

**XRAY**  
1/8 LUXURY NITRO ON-ROAD CAR

# FX-3 2017 INSTRUCTION MANUAL



MADE IN  
EUROPE

**4X**  
WINTERNATS  
CHAMPION

ASIAN  
**FEMCA**  
WINTERCUP

**12X**  
NATIONAL  
CHAMPION  
TITLES



## BEFORE YOU START

The RX8 is a high-competition, high-quality, 1/8-scale on-road nitro 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 RX8, 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.

## 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)

Read carefully and fully understand the instructions before beginning assembly.

Make sure you review this entire Instruction Manual and examine all details carefully. If for some reason you decide the RX8 is not what you wanted or expected, do not continue any further. Your hobby dealer cannot accept your RX8 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.

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

## 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 guaranty 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!

## **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

## **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,

## **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

## **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

## **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!

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.

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.

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.

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 additions that may arise from the use of this product.**

**All rights reserved.**

**Please note that raw materials such as aluminum, steel, brass, fibreglass, or carbon fibre may have small scratches on the surface which is a standard characteristic of any raw material. Scratches on the surface of any materials are NOT considered to be material defects.**

Products may potentially have small amounts of corrosion on them. This may be caused by variances in weather during different times of the year, humidity in the shop or during shipping, and other contributing factors. Even though we have taken all precautions and protection methods to prevent corrosion, these small amounts of corrosion (if present) are unavoidable and considered to be acceptable.

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

# SYMBOLS USED

Apply thread lock	Assemble left and right sides the same way	Number of teeth	Part bags used
Apply oil (may indicate specific type)	Ensure smooth non-binding movement	Detail	Assemble in the specified order
Apply cyanoacrylate (CA) glue	Cut off remaining material	Pay attention here	Assembly view
Apply grease	Assemble as many times as specified (here twice)	Follow tip here	Optional parts

# TOOLS REQUIRED

**HUDY TOOLS**

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

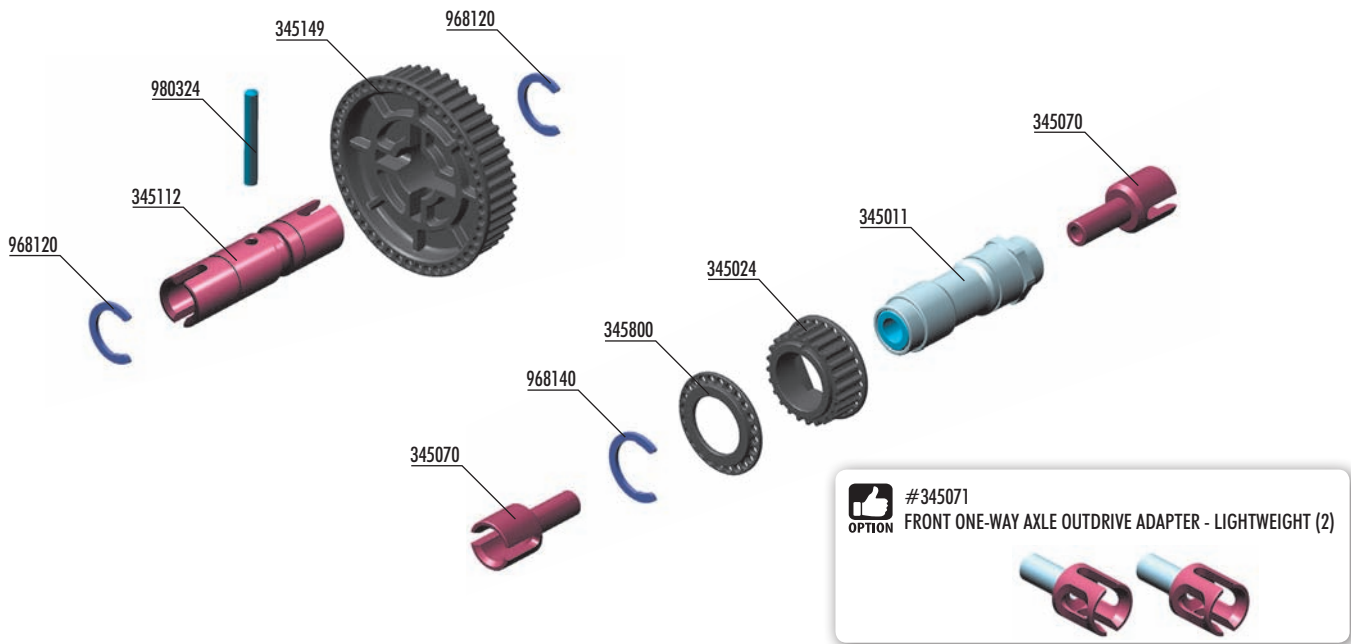
Flywheel Tool (HUDY #182010)	Alu Pinion Gear Tool (XRAY #349903)	Turnbuckle Tool 3.0mm (HUDY #181030)	Reamer (HUDY #107602) (HUDY #107601)
Side Cutters (HUDY #189010)	Pocket Hobby Knife (HUDY #188981)	Wrench Glowplug/Clutchnut (HUDY #107581)	Scissors (HUDY #188990)

# 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

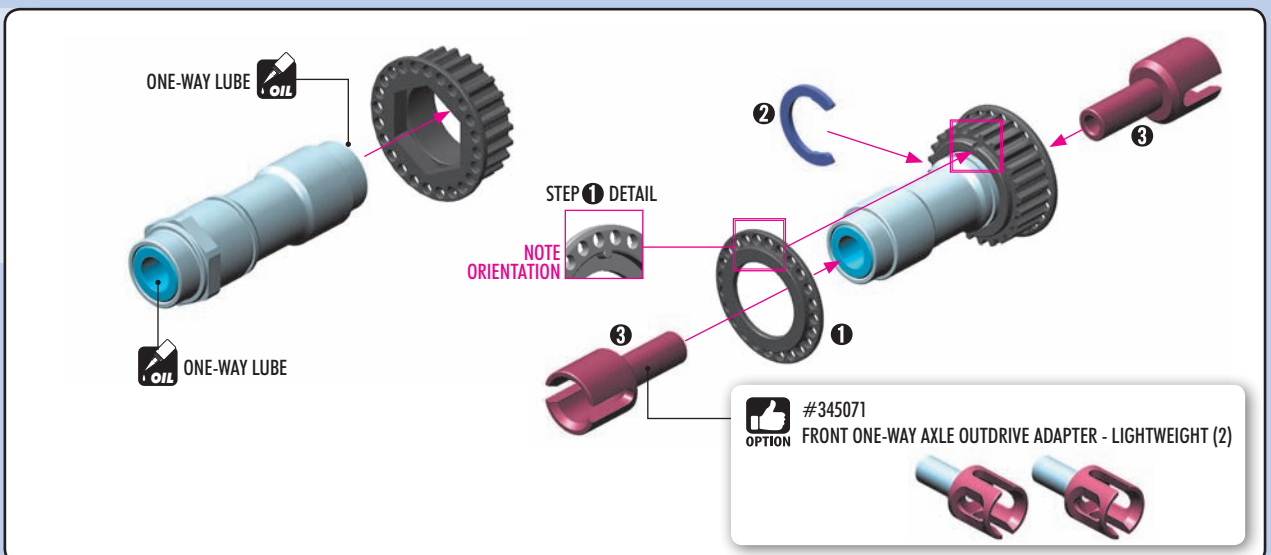
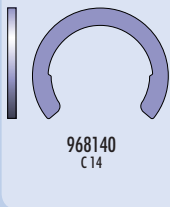
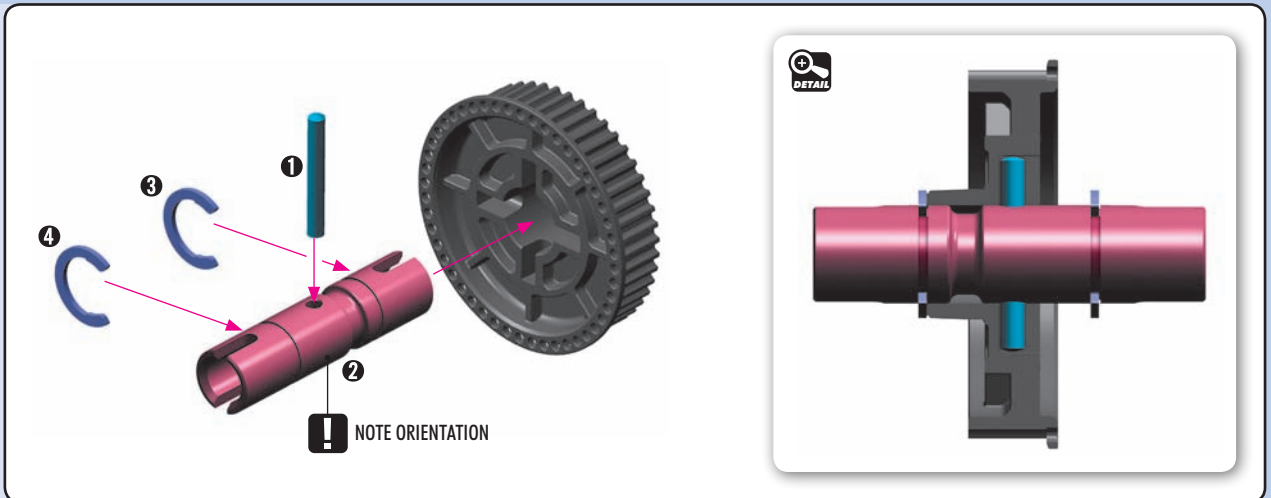
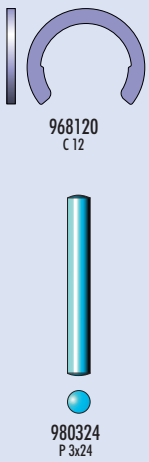


**BAG**

**01**

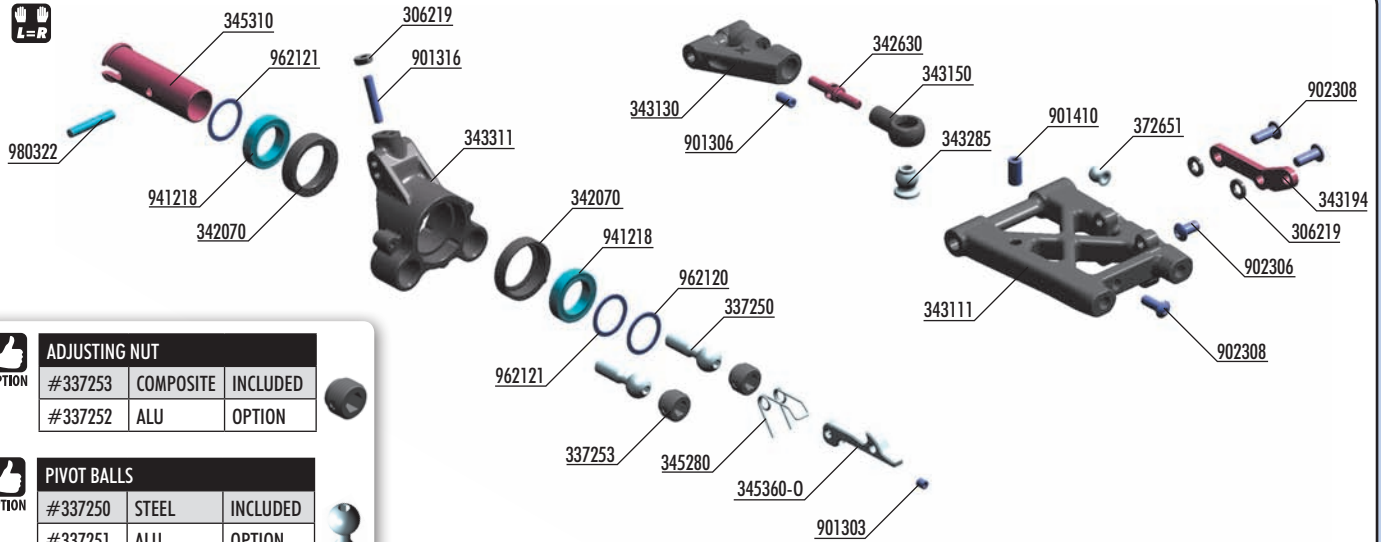
345001 FRONT ONE-WAY - HARDCOATED + LIGHTWEIGHT ADAPTERS  
 345011 FRONT ONE-WAY AXLE - BLACK COATED  
 345024 COMPOSITE FRONT ONE-WAY AXLE PULLEY 24T  
 345070 FRONT ONE-WAY AXLE OUTDRIVE ADAPTER - HUDY SPRING STEEL™ (2)  
 345071 FRONT ONE-WAY AXLE OUTDRIVE ADAPTER - LIGHTWEIGHT (2) (OPTION)  
 345800 COMPOSITE BELT PULLEY COVER SET  
 345112 REAR SOLID AXLE SHAFT - HUDY SPRING STEEL™

345149 COMPOSITE REAR SOLID AXLE PULLEY 48T  
 968120 C-CLIP 12 (10)  
 968140 C-CLIP 14 (10)  
 980324 PIN 3x24 (10)



# 2. REAR SUSPENSION

2x L=R



### ADJUSTING NUT

#337253	COMPOSITE	INCLUDED
#337252	ALU	OPTION



### PIVOT BALLS

#337250	STEEL	INCLUDED
#337251	ALU	OPTION
#337255	TITAN	OPTION



#345301  
REAR CVD DRIVE SHAFT SET  
HUDY SPRING STEEL™



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



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



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



### SUSPENSION UPPER ARMS

#343130	MEDIUM	INCLUDED
#343131	HARD	OPTION
#343132	GRAPHITE	OPTION



### SUSPENSION LOWER ARMS

#343111	MEDIUM	INCLUDED
#343112	HARD	OPTION
#343113	GRAPHITE	OPTION

## BAG

02.1

306219	COMPOSITE SET OF SERVO SHIMS (4)	343285	PIVOT BALL 6.8MM (2)	901303	HEX SCREW SB M3x3 (10)
337250	STEEL PIVOT BALL 8.4 MM (2)	343311	COMPOSITE UPRIGHT REAR FOR AERO DISC	901306	HEX SCREW SB M3x6 (10)
337253	COMPOSITE ADJUSTING NUT M10x1 (4)	345280	WHEEL SPRING (2)	901316	HEX SCREW SB M3x16 (10)
342070	COMPOSITE SET OF BUSHINGS (2)	345310	REAR WHEEL AXLE - HUDY SPRING STEEL™	901410	HEX SCREW SB M4x10 (10)
342630	ADJ. TURNBUCKLE L/R 20 MM - HUDY SPRING STEEL™ (2)	345360-0	ALU REAR WHEEL LOCK - SWISS 7075 T6 - ORANGE (2)	902306	HEX SCREW SH M3x6 (10)
343111	SUSPENSION ARM FOR EXTENSION - REAR LOWER	345370	GRAPHITE REAR AERODYNAMIC DISC 1.6MM - SET (OPTION)	902308	HEX SCREW SH M3x8 (10)
343130	COMPOSITE SUSPENSION ARM REAR UPPER	372651	PIVOT BALL UNIVERSAL 4.9 MM - HUDY SPRING STEEL™ (2)	962120	WASHER S 12x15x0.5 (10)
343150	UPPER BALL JOINT 5.8MM - SHORT & LONG (2+2)	941218	HIGH-SPEED BALL-BEARING 12x18x4 RUBBER SEALED (2)	962121	WASHER S 12x15x1.0 (10)
343194	STEEL EXTENSION FOR SUSPENSION ARM - REAR LOWER (2)			980322	PIN 3x22 (10)



901306  
SB M3x6



901410  
SB M4x10

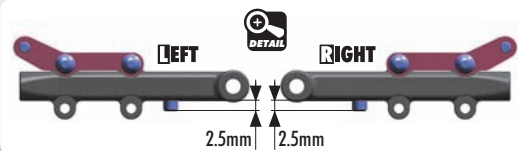
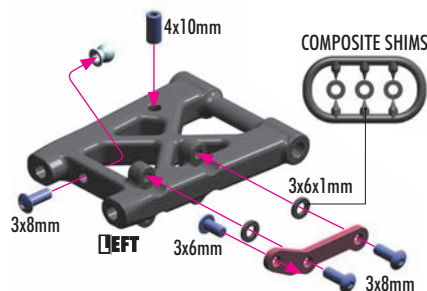


902306  
SH M3x6



902308  
SH M3x8

2x L=R



### SUSPENSION UPPER ARMS

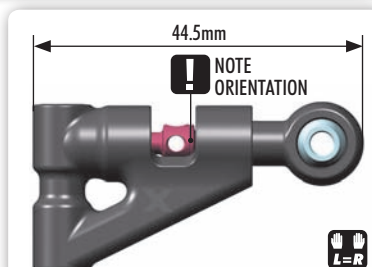
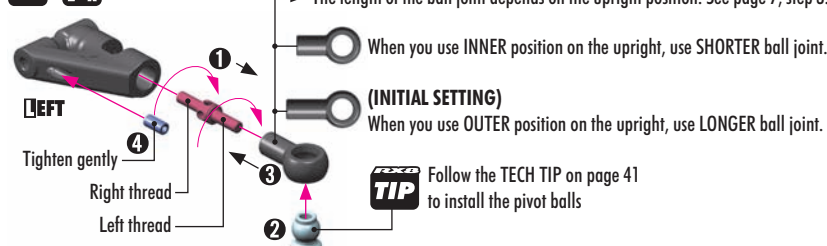
#343130	MEDIUM	INCLUDED
#343131	HARD	OPTION
#343132	GRAPHITE	OPTION



### SUSPENSION LOWER ARMS

#343111	MEDIUM	INCLUDED
#343112	HARD	OPTION
#343113	GRAPHITE	OPTION

2x L=R





## 2. REAR SUSPENSION

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

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

**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

**OPTION**

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

941218  
BB 12x18x4

962120  
S 12x15x0.5

962121  
S 12x15x1.0

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

1mm

BEARING OIL

**NOTE ORIENTATION**  
When using eccentric bushings, both bushings must be in same position.

0.5mm

**CONCENTRIC INITIAL SETTING**

**ECCENTRIC INITIAL SETTING**

**INITIAL SETTING COMPOSITE SET OF BUSHINGS**

**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

**DETAIL**

**OPTION**

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

**OPTION**

#345301  
REAR CVD DRIVE SHAFT SET  
HUDY SPRING STEEL™

**OPTION**

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

901303  
SB M3x3

980322  
P 3x22

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

1 2 3 4 5

TIGHTEN GENTLY

TIGHTEN FULLY

**DETAIL**

CENTERED

CUTAWAY VIEW

306219  
SHIM 3x6x2

901316  
SB M3x16

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

6mm INITIAL POSITION

2mm

COMPOSITE SHIMS

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

LEFT

**FRONT**

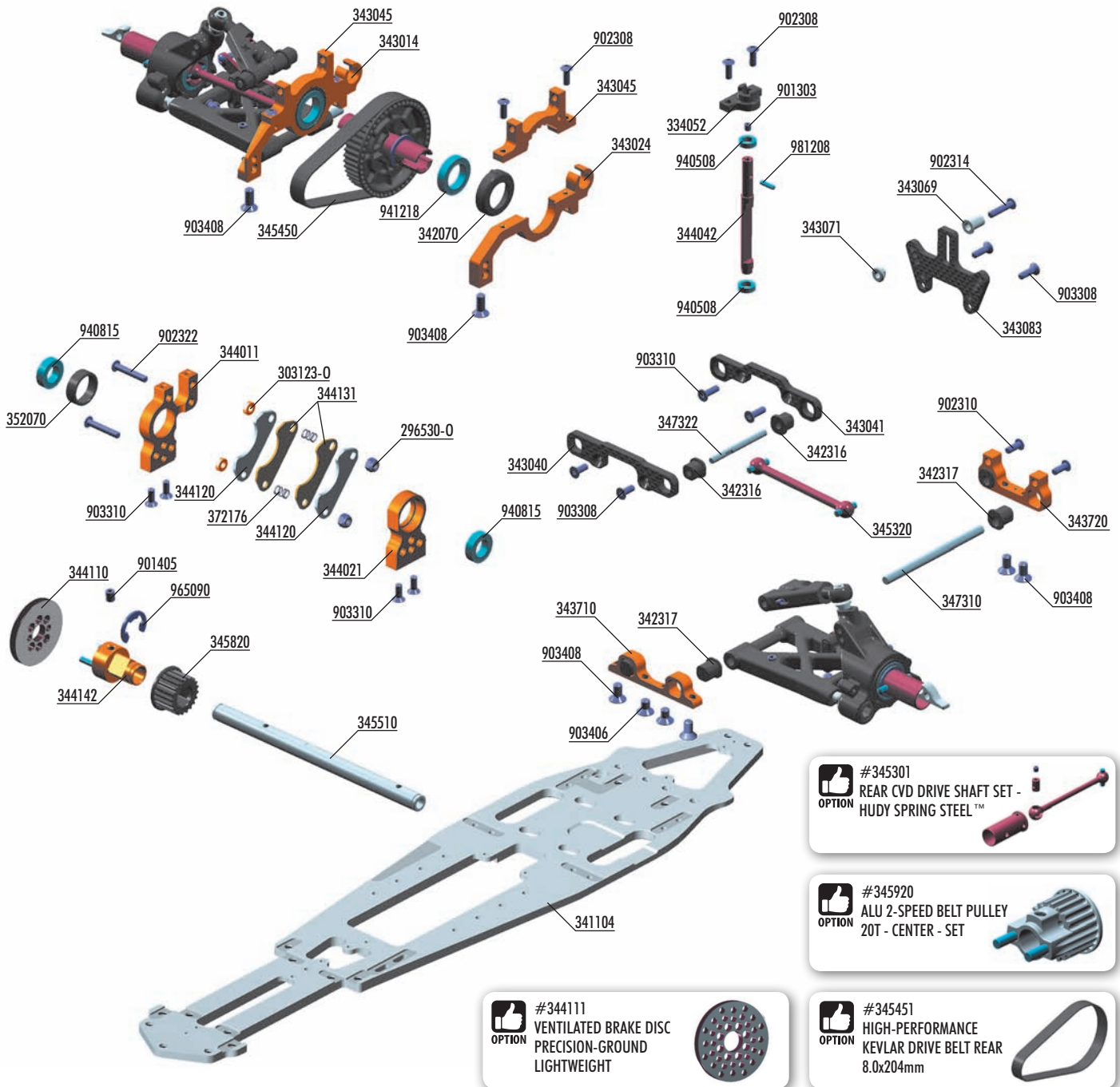
2.1mm

**REAR**

1.8mm

**DETAIL**

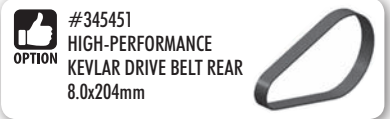
## 2. REAR SUSPENSION



**BAG**

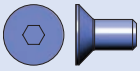
**02.2**

- |          |   |        |  |
|----------|---|--------|--|
| 296530-0 | ALU NUT M3 - ORANGE (10)                              | 345320 | REAR DRIVE SHAFT 61MM - HUDY SPRING STEEL™                 |
| 303123-0 | ALU SHIM 3x6x2.0MM - ORANGE (10)                      | 345450 | PUR® REINFORCED DRIVE BELT REAR 8.0 x 204 MM               |
| 334052   | COMPOSITE BRAKE UPPER PLATE                           | 345510 | 2-SPEED SHAFT 8MM - SUPER LIGHTWEIGHT - HUDY SPRING STEEL™ |
| 341104   | CHASSIS 5MM - CNC MACHINED - SWISS 7075 T6            | 345820 | COMPOSITE 2-SPEED BELT PULLEY 20T - CENTER                 |
| 342070   | COMPOSITE SET OF BUSHINGS (2)                         | 347310 | REAR LOWER INNER PIVOT PIN (2)                             |
| 342316   | COMPOSITE REAR UPPER SUSP. ECCENTRIC BUSHING (4)      | 347322 | REAR UPPER INNER PIVOT PIN WITH FLAT SPOT (2)              |
| 342317   | COMPOSITE REAR LOWER SUSP. ECCENTRIC BUSHING (4)      | 352070 | COMPOSITE BEARING HUB FOR DIFF (4)                         |
| 343014   | ALU LOWER BULKHEAD REAR - SWISS 7075 T6 - RIGHT       | 372176 | SPRING 4.25 COILS 3.6x6x0.4MM; C=1.5 - GOLD (SOFT) (2)     |
| 343024   | ALU LOWER BULKHEAD REAR - SWISS 7075 T6 - LEFT        | 901303 | HEX SCREW SB M3x3 (10)                                     |
| 343040   | GRAPHITE REAR UPPER ARM HOLDER 3.5MM - FRONT          | 901405 | HEX SCREW SB M4x5 (10)                                     |
| 343041   | GRAPHITE REAR UPPER ARM HOLDER 3.5MM - REAR           | 902308 | HEX SCREW SH M3x8 (10)                                     |
| 343045   | ALU UPPER CLAMP REAR - SWISS 7075 T6 - (L+R)          | 902310 | HEX SCREW SH M3x10 (10)                                    |
| 343069   | STEEL BUSHING (2)                                     | 902314 | HEX SCREW SH M3x14 (10)                                    |
| 343071   | BELT TENSIONER SET - STEEL                            | 902322 | HEX SCREW SH M3x22 (10)                                    |
| 343083   | GRAPHITE SHOCK TOWER REAR                             | 903308 | HEX SCREW SFH M3x8 (10)                                    |
| 343710   | ALU REAR LOWER SUSPENSION HOLDER - FRONT - RF         | 903310 | HEX SCREW SFH M3x10 (10)                                   |
| 343720   | ALU REAR LOWER SUSPENSION HOLDER - REAR - RR          | 903406 | HEX SCREW SFH M4x6 (10)                                    |
| 344011   | ALU BRAKE STAND - SWISS 7075 T6 - SET                 | 903408 | HEX SCREW SFH M4x8 (10)                                    |
| 344021   | ALU 2-SPEED HOLDER - SWISS 7075 T6                    | 940508 | HIGH-SPEED BALL-BEARING 5x8x2.5 RUBBER SEALED (2)          |
| 344042   | BRAKE CAM POST - STEEL                                | 940815 | HIGH-SPEED BALL-BEARING 8x14x4 RUBBER SEALED (2)           |
| 344110   | VENTILATED BRAKE DISC - PRECISION-GROUND              | 941218 | HIGH-SPEED BALL-BEARING 12x18x4 RUBBER SEALED (2)          |
| 344120   | STEEL BRAKE PAD - HARDENED (2)                        | 965090 | E-CLIP 9 (10)  |
| 344131   | BRAKE PAD "SLS" (2)                                   | 981208 | PIN 2x8 (10)   |
| 344142   | BRAKE DISK ADAPTER - SWISS 7075 T6 - BLACK HARDCOATED |        |  |

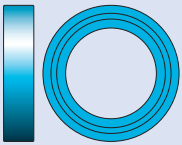
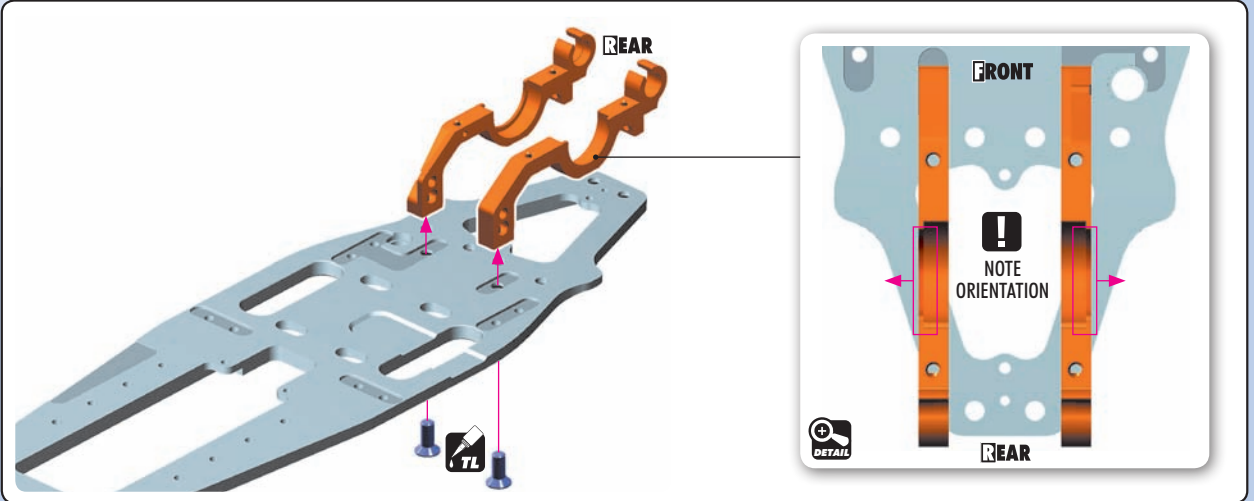




