



1/10 LUXURY ELECTRIC TOURING CAR

1/10

MADE IN EUROPE

INSTRUCTION MANUAL

WORLD VICE-CHAMPION

45x USA NATIONAL CHAMPION

EUROPEAN CHAMPION Modified

3x EUROPEAN CHAMPION Stock

16x CAR OF THE YEAR

car action Reader's Choice Award

300+ NATIONAL CHAMPION TITLES

ITS SNOWBURD NATIONALS WINNER

2016 INTERNATIONAL INDOOR CHAMPION

6x DHI CUP WINNER

11x LET TOM WINNER

3x TITE CHAMPION

19x ETS WINNER

4x ETS SEASON STOCK WINNER

7x EUROPEAN CHAMPION Junior

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

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.

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.

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 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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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.

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

IMPORTANT NOTES - ELECTRICAL

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

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.

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

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

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.

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.

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

Limitations of Liability

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

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

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

All rights reserved.

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

Part bags used 	Assemble in the specified order 	Assemble left and right sides the same way 	Pay attention here 	Assemble as many times as specified (here twice) 	Apply thread lock 	Apply CA glue 	Apply oil
Scale 	Apply grease 	Optional parts 	Ensure smooth non-binding movement 	Tighten screw gently 	Completed assembly 	Detail 	Follow Set-Up Book

TOOLS REQUIRED

HUDY TOOLS: Allen: 1.5mm, 2.0mm, 3.0mm, Socket: 5.5mm, 7.0mm 	Combination Pliers (HUDY #189020) 	Side Cutters (HUDY #189010) 	Hobby Knife 	Turnbuckle Wrench 4mm (HUDY #181040) 	Reamer (HUDY #107600) or (HUDY #107601) 	Scissors (HUDY #188990)
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EQUIPMENT INCLUDED

XRAY Premium Silicone Oil 400cSt (#359240) Oil 2000cSt (#359302) 	Graphite Grease (HUDY #106210)
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NOT INCLUDED

	<p>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 at our Web site at 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.</p>	<table border="1"> <thead> <tr> <th colspan="2">SAMPLE OF OPTIONAL PARTS</th> </tr> </thead> <tbody> <tr> <td>#30XXXX</td> <td>OPTION 1</td> </tr> <tr> <td>#30XXXX</td> <td>OPTION 2</td> </tr> <tr> <td>#30XXXX</td> <td>OPTION 3</td> </tr> </tbody> </table>	SAMPLE OF OPTIONAL PARTS		#30XXXX	OPTION 1	#30XXXX	OPTION 2	#30XXXX	OPTION 3	<p>XRAY offers wide range of optional tuning parts which are listed in a table like this. 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.</p>
SAMPLE OF OPTIONAL PARTS											
#30XXXX	OPTION 1										
#30XXXX	OPTION 2										
#30XXXX	OPTION 3										

EQUIPMENT REQUIRED

Transmitter 	Receiver 	Steering Servo 	Electric Motor & Pinion Gear and Setscrew 	Bearing Oil (HUDY #106230) 	Speed Controller
190mm Bodyshell 	LiPo Battery 	Lexan™ Paint 	Battery Charger 	Fibre Tape (HUDY #107870) Double-sided Tape 	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.

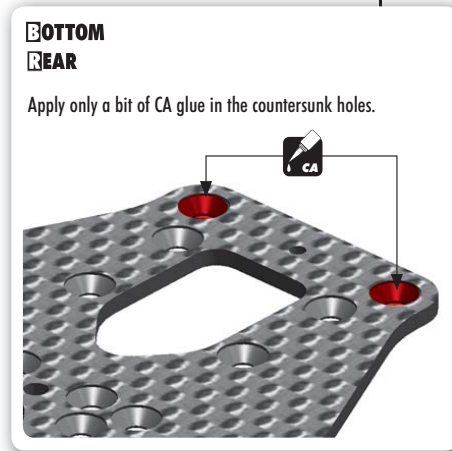
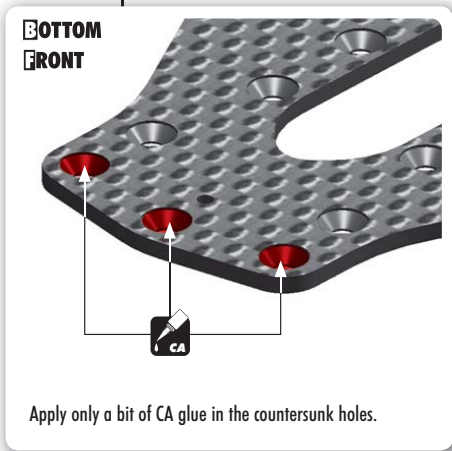
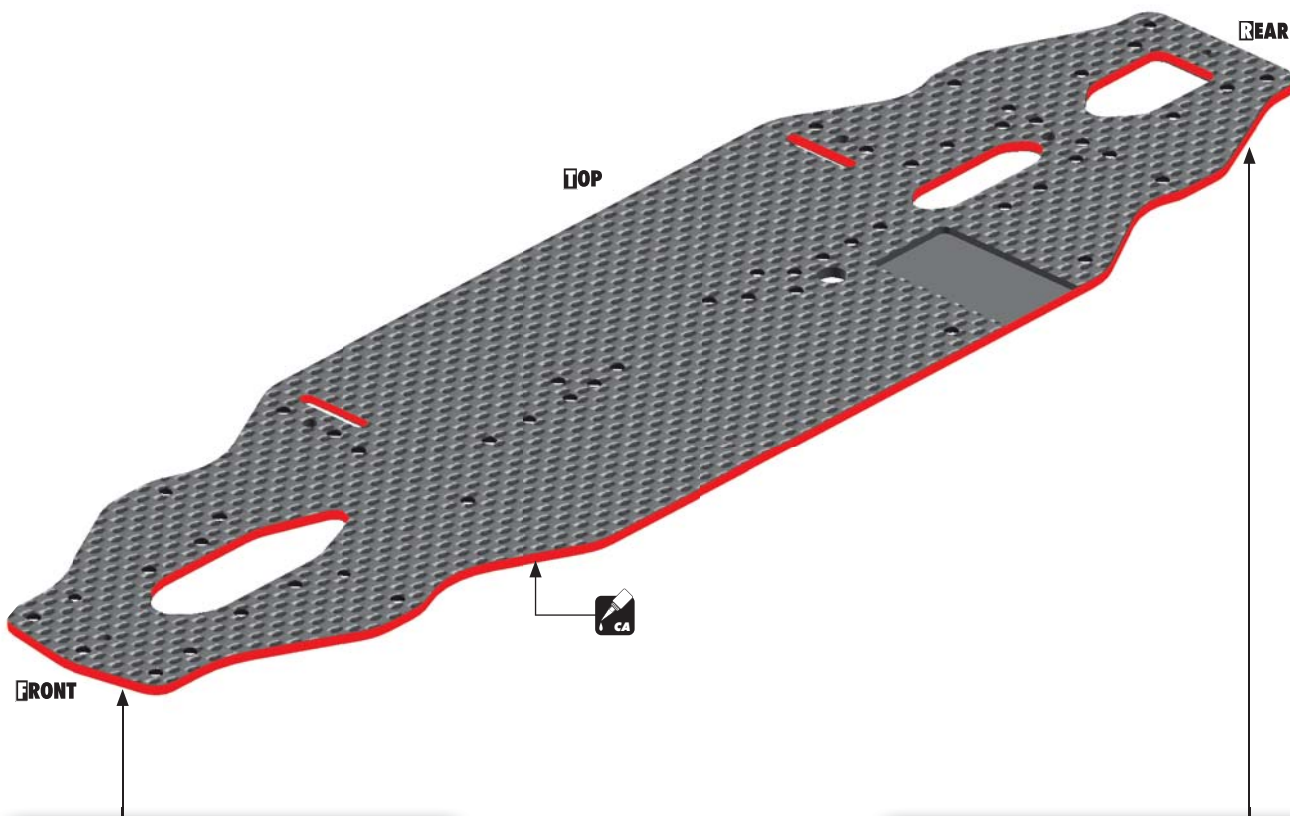
STYLE B - indicates parts that are included in the box.

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.



1. GEAR DIFFERENTIAL & FRONT SOLID AXLE

#304971
OPTION HUDY SPRING STEEL™ OUTDRIVES

#305137
OPTION STEEL SOLID AXLE DRIVESHAFT ADAPTERS

01.2
GEAR DIFFERENTIAL

01.1
COMPOSITE SOLID AXLE

#305136
OPTION ALU SOLID DRIVESHAFT ADAPTERS

#305137
OPTION STEEL SOLID AXLE DRIVESHAFT ADAPTERS

<p>BAG</p> <p>01.1</p> <p>01.2</p>	30 4900	XRAY GEAR DIFFERENTIAL - SET	90 2310	HEX SCREW SH M3x10 (10)
	30 4910	COMPOSITE GEAR DIFF CASE & COVER	90 3256	HEX SCREW SFH M2.5x6 (10)
	30 4930	COMPOSITE GEAR DIFF BEVEL & SATELLITE GEARS (2+4)	94 1015	HIGH-SPEED BALL-BEARING 10x15x4 RUBBER SEALED (2)
	30 4970	ALU GEAR DIFF OUTDRIVE ADAPTER - 7075 T6 (2)	96 4031	WASHER S 3.5x10x0.2 (10)
	30 4980	COMPOSITE GEAR DIFF CROSS PIN	96 4050	WASHER S 5x15x0.3 (10)
	30 4990	DIFF GASKET (4)	97 1240	SILICONE O-RING 24x0.7 (10)
	30 5105	XRAY MULTI-DIFF T3/T4 LiPo (OPTION)	97 2050	SILICONE O-RING 5x2 (10)
	30 5135	COMPOSITE SOLID AXLE DRIVESHAFT ADAPTERS (2)	98 1210	PIN 2x10 (10)
	30 5188	COMPOSITE SOLID AXLE 38T - SET		

964050
S 5x15x0.3

972050
O 5x2

981210
P 2x10

STEP 4 5 DETAIL

#304971
OPTION HUDY SPRING STEEL™ OUTDRIVES

964050
S 5x15x0.3

972050
O 5x2

981210
P 2x10

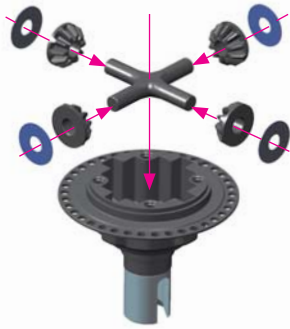
NOTE ORIENTATION

STEP 4 DETAIL
Use tweezers to insert pin.

CUTAWAY VIEW

1. GEAR DIFFERENTIAL & FRONT SOLID AXLE

964031
S 3.5x10x0.2



OIL

TIP



Fill differential up to the top of the diff pin. DO NOT fill the diff to the top of the housing.

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



7.90g

#107865
HUDY Ultimate Digital Pocket
Scale 300g ± 0.01g



9.20g

1 Put the diff (without oil) on the scale and check the weight (approximately 7.90g)

$$7.9g + 1.3g = 9.2g$$

2 Slowly pour oil into the diff and watch the weight. Add 1.3g of oil into the diff. The approximate weight of the diff including oil is 9.20g.

TIP

TIPS FOR DIFFERENTIALS

TIP

LOW-TRACTION

1000cSt (HUDY #106410)
2000cSt (HUDY #106420)

MEDIUM-TRACTION

2000cSt (HUDY #106420)
3000cSt (HUDY #106430)
5000cSt (HUDY #106450)

HIGH-TRACTION

5000cSt (HUDY #106450)
6000cSt (HUDY #106460)
7000cSt (HUDY #106470)
8000cSt (HUDY #106480)
9000cSt (HUDY #106490)
10000cSt (HUDY #106510)

SUPER HIGH-TRACTION

10000cSt (HUDY #106510)
15000cSt (HUDY #106515)
20000cSt (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 suggest to 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™ outrives because the stress on the outrives in the front is much higher than in the rear.

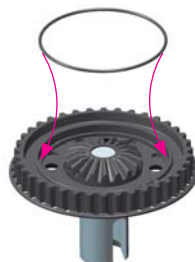
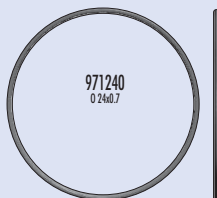
USE THESE OILS FOR FRONT DIFFERENTIAL

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

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.



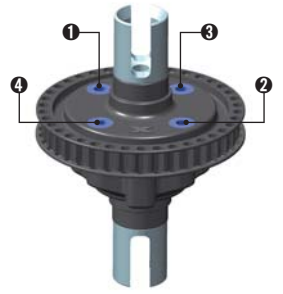
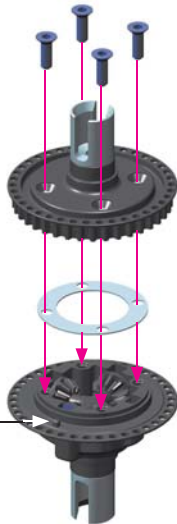
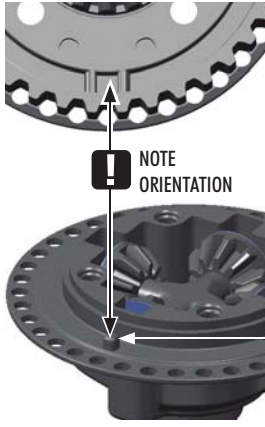
!

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.

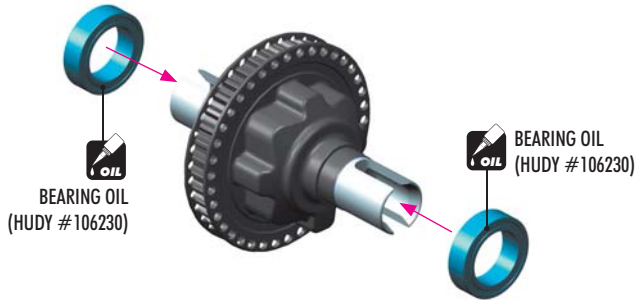
1. GEAR DIFFERENTIAL & FRONT SOLID AXLE



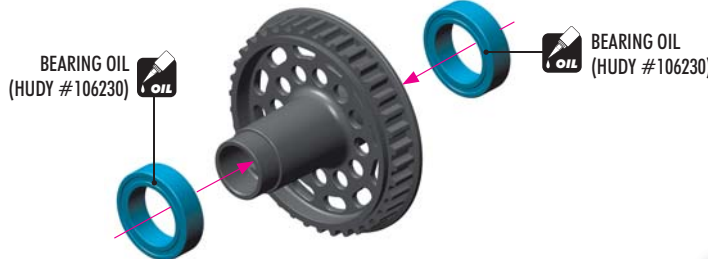
BOTTOM



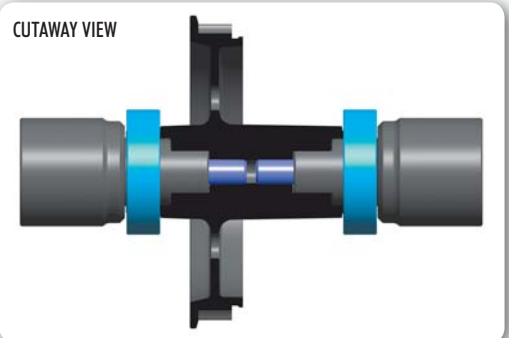
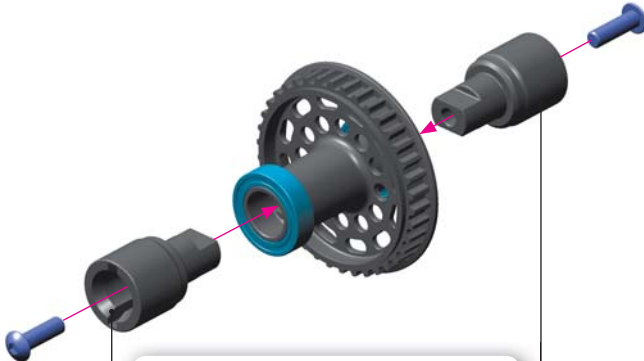
Finish tightening in this order.



COMPOSITE FRONT SOLID AXLE



FRONT & REAR AXLES	
#304900	GEAR DIFFERENTIAL
#305188	COMPOSITE SOLID AXLE 38T PULLEY



2. CENTRAL TRANSMISSION

902306
SH M3x6

903306
SFH M3x6

903310
SFH M3x10

960030
N M3

NOTE ORIENTATION

NOTE ORIENTATION

IMPORTANT!

Tighten screws in order indicated.

M3 nut must always be tightened fully. When tightening the nut, use pliers.

902304
SH M3x4

965050
CS

981212
P 2x12

1.

2.

3.

OPTION	SPUR GEARS 48P	OPTION	SPUR GEARS 64P
	#305778 OFFSET SPUR GEAR 78T / 48P		#305862 OFFSET SPUR GEAR 92T / 64P
	#305781 OFFSET SPUR GEAR 81T / 48P		#305866 OFFSET SPUR GEAR 96T / 64P
	#305784 SPUR GEAR 84T / 48P		#305870 OFFSET SPUR GEAR 100T / 64P
			#305874 OFFSET SPUR GEAR 104T / 64P
			#305876 OFFSET SPUR GEAR 106T / 64P
			#305878 OFFSET SPUR GEAR 108T / 64P
			#305880 OFFSET SPUR GEAR 110T / 64P
			#305882 OFFSET SPUR GEAR 112T / 64P
			#305884 OFFSET SPUR GEAR 114T / 64P

NOTE ORIENTATION

Note orientation only when using XRAY OFFSET spur gears.

CUTAWAY VIEW



940510
BB 5x10x4

NOTE ORIENTATION

NOTE ORIENTATION

2. CENTRAL TRANSMISSION

FRONT BELT TENSION ADJUSTMENT

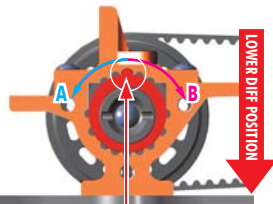
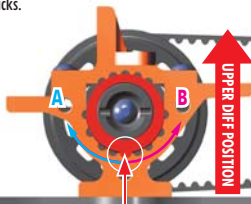
Front diff **upper** position provides **more steering** but provides **less front traction**.

Front diff **lower** position provides **more front traction** but makes the car **push more on power**.

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

Recommended for **low traction** tracks.

