

XRAY
1/10 LUXURY ELECTRIC TOURING CAR 4WD

T44


**WORLD
CHAMPION**
2018-2019


6x
**EUROPEAN
CHAMPION**

10x
ETS
EURO TOURING SERIES
CHAMPION

49x
**USA
NATIONAL
CHAMPION**

29x
**ASIAN
ONROAD
CHAMPIONSHIP**


**MADE IN
EUROPE**

INSTRUCTION MANUAL

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.

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.

- Keep the wheels of the model off the ground when checking the operation of the radio equipment.
- Disconnect the battery pack before storing your model.
- When learning to operate your model, go to an area that has no obstacles that can damage your model if your model suffers a collision.
- Remove any sand, mud, dirt, grass or water before putting your model away.
- If the model behaves strangely, immediately stop the model, check and clear the problem.
- To prevent any serious personal injury and/or damage to property, be responsible when operating all remote controlled models.
- The model car is not intended for use on public places and roads or areas where its operation can conflict with or disrupt pedestrian or vehicular traffic.
- Because the model car is controlled by radio, it is subject to radio interference from many sources that are beyond your control. Since radio interference can cause momentary loss of control, always allow a safety margin in all directions around the model in order to prevent collisions.
- Do not use your model:
 - Near real cars, animals, or people that are unaware that an RC car is being driven.
 - In places where children and people gather
 - In residential districts and parks
 - In limited indoor spaces
 - In wet conditions
 - In the street
 - In areas where loud noises can disturb others, such as hospitals and residential areas.
 - At night or anytime your line of sight to the model may be obstructed or impaired in any way.

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

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

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

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

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 exceed the monetary value of this product.

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

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

All rights reserved.

QUALITY CERTIFICATE

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

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

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

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

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 view 	Follow Set-up Book

TOOLS REQUIRED

HUDY TOOLS: Allen: 1.5mm Allen: 2.0mm Allen: 3.0mm Socket: 5.5mm Socket: 7.0mm Arm Reamer 3.0mm						Turnbuckle Wrench 4mm (HUDY #181040)
Scissors (HUDY #188990) 	Combination Pliers (HUDY #189020) 	Side Cutters (HUDY #189010) 	Pocket Hobby Knife (HUDY #188981) 	RC Shock-Plier Uni Tool (HUDY #183011) 	Reamer (HUDY #107600) or (HUDY #107601) 	

ITEMS INCLUDED

Premium Silicone Oil 450cSt (HUDY #106345) 	Premium Silicone Oil 3000cSt (HUDY #106430)
Graphite Grease (HUDY #106210) 	

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.								
<table border="1"> <thead> <tr> <th colspan="2">SAMPLE OF OPTIONAL PARTS</th> </tr> </thead> <tbody> <tr> <td>#30XXX</td> <td>OPTION 1</td> </tr> <tr> <td>#30XXX</td> <td>OPTION 2</td> </tr> <tr> <td>#30XXX</td> <td>OPTION 3</td> </tr> </tbody> </table>	SAMPLE OF OPTIONAL PARTS		#30XXX	OPTION 1	#30XXX	OPTION 2	#30XXX	OPTION 3	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.
SAMPLE OF OPTIONAL PARTS									
#30XXX	OPTION 1								
#30XXX	OPTION 2								
#30XXX	OPTION 3								

EQUIPMENT REQUIRED

Transmitter 	Receiver 	Steering Servo 	Electric Motor & Pinion Gear and Setscrew 	Bearing Oil (HUDY #106230) 	Speed Controller
190mm Bodysell 	LiPo Battery 	Lexan™ Paint 	Battery Charger 	Fibre Tape (HUDY #107870) Double-sided Tape (HUDY #107875) 	Wheels & Tires & Inserts (HUDY #803053 C3-28) (HUDY #803062 A1-36)

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.

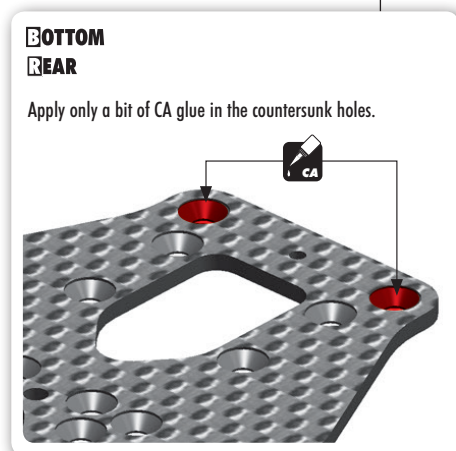
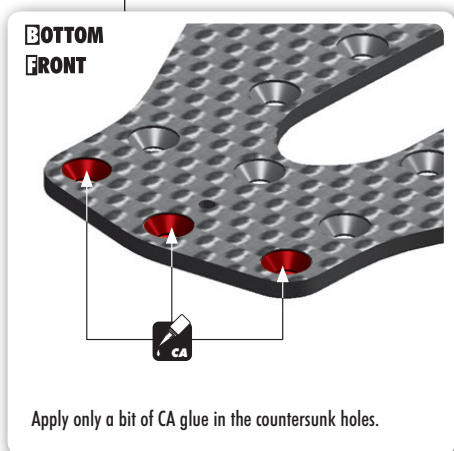
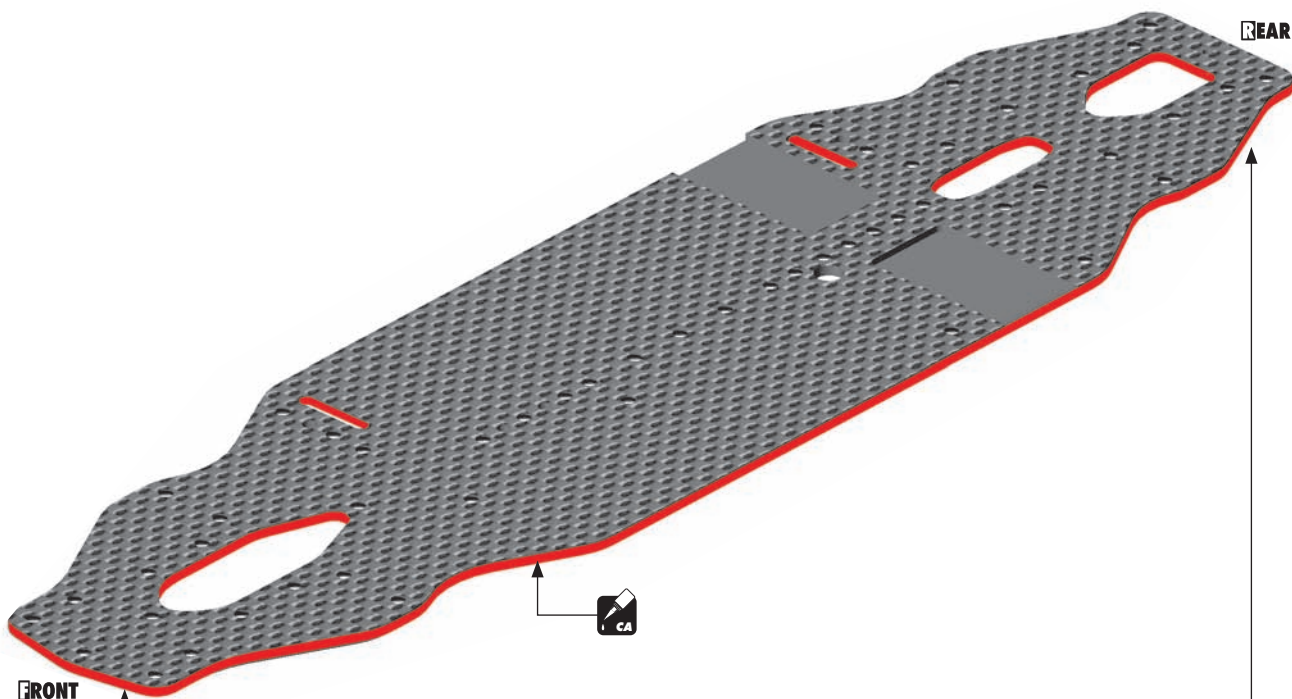
STYLE B - indicates parts that are included in the box.

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

#304932
OPTION
GRAPHITE GEAR DIFF BEVEL & SATELLITE GEARS (2+4)

#309002
OPTION
SET OF CERAMIC BALL-BEARINGS (14)

#304971
OPTION
HUDY SPRING STEEL™ OUTDRIVES

#305136
OPTION
ALU SOLID DRIVESHAFT ADAPTERS

#305137
OPTION
STEEL SOLID AXLE DRIVESHAFT ADAPTERS
HUDY SPRING STEEL™

01.2
GEAR DIFFERENTIAL

01.1
COMPOSITE SOLID AXLE

BAG	<p>01.1</p> <p>01.2</p>	<table border="0"> <tr> <td>304900</td> <td>XRAY GEAR DIFFERENTIAL - SET</td> <td>902310</td> <td>HEX SCREW SH M3x10 (10)</td> </tr> <tr> <td>304910</td> <td>COMPOSITE GEAR DIFF CASE & COVER</td> <td>903256</td> <td>HEX SCREW SFH M2.5x6 (10)</td> </tr> <tr> <td>304930</td> <td>COMPOSITE GEAR DIFF BEVEL & SATELLITE GEARS (2+4)</td> <td>941015</td> <td>BALL-BEARING 10x15x4 RUBBER SEALED - OIL (2)</td> </tr> <tr> <td>304970</td> <td>ALU GEAR DIFF OUTDRIVE ADAPTER - 7075 T6 (2)</td> <td>964031</td> <td>WASHER S 3.5x10x0.2 (10)</td> </tr> <tr> <td>304980</td> <td>COMPOSITE GEAR DIFF CROSS PIN</td> <td>964050</td> <td>WASHER S 5x15x0.3 (10)</td> </tr> <tr> <td>304990</td> <td>DIFF GASKET (4)</td> <td>971240</td> <td>SILICONE O-RING 24x0.7 (10)</td> </tr> <tr> <td>305135</td> <td>COMPOSITE SOLID AXLE DRIVESHAFT ADAPTERS (2)</td> <td>972050</td> <td>SILICONE O-RING 5x2 (10)</td> </tr> <tr> <td>305188</td> <td>COMPOSITE SOLID AXLE 38T - SET</td> <td>981210</td> <td>PIN 2x10 (10)</td> </tr> </table>	304900	XRAY GEAR DIFFERENTIAL - SET	902310	HEX SCREW SH M3x10 (10)	304910	COMPOSITE GEAR DIFF CASE & COVER	903256	HEX SCREW SFH M2.5x6 (10)	304930	COMPOSITE GEAR DIFF BEVEL & SATELLITE GEARS (2+4)	941015	BALL-BEARING 10x15x4 RUBBER SEALED - OIL (2)	304970	ALU GEAR DIFF OUTDRIVE ADAPTER - 7075 T6 (2)	964031	WASHER S 3.5x10x0.2 (10)	304980	COMPOSITE GEAR DIFF CROSS PIN	964050	WASHER S 5x15x0.3 (10)	304990	DIFF GASKET (4)	971240	SILICONE O-RING 24x0.7 (10)	305135	COMPOSITE SOLID AXLE DRIVESHAFT ADAPTERS (2)	972050	SILICONE O-RING 5x2 (10)	305188	COMPOSITE SOLID AXLE 38T - SET	981210	PIN 2x10 (10)
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964050
S 5x15x0.3

972050
O 5x2

981210
P 2x10

STEP 4 5 DETAIL

#304971
OPTION
HUDY SPRING STEEL™ OUTDRIVES

#304932
OPTION
GRAPHITE GEAR DIFF BEVEL & SATELLITE GEARS (2+4)

964050
S 5x15x0.3

972050
O 5x2

981210
P 2x10

NOTE ORIENTATION

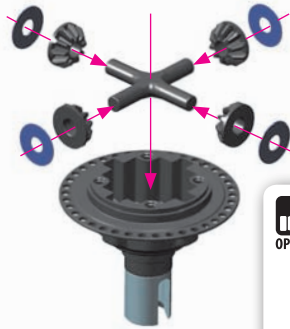
STEP 4 DETAIL
Use tweezers to insert pin.

CUTAWAY VIEW

1. GEAR DIFFERENTIAL & FRONT SOLID AXLE



964031
S 3.5x10x0.2



OPTION #304932
GRAPHITE GEAR DIFF BEVEL & SATELLITE GEARS (2+4)



INITIAL SETTING

3 000cSt



TIP

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

DOPLNIT AIR VAC

TO ENSURE YOU HAVE THE SAME AMOUNT OF OIL FROM R... WING:



7.90g

#107865

HUDY Ultimate Digital Pocket Scale 300g ± 0.01g



$$7.9g + 1.5g = 9.4g$$



9.40g

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

2 Slowly pour oil into the diff and watch the weight. Add 1.5g of oil into the diff. The approximate weight of the diff including oil is 9.40g.

TIP

TIPS FOR DIFFERENTIALS

TIP

LOW TRACTION

1 000cSt (HUDY #106410)
2 000cSt (HUDY #106420)

MEDIUM TRACTION

2 000cSt (HUDY #106420)
3 000cSt (HUDY #106430)
4 000cSt (HUDY #106440)
5 000cSt (HUDY #106450)

HIGH TRACTION

5 000cSt (HUDY #106450)
6 000cSt (HUDY #106460)
7 000cSt (HUDY #106470)
8 000cSt (HUDY #106480)
9 000cSt (HUDY #106490)
10 000cSt (HUDY #106510)

SUPER-HIGH TRACTION

10 000cSt (HUDY #106510)
15 000cSt (HUDY #106515)
20 000cSt (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™ outrives because the stress on the outrives in the front is much higher than in the rear.

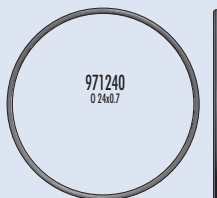
USE THESE OILS FOR FRONT DIFFERENTIAL

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

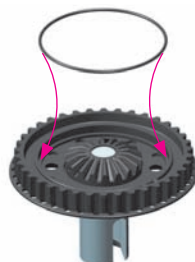
To make the front differential tighter, you can use cleaning gum instead of oil.

IMPORTANT!

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



971240
O 24x0.7



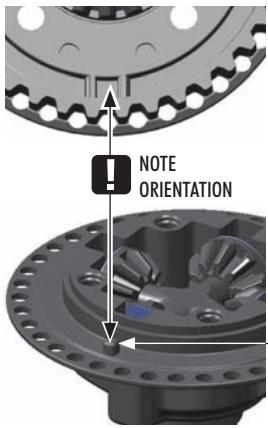
After disassembling the gear diff the large O-ring may have an increased size and may be more difficult to re-install. We recommend either inserting the old O-ring carefully in the diff cover, or replacing the old O-ring with a new O-ring if the old one cannot be made to fit properly.

1. GEAR DIFFERENTIAL & FRONT SOLID AXLE

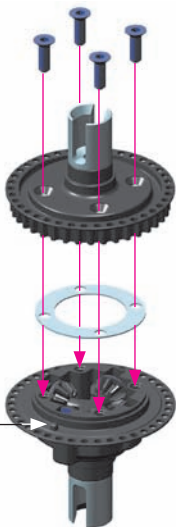


903256
SFH M2.5x6

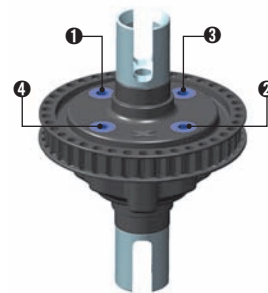
BOTTOM



NOTE ORIENTATION



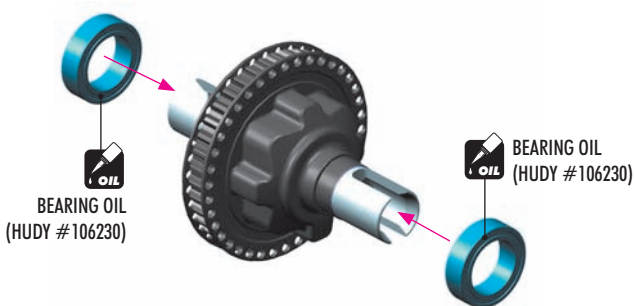
Tighten the screws equally but do NOT tighten them completely.



Finish tightening in this order.