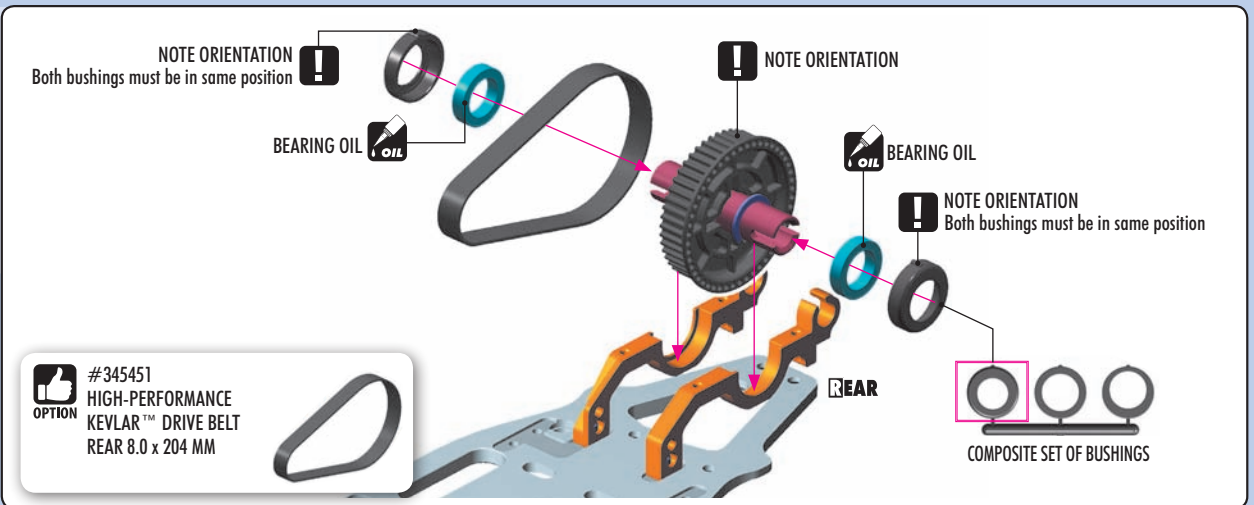
## 2. REAR SUSPENSION



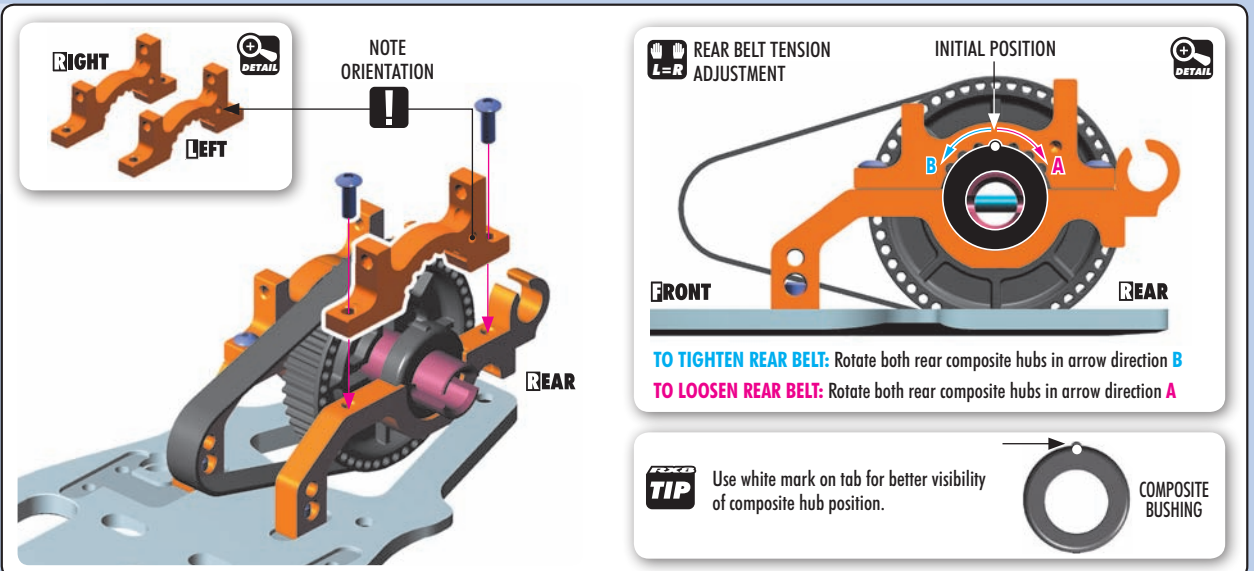
903408  
SFH M4x8



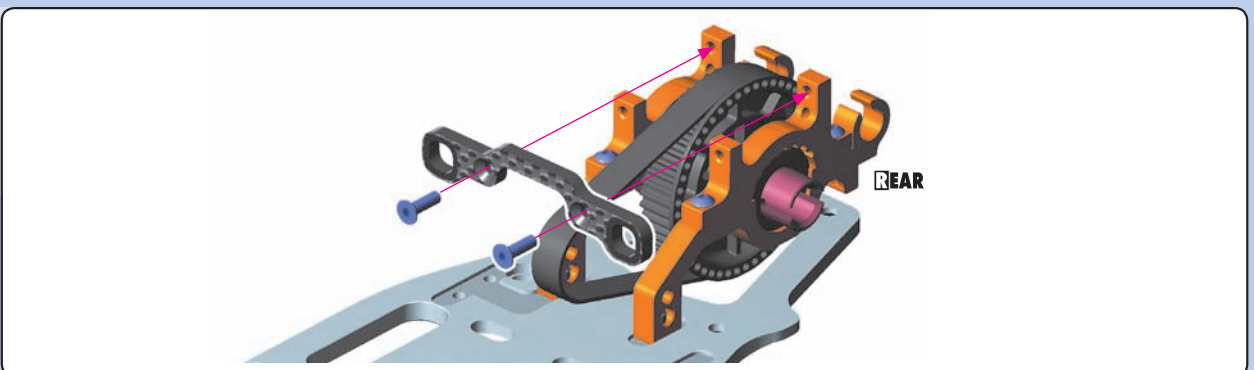
941218  
BB 12x18x4



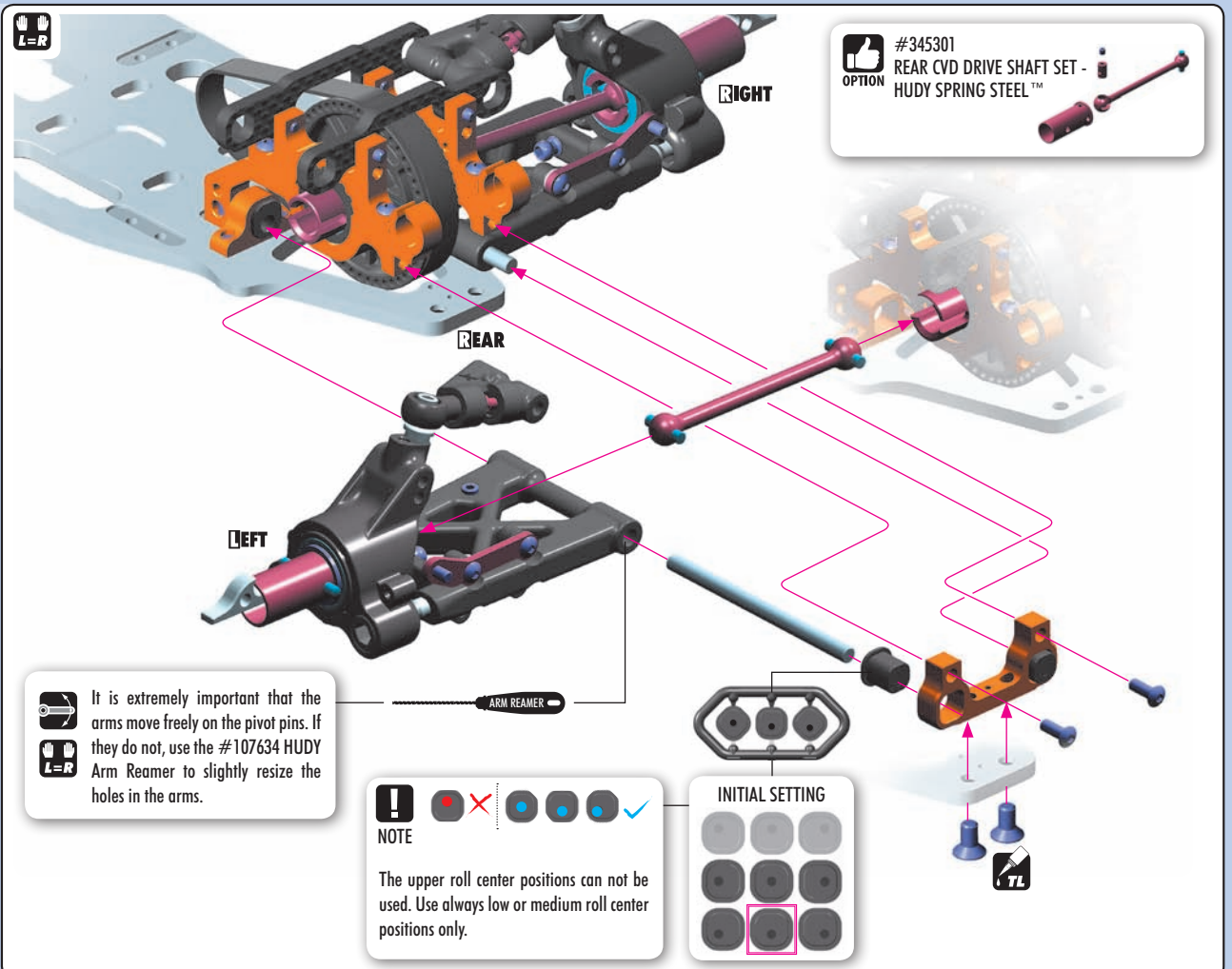
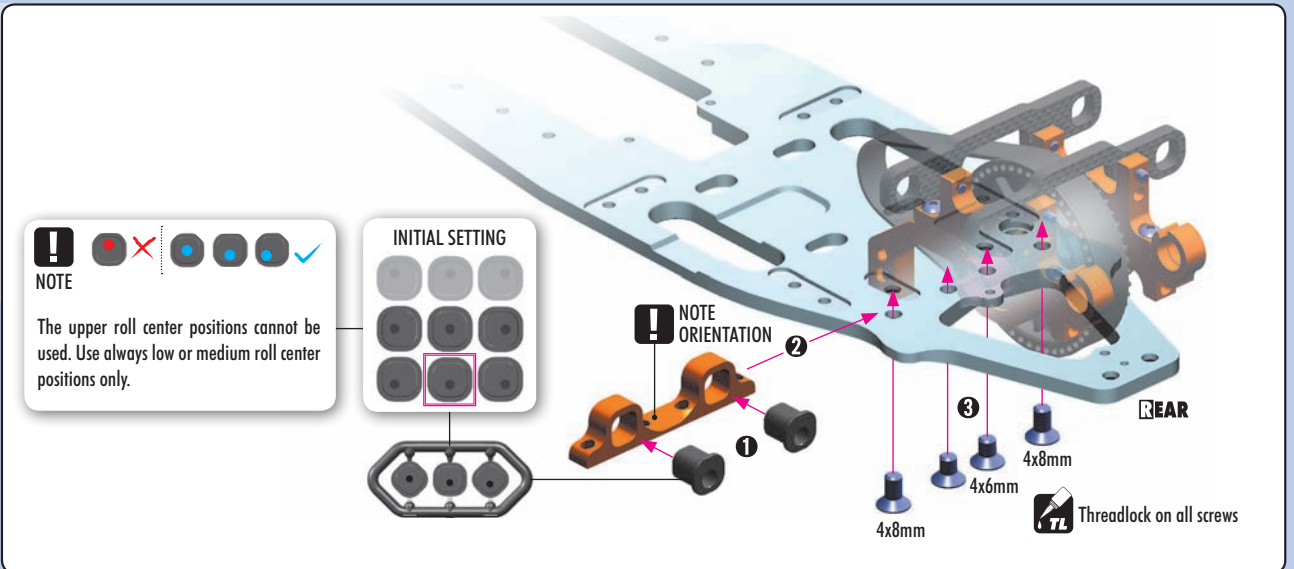
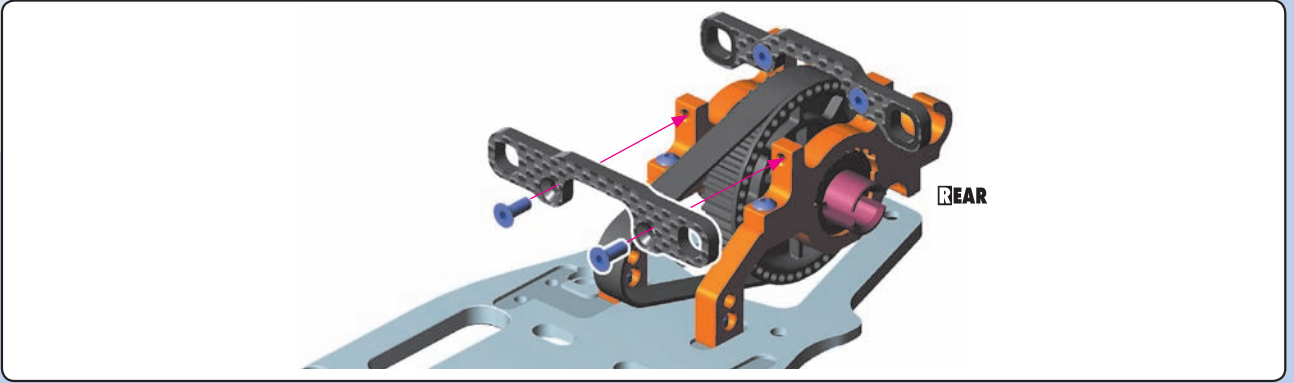
902308  
SH M3x8



903310  
SFH M3x10



## 2. REAR SUSPENSION





## 2. REAR SUSPENSION

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

**RIGHT** **LEFT** **REAR**

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**

**INITIAL SETTING**

**NOTE ORIENTATION**

**TIGHTEN FULLY**  
setscrew M3x6 onto flatspot

**296530-0**  
N M3

**303123-0**  
SHIM 3x6x2

**902322**  
SH M3x22

**CA** **CA**

**NEET TIP**

Roughen steel plates with sandpaper before gluing fibre pads

**FIBRE PADS FACE TOGETHER**

**3x6x2mm** **3x6x2mm**

**10mm**

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

**940815**  
BB 8x14x4

**BEARING OIL** **NOTE ORIENTATION**

**8x14x4mm** **3** **NOTE ORIENTATION**

**REAR** **BEARING OIL**

**NOTE ORIENTATION** **1** **BEARING OIL**

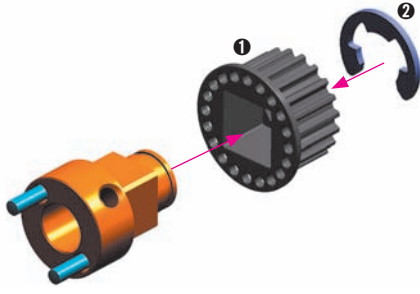
**5x8x2.5** **8x14x4mm**

**3** **3** **3**

# 2. REAR SUSPENSION



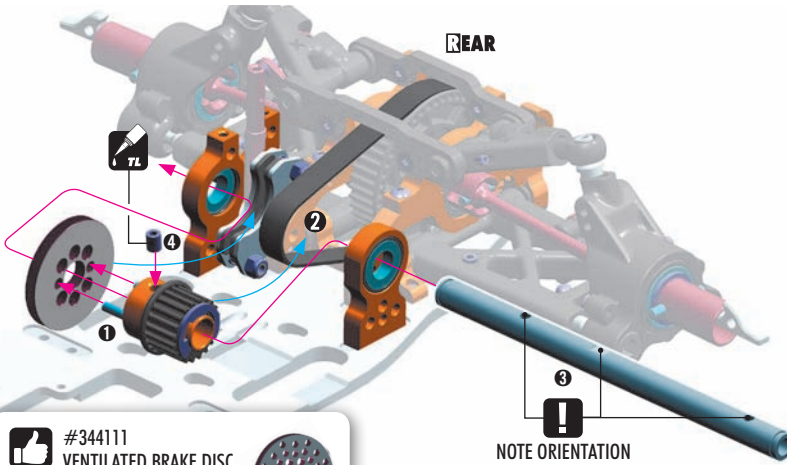
965070  
C7



#345920  
ALU 2-SPEED BELT PULLEY 20T  
CENTER - SET



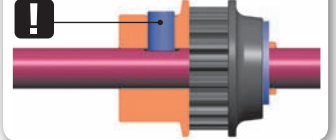
901405  
SB M4x5



REAR

STEP 4 DETAIL

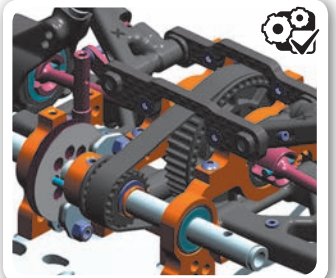
Tighten setscrew onto flat spot



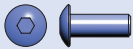
#344111  
VENTILATED BRAKE DISC  
- PRECISION - GROUND -  
LIGHTWEIGHT



NOTE ORIENTATION



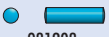
901303  
SB M3x3



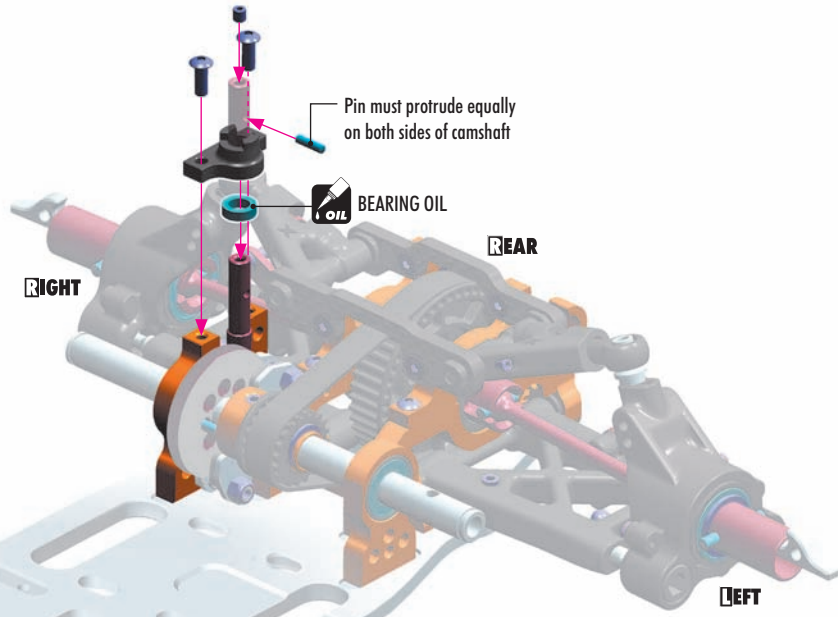
902308  
SH M3x8



940508  
BB 5x8x2.5



981208  
P 2x8



Pin must protrude equally  
on both sides of camshaft

BEARING OIL

RIGHT

REAR

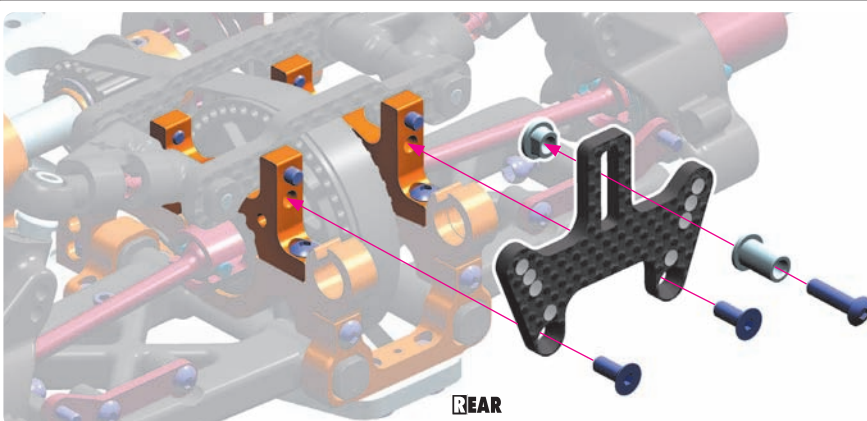
LEFT



902314  
SH M3x14



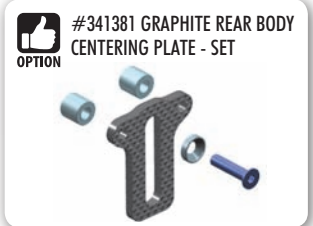
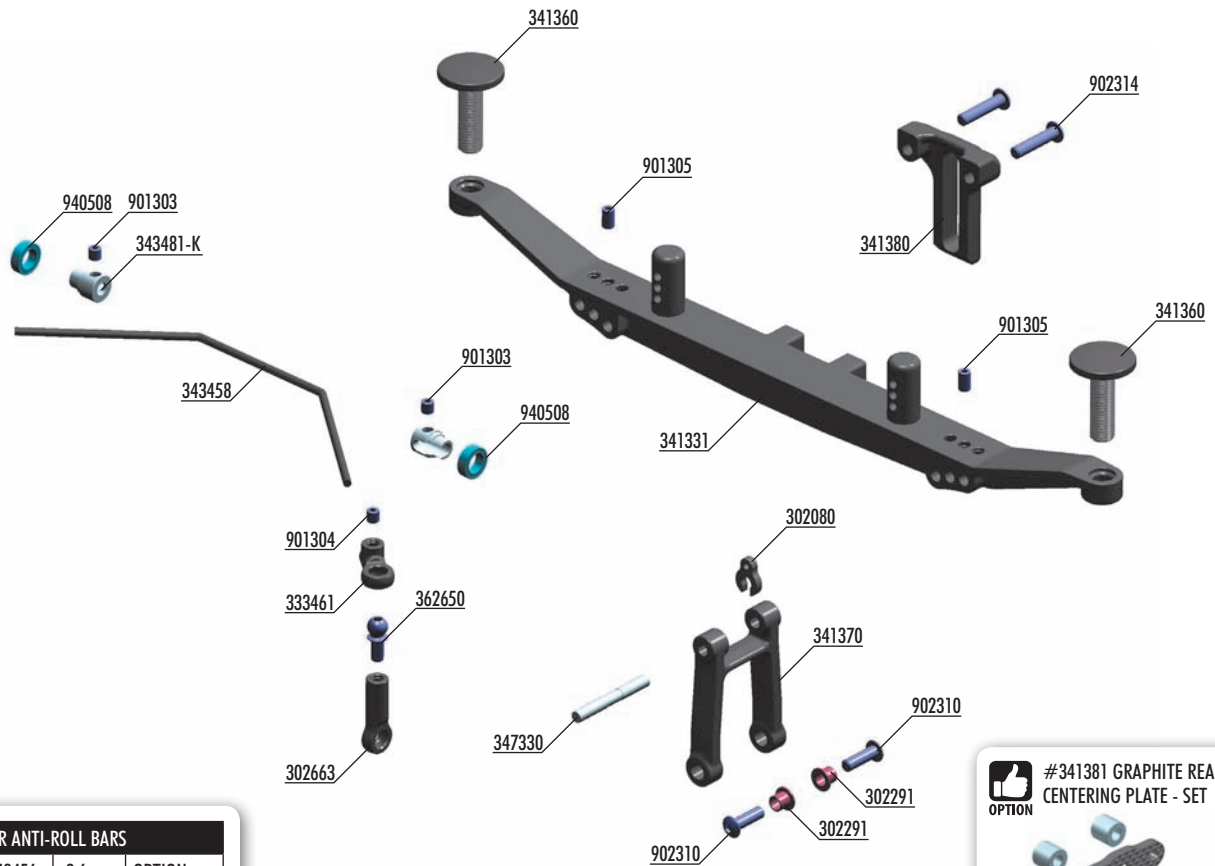
903308  
SFH M3x8



REAR



## 2. REAR SUSPENSION



REAR ANTI-ROLL BARS			
OPTION	#343456	2.6mm	OPTION
	#343458	2.8mm	INCLUDED
	#343460	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)                       | 901303 | HEX SCREW SB M3x3 (10)                            |
| 302663   | COMPOSITE BALL JOINT 4.9MM - OPEN - V2 (8)         | 901304 | HEX SCREW SB M3x4 (10)                            |
| 333461   | COMPOSITE ANTI-ROLL BAR BALL JOINT 4.9 MM - V3 (4) | 901305 | HEX SCREW SB M3x5 (10)                            |
| 341331   | COMPOSITE REAR BODY HOLDER - HIGHER                | 902310 | HEX SCREW SH M3x10 (10)                           |
| 341360   | COMPOSITE REAR BODY HOLDER SCREW (2)               | 902314 | HEX SCREW SH M3x14 (10)                           |
| 341370   | COMPOSITE REAR BODY HOLDER ARM                     | 940508 | HIGH-SPEED BALL-BEARING 5x8x2.5 RUBBER SEALED (2) |
| 341380   | COMPOSITE REAR BODY CENTERING PLATE                |        |   |
| 341381   | GRAPHITE REAR BODY CENTERING PLATE - SET (OPTION)  |        |   |
| 343456   | ANTI-ROLL BAR REAR 2.6 MM (OPTION)                 |        |   |
| 343458   | ANTI-ROLL BAR REAR 2.8 MM                          |        |   |
| 343460   | ANTI-ROLL BAR REAR 3.0 MM (OPTION)                 |        |   |
| 343481-K | ALU CUTTED ANTI-ROLL BAR COLLAR - BLACK (2)        |        |   |
| 347330   | REAR BODY HOLDER ARM PIN (2)                       |        |   |

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

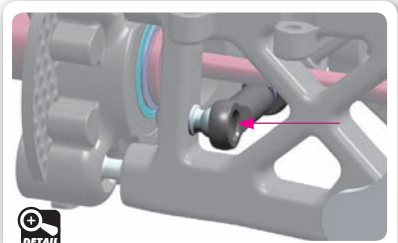
6mm THREAD



26mm

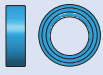


**DETAIL**

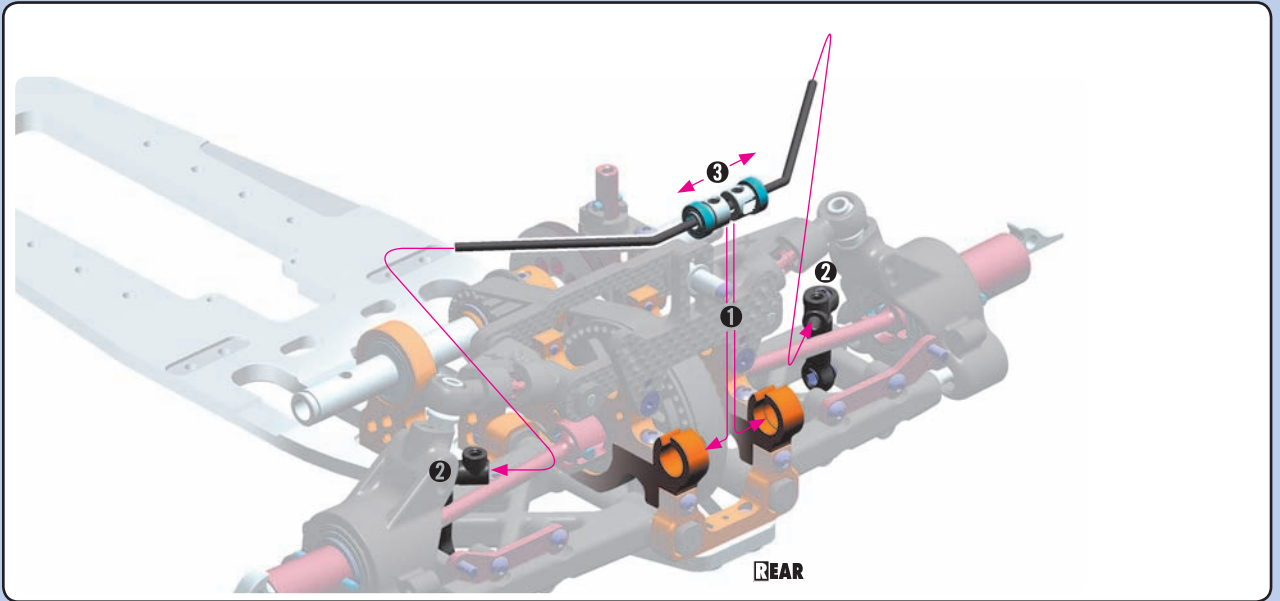
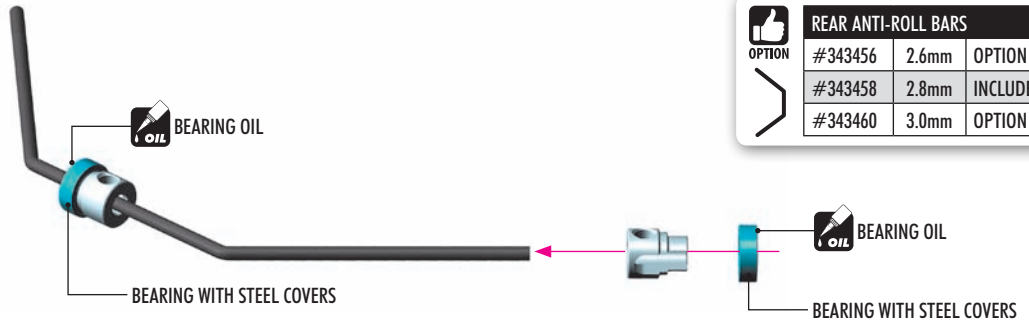


**DETAIL**

## 2. REAR SUSPENSION



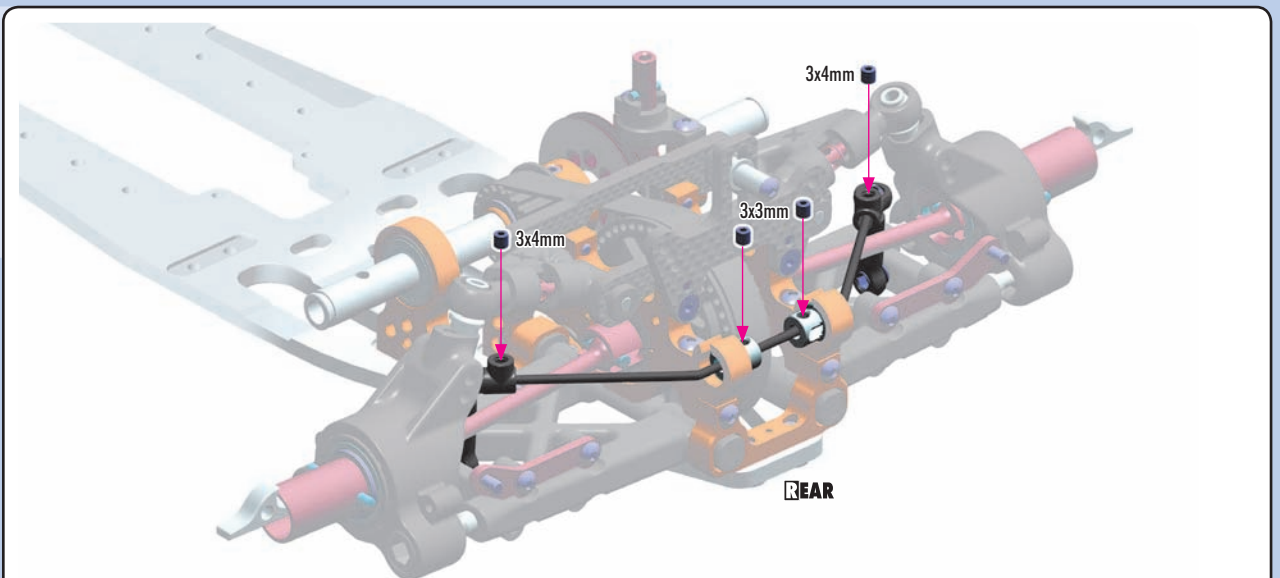
930508  
BB 5x8x2.5



901303  
SB M3x3



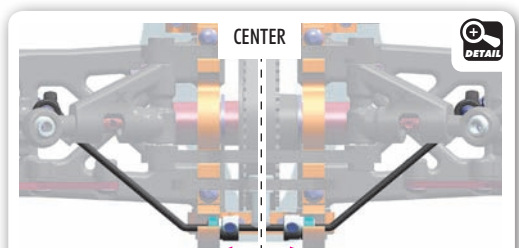
901304  
SB M3x4



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.



