BB 5x8x2.5



## (1) ADJUSTING THE CLUTCH GAP



## (2) ADJUSTING THE ENDPLAY



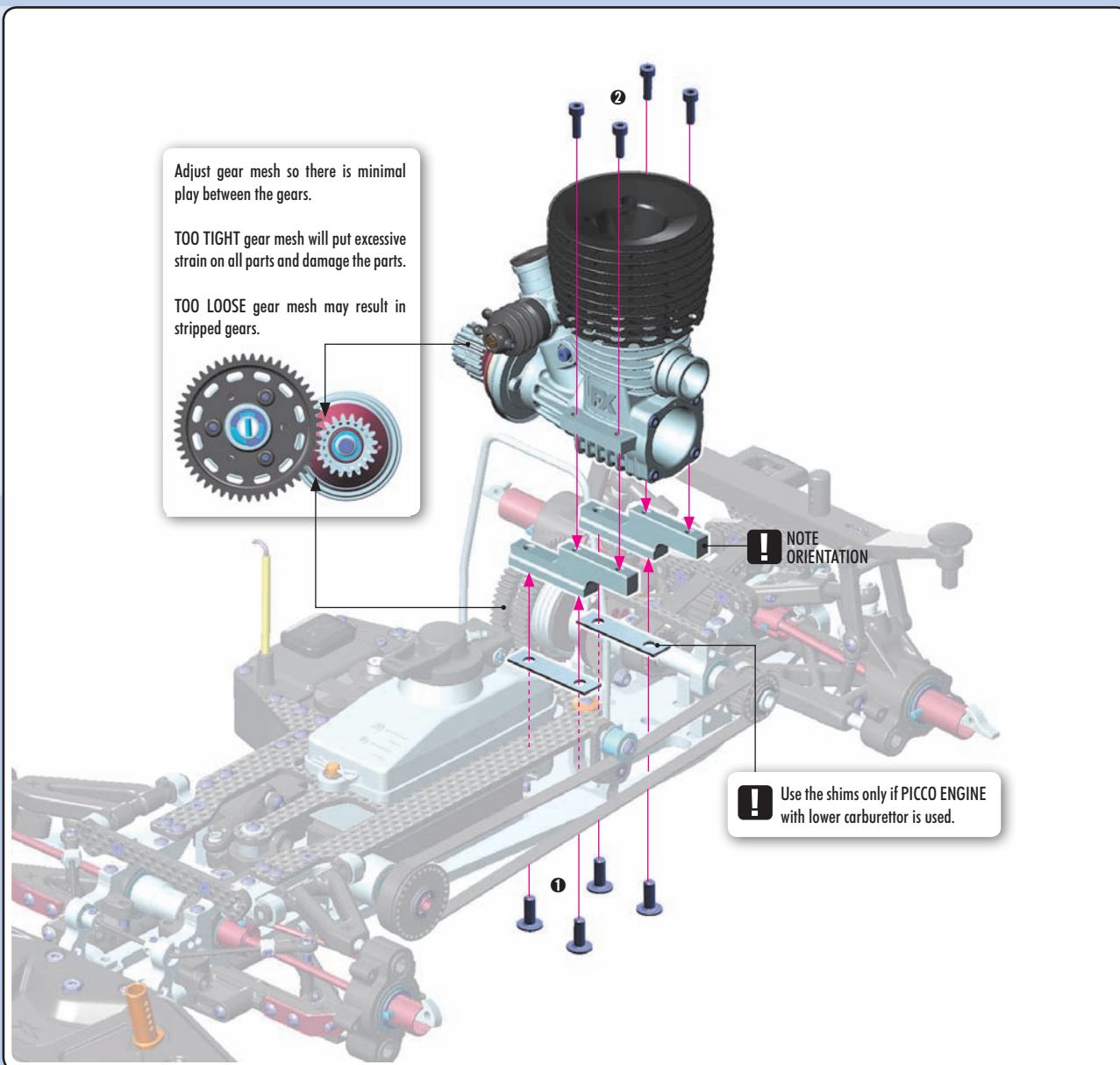
# 8. ENGINE & CLUTCH



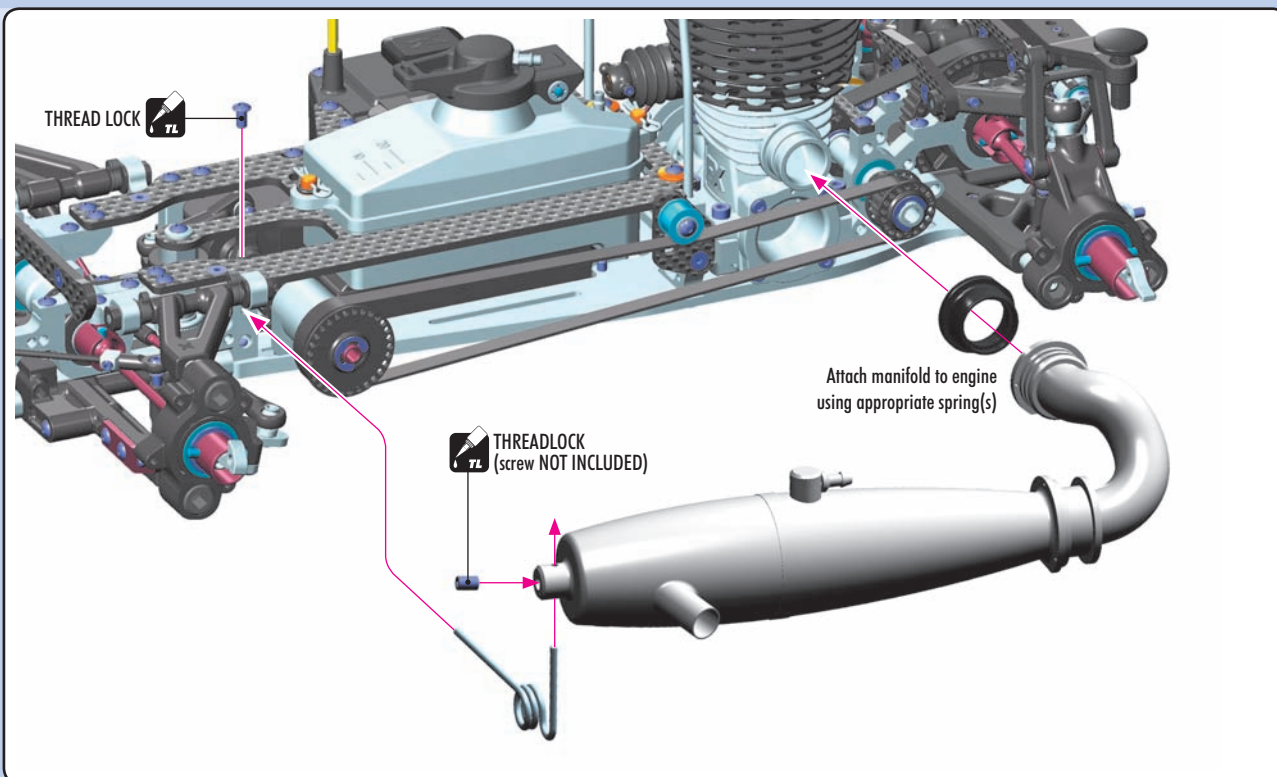
908312  
SCH M3x12



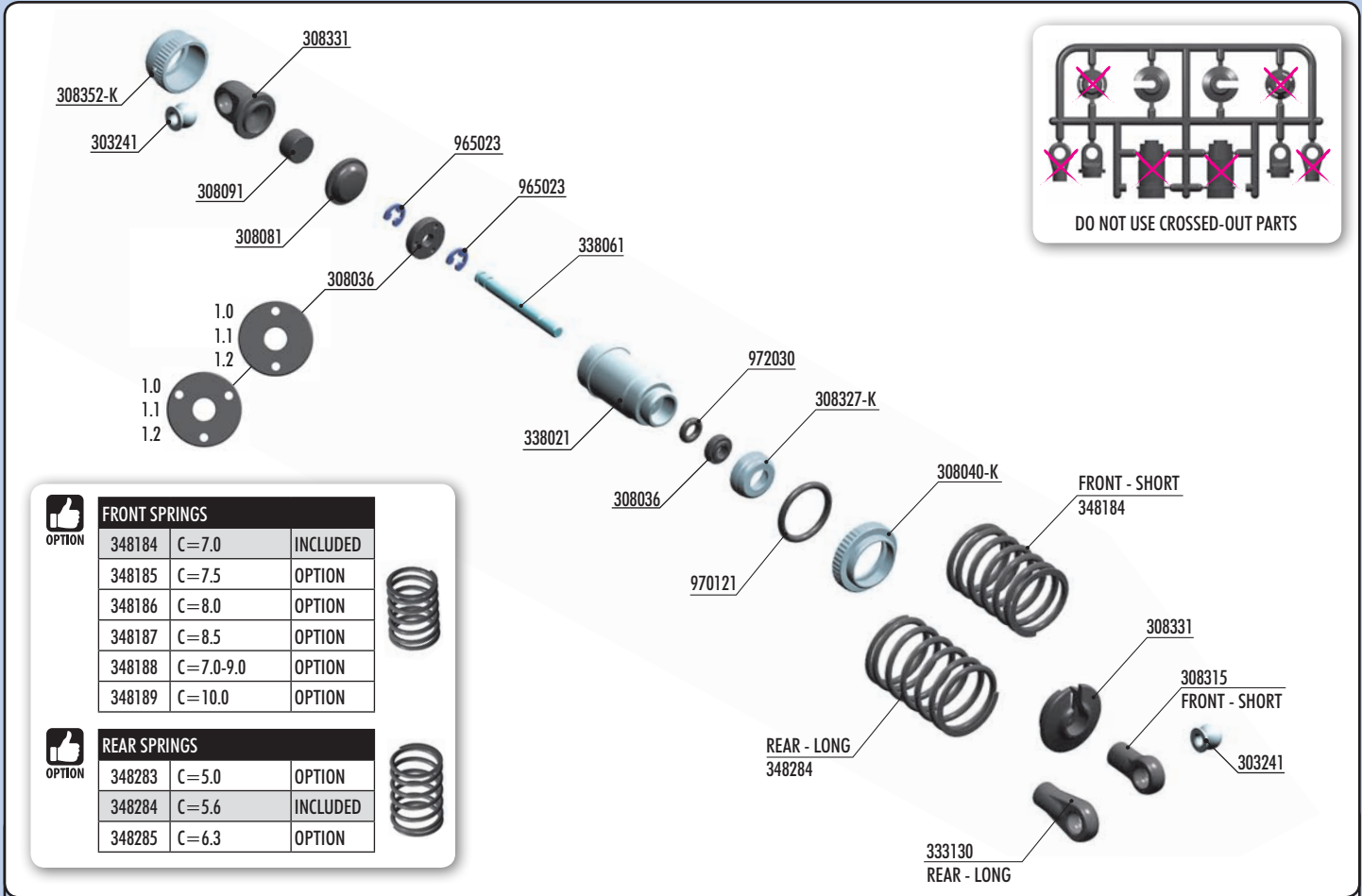
911410  
SHF M4x10



902306  
SH M3x6



# 9. SHOCK ABSORBERS



### FRONT SPRINGS

348184	C=7.0	INCLUDED
348185	C=7.5	OPTION
348186	C=8.0	OPTION
348187	C=8.5	OPTION
348188	C=7.0-9.0	OPTION
348189	C=10.0	OPTION



### REAR SPRINGS

348283	C=5.0	OPTION
348284	C=5.6	INCLUDED
348285	C=6.3	OPTION



### BAG



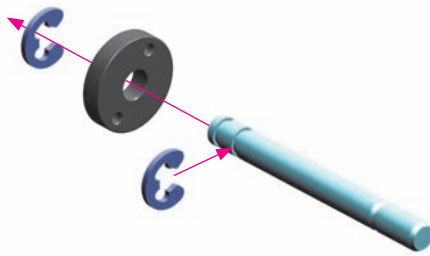
- 303241 BALL UNIVERSAL 5.8 MM HEX (4)
- 308036 COMPOSITE NON-ADJUSTABLE PISTONS - DELRIN™ - V3
- 308040-K SHOCK ADJ. NUT ALU + O-RING - BLACK (4)
- 308081 SHOCK ABSORBER MEMBRANE - LOW (4)
- 308091 SHOCK FOAM INSERTS - LOW (4)
- 308315 COMPOSITE SHOCK BALL JOINT - LONG (4)
- 308327-K ALU CAP FOR XRAY SHOCK BODY - BLACK (2)
- 308331 COMPOSITE FRAME SHOCK PARTS 4-STEP - SHORT
- 308352-K ALU SHOCK CAP-NUT WITH HOLE - BLACK (2)
- 333130 COMPOSITE REAR UPPER CAMBER LINK BALL JOINT 5.8 MM (4)

- 338001-K ALU SHOCK ABSORBER-SET - BLACK (2)
- 338021 ALU SHOCK BODY (2)
- 338061 HARDENED SHOCK SHAFT (2)
- 348184 XRAY SPRING-SET C=7.0 - FRONT (2)
- 348284 XRAY SPRING-SET C=5.6 - REAR (2)
- 965023 E-CLIP 2.3 (10)
- 970121 O-RING 12.1x1.6 (10)
- 972030 SILICONE O-RING 3x2 (10)



965023  
C 2.3

4x



2x

FRONT



1.0 — INITIAL SETTING  
1.1  
1.2

2x

REAR

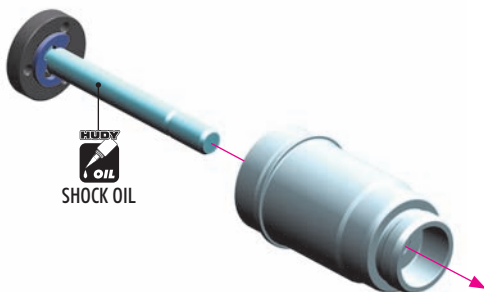


1.0 — INITIAL SETTING  
1.1  
1.2

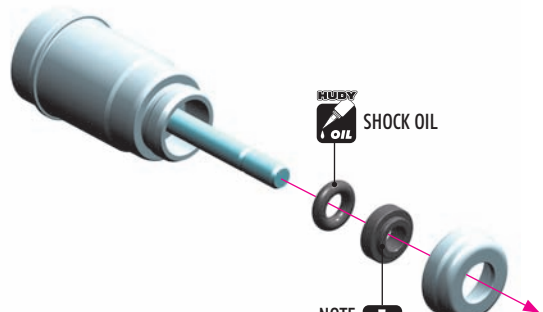


972030  
O 3x2

4x



SHOCK OIL



SHOCK OIL

NOTE ORIENTATION

# 9. SHOCK ABSORBERS



**4x**

**SHOCK OIL**

**DETAIL**

Be careful not to cross-thread the collar on the shock body.