941015
BB 10x15x4



BEARING OIL
(HUDY #106230)

BEARING OIL
(HUDY #106230)

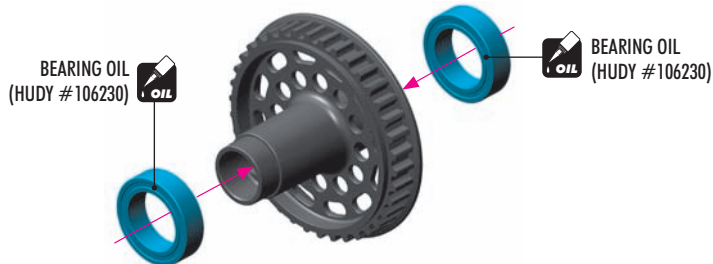
COMPOSITE FRONT SOLID AXLE



902310
SH M3x10

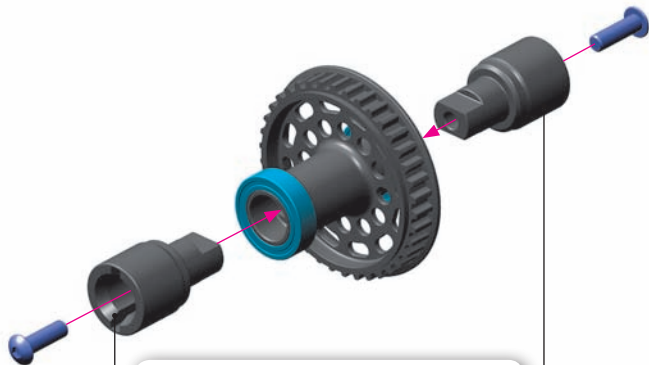


941015
BB 10x15x4



BEARING OIL
(HUDY #106230)

BEARING OIL
(HUDY #106230)



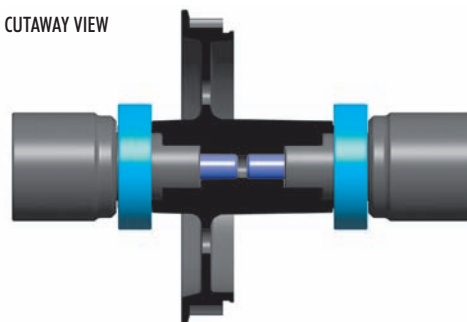
#305137
STEEL SOLID AXLE DRIVESHAFT ADAPTERS
HUDY SPRING STEEL™



#305136
ALU SOLID DRIVESHAFT ADAPTERS

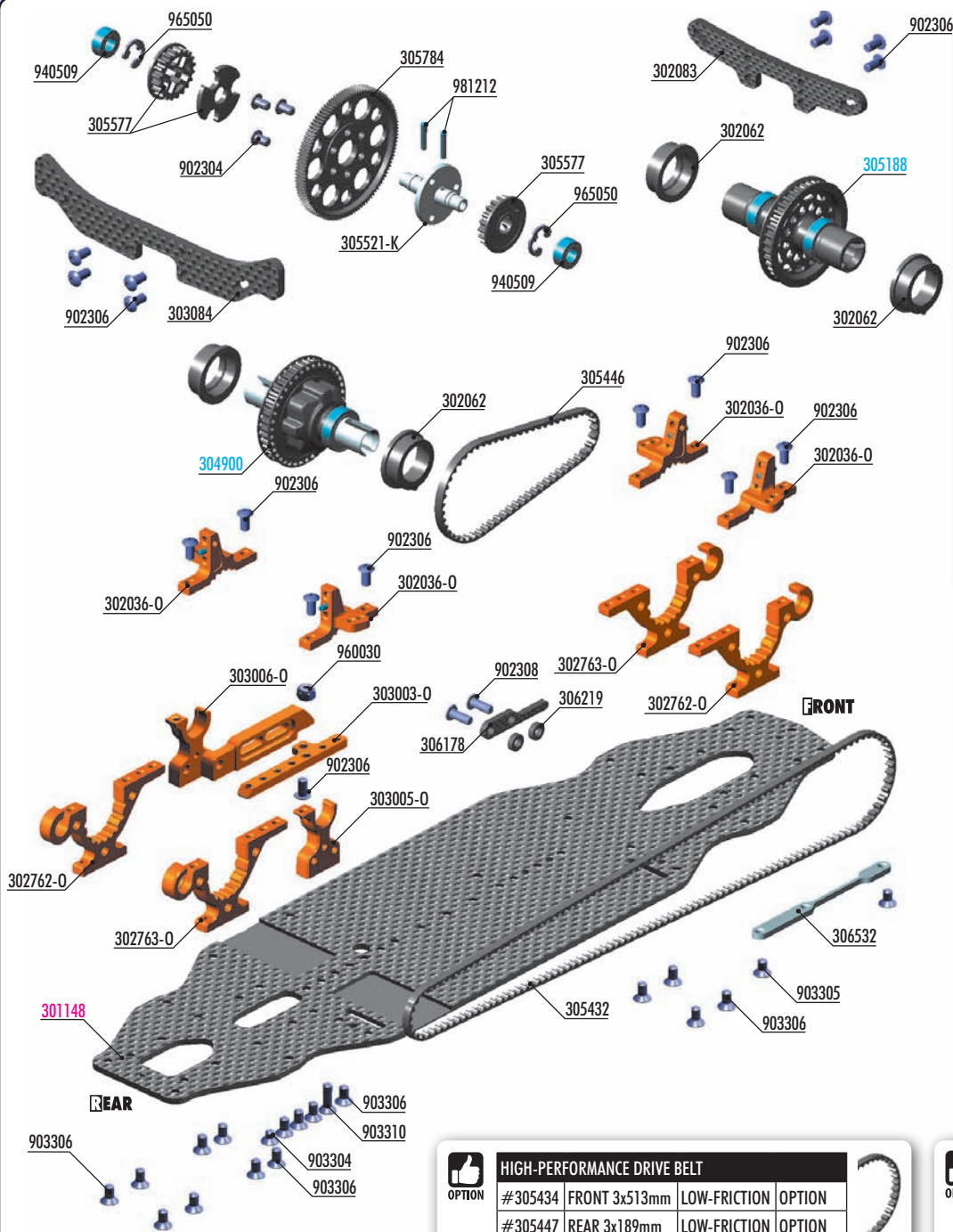


CUTAWAY VIEW



FRONT & REAR AXLES

2. CENTRAL TRANSMISSION



OPTION **OFFSET SPUR GEARS 48P**

#305772	72T / 48P	OPTION
#305776	76T / 48P	OPTION
#305778	78T / 48P	OPTION
#305779	79T / 48P	OPTION
#305781	81T / 48P	OPTION
#305784	84T / 48P	INCLUDED

OPTION **OFFSET SPUR GEARS 64P**

#305860	90T / 64P	OPTION
#305862	92T / 64P	OPTION
#305866	96T / 64P	OPTION
#305869	99T / 64P	OPTION
#305870	100T / 64P	OPTION
#305874	104T / 64P	OPTION
#305876	106T / 64P	OPTION
#305878	108T / 64P	OPTION
#305880	110T / 64P	OPTION
#305882	112T / 64P	OPTION
#305884	114T / 64P	OPTION

OPTION #309002 SET OF CERAMIC BALL-BEARINGS (14)

OPTION #303004 T4 BRASS MOTOR MOUNT PLATE

OPTION #305577-0 FIXED PULLEY 20T - LOW FRICTION - GRAPHITE (2)

OPTION #302063 ALU ADJUSTMENT BALL-BEARING HUB (2)

OPTION **HIGH-PERFORMANCE DRIVE BELT**

#305434	FRONT 3x513mm	LOW-FRICTION	OPTION
#305447	REAR 3x189mm	LOW-FRICTION	OPTION

OPTION #309855 BRASS BATTERY BACKSTOP

OPTION #301151 T4'19 ALU EXTRA-FLEX CHASSIS 2.0MM - WORLDS EDITION

OPTION #301150 T4'19 ALU FLEX CHASSIS 2.0mm

OPTION #301149 T4'19 ALU CHASSIS 2.0mm

BAG
02

- 302036-0 T4 ALU UPPER CLAMP WITH 2 ADJ. ROLL-CENTERS (L+R) - ORANGE
- 302062 T4 COMPOSITE ADJUSTMENT BALL-BEARING HUB (4)
- 302083 ULP SHOCK TOWER FRONT 3.0MM GRAPHITE
- 302762-0 T4 ALU LOWER ADJUSTMENT BULKHEAD - FRONT R / REAR L - ORANGE
- 302763-0 T4 ALU LOWER ADJUSTMENT BULKHEAD - FRONT L / REAR R - ORANGE
- 303003-0 T4 ALU MOTOR MOUNT PLATE - ORANGE
- 303005-0 T4'19 ALU LAYSHAFT BULKHEAD RIGHT - ORANGE
- 303006-0 T4'19 ALU MOTOR MOUNT - ORANGE
- 303084 ULP SHOCK TOWER REAR 3.0MM GRAPHITE
- 305432 HIGH-PERFORMANCE DRIVE BELT FRONT 3 x 513 MM
- 305446 HIGH-PERFORMANCE DRIVE BELT REAR 3 x 189 MM
- 305521-K ALU SOLID LAYSHAFT - BLACK
- 305577 COMPOSITE FIXED PULLEY 20T (2)
- 305784 SPUR GEAR 84T / 48
- 306178 GRAPHITE BATTERY BACKSTOP 2.2MM
- 306219 COMPOSITE SET OF SERVO SHIMS (4)

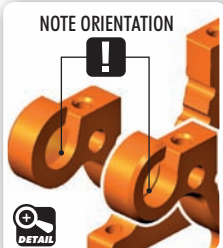
- 306532 T4'19 ALU CHASSIS STIFFENER - BLACK - 7075 T6
- 902304 HEX SCREW SH M3x4 - STAINLESS (10)
- 902306 HEX SCREW SH M3x6 (10)
- 902308 HEX SCREW SH M3x8 (10)
- 903304 HEX SCREW SFH M3x4 (10)
- 903305 HEX SCREW SFH M3x5 (10)
- 903306 HEX SCREW SFH M3x6 (10)
- 903310 HEX SCREW SFH M3x10 (10)
- 940509 BALL-BEARING 5x9x3 RUBBER-SEALED - OIL (2)
- 960030 NUT M3 (10)
- 965050 E-CLIP 5 (10)
- 981212 PIN 2x12 (10)

- 304900 XRAY GEAR DIFFERENTIAL - SET
- 305188 COMPOSITE SOLID AXLE 38T - SET
- 301148 T4'19 CHASSIS 2.2MM GRAPHITE


2. CENTRAL TRANSMISSION

-  902306
SH M3x6
-  903304
SFH M3x4
-  903306
SFH M3x6
-  903310
SFH M3x10
-  960030
N M3

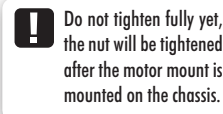
NOTE ORIENTATION

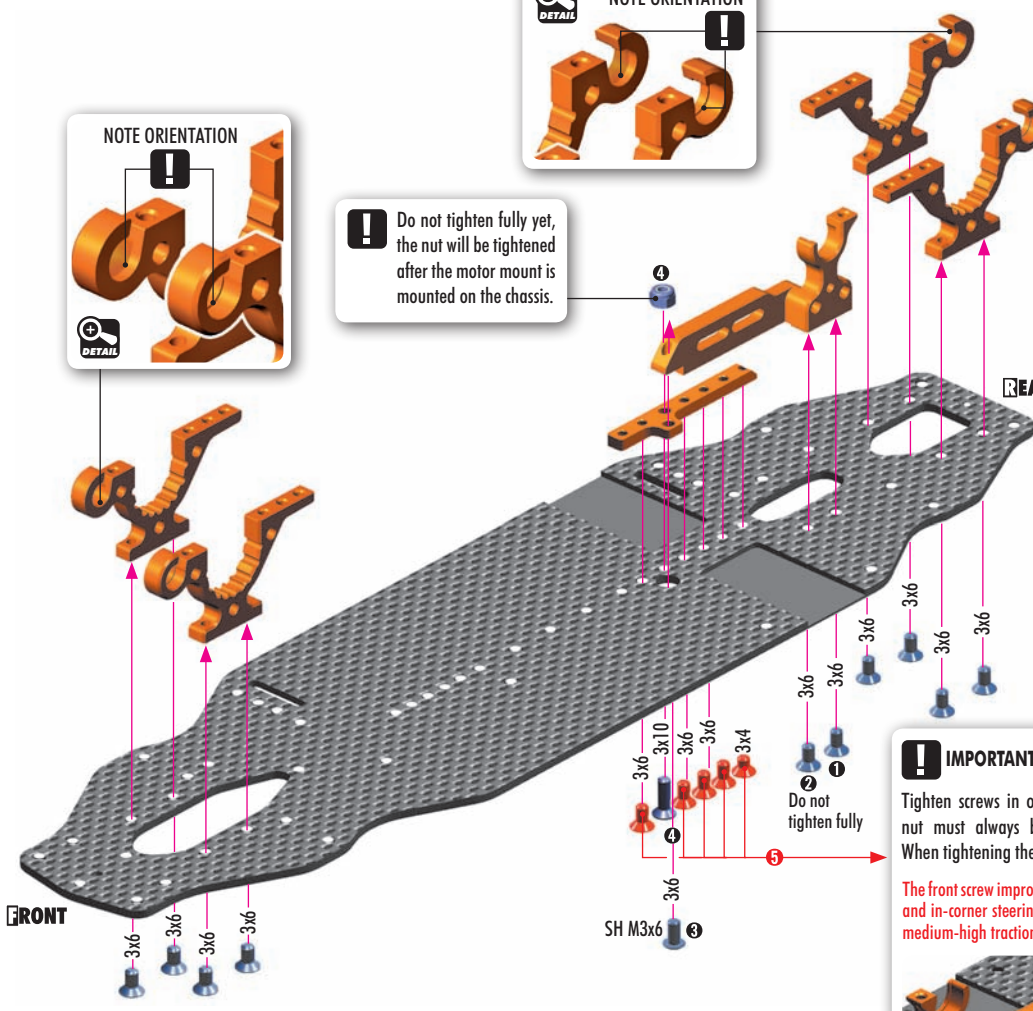


NOTE ORIENTATION



Do not tighten fully yet, the nut will be tightened after the motor mount is mounted on the chassis.

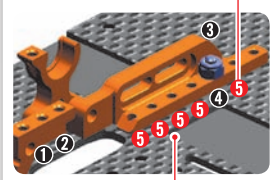





IMPORTANT!


Tighten screws in order indicated. M3 nut must always be tightened fully. When tightening the nut, use pliers.




The front screw improves steering response and in-corner steering. Recommended for medium-high traction tracks.



Using the back screws generates more traction and makes the car more stable in chicanes. Recommended for low-medium traction tracks.

 #303004
T4 BRASS MOTOR MOUNT PLATE
OPTION

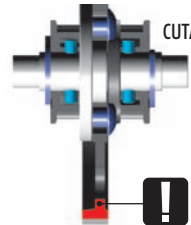


-  902304
SH M3x4
-  965050
CS
-  981212
P 2x12


SET-UP BOOK

GEARING ADJUSTMENT

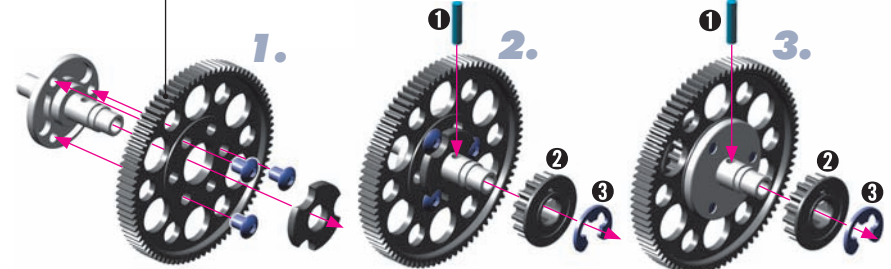
CUTAWAY VIEW





NOTE ORIENTATION
only when using XRAY OFFSET spur gears.