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

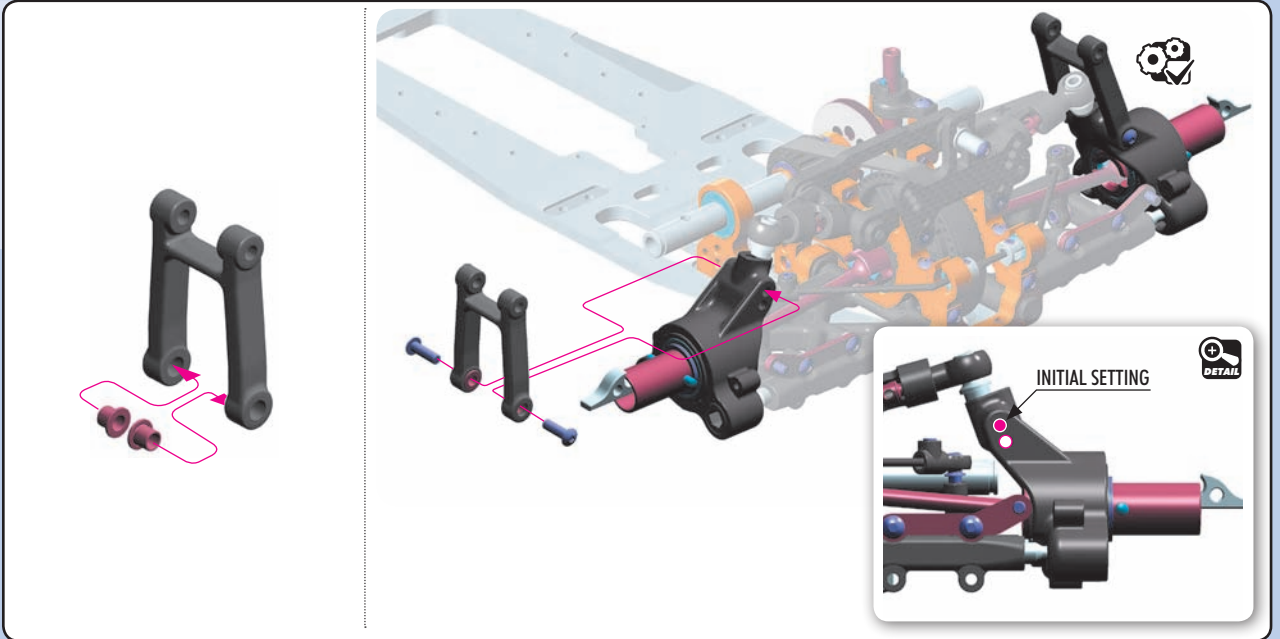
REAR



## 2. REAR SUSPENSION

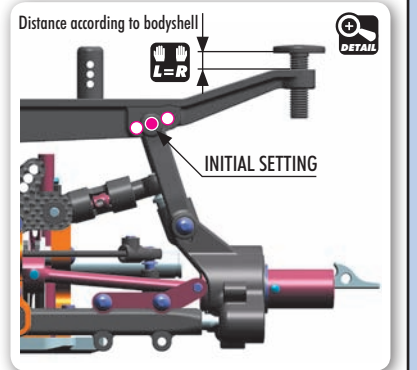
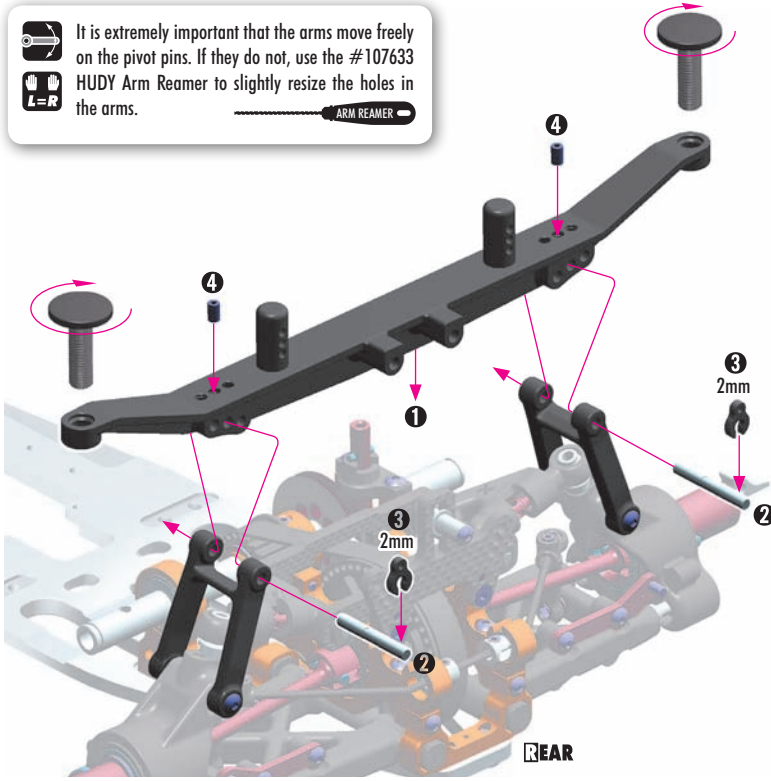


902310  
SH M3x10

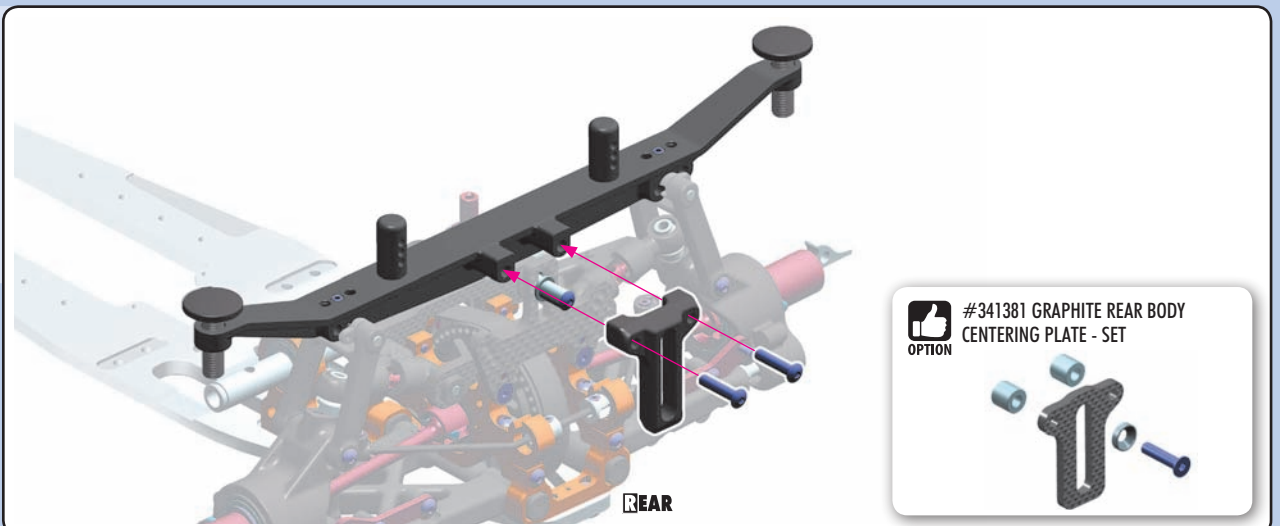


901305  
SB M3x5

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.




902314  
SH M3x14

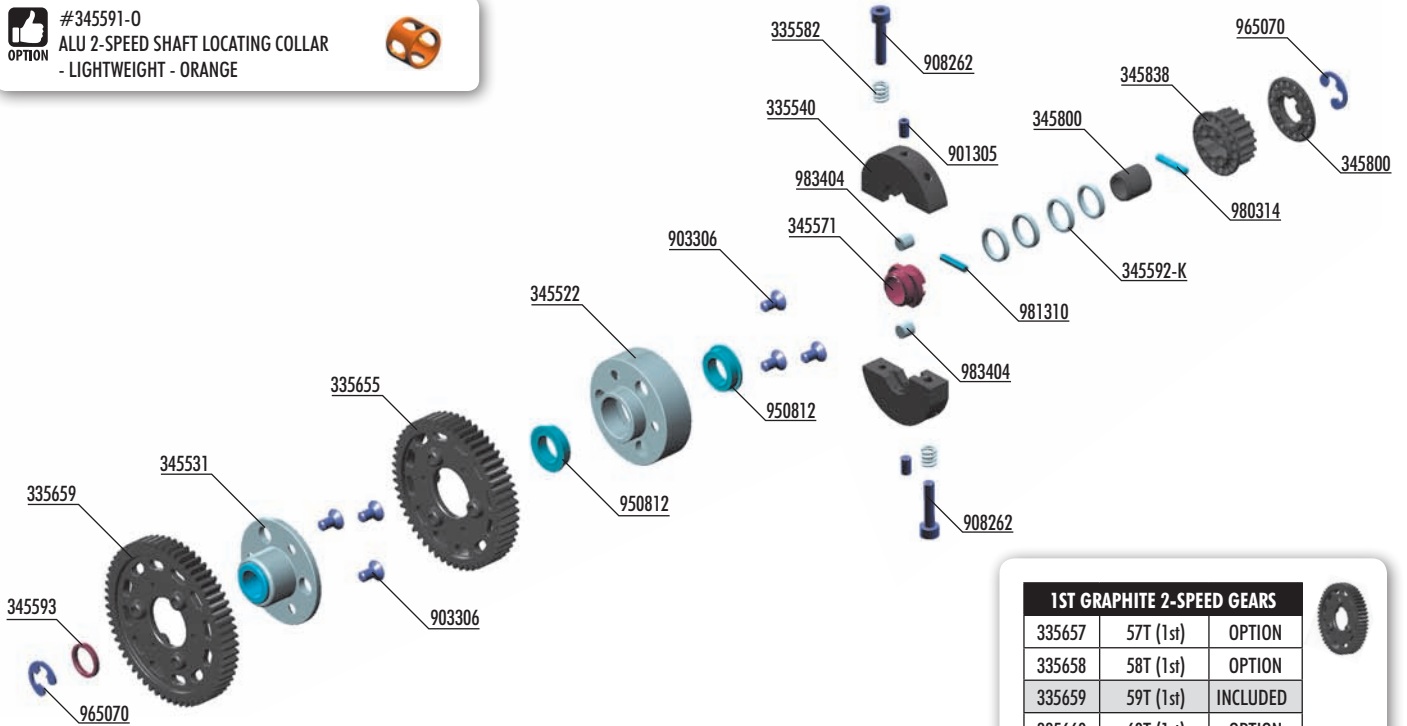


# 3. REAR TRANSMISSION

**OPTION** #345581  
GEAR BOX SPRING C=13.0 (2)



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

### 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)
- 345522 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)
- 908262 HEX SCREW SOCKET HEAD CAP M2.5x12 (10)
- 903306 HEX SCREW SFH M3x6 (10)
- 950812 BALL-BEARING 8x12x3.5 FLANGED (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

**REAR**

**STEP 1 DETAIL**

**STEP 2 DETAIL**

**NOTE ORIENTATION**

**NOTE ORIENTATION**

**NOTE ORIENTATION**

Use the belt pulley cover 18T with hole diameter of 10mm

8mm

7.5mm

ALU Shims

NOTE ORIENTATION

STEEL Shim

~~Marked 1 strip~~

Do not use

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



# 3. REAR TRANSMISSION



901305  
SB M3x5



908262  
SCH M2.5x12



983404  
RP 4x4

SHIFT-POINT SCREW

SHOE-GAP SETSCREW

**TIP** Use white paint to color the top of ONE screw head. This will allow you to identify the two different screws - one white, one dark - when you are adjusting the shift point.

NOTE ORIENTATION

**DETAIL** Setscrews must NOT protrude

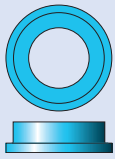
Top of screw head should be level with hole bottom edge

Do not overtighten gap-setting setscrews. Only tighten until roller pins contact the center hub.

**OPTION** #345581 GEAR BOX SPRING C=13.0 (2)



903306  
SFH M3x6



950812  
BB 8x12x4

**2ND GEAR**

NOTE ORIENTATION

BEARING OIL

BEARING OIL

Use HUDY Reamer #107600 to slightly chamfer the edges on all 3 screw holes from inside.

**1ST GEAR**

NOTE ORIENTATION

ONE-WAY LUBE

Use HUDY Reamer #107600 to slightly chamfer the edges on all 3 screw holes from inside.



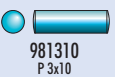
345592-K  
ALU SHIM 8x10x1.5



345593  
STEEL SHIM 8x10x1.5



965070  
C7



981310  
P 3x10

STEEL Shim

Marked 1 strip

**REAR**

NOTE ORIENTATION

NOTE ORIENTATION

NOTE ORIENTATION

ALU Shims

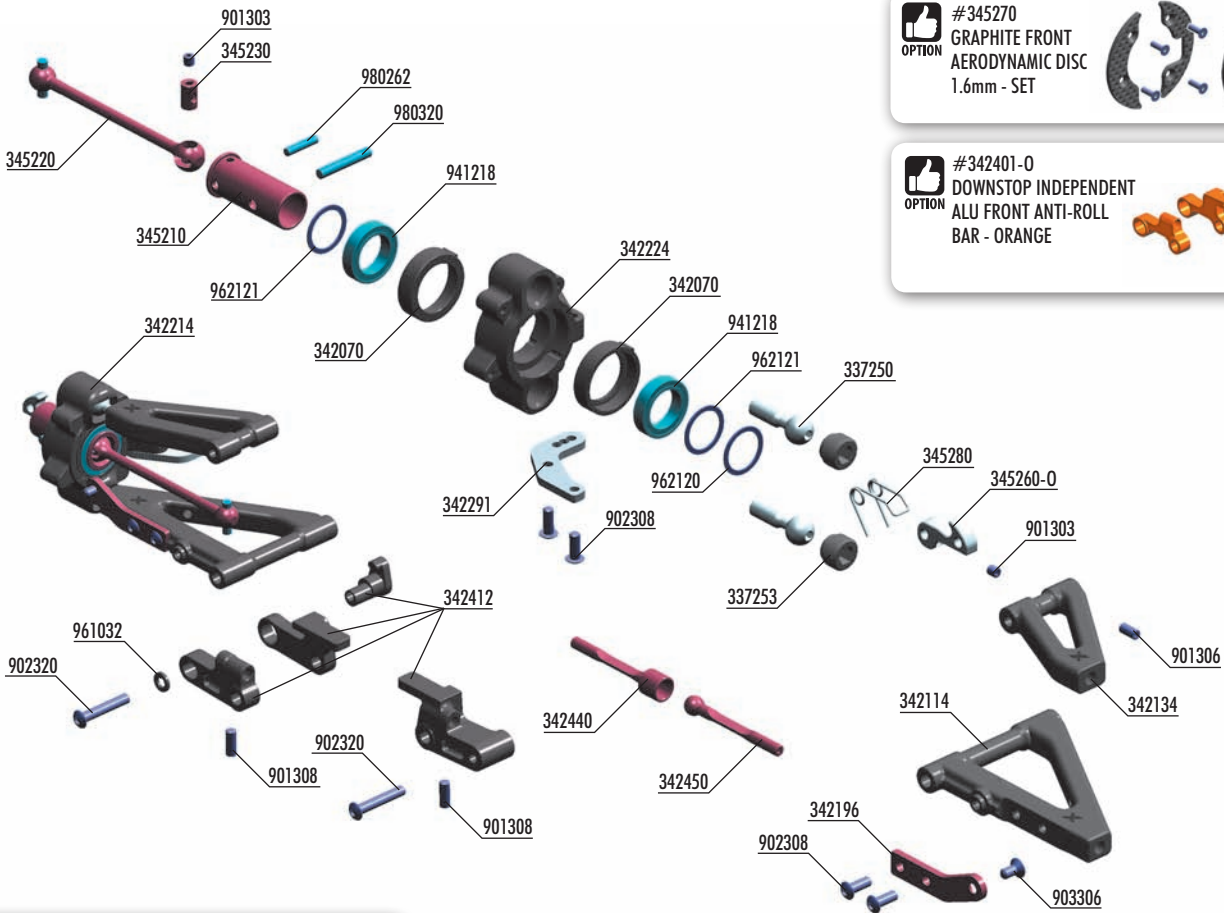
NOTE ORIENTATION

2ND GEAR

1ST GEAR

**OPTION** 1ST COMPOSITE & GRAPHITE 2-SPEED GEARS  
2ND COMPOSITE & GRAPHITE 2-SPEED GEARS  
See page 16, exploded view

# 4. FRONT SUSPENSION



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

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

**FRONT SUSPENSION UPPER ARMS**

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

**FRONT SUSPENSION LOWER ARMS**

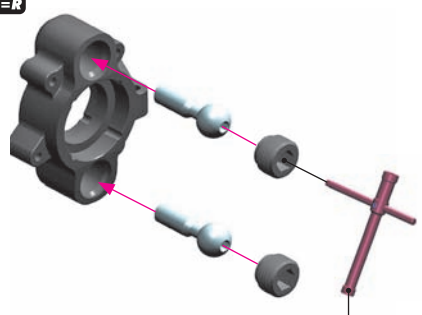
#342114	MEDIUM	INCLUDED
#342115	GRAPHITE	OPTION

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

**BAG**  
04.1

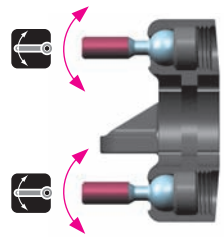
- |          |  |        |  |
|----------|--|--------|--|
| 337250   | STEEL PIVOT BALL 8.4 MM (2)                            | 345270 | GRAPHITE FRONT AERODYNAMIC DISC 1.6MM - SET (OPTION) |
| 337253   | COMPOSITE ADJUSTING NUT M10x1 (4)                      | 345280 | WHEEL SPRING (2)                                     |
| 342070   | COMPOSITE SET OF BUSHINGS (2)                          | 901303 | HEX SCREW SB M3x3 (10)                               |
| 342114   | SUSPENSION ARM FOR WIRE ANTI-ROLL BAR - FRONT          | 901306 | HEX SCREW SB M3x6 (10)                               |
| 342134   | COMPOSITE SUSPENSION ARM FRONT UPPER - SHORT - SOFT    | 901308 | HEX SCREW SB M3x8 (10)                               |
| 342196   | STEEL EXTENSION FOR SUSPENSION ARM - FRONT LOWER (L+R) | 902308 | HEX SCREW SH M3x8 (10)                               |
| 342214   | COMPOSITE STEERING BLOCK FOR AERO DISC - RIGHT         | 902320 | HEX SCREW SH M3x20 (10)                              |
| 342224   | COMPOSITE STEERING BLOCK FOR AERO DISC - LEFT          | 903306 | HEX SCREW SFH M3x6 (10)                              |
| 342291   | ALU EXTENSION FOR STEERING BLOCK - SWISS 7075 T6 (2)   | 941218 | HIGH-SPEED BALL-BEARING 12x18x4 RUBBER SEALED (2)    |
| 342412   | COMPOSITE FRONT ANTI-ROLL BAR HOLDERS                  | 961032 | WASHER S 3.2 (10)                                    |
| 342440   | ANTI-ROLL BAR FRONT FEMALE - HUDY SPRING STEEL™        | 962120 | WASHER S 12x15x0.5 (10)                              |
| 342450   | ANTI-ROLL BAR FRONT MALE - HUDY SPRING STEEL™          | 962121 | WASHER S 12x15x1.0 (10)                              |
| 345210   | FRONT WHEEL AXLE - HUDY SPRING STEEL™                  | 980262 | PIN 2.5x12 (10)                                      |
| 345220   | FRONT CVD DRIVE SHAFT 71MM - HUDY SPRING STEEL™        | 980320 | PIN 3x20 (10)  |
| 345230   | DRIVE SHAFT COUPLING - HUDY SPRING STEEL™              |        |  |
| 345260-0 | ALU FRONT WHEEL LOCK - SWISS 7075 T6 - ORANGE (2)      |        |  |

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



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.

**OPTION** **ADJUSTING NUT**

#337253	COMPOSITE	INCLUDED
#337252	ALU	OPTION

**OPTION** **PIVOT BALLS**

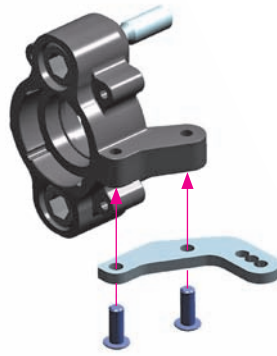
#337250	STEEL	INCLUDED
#337251	ALU	OPTION
#337255	TITAN	OPTION



# 4. FRONT SUSPENSION



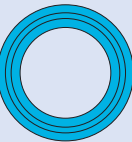
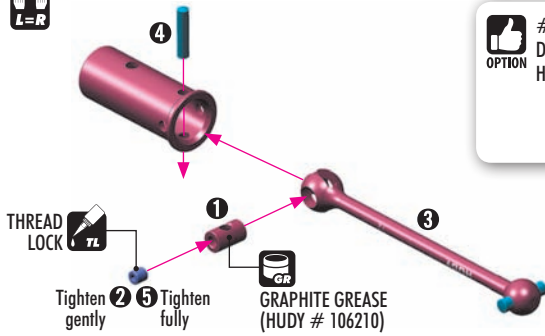
2x L-R



2x L-R



2x L-R

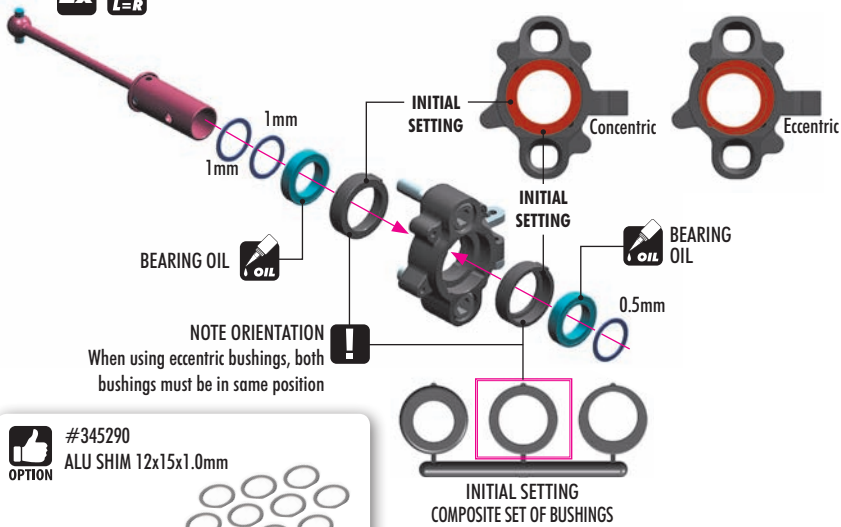


941218 BB 12x18x4



962121 S 12x15x1.0

2x L-R



SHIM

SHIM

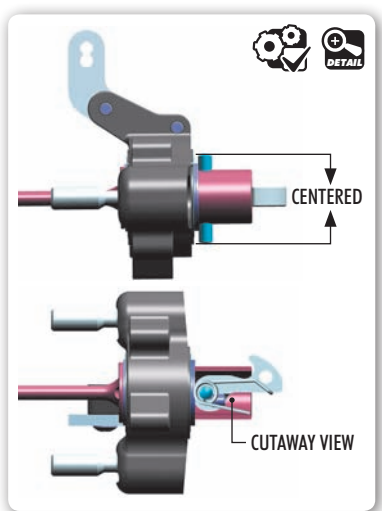
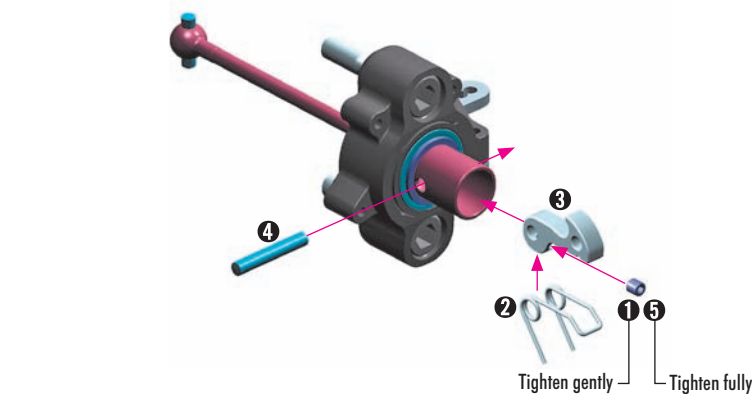
INNER	INITIAL SETTING	OUTER
1+1	INITIAL SETTING	0.5
1+0.5		1
1		1+0.5
0.5		1+1
0		1+1+0.5