FRONT



INITIAL POSITION FOR CARPET

Place tab in this **BOTTOM NOTCH**

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**

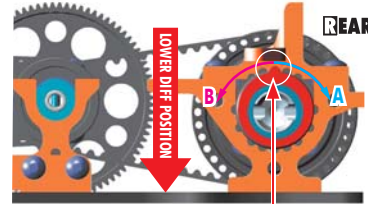
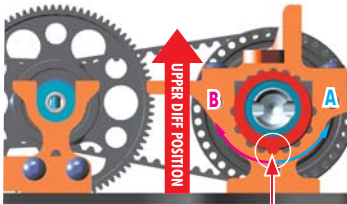
REAR BELT TENSION ADJUSTMENT

Rear diff **upper** position provides **more on-power steering** but makes the rear slightly **more loose**.

Rear diff **lower** position provides **more rear traction**, mainly **on-power traction** and makes the car **more stable in the chicanes**, but makes the car **push more on power**.

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

Recommended for **low-medium** traction tracks.



INITIAL POSITION FOR CARPET

Place tab in this **BOTTOM NOTCH**

INITIAL POSITION FOR ASPHALT

Place tab in this **TOP NOTCH**

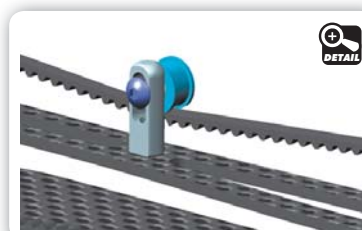
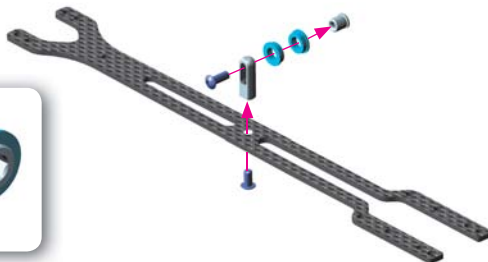
TO LOOSEN REAR BELT: Rotate both rear nylon hubs in arrow direction **A**

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

#303071 BELT TENSIONER

OPTION

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

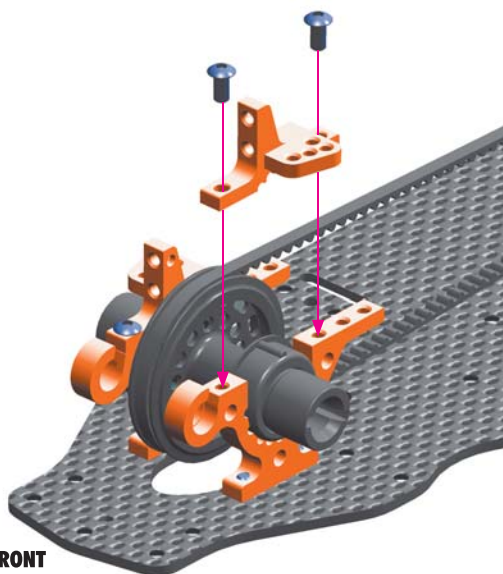


DETAIL



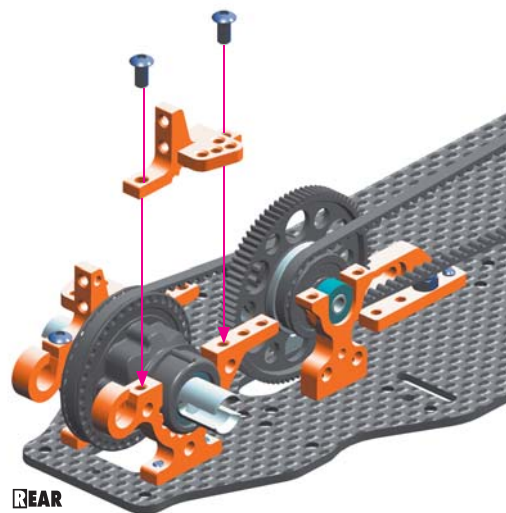
902306
SH M3x6

L=R



FRONT

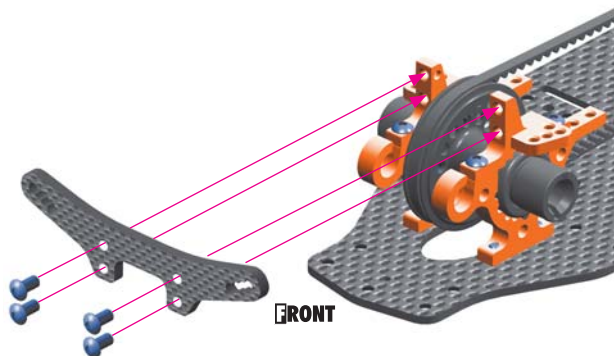
L=R



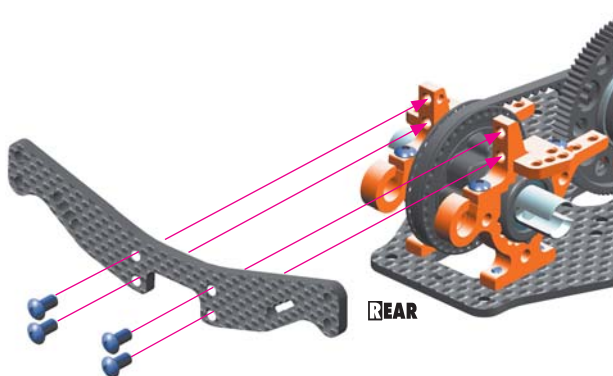
REAR



902306
SH M3x6



FRONT



REAR

3. FRONT & REAR SUSPENSION



901310
SB M3x10

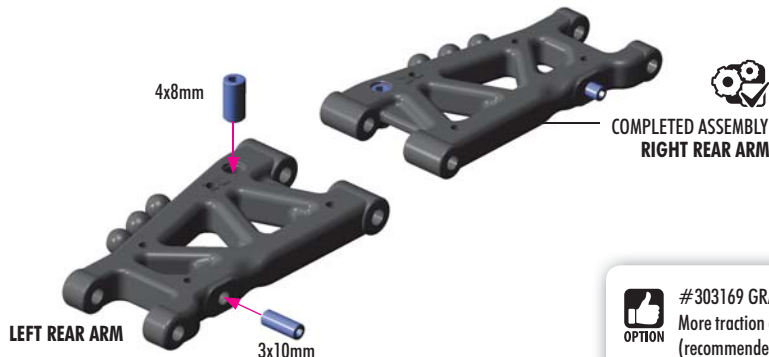
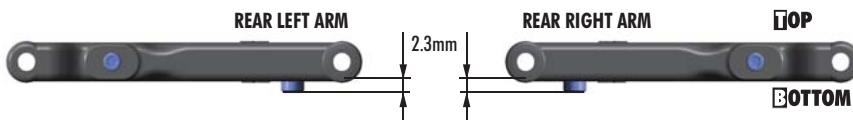


901408
SB M4x8

2x L-R REAR ARMS

STANDARD REAR SUSPENSION

INITIAL SETTING



#303169 GRAPHITE ARM - REAR
More traction and more stable but more fragile
(recommended for all kinds of conditions)

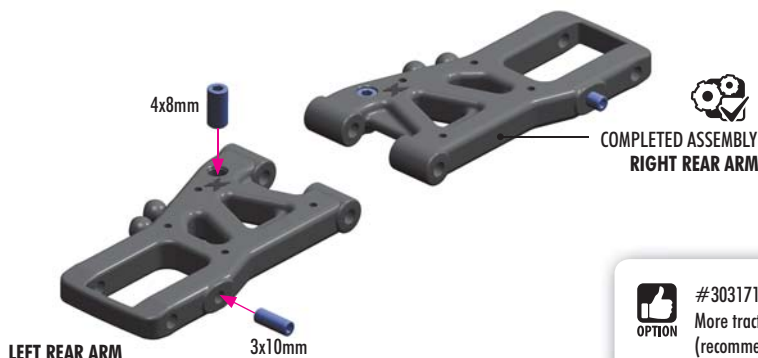
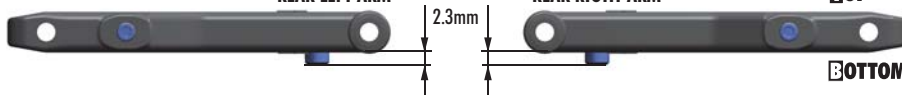


2x L-R ACTIVE REAR SUSPENSION™

REAR LEFT ARM

REAR RIGHT ARM

TOP



#303171 GRAPHITE ARS ARM - REAR
More traction and more stable but more fragile
(recommended for all kinds of conditions)



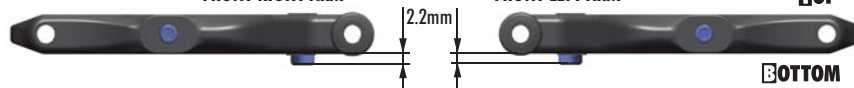
REAR DOWNSTOP
ADJUSTMENT

2x L-R FRONT ARMS

FRONT RIGHT ARM

FRONT LEFT ARM

TOP



#302169 GRAPHITE ARM - FRONT
More traction and more stable but more fragile
(recommended for all kinds of conditions)



FRONT DOWNSTOP
ADJUSTMENT

3. FRONT & REAR SUSPENSION



903306
SFH M3x6

FRONT

Marked "FR"

NOTE ORIENTATION

#303710-0 ALU LOWER 2-PIECE SUSPENSION HOLDER

OPTION

For more steering, we recommend using the optional alu separate suspension holders.



303129
SHIM 3x6x1



903306
SFH M3x6

#303711-0 ALU REAR LOWER 1-PIECE SUSPENSION HOLDER

OPTION

Marked "RF"

For more steering, we recommend using the optional 1-piece alu suspension holder. Use for high-grip conditions only; it decreases rear traction.

IMPORTANT

When using ARS suspension, the alu rear lower 1 piece suspension holder must be used together with #302201 alu brace post for ARS 3x5x9mm (2).

NOTE ORIENTATION

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.

REAR

Marked "RR"

INITIAL POSITION

1 0.5 0 0.5 1

Composite eccentric bushings

ALTERNATIVE STANDARD REAR SUSPENSION INITIAL SETTING

ALTERNATIVE ACTIVE REAR SUSPENSION™

44.3 mm

2x 1:1 L=R

INITIAL POSITION

1 0.5 0 0.5 1

Composite eccentric bushings

All possible mounting alternatives of eccentric bushings

ECCENTRIC BUSHINGS HAVE TWO DIFFERENT OFFSETS FROM THE CENTER.

● ● Middle position = 0.5 mm or 0.5° from center ● ● Outer position = 1mm or 1° from center

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 track-width 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 Set-up Book (#209100).

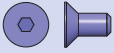
SET-UP BOOK

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

3. FRONT & REAR SUSPENSION

10

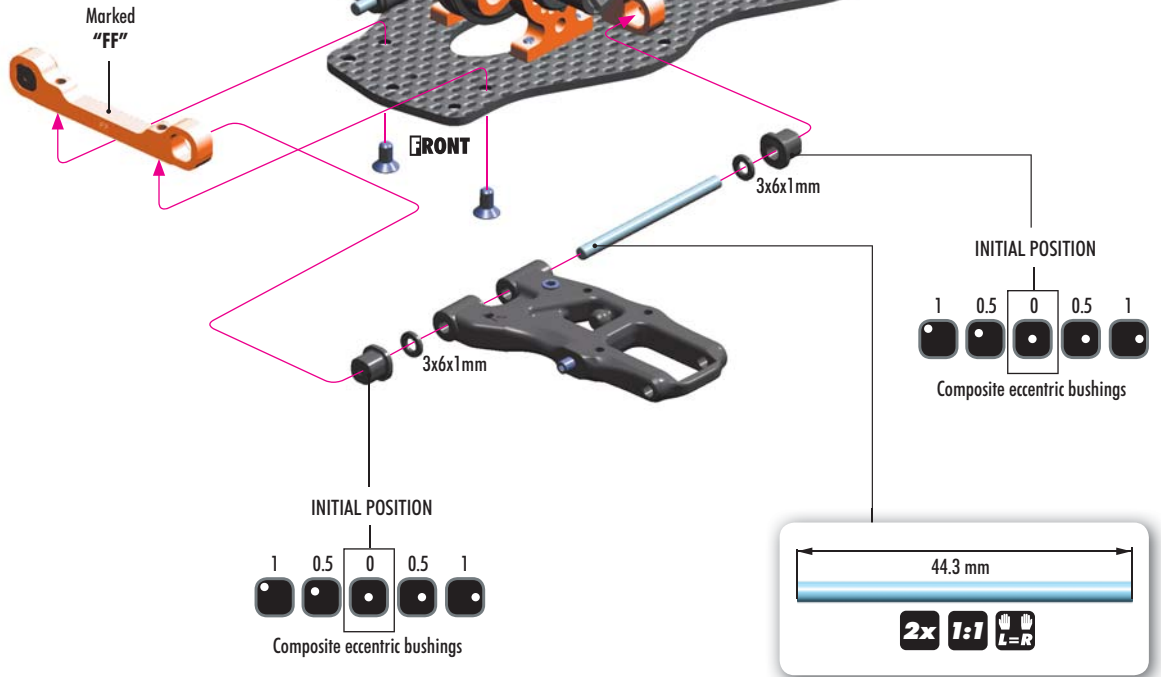
303129
SHIM 3x6x1



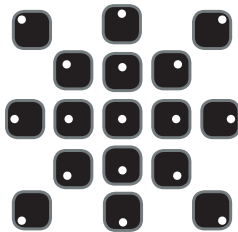
903306
SFH M3x6



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.



All possible mounting alternatives of eccentric bushings



ECCENTRIC BUSHINGS HAVE TWO DIFFERENT OFFSETS FROM THE CENTER.

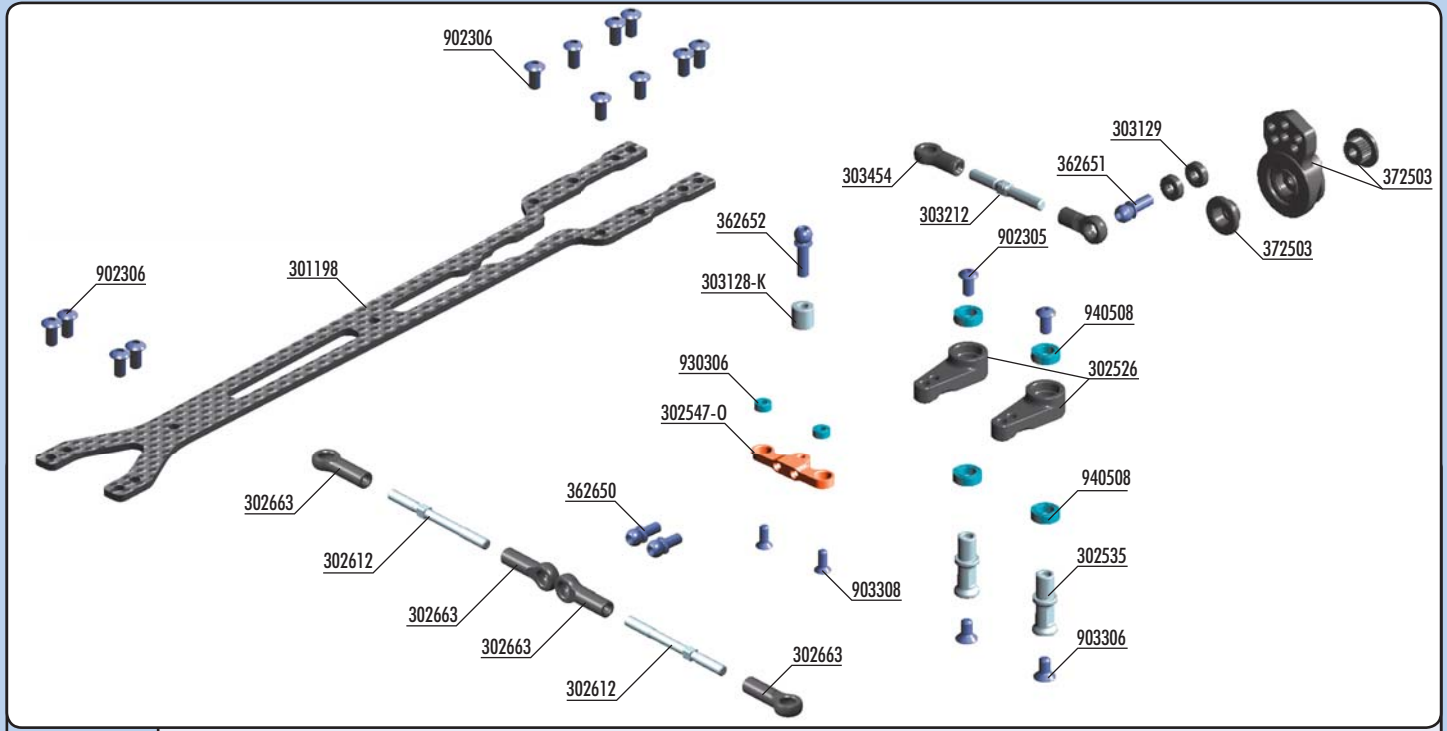
- Middle position = 0.5 mm or 0.5° from center
- Outer position = 1 mm or 1° from center

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).