**INCORRECT** ✗

**CORRECT** ✓

Install the ball joint with Professional Multi Tool (HUDY #183011)

**FRONT SHORT 2x**

**REAR LONG 2x**

1~2mm

**DO NOT USE CROSSED-OUT PARTS**

**HINT:** Pre-thread the ball joint using an M3 screw.

**WARNING!** Be careful not to pre-thread too far, since the ball joint may split or the plastic threads may strip out

**4x**

**SHOCK FILLING**

- 1 Fully extend the piston rod so the piston is at the bottom of the shock body.
- 2 Hold the shock upright and slightly overfill the shock body with shock oil.
- 3 Let the oil settle and allow air bubbles to rise to the top. Slowly move the piston up and down until no more air bubbles appear. Add shock oil as necessary.
- 4 Pull the piston rod most of the way out of the shock body. Let the shock rest for 5 minutes to allow the air bubbles to escape.

**4x**

**CUTAWAY VIEW**

After you insert the membrane ensure that it sits properly all around the alu cup properly.

**4x**

When installing the shock cap assembly on the shock body, some oil will leak out... this is normal.

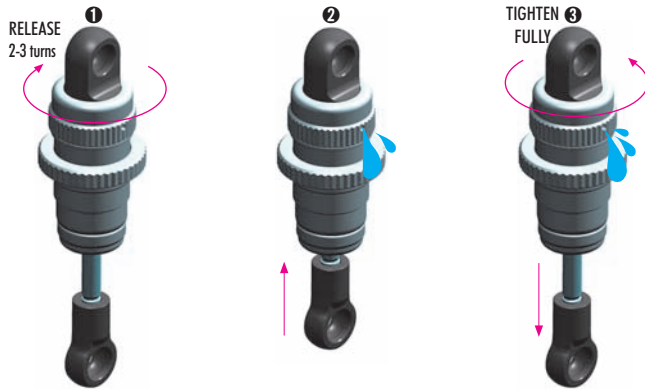
Fully tighten the cap and clean off any excess oil.

After the shock is assembled, the shock rod will push itself out of the shock body fairly quickly.

Follow the next procedure to adjust the rebound.

# 9. SHOCK ABSORBERS

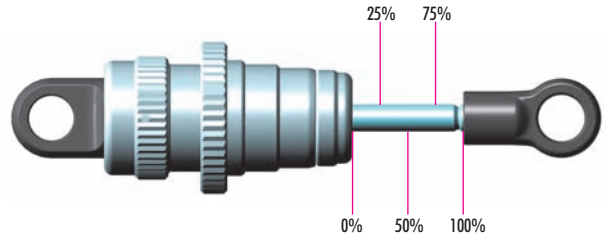
4x



### REBOUND ADJUSTMENT

AFTER THE SHOCK IS ASSEMBLED YOU HAVE TO SET THE SHOCK REBOUND.

- ❶ Release the shock cap by 2-3 turns.
- ❷ Push the shock shaft fully up. For the first time the extra oil will release through the hole in the alu cap-nut.
- ❸ Tighten the shock cup. When tightening the shock cap, extra oil will again release through the hole in the alu cap - nut. When tightening, the shock shaft will push out from the shock body.



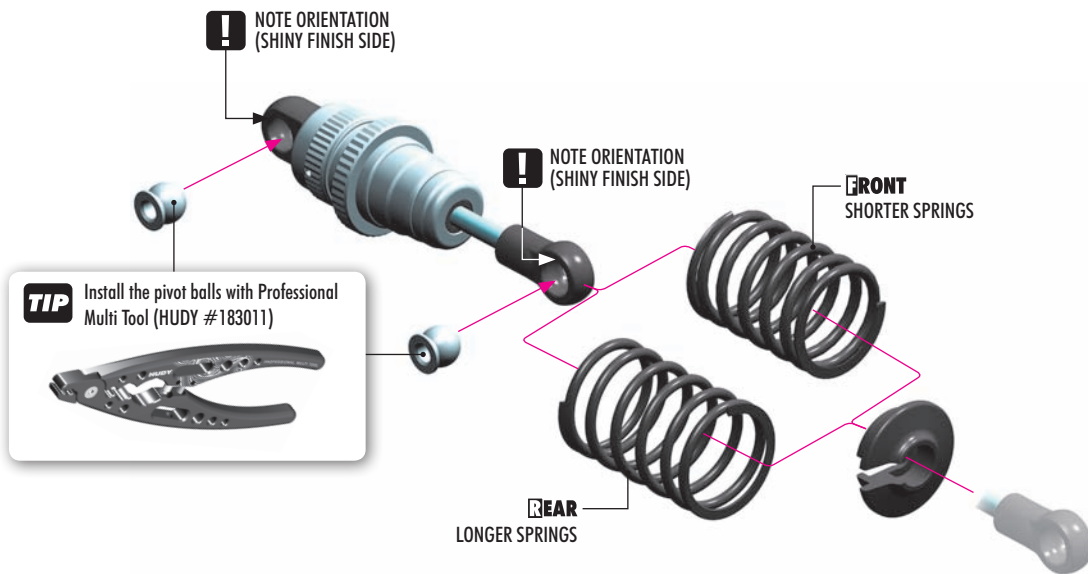
### REBOUND CHECK

It is very important to push the shock shaft into the shock body slowly otherwise air can come into the shock body which would create bubbles.

- 100% rebound - repeat step 2 and 3 two - three times
- 75% rebound - repeat step 2 and 3 until the shock shaft will push out 75% of its length
- 50% rebound - repeat step 2 and 3 until the shock shaft will push out 50% of its length
- 25% rebound - repeat step 2 and 3 until the shock shaft will push out 25% of its length
- 0% rebound - repeat step 2 and 3 until the shock shaft will push out 0% of its length

If the shock shaft does not rebound enough, you will have to refill the shock with shock oil, and then repeat the bleeding and rebound adjustment procedure.

4x



OPTION

### SHOCK SPRING RETAINING COLLAR

#308031	ALU - SILVER	OPTION
#308031-O	ALU - ORANGE	OPTION
#308031-K	ALU - BLACK	OPTION
#308331	COMPOSITE	INCLUDED

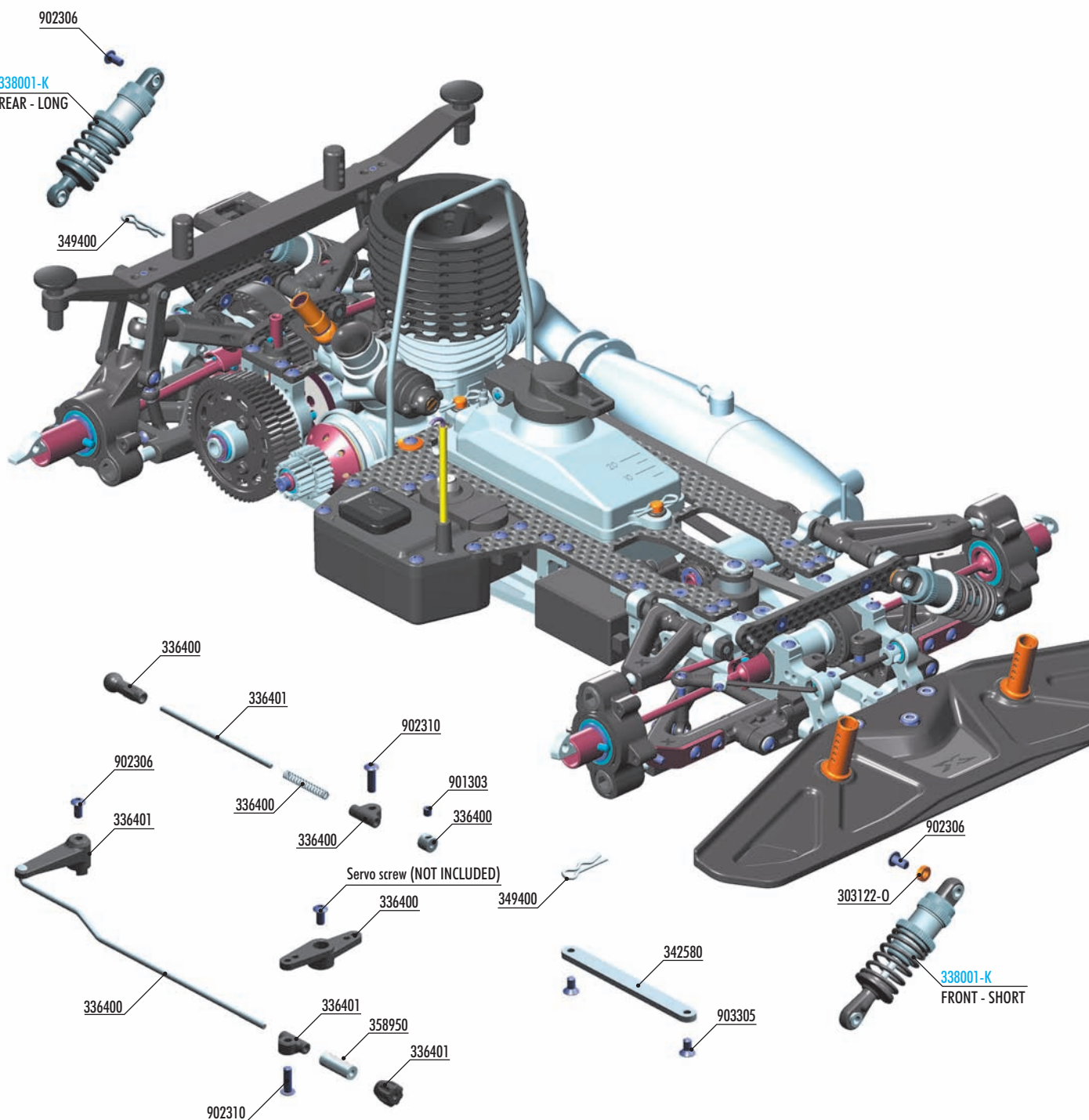


### SHOCK LENGTH ADJUSTMENT

It is VERY important that all shocks are equal length.

Fully extend the shock absorber and measure the end-to-end length; we recommend using digital calipers to give an accurate measurement. If a shock absorber is shorter or longer than others, adjust the shock length by tightening or loosening the ball joint on the shock rod.

# 10. FINAL ASSEMBLY



**#334061-0**  
**ALU BRAKE POST ARM - SWISS 7075 T6 - ORANGE**

**HUDY CLAMP ALU SERVO HORNS**

#293441	23T KO Propo, Airtronics, JR, Sanwa
#293442	24T Hitec
#293443	25T Futaba

**HUDY ALU SERVO HORNS**

#293494	23T KO Propo, Airtronics, JR, Sanwa
#293495	24T Hitec
#293496	25T Futaba

**BAG**  
**10**

- 303122-0 ALU SHIM 3x6x1.0MM - ORANGE (10)
- 336400 THROTTLE LINKAGE SET
- 336401 BRAKE LINKAGE SET
- 342580 ALU FRONT CHASSIS BRACE
- 349400 BODY CLIP (10)
- 358950 SILICONE TUBING 1M (2.4 x 5.5MM)

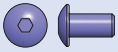
- 901303 HEX SCREW SB M3x3 (10)
- 902306 HEX SCREW SH M3x6 (10)
- 902310 HEX SCREW SH M3x10 (10)
- 903305 HEX SCREW SFH M3x5 (10)

338001-K ALU SHOCK ABSORBER-SET - BLACK (2)