2x L-R



980320 P 3x20



# 4. FRONT SUSPENSION

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

**TOP** 5.1mm

**BOTTOM** 5.5mm

**DETAIL**

**FRONT SUSPENSION UPPER ARMS**

<b>OPTION</b>	#342131	MEDIUM	OPTION
	#342132	HARD	OPTION
	#342133	GRAPHITE	OPTION
	#342134	SOFT	INCLUDED

**FRONT SUSPENSION LOWER ARMS**

<b>OPTION</b>	#342114	MEDIUM	INCLUDED
	#342115	GRAPHITE	OPTION

**901308**  
SB M3x8

**902320**  
SH M3x20

**961032**  
S 3.2

**ALTERNATIVE 2: BLADE ANTI-ROLL BAR**

**NOTE ORIENTATION**

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

**DETAIL**

**RIGHT**

**NOTE ORIENTATION**

**LEFT**

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

**OPTION**

**901306**  
SB M3x6

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

TIGHTEN GENTLY, tighten fully when the drive pins are assembled. Page 25, step 1

**902308**  
SH M3x8

**903306**  
SFH M3x6

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

**DETAIL**

# 4. FRONT SUSPENSION



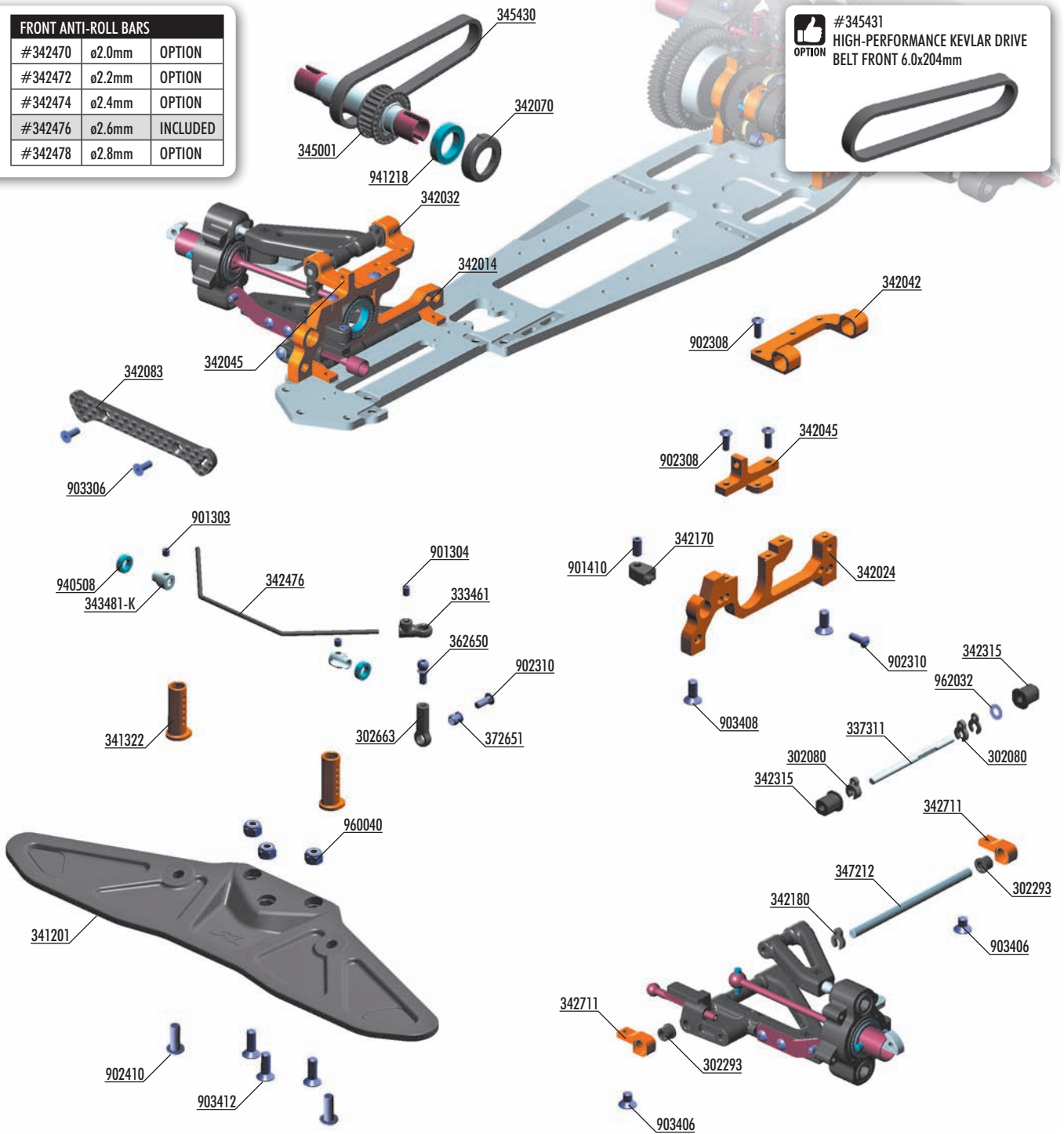
OPTION

FRONT ANTI-ROLL BARS		
#342470	ø2.0mm	OPTION
#342472	ø2.2mm	OPTION
#342474	ø2.4mm	OPTION
#342476	ø2.6mm	INCLUDED
#342478	ø2.8mm	OPTION



OPTION

#345431  
HIGH-PERFORMANCE KEVLAR DRIVE  
BELT FRONT 6.0x204mm



## 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)
- 333461 COMPOSITE ANTI-ROLL BAR BALL JOINT 4.9 MM - V3 (4)
- 337311 PIVOT PIN WITH FLAT SPOT (2)
- 341201 COMPOSITE BUMPER - DOWNFORCE
- 341322 ALU FRONT BODY POST - SHORT - SWISS 7075 T6 (2)
- 342014 ALU LOWER BULKHEAD FRONT - SWISS 7075 T6 - RIGHT
- 342024 ALU LOWER BULKHEAD FRONT - SWISS 7075 T6 - LEFT
- 342032 ALU UPPER ARM HOLDER RIGHT - SWISS 7075 T6 - SET
- 342042 ALU UPPER ARM HOLDER LEFT - SWISS 7075 T6 - SET
- 342045 ALU UPPER CLAMP FRONT - SWISS 7075 T6 - (L+R)
- 342070 COMPOSITE SET OF BUSHINGS (2)
- 342083 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)
- 342472 ANTI-ROLL BAR FRONT 2.2 MM (OPTION)
- 342474 ANTI-ROLL BAR FRONT 2.4 MM (OPTION)
- 342476 ANTI-ROLL BAR FRONT 2.6 MM
- 342478 ANTI-ROLL BAR FRONT 2.8 MM (OPTION)
- 342711 ALU LOWER FRONT SUSPENSION HOLDER (1) - SWISS 7075 T6

- 343481-K ALU CUTTED ANTI-ROLL BAR COLLAR - BLACK (2)
- 345430 PUR® REINFORCED DRIVE BELT FRONT 6.0 x 204 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)
- 901303 HEX SCREW SB M3x3 (10)
- 901304 HEX SCREW SB M3x4 (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 HIGH-SPEED BALL-BEARING 5x8x2.5 RUBBER SEALED (2)
- 941218 HIGH-SPEED BALL-BEARING 12x18x4 RUBBER SEALED (2)
- 960040 NUT M4 (10)
- 962032 WASHER S 3x6x0.2 (10)
- 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**

**NOTE ORIENTATION**

**NOTE ORIENTATION**

**FRONT**

**DETAIL**

**DETAIL**

**L=R** 3.5mm

- 941218 BB 12x18x4

**NOTE ORIENTATION** **NOTE ORIENTATION** **NOTE ORIENTATION** **NOTE ORIENTATION**

**BEARING OIL** **BEARING OIL**

**INITIAL SETTING COMPOSITE SET OF BUSHINGS** **L=R**

**NOTE ORIENTATION** Both bushings must be in same position

**OPTION** #345431 HIGH-PERFORMANCE KEVLAR DRIVE BELT FRONT 6.0x204mm

**FRONT**

- 902308 SH M3x8

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

**NOTE ORIENTATION**

**NOTE ORIENTATION**

**FRONT**

**DETAIL** **NOTE ORIENTATION**

- 903306 SFH M3x6

**NOTE ORIENTATION**

**FRONT**

# 4. FRONT SUSPENSION

The RX8 kit comes with both types of front anti-roll bars; blade-style or wire. Decide which anti-roll bar to use.

**Blade anti-roll bar (Alternative 1)** 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 (immediately below).

**Wire anti-roll bar (Alternative 2)** is recommended for smaller, technical tracks when fast direction changes and side weight changes are needed. Skip to and follow the "Alternative 2" assembly steps (starting on page 24).

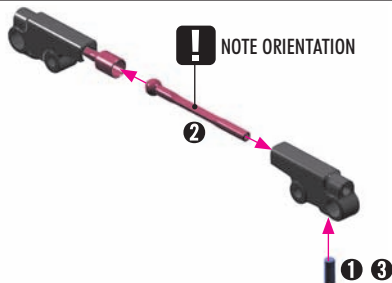
## ALTERNATIVE 1 (BLADE ANTI-ROLL BAR)



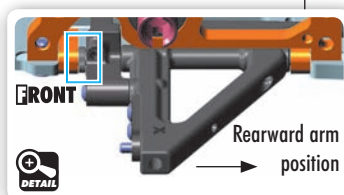
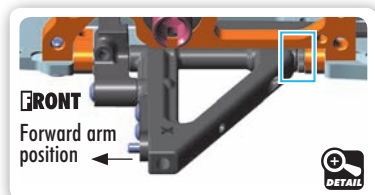
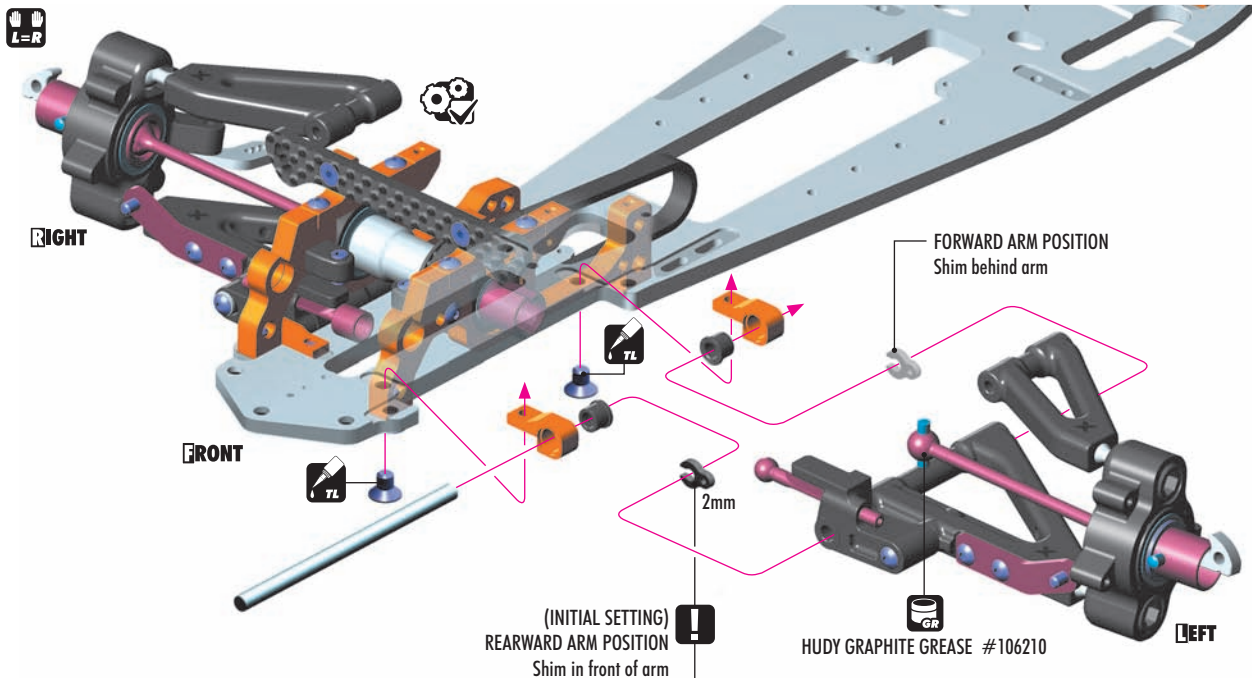
901308  
SB M3x8

1 Pre-thread mount with the set-screw

3 After anti-roll bar is inserted, install and tighten the set-screw



903406  
SFH M4x6

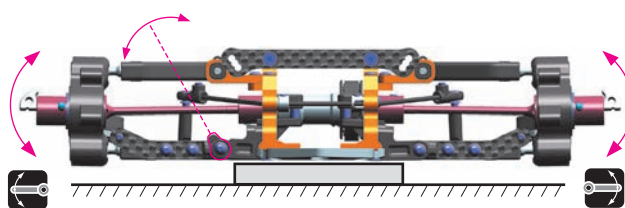


It is extremely important that the arms move freely on the pivot pins. If they do not, use the #107634 HUDY Arm Reamer to slightly resize the holes in the arms.

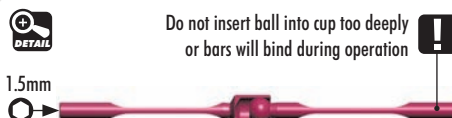
### IMPORTANT!

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 29).

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.



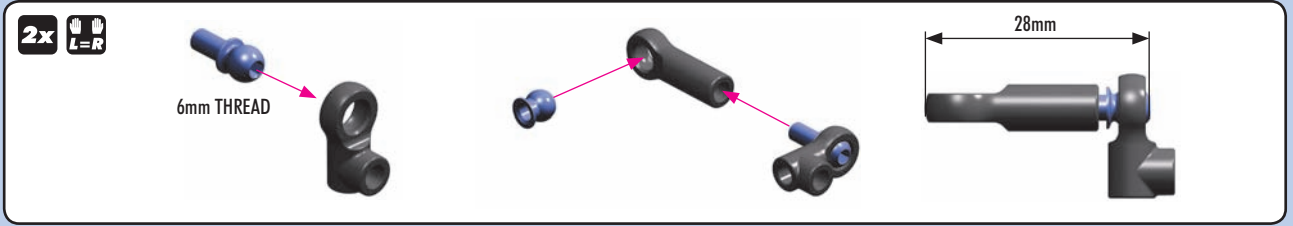
Ensure that the suspension arms move freely. Ensure that the eccentric holders move freely.



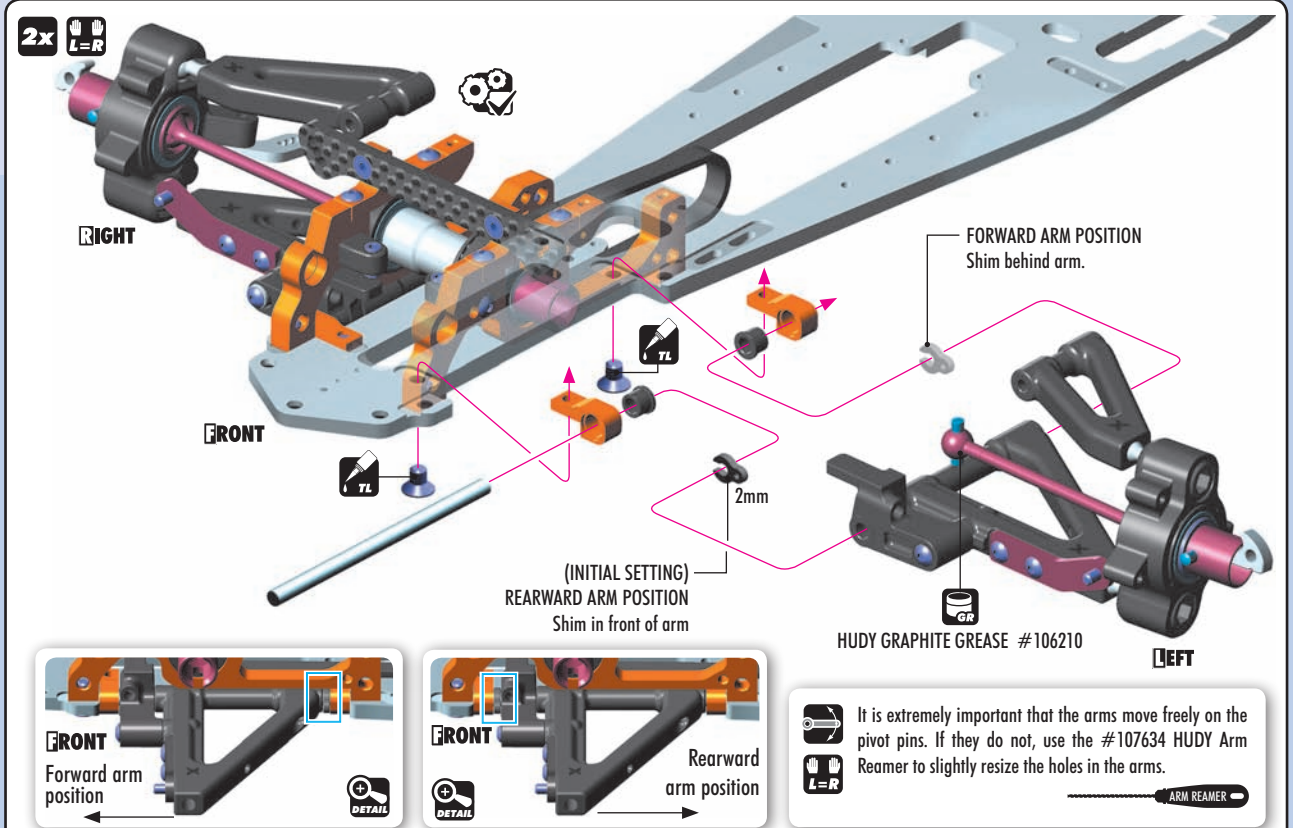
Each anti-roll bar blade has a hex hole at its end. Use a 1.5mm hex wrench to adjust the blades.

# 4. FRONT SUSPENSION

## ALTERNATIVE 2 (WIRE ANTI-ROLL BAR)



903406  
SFH M4x6



### IMPORTANT!

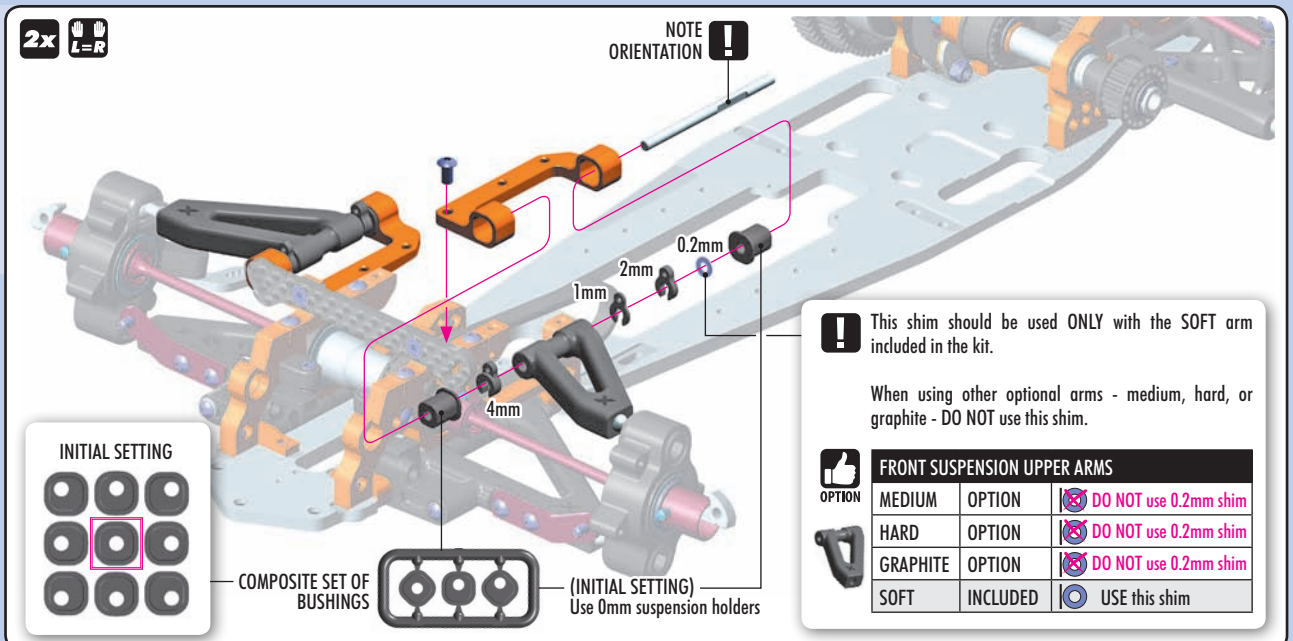
The position of the front arm directly influences the steering Ackermann (angle of the steering linkages). When the arm is moved to rearward position (shim in front of the arm), the angle of the steering linkages changes and gives less Ackermann. By decreasing the Ackermann, the car gets more turn-in & increased steering at corner exit, but less cornering speed. The Ackermann can be changed by the Quick-Saver™ (see page 29).



902308  
SH M3x8



962032  
SHIM 3x6x0.2



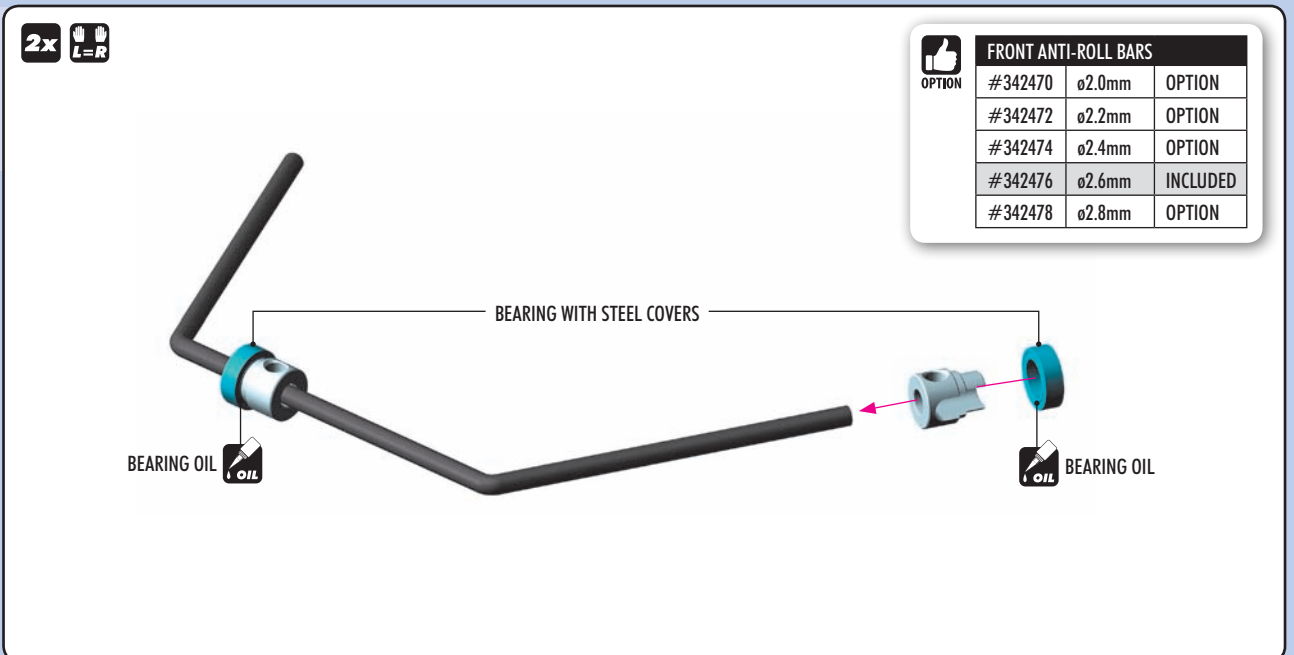
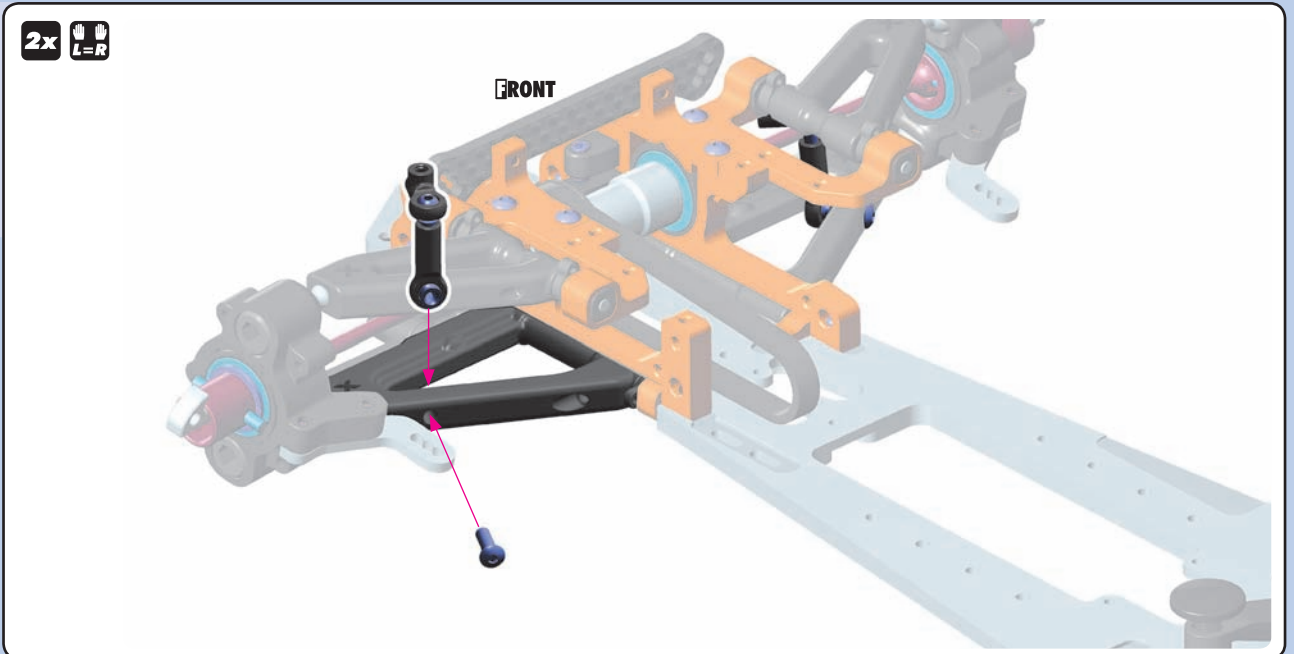
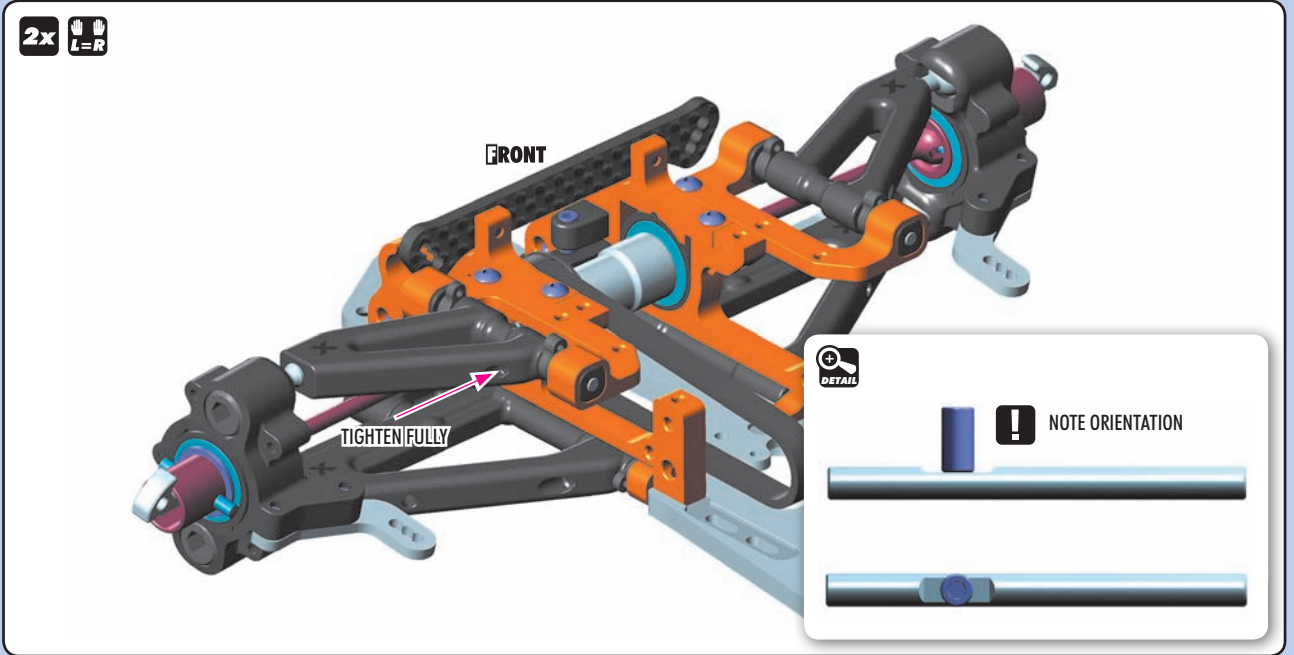
**!** This shim should be used ONLY with the SOFT arm included in the kit.

When using other optional arms - medium, hard, or graphite - DO NOT use this shim.