TOE-IN
TRACK-WIDTH
WHEELBASE
ROLL CENTER
ANTI-DIVE
KICK-UP

4. STEERING



BAG
04

- | | | | |
|-----------|--|---------|---|
| 30 1196 | T4 UPPER DECK 1.6MM GRAPHITE - V2 (OPTION) | 36 2650 | BALL END 4.9MM WITH THREAD 6MM (2) |
| 30 1198 | T4 UPPER DECK 2.0MM GRAPHITE | 36 2651 | BALL END 4.9MM WITH THREAD 8MM (2) |
| 30 2525 | ALU DUAL SERVO SAVER ARM + BALL-BEARINGS (2) (OPTION) | 36 2652 | BALL END 4.9MM WITH THREAD 10MM (2) |
| 30 2526 | COMPOSITE DUAL SERVO SAVER ARM | 37 2503 | COMPOSITE SERVO SAVER - X-STIFF - SET - V2 |
| 30 2535 | ALU STEERING POST FOR DUAL SERVO SAVER (2) | 90 2305 | HEX SCREW SH M3x5 (10) |
| 30 2547-0 | T4*14 ALU STEERING PLATE 8.5MM FOR DUAL SERVO SAVER - ORANGE | 90 2306 | HEX SCREW SH M3x6 (10) |
| 30 2612 | ALU ADJ. TURNBUCKLE M3 L/R 39 MM - SWISS 7075 T6 (2) | 90 3306 | HEX SCREW SFH M3x6 (10) |
| 30 2663 | COMPOSITE BALL JOINT 5 MM - OPEN - V2 (8) | 90 3308 | HEX SCREW SFH M3x8 (10) |
| 30 3128-K | ALU SHIM 3x6x6.0MM - BLACK (10) | 93 0306 | BALL-BEARING 3x6x2.5 (2) |
| 30 3129 | COMPOSITE SET OF SHIMS (3x1MM; 1x2MM) (2) | 94 0508 | HIGH-SPEED BALL-BEARING 5x8x2.5 RUBBER SEALED (2) |
| 30 3212 | ALU ADJ. TURNBUCKLE L/R 26 MM - SWISS 7075 T6 (2) | | |
| 30 3454 | BALL JOINT 4.9MM - OPEN (4) | | |



2x **L-R**

SERVO LINK
Adjust servo link to fit your servo

65.4mm

LEFT RIGHT

65.4mm

approximately 47mm

- 903308 SFH M3x8
- 930306 BB 3x6x2.5
- 940508 BB 5x8x2.5



Use bearing oil for all bearings (HUDEY #106230)

#302525 ALU DUAL SERVO SAVER ARM
OPTION

We recommend using the aluminum dual servo saver arms when better steering response is needed. Also recommended for asphalt tracks.

NOTE ORIENTATION

Do not use for basic set-up

6mm THREAD

NOTE ORIENTATION

2x **L-R**

TIP

To change Ackermann angle, use 2 identical shims (of same thickness) between the alu steering plate and ball ends.

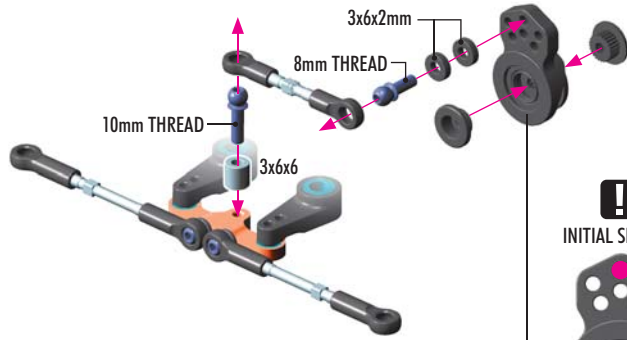
3x1 mm & 1x2mm composite shims



303129
SHIM 3x6x2



303128-K
SHIM 3x6x6



INITIAL SETTING



OPTION

HUDY ALU SERVO HORNS

#293491	KO, JR, Sanwa, Airtr. - OFFSET - 23T
#293492	Hiitec - OFFSET - 24T
#293493	Futaba - OFFSET - 25T

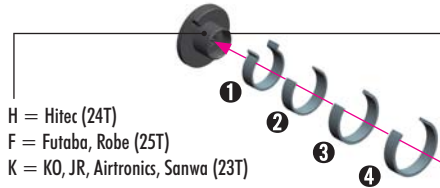


#293501	KO, JR, Sanwa, Airtronics - 23T
#293502	Hiitec - 24T
#293503	Futaba - 25T

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

IMPORTANT!

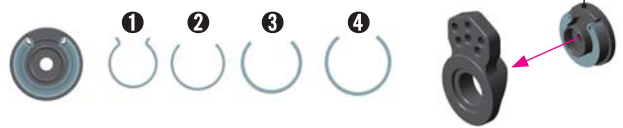
When the aluminum horn is used, the steering servo saver is not used. This increases the risk of breaking the servo in serious crashes.



H = Hiitec (24T)

F = Futaba, Robe (25T)

K = KO, JR, Airtronics, Sanwa (23T)



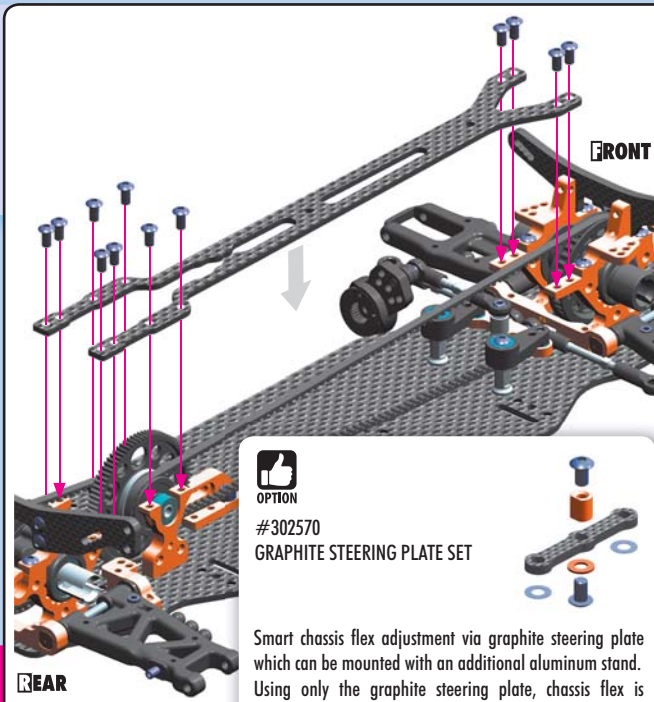
902305
SH M3x5



903306
SFH M3x6



902306
SH M3x6



OPTION

#302570 GRAPHITE STEERING PLATE SET

Smart chassis flex adjustment via graphite steering plate which can be mounted with an additional aluminum stand. Using only the graphite steering plate, chassis flex is medium; using the aluminum stand for reinforcement, the flex becomes stiffer. Stiffer flex results in more aggressive handling and increased steering.



OPTION

#301196 T4 GRAPHITE UPPER DECK 1.6MM - V2

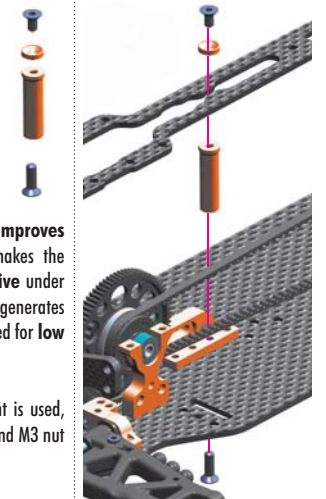


We recommend using optional 1.6mm top deck for super-low traction conditions as it provides more overall traction and steering.



OPTION

#306516-0 T4 ALU TOP DECK MOUNT - ORANGE



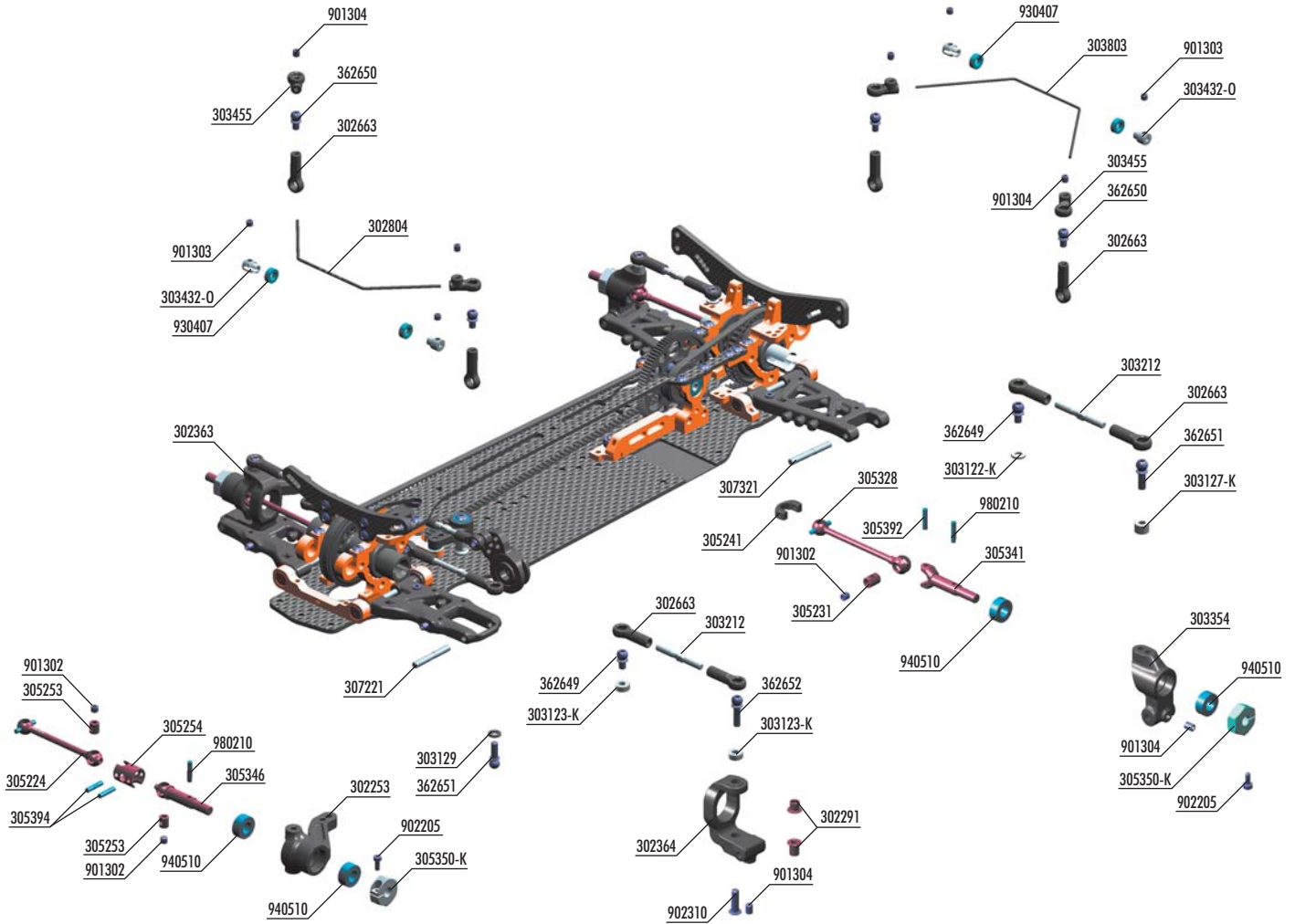
Optional alu top deck mount improves forward and rear traction and makes the car more stable and easier to drive under low-traction conditions, however generates more on-power push. Recommended for low and medium traction conditions.

When the aluminum top deck mount is used, the screws from layshaft bulkheads and M3 nut from motor holder must be removed.



CHASSIS FLEX SETTING
TOP DECK SETTING

5. FRONT & REAR TRANSMISSION

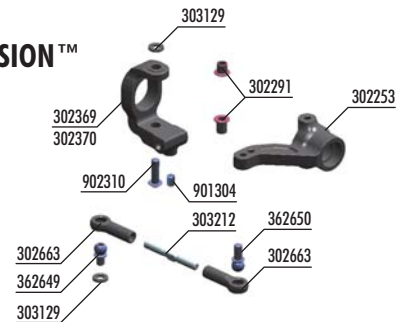


FOR ALTERNATIVE SETTING

ACTIVE REAR SUSPENSION™

BAG

08



#307222 - TITAN FRONT ARM PIVOT PIN (2)

#307322 - TITAN REAR ARM PIVOT PIN (2)



BAG

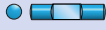
05

- | | | | |
|-----------|--|-----------|--|
| 30 2253 | COMPOSITE STEERING BLOCK - HARD | 30 5332 | ECS ES (ES) DRIVE SHAFT 52MM - HUDY SPRING STEEL™ - SET |
| 30 2291 | STEEL STEERING BUSHING (2+2) | 30 5333 | ECS ES (ES) DRIVE SHAFT 50MM - HUDY SPRING STEEL™ - SET (OPTION) |
| 30 2363 | COMPOSITE C-HUB RIGHT - 4° DEG. - MEDIUM - V2 | 30 5346 | ECS DRIVE AXLE FOR 2MM PIN - HUDY SPRING STEEL™ |
| 30 2364 | COMPOSITE C-HUB LEFT - 4° DEG. - MEDIUM - V2 | 30 5394 | ECS DRIVE SHAFT PIN 2 x 9 WITH FLAT SPOT (2) |
| 30 2369 | COMPOSITE C-HUB RIGHT - 0° DEG. - HARD | 30 5341 | DRIVE AXLE - LIGHTWEIGHT - HUDY SPRING STEEL™ |
| 30 2370 | COMPOSITE C-HUB LEFT - 0° DEG. - HARD | 30 5350-K | ALU WHEEL HUB - BLACK (2) |
| 30 2663 | COMPOSITE BALL JOINT 4.9MM - OPEN - V2 (8) | 30 5392 | DRIVE SHAFT PIN 2 x 10 WITH FLAT SPOT (2) |
| 30 2804 | ANTI-ROLL BAR FOR BALL BEARINGS - FRONT 1.4 MM | 30 7221 | FRONT ARM PIVOT PIN (2) |
| 30 3122-K | ALU SHIM 3x6x1.0MM - BLACK (10) | 30 7321 | REAR ARM PIVOT PIN (2) |
| 30 3123-K | ALU SHIM 3x6x2.0MM - BLACK (10) | 36 2649 | BALL END 4.9MM WITH THREAD 5MM (2) |
| 30 3127-K | ALU SHIM 3x6x4.0MM - BLACK (10) | 36 2650 | BALL END 4.9MM WITH THREAD 6MM (2) |
| 30 3129 | COMPOSITE SET OF SHIMS (3x1MM; 1x2MM) (2) | 36 2651 | BALL END 4.9MM WITH THREAD 8MM (2) |
| 30 3210 | TURNBUCKLE M3 L/R 26 MM - SPRING STEEL™ (2) (OPTION) | 36 2652 | BALL END 4.9MM WITH THREAD 10MM (2) |
| 30 3212 | ALU ADJ. TURNBUCKLE M3 L/R 26 MM - SWISS 7075 T6 (2) | 90 1302 | HEX SCREW SB M3x2.5 (10) |
| 30 3354 | COMPOSITE UPRIGHT 0° OUTBOARD TOE-IN - HARD | 90 1303 | HEX SCREW SB M3x3 (10) |
| 30 3432-0 | ALU ANTI-ROLL BAR BUSHING - ORANGE (2) | 90 1304 | HEX SCREW SB M3x4 (10) |
| 30 3455 | COMPOSITE ANTI-ROLL BAR BALL JOINT 4.9 MM (4) | 90 2205 | HEX SCREW SH M2x5 (10) |
| 30 3803 | ANTI-ROLL BAR FOR BALL BEARINGS - REAR 1.3 MM | 90 2310 | HEX SCREW SH M3x10 (10) |
| 30 5231 | DRIVE SHAFT COUPLING - HUDY SPRING STEEL™ | 93 0407 | BALL-BEARING 4x7x2.5 (2) |
| 30 5241 | DRIVE SHAFT REPLACEMENT PLASTIC CAP 3.5 MM (4) | 94 0510 | HIGH-SPEED BALL-BEARING 5x10x4 RUBBER SEALED (2) |
| 30 5224 | ECS (ES) DRIVE SHAFT 52MM FOR 2MM PIN - HUDY SPRING STEEL™ (1) | 98 0210 | PIN 2x10 (10) |
| 30 5253 | ECS DRIVE SHAFT COUPLING FOR 2MM PIN - HUDY SPRING STEEL™ | | |
| 30 5254 | ECS (ES) DRIVE SHAFT CASE FOR 2MM PIN - HUDY SPRING STEEL™ | | |
| 30 5328 | ALU DRIVE SHAFT SWISS 7075 T6 - HARD COATED - 50MM | | |

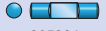
5. FRONT & REAR TRANSMISSION



901302
SB M3x2.5

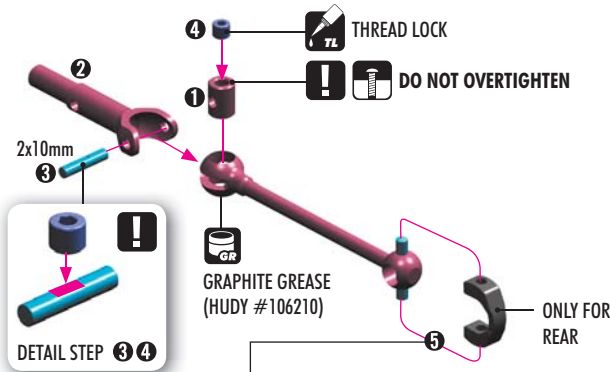


305392
P 2x10



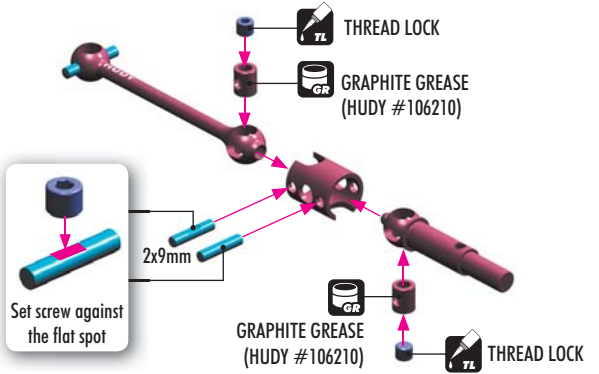
305394
P 2x9

2x REAR TRANSMISSION



TIP For easy installation of the #305241 plastic caps, use pliers as shown.

2x FRONT TRANSMISSION



ECS DRIVE SHAFTS

ECS shafts are available in both 50mm (optionally) and 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).

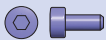
52mm shafts are recommended for **carpet and large asphalt** tracks.

50mm shafts are recommended for **small-medium tight asphalt** tracks.

