

#### **BEFORE YOU START**

The T4 is a high-competition, high-quality, 1/10-scale touring 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 T4, YOU MUST read through all of the operating instructions and instruction manual and fully understand them to get

#### **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. Also, please visit our Web site at 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

the maximum enjoyment and prevent unnecessary damage. Read carefully and fully understand the instructions before beginning assembly.

Make sure you review this entire manual, download and use set-up book from the web, and examine all details carefully. If for some reason you decide The T4 is not what you wanted or expected, do not continue any further. Your hobby dealer cannot accept your T4 kit for return or exchange after it has been partially or fully

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

XRAY Europe K Vystavisku 6992 91101 Trenčín Slovakia, EUROPE Phone: 421-32-7401100 Fax: 421-32-7401109 E-mail: info@teamxray.com

#### **XRAY USA**

RC America, 2030 Century Center Blvd #15 Irving, TX 75062 Phone: (214) 744-2400 Fax: (214) 744-2401 E-mail: xray@rcamerica.com

#### Failure to follow these instructions will be considered as abuse and/or neglect.

#### SAFETY PRECAUTIONS

Contains:

LEAD (CAS 7439-92-1) ANTIMONY (CAS 7440-36-0)

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

Contains lead, a listed carcinogen. Lead is harmful if ingested. 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.

## A

#### 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 RC 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 shortcircuits, approximately 300W of electricity can be discharged, leading to fire or burns. Never disassemble battery or cut battery cables.
- Use a recommended charger for the receiver and transmitter batteries and follow the instructions correctly. Over-charging, incorrect charging, or using inferior chargers can cause the batteries to become dangerously hot.

- Recharge battery when necessary. Continual recharging may damage battery and, in the worst case, could build up heat leading to fire. If battery becomes extremely hot during recharging, please ask your local hobby shop for check and/or repair and/or replacement.
- Regularly check the charger for potential hazards such as damage to the
  cable, plug, casing or other defects. Ensure that any damage is rectified
  before using the charger again. Modifying the charger may cause short-circuit
  or overcharging leading to a serious accident. Therefore do not modify the
  charger.
- Always unplug charger when recharging is finished.
- Do not recharge battery while battery is still warm. After use, battery retains heat. Wait until it cools down before charging.
- Do not allow any metal part to short circuit the receiver batteries or other electrical/electronic device on the model.
- Immediately stop running if your RC model gets wet as may cause short circuit.
- Please dispose of batteries responsibly. Never put batteries into fire.

#### R/C & BUILDING TIPS

- Make sure all fasteners are properly tightened. Check them periodically.
- Make sure that chassis screws do not protrude from the chassis.
- For the best performance, it is very important that great care is taken to ensure the free movement of all parts.
- Clean all ball-bearings so they move very easily and freely.
- Tap or pre-thread the plastic parts when threading screws.
- Self-tapping screws cut threads into the parts when being tightened. Do not use
  excessive force when tightening the self-tapping screws because you may strip
  out the thread in the plastic. We recommended you stop tightening a screw
  when you feel some resistance.
- Ask your local hobby shop for any advice.

Please support your local hobby shop. We at XRAY Model Racing Cars support all local hobby dealers. Therefore we ask you, if at all possible, to purchase XRAY products at your hobby dealer and give them your support like we do. If you have difficulty finding XRAY products, please check out www.teamxray.com to get advice, or contact us via email at info@teamxray.com, or contact the XRAY distributor in your country.

#### WARRANTY

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

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

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

#### **Limitations of Liability**

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

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

Disregard of the any of the above cautions may lead to accidents, personal injury, or property damage. XRAY MODEL RACING CARS assumes no responsibility for any injury, damage, or misuse of this product during assembly or operation, nor any addictions that may arise from the use of this product.

All rights reserved.

#### **QUALITY CERTIFICATE**

XRAY MODEL RACING CARS uses only the highest quality materials, the best compounds for molded parts and the most sophisticated manufacturing processes of TQM (Total Quality Management). We guarantee that all parts of a newly-purchased kit are manufactured with the highest regard to quality. However, due to the many factors inherent in model racecar competition, we cannot guarantee

any parts once you start racing the car. Products which have been worn out, abused, neglected or improperly operated will not be covered under warranty. We wish you enjoyment of this high-quality and high-performance RC car and wish you best success on the track!

In line with our policy of continuous product development, the exact specifications of the kit may vary. In the unlikely event of any problems with your new kit, you should contact the model shop where you purchased it, quoting the part number.

We do reserve all rights to change any specification without prior notice. All rights reserved.



## SYMBOLS USED





Assemble in the specified order





U U L=R



Pay attention

here

Assemble as many times as specified (here twice)

2x



Apply thread lock











Scale























## TOOLS REQUIRED

















#### ITEMS INCLUDED







# **NOT INCLUDED**



To ensure that you always have access to the most up-to-date version of the XRAY Set-up Book, XRAY will now be offering only the digital online version on our website www.teamxray.com. By offering this online version instead of including a hardcopy printed version in kits, you will always be assured of having the most current updated version.





XRAY offers wide range of optional tuning parts which are listed in tables like these. Please refer to the exploded view of each main section to verify which part is included in the kit while all other parts are available only as an optional part and must be purchased separately.

## **EQUIPMENT REQUIRED**



190mm Bodyshell



















Wheels & Tires & Inserts

## **COLOR INDICATIONS**

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

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

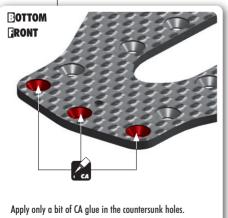
Style A - indicates parts that are included in the bag marked for the section.

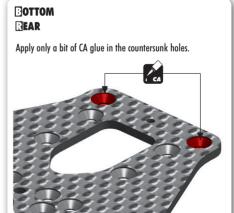
STYLE B - indicates parts that are included in the box.

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

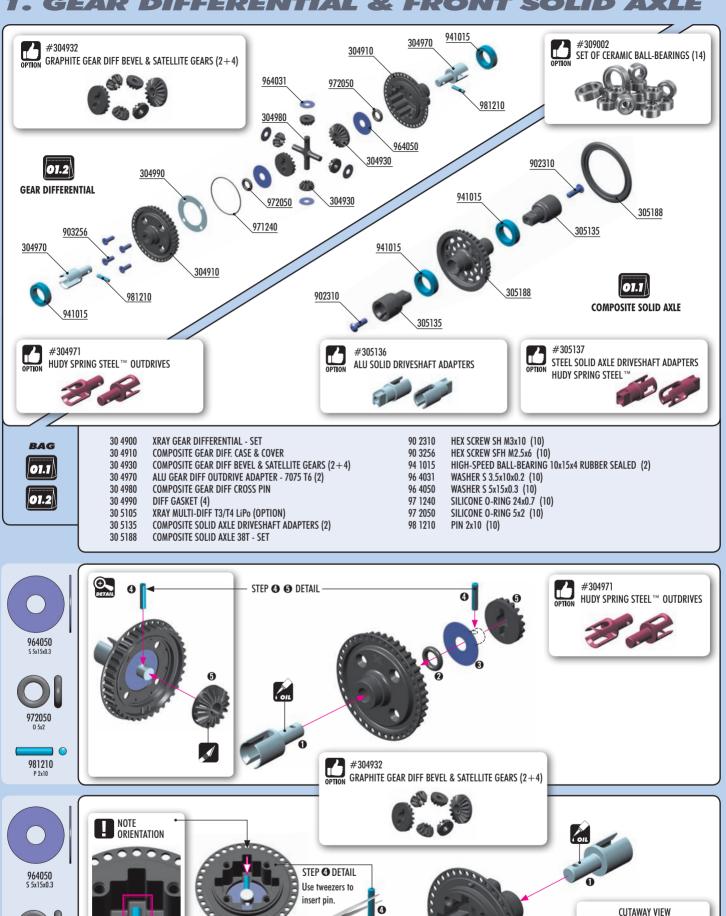
#### CHASSIS PREPARATION

To protect and seal edges of graphite parts, sand edges smooth and then apply CA glue. Do this for: chassis edges, countersunk holes, and shock towers. REAR RONT **BOTTOM BOTTOM** RONT REAR Apply only a bit of CA glue in the countersunk holes.





## 1. GEAR DIFFERENTIAL & FRONT SOLID AXLE



0 5x2

## 1. GEAR DIFFERENTIAL & FRONT SOLID AXLE





#### TO ENSURE YOU HAVE THE SAME AMOUNT OF OIL FROM REBUILD TO REBUILD, DO THE FOLLOWING:



TIP	TIPS FOR DIFFERENTIALS			TIP			
LOW TRAC	TION	WEDIUM '	TRACTION			10000cSt	(HUDY #106510)
1000cSt 2000cSt	(HUDY #106410) (HUDY #106420)	2000cSt 3000cSt 4000cSt 5000cSt	(HUDY #106420) (HUDY #106430) (HUDY #106440) (HUDY #106450)	5000cSt 6000cSt 7000cSt 8000cSt 9000cSt	(HUDY #106450) (HUDY #106460) (HUDY #106470) (HUDY #106480) (HUDY #106490)	10000cSt 15000cSt 20000cSt	GH TRACTION  (HUDY #106510)  (HUDY #106515)  (HUDY #106520)

# NOTE

SOFTER oil increases rear traction, HARDER oil increases on-power steering and stability. It is important not to use soft oils in high-traction conditions as this would not increase traction, but would make the car loose as the car would become too twitchy.

However, if the oil is too soft, it could generate the same effect like the car has no traction. Therefore it is very important to choose the correct oil very carefully. We recommend using softer oil first, then try harder oil to better understand the effect on the car's behavior at the track. Choose the oil accordingly.

#### TIP TIPS FOR FRONT DIFFERENTIAL

To increase on-power steering and cornering speed, the gear diff can also be used in the front. NOTE: If you use the gear diff in the front, we recommend using optional #304971 HUDY Spring Steel™ outdrives because the stress on the outdrives in the front is much higher than in the rear.