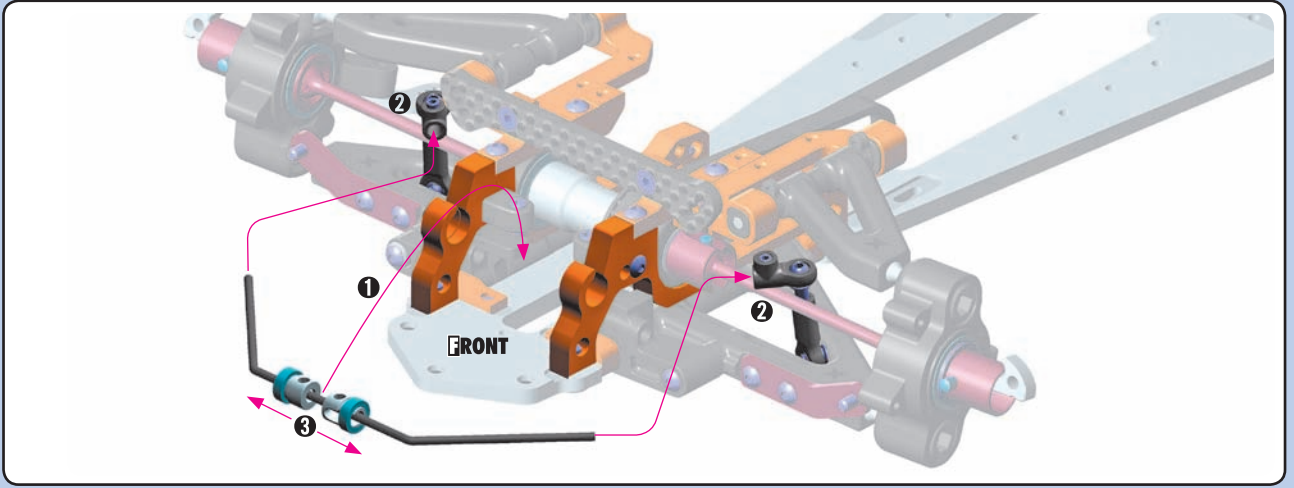
OPTION	FRONT SUSPENSION UPPER ARMS	OPTION	RECOMMENDATION
MEDIUM	OPTION		DO NOT use 0.2mm shim
HARD	OPTION		DO NOT use 0.2mm shim
GRAPHITE	OPTION		DO NOT use 0.2mm shim
SOFT	INCLUDED		USE this shim



# 4. FRONT SUSPENSION

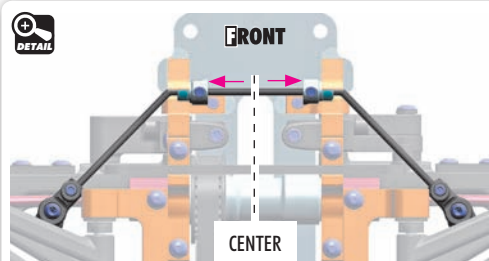
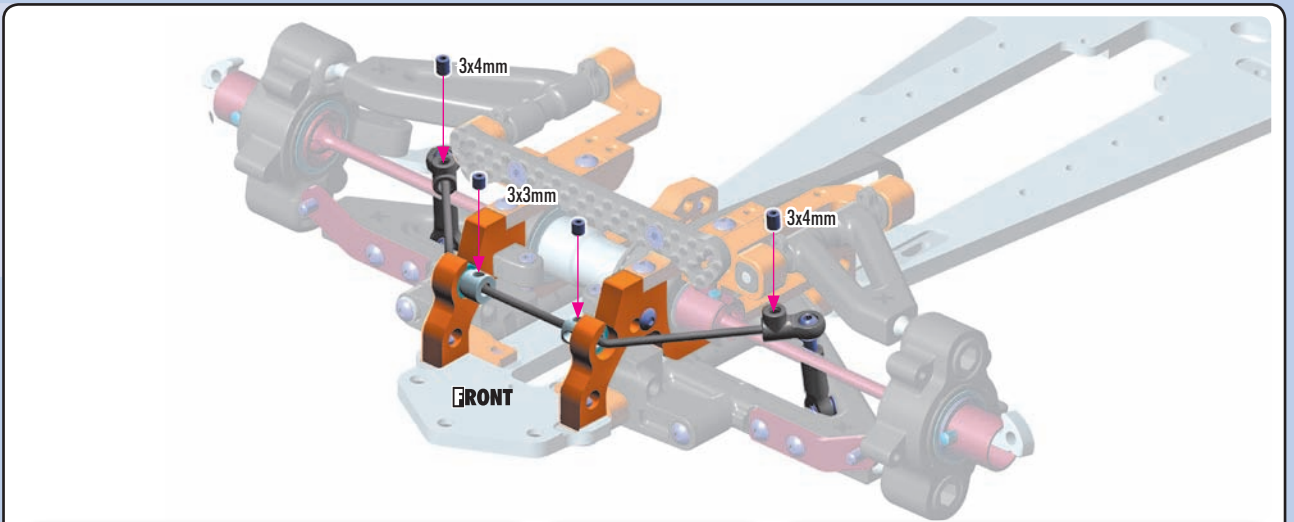


# 4. FRONT SUSPENSION



901303  
SB M3x3

901304  
SB M3x4

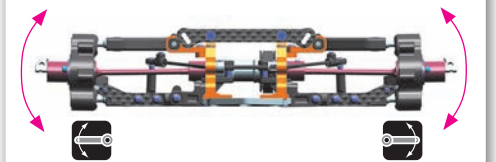


Set the bar into the center, remove the play in the bushings, and tighten the set-screws fully.



If the sides still do not move at the same time, adjust the length of the bar holders.

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.



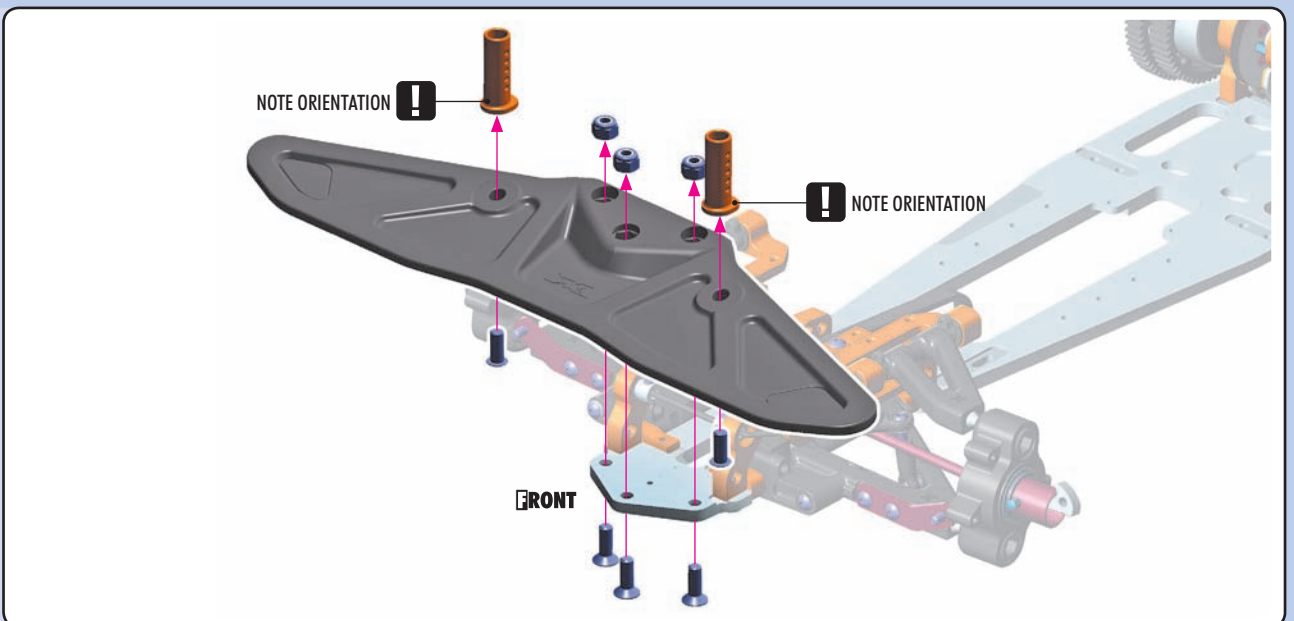
902410  
SH M4x10



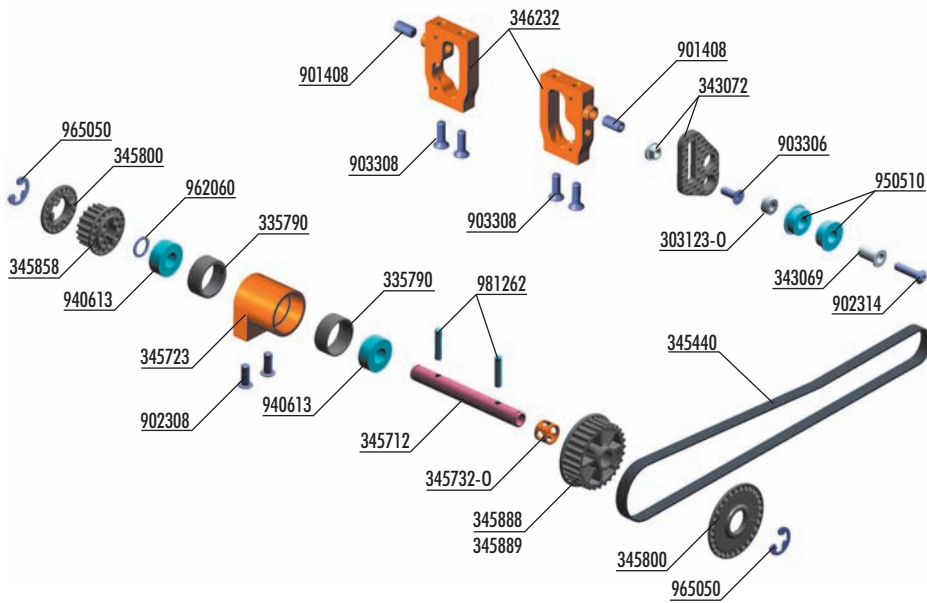
903412  
SFH M4x12



960040  
N M4



# 5. FRONT TRANSMISSION



DRIVE BELT SIDE (6.0x432mm)			
OPTION	#345440	PUR® REINFORCED	INCLUDED
	#345441	KEVLAR	OPTION

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

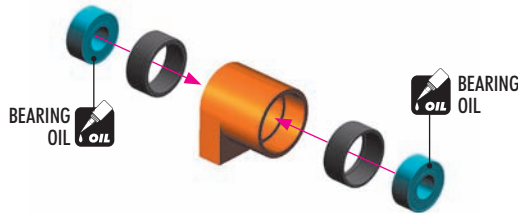
## BAG



- |          |   |        |  |
|----------|---|--------|--|
| 303123-0 | ALU SHIM 3x6x2.0MM - ORANGE (10)                                | 346232 | ALU RADIO PLATE MOUNT - 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)                           |
| 343072   | BELT TENSIONER SET - STEEL                                      | 902314 | HEX SCREW SH M3x14 (10)                          |
| 345440   | PUR® REINFORCED DRIVE BELT SIDE 6.0 x 432 MM                    | 903306 | HEX SCREW SFH M3x6 (10)                          |
| 345712   | FRONT MIDDLE SHAFT - LIGHTWEIGHT - HUDY SPRING STEEL™           | 903308 | HEX SCREW SFH M3x8 (10)                          |
| 345723   | ALU FRONT MIDDLE SHAFT HOLDER                                   | 940613 | HIGH-SPEED BALL-BEARING 6x13x5 RUBBER SEALED (2) |
| 345732-0 | ALU MIDDLE SHAFT LOCATING COLLAR - SHORT - LIGHTWEIGHT - ORANGE | 950510 | BALL-BEARING 5x10x4 FLANGED (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                          |        |  |



940613  
BB 6x13x5

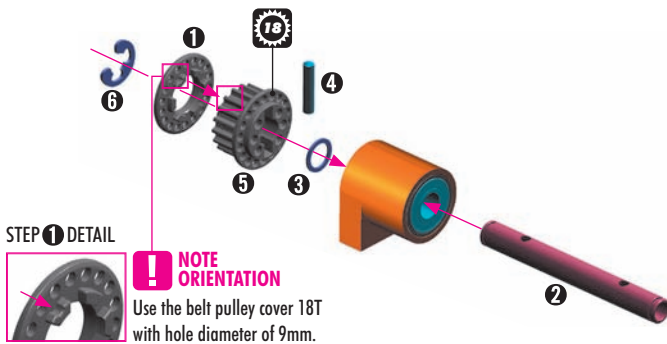


962060  
SHIM 6x8x0.5

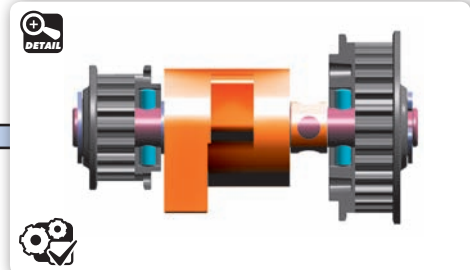


965050  
C5

981262  
P 2.5x12

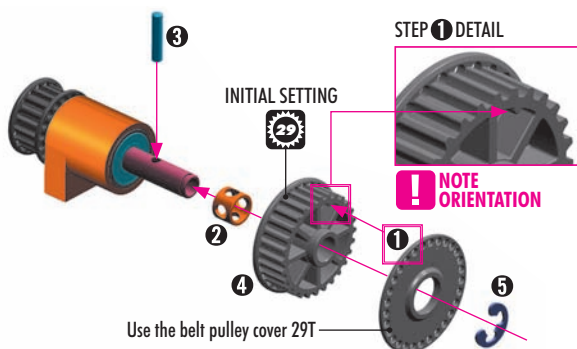


FRONT BELT PULLEY CENTER				
OPTION	#345858	18T	COMPOSITE	INCLUDED
	#345958	18T	ALU	OPTION



965050  
C5

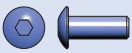
981262  
P 2.5x12



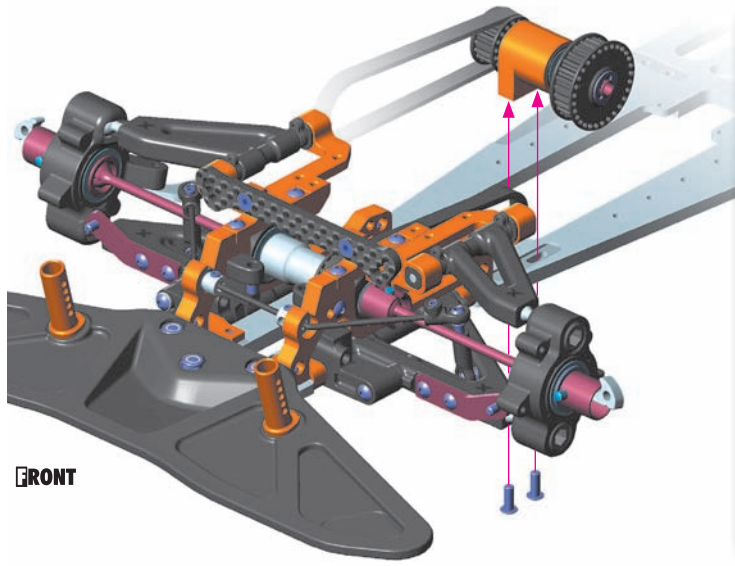
FRONT SIDE BELT PULLEY				
OPTION	#345888	28T	COMPOSITE	INCLUDED
	#345889	29T	COMPOSITE	INCLUDED
	#345988	28T	ALU	OPTION
	#345989	29T	ALU	OPTION
	#345990	30T	ALU	OPTION



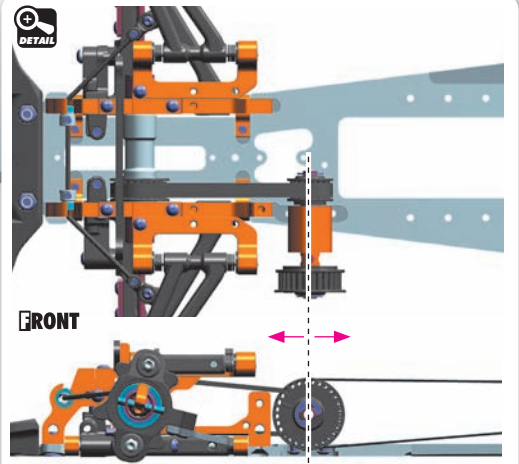
# 5. FRONT TRANSMISSION



902308  
SH M3x8



FRONT



FRONT

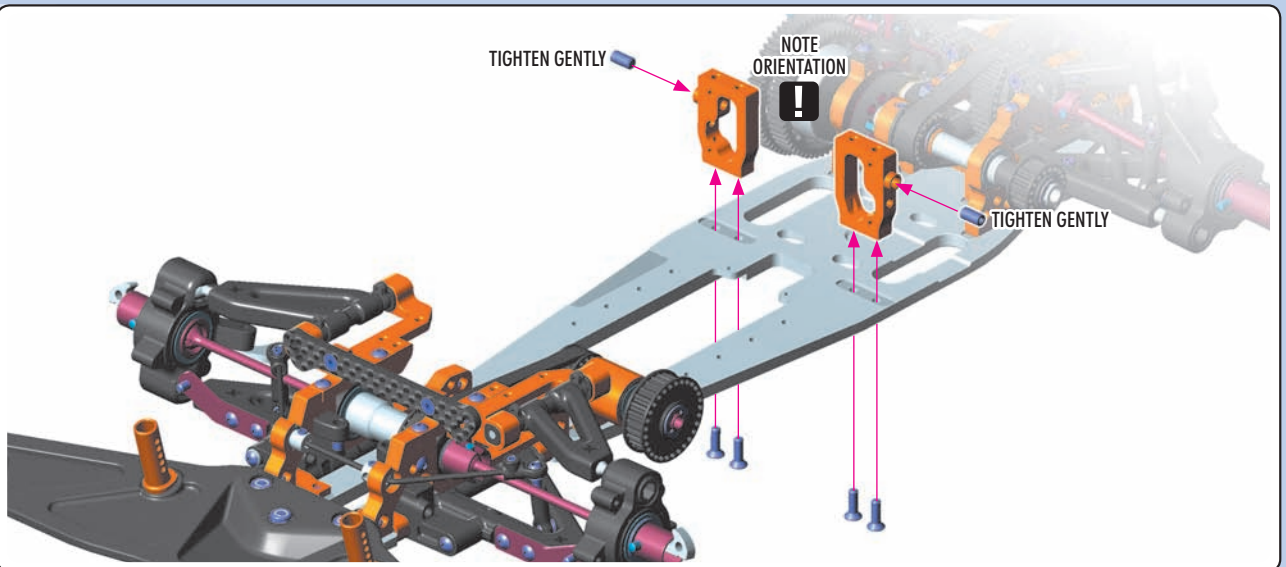
Adjust the tension of the front & side belt by moving the front middle shaft holder.



901408  
SB M4x8



903308  
SFH M3x8



TIGHTEN GENTLY

NOTE ORIENTATION



TIGHTEN GENTLY



303123-0  
SHIM 3x6x2



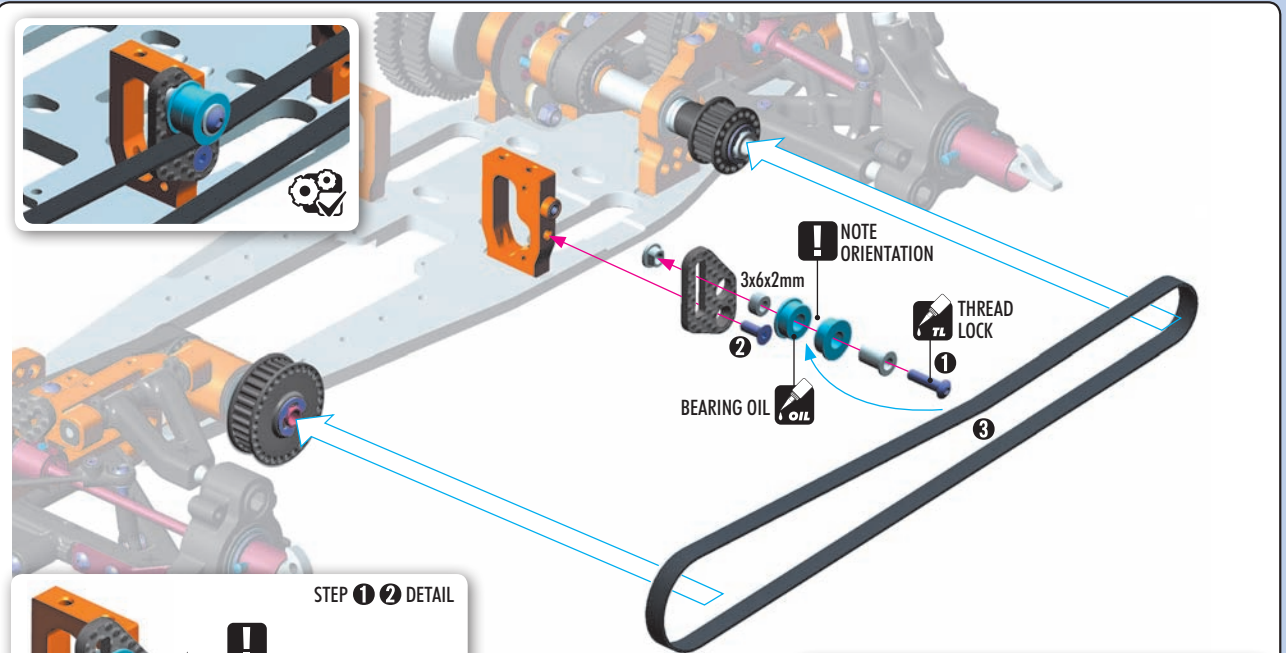
902314  
SH M3x14



903306  
SFH M3x6



950510  
BB 5x10x4



NOTE ORIENTATION

3x6x2mm

BEARING OIL

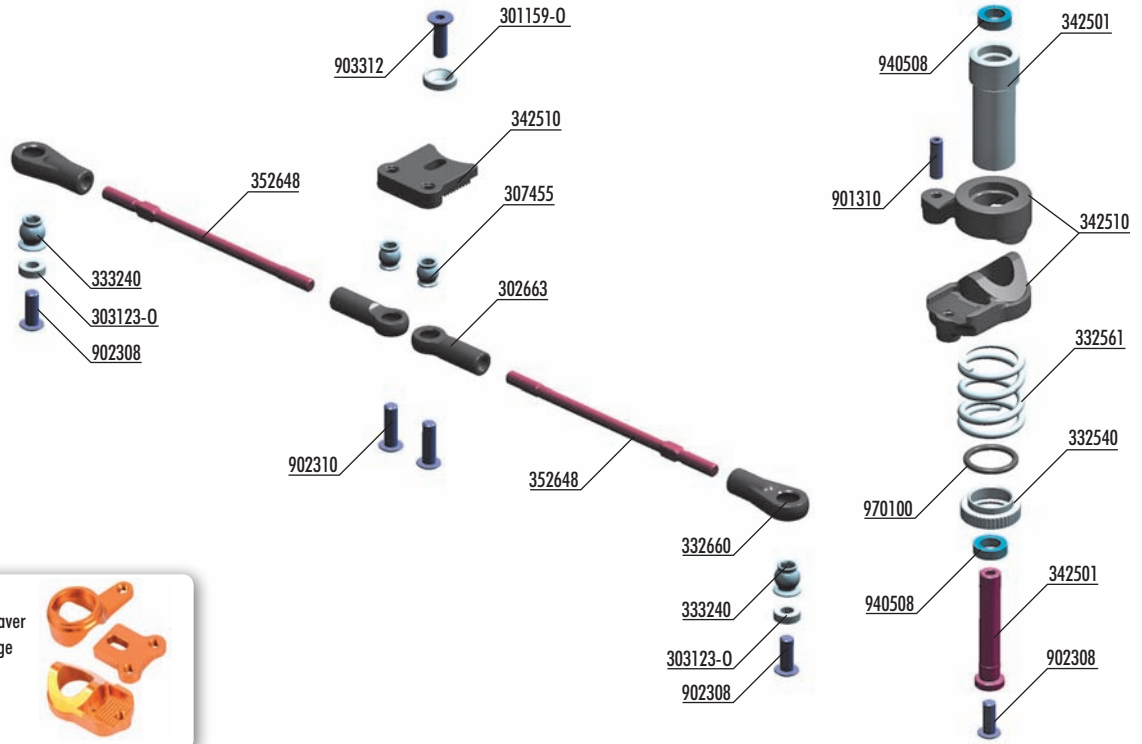
THREAD LOCK

STEP 1 2 DETAIL

**!** TO ADJUST THE BELT TENSIONER:

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

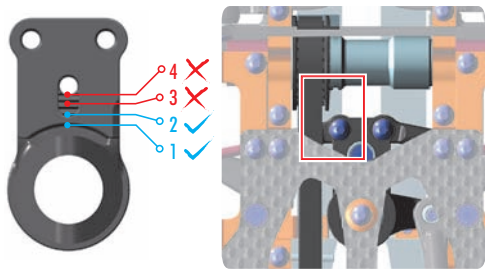
OPTION	DRIVE BELT SIDE (6.0x432mm)		
	#345440	PUR® REINFORCED	INCLUDED
	#345441	KEVLAR	OPTION



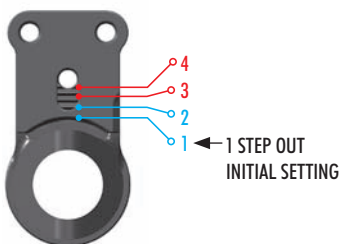
303123-0	ALU SHIM 3x6x2.0MM - ORANGE (10)	342510	COMPOSITE SERVO SAVER
301159-0	ALU COUNTERSUNK SHIM - ORANGE (4)	352648	XT8 ADJ. TURNBUCKLE M3 L/R 62 MM - HUDY SPRING STEEL (2)
302663	COMPOSITE BALL JOINT 4.9MM - OPEN - V2 (8)	901310	HEX SCREW SB M3x10 (10)
307455	PIVOT BALL 4.9 MM DOUBLE BEVEL SHOULDERS (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	HIGH-SPEED BALL-BEARING 5x8x2.5 RUBBER SEALED (2)
333240	BALL UNIVERSAL 5.8 MM HEX (4)	970100	O-RING 10 x 1.5 (10)
342501	SERVO SAVER COMPLETE SET		



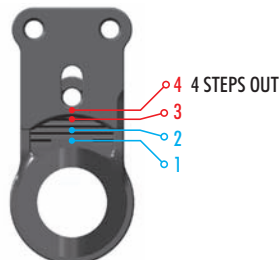
**USE ONLY ACKERMANN POSITIONS 1 OR 2.**  
DO NOT use Ackerman positions 3 or 4; these can be used ONLY after modifying the ball joint & one-way pulley so that they do not touch.



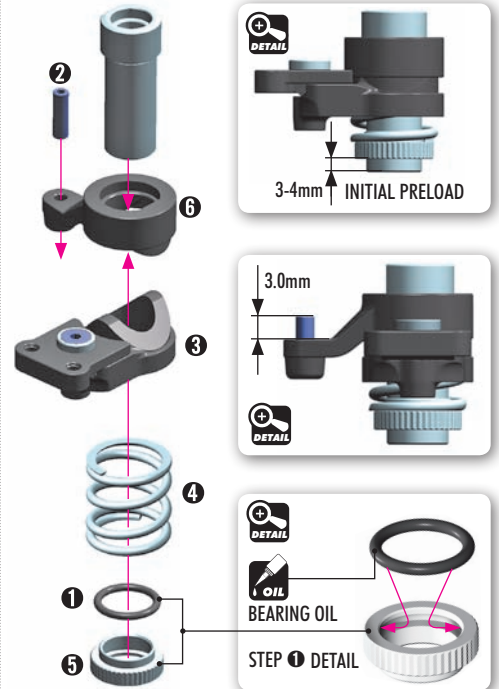
THERE ARE 4 DIFFERENT ACKERMANN SETTINGS POSSIBLE WITH THE QUICK-SAVER™  
For initial Ackermann setting, use Step 1 (2nd shortest length).