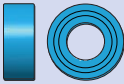


DRIVE SHAFTS

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



902205
SH M2x5



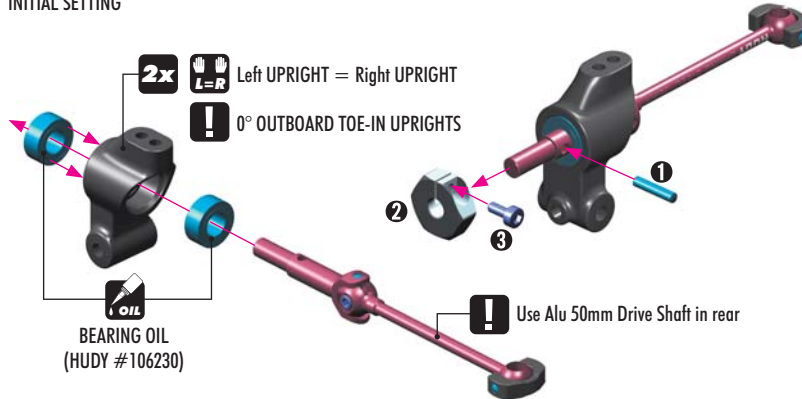
940510
BB 5x10x4



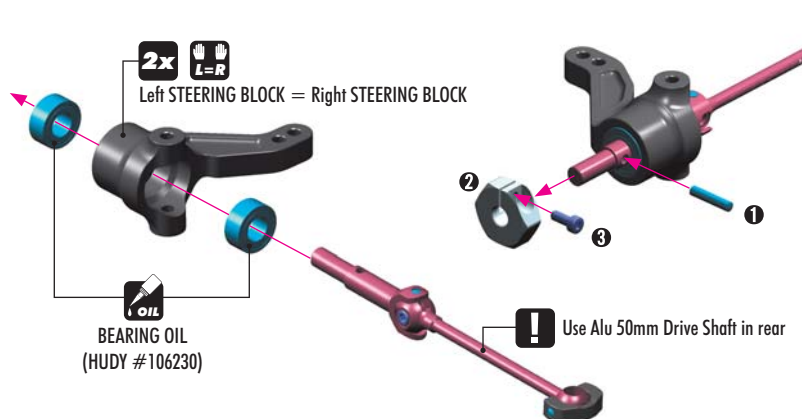
980210
P 2x10

L-R REAR TRANSMISSION

ALTERNATIVE STANDARD REAR SUSPENSION INITIAL SETTING



ALTERNATIVE ACTIVE REAR SUSPENSION™



T4 OPTIONAL PARTS

STANDARD	UPRIGHTS
#303351	1° - R MEDIUM (2-HOLE)
#303352	0° - R/L MEDIUM (2-HOLE)
#303353	1° - R HARD (2-HOLE)
#303354	0° - R/L HARD (2-HOLE)
#303361	1° - L MEDIUM (2-HOLE)
#303362	0° - R/L MEDIUM (1-HOLE)
#303363	1° - L HARD (2-HOLE)
#303364	0° - R/L HARD (1-HOLE)
#303358	ALU 1° - R/L (4-HOLE)
#303359	ALU 2° - R/L (4-HOLE)

STANDARD	WHEEL HUBS
#305350-K	ALU - OFFSET (0 mm)
#305351	ALU - OFFSET (-0.75 mm)
#305352	ALU - OFFSET (+0.75 mm)
#305353	ALU - OFFSET (+1.5 mm)

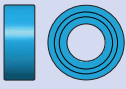
STANDARD	STEERING BLOCKS
#302252	MEDIUM
#302253	HARD
#302256	ALU



5. FRONT & REAR TRANSMISSION



902205
SH M2x5



940510
BB 5x10x4

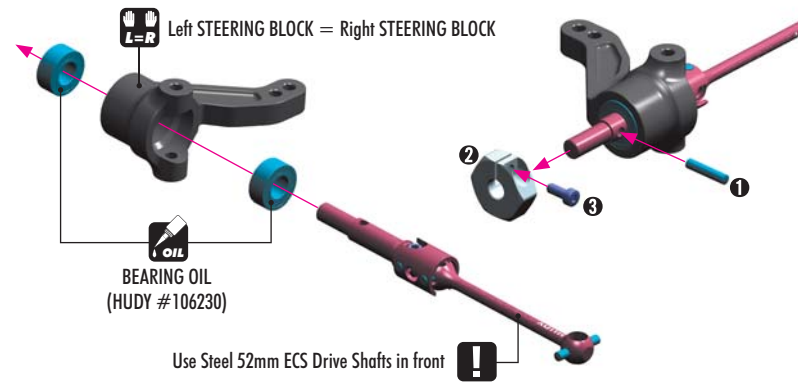


980210
P 2x10



REAR TOE-IN
TRACK-WIDTH

2x FRONT TRANSMISSION



T4 OPTIONAL PARTS

WHEEL HUBS	
STANDARD	#305350-K ALU - OFFSET 0 MM
	#305351 ALU - OFFSET -0.75 MM
	#305352 ALU - OFFSET +0.75 MM
	#305353 ALU - OFFSET +1.5 MM

STEERING BLOCKS	
	#302252 MEDIUM
STANDARD	#302253 HARD
	#302256 ALU

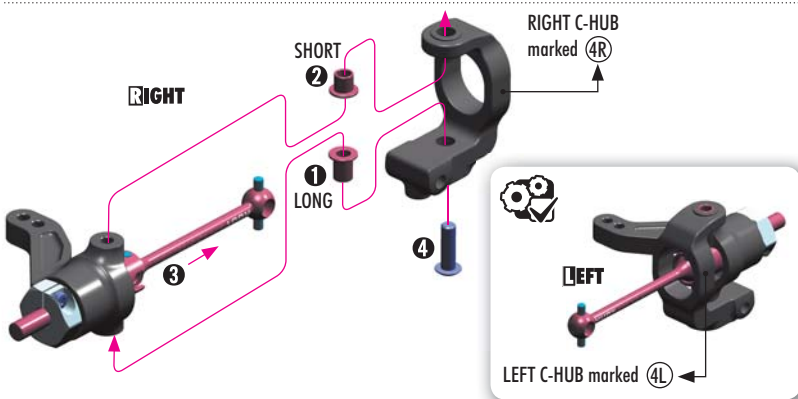


902310
SH M3x10

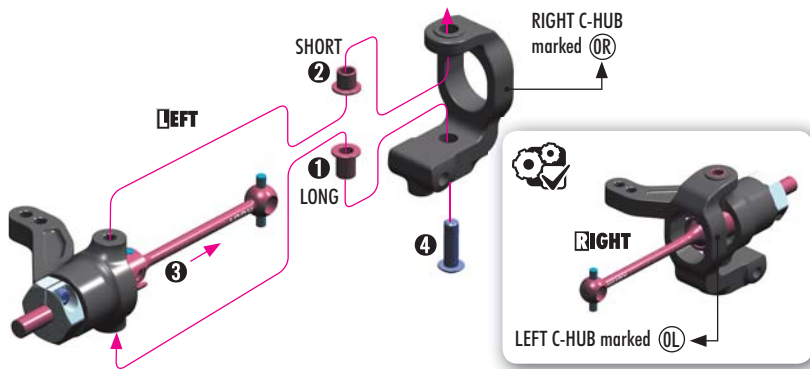


CASTER ADJUSTMENT

2x FRONT TRANSMISSION

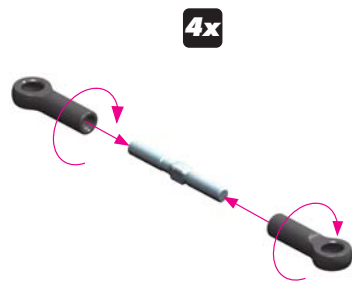


2x ACTIVE REAR SUSPENSION™



C-HUBS FRONT TRANSMISSION	
	#302334 ALU 0° - R + L
	#302335 ALU 2° - RIGHT
	#302336 ALU 2° - LEFT
	#302337 ALU 4° - RIGHT
	#302338 ALU 4° - LEFT
	#302339 ALU 6° - RIGHT
	#302340 ALU 6° - LEFT
	#302361 2° - RIGHT - MEDIUM
	#302362 2° - LEFT - MEDIUM
STANDARD	#302363 4° - RIGHT - MEDIUM
STANDARD	#302364 4° - LEFT - MEDIUM
	#302365 6° - RIGHT - MEDIUM
	#302366 6° - LEFT - MEDIUM
	#302371 2° - RIGHT - HARD
	#302372 2° - LEFT - HARD
	#302373 4° - RIGHT - HARD
	#302374 4° - LEFT - HARD
	#302375 6° - RIGHT - HARD
	#302376 6° - LEFT - HARD
	#302383 4° - RIGHT - GRAPHITE
	#302384 4° - LEFT - GRAPHITE

C-HUBS ACTIVE REAR TRANSMISSION	
	#302334 ALU 0°
	#302359 0° - RIGHT - MEDIUM
	#302360 0° - LEFT - MEDIUM
STANDARD	#302369 0° - RIGHT - HARD
STANDARD	#302370 0° - LEFT - HARD
	#302379 0° - RIGHT - GRAPHITE
	#302380 0° - LEFT - GRAPHITE



FRONT

2x L=R
FRONT LEFT = FRONT RIGHT



REAR

2x L=R
REAR LEFT = REAR RIGHT



CAMBER ADJUSTMENT

5. FRONT & REAR TRANSMISSION



303122-K
SHIM 3x6x1



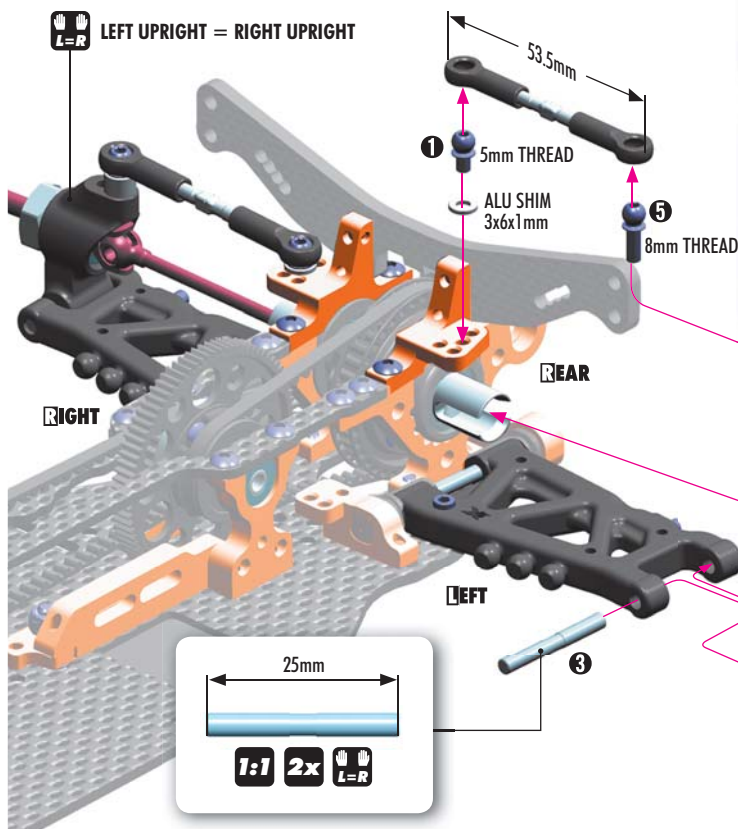
303127-K
SHIM 3x6x4



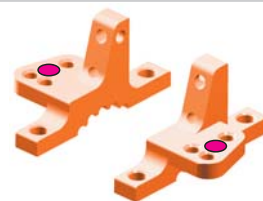
901304
SB M3x4

REAR TRANSMISSION

ALTERNATIVE STANDARD REAR SUSPENSION INITIAL SETTING



INITIAL POSITION



1-HOLE REAR UPRIGHTS (See page 19)

OPTION

An optional 1-hole rear upright is available for fine tuning. This optional upright may be used on high-traction tracks or tracks with long sweepers, since the position of the center hole will allow faster driving through those corners because of better cornering speed.



2

ALU SHIM 3x6x4mm

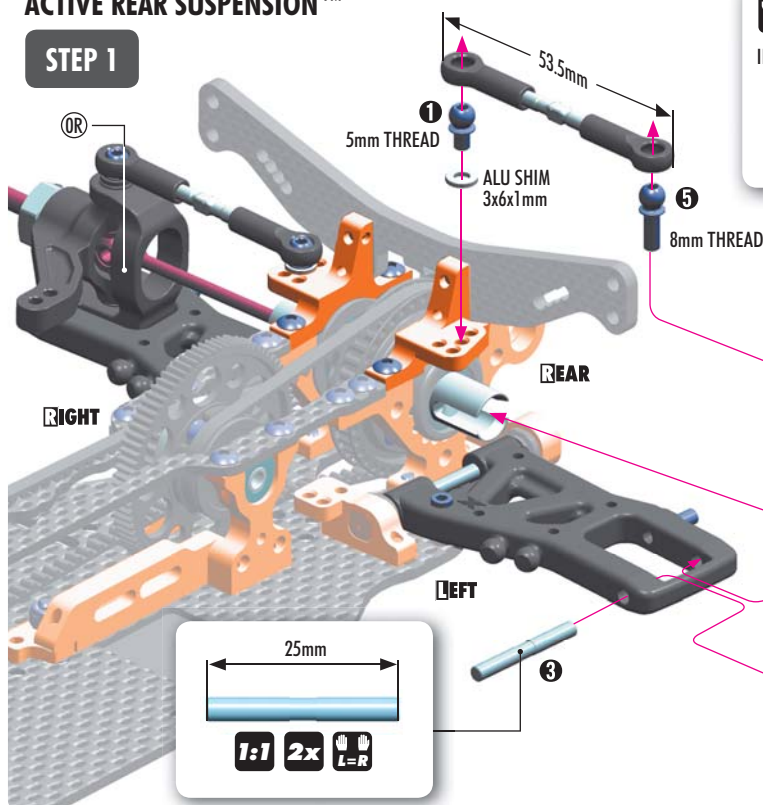
INITIAL POSITION
Use inner hole



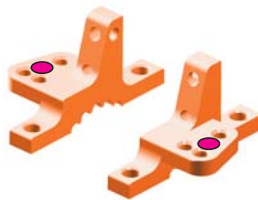
4

ALTERNATIVE ACTIVE REAR SUSPENSION™

STEP 1



INITIAL POSITION



2

OL

COMPOSITE SHIM 3x6x1mm

TIGHTEN GENTLY

4

SET-UP BOOK

ROLL CENTER
CAMBER

5. FRONT & REAR TRANSMISSION

10

303129
SHIM 3x6x1



903306
SFH M3x6

2x L=R REAR TRANSMISSION

ALTERNATIVE ACTIVE REAR SUSPENSION™

STEP 2

INITIAL POSITION



! IMPORTANT

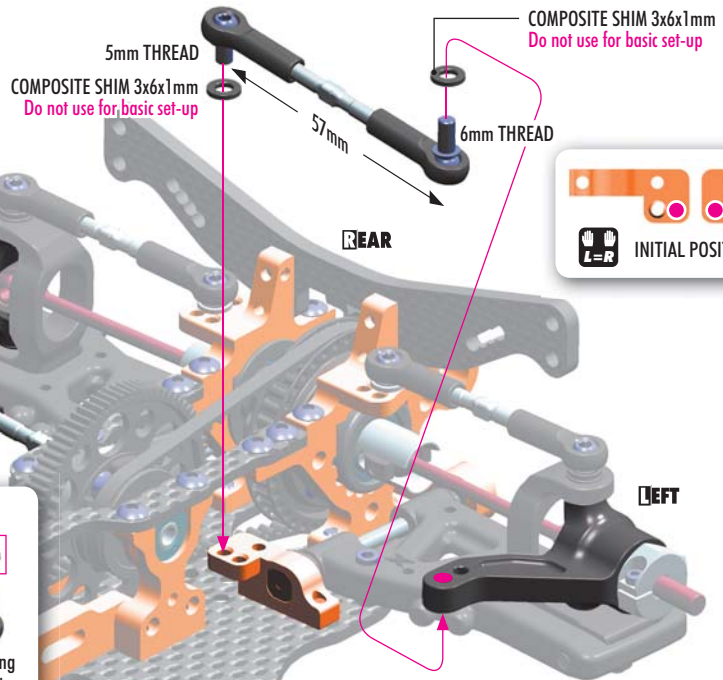
ALWAYS USE ONLY THIS POSITION

! IMPORTANT



The angle of ARS linkage – which is made by adding/removing shims on the steering block and ARS post mount – changes the toe-in characteristics of the rear tires under rolling effect; when the car is pressed the toe-in can either increase or decrease.

Check the toe-in change on your set-up system when the car is in neutral position and when is pressed down. For more information see the HUDY Set-Up Book.