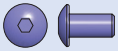
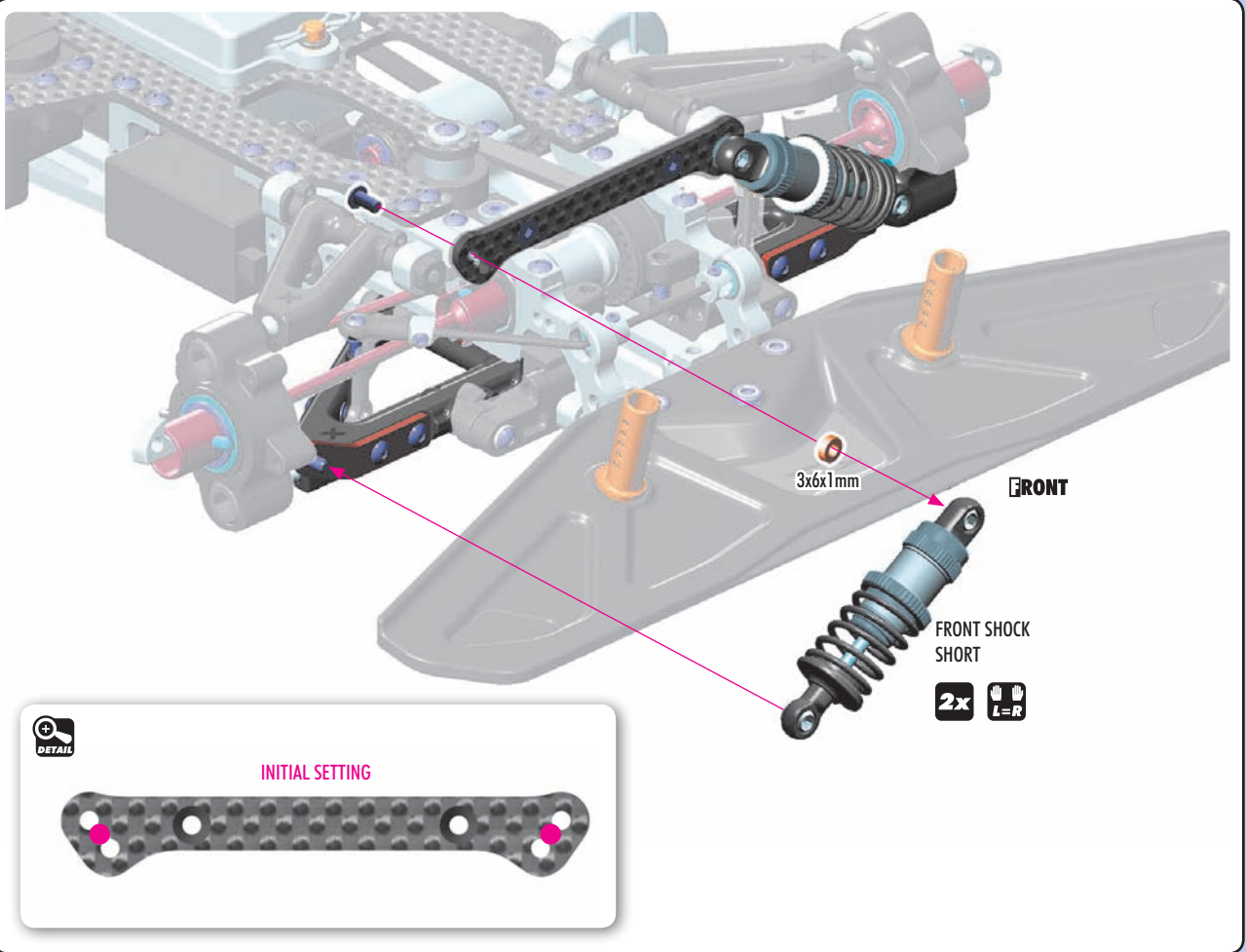
# 10. FINAL ASSEMBLY

10

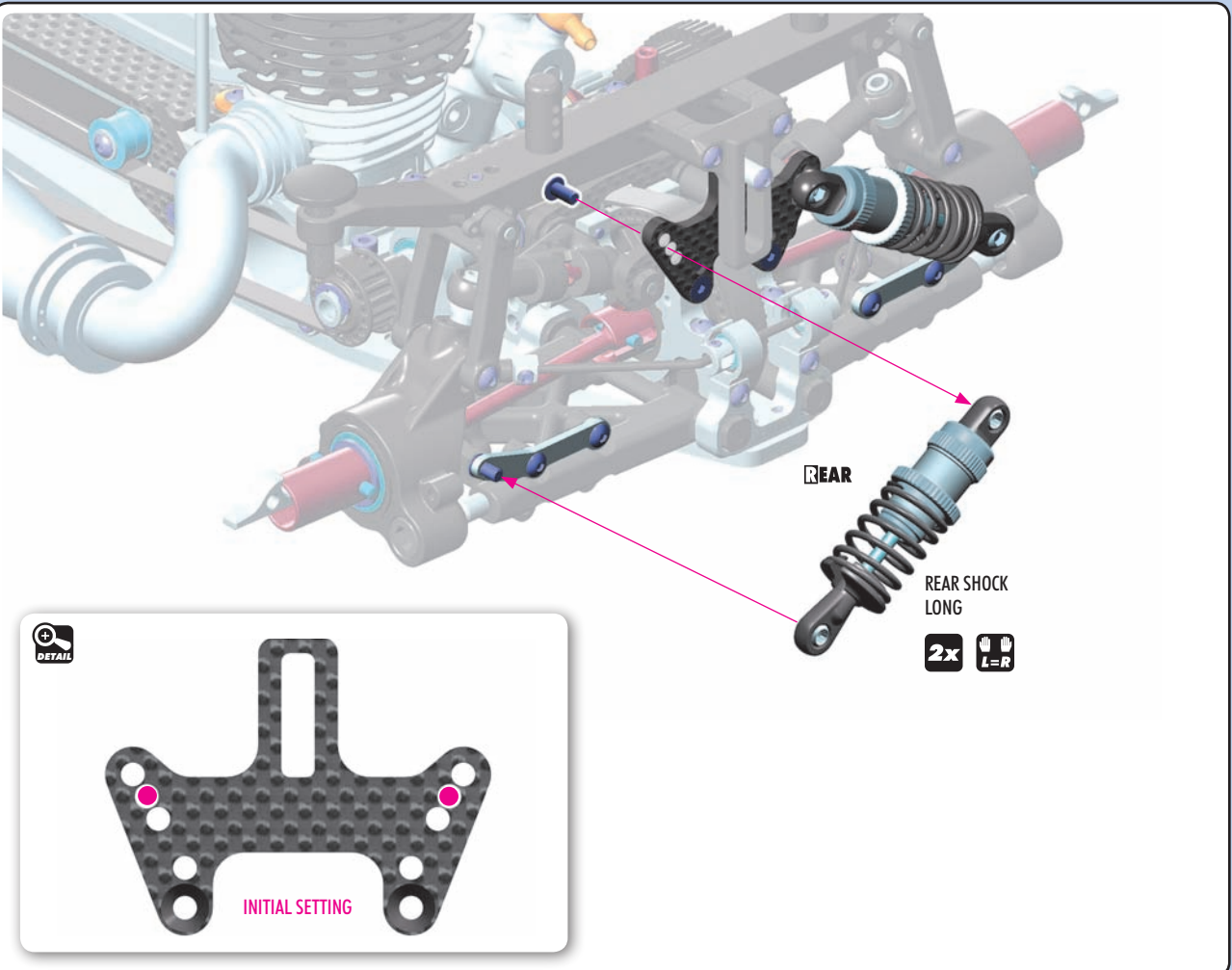
303122-0  
SHIM 3x6x1



902306  
SH M3x6



902306  
SH M3x6



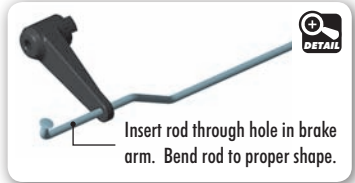
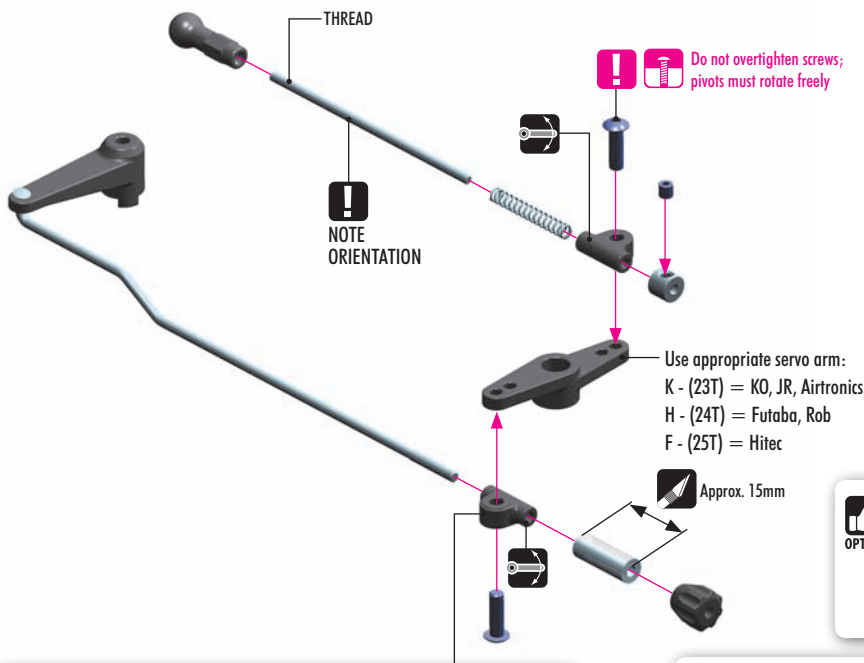
# 10. FINAL ASSEMBLY



901303  
SB M3x3



902310  
SH M3x10



**HUDY CLAMP ALU SERVO HORNS**

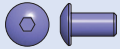
#293441	23T
#293442	24T
#293443	25T

**IMPORTANT:**  
The composite holders and servo horn orientation depends on the servo type and servo position which can be mounted either from top of the radio plate or from the bottom.

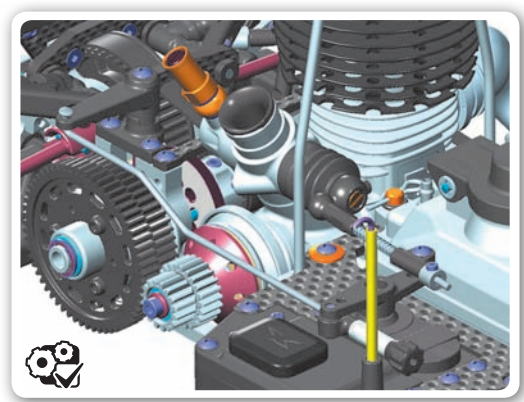
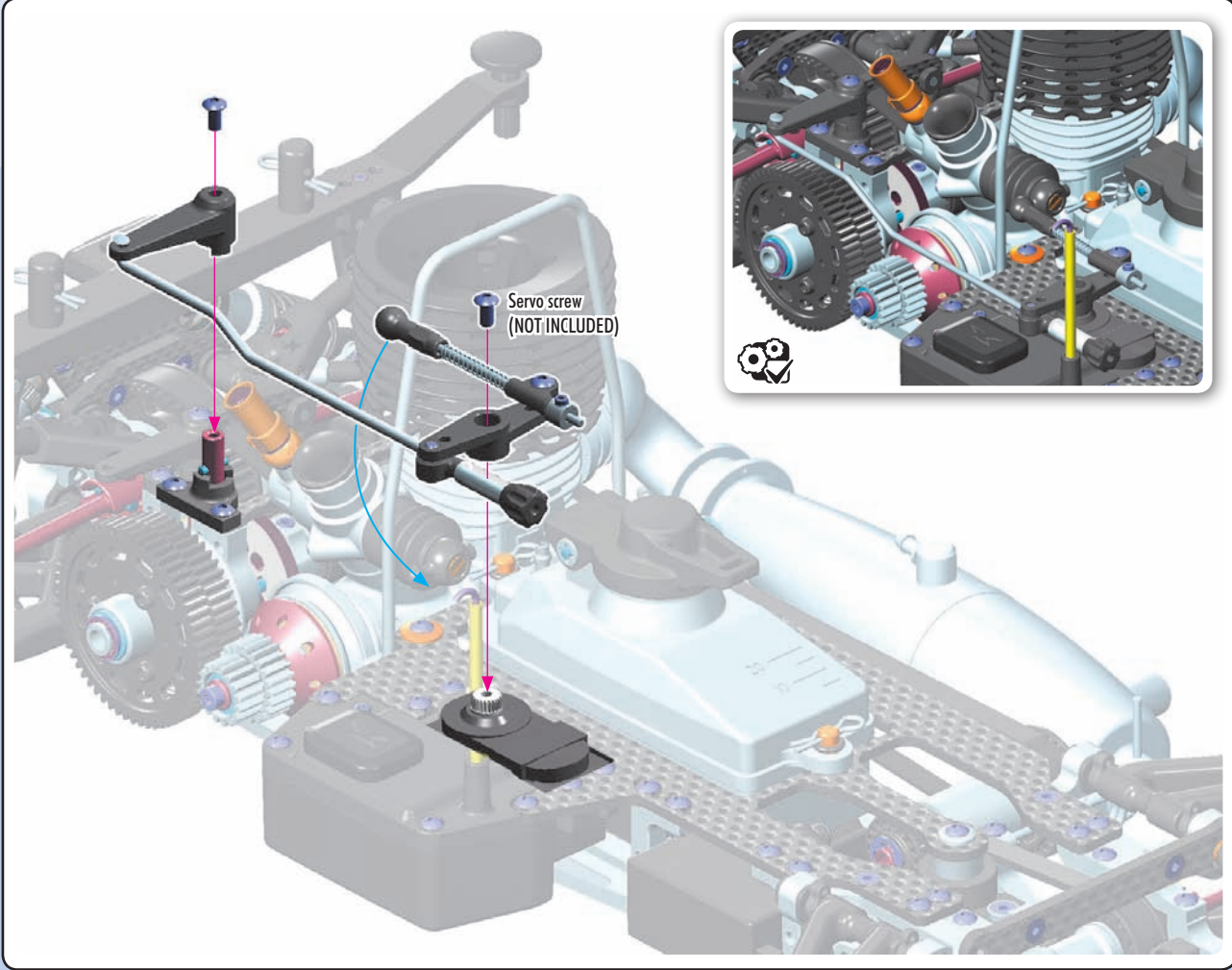
**HUDY ALU SERVO HORNS**