#### **USE THESE OILS FOR FRONT DIFFERENTIAL**

500,000 cSt (HUDY #106650) 1,000,000 cSt (HUDY #106692) 2,000,000 cSt (HUDY #106694)

To make the front differential tighter, you can use cleaning gum instead of oil.

# IMPORTANT!

Using cleaning gum instead of oil in the gear differential can lead to gear breakage because the gears are working under dry conditions.



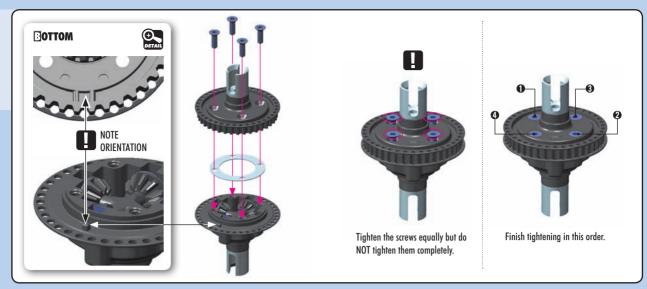




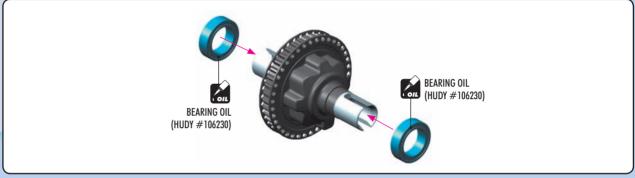
After disassembling the gear diff the large O-ring may have an increased size and may be more difficult to re-install. We recommend either inserting the old O-ring carefully in the diff cover, or replacing the old O-ring with a new O-ring if the old one cannot be made to fit properly.

## 1. GEAR DIFFERENTIAL & FRONT SOLID AXLE



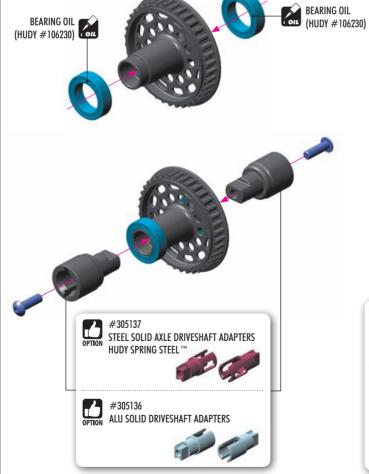




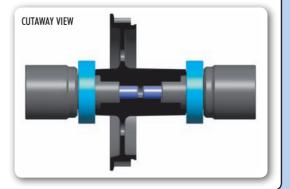


#### **COMPOSITE FRONT SOLID AXLE**



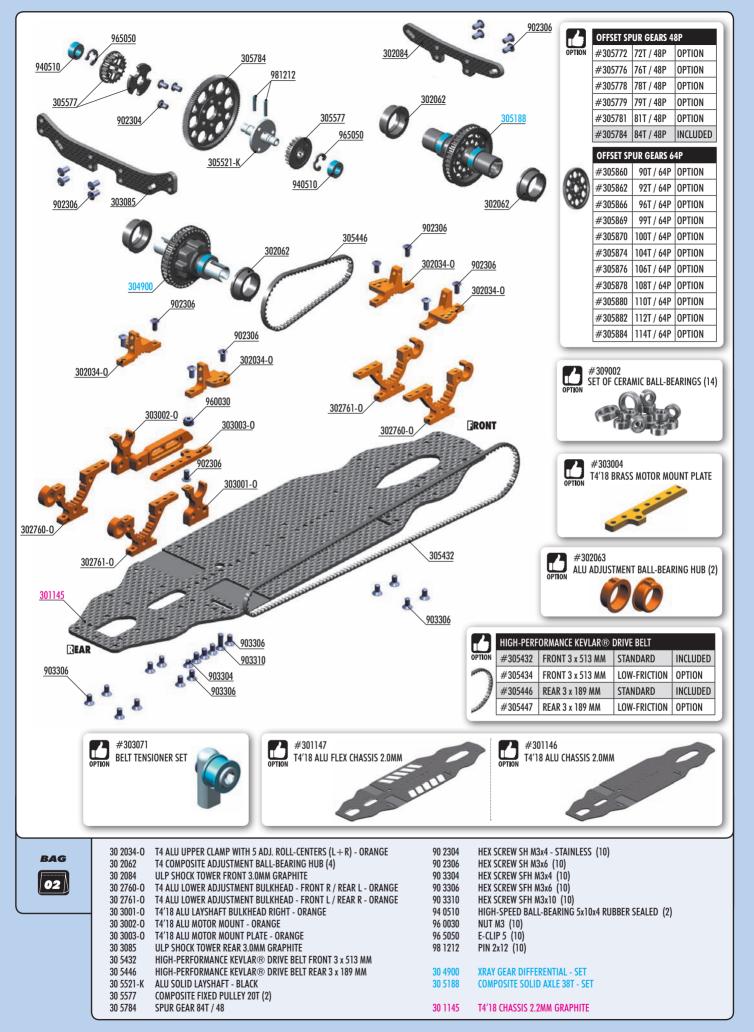




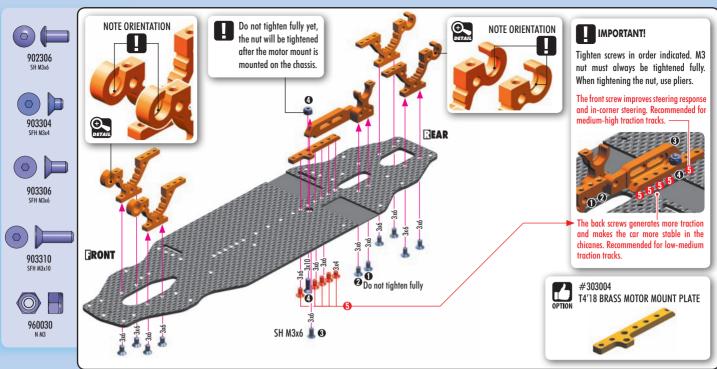


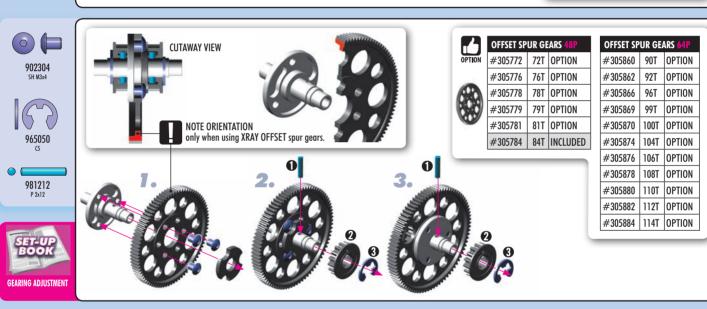


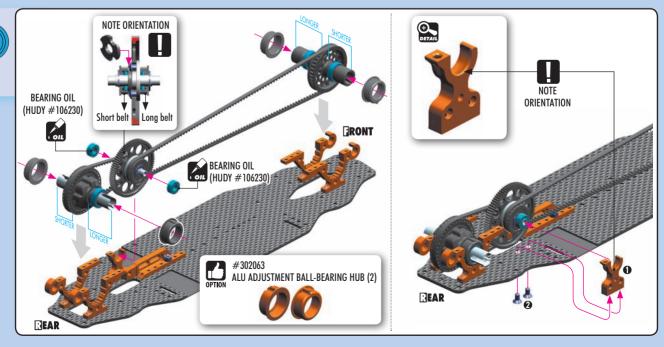
## 2. CENTRAL TRANSMISSION



#### 2. CENTRAL TRANSMISSION



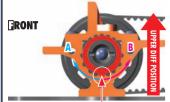




# FRONT BELT TENSION ADJUSTMENT

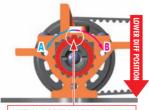
Front diff UPPER position - tab in bottom notch - provides more steering, but less front traction

Recommended for **medium-high** traction tracks and technical tracks.



INITIAL POSITION FOR CARPET Place tab in this BOTTOM NOTCH Front diff LOWER position - tab in top notch - provides more front traction, but makes the car push more on power.

Recommended for low-traction tracks.



INITIAL POSITION FOR ASPHALT Place tab in this TOP NOTCH

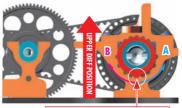
TO LOOSEN FRONT BELT: Rotate both front nylon hubs in arrow direction A

TO TIGHTEN FRONT BELT: Rotate both front nylon hubs in arrow direction B

## REAR BELT TENSION ADJUSTMENT

Rear diff **UPPER** position - tab in bottom notch - provides **more on-power steering**, but makes the rear slightly **more loose**.

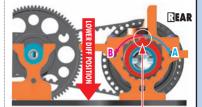
Recommended for medium-high traction tracks.



INITIAL POSITION FOR CARPET
Place tab in this BOTTOM NOTCH

Rear diff LOWER position - tab in top notch - provides more rear traction (mainly on-power), makes the car more stable in chicanes, but makes the car push on-power.

Recommended for low-medium traction tracks.



INITIAL POSITION FOR ASPHALT Place tab in this TOP NOTCH

TO LOOSEN REAR BELT: Rotate both rear nylon hubs in arrow direction A

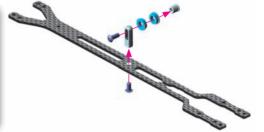
TO TIGHTEN REAR BELT: Rotate both rear nylon hubs in arrow direction B



#303071 BELT TENSIONER SET

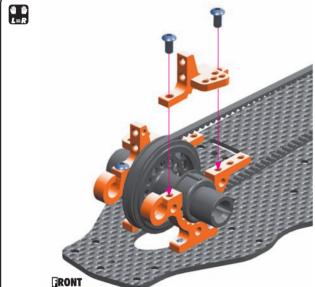
May be used when the front belt becomes worn and loose. Belt tensioner is NOT included in the kit and must be purchased separately.