ACTIVE TOE-IN

303123-K
SHIM 3x6x2



901304
SB M3x4

2x L=R FRONT TRANSMISSION

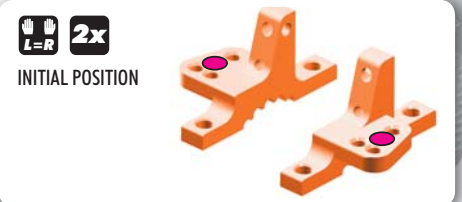
4R

5mm THREAD ①

ALU SHIM 3x6x2mm

55.5mm

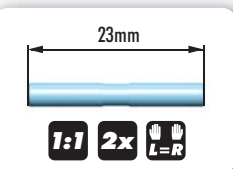
10mm THREAD ⑤



RIGHT

FRONT

LEFT



ALU SHIM 3x6x2mm

! TIGHTEN GENTLY



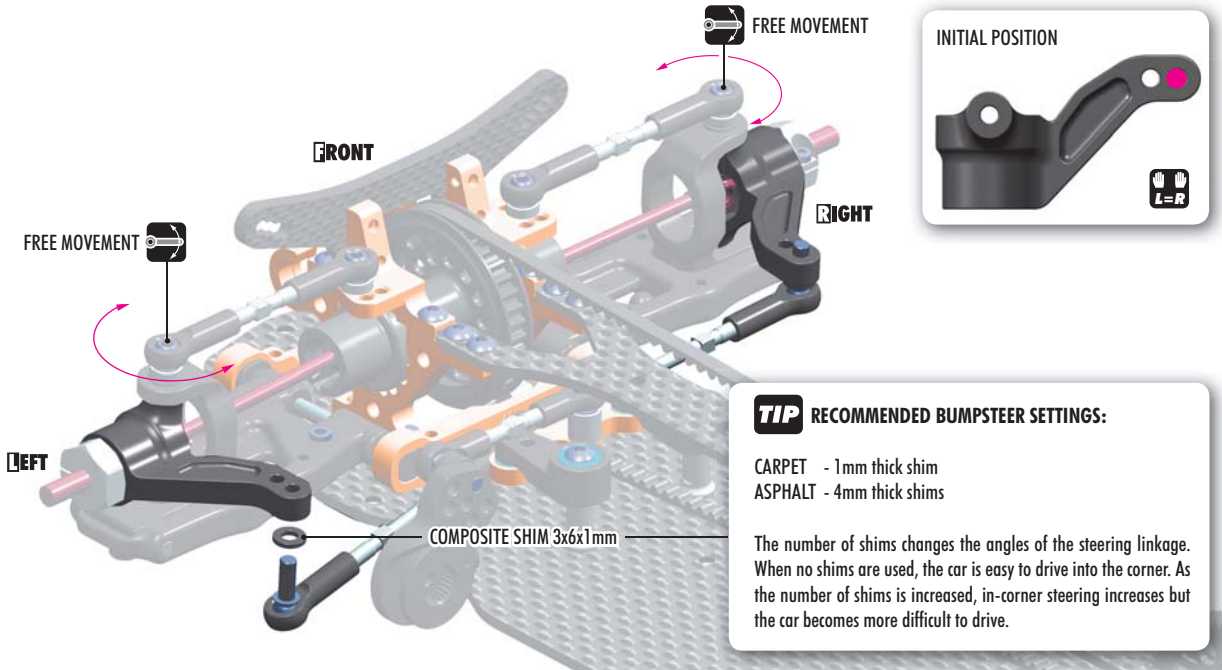
ROLL-CENTER

5. FRONT & REAR TRANSMISSION

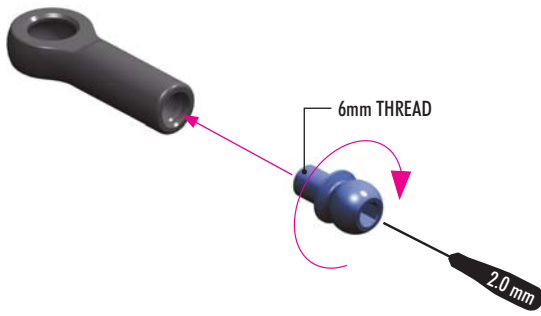
10

303129
SHIM 3x6x1

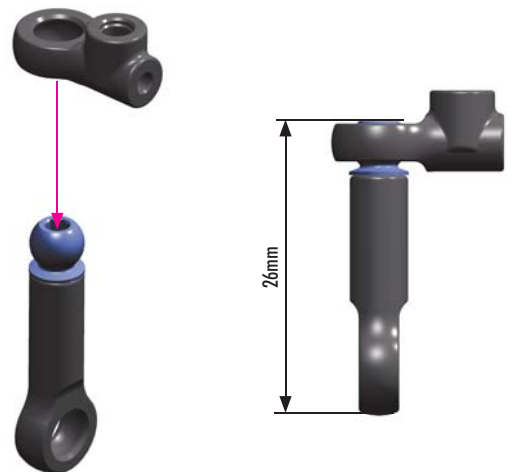
FRONT TRANSMISSION



4x



4x

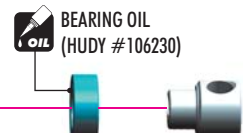


2x



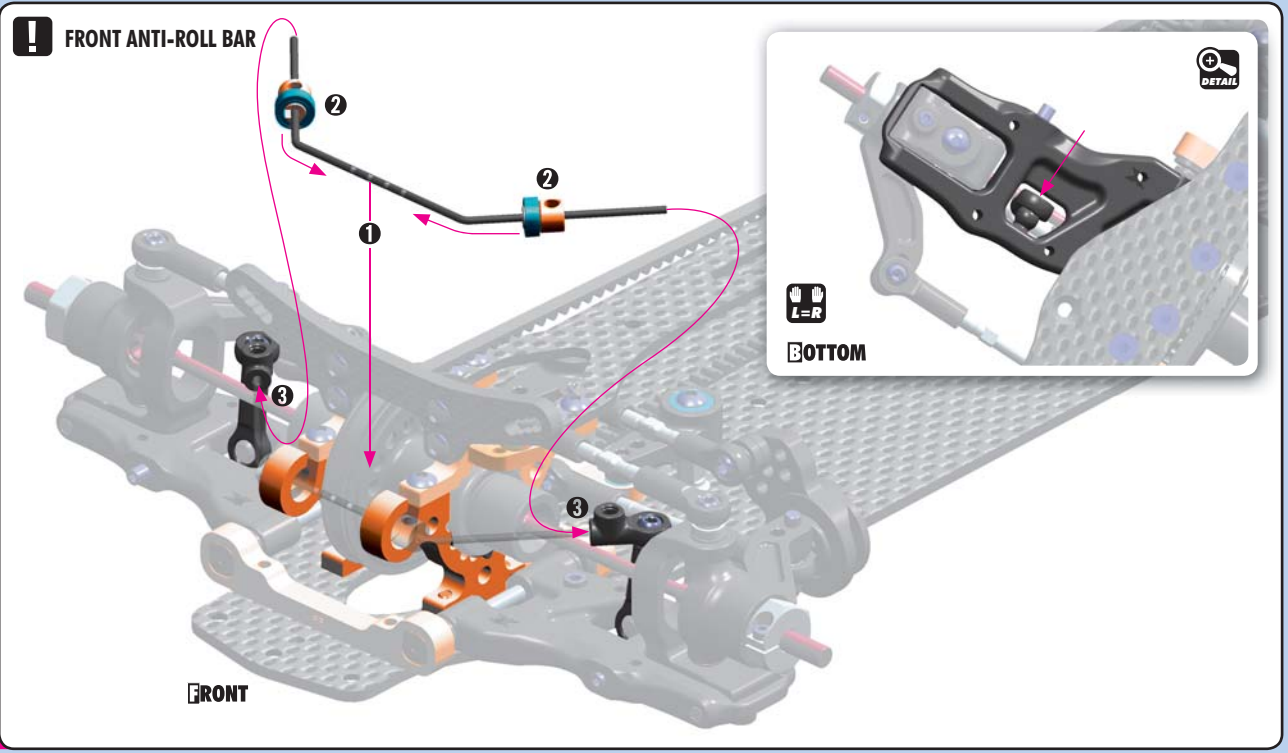
FRONT ANTI-ROLL BARS		
OPTION	#302802	FRONT 1.2 MM
	#302803	FRONT 1.3 MM
STANDARD	#302804	FRONT 1.4 MM
	#302805	FRONT 1.5 MM
	#302806	FRONT 1.6 MM

REAR ANTI-ROLL BARS		
OPTION	#303801	REAR 1.1 MM
	#303802	REAR 1.2 MM
STANDARD	#303803	REAR 1.3 MM
	#303804	REAR 1.4 MM
	#303805	REAR 1.5 MM
	#303806	REAR 1.6 MM

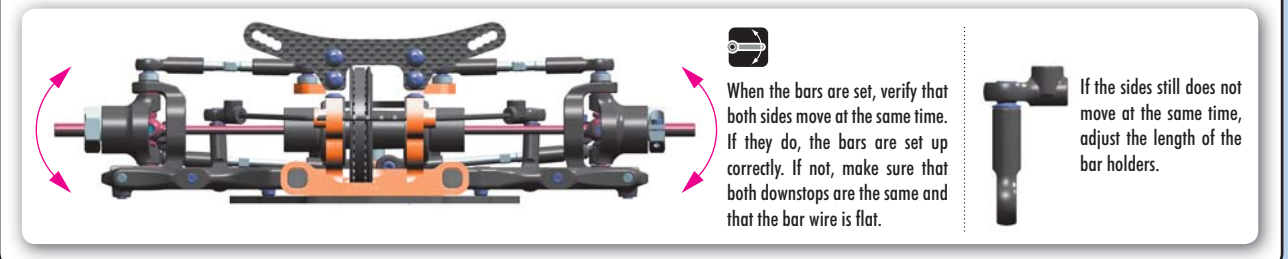
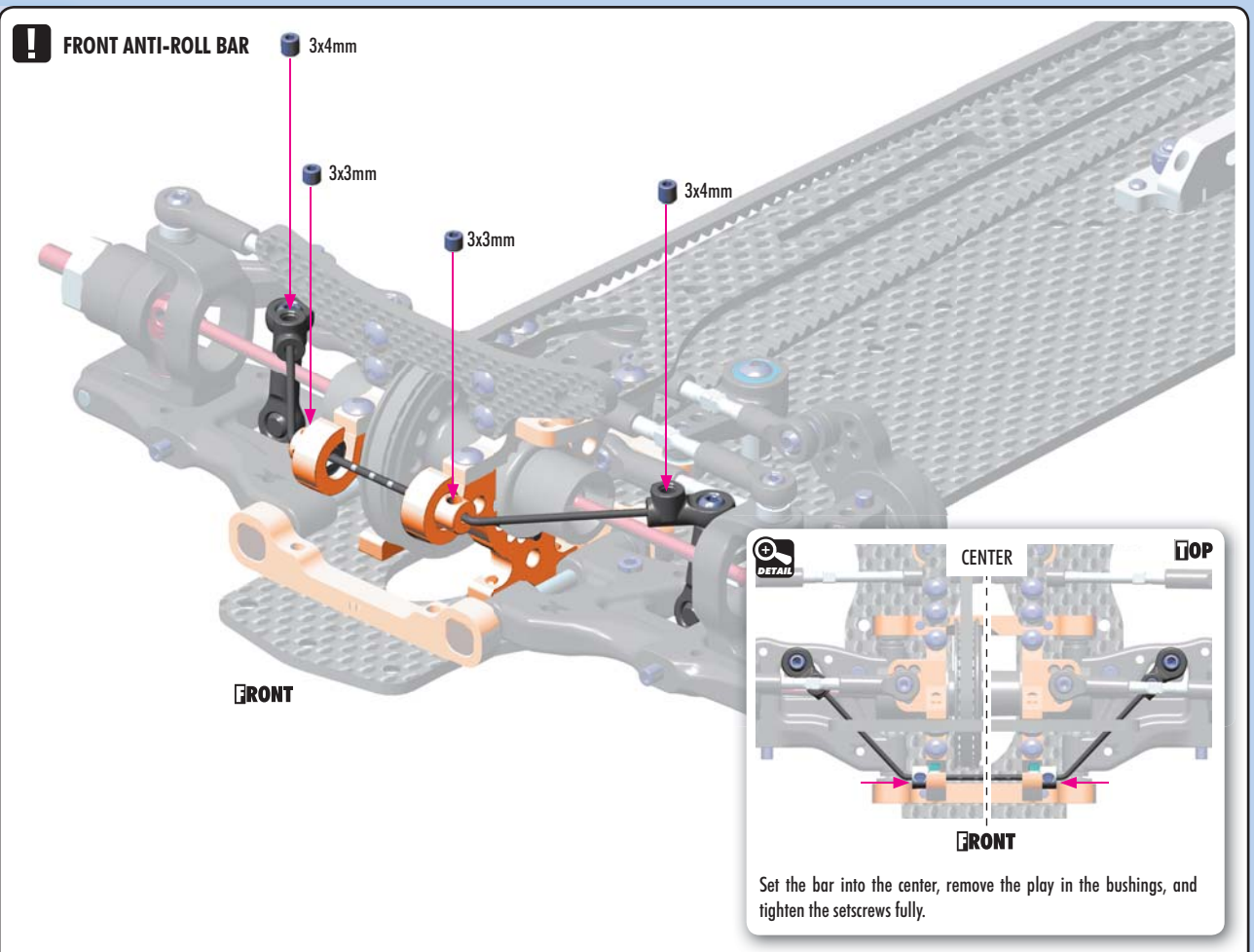


930407
BB 4x7x2.5

5. FRONT & REAR TRANSMISSION

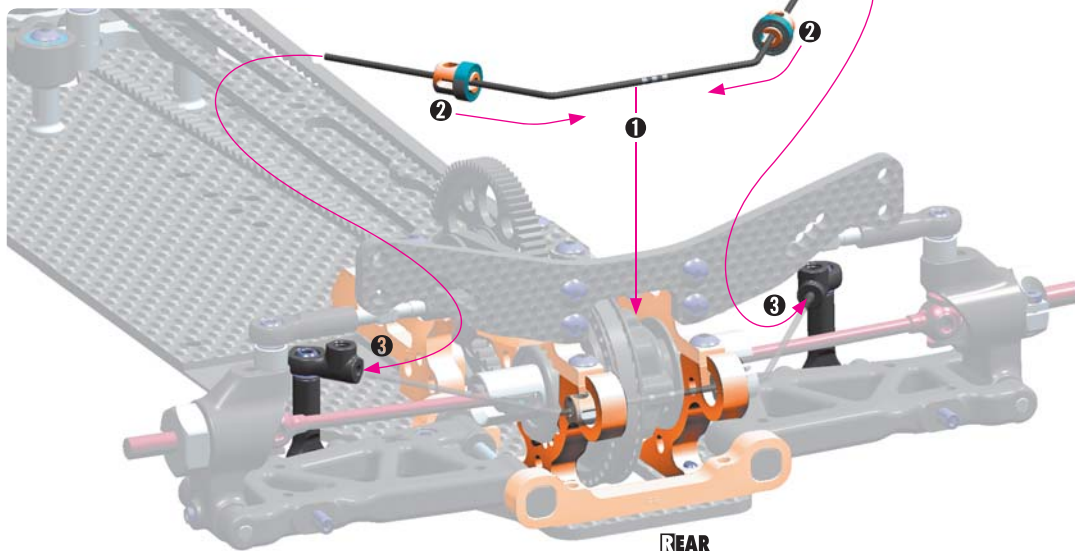


- 901303
SB M3x3
- 901304
SB M3x4

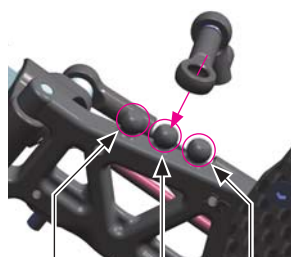


5. FRONT & REAR TRANSMISSION

REAR ANTI-ROLL BAR



2x INITIAL POSITION



OUTER MIDDLE INNER

STANDARD SUSPENSION INITIAL POSITION = 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 medium-traction 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 holes which are identical as inner and middle ball on the standard rear arm.

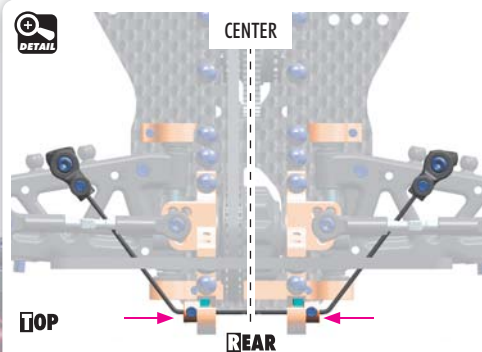
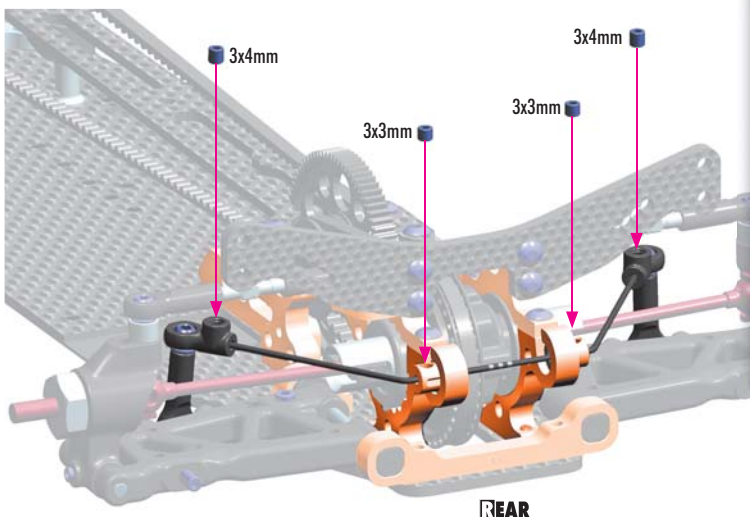


ANTI-ROLL BARS

901303
SB M3x3

901304
SB M3x4

REAR ANTI-ROLL BAR



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

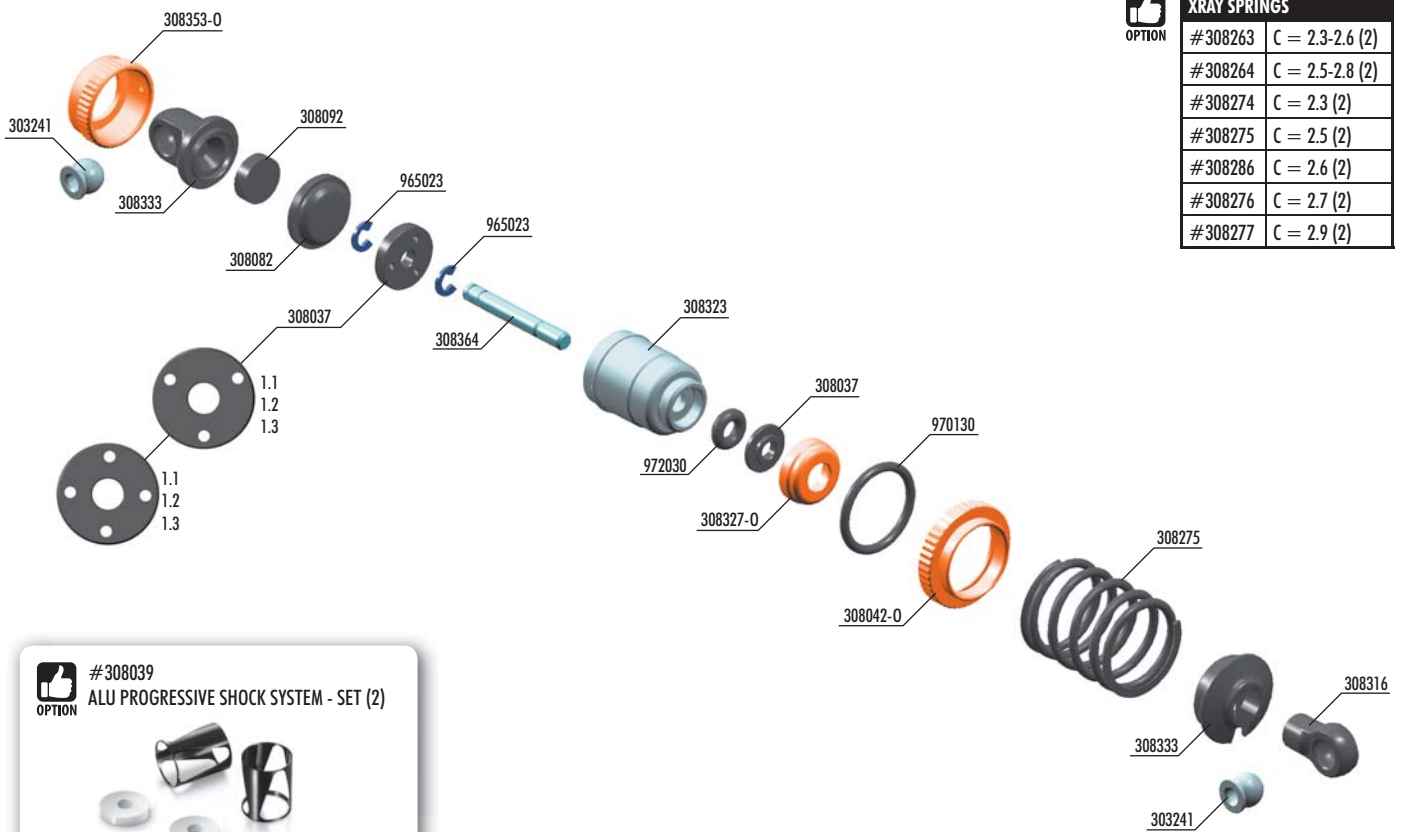


When the bars are set, verify that both sides move at the same time. If they do, the bars are set up correctly. If not, make sure that both downstops are the same and that the bar wire is flat.