#293494	23T KO Propo, Airtronics, JR, Sanwa
#293495	24T Hitec
#293496	25T Futaba

**#334061-0**  
ALU BRAKE POST ARM - SWISS 7075 T6 - ORANGE



902306  
SH M3x6







903305  
SFH M3x5

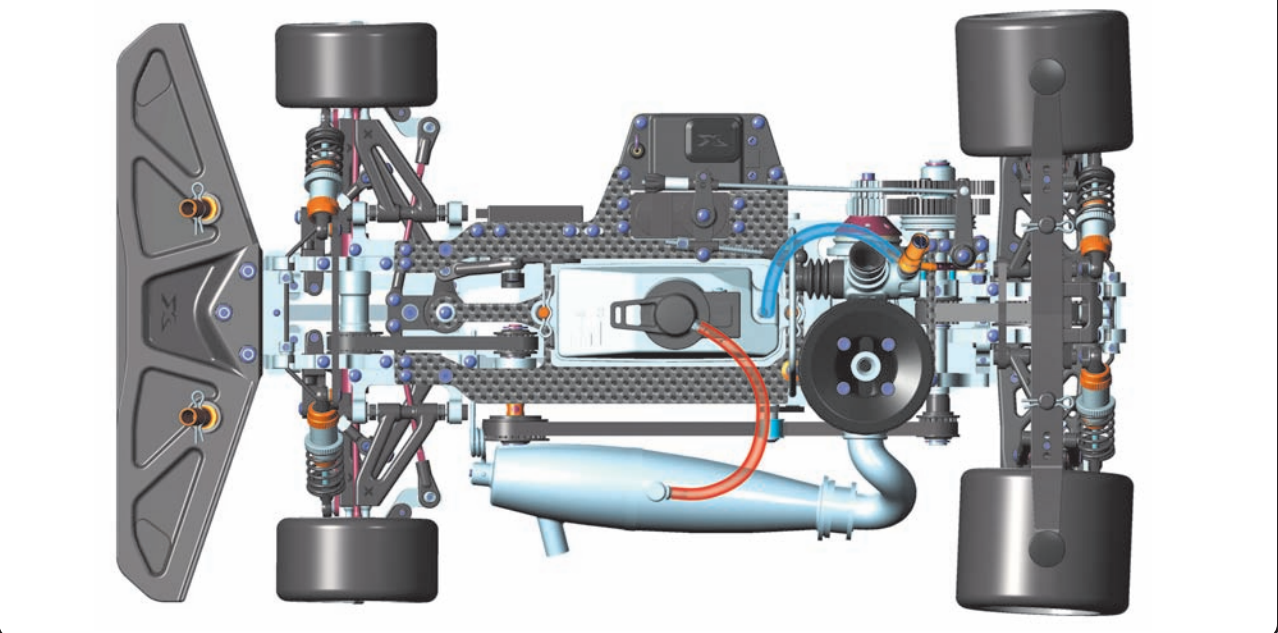
**FRONT**

Aluminum Brace

**FRONT CHASSIS FLEX ADJUSTMENT**  
Chassis features unique and innovative front flex adjustment using an insertable aluminum brace.

<p><b>SOFT SETTING</b> NO BRACE: The car is easier to drive and has more forward traction.</p>	<p><b>STIFF SETTING</b> USING THE ALUMINUM BRACE: Car has increased steering response and cornering speed.</p>
--	--

Cut 2 pieces of silicone tubing and install as follows: **SILICONE TUBE MARKED AS RED = FROM MUFFLER TO FUEL TANK CAP**      **SILICONE TUBE MARKED AS BLUE = FROM FUEL TANK TO CARBURETOR**



903305  
SFH M3x5

**OPTION** **BRASS CHASSIS WEIGHTS (OPTIONAL)**

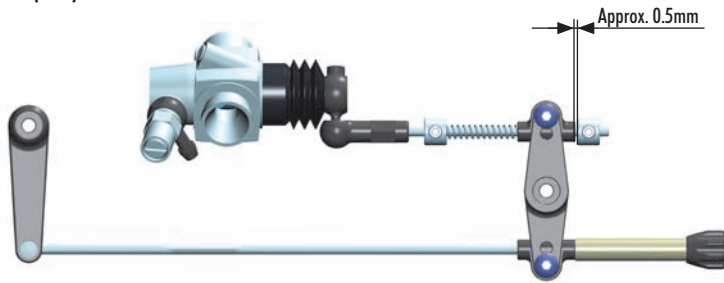
**FRONT** **REAR**

25g  
3x5mm      3x5mm

<p><b>OPTION</b> #341187 BRASS CHASSIS WEIGHT FRONT 25g</p>	<p><b>OPTION</b> #341188 BRASS CHASSIS WEIGHT MIDDLE</p>
---	--

# CARB LINKAGE ADJUSTMENT

## NEUTRAL (IDLE)

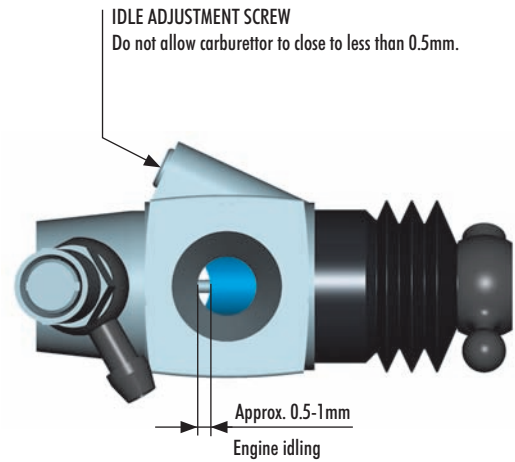


Turn on transmitter and receiver and set the throttle servo trim to the neutral position.

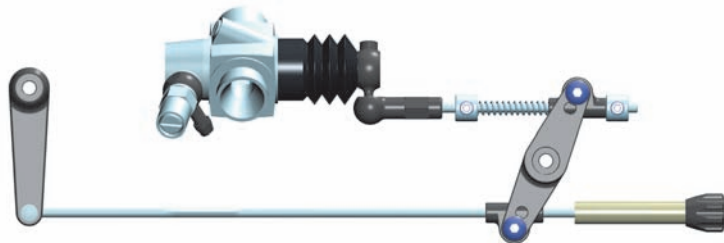
Adjust the idle adjustment screw on the carburetor to open approx. 0.5-1mm.

Adjust both collars on the carb and brake linkages accordingly. The carb linkage must have approximately 0.5mm of preload on the spring at neutral.

DO NOT ADJUST while the engine is running.



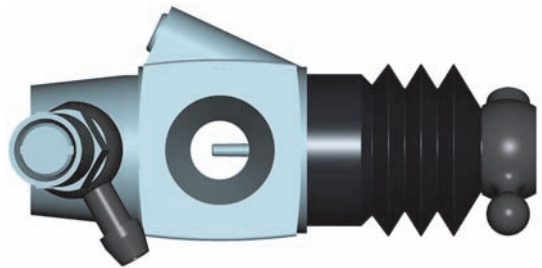
## FULL THROTTLE



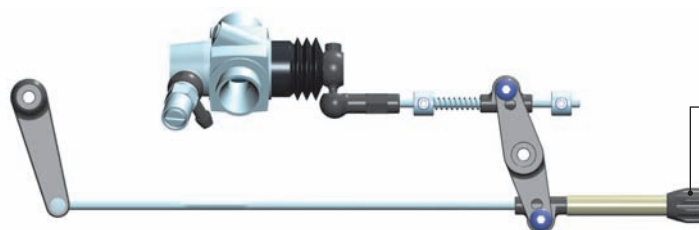
With the engine NOT RUNNING but the receiver turned ON, apply full throttle at the transmitter.

Adjust the transmitter's throttle servo high-end point so that the servo horn fully opens the carburetor when the transmitter's throttle control (e.g., throttle trigger) is at 95% of full throttle. The servo should not have excessive strain when at full throttle, or throttle/carb damage will result.

If the transmitter does not have throttle high-end point adjustment, adjust the throttle linkage pivot position on the servo horn until full throttle is obtained.



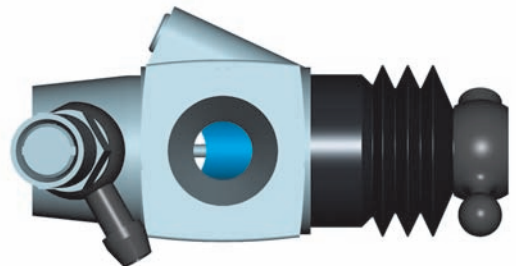
## BRAKE



BRAKE ADJUSTING COLLAR

Adjust the composite collar on the brake linkage so the brakes work smoothly.

If the brakes apply too much or not enough, adjust the collar accordingly. If your transmitter has throttle servo low-end point adjustment (or brake adjustment), use that to set the appropriate amount of throttle servo horn throw.





**INSTRUCTION MANUAL SUPPLEMENTARY SHEET**

Use this RX8E.3 Supplementary Instruction Sheet along with the standard RX8.3 Instruction Manual.

**New and Improved Parts**

All of these parts are new or updated from the previous versions.



#303120  
Set of alu shim (0.5mm, 1.5mm, 2.5mm)



#343077  
RX8E Graphite Belt Tensioner Holder 2.5mm



#376130  
Composite LiPo Battery Backstop (2)



#345611  
RX8E Center Shaft - HUDY Spring Steel™



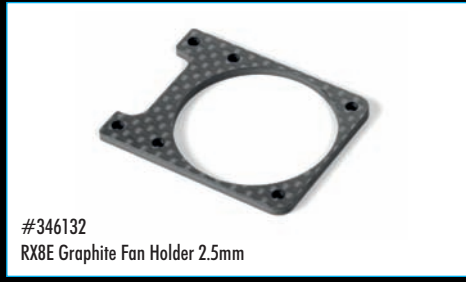
#345620  
RX8E Alu Spur Gear Collar - Swiss 7075 T6



#345630  
RX8E Alu Pinion Gear Adapter - Swiss 7075 T6



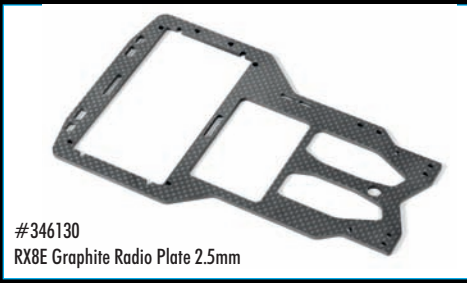
#345690  
Alu Shim 5x17x1.5mm - Black (2)



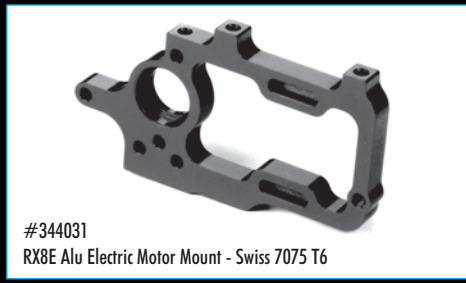
#346132  
RX8E Graphite Fan Holder 2.5mm



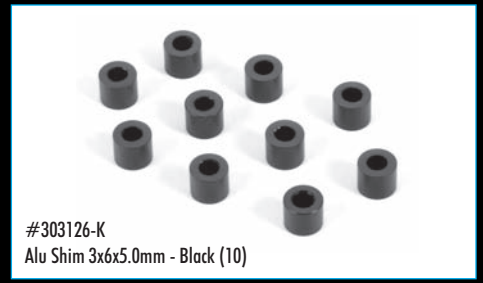
#346131  
RX8E Graphite Receiver Case Holder 2.5mm



#346130  
RX8E Graphite Radio Plate 2.5mm



#344031  
RX8E Alu Electric Motor Mount - Swiss 7075 T6



#303126-K  
Alu Shim 3x6x5.0mm - Black (10)