OFFSET SPUR GEARS 48P			OFFSET SPUR GEARS 64P		
#305772	72T	OPTION	#305860	90T	OPTION
#305776	76T	OPTION	#305862	92T	OPTION
#305778	78T	OPTION	#305866	96T	OPTION
#305779	79T	OPTION	#305869	99T	OPTION
#305781	81T	OPTION	#305870	100T	OPTION
#305784	84T	INCLUDED	#305874	104T	OPTION
			#305876	106T	OPTION
			#305878	108T	OPTION
			#305880	110T	OPTION
			#305882	112T	OPTION
			#305884	114T	OPTION



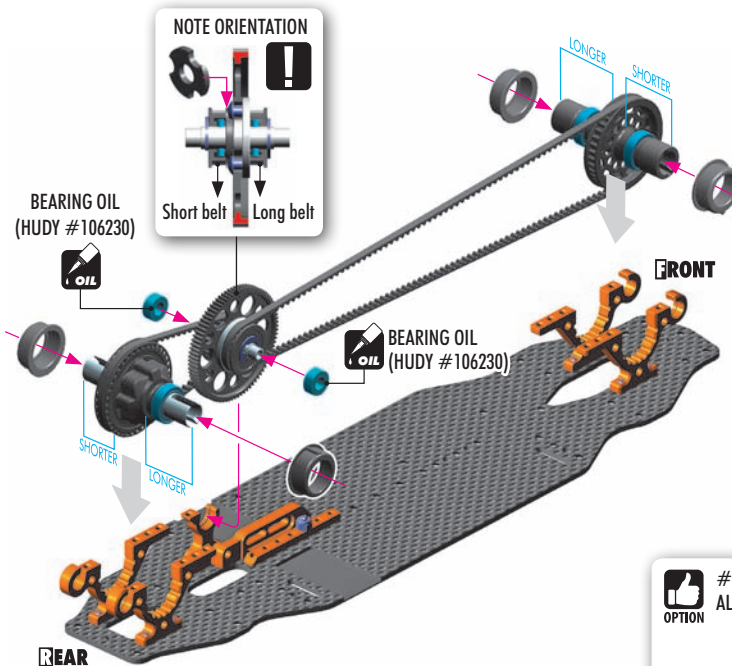
 #305577-0
FIXED PULLEY 20T - LOW FRICTION - GRAPHITE (2)
OPTION



2. CENTRAL TRANSMISSION



940509
BB 5x9x3



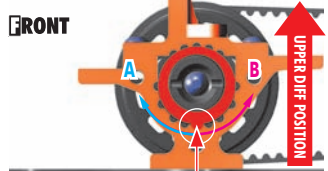
#302063
ALU ADJUSTMENT BALL-BEARING HUB (2)
OPTION



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.

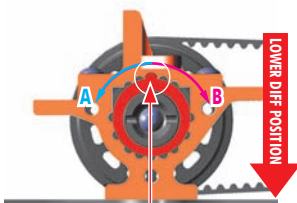


INITIAL POSITION FOR CARPET
Place tab in this **BOTTOM** NOTCH

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**

Front diff **LOWER** position - tab in top notch - provides **more front traction**, but makes the car **push on-power**.

Recommended for **low-traction** tracks.

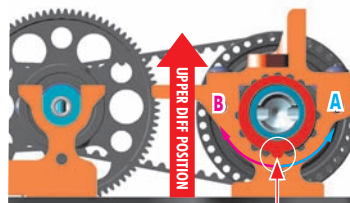


INITIAL POSITION FOR ASPHALT
Place tab in this **TOP** NOTCH

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.

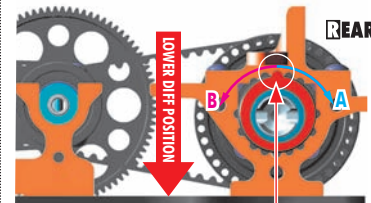


INITIAL POSITION FOR CARPET
Place tab in this **BOTTOM** NOTCH

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**

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



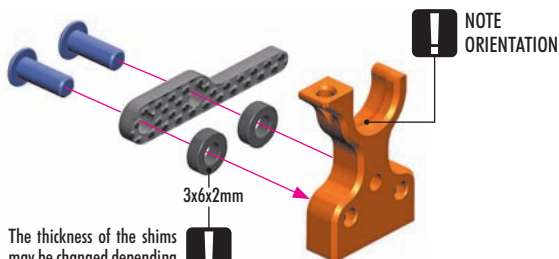
306219
SHIM 3x6x2



902308
SH M3x8

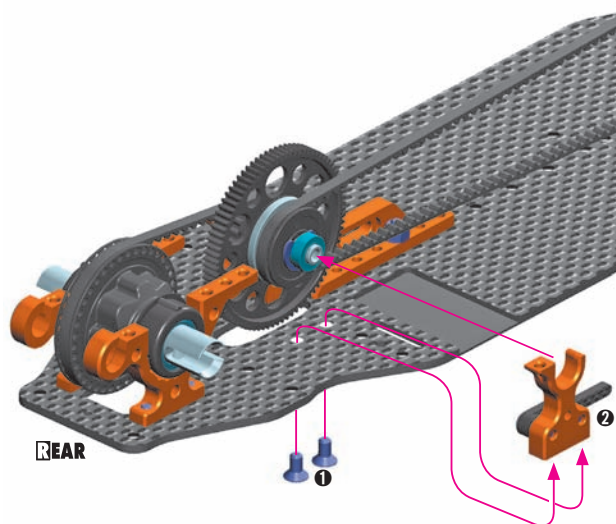


903306
SFH M3x6

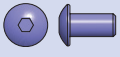


The thickness of the shims may be changed depending on the position of the batteries you want to use.

#309855
BRASS BATTERY BACKSTOP
OPTION



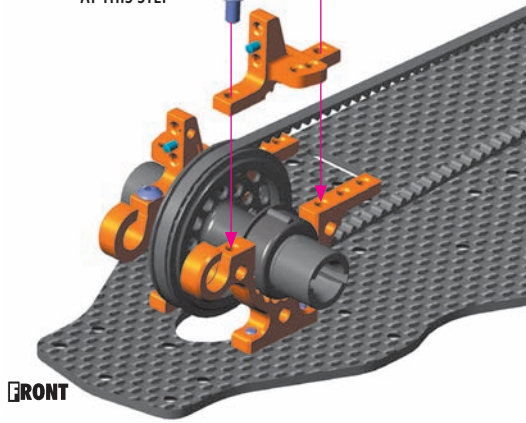
2. CENTRAL TRANSMISSION



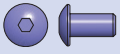
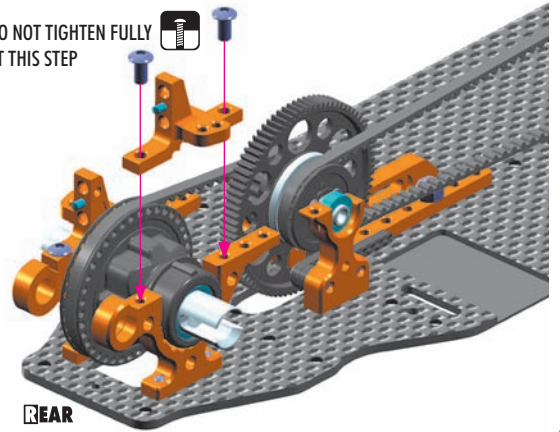
902306
SH M3x6



DO NOT TIGHTEN FULLY
AT THIS STEP

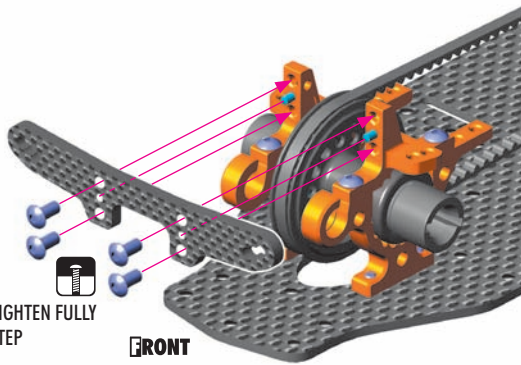


DO NOT TIGHTEN FULLY
AT THIS STEP

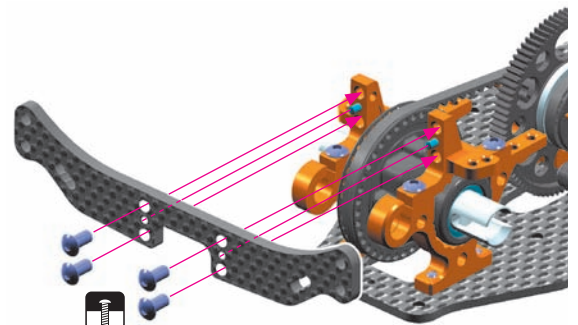


902306
SH M3x6

DO NOT TIGHTEN FULLY
AT THIS STEP

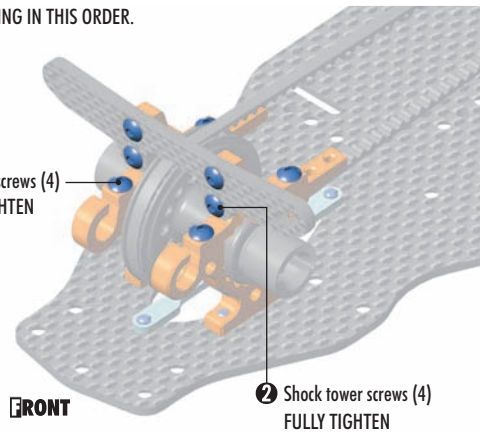


DO NOT TIGHTEN FULLY
AT THIS STEP



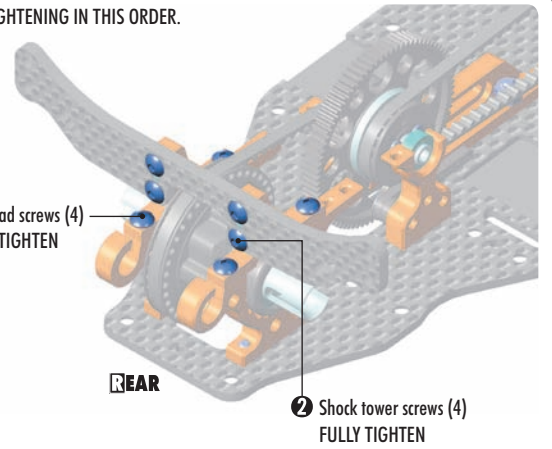
FINISH TIGHTENING IN THIS ORDER.

1 Bulkhead screws (4)
FULLY TIGHTEN



FINISH TIGHTENING IN THIS ORDER.

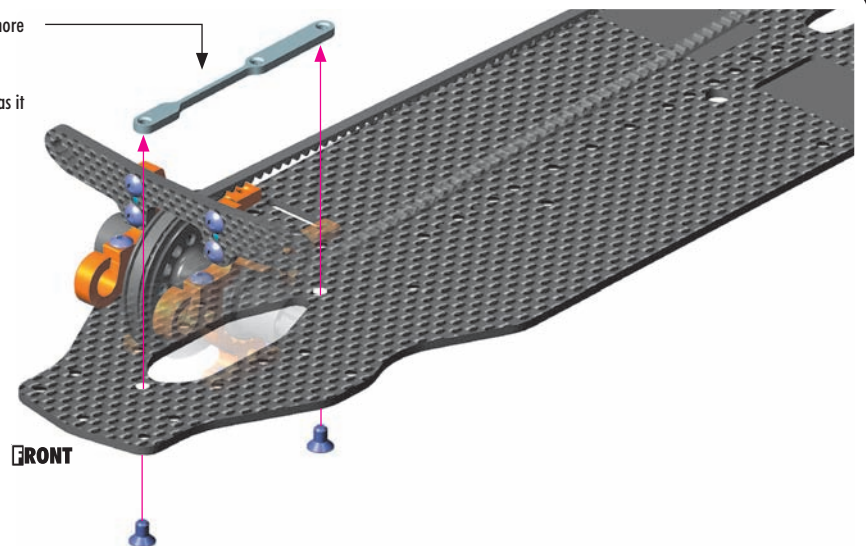
1 Bulkhead screws (4)
FULLY TIGHTEN



903305
SFH m3x5

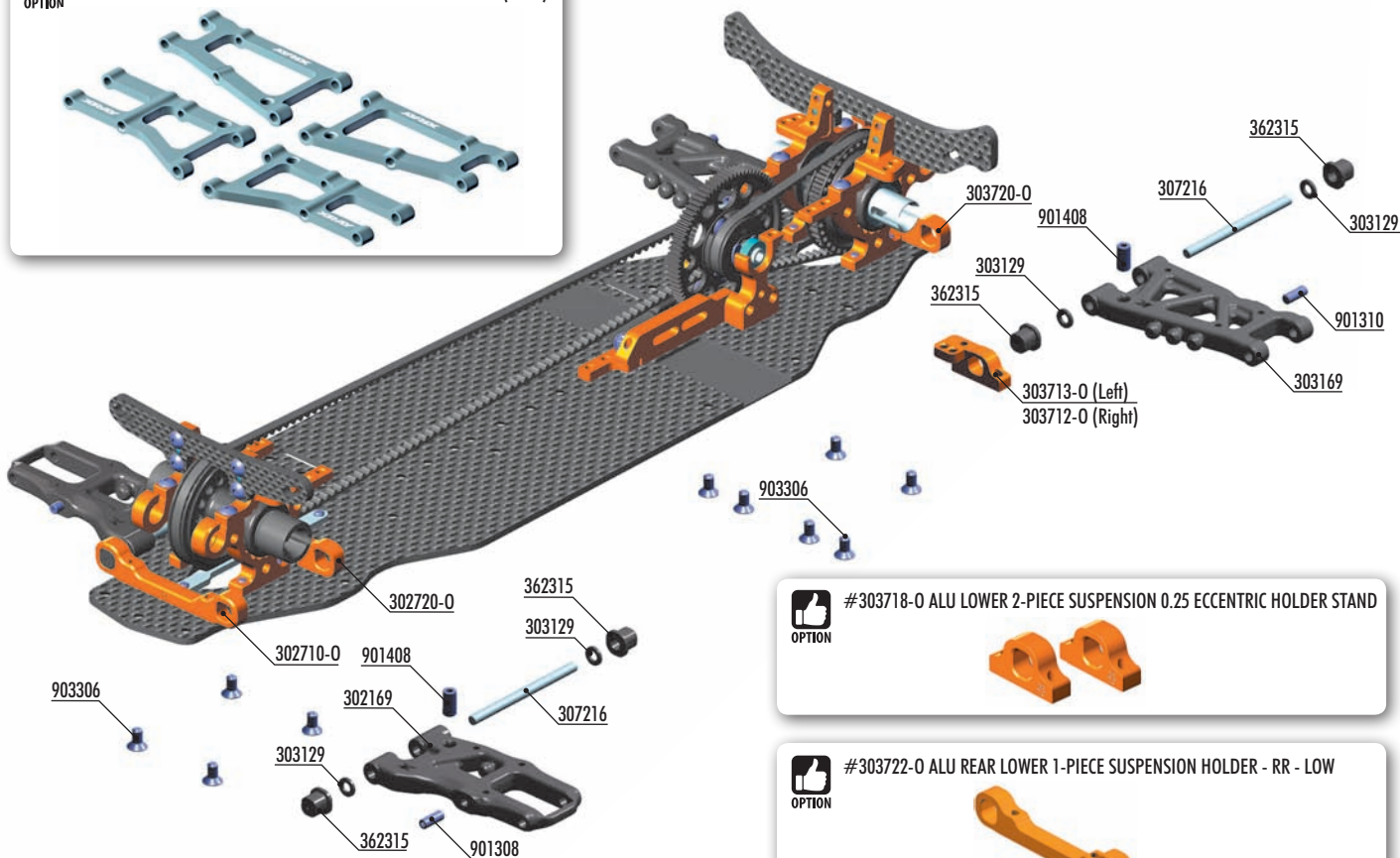
The brace improves in-corner steering and makes the car more precise to drive.

Recommended for use at low- and medium-traction tracks, as it may cause traction rolling in high-traction conditions.