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

6. SHOCK ABSORBERS



XRAY SPRINGS	
#308263	C = 2.3-2.6 (2)
#308264	C = 2.5-2.8 (2)
#308274	C = 2.3 (2)
#308275	C = 2.5 (2)
#308286	C = 2.6 (2)
#308276	C = 2.7 (2)
#308277	C = 2.9 (2)



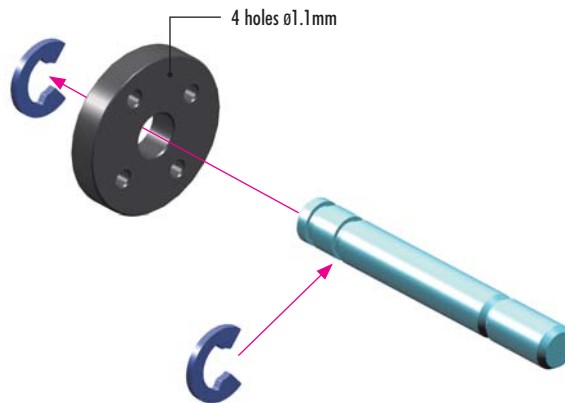
#308039
ALU PROGRESSIVE SHOCK SYSTEM - SET (2)



Progressive shock system for touring cars for improved traction and steering characteristics. Shock insert has 3 triangle cuts and is used with piston without holes. The hardness of the shock is influenced not by the holes in the piston but with the insert.



- | | | | |
|-----------|--|-----------|--|
| 30 3241 | BALL UNIVERSAL 5.8 MM HEX (4) | 30 8333 | T4 COMPOSITE SHOCK PARTS FOR ALU SHOCKS |
| 30 8037 | COMPOSITE PISTONS 4-HOLE 1.0-1.2MM, 3-HOLE 1.0-1.2MM | 30 8353-0 | T4 ALU SHOCK CAP-NUT WITH VENT HOLE - ORANGE (2) |
| 30 8042-0 | T4 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 8307-0 | XRAY T4 ALU SHOCK ABSORBER-SET - ORANGE (2) | 96 5023 | E-CLIP 2.3 (10) |
| 30 8316 | SHOCK BALL JOINT - OPEN (4) | 97 0130 | O-RING 13 x 1.5 (10) |
| 30 8323 | T4 ALU XRAY 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



4x

SHOCK OIL

SHOCK OIL

NOTE ORIENTATION



4x

SHOCK OIL

SHOCK OIL

1

2

CUTAWAY VIEW

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

4x

1mm

INCORRECT

CORRECT

DETAIL

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 OIL

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 to allow oil into all cavities within the shock body.
- 4 Extend 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.
- 5 Add shock oil as necessary.

4x

FOAM INSERT

CUTAWAY VIEW

After you insert the membrane, ensure that it is fully seated inside the alu cap.

4x

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

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.

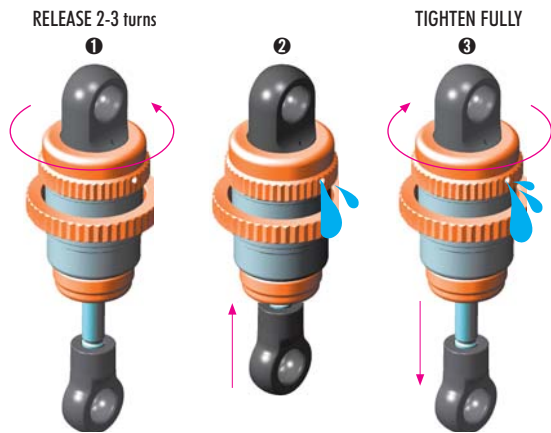
OPTION

SHOCK OILS		SHOCK OILS	
#106310	100cSt	#106355	550cSt
#106315	150cSt	#106360	600cSt
#106320	200cSt	#106365	650cSt
#106325	250cSt	#106370	700cSt
#106330	300cSt	#106375	750cSt
#106335	350cSt	#106380	800cSt
#106340	400cSt	#106390	900cSt
#106345	450cSt	#106410	1000cSt
#106350	500cSt	#106420	2000cSt



6. SHOCK ABSORBERS

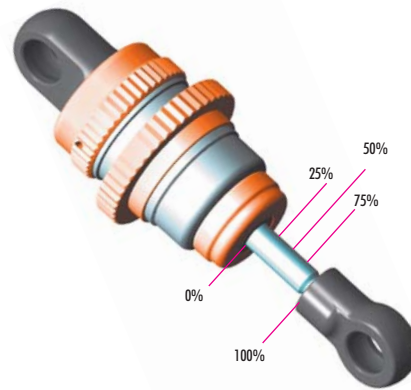
REBOUND ADJUSTMENT



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

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



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.

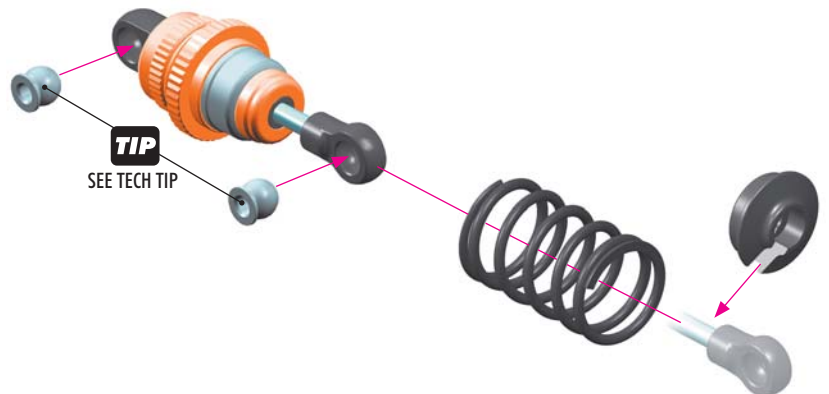
- 100% rebound - do not do step 2 and 3
- 75% rebound - repeat step 2 and 3 until the shock shaft will push out 75% of its length
- 50% rebound - repeat step 2 and 3 until the shock shaft will push out 50% of its length
- 25% rebound - repeat step 2 and 3 until the shock shaft will push out 25% of its length
- 0% rebound - repeat step 2 and 3 until the shock shaft will push out 0% of its length

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

4x

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.



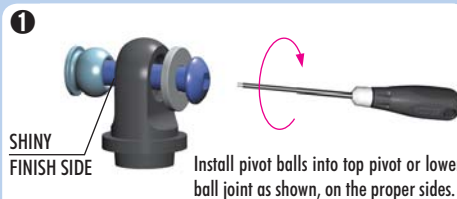
TECH TIP

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

- Parts Needed:
- M3x16 SH screw
 - M3 shim

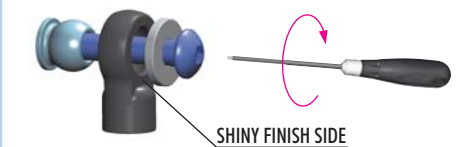
Note that the composite parts have two sides, noticeable around the pivot ball hole: one side has a shiny finish, the other side has a regular finish.

SHINY FINISH SIDE



Install pivot balls into top pivot or lower ball joint as shown, on the proper sides.

Note that the lower pivot ball has an extra shoulder.



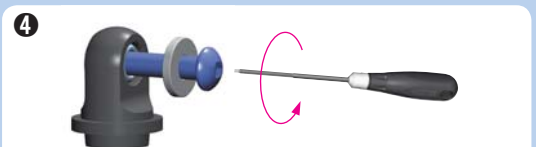
SHINY FINISH SIDE



Ensure pivot balls move freely.

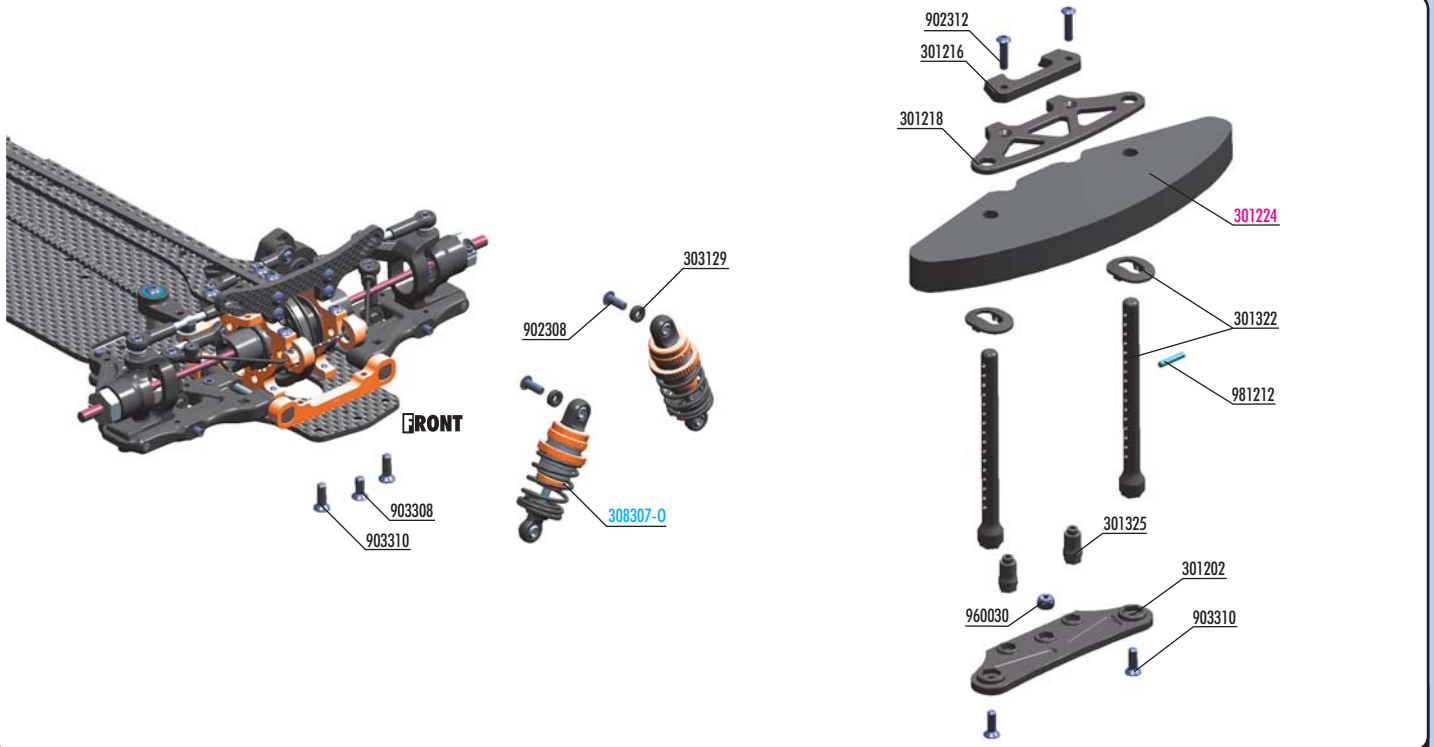


Tighten screw until pivot ball snaps into place.



Remove screw and shim.

7. FRONT & REAR ASSEMBLY



BAG

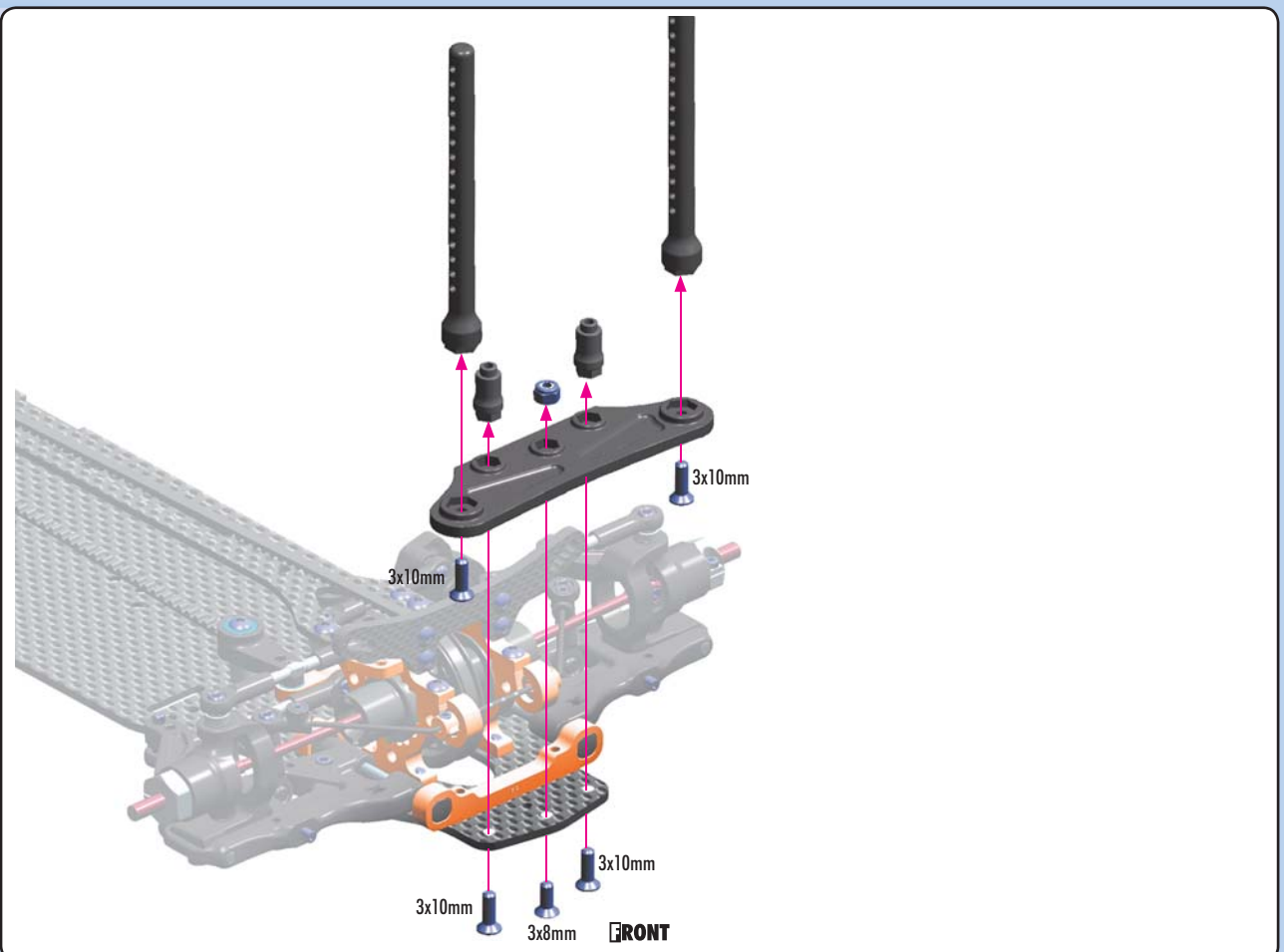
07

- 30 1202 COMPOSITE BUMPER
- 30 1213 GRAPHITE BUMPER UPPER HOLDER 2.5MM (OPTION)
- 30 1216 COMPOSITE BUMPER UPPER HOLDER BRACE
- 30 1218 COMPOSITE UPPER HOLDER FOR BUMPER
- 30 1322 FRONT BODY MOUNT SET
- 30 1323 FRONT BODY MOUNT SET +1MM HEIGHT (OPTION)
- 30 1324 FRONT BODY MOUNT SET +2MM HEIGHT (OPTION)
- 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 1224 T4 FOAM BUMPER