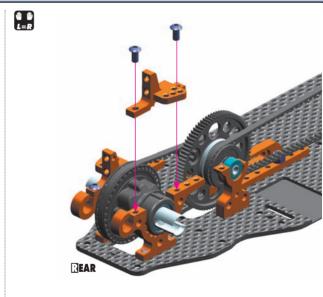




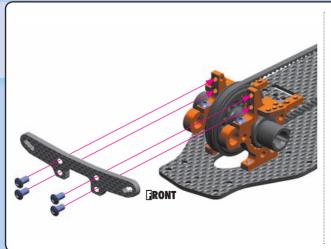


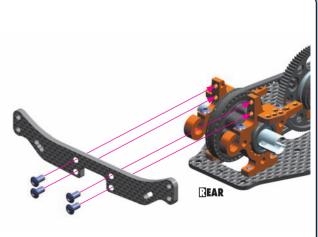


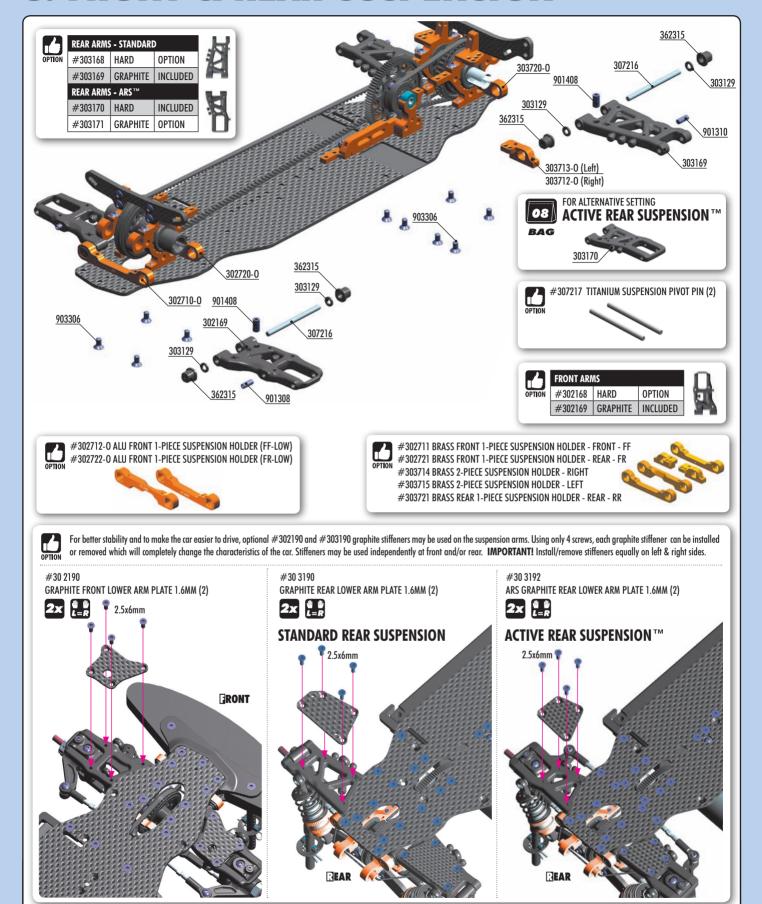








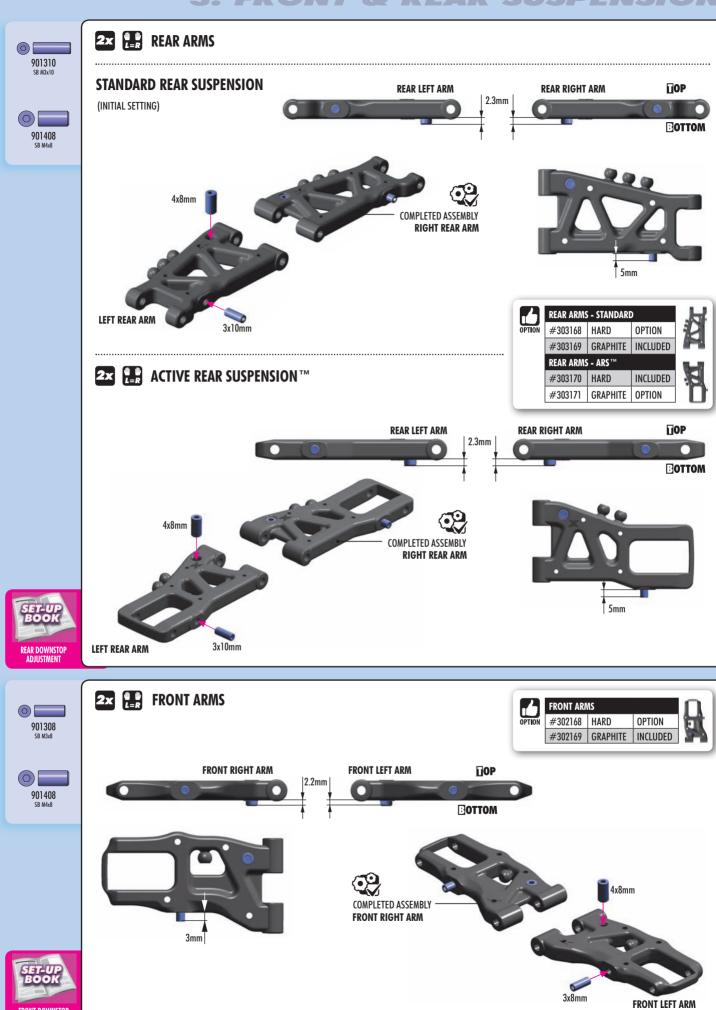




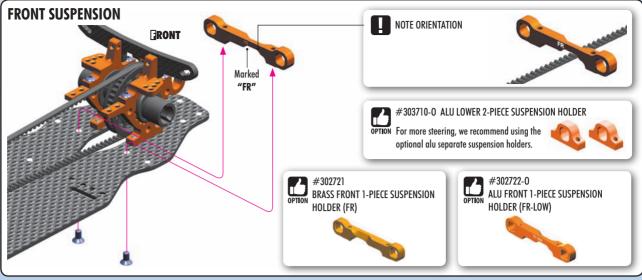


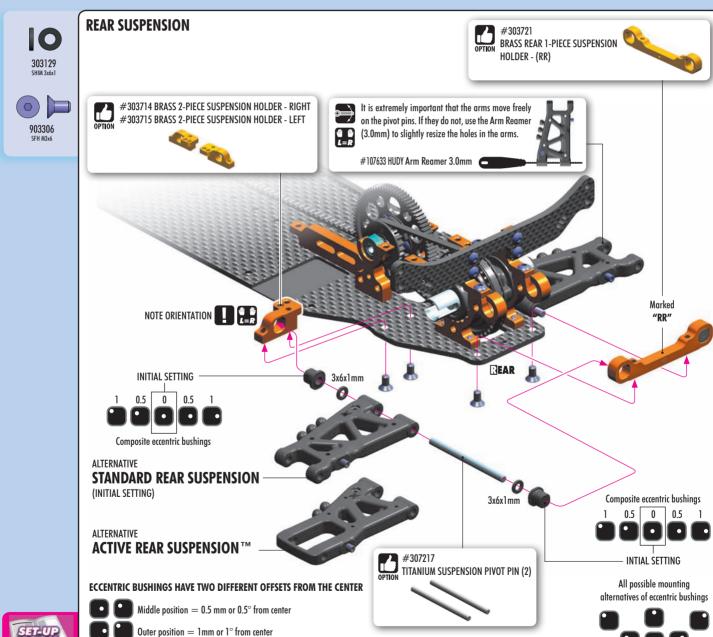
30 2169	FRONT SUSPENSION ARM - GRAPHITE - 1-HOLE	30 371
30 2710-0	ALU FRONT LOWER 1-PIECE SUSPENSION HOLDER - FRONT - FF	30 372
30 2720-0	ALU FRONT LOWER 1-PIECE SUSPENSION HOLDER - REAR - FR	30 721
30 3129	COMPOSITE SET OF WHEELBASE SHIMS (3x1MM; 1x2MM) (2)	36 231
30 3169	REAR SUSPENSION ARM - GRAPHITE - 1-HOLE	90 130
30 3170	ARS - ACTIVE REAR SUSPENSION ARM - HARD - 1-HOLE	90 131
303712-0	ALU LOWER 2-PIECE SUSPENSION HOLDER - RIGHT	90 140
303713-0	ALU LOWER 2-PIECE SUSPENSION HOLDER - LEFT	90 330

30 3711-0	ALU REAR LOWER 1-PIECE SUSPENSION HOLDER - FRONT - RF (OPTION)	ı
30 3720-0	ALU REAR LOWER 1-PIECE SUSPENSION HOLDER - REAR - RR	ı
30 7216	SUSPENSION PIVOT PIN (2)	ı
36 2315	ECCENTRIC BUSHING SET (2)	ı
90 1308	HEX SCREW SB M3x8 (10)	ı
90 1310	HEX SCREW SB M3x10 (10)	ı
90 1408	HEX SCREW SB M4x8 (10)	ı
90 3306	HEX SCREW SFH M3x6 (10)	





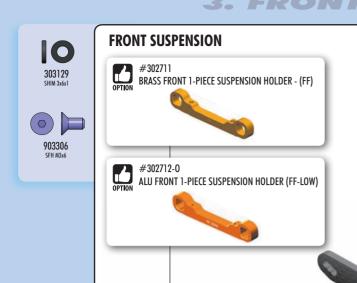


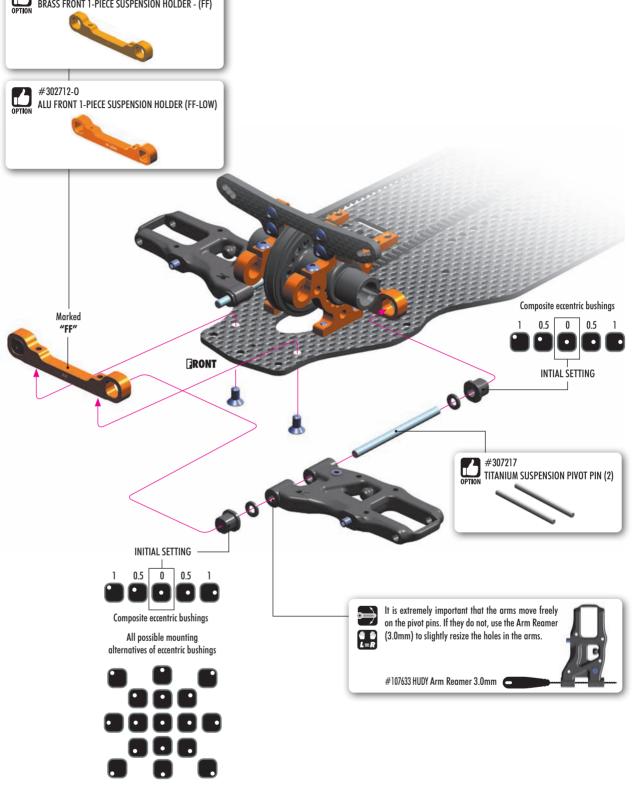


TOE-IN TRACK-WIDTH WHEELBASE ROLL CENTER ANTI-SQUAT PRO-SQUAT

Set-up Book (#209100).