#345733-K  
RX8E Alu Middle Shaft Locating Collar - Black



#345713  
RX8E Front Middle Shaft - Lightweight



#345594-K  
RX8E Alu 2-Speed Shaft Locating Collar - Black



**!** Follow the **RX8.3** Instruction Manual for specific steps.

## 2. REAR SUSPENSION

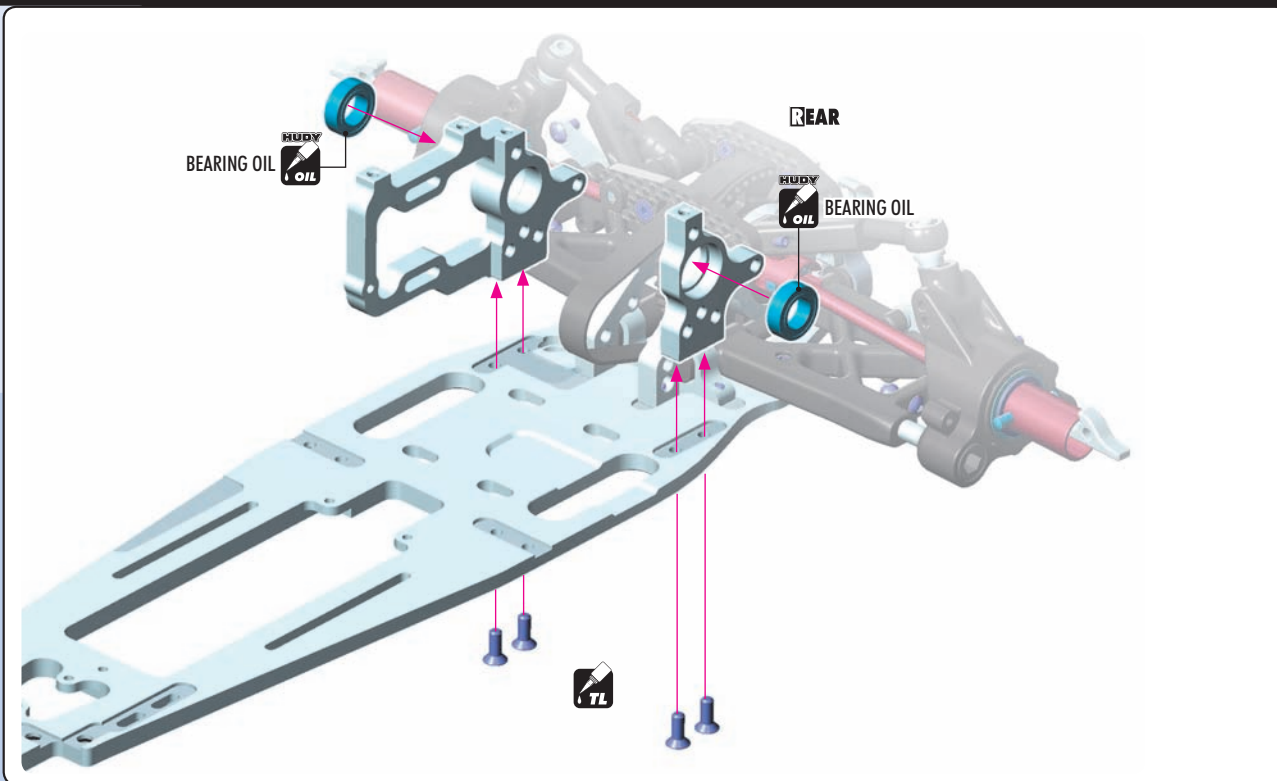
PAGE 13 / STEP 2



903310  
SFH M3x10



930815  
BB 8x14x4

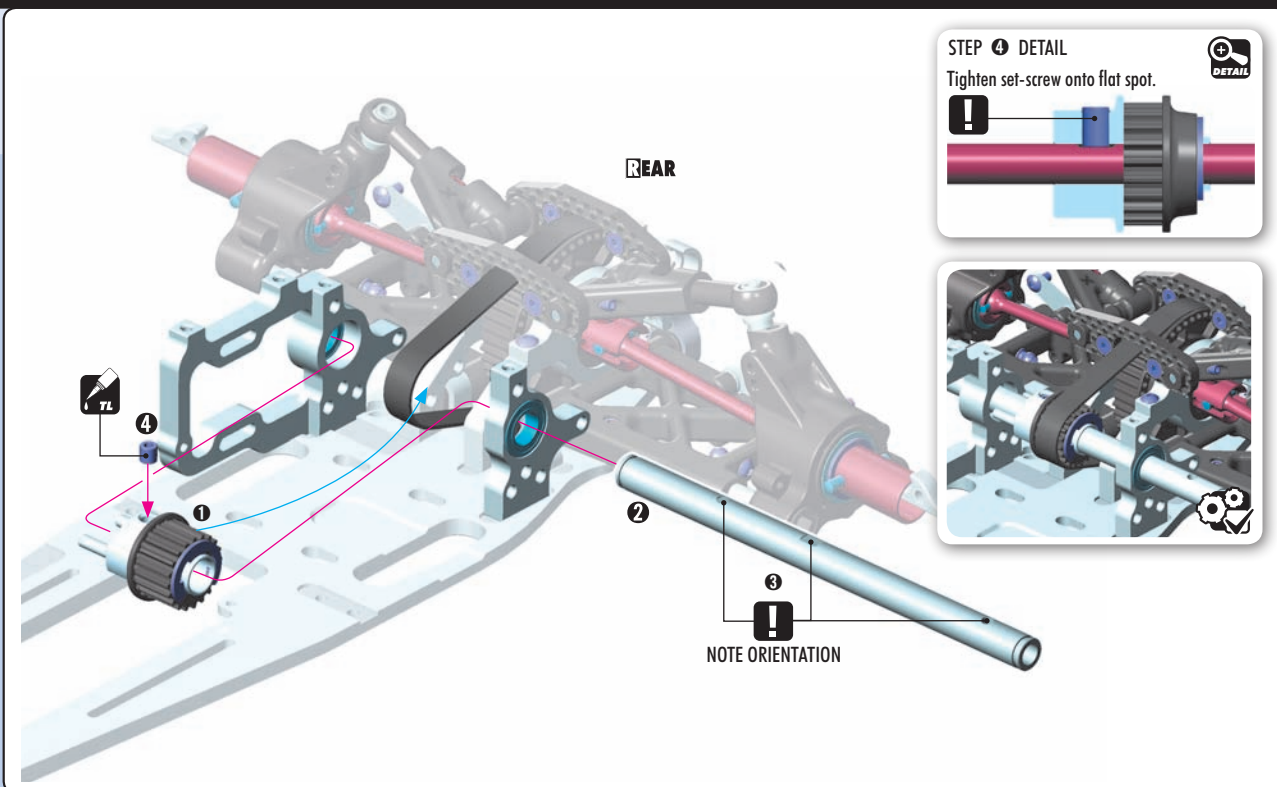


## 2. REAR SUSPENSION

PAGE 14 / STEP 1

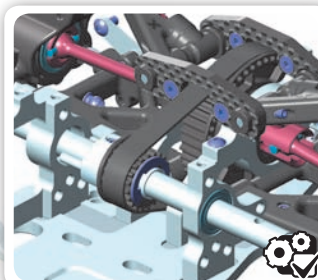
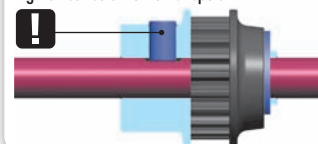


901404  
SB M4x4



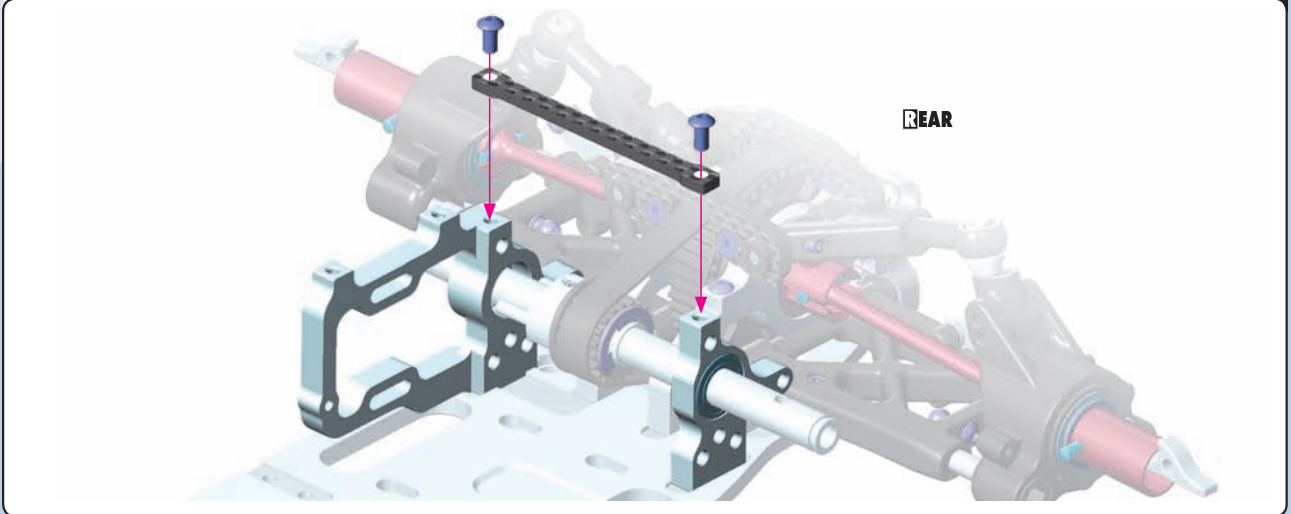
STEP 4 DETAIL

Tighten set-screw onto flat spot.



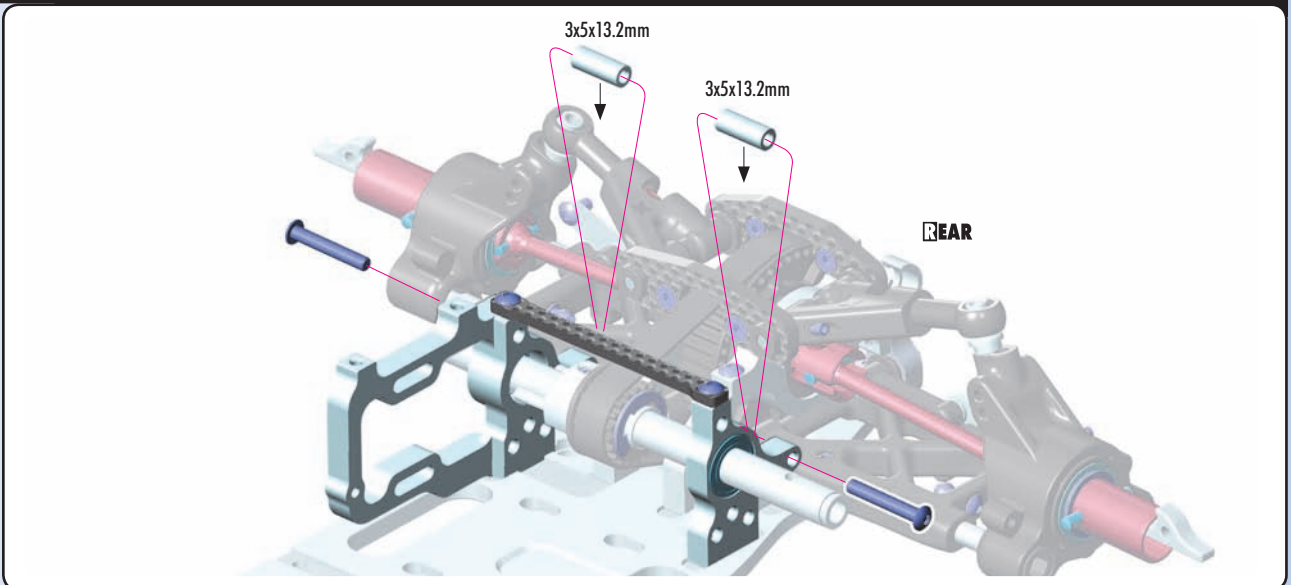
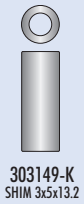
## 2. REAR SUSPENSION

PAGE 14 / STEP 2



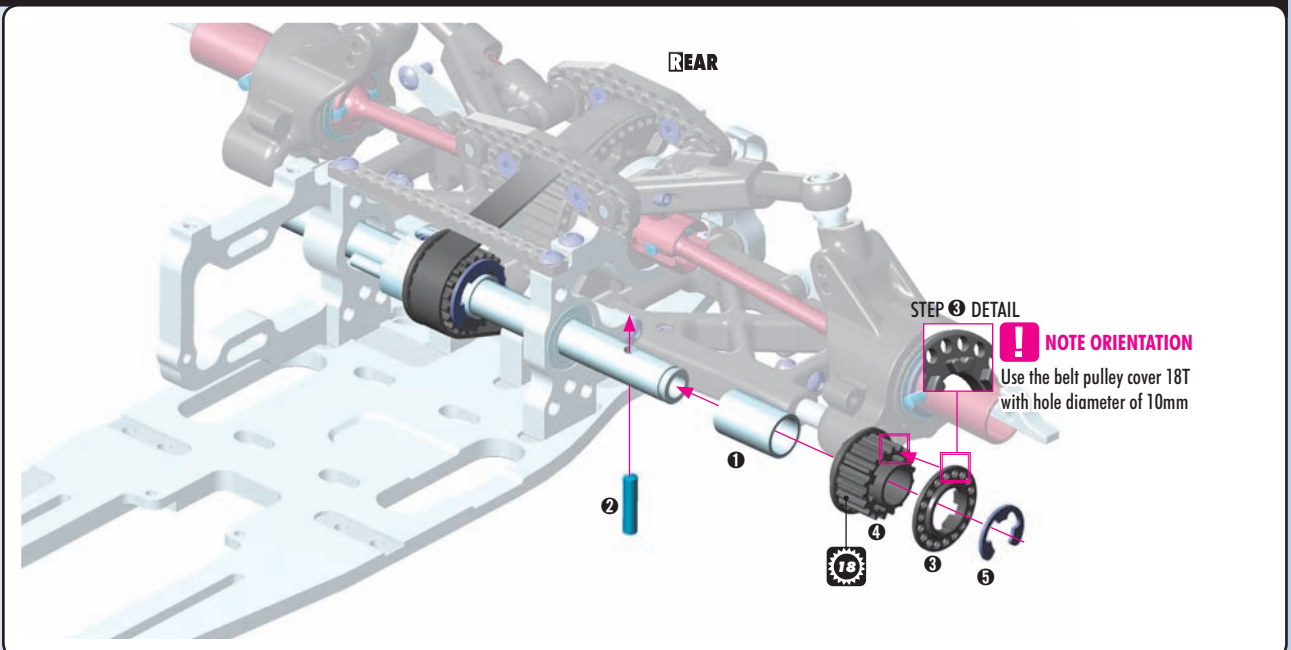
## 2. REAR SUSPENSION

PAGE 15 / STEP 1



## 2. REAR TRANSMISSION

PAGE 19 / STEP 2



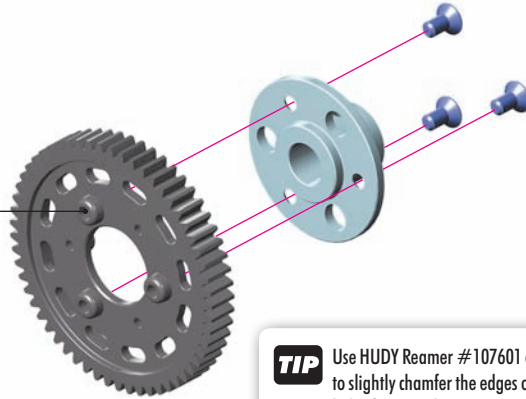
### 3. REAR SUSPENSION

PAGE 20 / STEP 2



903306  
SFH M3x6

**!** NOTE ORIENTATION



#### GRAPHITE GEARS

OPTION	335653	53T	OPTION
	335654	54T	OPTION
	335655	55T	OPTION
	335657	57T	INCLUDED
	335658	58T	OPTION
	335659	59T	OPTION
	335660	60T	OPTION