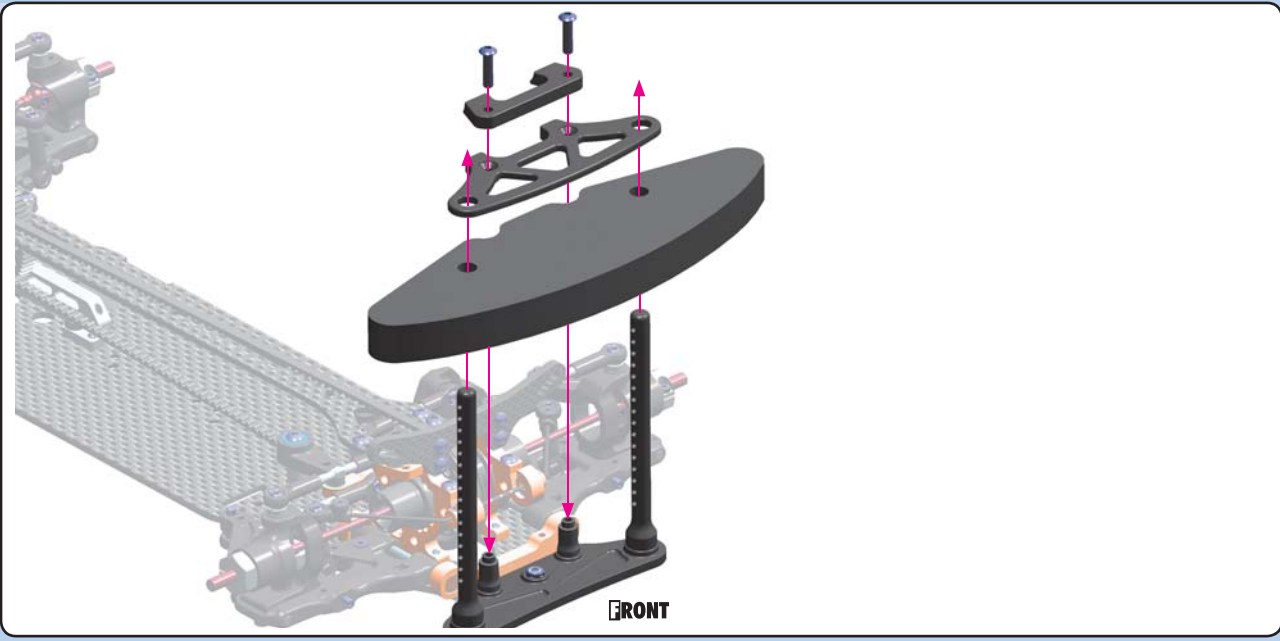
30 8307-0 XRAY T4 ALU SHOCK ABSORBER-SET - ORANGE (2)



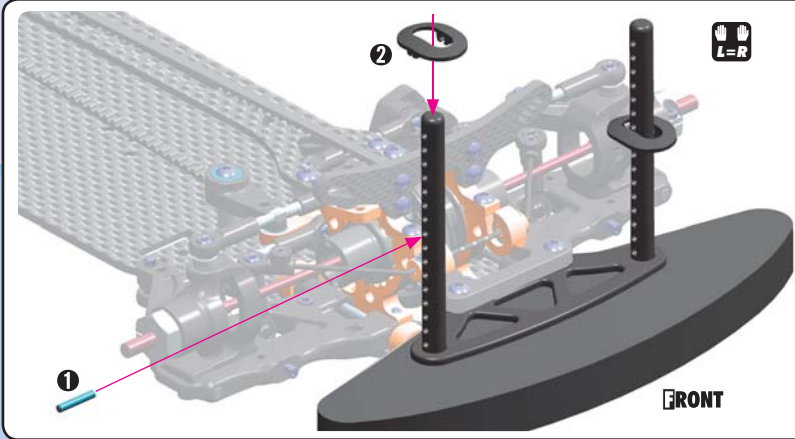
7. FRONT & REAR ASSEMBLY




902312
SH M3x12



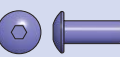

981212
P 2x12




#301351-0
ALU ADJUSTABLE BODY POST STOP (2)
OPTION



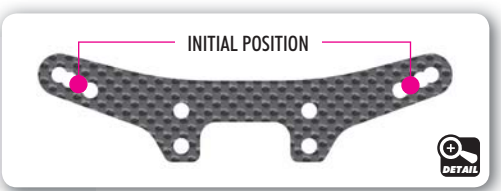
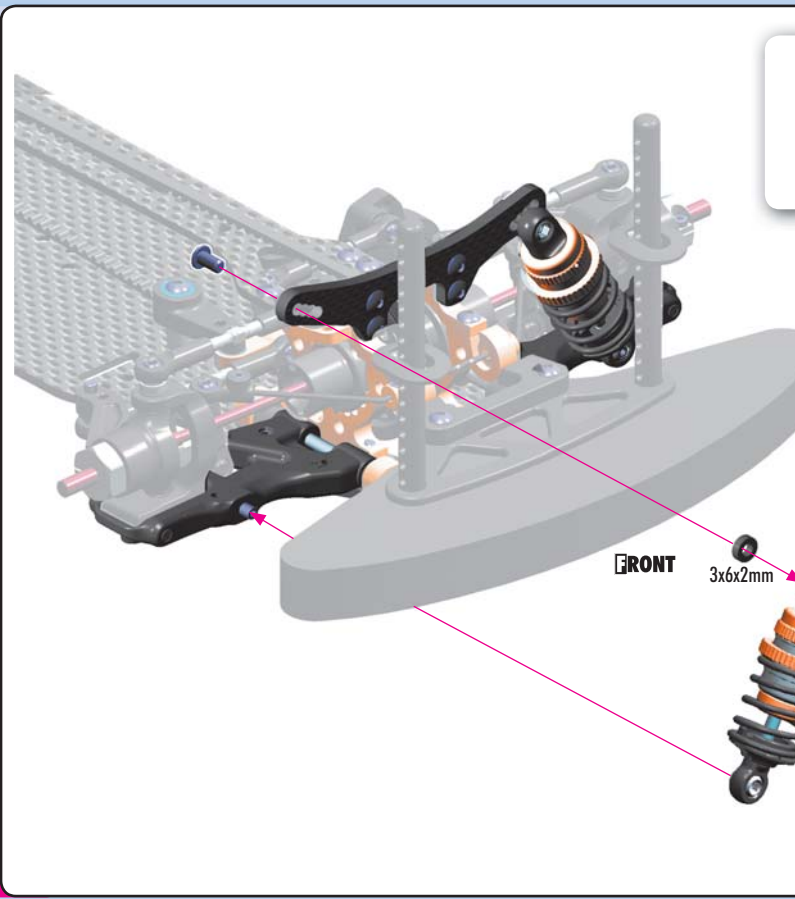
Very handy, easily externally adjustable body post from Swiss 7075 T6 aluminum. Allows for adjustment of body height by 3mm without needing to change the position on the body post.



902308
SH M3x8



303129
SHIM 3x6x2

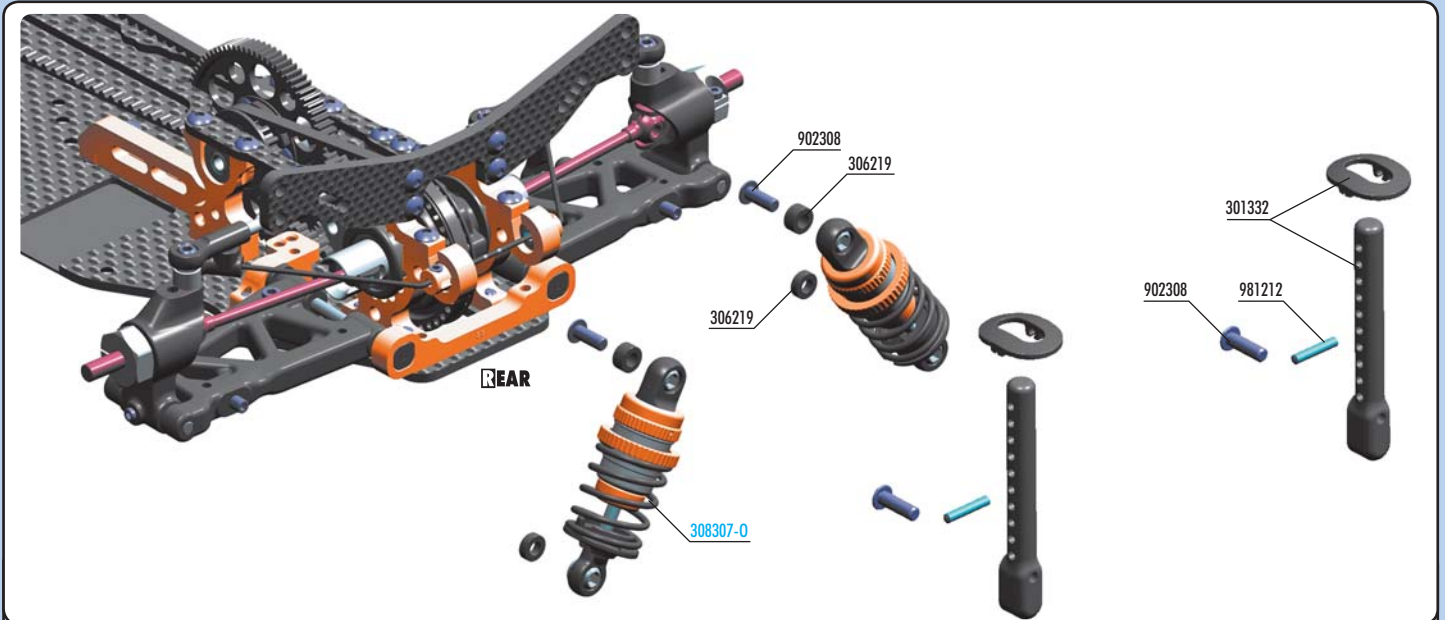



SET-UP BOOK

SHOCK POSITION
RIDE HEIGHT
DROOP



7. FRONT & REAR ASSEMBLY



BAG

07

- 30 1332 REAR BODY MOUNT SET
- 30 1333 REAR BODY MOUNT SET +1MM HEIGHT (OPTION)
- 30 1334 REAR BODY MOUNT SET +2MM HEIGHT (OPTION)
- 30 6219 COMPOSITE SET OF SERVO SHIMS (4)

- 90 2308 HEX SCREW SH M3x8 (10)
- 98 1212 PIN 2x12 (10)

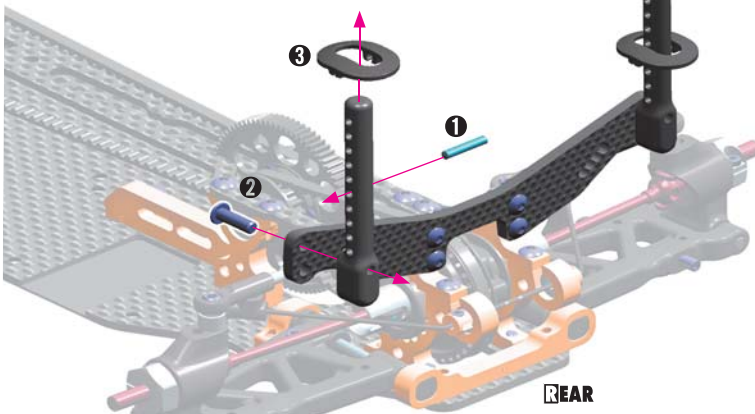
30 8307-0 XRAY T4 ALU SHOCK ABSORBER-SET - ORANGE (2)



902308
SH M3x8



981212
P 2x12



#301351-0
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.



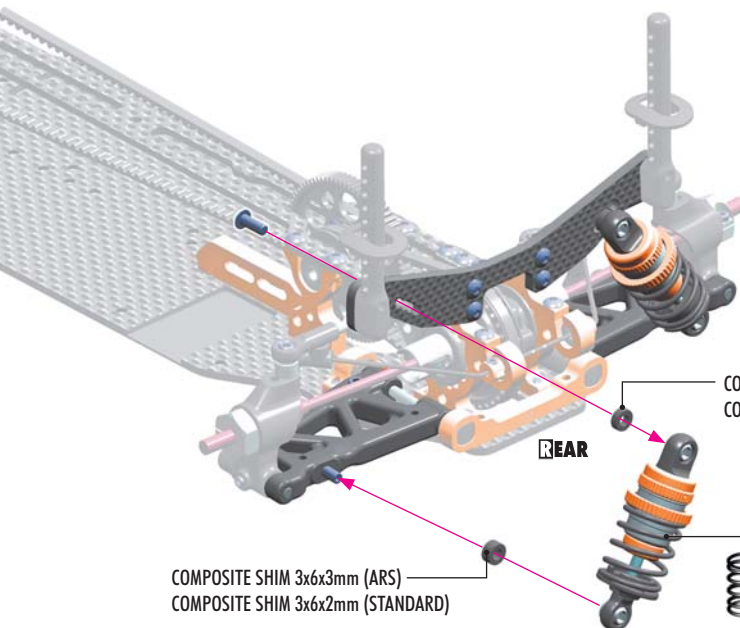
902308
SH M3x8

10

306219
SHIM 3x6x2

10

306219
SHIM 3x6x3



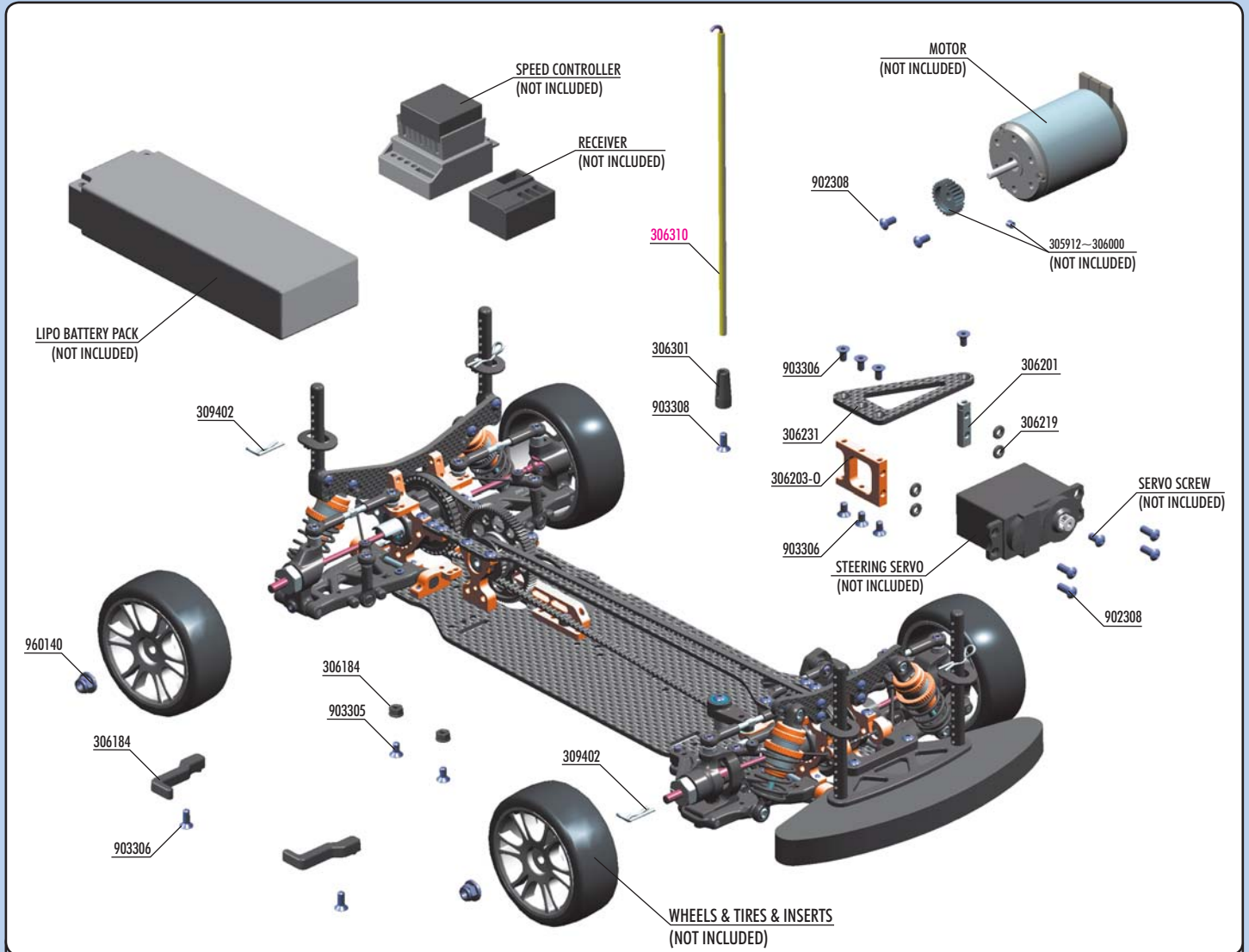
INITIAL POSITION



SET-UP BOOK

SHOCK POSITION
RIDE HEIGHT
DROOP

7. FINAL ASSEMBLY



BAG
07

- 30 3061 LIPO CHASSIS GRAPHITE MOTOR GUARD (OPTION)
- 305912-306000 NARROW PINION GEAR ALU HARD COATED (OPTION)
- 30 6163-K GRAPHITE BATTERY STRAP 6-CELL (SET) - BLACK (OPTION)
- 30 6184 LONG COMPOSITE LIPO BATTERY BACKSTOP (1 + 1)
- 30 6186 ALU LIPO BATTERY BACKSTOP (F + R) (OPTION)
- 30 6188 T4 GRAPHITE ADJUSTABLE BATTERY HOLDER (OPTION)
- 30 6191 T4 GRAPHITE + ALU FULLY ADJUSTABLE BATTERY HOLDER (OPTION)
- 30 6201 ALU SERVO MOUNT - LONG
- 30 6203-0 T4'15 ALU SERVO MOUNT - ORANGE
- 30 6219 COMPOSITE SET OF SERVO SHIMS (4)

- 30 6301 ANTENNA MOUNT - THIN
- 30 6231 T4'15 GRAPHITE SERVO HOLDER 2.5MM
- 30 9402 BODY CLIP FOR 6MM BODY POST (4)
- 90 2308 HEX SCREW SH M3x8 (10)
- 90 3305 HEX SCREW SFH M3x5 (10)
- 90 3306 HEX SCREW SFH M3x6 (10)
- 90 3308 HEX SCREW SFH M3x8 (10)
- 96 0140 NUT M4 WITH FLANGE (10)

30 6310 ANTENNA (2)

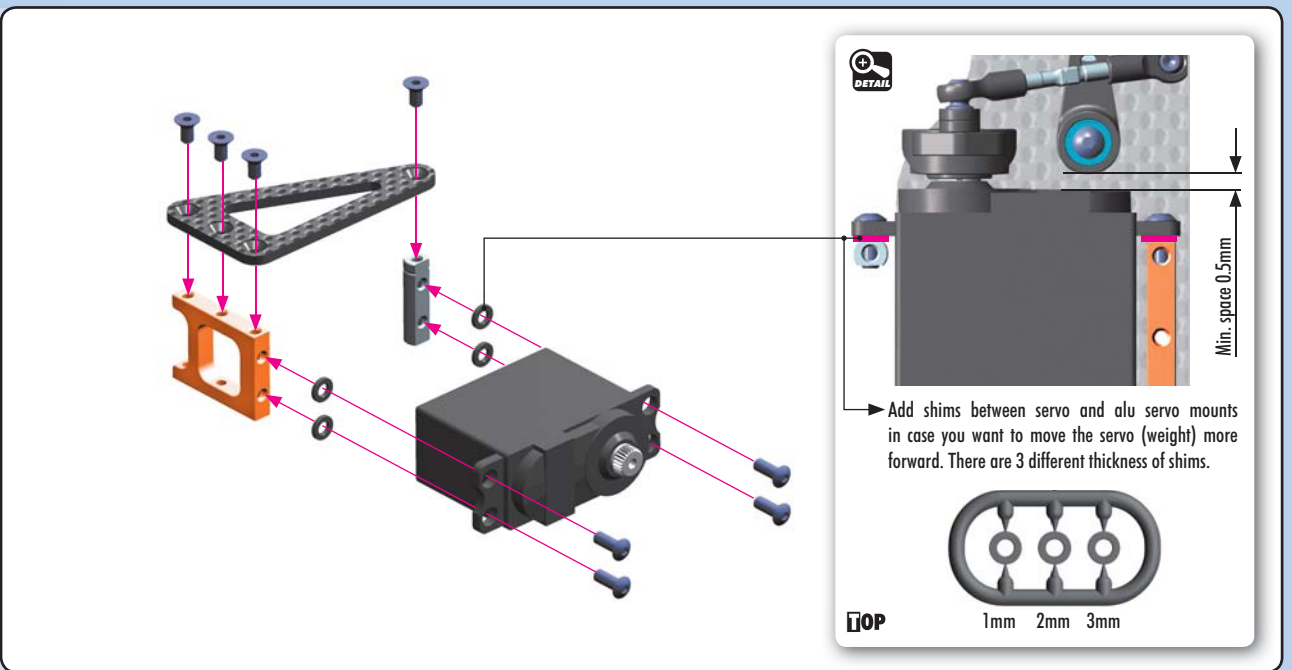
IO
306219 SHIM 3x6x1

IO
306219 SHIM 3x6x2

IO
306219 SHIM 3x6x3

902308
SH M3x8

903306
SFH M3x6

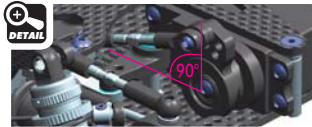


7. FINAL ASSEMBLY



903306
SFH M3x6

For improved weight balance and for more space for electronics, we recommend using a narrow, light servo.