The XRAY rear alu lower suspension holders provide even greater range of adjustment for the rear suspension. Using different combinations of eccentric bushings, fine adjustment of rear squat, rear toe-in, rear roll center, and rear trackwidth can be obtained. For more information about the influence of rear squat, rear toe-in, rear roll center and rear track-width on car handling, please refer to HUDY





ECCENTRIC BUSHINGS HAVE TWO DIFFERENT OFFSETS FROM THE CENTER.



Outer position = 1mm or 1° from center

The XRAY front alu lower suspension holders provide even greater range of adjustment for the front suspension. Using different combinations of eccentric bushings, fine adjustment of front anti-squat, front kick-up, front toe-in, front roll center, and front track-width can be obtained. For more information about the influence of front anti-dive, front kick-up, front toe-in, front roll center and front track-width on car handling, please refer to HUDY Set-up Book (#209100).



## 4. STEERING

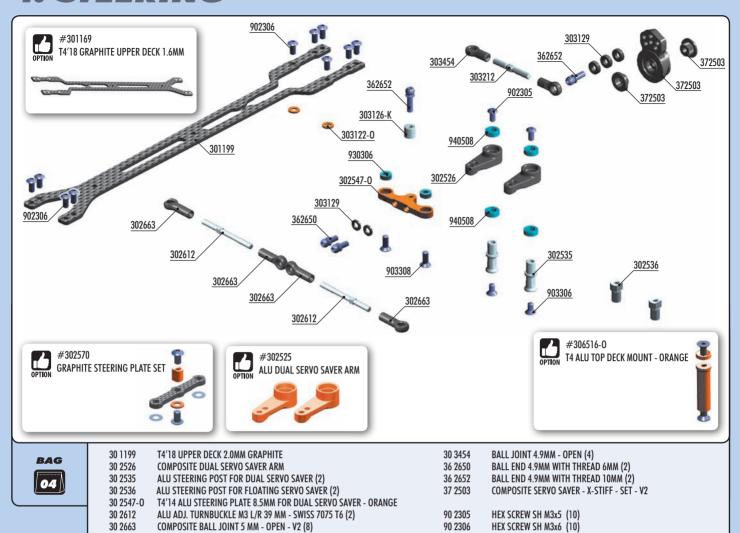
30 2612

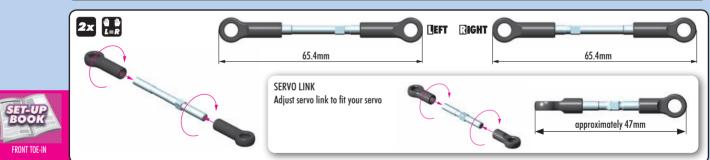
30 2663 30 3122-0

30 3126-K

30 3129

30 3212





90 2305

90 2306

90 3306

90 3308

93 0306

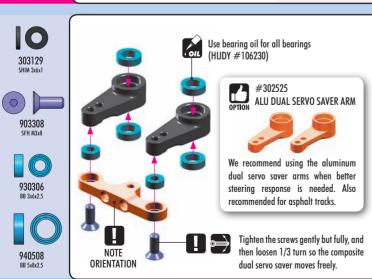
94 0508

HEX SCREW SFH M3x6 (10)

HEX SCREW SFH M3x8 (10)

BALL-BEARING 3x6x2.5 (2)

HIGH-SPEED BALL-BEARING 5x8x2.5 RUBBER SEALED (2)



ALU ADJ. TURNBUCKLE M3 L/R 39 MM - SWISS 7075 T6 (2)

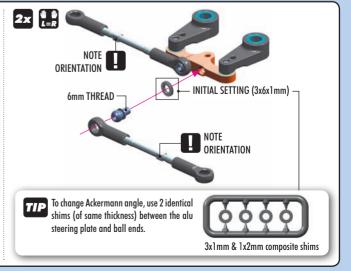
COMPOSITE BALL JOINT 5 MM - OPEN - V2 (8)

COMPOSITE SET OF SHIMS (3x1MM; 1x2MM) (2)

ALU ADJ. TURNBUCKLE L/R 26 MM - SWISS 7075 T6 (2)

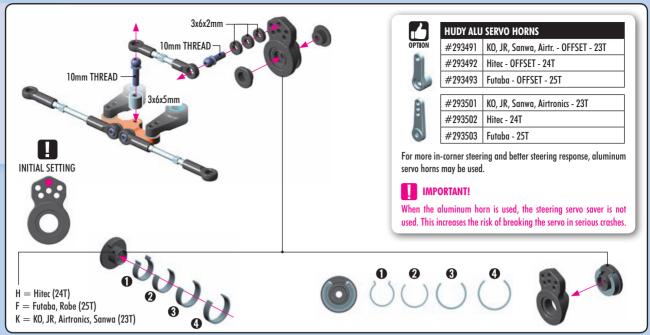
ALU SHIM 3x6x1.0MM - ORANGE (10)

ALU SHIM 3x6x5.0MM - BLACK (10)



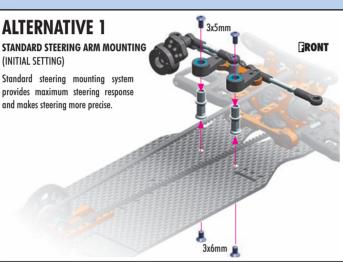












#### **ALTERNATIVE 2**

#### FLOATING STEERING ARM MOUNTING

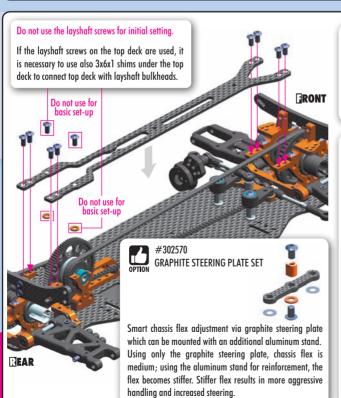
Floating steering mounting system makes the car easier to drive over curbs and on bumpy tracks. Helps prevent oversteer.



NOTE: The floating steering arms are mounted on the graphite servo holder in the Final Assembly page 33/step 1.

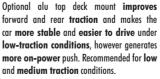




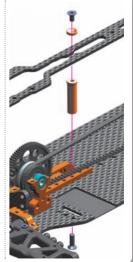




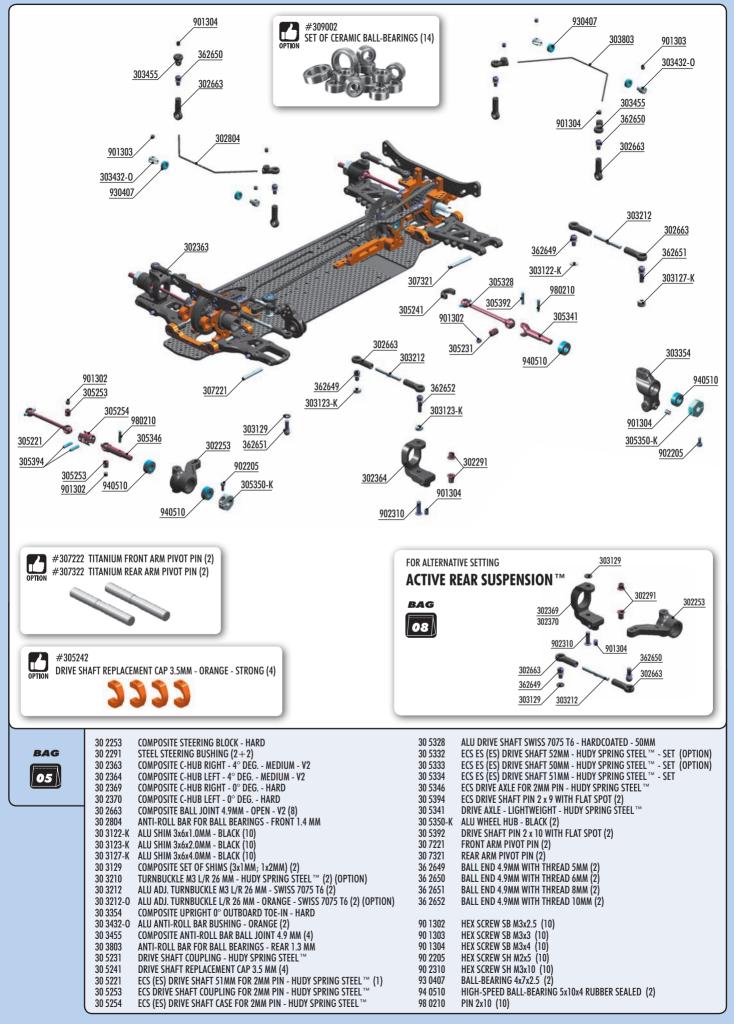




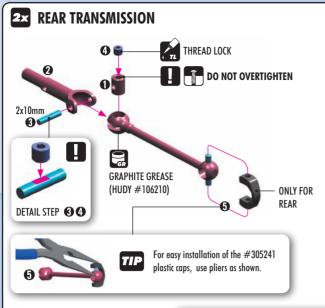
When the aluminum top deck mount is used, the screws from layshaft bulkheads and M3 nut from motor holder must be removed (page 10/ step 1).