**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

**TIP** Follow the TECH TIP on page 41 to install the pivot balls

**2x**

**NOTE ORIENTATION**

**NOTE ORIENTATION**

**NOTE ORIENTATION**

**NOTE ORIENTATION**

**LEFT**

**RIGHT**

42.5mm

42.5mm

**NOTE ORIENTATION**

**NOTE ORIENTATION**

**THREAD LOCK**

**2**

**BEARING OIL**

**BEARING OIL**

**3**

**THREAD LOCK**

**2x**

**L-R**

**303123-0**  
SHIM 3x6x2

**NOTE ORIENTATION**

**3x6x2mm**

**THREAD LOCK**

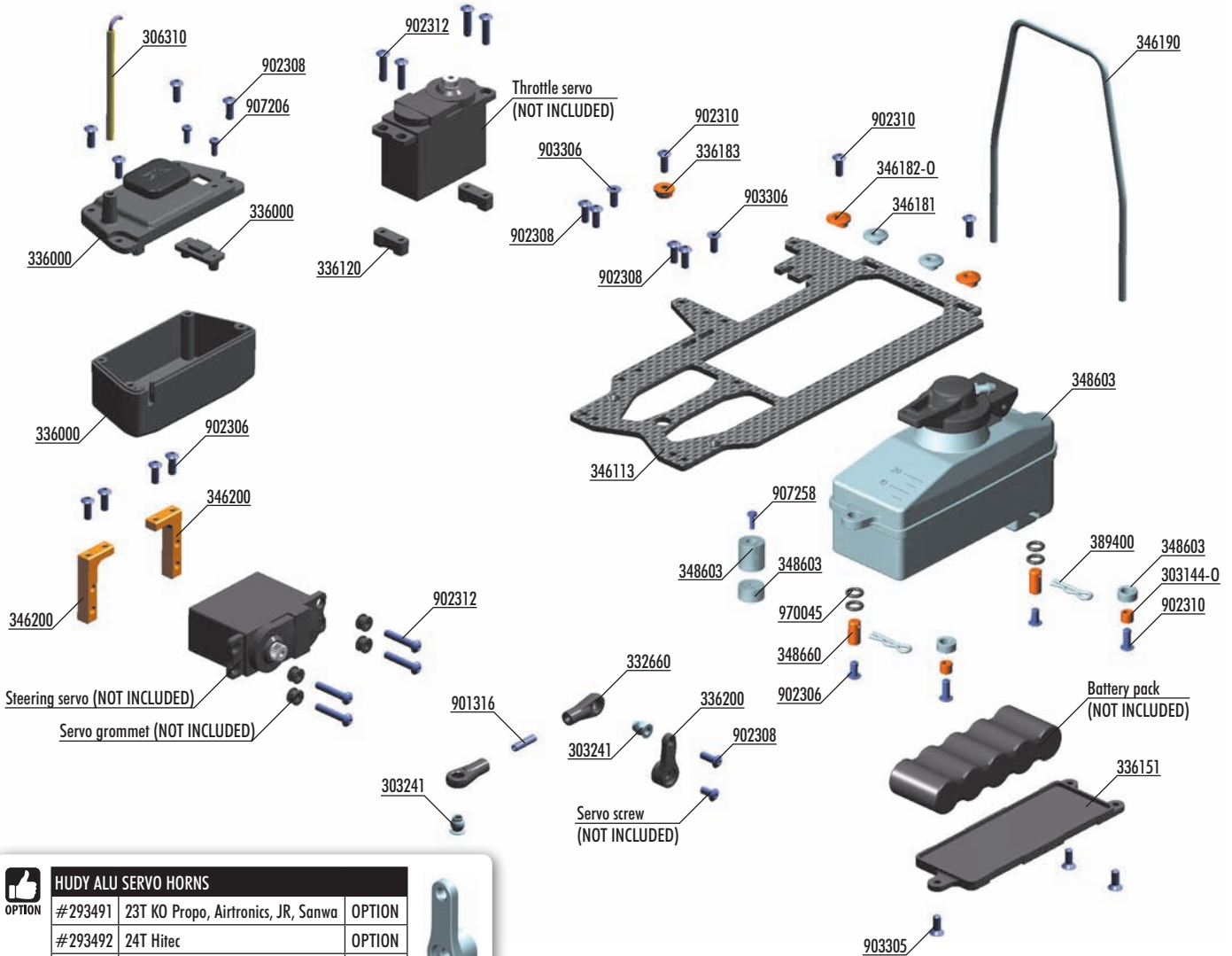
**FRONT**

**INITIAL SETTING**

**DETAIL**



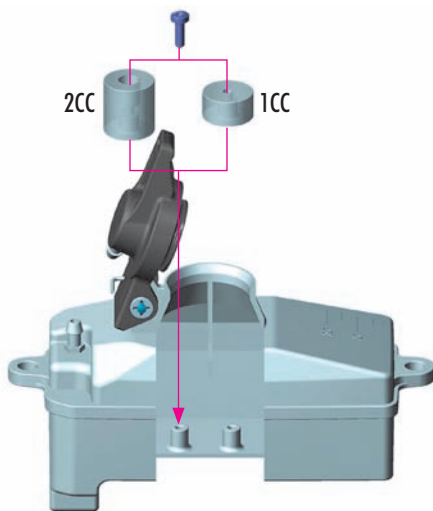
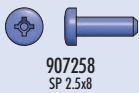
# 7. FUEL TANK & ELECTRONICS



HUDY ALU SERVO HORNS		
OPTION #293491	23T KO Propo, Airtronic, JR, Sanwa	OPTION
#293492	24T Hitec	OPTION
#293493	25T Futaba	OPTION



- |   |   |                                   |
|---|---|-----------------------------------|
| 303144-O ALU SHIM 3x5x4.0MM - ORANGE (10)                 | 346113 GRAPHITE RADIO PLATE                         | 902306 HEX SCREW SH M3x6 (10)     |
| 303241 BALL UNIVERSAL 5.8 MM HEX (4)                      | 346181 ALU RADIO PLATE TWEAK BUSHING HARDCOATED (2) | 902308 HEX SCREW SH M3x8 (10)     |
| 306310 ANTENNA TUBE (2)                                   | 346182-0 ALU RADIO PLATE BUSHING FIXED - ORANGE (2) | 902310 HEX SCREW SH M3x10 (10)    |
| 332660 COMPOSITE STEERING & SERVO BALL JOINT 5.8 MM (4+2) | 346190 ROLL-OVER BAR                                | 902312 HEX SCREW SH M3x12 (10)    |
| 336000 COMPOSITE RECEIVER CASE                            | 346200 ALU SERVO MOUNT - SWISS 7075 T6 (2)          | 903305 HEX SCREW SFH M3x5 (10)    |
| 336120 COMPOSITE STEERING SERVO HOLDER - SET - V2         | 348603 FUEL TANK 125CC - SET                        | 903306 HEX SCREW SFH M3x6 (10)    |
| 336151 COMPOSITE BATTERY PLATE                            | 348660 ALU FUEL TANK MOUNT (2)                      | 907206 SCREW PHILLIPS M2x6 (10)   |
| 336200 COMPOSITE STEERING SERVO ARMS - SET                | 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)        |



The fuel tank has the 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.

### 1CC FUEL TANK INSERT

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

NOTE ORIENTATION



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  
SHIM 3x5x4



902306  
SH M3x6



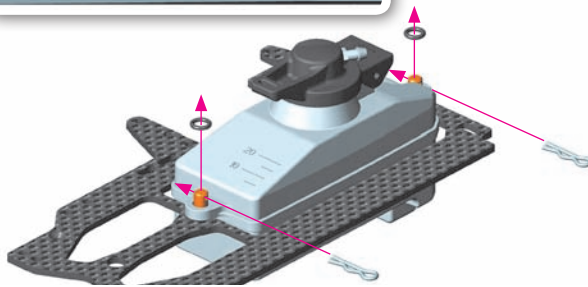
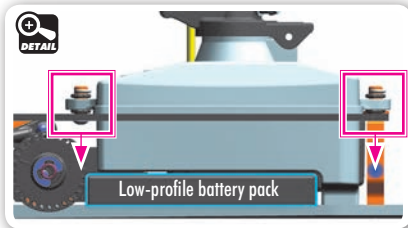
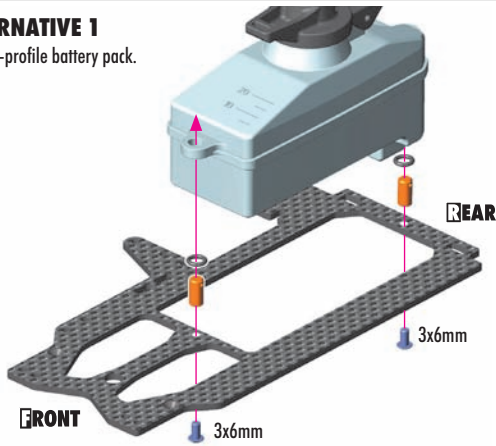
902310  
SH M3x10



970045  
O 4.5x1.5

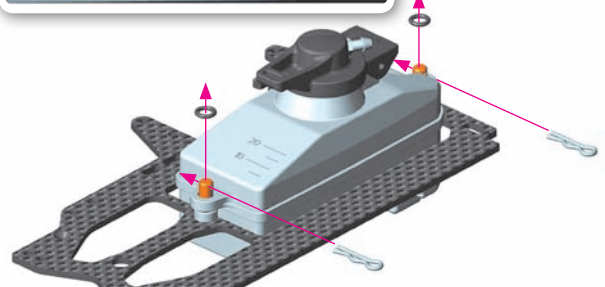
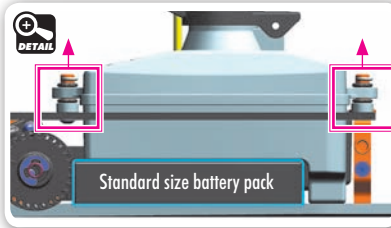
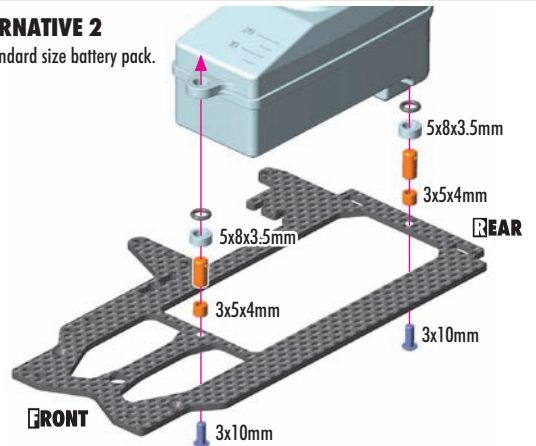
## ALTERNATIVE 1

For low-profile battery pack.

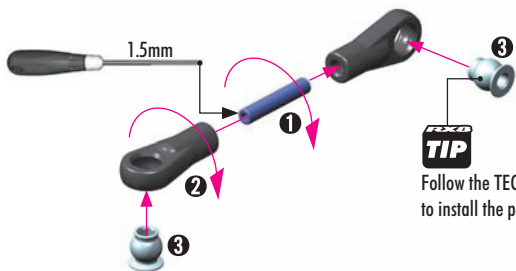


## ALTERNATIVE 2

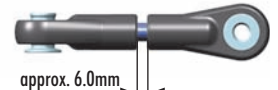
For standard size battery pack.



901316  
SB M3x16



**TECH TIP**  
Follow the TECH TIP on page 41 to install the pivot balls



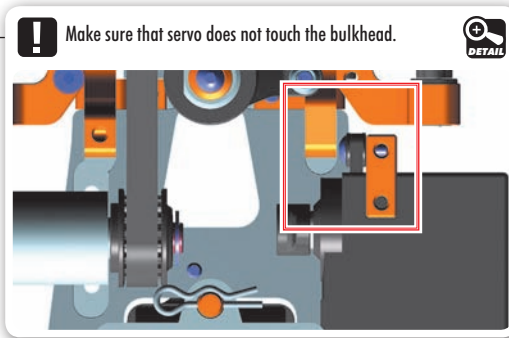
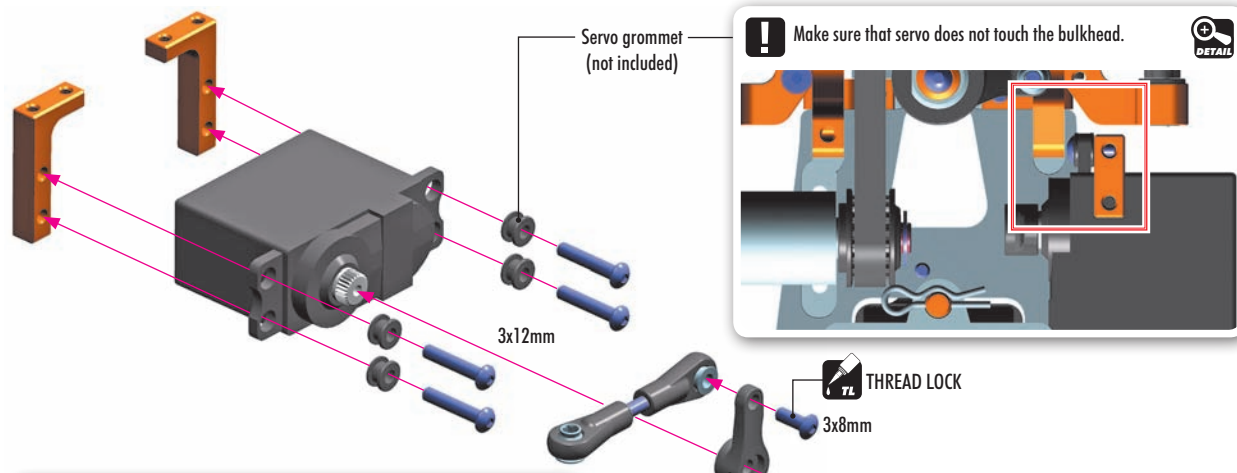
approx. 6.0mm  
Note the 90° angle difference between the ball joints



902308  
SH M3x8



902312  
SH M3x12



HUDY ALU SERVO HORNS			
OPTION	#293491	23T KO Propo, Airtronics, JR, Sanwa	OPTION
	#293492	24T Hitec	OPTION
	#293493	25T Futaba	OPTION

Use alum servo horns for more in-corner steering and better steering response.

**THREAD LOCK**  
3x8mm  
Servo screw (not included)

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

# 7. FUEL TANK & ELECTRONICS

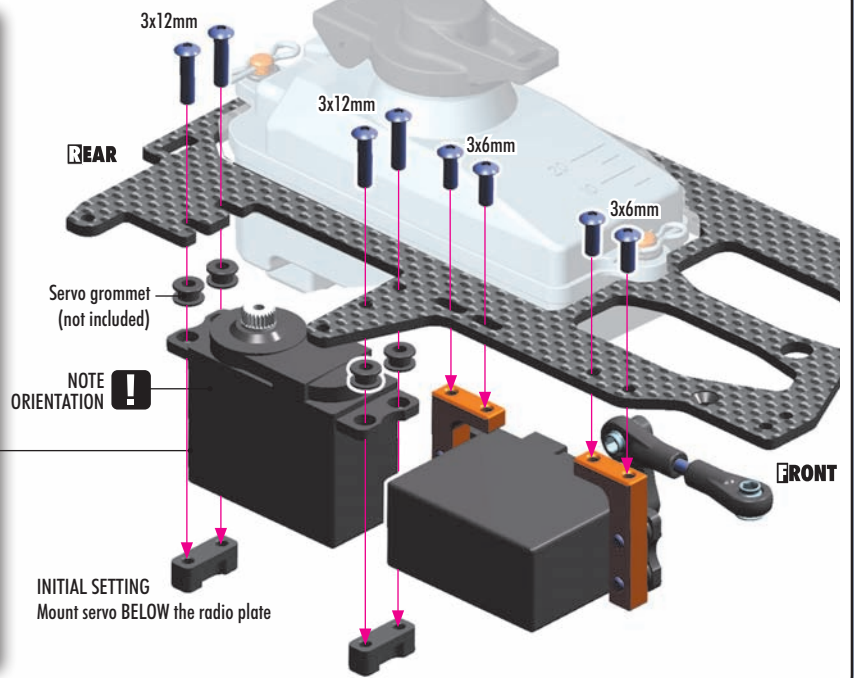
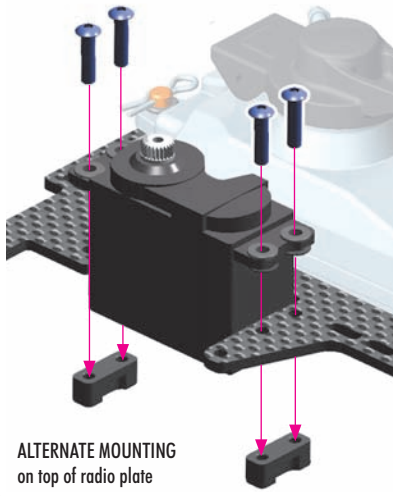


902306  
SH M3x6



902312  
SH M3x12

**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.



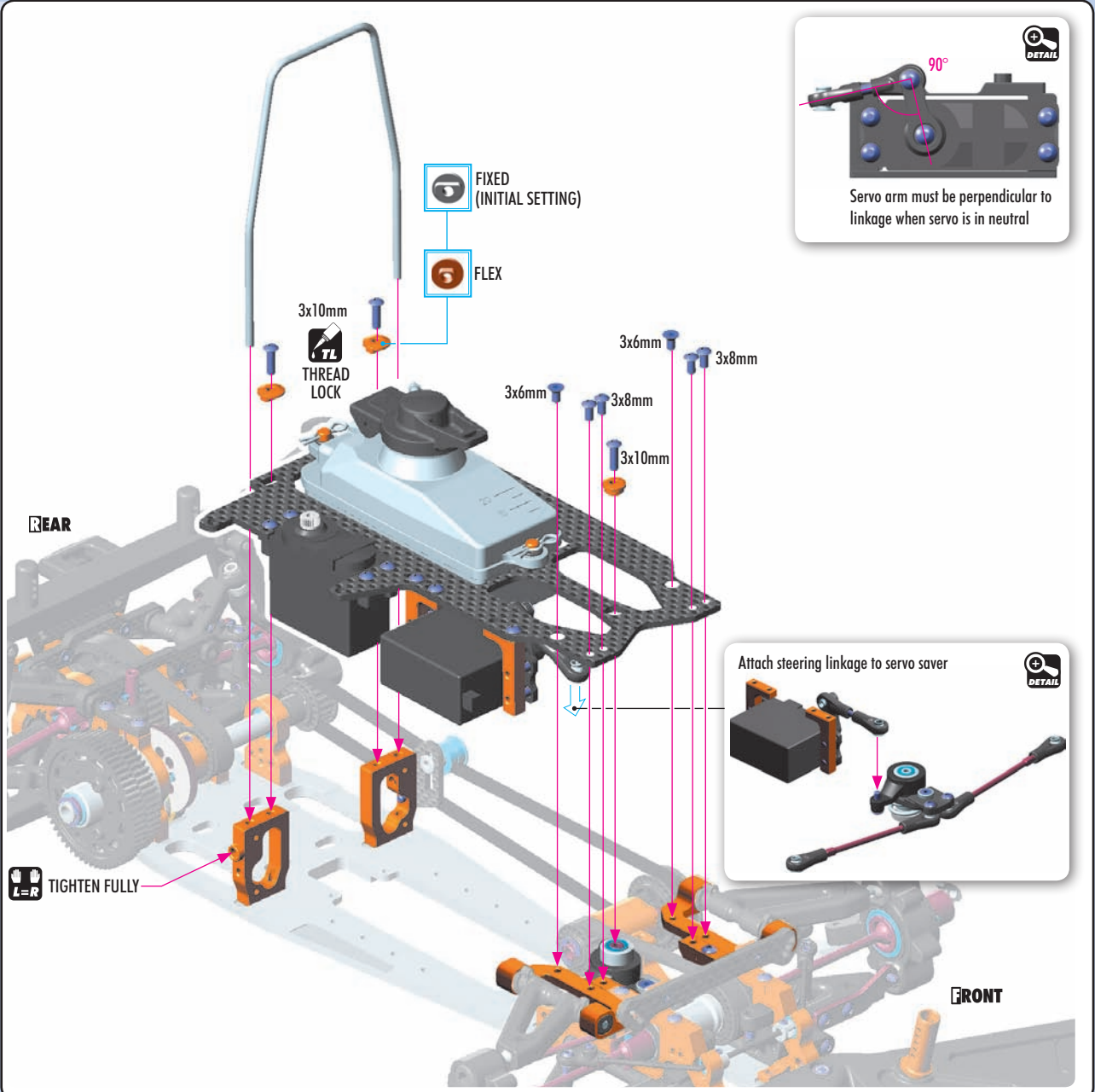
902308  
SH M3x8



902310  
SH M3x10



903306  
SFH M3x6





# 7. FUEL TANK & ELECTRONICS



902308  
SH M3x8



907206  
2x6

**REAR**

Antenna Tube

3x8mm

2x6mm

3x8mm

Receiver (NOT INCLUDED)

3x8mm

3x8mm

**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.

Route servo and transponder leads into box and seal with silicone sealant.

Use an appropriate receiver battery pack

Battery (NOT INCLUDED)

Use tape to mount the receiver battery pack to the lower holder (not included).

**BATTERY PLATE**

<b>OPTION</b>	#336151	COMPOSITE	INCLUDED
	#336155	GRAPHITE	OPTION
	#346157	BRASS (100g)	OPTION



903305  
SFH M3x5

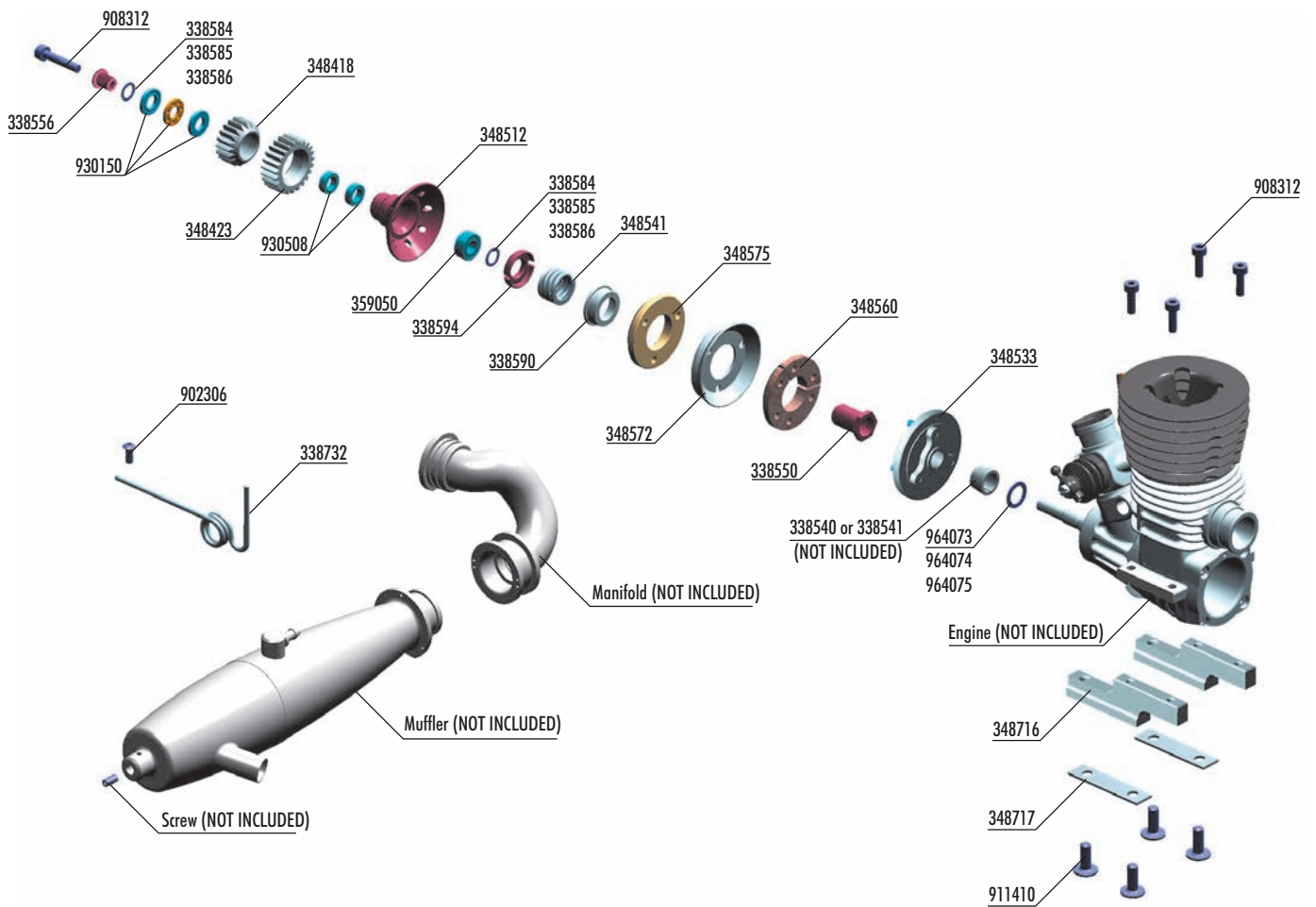
**FRONT**

**REAR**

**TL**

THREAD LOCK (all screws)

# 8. ENGINE & CLUTCH



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

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



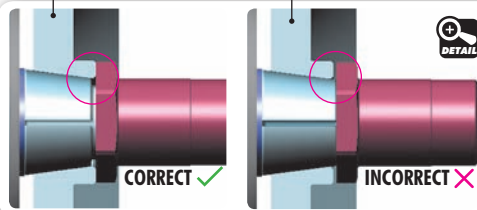
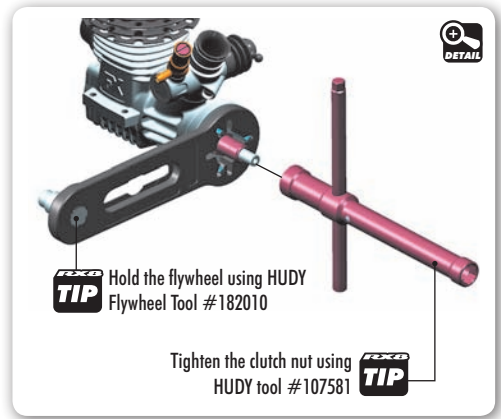
**BAG**

**08**

- 338540 FLYWHEEL COLLAR 7MM - NOVAROSSİ (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

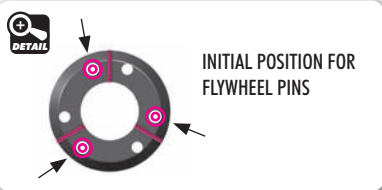
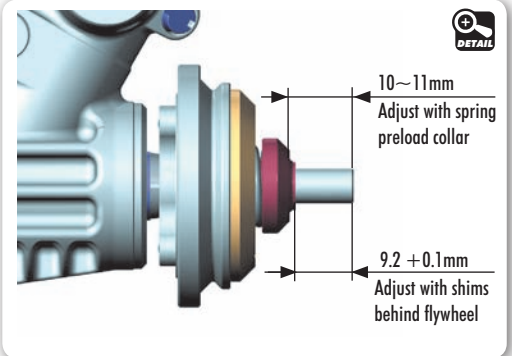
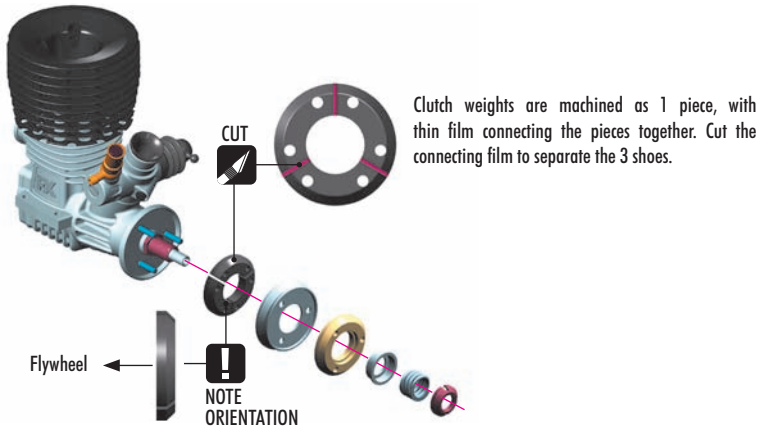
- 348560 CLUTCH FLYWEIGHT SET
- 348572 ALU CLUTCH DISK - CONICAL - SWISS 7075 T6
- 348575 CLUTCH SHOE - YELLOW
- 348576 CLUTCH SHOE - RED (OPTION)
- 348716 ALU ENGINE MOUNT (2)
- 348717 STAINLESS STEEL ENGINE MOUNT SHIM (2)
- 359050 CLUTCH BELL BALL-BEARING 5x10x4 (2)
- 902306 HEX SCREW SH M3x6 (10)
- 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 (2)
- 964073 WASHER S 7x10x0.2 (10)
- 964074 WASHER S 7x10x0.3 (10)
- 964075 WASHER S 7x10x0.5 (10)

# 8. ENGINE & CLUTCH



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.



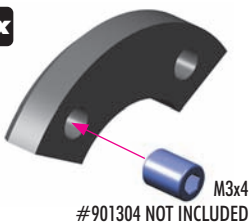
## TECH TIP FOR EXTRA BOTTOM-END POWER

For extra bottom-end power, thread a M3x4 setscrew (#901304) into each clutch flyweight as shown. The setscrew 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.

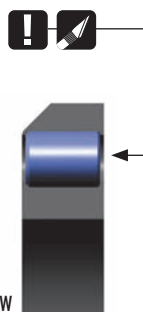
### IMPORTANT!

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

3x



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



## 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.



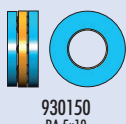
Please follow these run-in steps to help ensure proper clutch operation:

- 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.





908312  
SCH M3x12



930150  
BA 5x10



930508  
BB 5x8x2.5

**DO NOT INSTALL** this bearing when setting clutch gap.  
**INSTALL** this bearing when setting endplay.

**IMPORTANT**  
Degrease this bearing with standard bearing cleaner, and then lubricate with light bearing oil.

**TIP**  
**ENDPLAY SHIMS**  
These shims are used to adjust clutchbell endplay.

**BEARING GREASE**  
**BEARING OIL**  
**GRAPHITE GREASE**

**CLUTCH GAP SHIMS**  
These shims are used to adjust clutch gap.

5x10x4mm  
5x8x2.5mm  
ø10mm  
ø5.2mm  
ø9.8mm  
ø5.0mm

**TIP**  
To measure the clutch gap (0.6~0.7mm) you can also use HUDY Flywheel Tool #182010

## (1) ADJUSTING THE CLUTCH GAP

1 Install the clutchbell, outer ball-bearing (small), and thrustbearing assembly on the engine crankshaft. **DO NOT** install the inner ball-bearing or internal shims.

Push the clutchbell onto the clutch shoe and measure distance A as indicated.