**TIP** Use HUDY Reamer #107601 or #107602 to slightly chamfer the edges on all 3 screw holes from inside.

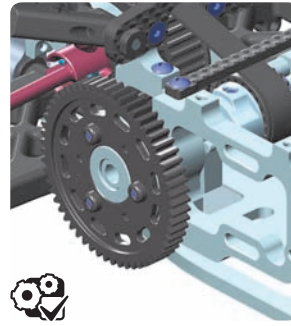
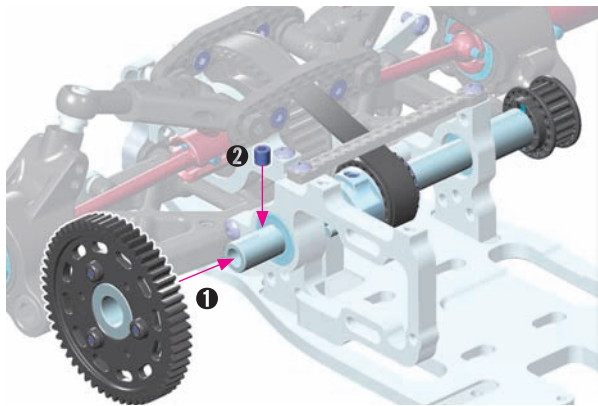


### 3. REAR SUSPENSION

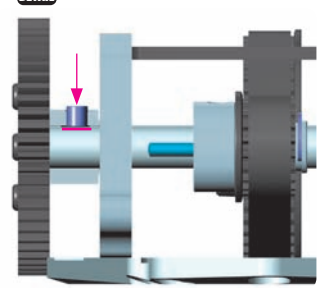
PAGE 20 / STEP 3



901404  
SB M4x4

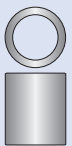


**+** STEP 2 DETAIL



### 5. FRONT TRANSMISSION

PAGE 31 / STEP 2,3



345733-K  
SHIM 6x8x9.5



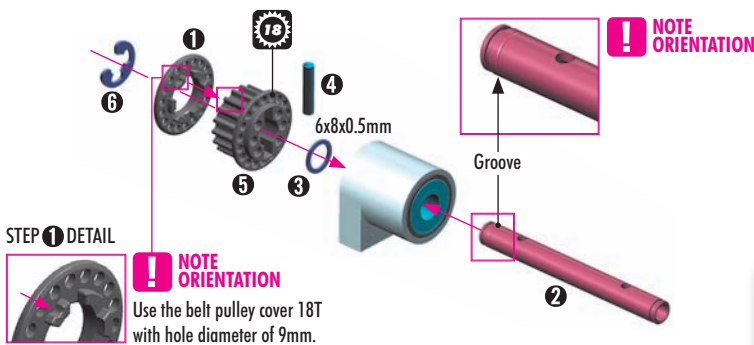
962060  
SHIM 6x8x0.5



965050  
CS



981262  
P 2.5x12

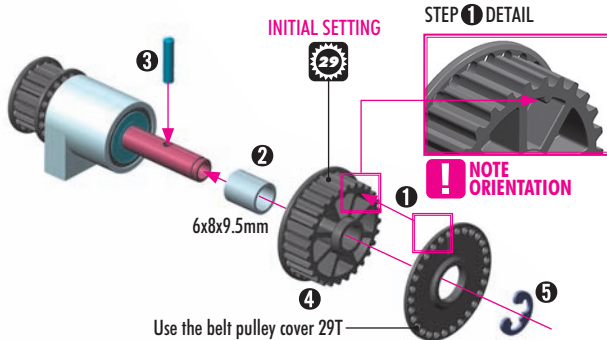


STEP 1 DETAIL

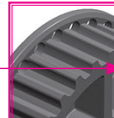


**!** NOTE ORIENTATION

Use the belt pulley cover 18T with hole diameter of 9mm.

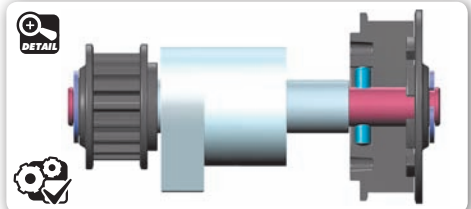


STEP 1 DETAIL



**!** NOTE ORIENTATION

Use the belt pulley cover 29T



#### FRONT SIDE BELT PULLEY

OPTION	#345888	28T	COMPOSITE	INCLUDED
	#345889	29T	COMPOSITE	INCLUDED
	#345988	28T	ALU	OPTION
	#345989	29T	ALU	OPTION
	#345990	30T	ALU	OPTION





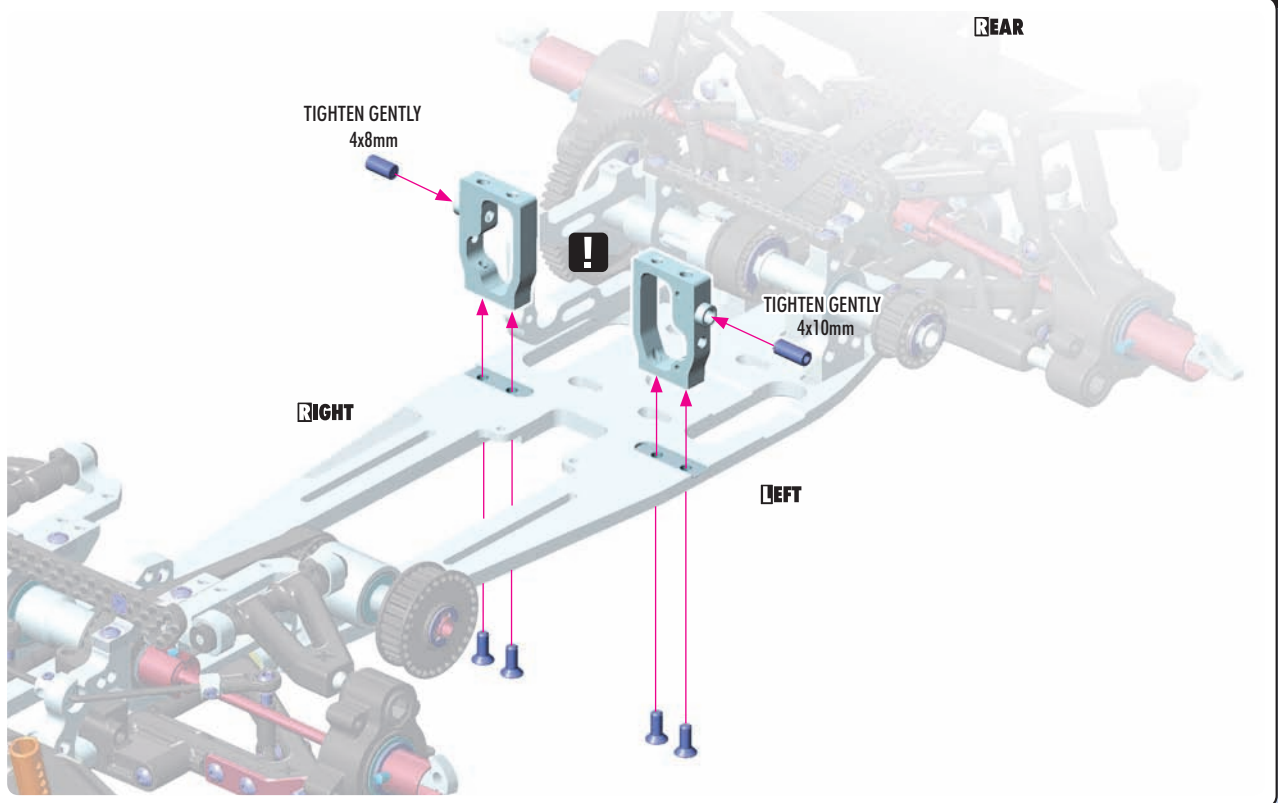
901408  
SB M4x8



901410  
SB M4x10



903308  
SFH M3x8



303120  
SHIM 3x6x2.5



303126-K  
SHIM 3x6x5



902318  
SH M3x18



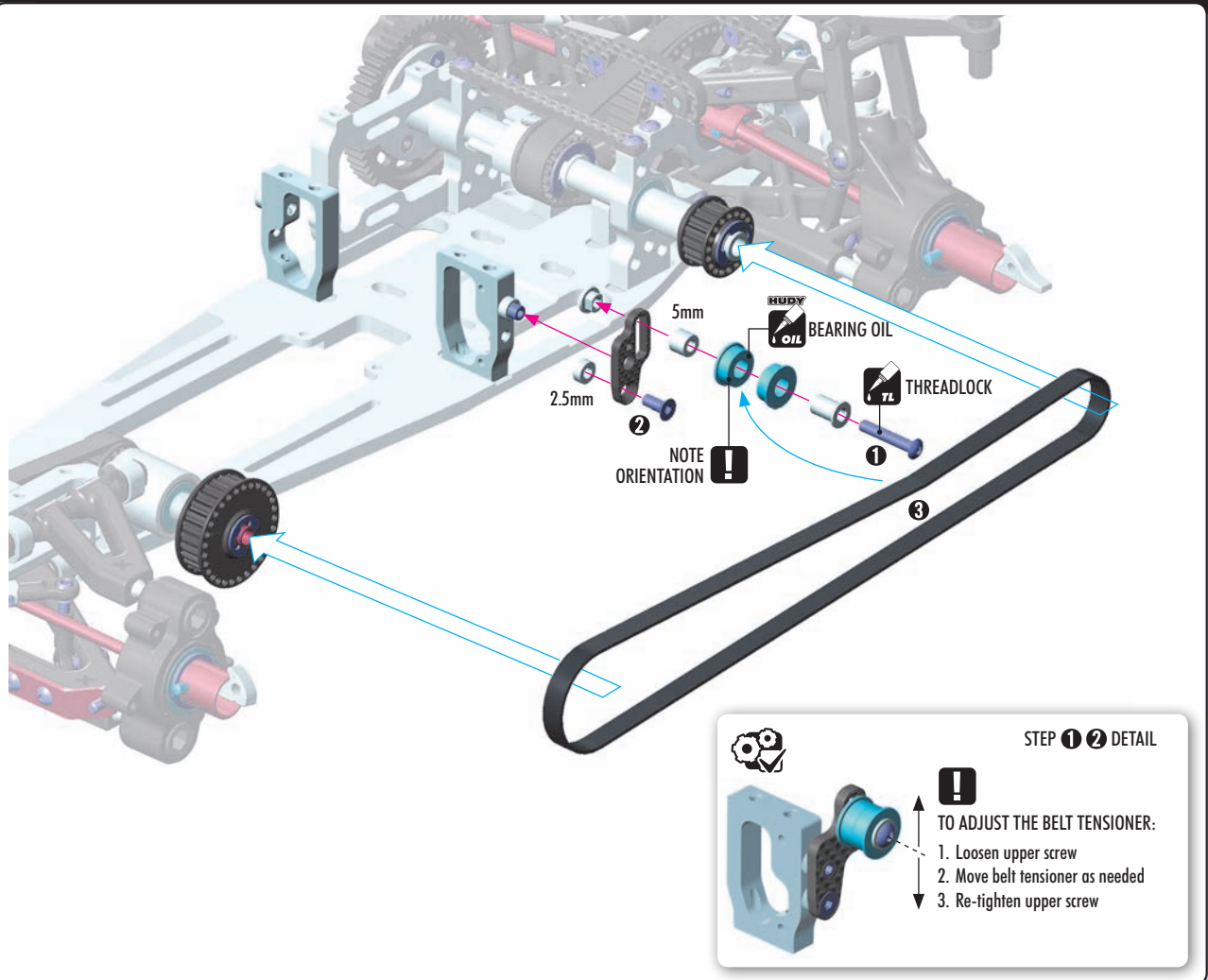
902318  
SH M3x18



903308  
SFH M3x8



950510  
BB 5x10x4



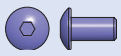
**STEP 1 2 DETAIL**

**!**

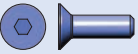
TO ADJUST THE BELT TENSIONER:

1. Loosen upper screw
2. Move belt tensioner as needed
3. Re-tighten upper screw

# 7. ELECTRONICS



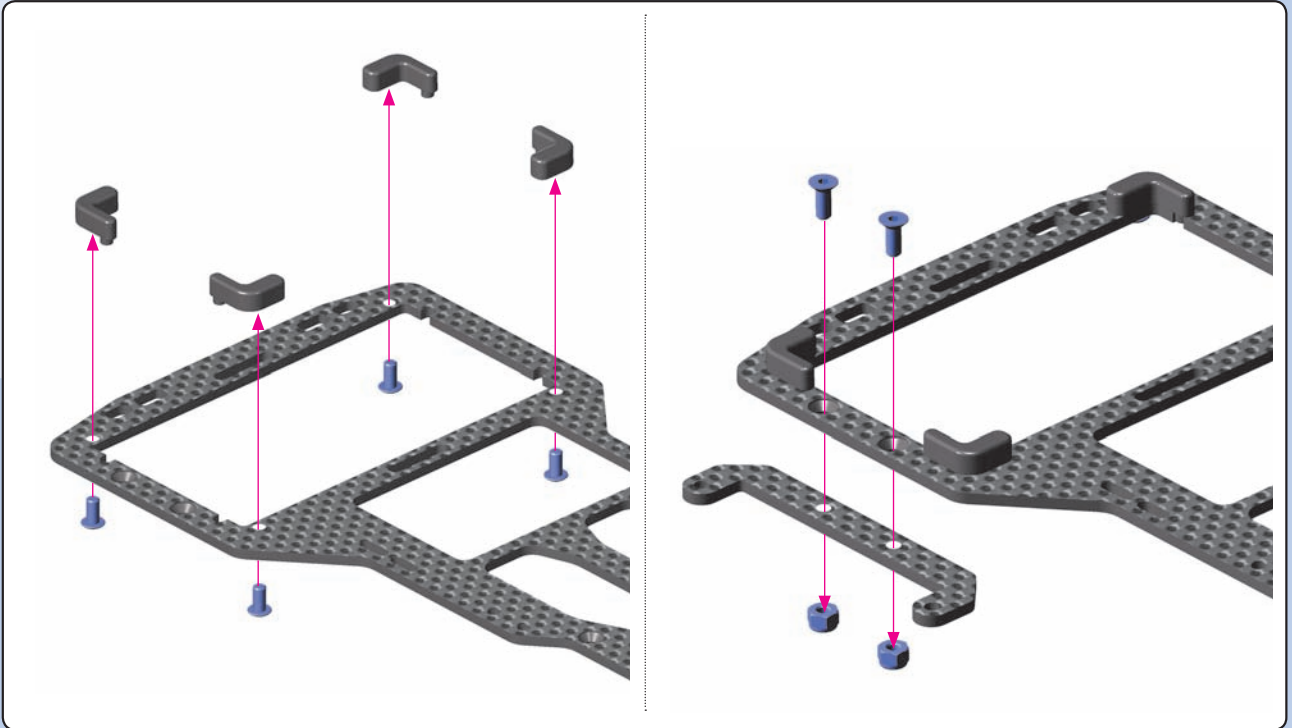
902306  
SH M3x6



903310  
SFH M3x10



960030  
N M3



# 7. ELECTRONICS

PAGE 37 / STEP 2



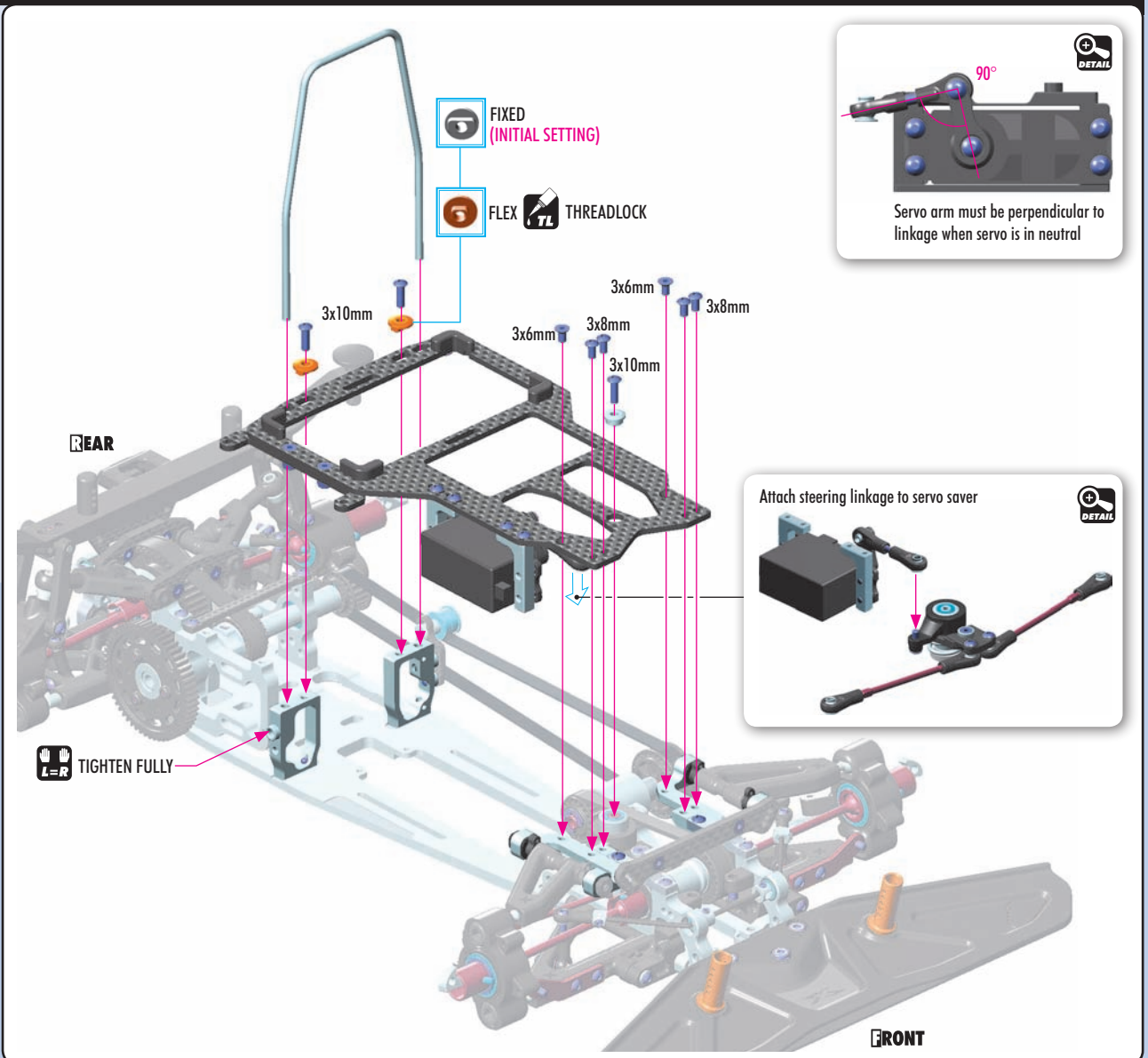
902308  
SH M3x8



902310  
SH M3x10



903306  
SFH M3x6



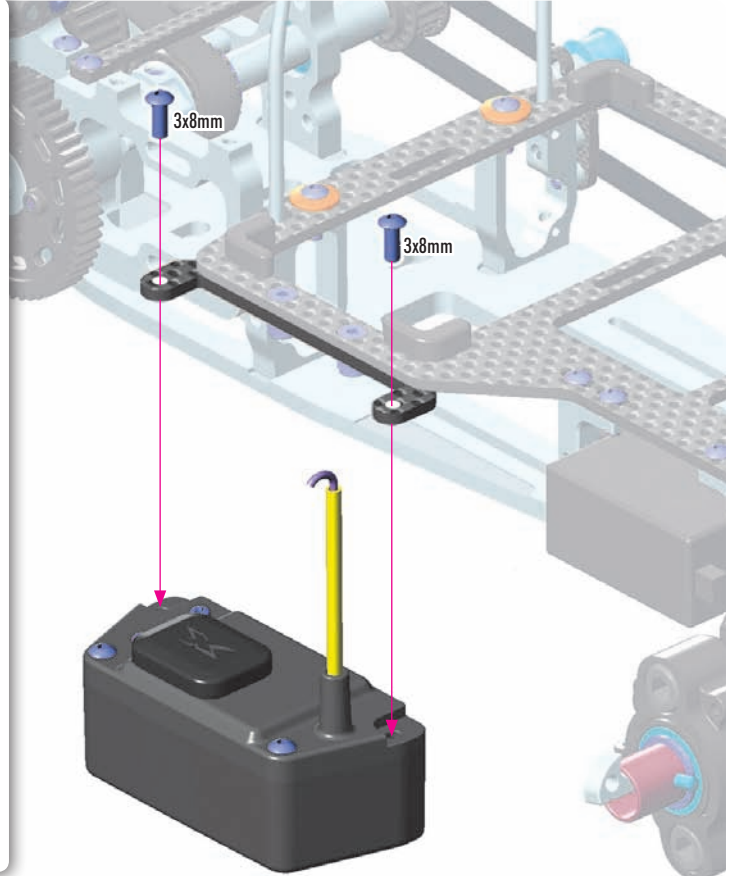
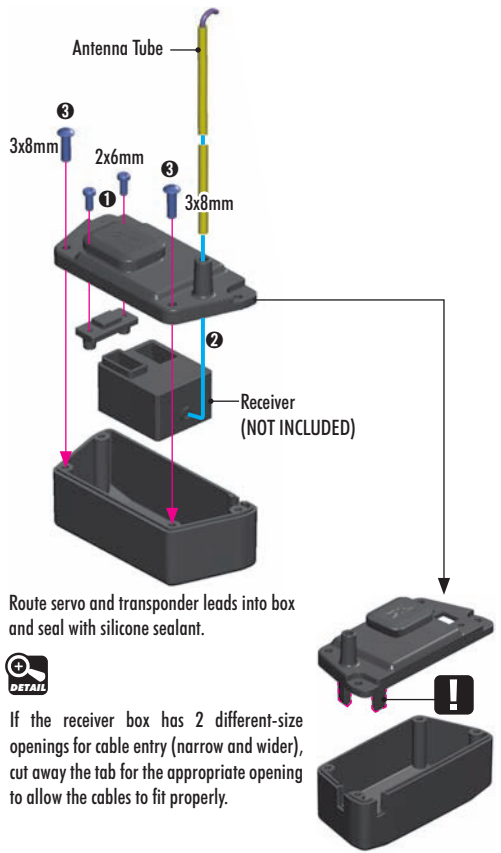