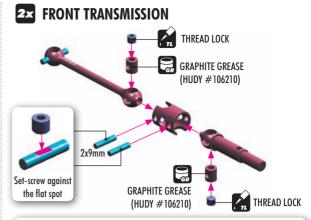












#### **ECS DRIVE SHAFTS**

ECS drive shafts are available in 51mm length in kit, or optional 50mm & 52mm lengths. The ECS drive shafts were developed to decrease front wheel vibration when racing with a solid front axle, thus providing a much smoother and quieter ride and increased steering



Longer drive shafts (52mm) make the car easier to drive because they give more traction and better stability, mainly in chicanes. However, the car will understeer more than with shorter (50mm) shafts which give a lot of steering and make the car more aggressive. Both left & right shafts should ALWAYS be the same length at one end of the car (front or rear).

**52mm** shafts are recommended for **carpet high-traction** tracks.

51mm shafts are recommended for carpet tracks and large asphalt tracks.

50mm shafts are recommended for low-traction or tight asphalt tracks.

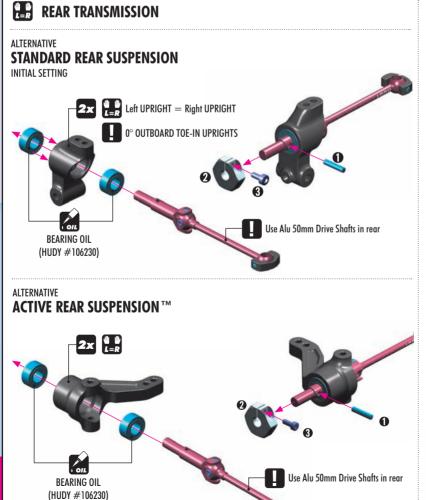
The new 51mm drive shafts which are included in the kit are the best compromise between 50 and 52mm lenath.

DRIVE SHAFTS			
#305323	50MM - STEEL		
#305324	52MM - STEEL		
#305326	52MM - ALU		
#305328	50MM - ALU		
#305332	52MM - ECS		
#305333	50MM - ECS		
#305334	51MM - ECS		





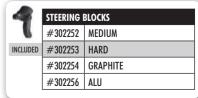




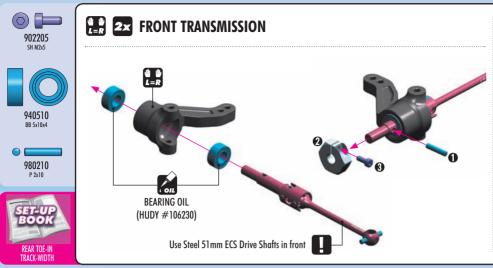
# T4 OPTIONAL PARTS

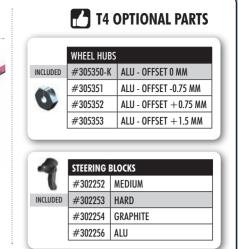


	WHEEL HUBS			
INCLUDED	#305350-K	ALU - OFFSET	(0 mm)	
64.	#305351	ALU - OFFSET	(-0.75 mm)	
9	#305352	ALU - OFFSET	(+0.75 mm)	
	#305353	ALU - OFFSET	(+1.5 mm)	



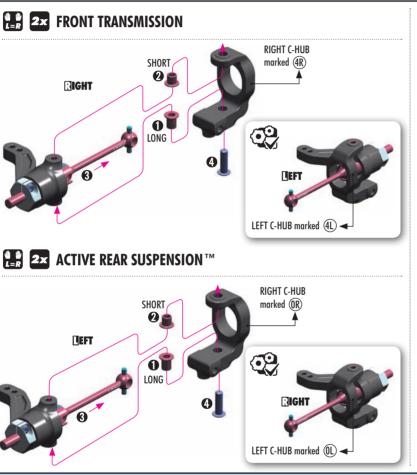




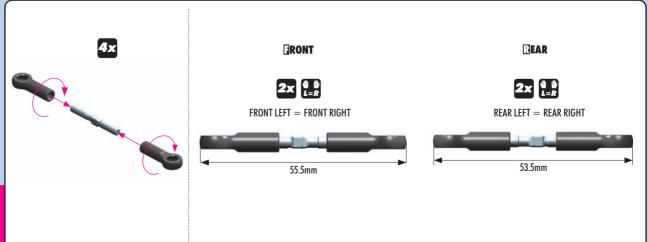




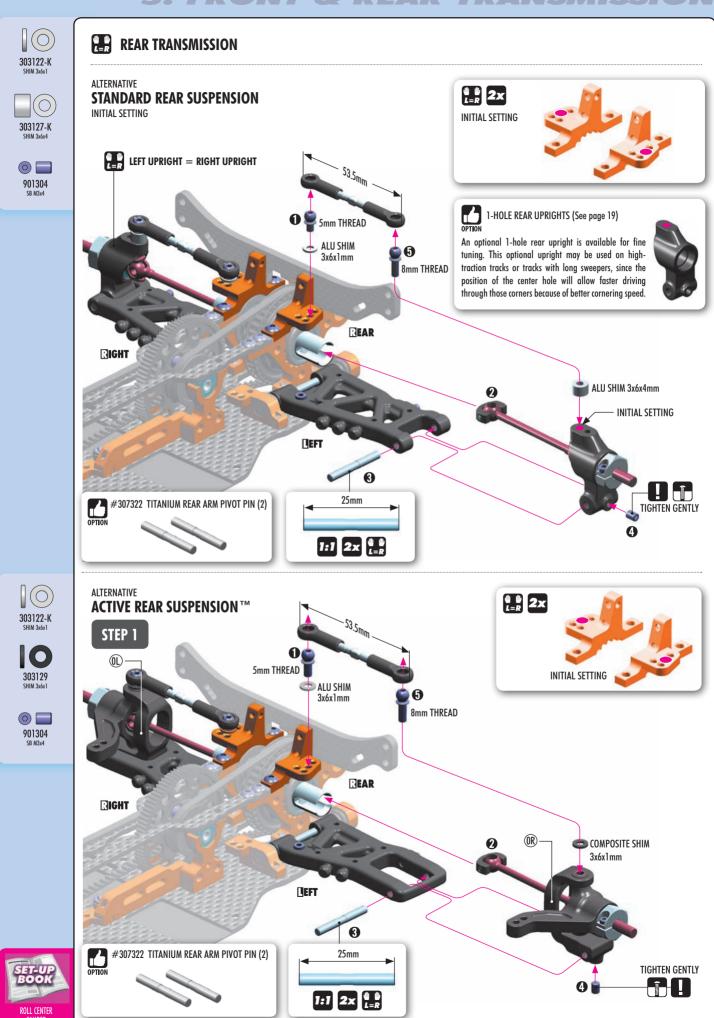


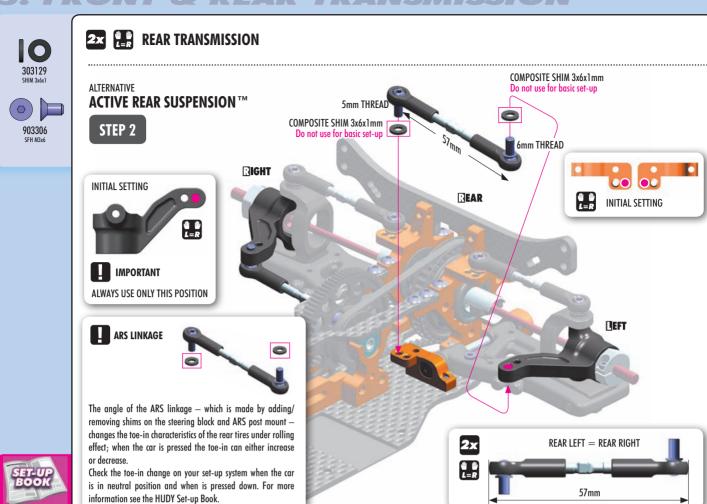


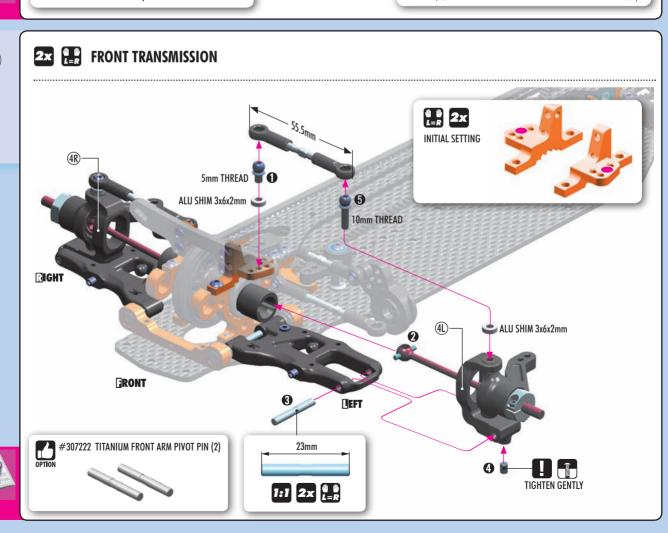










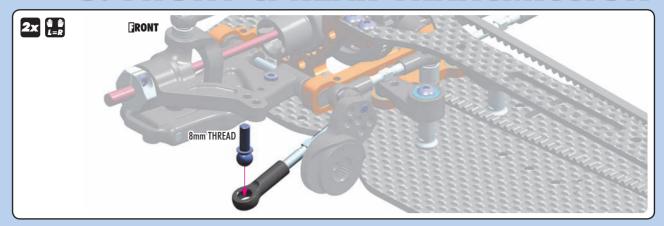


**ROLL-CENTE** 

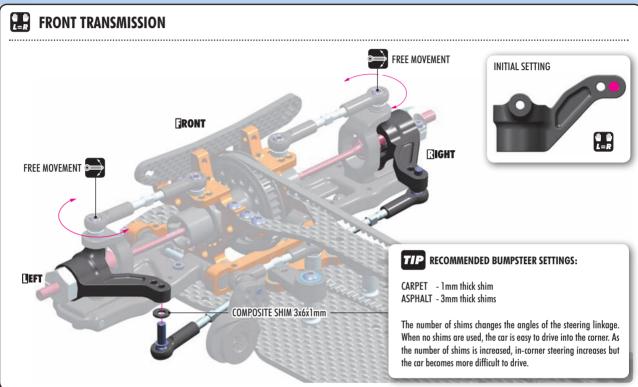
303123-K

(i)