2 Pull the clutchbell away from the clutch shoe and measure distance B as indicated.

3 The clutch gap is A - B; the correct gap is 0.6-0.7mm

If the clutch gap is greater than this, you can easily calculate the thickness of shims required to set correct gap:  
Thickness of shims required (in mm) = A-B-0.7

For example, using the values A=5.5mm, B=4.5mm  
Shim thickness = 5.5-4.5-0.7=0.3mm

Place shims on the small collar, outside the thrustbearing assembly.

Insert CLUTCH GAP SHIMS here

## (2) ADJUSTING THE ENDPLAY

Measure endplay with this bearing installed

Apply shims on crankshaft to set endplay to 0.05-0.15mm

Insert ENDPLAY SHIMS here (approximately 0.7~1.0mm)

**NOTE ORIENTATION**

23

18

To tighten the pinion gear, use the #349903 alu pinion tool.

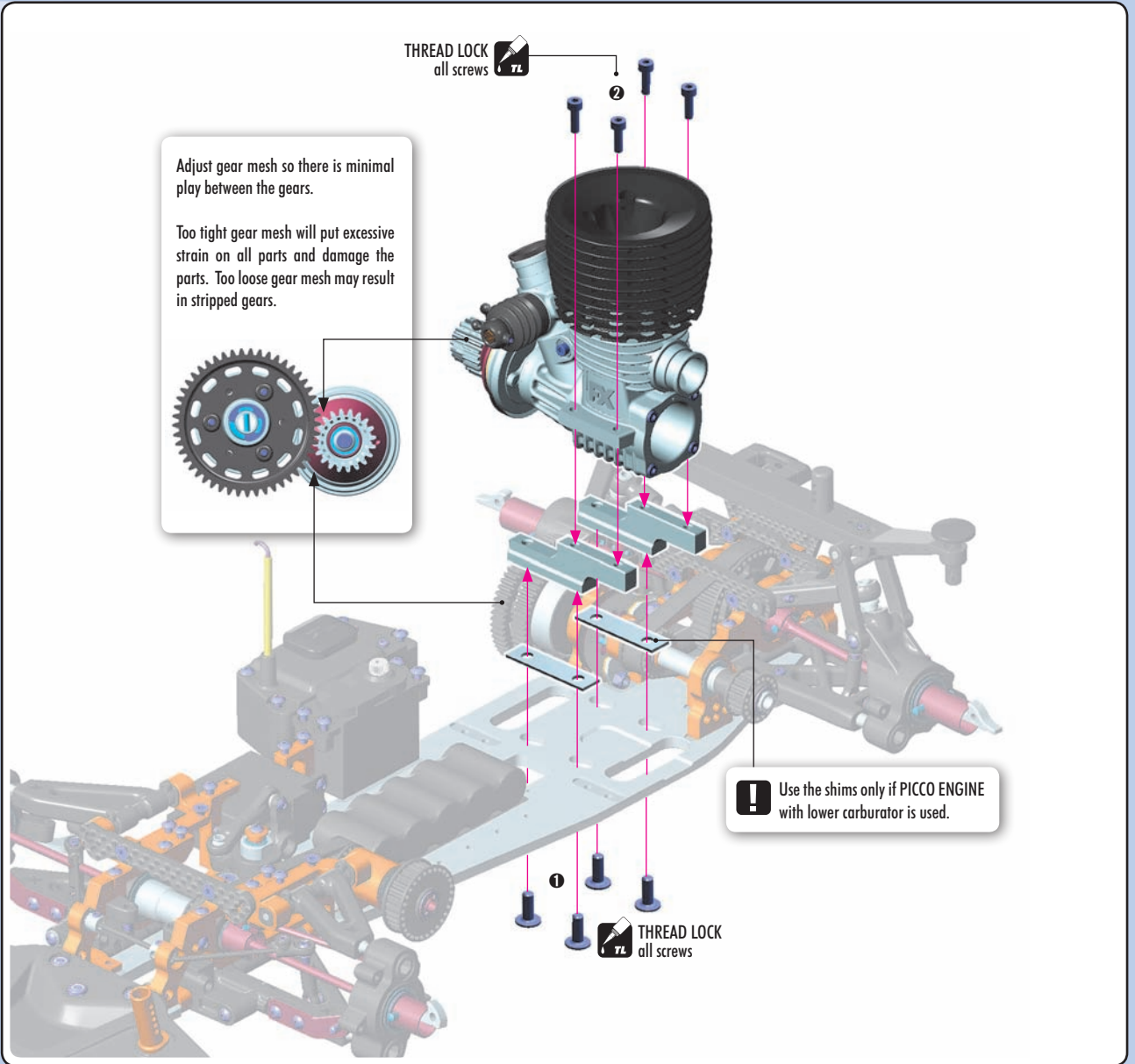
# 8. ENGINE & CLUTCH



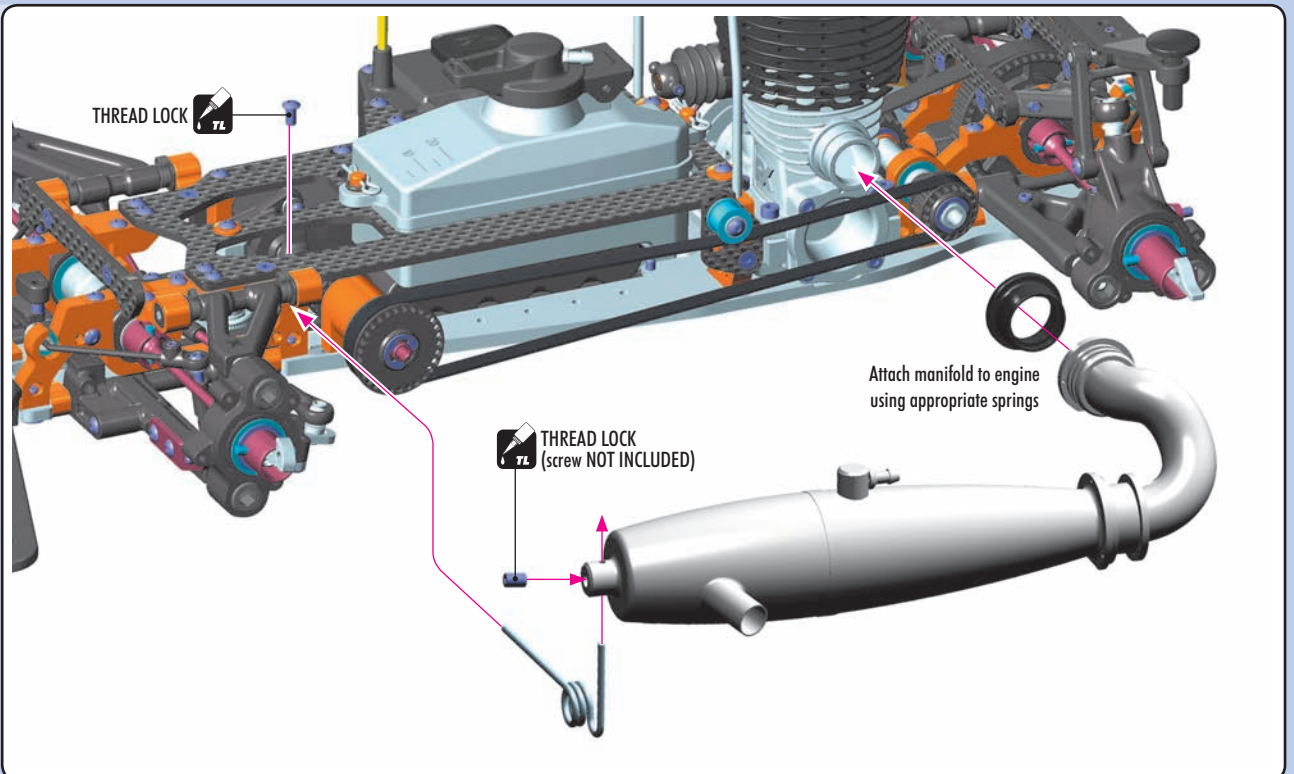
908312  
SCH M3x12



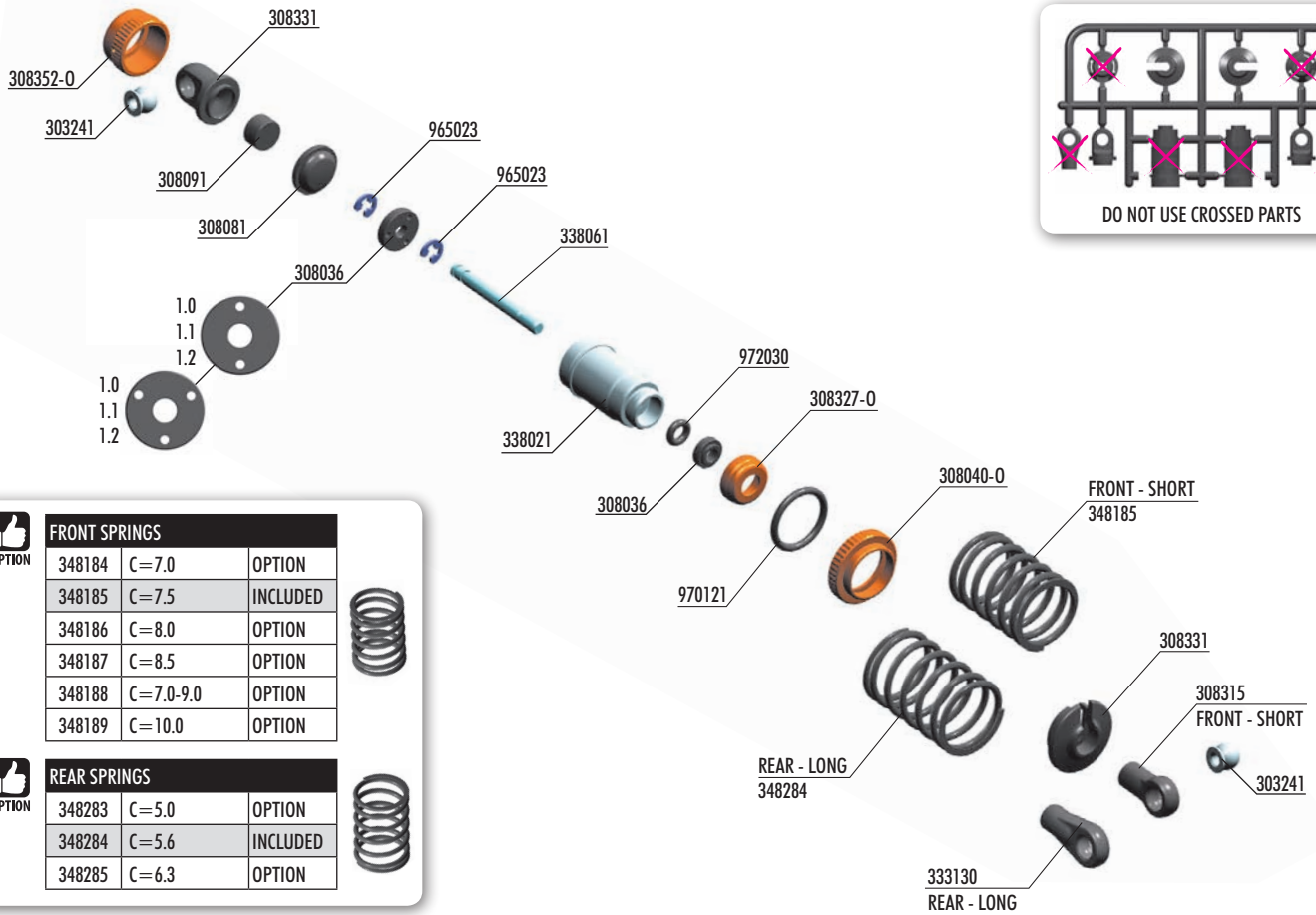
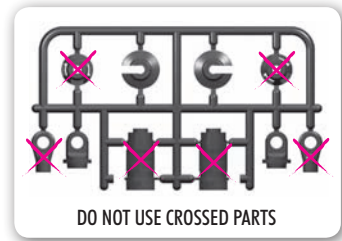
911410  
SHF M4x10



902306  
SH M3x6



# 9. SHOCK ABSORBERS



### FRONT SPRINGS

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



### REAR SPRINGS

OPTION	Part Number	Value	Status
	348283	C=5.0	OPTION
	348284	C=5.6	INCLUDED
	348285	C=6.3	OPTION



### BAG



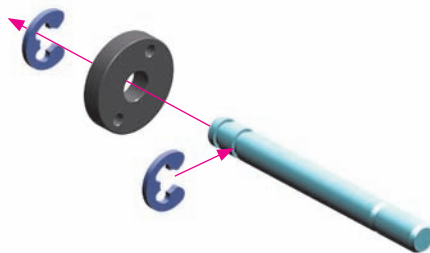
- 303241 BALL UNIVERSAL 5.8 MM HEX (4)
- 308036 COMPOSITE NON-ADJUSTABLE PISTONS - DELRIN™ - V3
- 308040-0 SHOCK ADJ. NUT ALU + O-RING - ORANGE (4)
- 308081 SHOCK ABSORBER MEMBRANE - LOW (4)
- 308091 SHOCK FOAM INSERTS - LOW (4)
- 308315 COMPOSITE SHOCK BALL JOINT - LONG (4)
- 308327-0 ALU CAP FOR XRAY SHOCK BODY - ORANGE (2)
- 308331 COMPOSITE FRAME SHOCK PARTS 4-STEP - SHORT
- 308352-0 ALU SHOCK CAP-NUT WITH HOLE - ORANGE (2)
- 333130 COMPOSITE REAR UPPER CAMBER LINK BALL JOINT 5.8 MM (4)

- 338001-0 ALU SHOCK ABSORBER-SET - ORANGE (2)
- 338021 ALU SHOCK BODY (2)
- 338061 HARDENED SHOCK SHAFT (2)
- 348185 XRAY SPRING-SET C=7.5 - 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  
C2.3

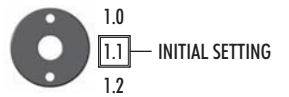
4x



2x FRONT

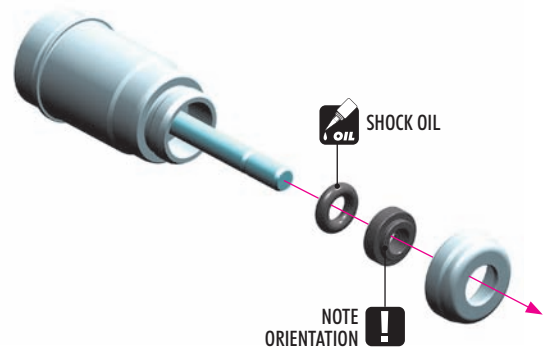
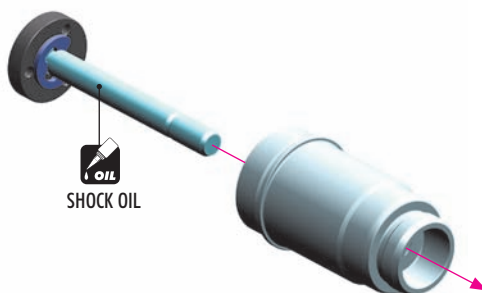


2x REAR



972030  
O 3x2

4x



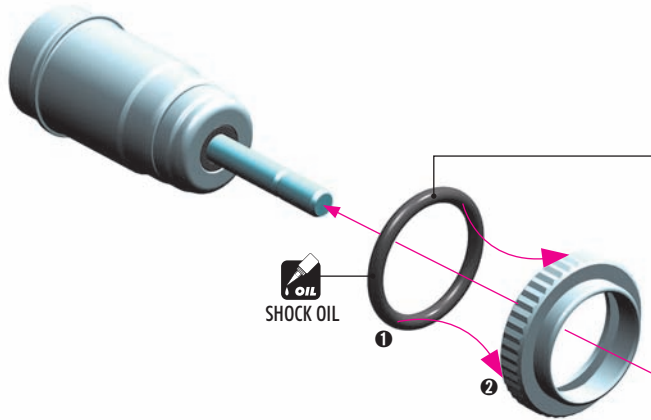


# 9. SHOCK ABSORBERS

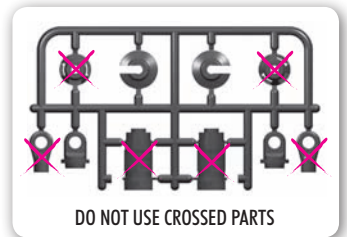
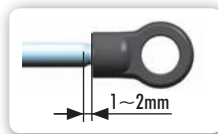
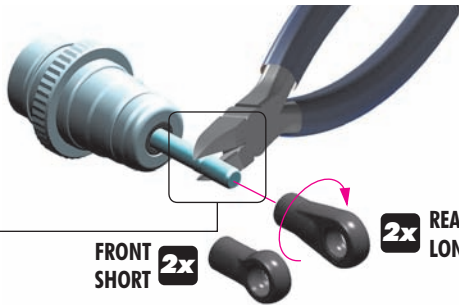
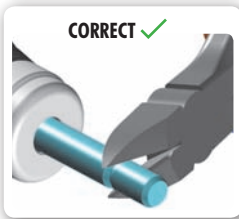
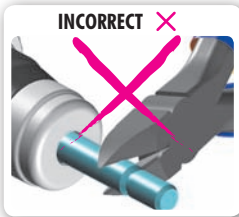


970121  
0 12.1x1.6

4x



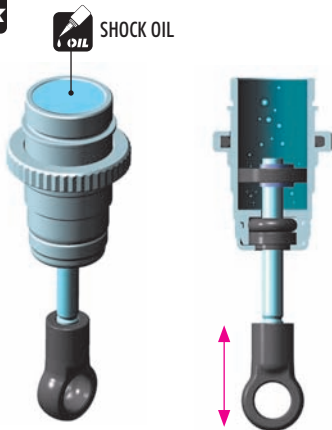
Be careful not to cross-thread the collar on the shock body.



**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

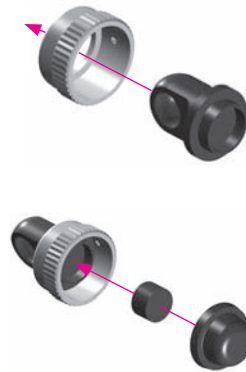
4x



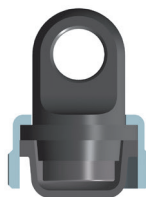
## SHOCK FILLING

- 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



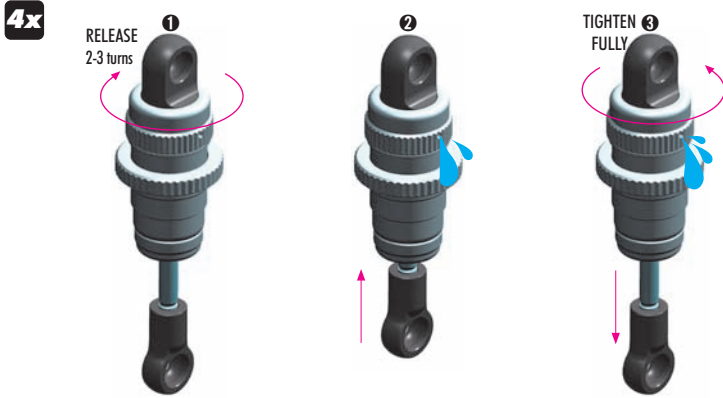
When installing the shock cap assembly on the shock body, some oil will leak out... this is normal.

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.

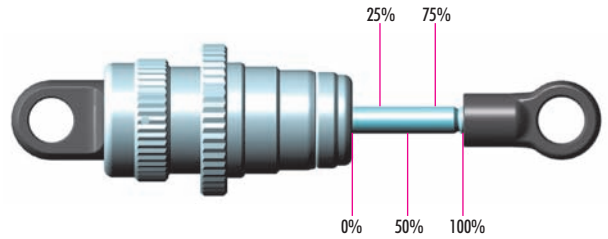
# 9. SHOCK ABSORBERS



## REBOUND ADJUSTMENT

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

- 1 Release the shock cap by 2-3 turns.
- 2 Push the shock shaft fully up. For the first time the extra oil will release through the hole in the alu cap - nut.
- 3 Tighten the shock cap. 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.

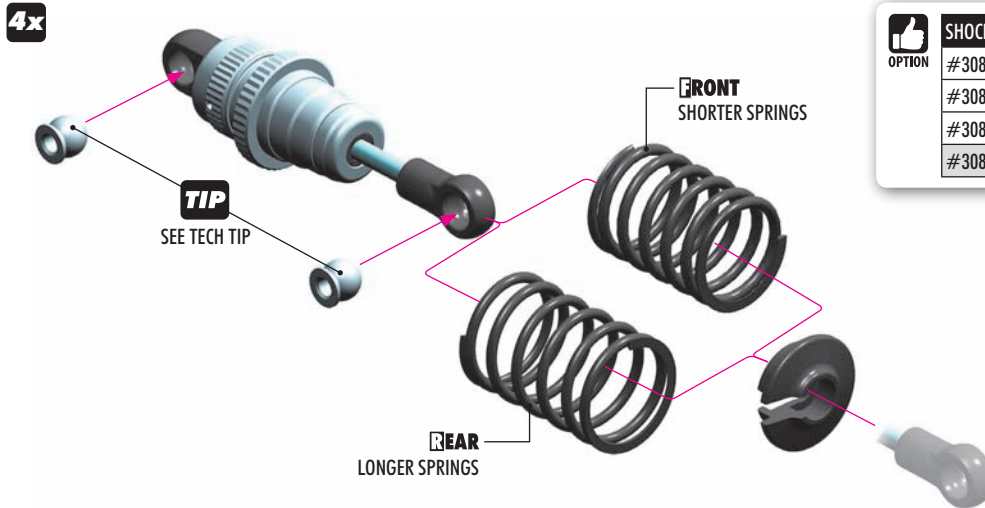


## REBOUND CHECK

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.



## SHOCK SPRING RETAINING COLLAR

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

## SHOCK LENGTH ADJUSTMENT

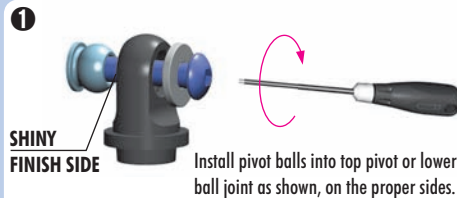
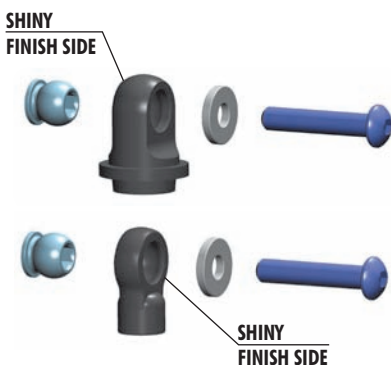
It is VERY important that all shocks are equal length. Fully extend the shock absorber and measure the end-to-end length; we recommend using digital calipers to give an accurate measurement. If a shock absorber is shorter or longer than others, adjust the shock length by tightening or loosening the ball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

## TECH TIP

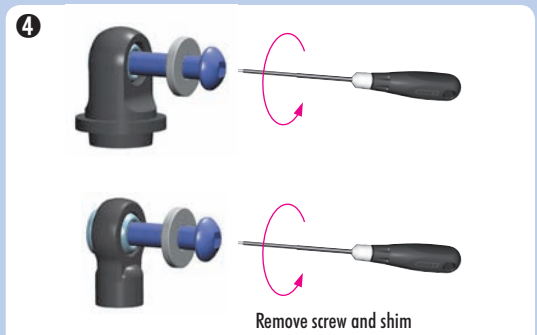
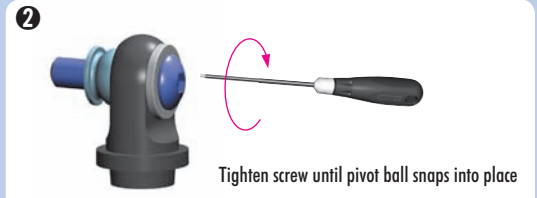
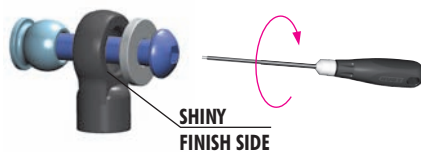
Follow this tech tip to properly install pivot balls into the top pivot and bottom ball joint.

- Parts needed:
- M3 x 16 SH screw
  - M3 shim

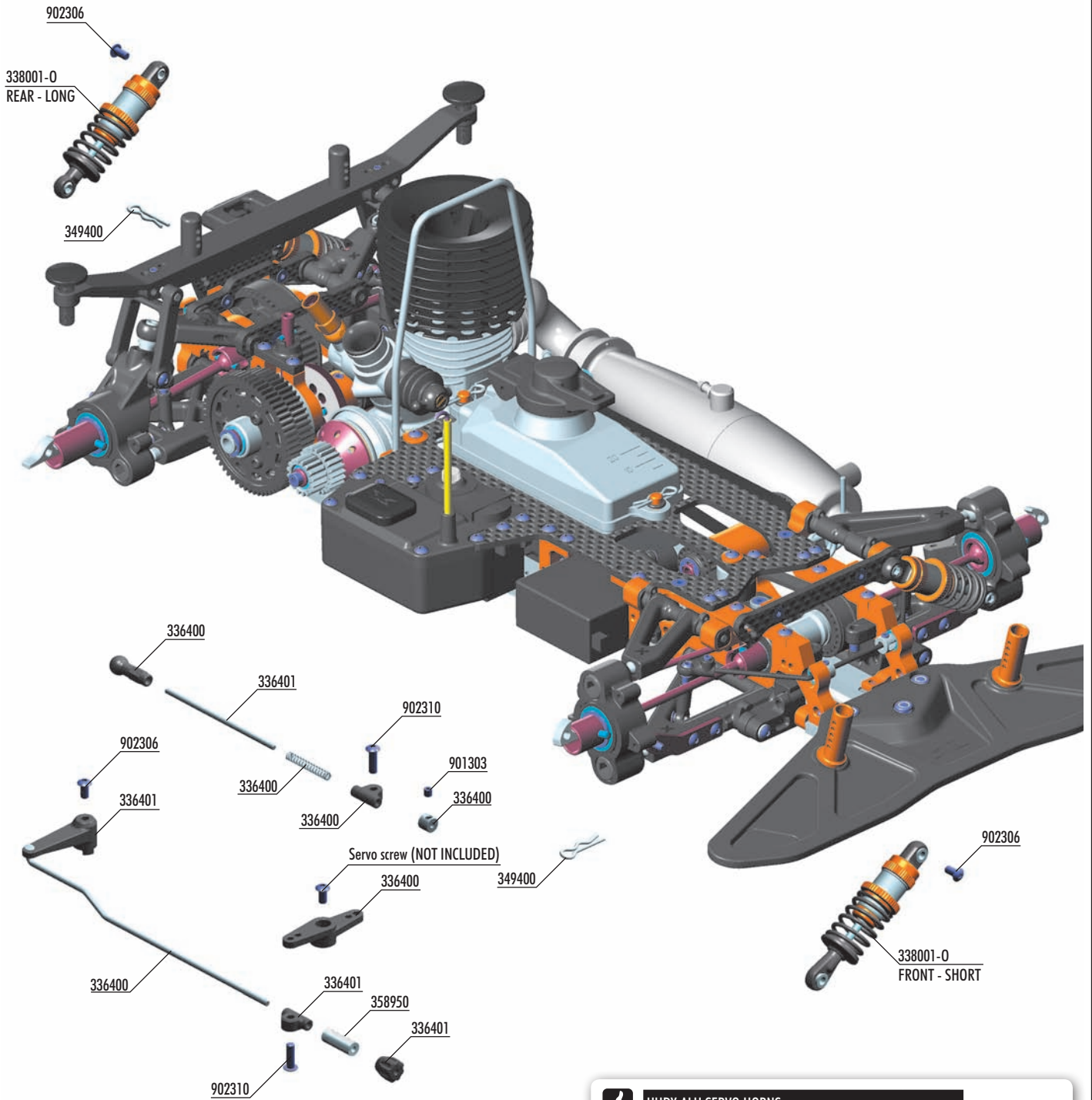
Note that the composite parts have two sides, noticeable around the pivot ball hole: one side has a shiny finish, the other side has a regular finish.



Note that the lower pivot ball has an extra shoulder.