3. FRONT & REAR SUSPENSION

#302101
ALU FRONT & REAR SUSPENSION ARM 1-HOLE - SWISS 7075 T6 (2+2)



#303718-0 ALU LOWER 2-PIECE SUSPENSION 0.25 ECCENTRIC HOLDER STAND
 OPTION



#303722-0 ALU REAR LOWER 1-PIECE SUSPENSION HOLDER - RR - LOW
 OPTION



#303716-0 ALU LOWER 2-PIECE SUSPENSION HOLDER - RIGHT - LOW
#303717-0 ALU LOWER 2-PIECE SUSPENSION HOLDER - LEFT - LOW
 OPTION



#302712-0 ALU FRONT 1-PIECE SUSPENSION HOLDER (FF-LOW)
#302722-0 ALU FRONT 1-PIECE SUSPENSION HOLDER (FR-LOW)
 OPTION



#302711 BRASS FRONT 1-PIECE SUSPENSION HOLDER - FRONT - FF
#302721 BRASS FRONT 1-PIECE SUSPENSION HOLDER - REAR - FR
#303714 BRASS 2-PIECE SUSPENSION HOLDER - RIGHT
#303715 BRASS 2-PIECE SUSPENSION HOLDER - LEFT
#303721 BRASS REAR 1-PIECE SUSPENSION HOLDER - REAR - RR
 OPTION



FRONT ARMS

#302168	HARD	OPTION
#302169	GRAPHITE	INCLUDED



REAR ARMS - STANDARD

#303168	HARD	OPTION
#303169	GRAPHITE	INCLUDED

REAR ARMS - ARS™

#303170	HARD	INCLUDED
#303171	GRAPHITE	OPTION



#307217 TITANIUM SUSPENSION PIVOT PIN (2)
 OPTION



08 FOR ALTERNATIVE SETTING
ACTIVE REAR SUSPENSION™
BAG



BAG

03

- 302169 FRONT SUSPENSION ARM - GRAPHITE - 1-HOLE
- 302710-0 ALU FRONT LOWER 1-PIECE SUSPENSION HOLDER - FRONT - FF
- 302720-0 ALU FRONT LOWER 1-PIECE SUSPENSION HOLDER - REAR - FR
- 303129 COMPOSITE SET OF WHEELBASE SHIMS (3x1MM; 1x2MM) (2)
- 303169 REAR SUSPENSION ARM - GRAPHITE - 1-HOLE
- 303170 ARS - ACTIVE REAR SUSPENSION ARM - HARD - 1-HOLE
- 303712-0 ALU LOWER 2-PIECE SUSPENSION HOLDER - RIGHT
- 303713-0 ALU LOWER 2-PIECE SUSPENSION HOLDER - LEFT

- 303720-0 ALU REAR LOWER 1-PIECE SUSPENSION HOLDER - REAR - RR
- 307216 SUSPENSION PIVOT PIN (2)
- 362315 ECCENTRIC BUSHING SET (2)
- 901308 HEX SCREW SB M3x8 (10)
- 901310 HEX SCREW SB M3x10 (10)
- 901408 HEX SCREW SB M4x8 (10)
- 903306 HEX SCREW SFH M3x6 (10)

3. FRONT & REAR SUSPENSION



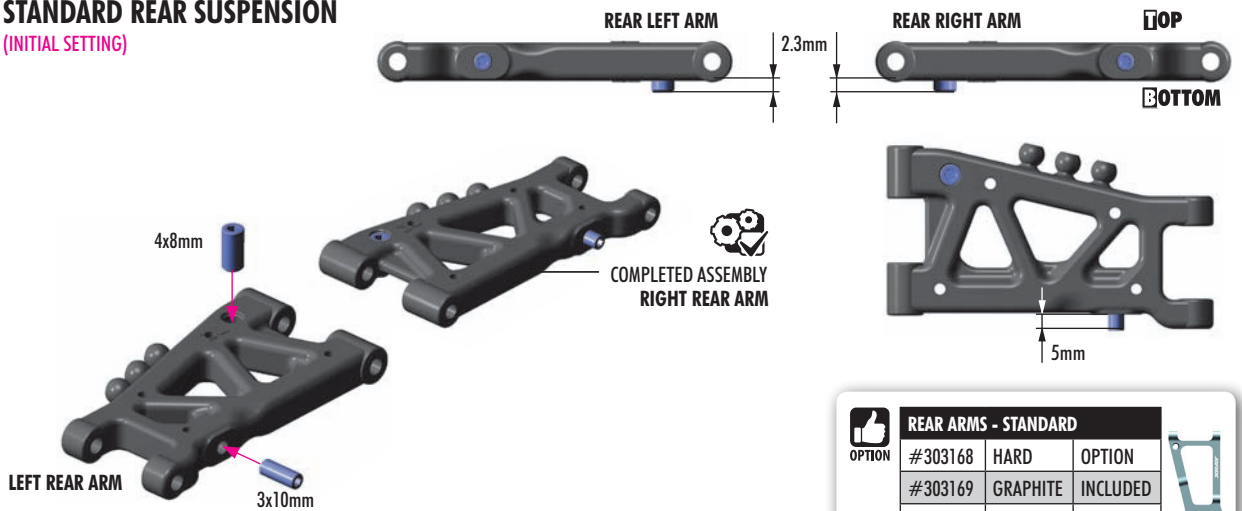
901310
SB M3x10



901408
SB M4x8

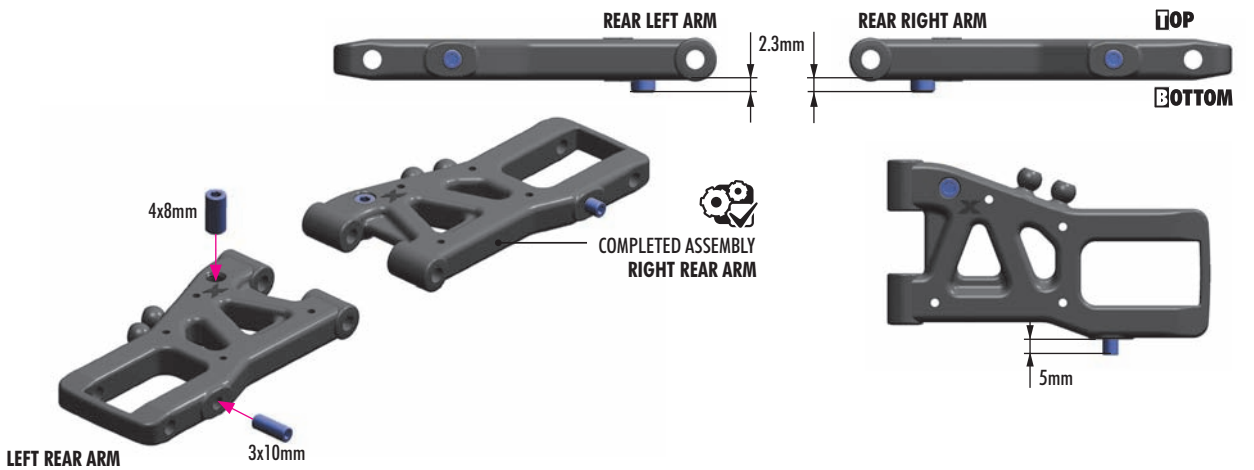
2x L-R REAR ARMS

STANDARD REAR SUSPENSION (INITIAL SETTING)



REAR ARMS - STANDARD			
OPTION	#303168	HARD	OPTION
	#303169	GRAPHITE	INCLUDED
	#302101	ALU	OPTION
REAR ARMS - ARS™			
	#303170	HARD	INCLUDED
	#303171	GRAPHITE	OPTION

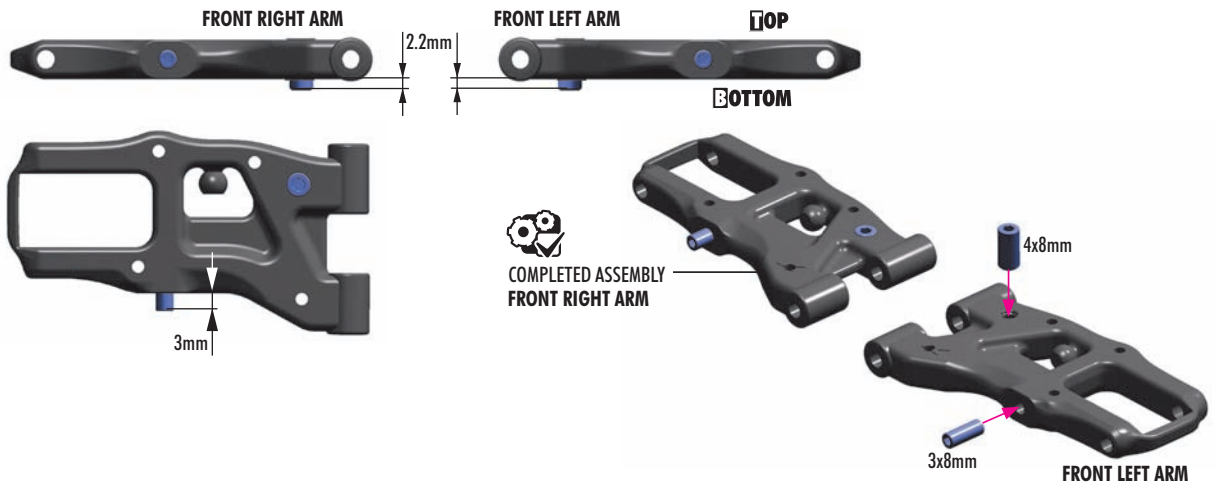
2x L-R ACTIVE REAR SUSPENSION™ (ALTERNATIVE)



REAR DOWNSTOP
ADJUSTMENT

2x L-R FRONT ARMS

FRONT ARMS			
OPTION	#302168	HARD	OPTION
	#302169	GRAPHITE	INCLUDED
	#302101	ALU	OPTION



FRONT DOWNSTOP
ADJUSTMENT

3. FRONT & REAR SUSPENSION

IO

303129
SHIM 3x6x1



903306
SFH M3x6

REAR SUSPENSION



#303722-0
ALU REAR LOWER 1-PIECE SUSPENSION
HOLDER - RR - LOW



#303721
BRASS REAR 1-PIECE SUSPENSION
HOLDER - (RR)



#303716-0 ALU LOWER 2-PIECE SUSPENSION HOLDER - RIGHT - LOW
#303717-0 ALU LOWER 2-PIECE SUSPENSION HOLDER - LEFT - LOW



It is extremely important that the arms move freely on the pivot pins. If they do not, use the Arm Reamer (3.0mm) to slightly resize the holes in the arms.

#107633 HUDY Arm Reamer 3.0mm



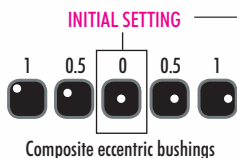
#303718-0 ALU LOWER 2-PIECE SUSPENSION 0.25
ECCENTRIC HOLDER STAND



#303714 BRASS 2-PIECE SUSPENSION HOLDER - RIGHT
#303715 BRASS 2-PIECE SUSPENSION HOLDER - LEFT



NOTE ORIENTATION



STANDARD REAR SUSPENSION (INITIAL SETTING)

ALTERNATIVE ACTIVE REAR SUSPENSION™

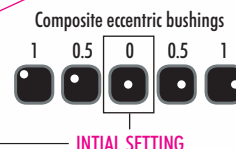
ECCENTRIC BUSHINGS HAVE TWO DIFFERENT OFFSETS FROM THE CENTER

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

The XRAY 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).



#307217
TITANIUM SUSPENSION
PIVOT PIN (2)

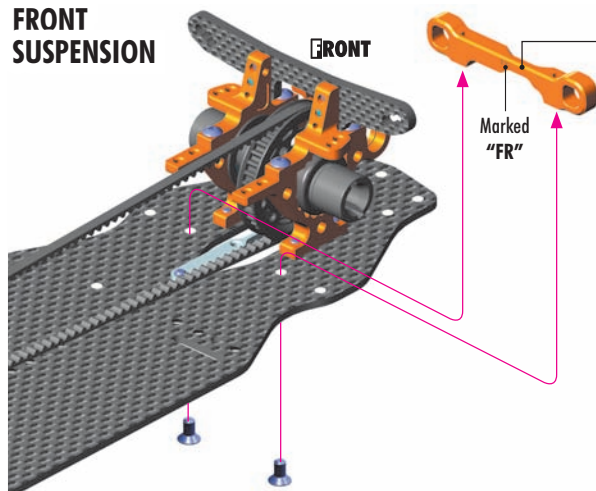


TOE-IN
TRACK-WIDTH
WHEELBASE
ROLL CENTER
ANTI-SQUAT
PRO-SQUAT

FRONT SUSPENSION



903306
SFH M3x6



NOTE ORIENTATION



#303710-0
ALU LOWER 2-PIECE SUSPENSION HOLDER
For more steering, we recommend using the optional alu separate suspension holders.



#302721
BRASS FRONT 1-PIECE
SUSPENSION HOLDER (FR)



#302722-0
ALU FRONT 1-PIECE
SUSPENSION HOLDER (FR-LOW)



3. FRONT & REAR SUSPENSION



303129
SHIM 3x6x1



903306
SFH M3x6

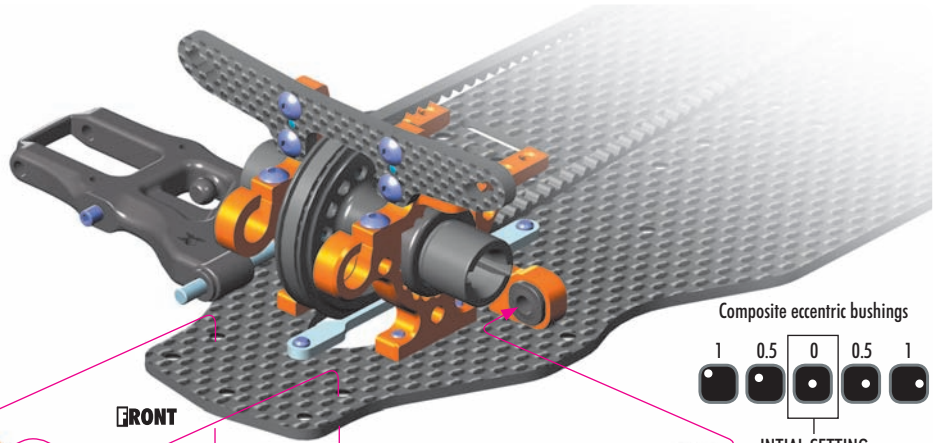
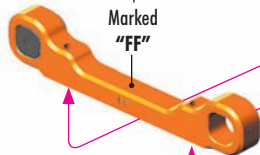
#302711
OPTION
BRASS FRONT 1-PIECE
SUSPENSION HOLDER - (FF)



#302712-0
OPTION
ALU FRONT 1-PIECE
SUSPENSION HOLDER (FF-LOW)



FRONT SUSPENSION



Composite eccentric bushings



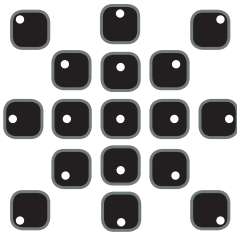
INITIAL SETTING

3x6x1mm

#307217
OPTION
TITANIUM SUSPENSION
PIVOT PIN (2)

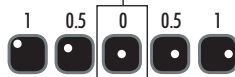


All possible mounting
alternatives of eccentric bushings



3x6x1mm

INITIAL SETTING

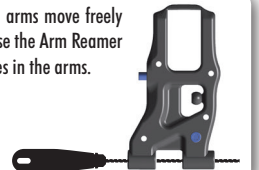


Composite eccentric bushings

It is extremely important that the arms move freely on the pivot pins. If they do not, use the Arm Reamer (3.0mm) to slightly resize the holes in the arms.



#107633 HUDY Arm Reamer 3.0mm



SET-UP BOOK

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

ECENTRIC 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 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.

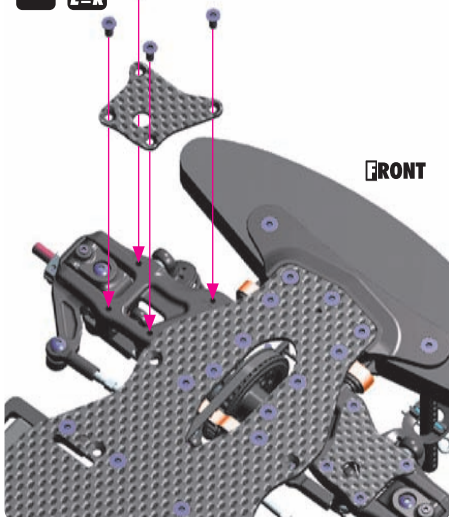


For better stability and to make the car easier to drive, optional #302190 and #303190 graphite stiffeners may be used on the suspension arms. Using only 4 screws, each graphite stiffener can be installed or removed which will completely change the characteristics of the car. Stiffeners may be used independently at front and/or rear. **IMPORTANT!** Install/remove stiffeners equally on left & right sides.