901304



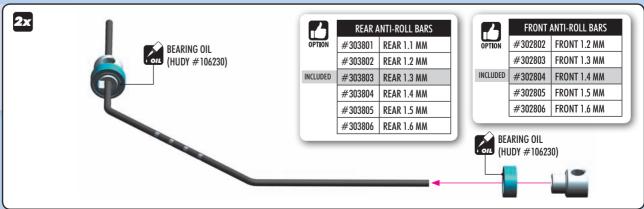


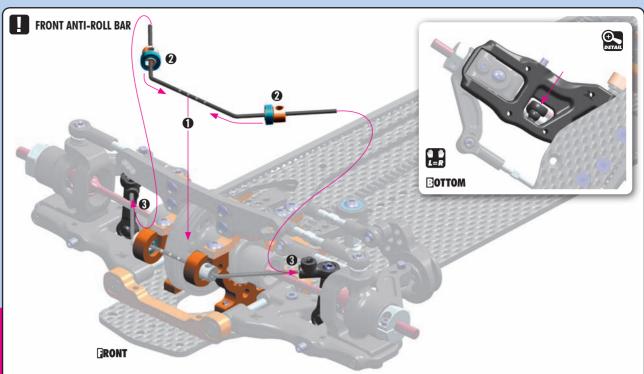






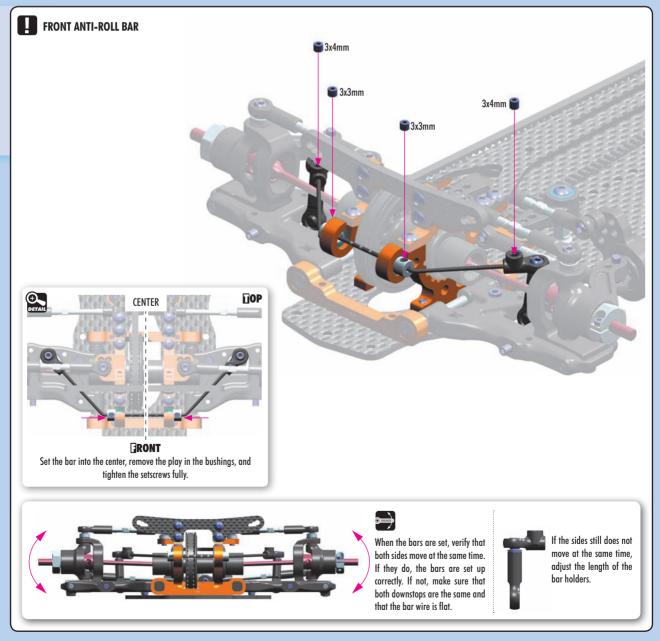


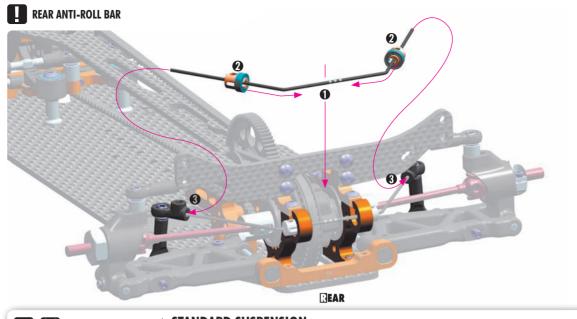














#### STANDARD SUSPENSION

INITIAL SETTING = MIDDLE BALL

Use the INNER ball on low-traction tracks (mainly low-traction carpet tracks). The car will have more traction & more steering, but will be more difficult to drive because the car will roll more.

Use the MIDDLE ball on low- to mediumtraction tracks (asphalt, carpet). The car will have a little less rear traction and the car will roll a little less which will make it easier to drive with more cornering speed. Use the **OUTER** ball on high-traction tracks (mainly high-traction asphalt tracks). The car will roll even less which will allow the use of more throttle in the corners, however the car will have less traction.

#### **ACTIVE REAR SUSPENSION™**

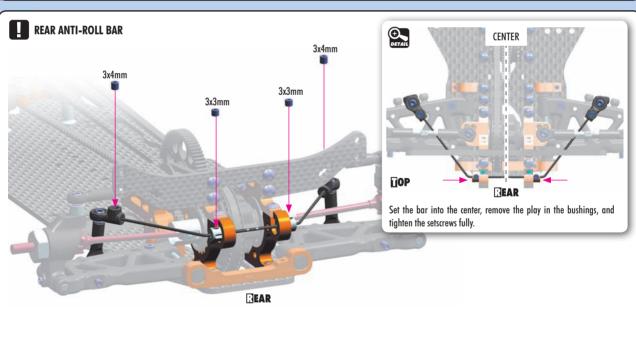
ARS arm has only two balls which are identical as inner & middle balls on the standard rear arm.

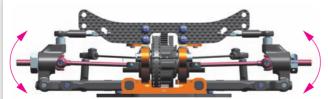












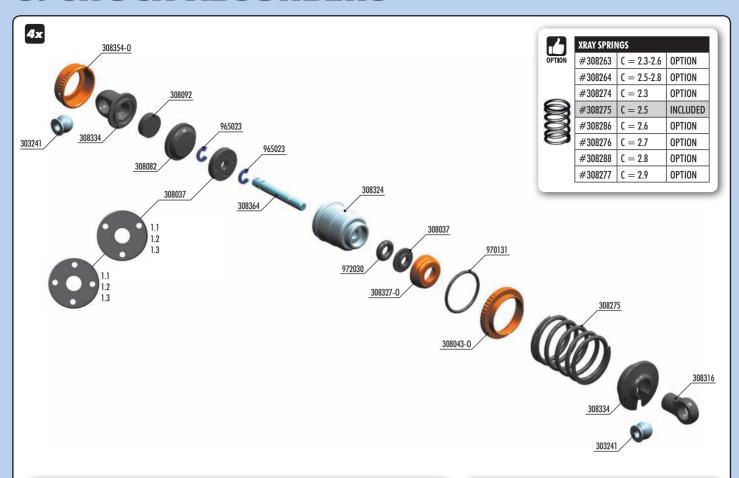


When the bars are set, verify that both sides move at the same time. If they do, the bars are set up correctly. If not, make sure that both downstops are the same and that the bar wire is flat.



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

## 6. SHOCK ABSORBERS





#### #308029

ULP ALU PROGRESSIVE SHOCK SYSTEM - SET (2)

Progressive shock system for touring cars for improved traction and steering characteristics. Shock insert with 3 triangular cutouts used with piston WITHOUT holes. The hardness of the shock is influenced not by the holes in the piston, but rather by the insert.





#308031-0 alu xray shock spring retaining collar - orange (4)



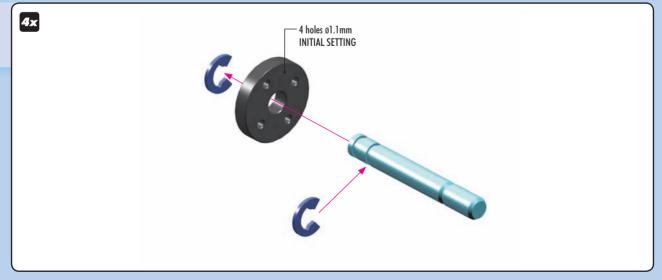






30 3241	BALL UNIVERSAL 5.8 MM HEX (4)	30 8334	ULP COMPOSITE SHOCK PARTS
30 8037	COMPOSITE PISTONS 4-HOLE 1.0-1.2MM, 3-HOLE 1.0-1.2MM	30 8354-0	ULP ALU SHOCK CAP-NUT WITH VENT HOLE - ORANGE (2)
30 8043-0	ULP ALU SHOCK ADJUSTABLE NUT - ORANGE (2)	30 8364	T4 HARDENED SHOCK SHAFT FOR ALU SHOCKS (2)
30 8082	T4 SHOCK ABSORBER MEMBRANE (4)	30 8275	XRAY SPRING-SET C=2.5
30 8092	T4 SHOCK FOAM INSERTS (4)		
30 8308-0	ULP ALU SHOCK ABSORBER-SET - ORANGE (2)	96 5023	E-CLIP 2.3 (10)
30 8316	SHOCK BALL JOINT - OPEN (4)	97 0131	O-RING 13 x 1.0 (10)
30 8324	ULP ALU SHOCK BODY (2)	97 2030	SILICONE O-RING 3 x 2 (10)
30 8327-0	ALU CAP FOR XRAY SHOCK BODY - ORANGE		