# 10. FINAL ASSEMBLY




**OPTION** **HUDY ALU SERVO HORNS**

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



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



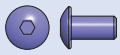
**BAG**

**10**

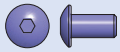
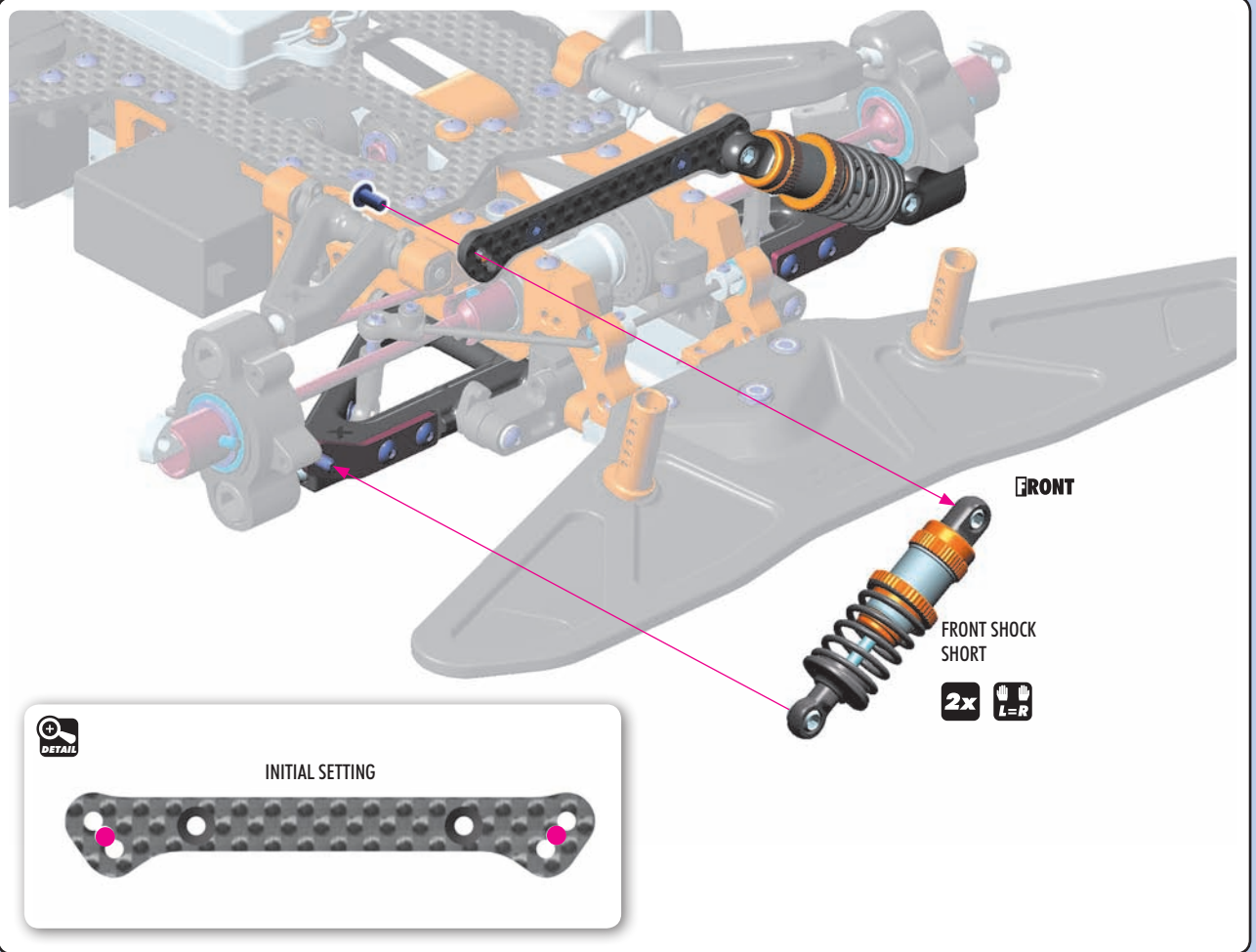
- 336400 THROTTLE LINKAGE SET
- 336401 BRAKE LINKAGE SET
- 338001-0 ALU SHOCK ABSORBER-SET - ORANGE (2)
- 334061-0 ALU BRAKE POST ARM - SWISS 7075 T6 - ORANGE (OPTION)
- 349400 BODY CLIP (10)
- 358950 SILICONE TUBING 1M (2.4 x 5.5MM)
  
- 901303 HEX SCREW SB M3x3 (10)
- 902306 HEX SCREW SH M3x6 (10)
- 902310 HEX SCREW SH M3x10 (10)



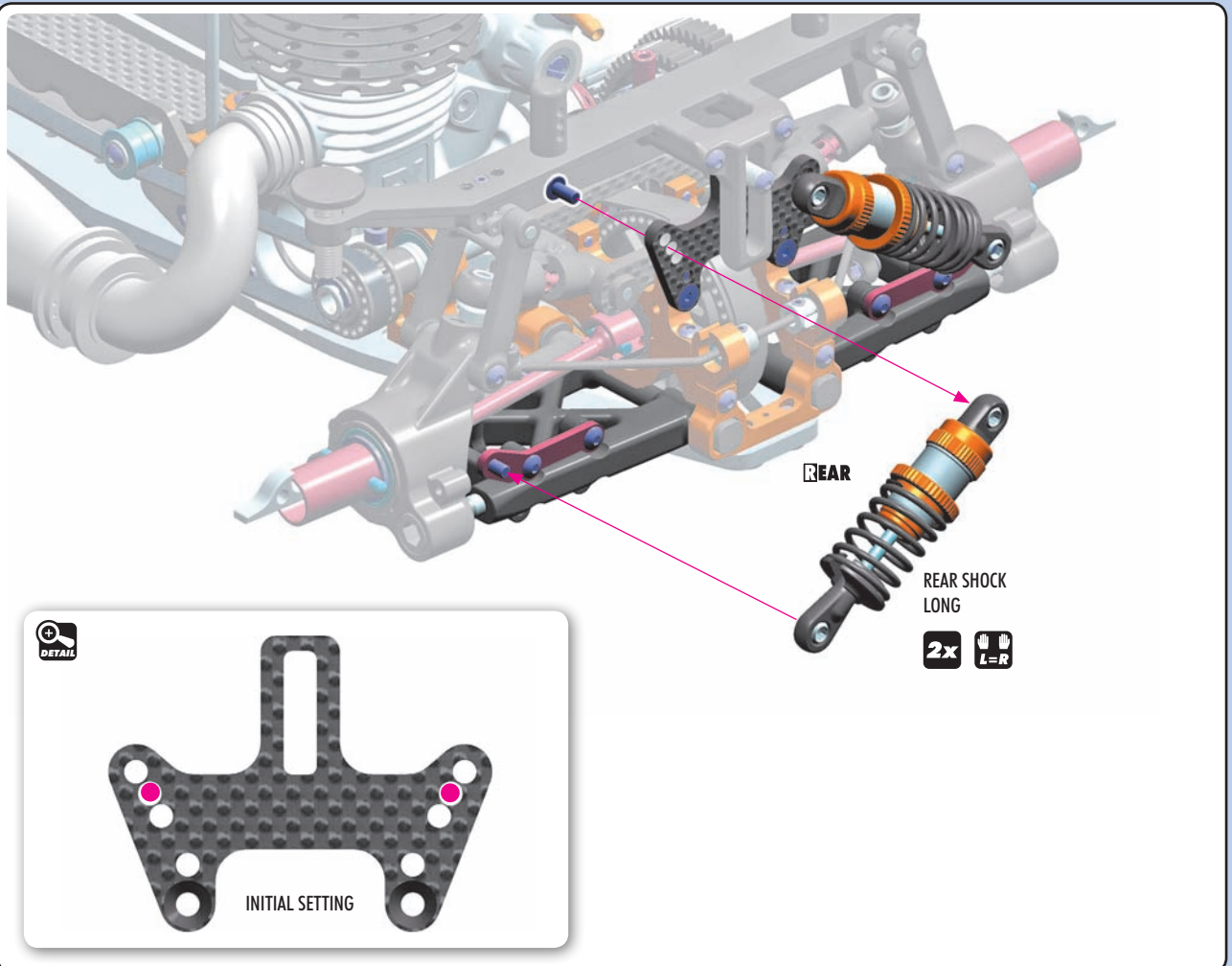
# 10. FINAL ASSEMBLY



902306  
SH M3x6



902306  
SH M3x6



# 10. FINAL ASSEMBLY



901303  
SB M3x3



902310  
SH M3x10

THREAD

NOTE ORIENTATION

Do not overtighten screws; pivots must rotate freely

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

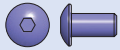
Approx. 15mm

HUDY ALU SERVO HORNS		
#293494	23T KO Propo, Airtronics, JR, Sanwa	OPTION
#293495	24T Hitec	OPTION
#293496	25T Futaba	OPTION

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

DETAIL

Insert rod through hole in brake arm. Bend rod to proper shape.



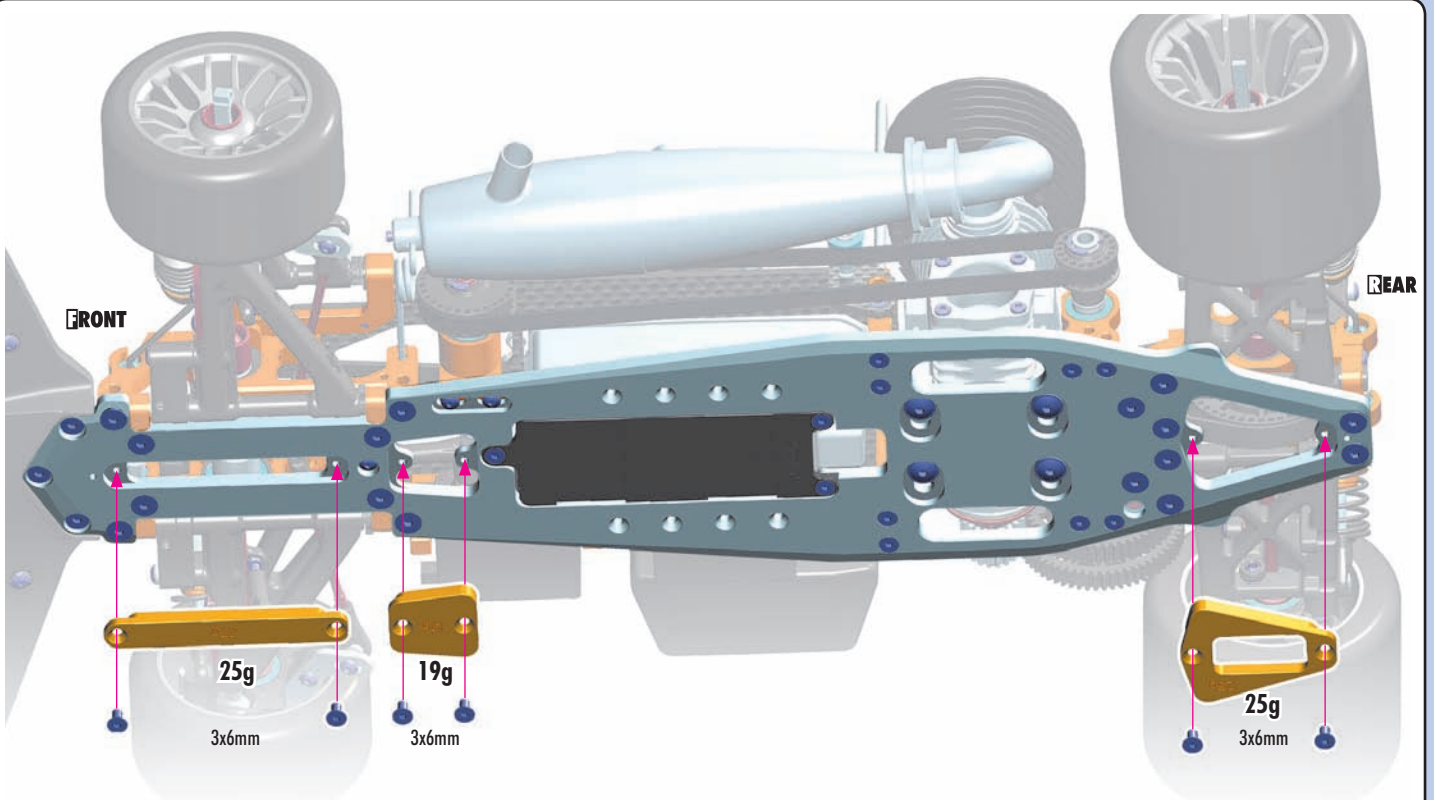
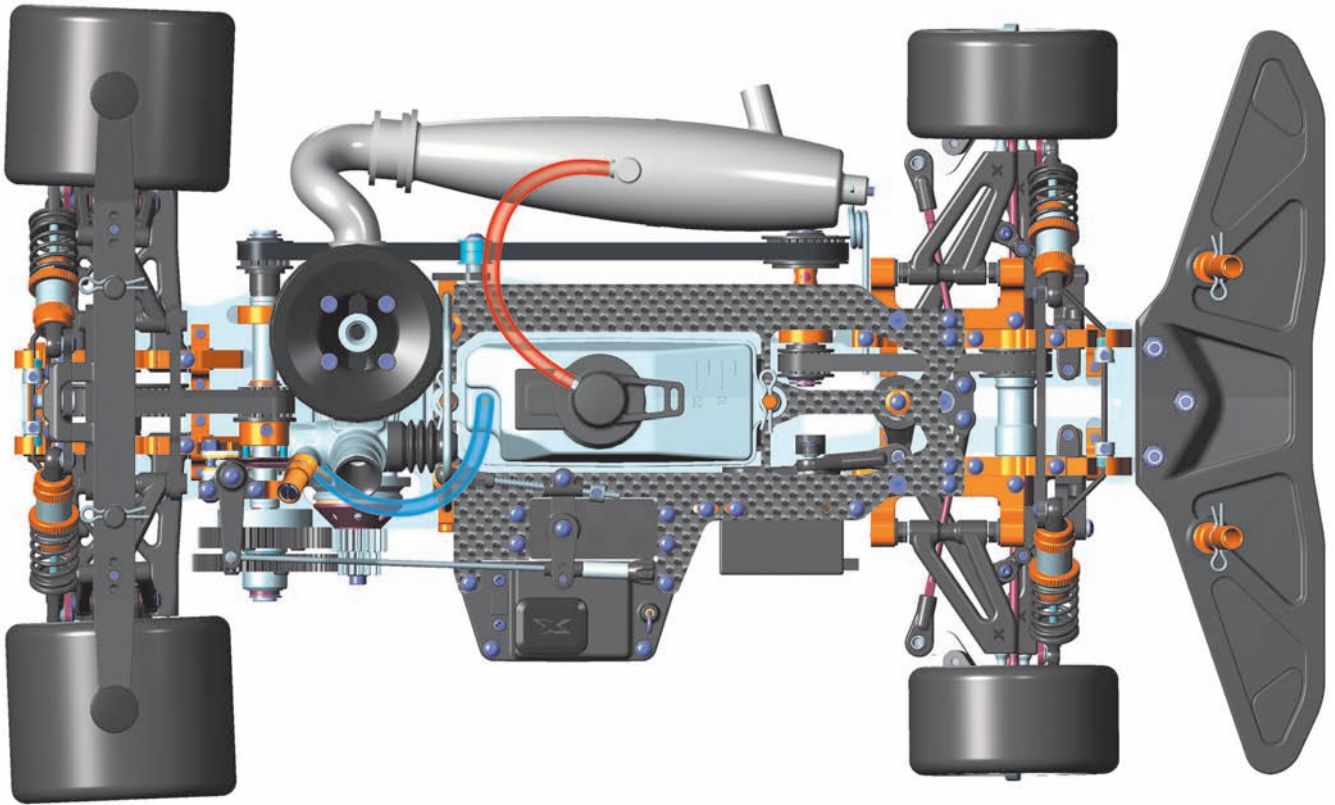
902306  
SH M3x6

Servo screw (NOT INCLUDED)



# 10. FINAL ASSEMBLY

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**



#341187  
BRASS CHASSIS WEIGHT FRONT 25g



#341188  
BRASS CHASSIS WEIGHT MIDDLE 19g



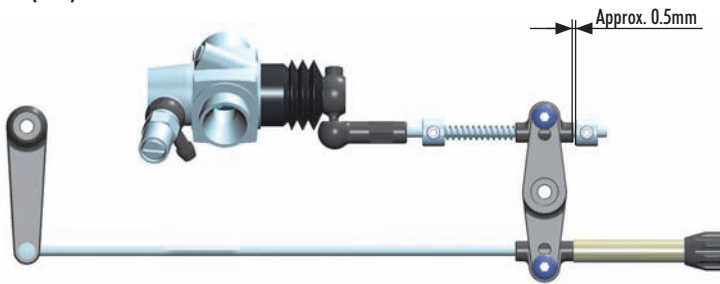
#341189  
BRASS CHASSIS WEIGHT REAR 25g





# CARB LINKAGE ADJUSTMENT

## NEUTRAL (IDLE)

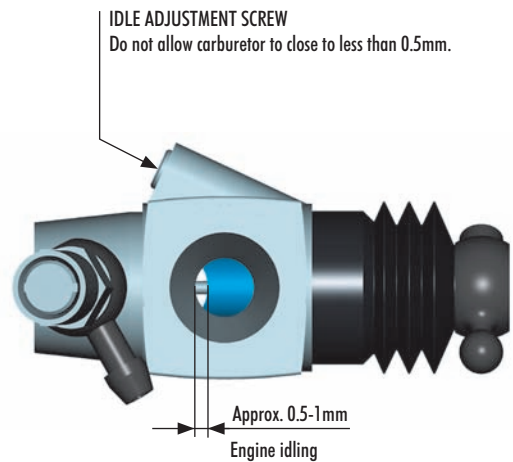


Turn on transmitter and receiver and set the throttle servo trim to the neutral position.

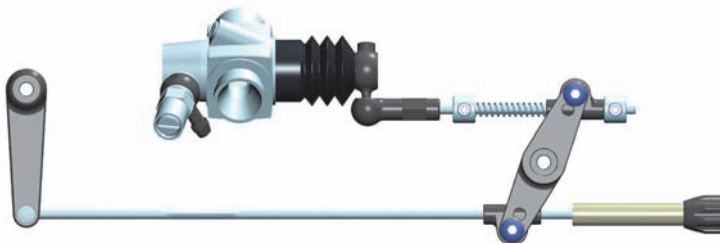
Adjust the idle adjustment screw on the carburetor to open approx. 0.5-1mm.

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.



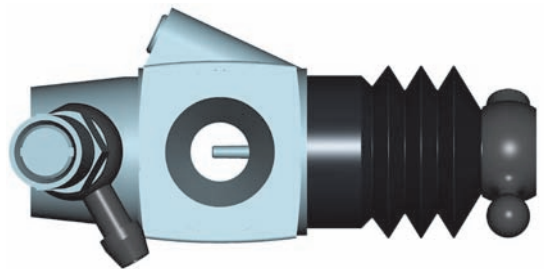
## FULL THROTTLE



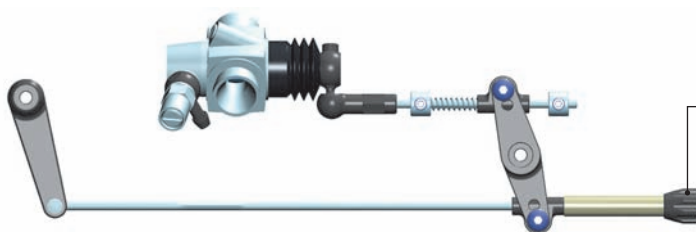
With the engine NOT RUNNING but the receiver turned ON, apply full throttle at the transmitter.

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.

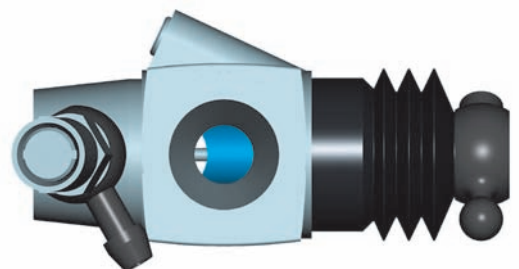


## BRAKE



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.



# SET-UP SHEET

# XRAY RX8'17

RACE			
TRACK			
NAME	DATE		
CITY	COUNTRY		

TEMPERATURE / °F or °C	AIR	TRACK
------------------------	-----	-------

LAPS	BEST LAP TIME	SEC
------	---------------	-----

QUALIFYING POSITION	FINAL POSITION
---------------------	----------------

TRACKS			
TRACK CONDITION	<input type="checkbox"/> SMOOTH	<input type="checkbox"/> MEDIUM	<input type="checkbox"/> BUMPY
	<input type="checkbox"/> TECHNICAL	<input type="checkbox"/> MIXED	<input type="checkbox"/> FAST
TRACK TRACTION	<input type="checkbox"/> LOW	<input type="checkbox"/> MEDIUM	<input type="checkbox"/> HIGH

GEARING			
PINION	1st 17 <input type="checkbox"/> 18 <input type="checkbox"/> 19 <input type="checkbox"/>	SPUR	1st 57 <input type="checkbox"/> 58 <input type="checkbox"/> 59 <input type="checkbox"/> 60 <input type="checkbox"/>
	2nd 22 <input type="checkbox"/> 23 <input type="checkbox"/> 24 <input type="checkbox"/> 25 <input type="checkbox"/>		2nd 53 <input type="checkbox"/> 54 <input type="checkbox"/> 55 <input type="checkbox"/>
PULLEY	28 <input type="checkbox"/> 29 <input type="checkbox"/> 30 <input type="checkbox"/>	RATIO 1st	RATIO 2nd

FRONT	SHOCKS	REAR
	SPRING	
	OIL	
	REBOUND	
<input type="checkbox"/> YES <input type="checkbox"/> NO	FOAM INSERTS	<input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/> 2 HOLES <input type="checkbox"/> 3 HOLES <input type="checkbox"/> OTHER	PISTONS 1.0 mm <input type="checkbox"/> 1.1 mm <input type="checkbox"/> 1.2 mm	<input type="checkbox"/> 2 HOLES <input type="checkbox"/> 3 HOLES <input type="checkbox"/> OTHER

ANTI-ROLL BAR	
<input type="checkbox"/> 0° <input type="checkbox"/> 30° <input type="checkbox"/> 45° <input type="checkbox"/> 60° <input type="checkbox"/> 90°	BLADE STANDARD <input type="checkbox"/> 0.7 mm
FRONT	REAR

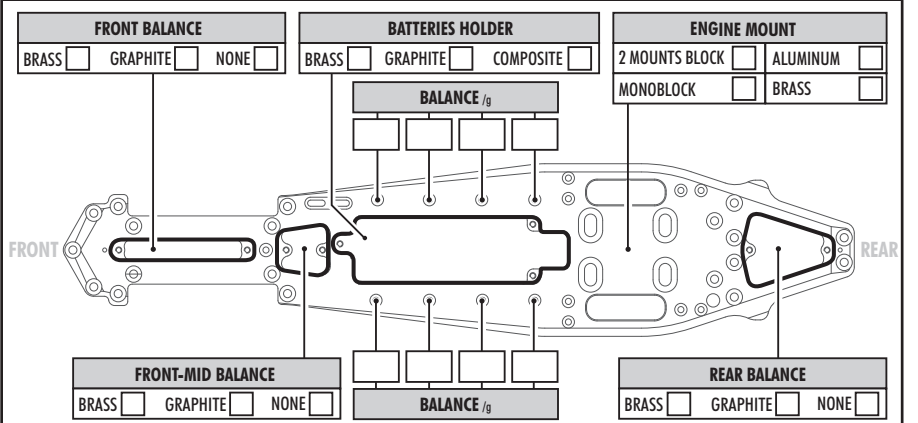
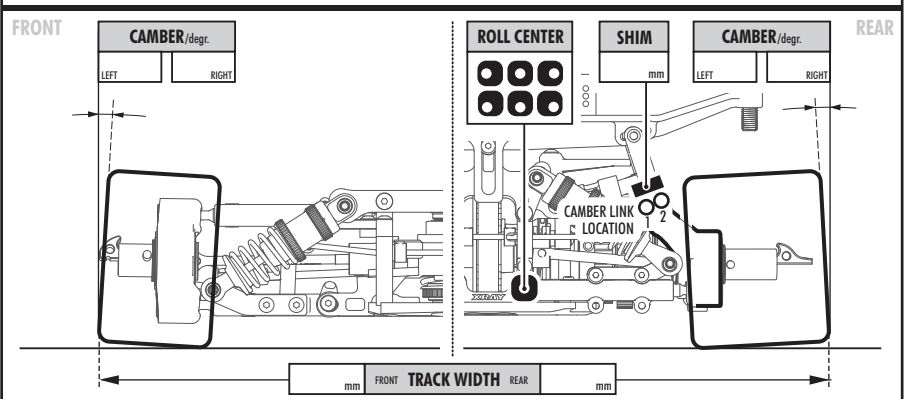
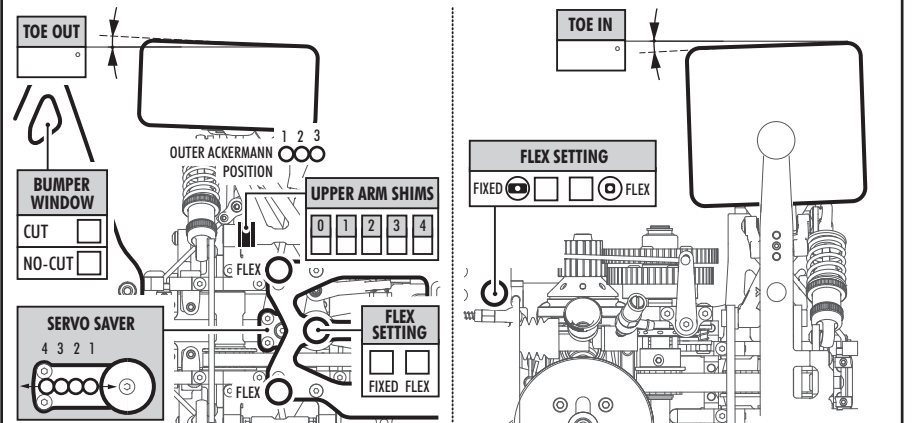
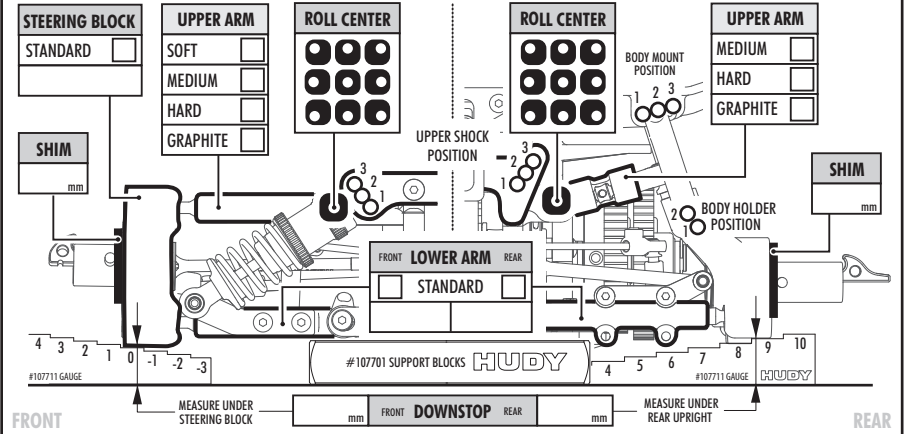
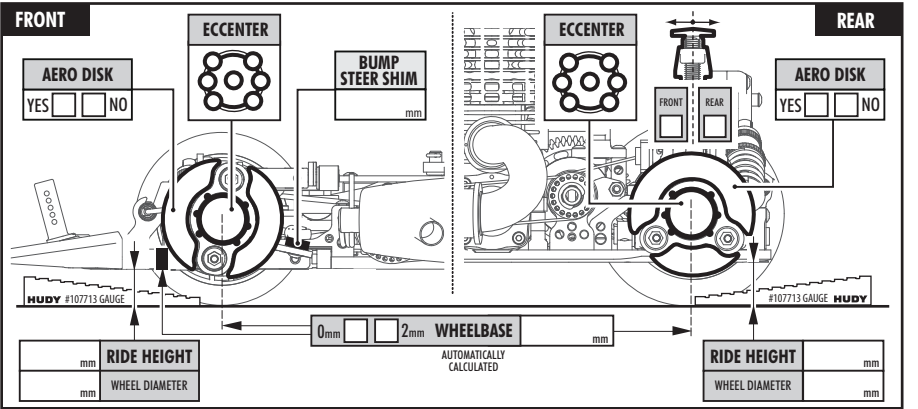
FRONT	TIRES	REAR
LEFT RIGHT	MANUFACTURER	LEFT RIGHT
	SHORE /degr.	
mm mm	DIAMETER	mm mm
mm mm	5 MIN. WEAR	mm mm
	RUBBER TIRES	

ENGINE		
ENGINE	FUEL	
CARB. DIA /mm	HEAD CLEARANCE	PLUG
MUFFLER	MANIFOLD	

CLUTCH / BRAKE	
CLUTCH TYPE	<input type="checkbox"/> STANDARD <input type="checkbox"/> OTHER
CLUTCH BELL	<input type="checkbox"/> STANDARD <input type="checkbox"/> ALU <input type="checkbox"/> OTHER
CLUTCH SHOE	<input type="checkbox"/> STANDARD <input type="checkbox"/> OTHER
CLUTCH SPRING	<input type="checkbox"/> STANDARD <input type="checkbox"/> OTHER
CLUTCH FLY WEIGHT	<input type="checkbox"/> 3mm Set screw <input type="checkbox"/> 4mm Set screw <input type="checkbox"/> WITHOUT
CLEARANCE /mm	
SPRING PRELOAD /mm	
BRAKE PAD	<input type="checkbox"/> STANDARD <input type="checkbox"/> OTHER
BRAKE DISC	<input type="checkbox"/> STANDARD <input type="checkbox"/> OTHER

BODY	
WING	HEIGHT

COMMENTS



**[www.teamxray.com](http://www.teamxray.com)**

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