#302190
GRAPHITE FRONT LOWER ARM PLATE 1.6MM (2)

2x L-R

2.5x6mm

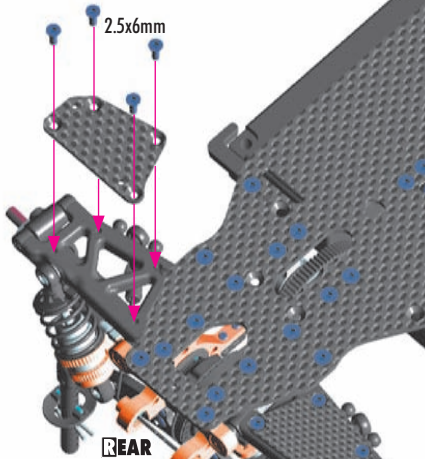


#303190
GRAPHITE REAR LOWER ARM PLATE 1.6MM (2)

2x L-R

2.5x6mm

STANDARD REAR SUSPENSION

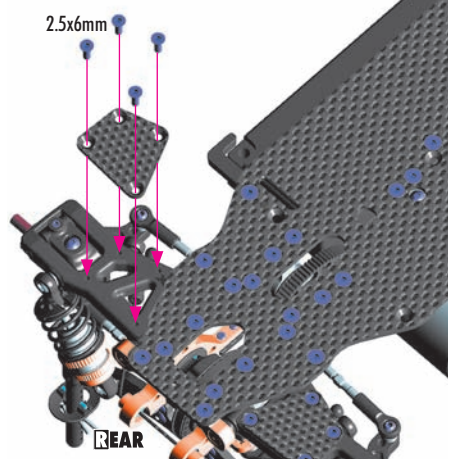


#303192
ARS GRAPHITE REAR LOWER ARM PLATE 1.6MM (2)

2x L-R

2.5x6mm

ACTIVE REAR SUSPENSION™



4. STEERING



#301166
GRAPHITE UPPER DECK 2.0MM - WORLDS EDITION



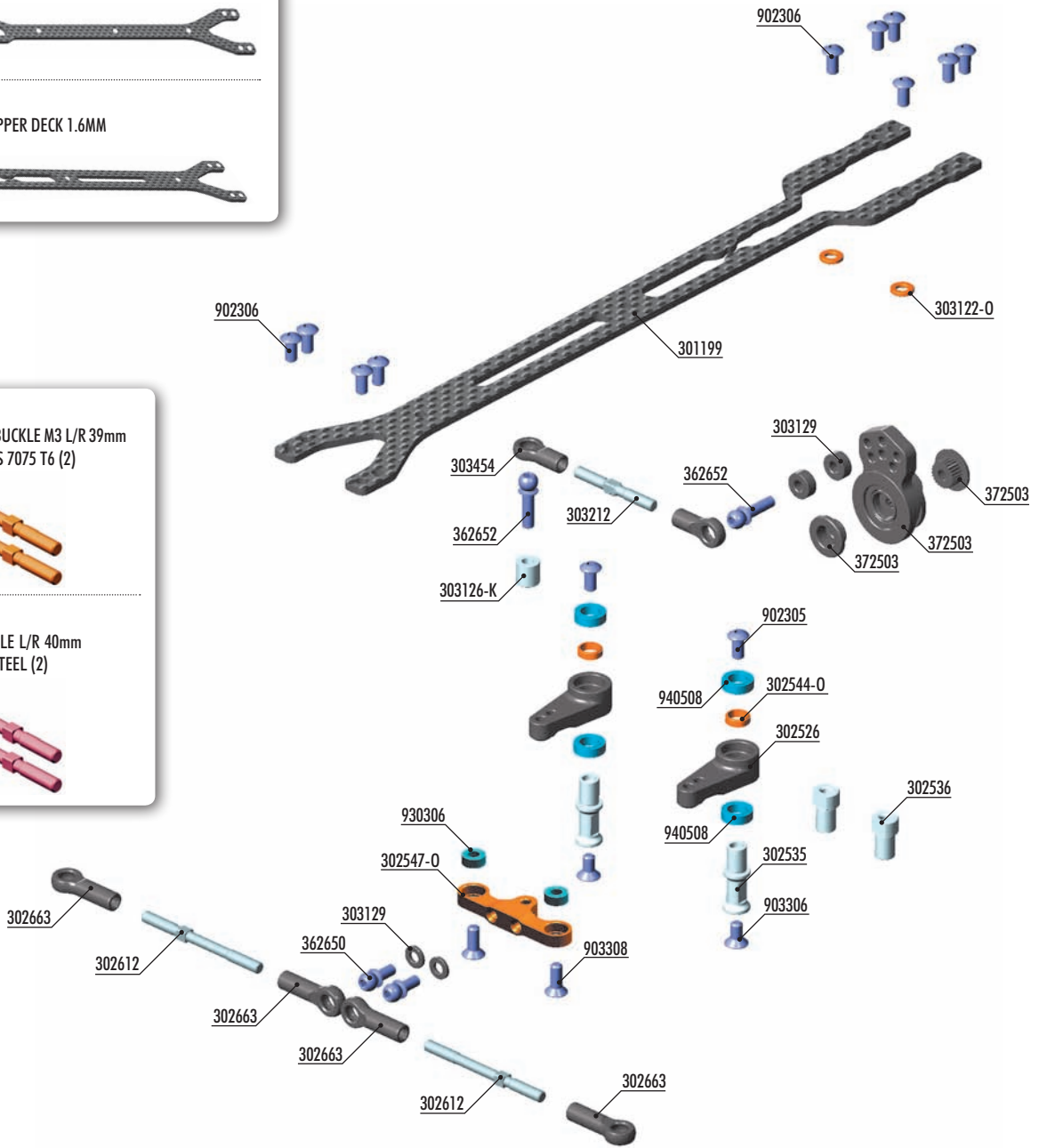
#301169
T4 GRAPHITE UPPER DECK 1.6MM



#302612-0
ALU ADJ. TURNBUCKLE M3 L/R 39mm
ORANGE - SWISS 7075 T6 (2)



#302610
ADJ. TURNBUCKLE L/R 40mm
HUDY SPRING STEEL (2)



#302570
GRAPHITE STEERING
PLATE SET



#302525
ALU DUAL-SERVO SAVER ARM



#306516-0
T4 ALU TOP DECK
MOUNT - ORANGE



#303071
BELT TENSIONER



BAG

04

- 301199 T4 UPPER DECK 2.0MM GRAPHITE
- 302526 COMPOSITE DUAL SERVO SAVER ARM
- 302535 ALU STEERING POST FOR DUAL-SERVO SAVER (2)
- 302536 ALU STEERING POST FOR FLOATING SERVO SAVER (2)
- 302544-0 ALU DISTANCE SLEEVE - ORANGE (2)
- 302547-0 T4 ALU STEERING PLATE 8.5MM FOR DUAL-SERVO SAVER - ORANGE
- 302612 ALU ADJ. TURNBUCKLE M3 L/R 39 MM - SWISS 7075 T6 (2)
- 302663 COMPOSITE BALL JOINT 5 MM - OPEN - V2 (8)
- 303122-0 ALU SHIM 3x6x1.0MM - ORANGE (10)
- 303126-K ALU SHIM 3x6x5.0MM - BLACK (10)
- 303129 COMPOSITE SET OF SHIMS (3x1MM; 1x2MM) (2)
- 303212 ALU ADJ. TURNBUCKLE L/R 26 MM - SWISS 7075 T6 (2)

- 303454 BALL JOINT 4.9MM - OPEN (4)
- 362650 BALL END 4.9MM WITH THREAD 6MM (2)
- 362652 BALL END 4.9MM WITH THREAD 10MM (2)
- 372503 COMPOSITE SERVO SAVER - X-STIFF - SET - V2
- 902305 HEX SCREW SH M3x5 (10)
- 902306 HEX SCREW SH M3x6 (10)
- 903306 HEX SCREW SFH M3x6 (10)
- 903308 HEX SCREW SFH M3x8 (10)
- 930306 BALL-BEARING 3x6x2.5 STEEL-SEALED - OILED (2)
- 940508 BALL-BEARING 5x8x2.5 RUBBER-SEALED - OILED (2)

4. STEERING

2x STEERING LINKS

LEFT THREAD RIGHT THREAD

65.4mm

OPTION #302612-0
ALU ADJ. TURNBUCKLE M3
L/R 39mm ORANGE - SWISS
7075 T6 (2)

OPTION #302610
ADJ. TURNBUCKLE L/R 40mm
HUDY SPRING STEEL (2)

SERVO LINK
Adjust servo link to fit your servo

LEFT THREAD RIGHT THREAD

approximately 47mm

903308
SFH M3x8

930306
BB 3x6x2.5

940508
BB 5x8x2.5

BEARING OIL (HUDY #106230)

NOTE ORIENTATION

⚠ Tighten the screws gently but fully, and then loosen 1/3 turn so the composite dual-servo saver moves freely.

1 tighten fully
2 loosen 1/3 ccw
3 check free movement (120° CCW)

OPTION #302525
ALU DUAL SERVO SAVER ARM

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

10

303129
SHIM 3x6x1

2x L=R

NOTE ORIENTATION

6mm THREAD

INITIAL SETTING (3x6x1mm)

NOTE ORIENTATION

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

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

3x1mm & 1x2mm shims

10

303129
SHIM 3x6x2

303126-K
SHIM 3x6x5

10mm THREAD

3x6x2mm

8mm THREAD

3x6x5mm

INITIAL SETTING

H = Hitec (24T)
F = Futaba, Robe (25T)
K = KO, JR, Airtronics, Sanwa (23T)

OPTION HUDY

ALU SERVO HORNS - OFFSET	
#293491	KO, Sanwa - 23T
#293492	Hitec - 24T
#293493	Futaba - 25T
CLAMP ALU SERVO HORNS - OFFSET	
#293401	KO, Sanwa - 23T
#293402	Hitec - 24T
#293403	Futaba - 25T

OPTION HUDY

HUDY ALU SERVO HORNS	
#293501	KO, Sanwa - 23T
#293502	Hitec - 24T
#293503	Futaba - 25T
HUDY CLAMP ALU SERVO HORNS	
#293407	KO, Sanwa - 23T
#293408	Hitec - 24T
#293409	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.



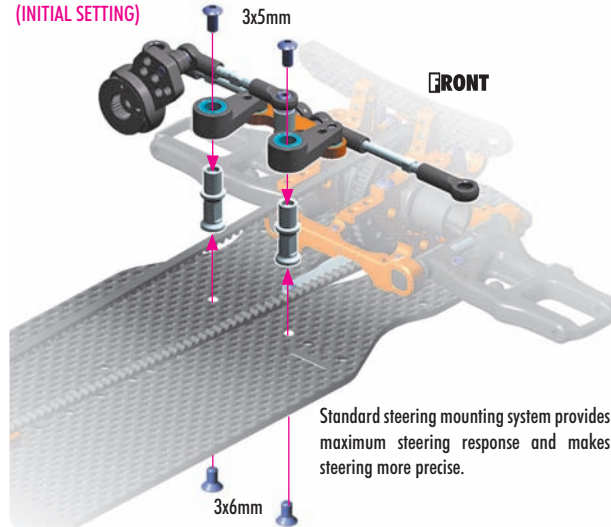
902305
SH M3x5



903306
SFH M3x6

ALTERNATIVE 1

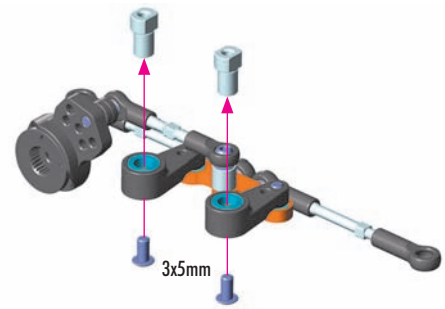
STANDARD STEERING ARM MOUNTING
(INITIAL SETTING)



Standard steering mounting system provides maximum steering response and makes steering more precise.

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 36/step 1.



902306
SH M3x6



303122-0
SHIM 3x6x1



#301169
GRAPHITE UPPER DECK 1.6MM



We recommend using optional 1.6mm top deck for super-low traction conditions or in combination with aluminum chassis as it provides more overall traction and steering.



#301166
GRAPHITE UPPER DECK 2.0MM - WORLDS EDITION



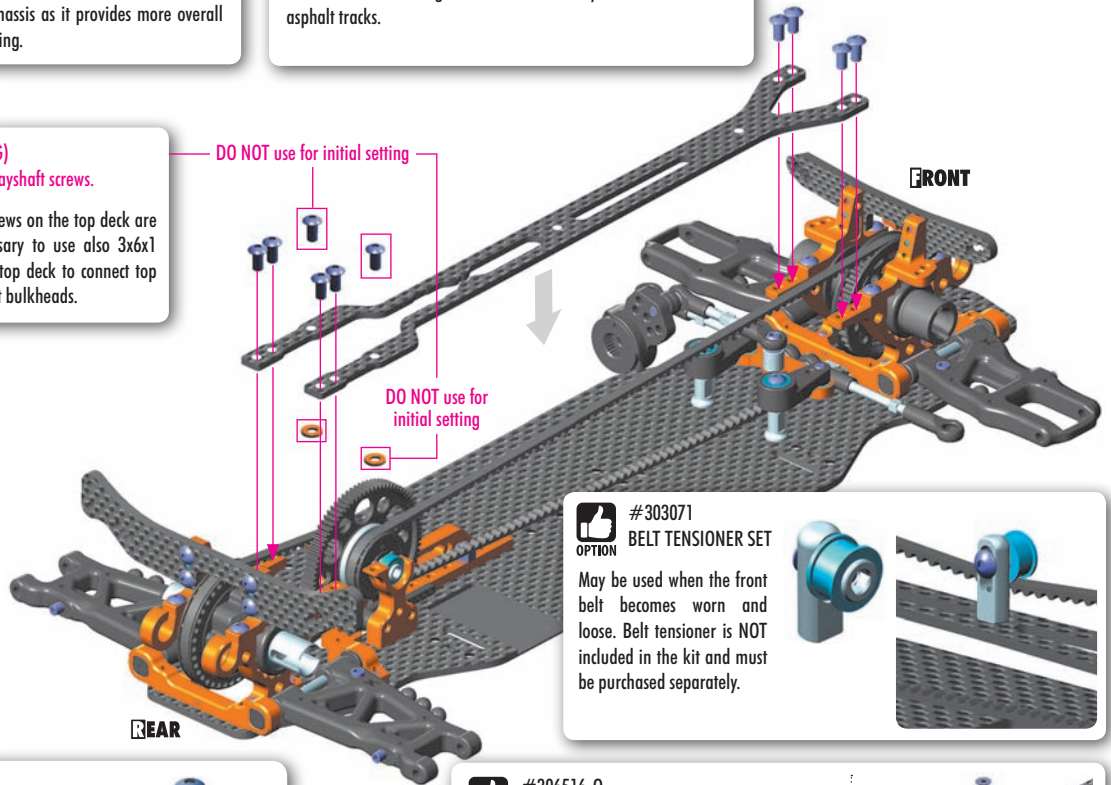
We recommend using optional WORLDS EDITION top deck for more in-corner steering. Recommended mainly for Modified class at asphalt tracks.

(INITIAL SETTING)
DO NOT use the layshaft screws.

If the layshaft screws on the top deck are used, it is necessary to use also 3x6x1 shims under the top deck to connect top deck with layshaft bulkheads.

DO NOT use for initial setting

DO NOT use for initial setting



#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.

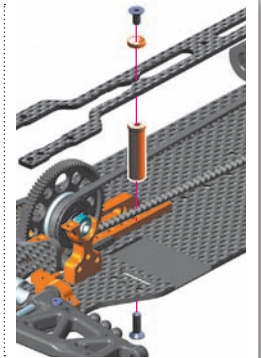


#306516-0
T4 ALU TOP DECK MOUNT - ORANGE



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.