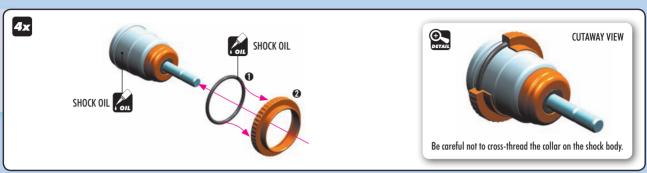


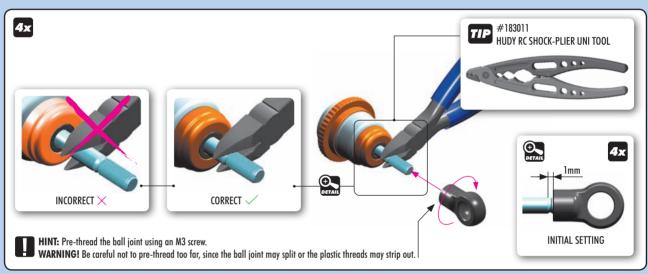
#### 6. SHOCK ABSORBERS

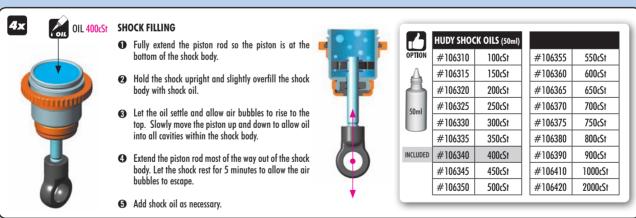


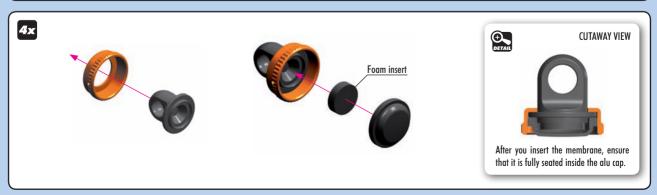






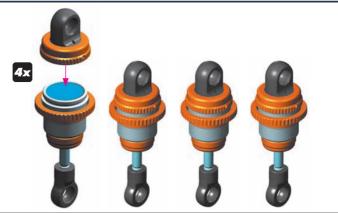




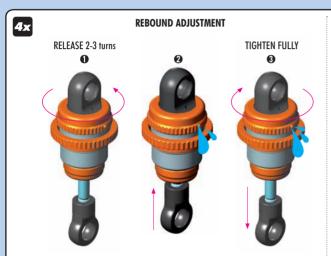


#### 6. SHOCK ABSORBERS

- When installing the shock cap assembly on the shock body, some oil will leak out... this is normal.
- 2 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.



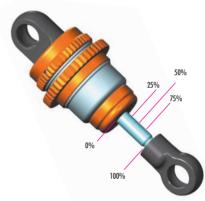




#### AFTER THE SHOCK IS ASSEMBLED YOU HAVE TO SET THE SHOCK REBOUND:

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

# REBOUND CHECK



#### **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 bubles.

100% rebound - do not do step 1 and 3

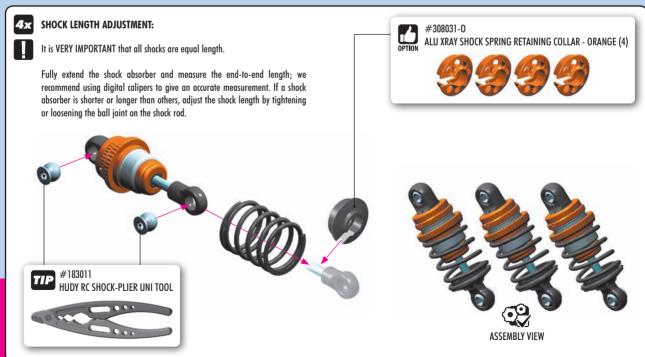
75%  $\,$  rebound - repeat step 1 and 3  $\,$  until the shock shaft will push out 75% of its length

50% rebound - repeat step 1 and 3 until the shock shaft will push out 50% of its length

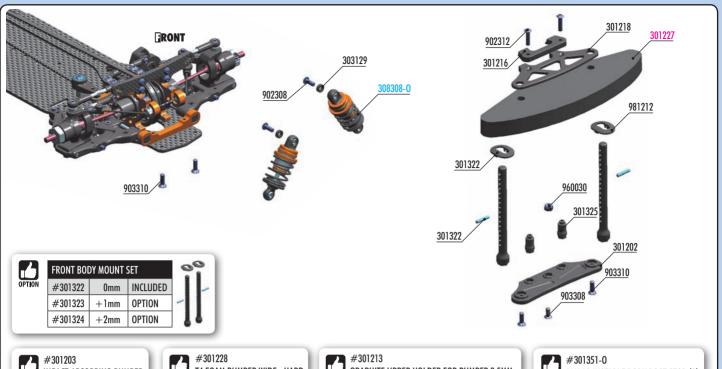
25%  $\,$  rebound - repeat step 1 and 3  $\,$  until the shock shaft will push out 25% of its length

0% rebound - repeat step 1 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.



# 7. FRONT & REAR ASSEMBLY













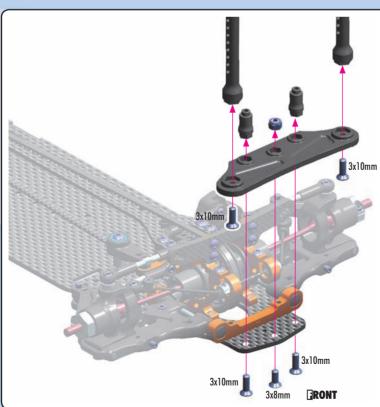
30 1202 COMPOSITE BUMPER
30 1216 COMPOSITE BUMPER UPPER HOLDER BRACE
30 1218 COMPOSITE UPPER HOLDER FOR BUMPER
30 1322 FRONT BODY MOUNT SET
30 1325 T4 COMPOSITE BRACE FOR BUMPER - LOW (2)
30 3129 COMPOSITE SET OF WHEELBASE SHIMS (3x1MM; 1x2MM) (2)

90 2308 HEX SCREW SH M3x8 (10) 90 2312 HEX SCREW SH M3x12 (10) 90 3308 HEX SCREW SFH M3x8 (10) 90 3310 HEX SCREW SFH M3x10 (10) 96 0030 NUT M3 (10) 98 1212 PIN 2x12 (10)

30 1227 T4 FOAM BUMER - LIGHT & STRONG
30 8308-0 ULP ALU SHOCK ABSORBER-SET - ORANGE (2)



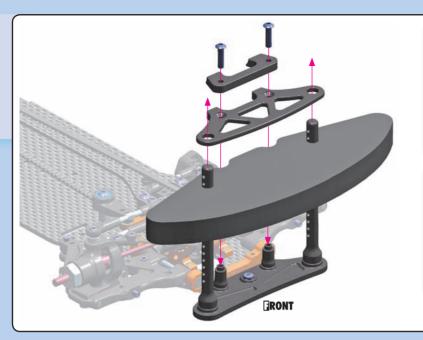






# 7. FRONT & REAR ASSEMBLY

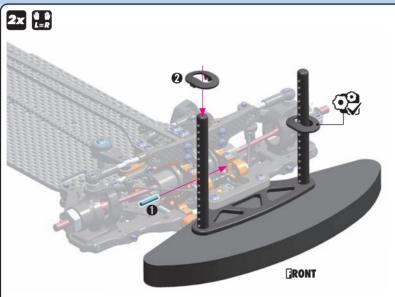














Very handy, easily externally adjustable body post from Swiss 7075 T6 aluminum. Allows for adjustment of body height by 3mm without needing to change the position on the body post.

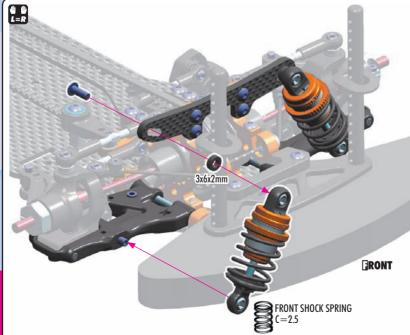


FRONT BODY MOUNT SET				
#301322	0mm	INCLUDED		
#301323	+1mm	OPTION		
#301324	+2mm	OPTION		













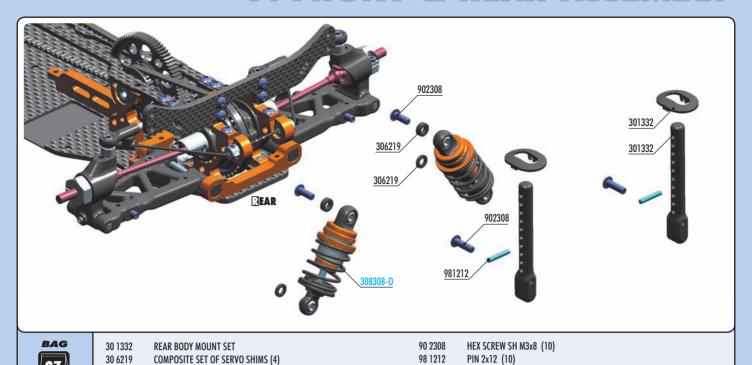




For some very specific racing conditions like extremely low traction, the shocks with shock towers from previous T4 cars will fit onto T4'18 and are available as an option.



# 7. FRONT & REAR ASSEMBLY

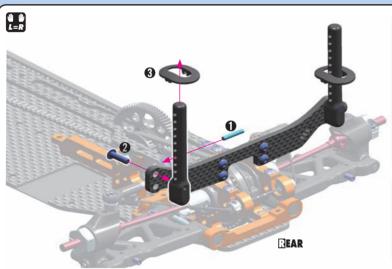


30 8308-0

902308

07

981212 P 2x12



ALU ADJUSTABLE BODY POST STOP (2) Very handy, easily externally adjustable body post from Swiss 7075 T6 aluminum. Allows for adjustment of body height by 3mm

without needing to change the position on the body post.