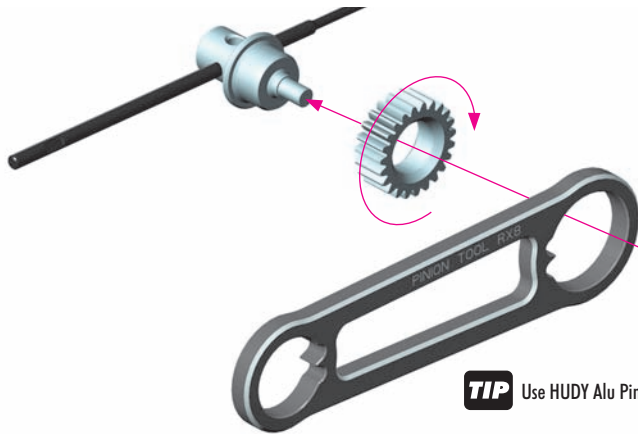
902308  
SH M3x8



907206  
2x6



7. ELECTRONICS



**TIP** Use HUDY Alu Pinion Tool #349903

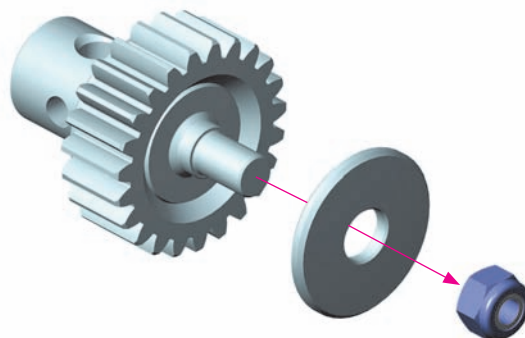


XCA HARDCOATED PINION GEAR

OPTION	#348422	22T	OPTION	
	#348423	23T	OPTION	
	#348424	24T	OPTION	
	#348425	25T	INCLUDED RECOMMENDED	



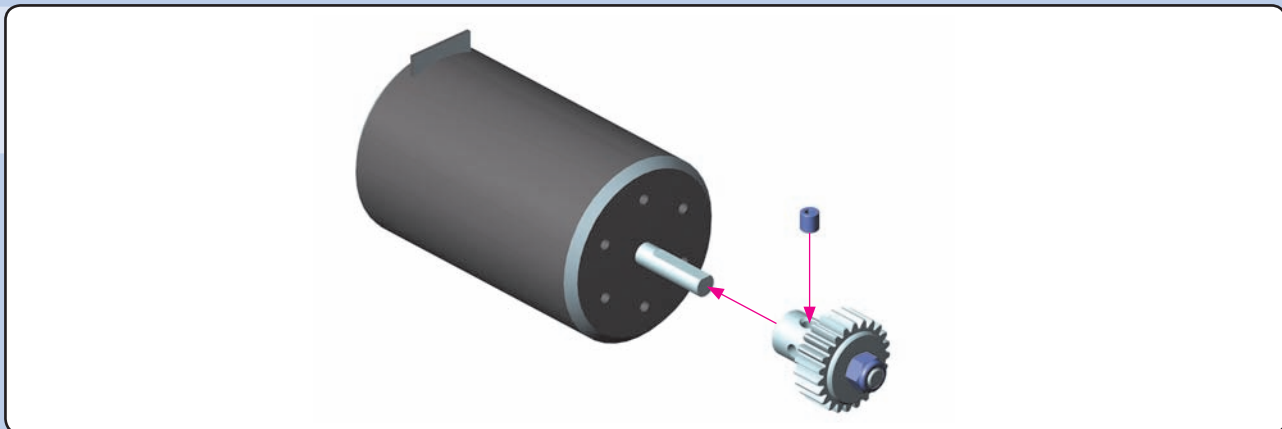
960040  
N M4



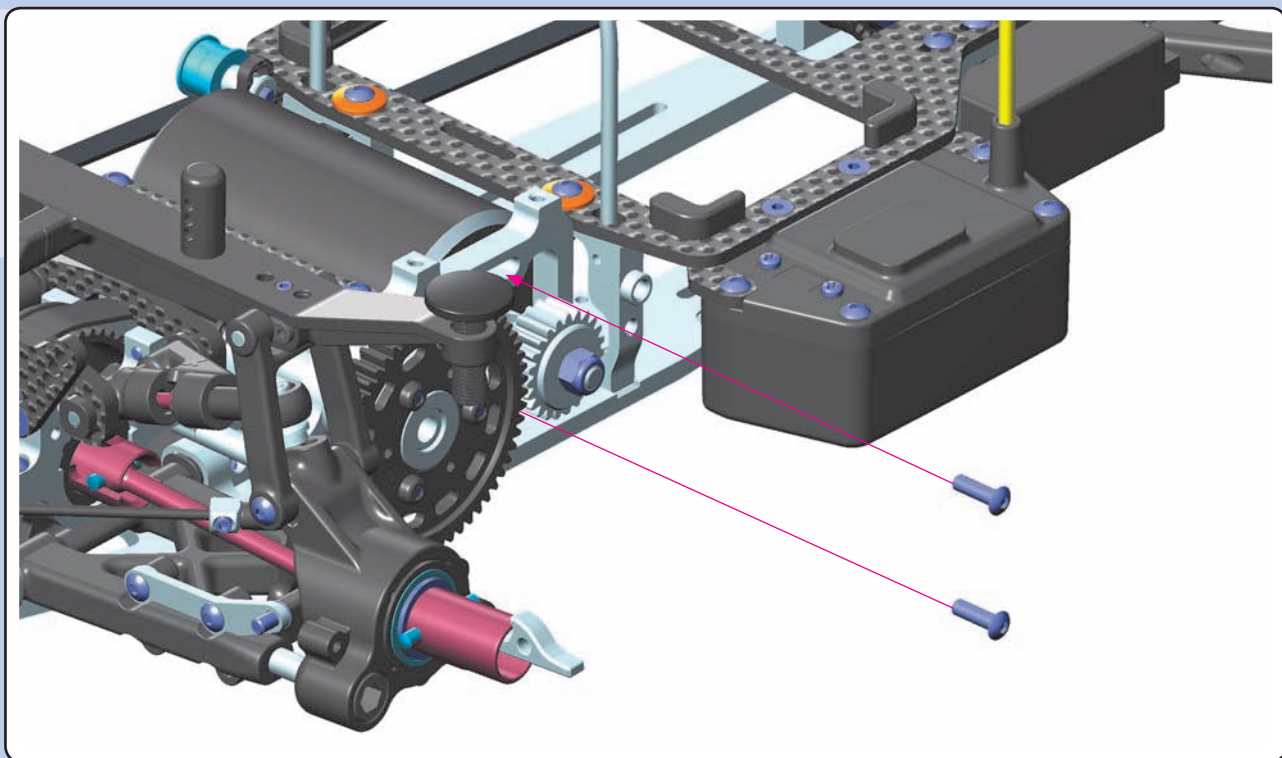
# 7. ELECTRONICS



901404  
SB M4x4



902310  
SH M3x10



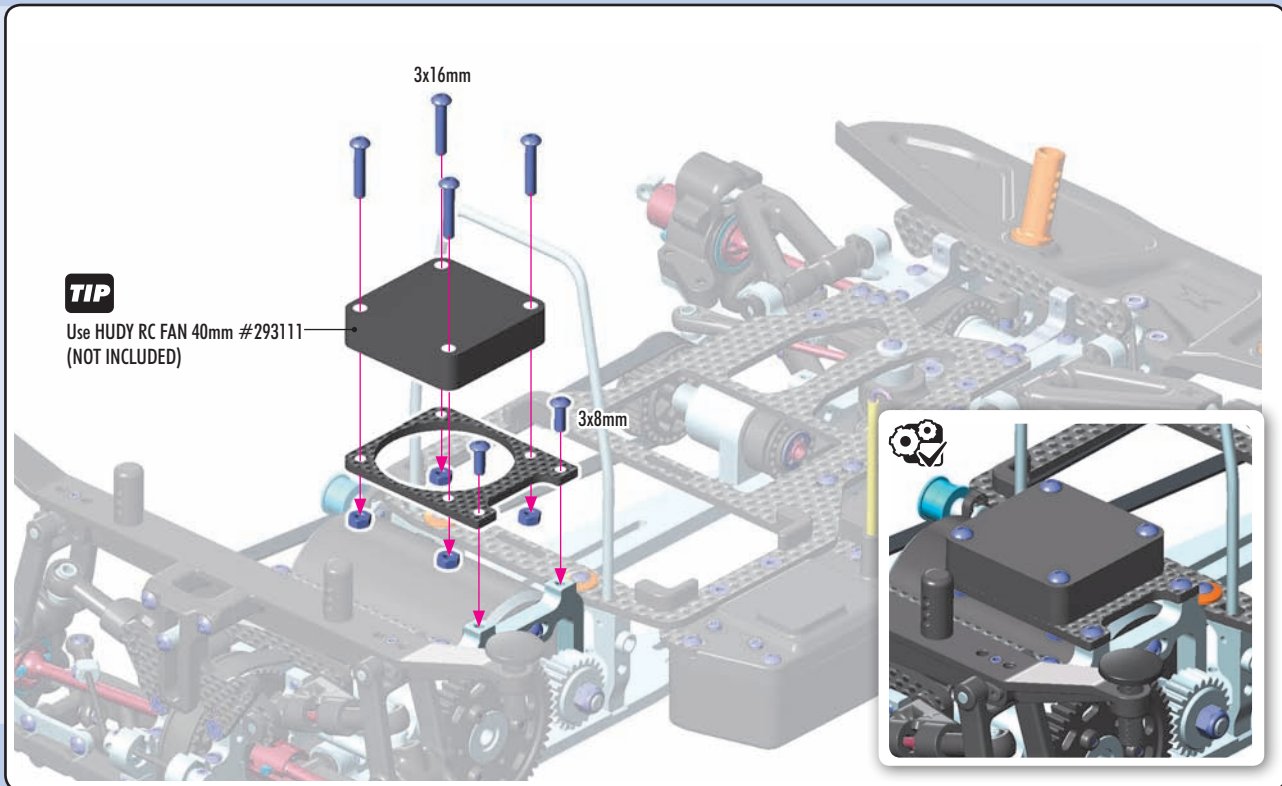
902308  
SH M3x8



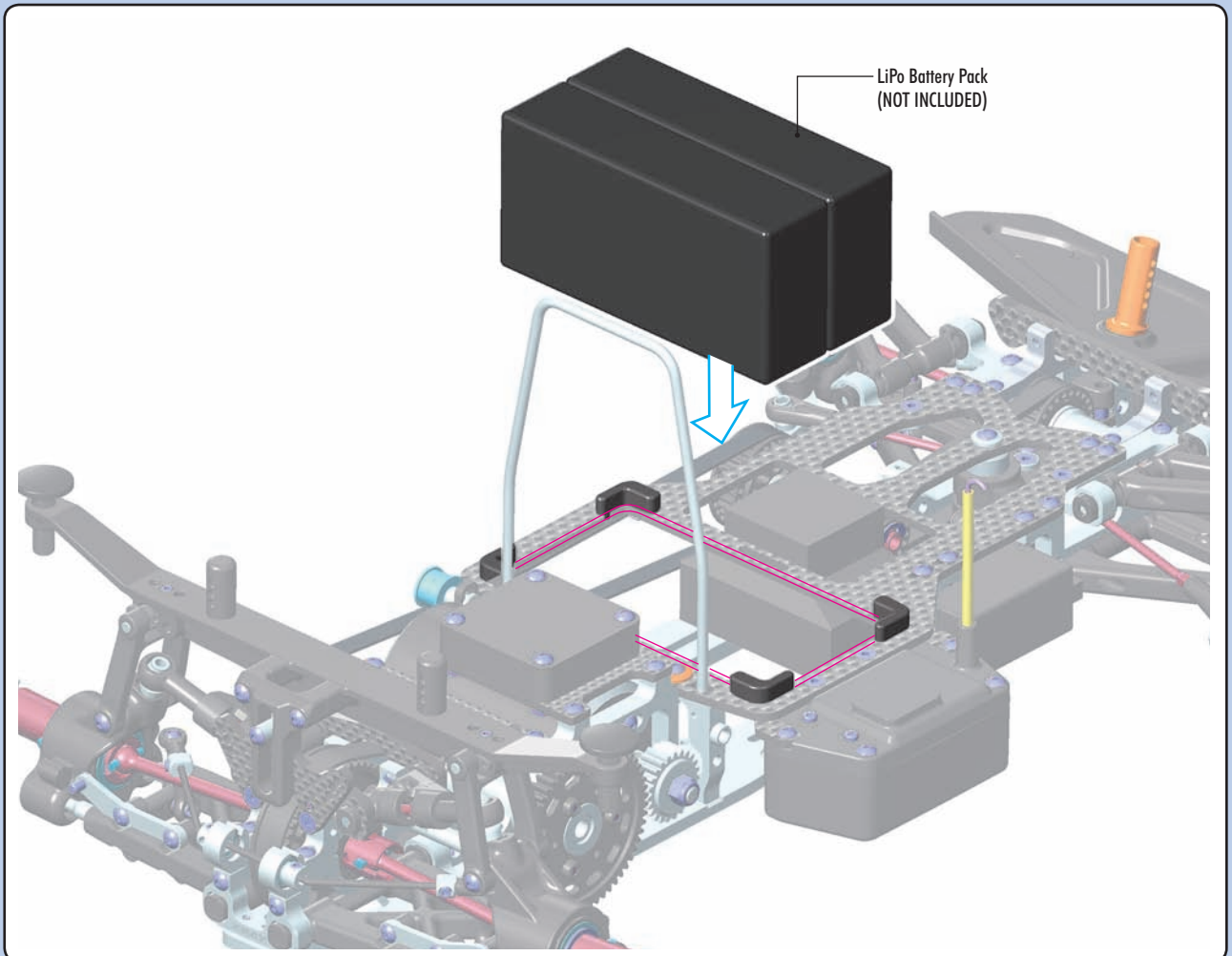
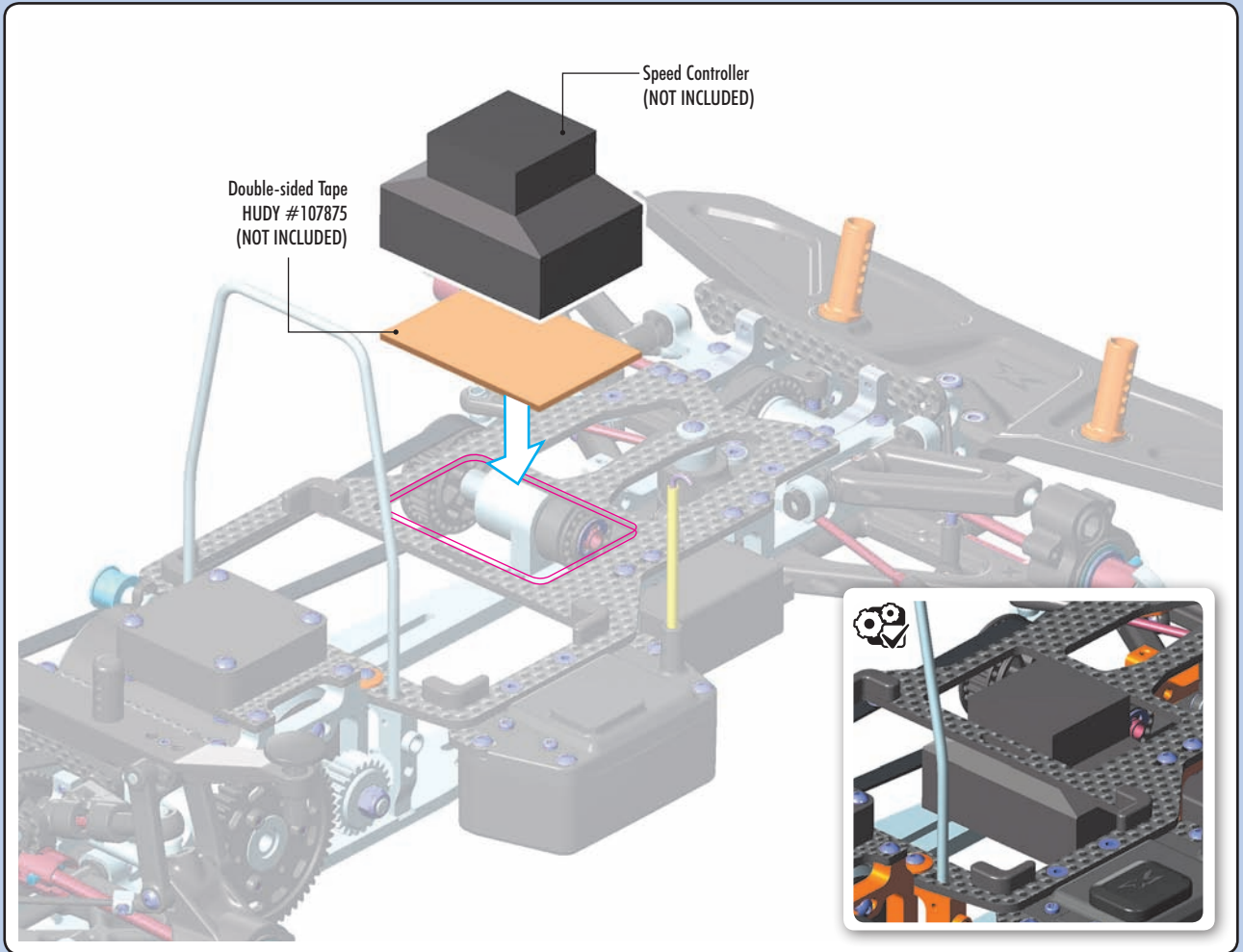
902316  
SH M3x16



960032  
N M3



## 7. ELECTRONICS



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