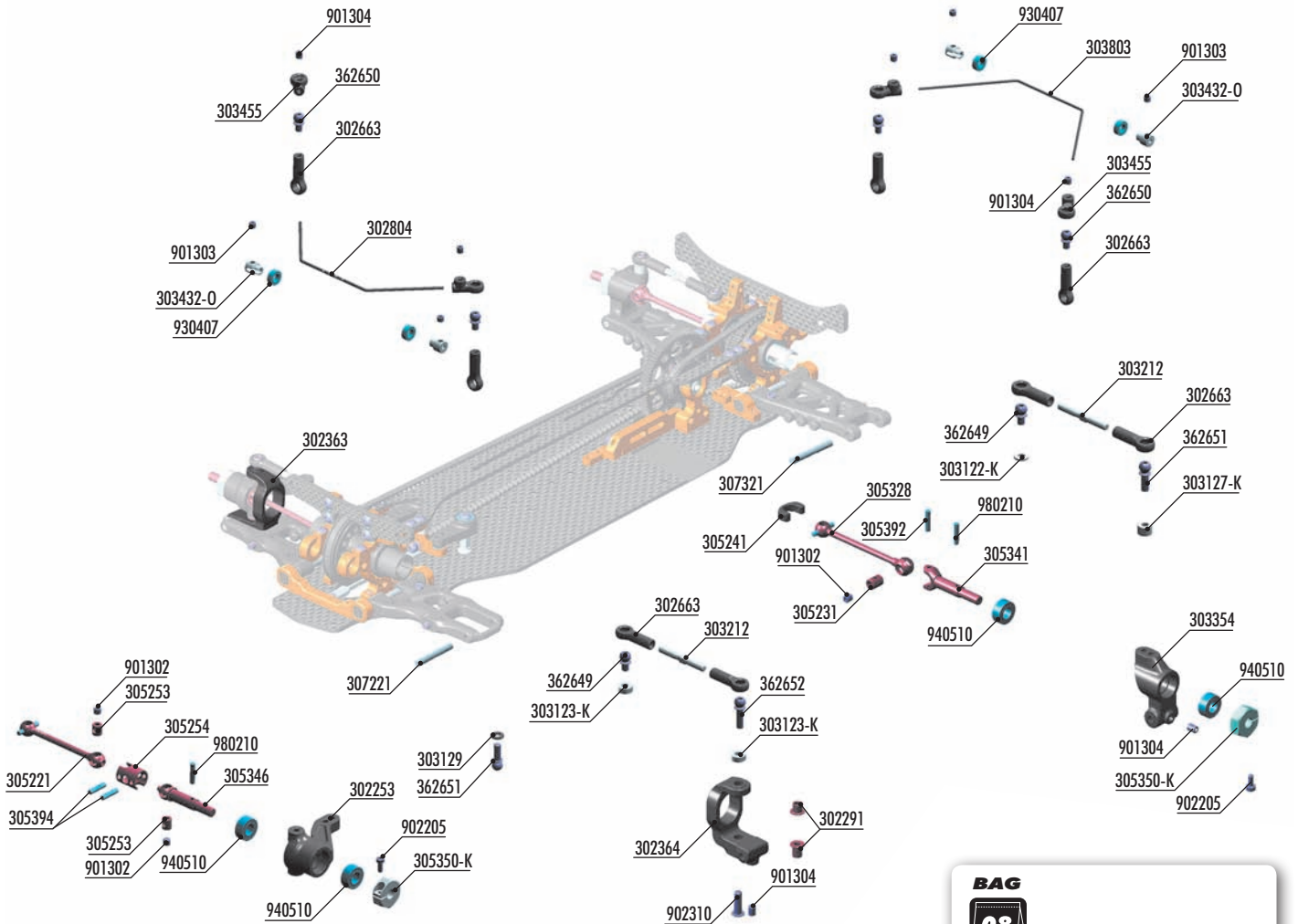
When the aluminum top deck mount is used, the screws from layshaft bulkheads and M3 nut from motor holder must be removed (page 10/step 1).



SET-UP BOOK

CHASSIS FLEX SETTING
TOP DECK SETTING

5. FRONT & REAR TRANSMISSION



#305242
 DRIVE SHAFT REPLACEMENT CAP
 3.5MM - ORANGE - STRONG (4)

#307222 TITANIUM FRONT ARM PIVOT PIN (2)
#307322 TITANIUM REAR ARM PIVOT PIN (2)

#303212-0
 ALU TURNBUCKLE L/R 26mm
 ORANGE - SWISS 7075 T6 (2)

#303210
 TURNBUCKLE M3 L/R 26mm
 HUDY SPRING STEEL™ (2)

#309002
 SET OF CERAMIC
 BALL-BEARINGS (14)

BAG
08
 FOR ALTERNATIVE SETTING
ACTIVE REAR SUSPENSION™

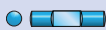
BAG
05

302253	COMPOSITE STEERING BLOCK - HARD	305328	ALU DRIVE SHAFT SWISS 7075 T6 - HARDCOATED - 50MM
302291	STEEL STEERING BUSHING (2+2)	305332	ECS ES (ES) DRIVE SHAFT 52MM - HUDY SPRING STEEL™ - SET (OPTION)
302363	COMPOSITE C-HUB RIGHT - 4° DEG. - MEDIUM - V2	305333	ECS ES (ES) DRIVE SHAFT 50MM - HUDY SPRING STEEL™ - SET (OPTION)
302364	COMPOSITE C-HUB LEFT - 4° DEG. - MEDIUM - V2	305334	ECS ES (ES) DRIVE SHAFT 51MM - HUDY SPRING STEEL™ - SET
302369	COMPOSITE C-HUB RIGHT - 0° DEG. - HARD	305346	ECS DRIVE AXLE FOR 2MM PIN - HUDY SPRING STEEL™
302370	COMPOSITE C-HUB LEFT - 0° DEG. - HARD	305394	ECS DRIVE SHAFT PIN 2 x 9 WITH FLAT SPOT (2)
302663	COMPOSITE BALL JOINT 4.9MM - OPEN - V2 (8)	305341	DRIVE AXLE - LIGHTWEIGHT - HUDY SPRING STEEL™
302804	ANTI-ROLL BAR FOR BALL BEARINGS - FRONT 1.4 MM	305350-K	ALU WHEEL HUB - BLACK (2)
303122-K	ALU SHIM 3x6x1.0MM - BLACK (10)	305392	DRIVE SHAFT PIN 2 x 10 WITH FLAT SPOT (2)
303123-K	ALU SHIM 3x6x2.0MM - BLACK (10)	307221	FRONT ARM PIVOT PIN (2)
303127-K	ALU SHIM 3x6x4.0MM - BLACK (10)	307321	REAR ARM PIVOT PIN (2)
303129	COMPOSITE SET OF SHIMS (3x1MM; 1x2MM) (2)	362649	BALL END 4.9MM WITH THREAD 5MM (2)
303210	TURNBUCKLE M3 L/R 26 MM - HUDY SPRING STEEL™ (2) (OPTION)	362650	BALL END 4.9MM WITH THREAD 6MM (2)
303212	ALU ADJ. TURNBUCKLE M3 L/R 26 MM - SWISS 7075 T6 (2)	362651	BALL END 4.9MM WITH THREAD 8MM (2)
303212-0	ALU ADJ. TURNBUCKLE L/R 26 MM - ORANGE - SWISS 7075 T6 (2) (OPTION)	362652	BALL END 4.9MM WITH THREAD 10MM (2)
303354	COMPOSITE UPRIGHT 0° OUTBOARD TOE-IN - HARD	901302	HEX SCREW SB M3x2.5 (10)
303432-0	ALU ANTI-ROLL BAR BUSHING - ORANGE (2)	901303	HEX SCREW SB M3x3 (10)
303455	COMPOSITE ANTI-ROLL BAR BALL JOINT 4.9 MM (4)	901304	HEX SCREW SB M3x4 (10)
303803	ANTI-ROLL BAR FOR BALL BEARINGS - REAR 1.3 MM	902205	HEX SCREW SH M2x5 (10)
305231	DRIVE SHAFT COUPLING - HUDY SPRING STEEL™	902310	HEX SCREW SH M3x10 (10)
305241	DRIVE SHAFT REPLACEMENT CAP 3.5 MM (4)	930407	BALL-BEARING 4x7x2.5 (2)
305221	ECS (ES) DRIVE SHAFT 51MM FOR 2MM PIN - HUDY SPRING STEEL™ (1)	940510	BALL-BEARING 5x10x4 RUBBER SEALED - OIL (2)
305253	ECS DRIVE SHAFT COUPLING FOR 2MM PIN - HUDY SPRING STEEL™	980210	PIN 2x10 (10)
305254	ECS (ES) DRIVE SHAFT CASE FOR 2MM PIN - HUDY SPRING STEEL™		

5. FRONT & REAR TRANSMISSION



901302
SB M3x2.5

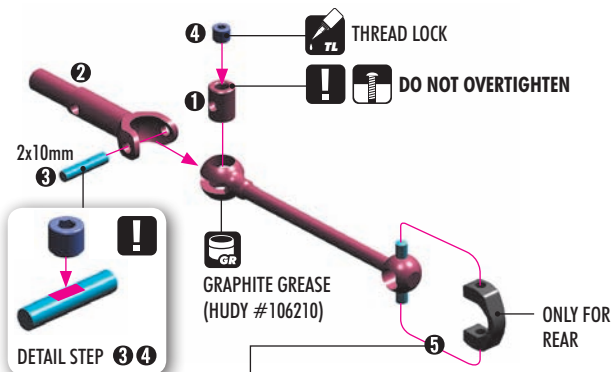


305392
P 2x10

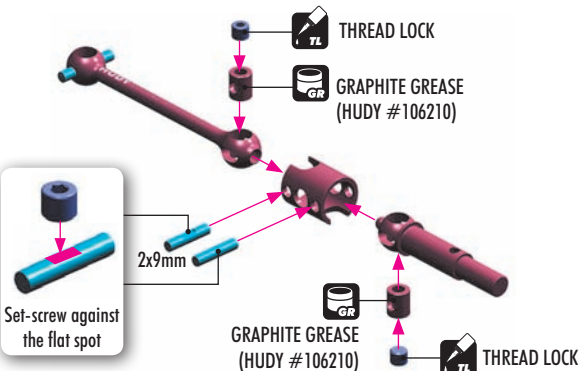


305394
P 2x9

2x REAR TRANSMISSION



2x FRONT TRANSMISSION



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).



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



#305242
DRIVE SHAFT REPLACEMENT CAP
3.5MM ORANGE - STRONG (4)



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 length.



902205
SH M2x5



940510
BB 5x10x4

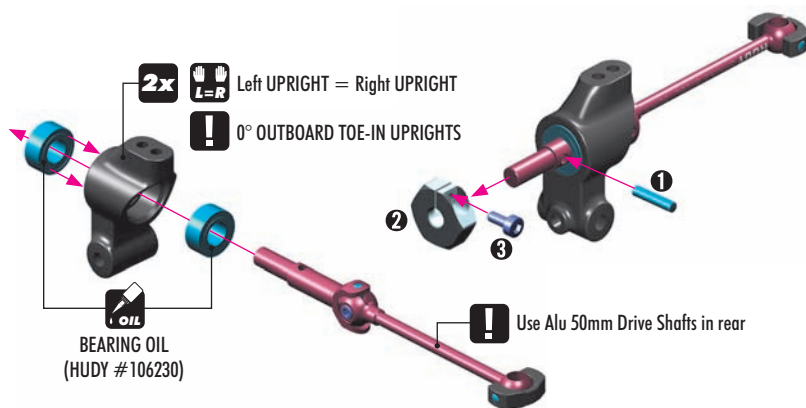


980210
P 2x10

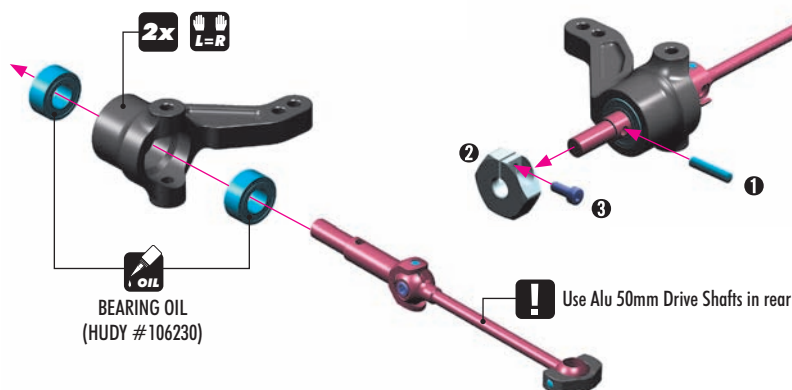
L=R REAR TRANSMISSION

STANDARD REAR SUSPENSION

INITIAL SETTING



ALTERNATIVE ACTIVE REAR SUSPENSION™



T4 OPTIONAL PARTS

UPRIGHTS	
#303351	1° - R MEDIUM (2-HOLE)
#303352	0° - R/L MEDIUM (2-HOLE)
#303353	1° - R HARD (2-HOLE)
INCLUDED #303354	0° - R/L HARD (2-HOLE)
#303360	0° - R/L GRAPHITE (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)

WHEEL HUBS	
INCLUDED #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
INCLUDED #302253	HARD
#302254	GRAPHITE
#302256	ALU

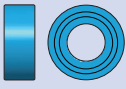


REAR TOE-IN
TRACK-WIDTH

5. FRONT & REAR TRANSMISSION



902205
SH M2x5



940510
BB 5x10x4

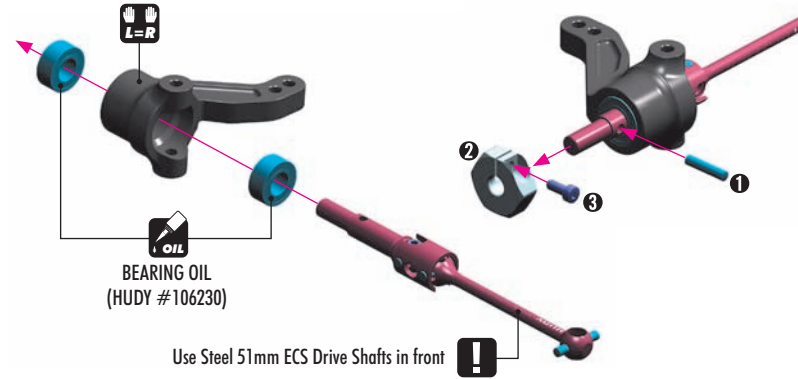


980210
P 2x10



REAR TOE-IN
TRACK-WIDTH

2x FRONT TRANSMISSION



T4 OPTIONAL PARTS

WHEEL HUBS	
INCLUDED	#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
INCLUDED	#302253 HARD
	#302254 GRAPHITE
	#302256 ALU

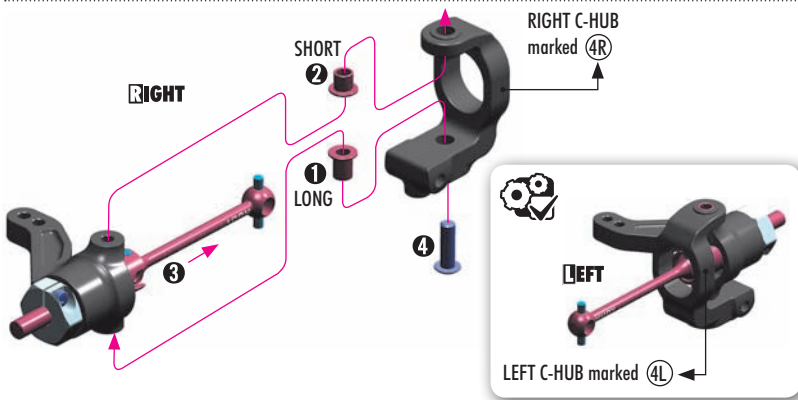


902310
SH M3x10



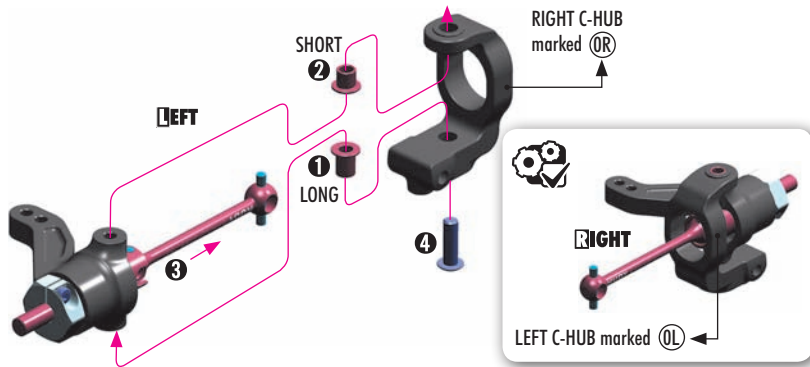
CASTER ADJUSTMENT

2x FRONT TRANSMISSION

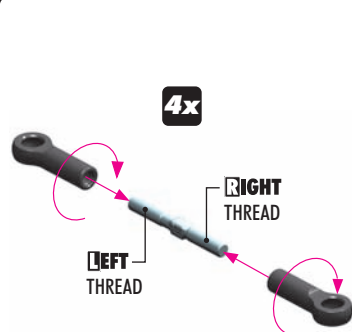


C-HUBS FRONT TRANSMISSION	
	#302334 ALU 0° - R+L
	#302335 ALU 2° - RIGHT
	#302336 ALU 2° - LEFT
	#302337 ALU 4° - RIGHT
	#302338 ALU 4° - LEFT
	#302339 ALU 6° - RIGHT
	#302340 ALU 6° - LEFT
	#302361 2° - RIGHT - MEDIUM
	#302362 2° - LEFT - MEDIUM
INCLUDED	#302363 4° - RIGHT - MEDIUM
INCLUDED	#302364 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