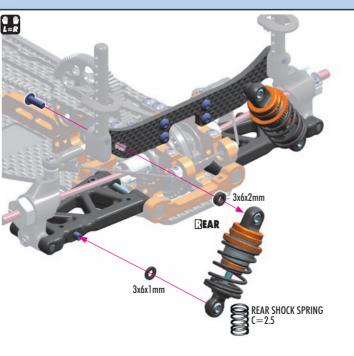
**ULP ALU SHOCK ABSORBER-SET - ORANGE (2)** 

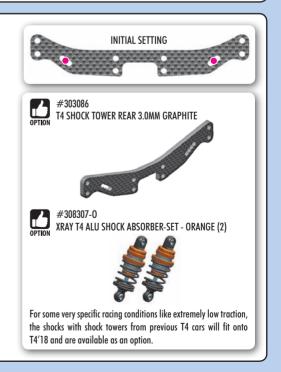




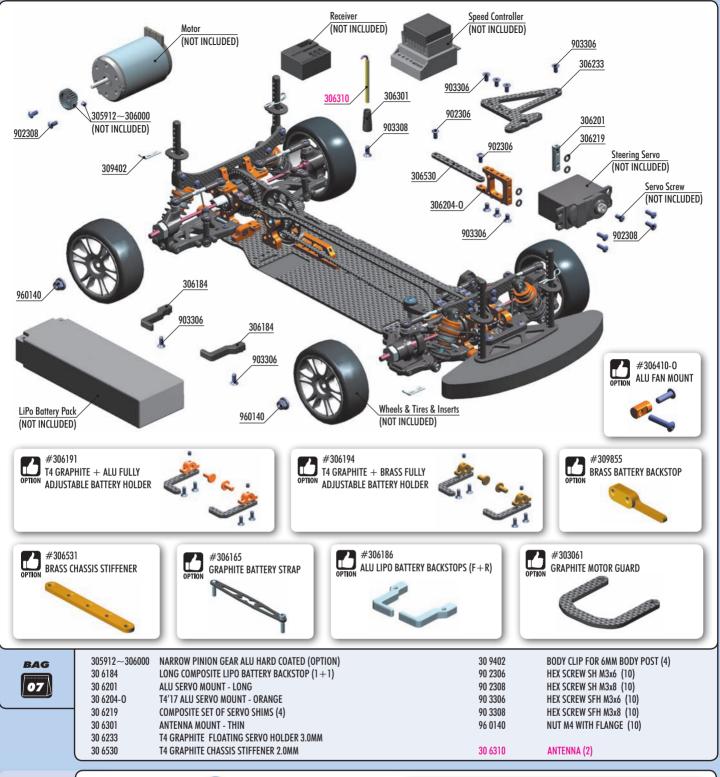


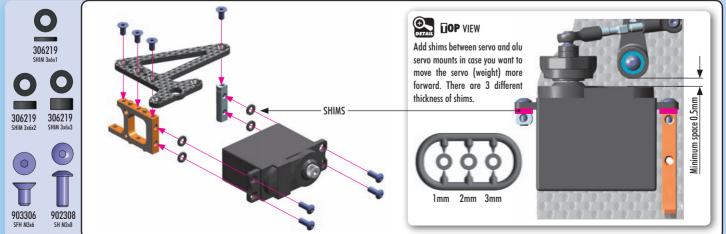




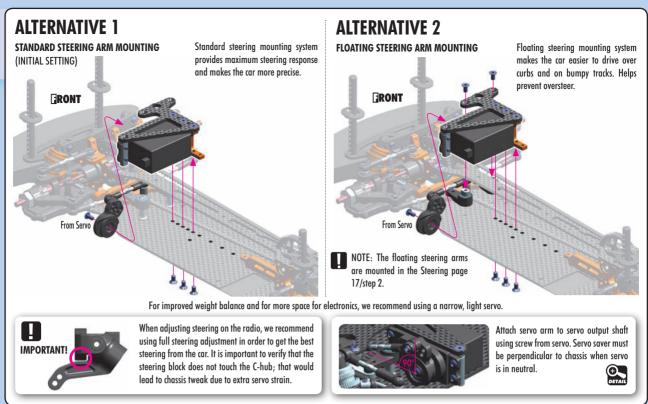


## 7. FINAL ASSEMBLY



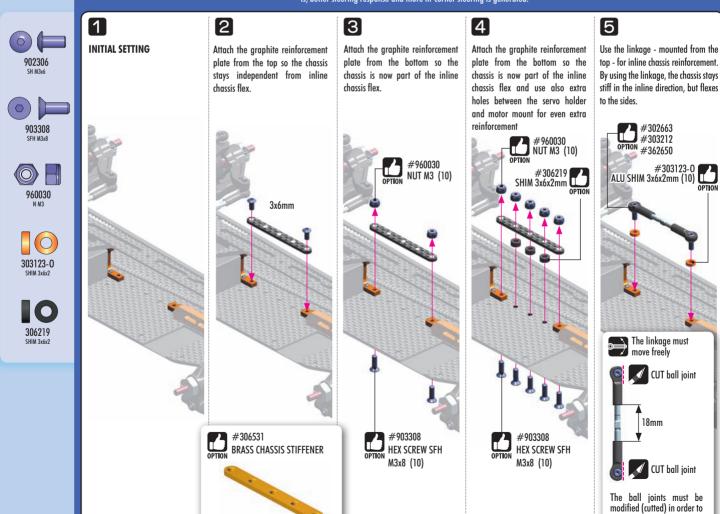






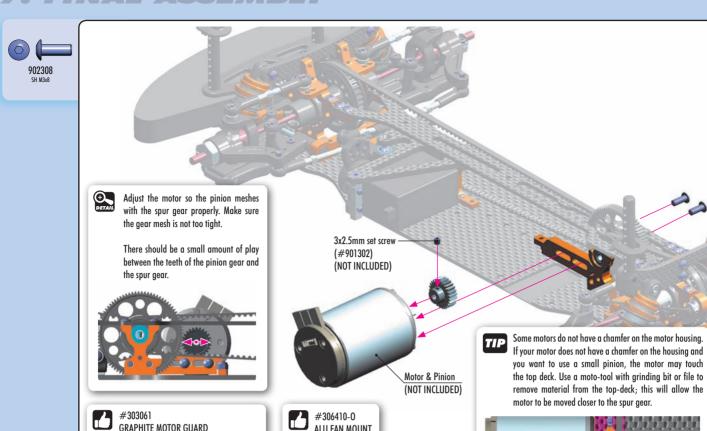


The inline chassis flex adjustment has a direct effect on the steering characteristics of the car. The more stiff the inline chassis flex is, better steering response and more in-corner steering is generated.



prevent ball joints touching the belt.

# 7. FINAL ASSEMBLY

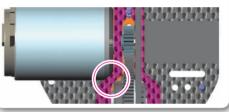




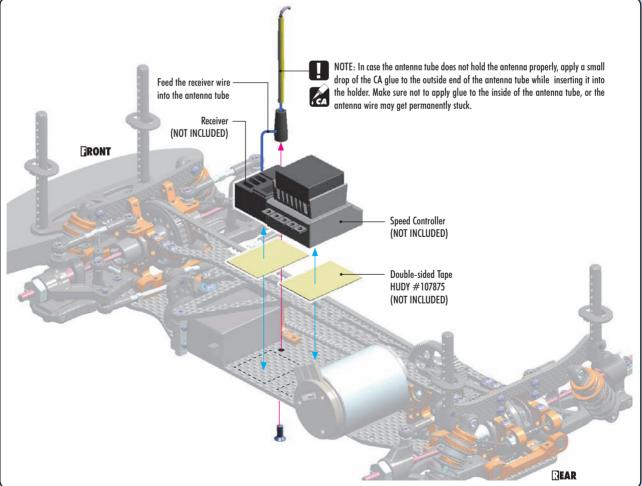




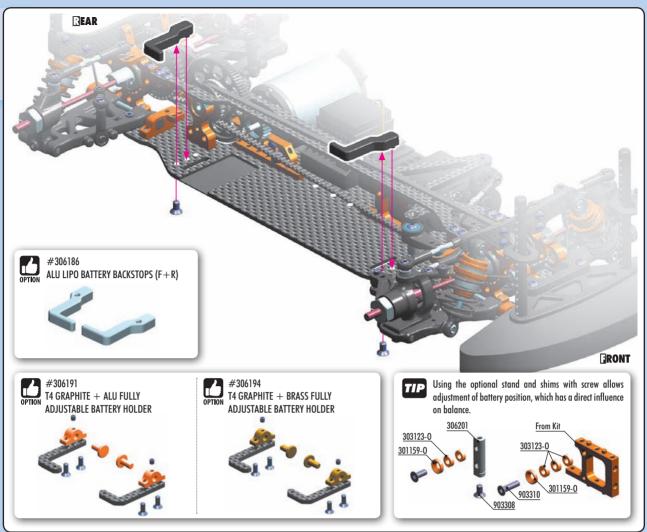




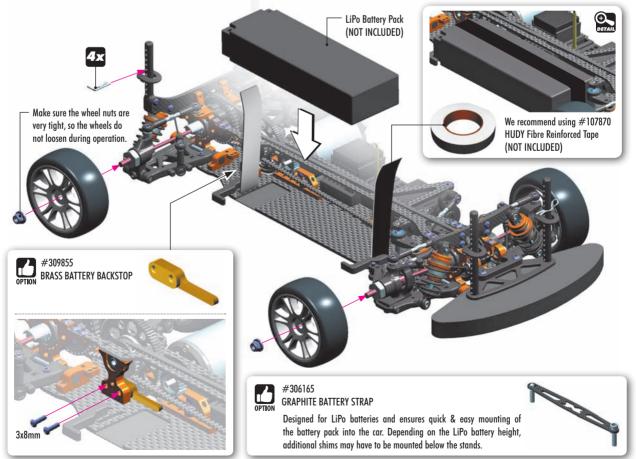
















































# www.teamxray.com

#### XRAY EUROPE

XRAY, K VÝSTAVISKU 6992, 91101 TRENCIN, SLOVAKIA, EUROPE PHONE: +421-32-740 11 00, FAX: +421-32-740 11 09, info@teamxray.com

#### XRAY USA

RC AMERICA, 2030 Century Center Blvd #15, Irving, TX 75062, USA PHONE: 214-744-2400, FAX: 214-744-2401, xray@rcamerica.com

