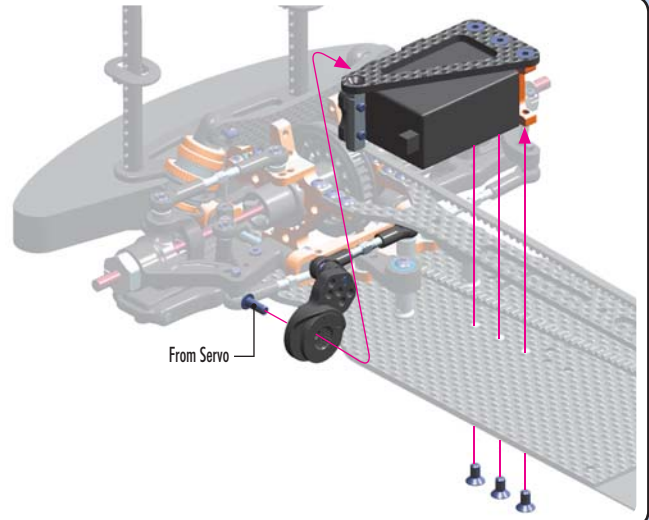


Attach servo arm to servo output shaft using screw from servo. Servo saver must be perpendicular to chassis when servo is in neutral.



IMPORTANT!

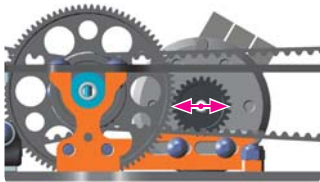
When adjusting steering on the radio, we recommend using full steering adjustment in order to get the best steering from the car. It is important to verify that the steering block does not touch the C-hub; that would lead to chassis tweak due to extra servo strain.



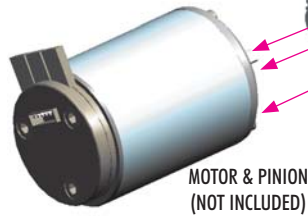
902308
SH M3x8

Adjust the motor so the pinion meshes with the spur gear properly. Make sure the gear mesh is not too tight.

There should be a small amount of play between the teeth of the pinion gear and the spur gear.



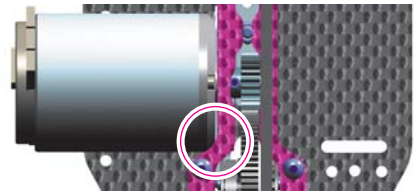
3x2.5mm set screw (#901302)
(NOT INCLUDED)



MOTOR & PINION
(NOT INCLUDED)

TIP

Some motors do not have a chamfer on the motor housing. If your motor does not have a chamfer on the housing and you want to use a small pinion, the motor may touch the top deck. Use a moto-tool with grinding bit or file to remove material from the top-deck; this will allow the motor to be moved closer to the spur gear.



#303061
LiPo Chassis Graphite Motor Guard



GEARING ADJUSTMENT



903308
SFH M3x8

Feed the receiver wire into the antenna tube

RECEIVER
(NOT INCLUDED)

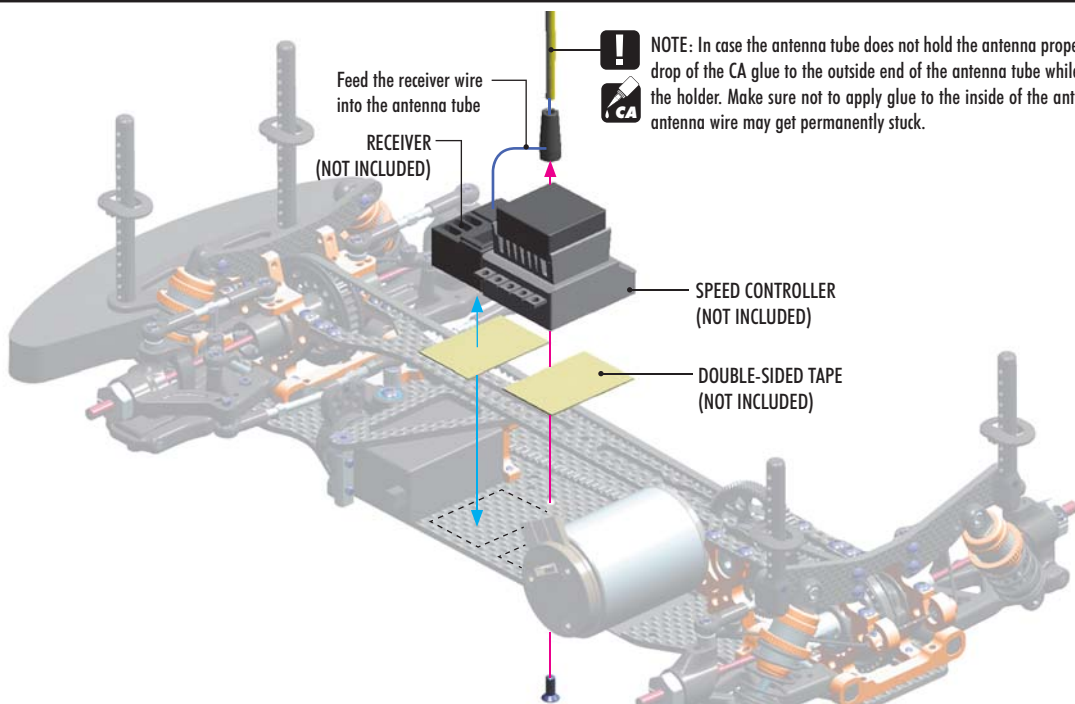


NOTE: In case the antenna tube does not hold the antenna properly, apply a small drop of the CA glue to the outside end of the antenna tube while inserting it into the holder. Make sure not to apply glue to the inside of the antenna tube, or the antenna wire may get permanently stuck.



SPEED CONTROLLER
(NOT INCLUDED)

DOUBLE-SIDED TAPE
(NOT INCLUDED)



7. FINAL ASSEMBLY



903305
SFH M3x5



903306
SFH M3x6

REAR

3x6mm

3x5mm

3x5mm

3x6mm

TIP Using the optional stand and shims with screw allows adjustment of battery position, which has a direct influence on balance.

OPTION #306186
ALU LIPO BATTERY BACKSTOPS (F+R)

OPTION #306191
T4 GRAPHITE + ALU FULLY ADJUSTABLE BATTERY HOLDER

4x

WHEELS & TIRES & INSERTS (NOT INCLUDED)

WARNING! Follow the adhesive manufacturer's instructions for proper use and safety. Wear proper eye and hand protection.

CA



960140
N M4

LIPO BATTERY PACK (NOT INCLUDED)

Make sure the wheel nuts are very tight, so the wheels do not loosen during racing.

We recommend using #107870 HUDY Fibre Reinforced Tape (NOT INCLUDED)

DETAIL

OPTION #306165
GRAPHITE BATTERY STRAP

Is designed for LiPo batteries and ensures quick & easy mounting of the battery pack into the car. Depending on the LiPo battery height, additional shims may have to be mounted below the stands.

RACE	<input type="text"/>
TRACK	<input type="text"/>
NAME	<input type="text"/>
CITY / COUNTRY	<input type="text"/>
CONTACT	<input type="text"/>
DATE	<input type="text"/>

TEMPERATURE AIR	<input type="text"/>	TEMPERATURE TRACK	<input type="text"/>
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QUAL POSITION	FINAL POSITION	BEST LAPTIME	RACE LENGTH
<input type="text"/>	<input type="text"/>	<input type="text"/> /sec	<input type="text"/> /min

TRACK	
TRACK SURFACE	<input type="checkbox"/> CARPET <input type="checkbox"/> ASPHALT

TRACK LAYOUT	<input type="checkbox"/> TECHNICAL <input type="checkbox"/> MIXED <input type="checkbox"/> FAST
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TRACTION	<input type="checkbox"/> LOW <input type="checkbox"/> MEDIUM <input type="checkbox"/> HIGH
----------	--

FRONT	TRANSMISSION	REAR
SOLID AXLE <input type="checkbox"/> YES	BALL DIFFERENTIAL <input type="checkbox"/> YES	
SOLID ONE WAY DIFFERENTIAL <input type="checkbox"/> YES		
ONE WAY DIFFERENTIAL <input type="checkbox"/> YES		

GEAR DIFFERENTIAL <input type="checkbox"/> YES	GEAR DIFFERENTIAL <input type="checkbox"/> YES
OIL <input type="text"/> /Cst	OIL <input type="text"/> /Cst

PINION / T	SPUR GEAR / T	FINAL DRIVE RATIO
<input type="text"/>	<input type="text"/>	<input type="text"/>

FRONT	SHOCKS	REAR
-------	--------	------

	SHOCK TYPE	
	XRAY SPRINGS	
	OIL /Cst	
	REBOUND %	
<input type="checkbox"/> YES <input type="checkbox"/> NO	FOAM INSERTS	<input type="checkbox"/> YES <input type="checkbox"/> NO
<input type="checkbox"/> YES <input type="checkbox"/> NO	O-RING ON SHAFT	<input type="checkbox"/> YES <input type="checkbox"/> NO

<input type="checkbox"/> 3 HOLES	PISTONS	<input type="checkbox"/> 3 HOLES
<input type="checkbox"/> 4 HOLES	1.0mm	<input type="checkbox"/> 4 HOLES
	1.1mm	
	1.2mm	
	OTHERS	

THICKNESS/mm	ANTI-ROLL BAR	THICKNESS/mm
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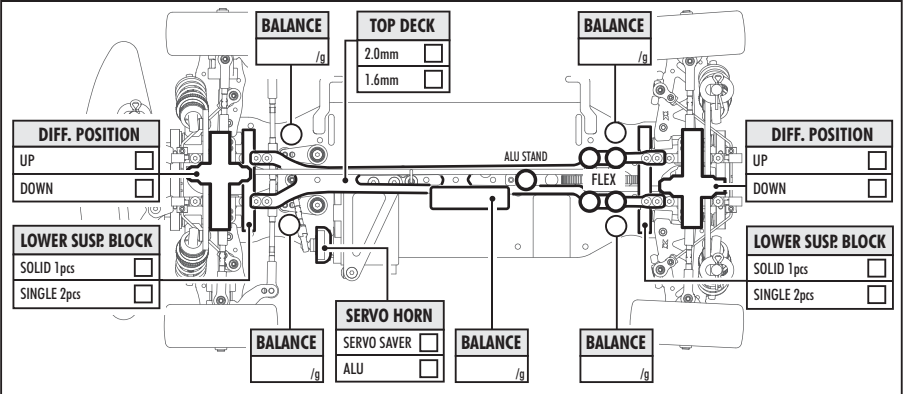
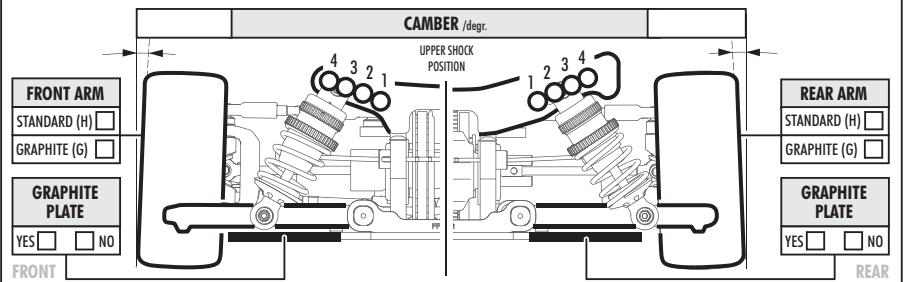
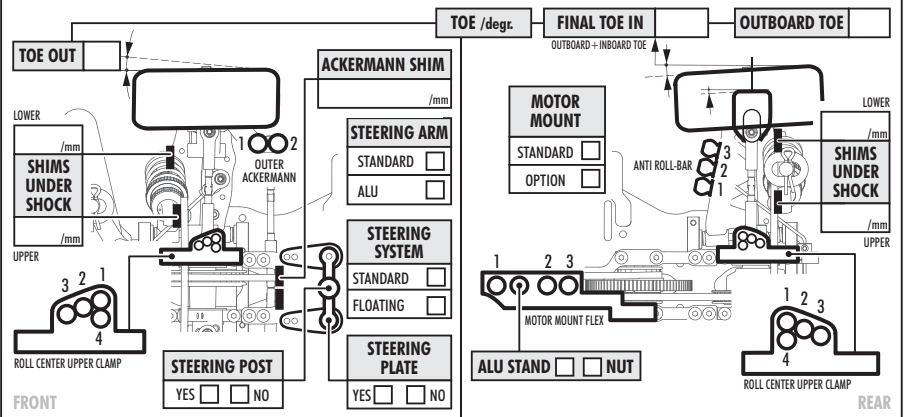
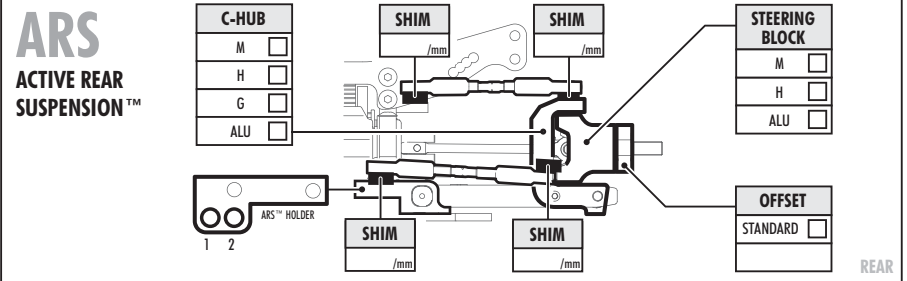
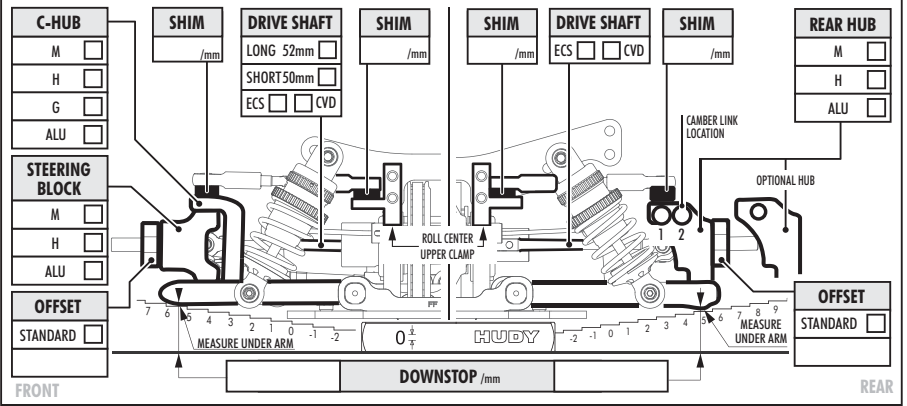
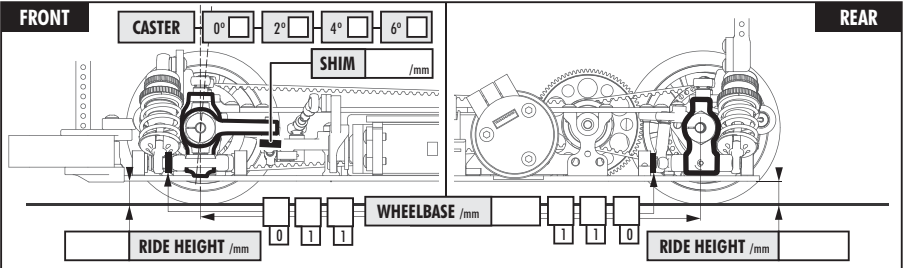
	TIRES	
	INSERTS	
	ADDITIVE	
	ADDITIVE TIMING	

FRONT LEFT	FRONT RIGHT	REAR LEFT	REAR RIGHT
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
TREATED AREA			

ECCENTRIC BUSHINGS	ROLL CENTER	ECCENTRIC BUSHINGS
	<input type="checkbox"/> 1 <input type="checkbox"/> 1 <input type="checkbox"/> 0.5 <input type="checkbox"/> 0.5	

MOTOR	TIMING
ESC	BATTERIES
BODY	WING

COMMENTS



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