2x ACTIVE REAR SUSPENSION™



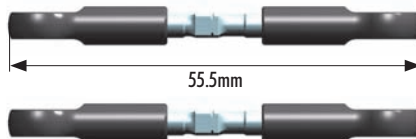
C-HUBS ACTIVE REAR TRANSMISSION	
	#302334 ALU 0°
	#302359 0° - RIGHT - MEDIUM
	#302360 0° - LEFT - MEDIUM
INCLUDED	#302369 0° - RIGHT - HARD
INCLUDED	#302370 0° - LEFT - HARD
	#302379 0° - RIGHT - GRAPHITE
	#302380 0° - LEFT - GRAPHITE



FRONT

2x L=R

FRONT LEFT = FRONT RIGHT



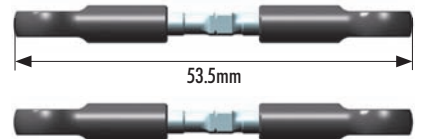
#303212-0
ALU TURNBUCKLE L/R 26mm
ORANGE - SWISS 7075 T6 (2)



REAR

2x L=R

REAR LEFT = REAR RIGHT



#303210
TURNBUCKLE M3 L/R 26mm
HUDY SPRING STEEL™ (2)



CAMBER ADJUSTMENT

5. FRONT & REAR TRANSMISSION



303122-K
SHIM 3x6x1



303127-K
SHIM 3x6x4

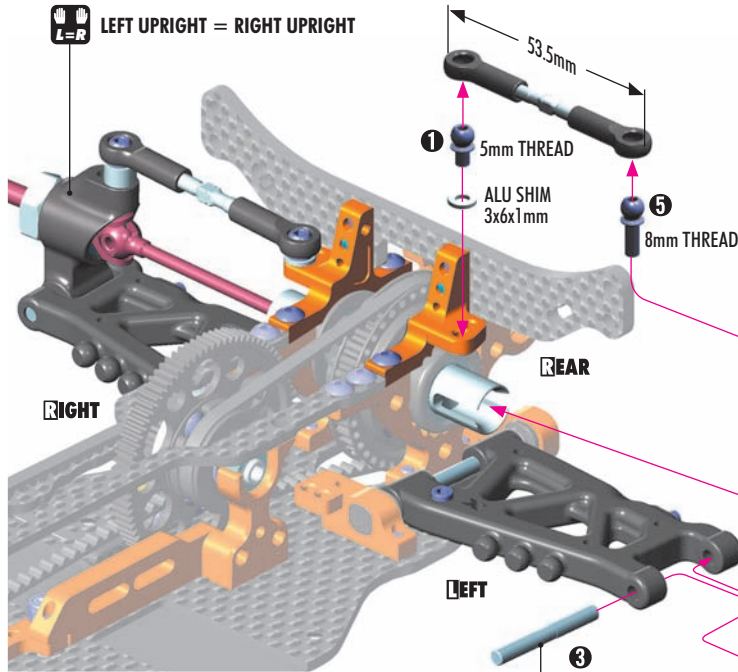


901304
SB M3x4

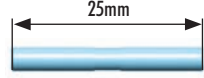
REAR TRANSMISSION

STANDARD REAR SUSPENSION

INITIAL SETTING



#307322 TITANIUM REAR ARM PIVOT PIN (2)
OPTION

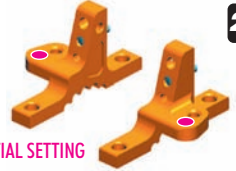


1:1 2x L=R



1-HOLE REAR UPRIGHTS (See page 21)

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.



INITIAL SETTING

TIP

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



ALU SHIM 3x6x4mm
INITIAL SETTING



TIGHTEN GENTLY



303122-K
SHIM 3x6x1



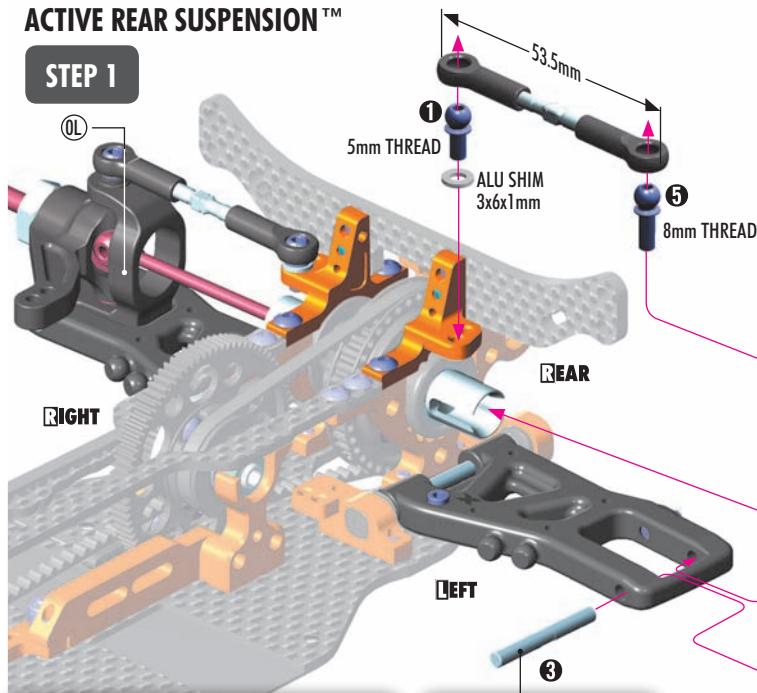
303129
SHIM 3x6x1



901304
SB M3x4

ALTERNATIVE ACTIVE REAR SUSPENSION™

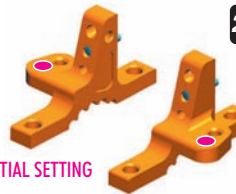
STEP 1



#307322 TITANIUM REAR ARM PIVOT PIN (2)
OPTION



1:1 2x L=R



INITIAL SETTING

TIP

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



OR
COMPOSITE SHIM 3x6x1mm

TIGHTEN GENTLY



SET-UP BOOK

ROLL CENTER
CAMBER

5. FRONT & REAR TRANSMISSION

10

303129
SHIM 3x6x1



903306
SFH M3x6

2x REAR TRANSMISSION

ALTERNATIVE ACTIVE REAR SUSPENSION™

STEP 2

INITIAL SETTING



IMPORTANT

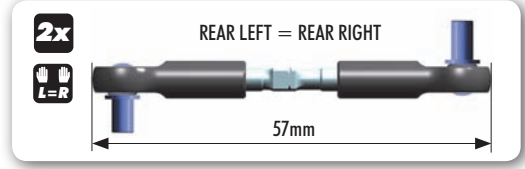
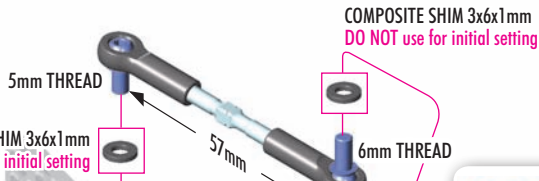
ALWAYS USE ONLY THIS POSITION

ARS LINKAGE



The angle of the 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.



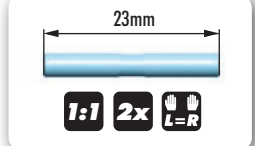
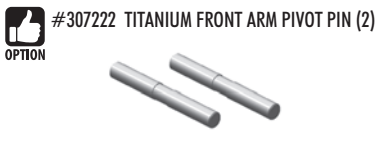
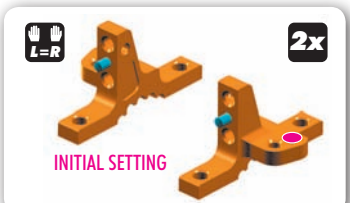
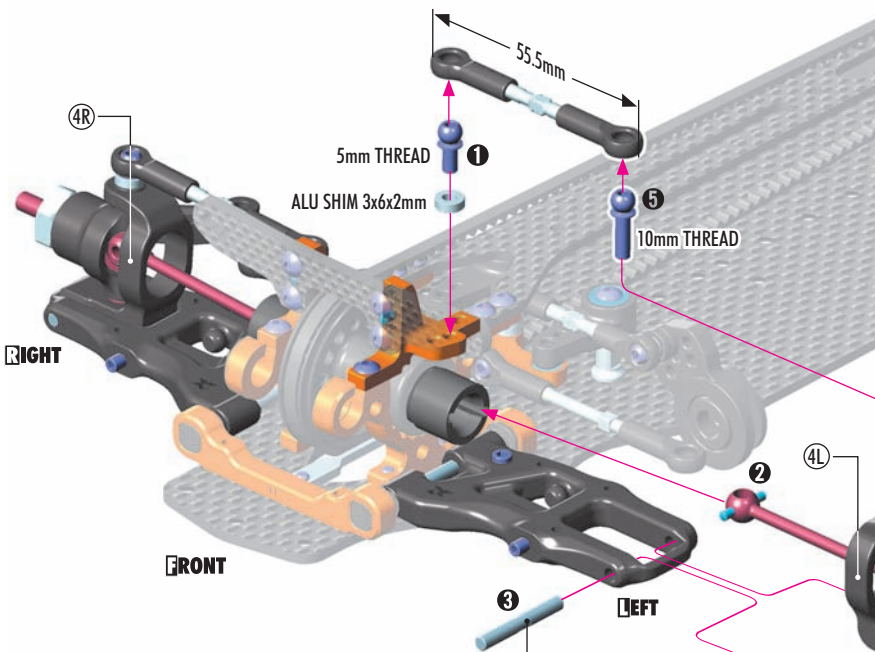
ACTIVE TOE-IN

303123-K
SHIM 3x6x2




901304
SB M3x4

2x FRONT TRANSMISSION

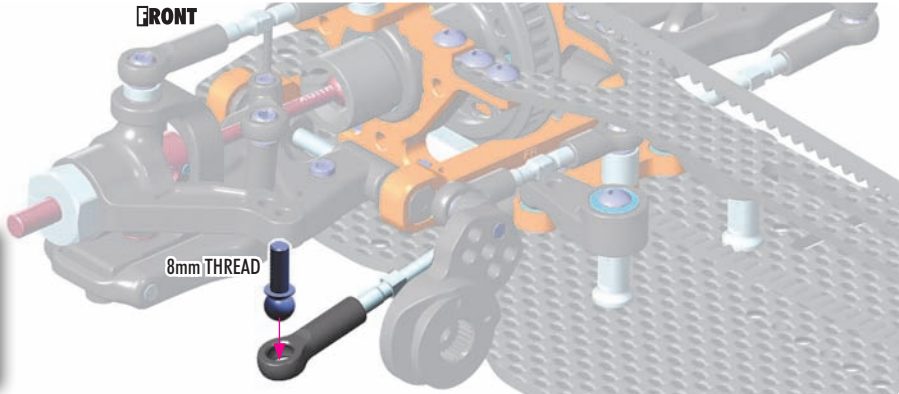


ROLL-CENTER

5. FRONT & REAR TRANSMISSION

2x 

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



8mm THREAD

10
303129
SHIM 3x6x1

L-R **FRONT TRANSMISSION**

FRONT

FREE MOVEMENT

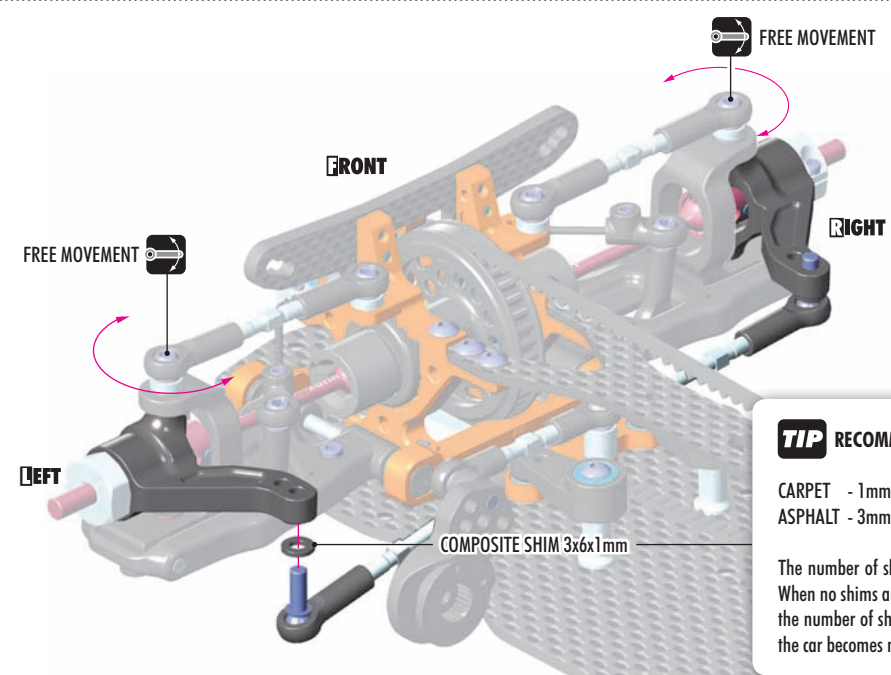
FREE MOVEMENT

RIGHT

LEFT

COMPOSITE SHIM 3x6x1mm

INITIAL SETTING



TIP RECOMMENDED BUMPSTEER SETTINGS:

CARPET - 1mm thick shim
ASPHALT - 3mm thick shims

The number of shims changes the angles of the steering linkage. When no shims are used, the car is easy to drive into the corner. As the number of shims is increased, in-corner steering increases but the car becomes more difficult to drive.

SET-UP BOOK
ACKERMANN
BUMPSTEER

4x

4x

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

6mm THREAD

2.0 mm

26mm



930407
BB 4x7x2.5

2x

BEARING OIL (HUDY #106230)

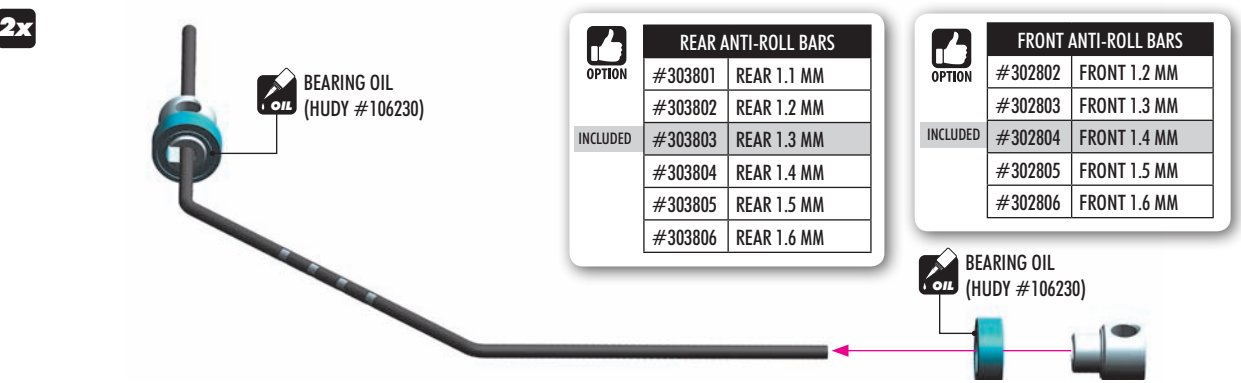
REAR ANTI-ROLL BARS

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

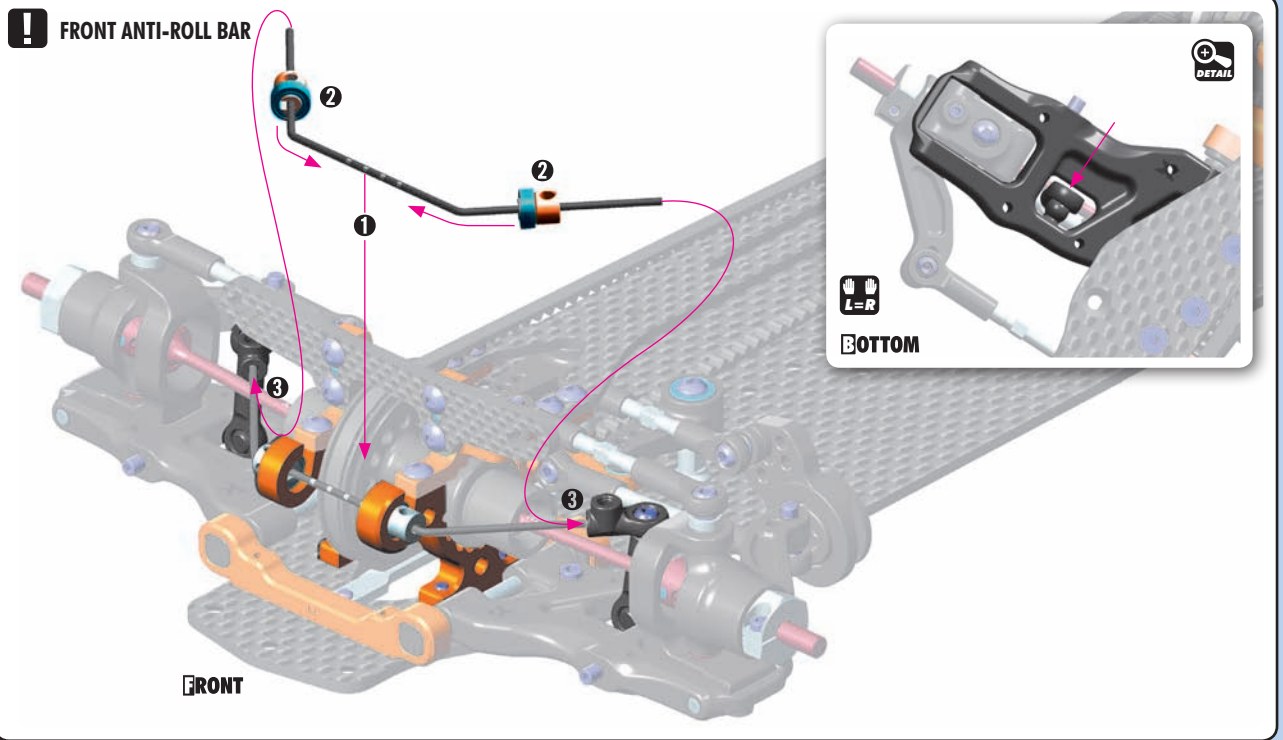
FRONT ANTI-ROLL BARS

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

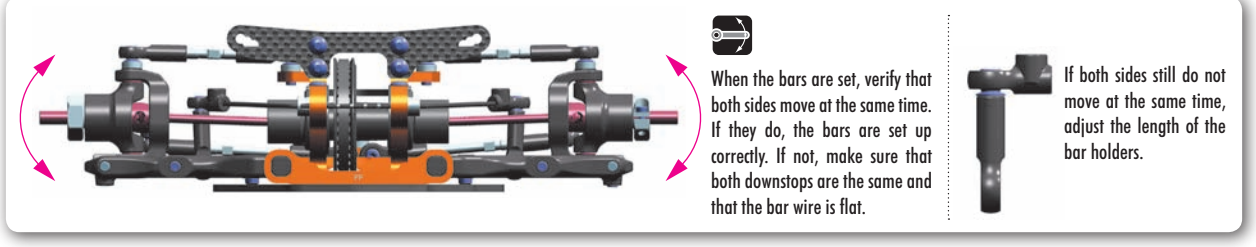
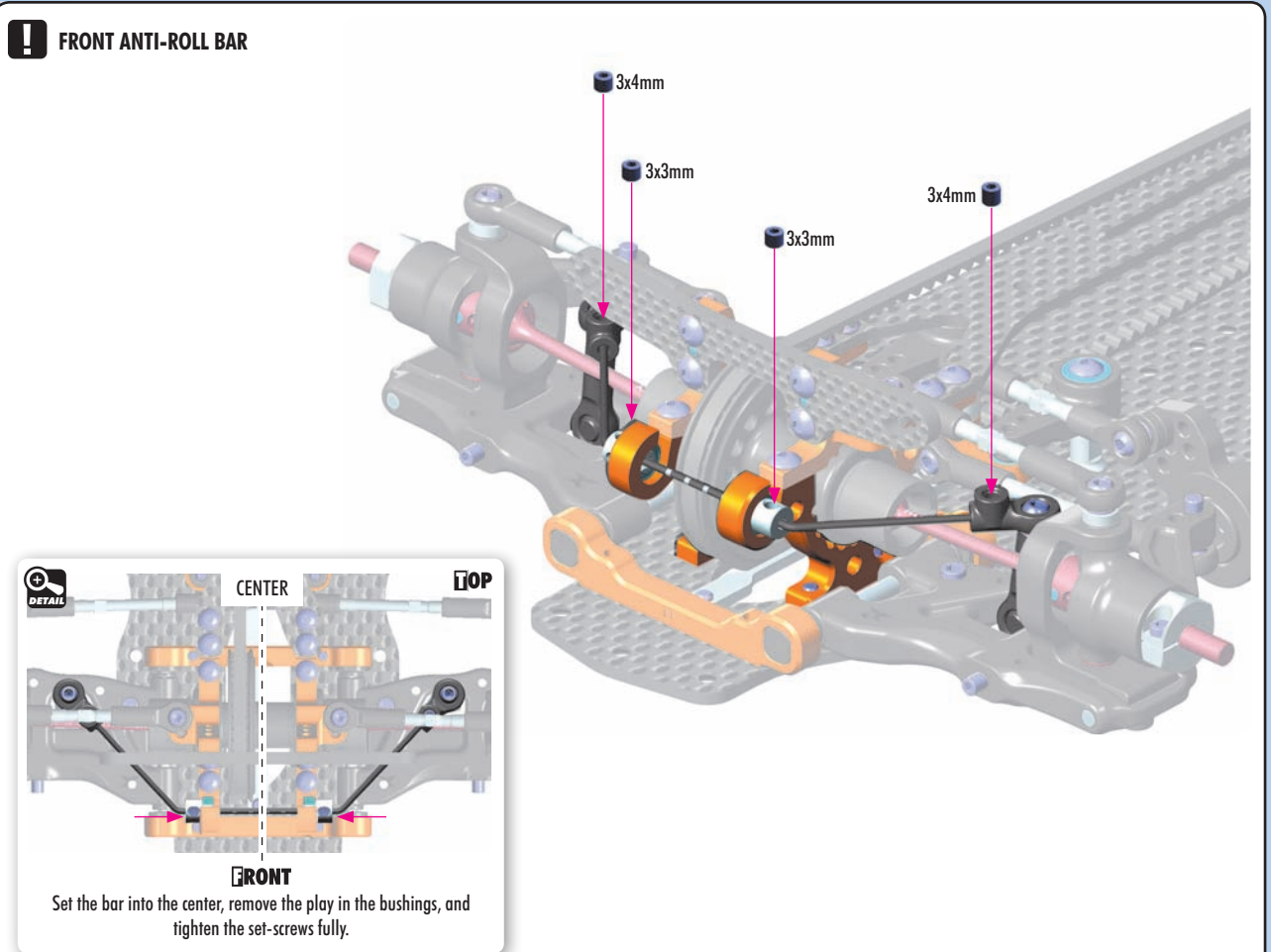
BEARING OIL (HUDY #106230)



5. FRONT & REAR TRANSMISSION

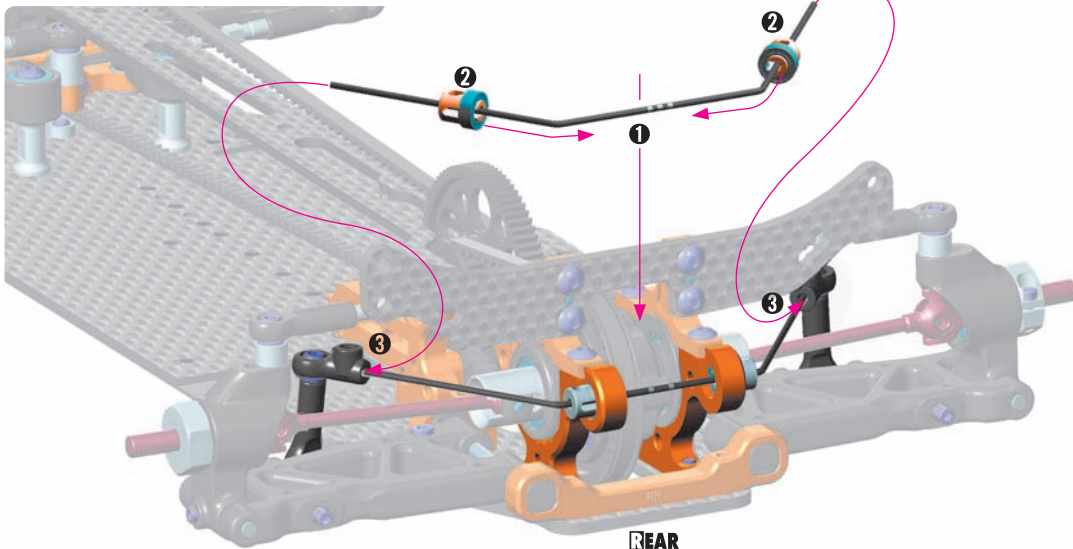


- 901303**
SB M3x3
- 901304**
SB M3x4

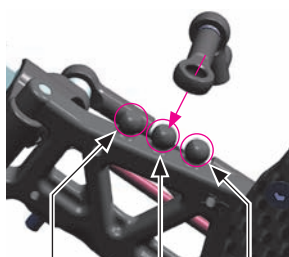


5. FRONT & REAR TRANSMISSION

REAR ANTI-ROLL BAR



2x INITIAL POSITION



OUTER MIDDLE INNER

STANDARD SUSPENSION INITIAL SETTING = MIDDLE BALL

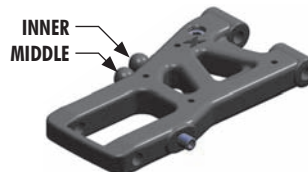
Use the **INNER** ball on low-traction tracks (mainly low-traction carpet tracks). The car will have more traction & more steering, but will be more difficult to drive because the car will roll more.

Use the **MIDDLE** ball on low- to 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.

(ALTERNATIVE) ACTIVE REAR SUSPENSION™

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

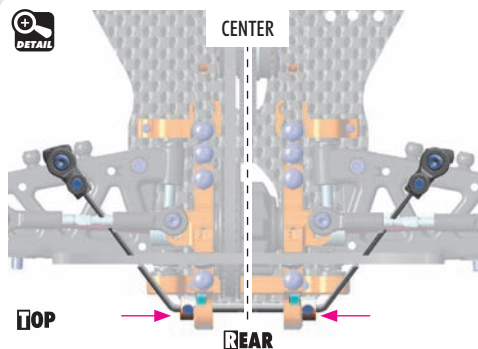
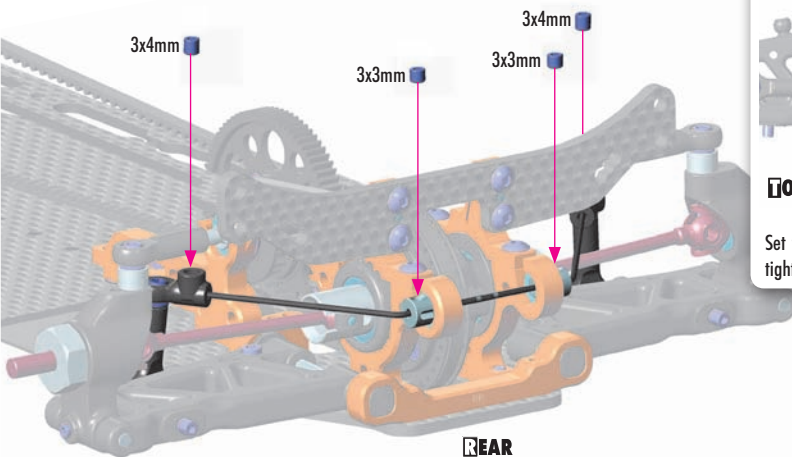


ANTI-ROLL BARS

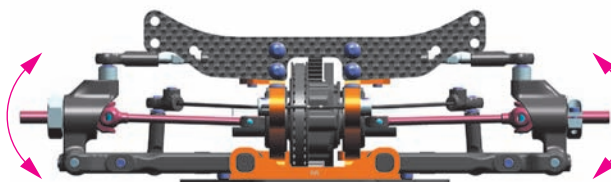
901303
SB M3x3

901304
SB M3x4

REAR ANTI-ROLL BAR



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



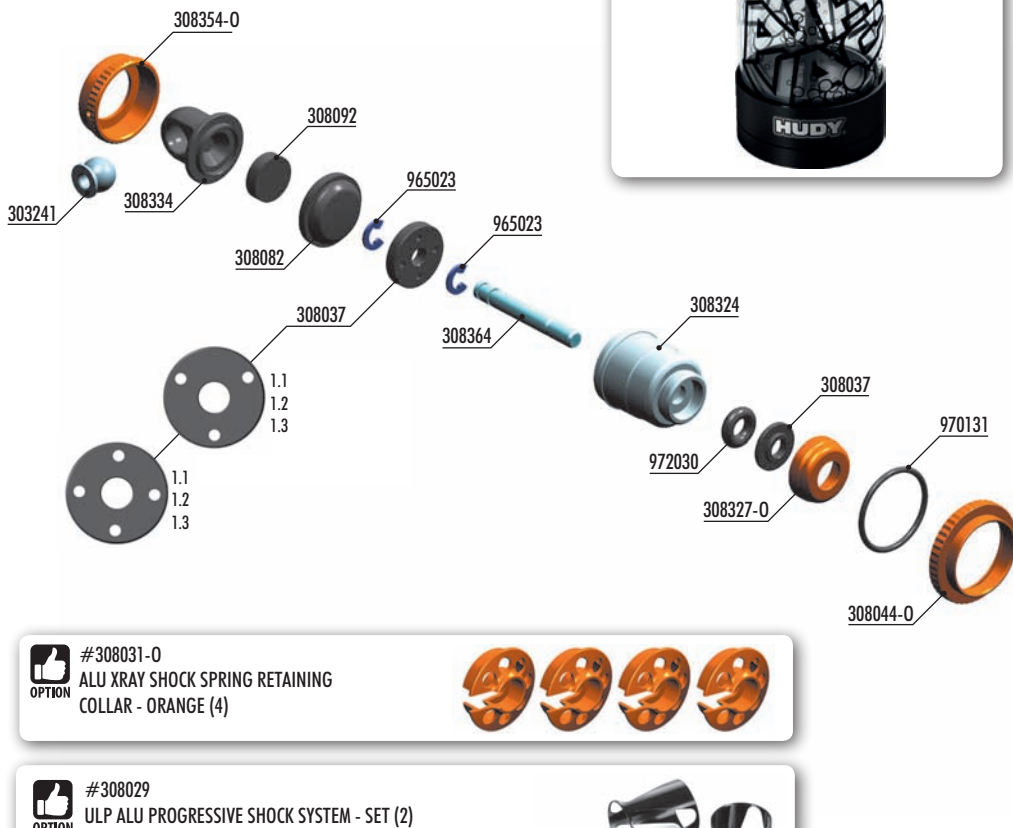
When the bars are set, verify that both sides move at the same time. If they do, the bars are set up correctly. If not, make sure that both downstops are the same and that the bar wire is flat.



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

6. SHOCK ABSORBERS

4x



#104002
 HUDY AIR VAC – VACUUM PUMP - ON-ROAD



XRAY SPRINGS

OPTION	Part #	C	Availability
	#308263	C = 2.3-2.6	OPTION
	#308264	C = 2.5-2.8	OPTION
	#308274	C = 2.3	OPTION
	#308275	C = 2.5	INCLUDED
	#308286	C = 2.6	OPTION
	#308276	C = 2.7	OPTION
	#308288	C = 2.8	OPTION
	#308277	C = 2.9	OPTION
	#308290	C = 3.0	OPTION

#308031-0
 ALU XRAY SHOCK SPRING RETAINING COLLAR - ORANGE (4)



#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.



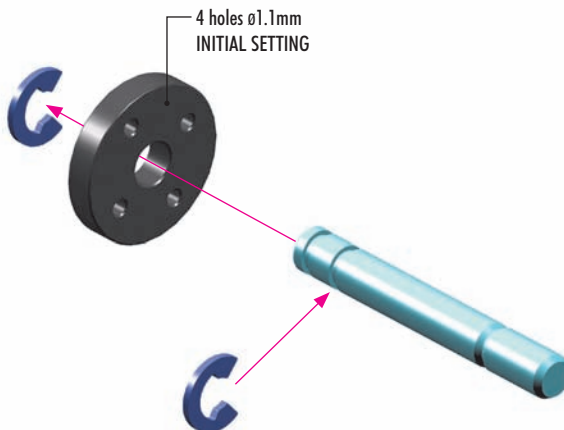
BAG

06

- | | | | |
|----------|--|----------|---|
| 303241 | BALL UNIVERSAL 5.8 MM HEX (4) | 308334 | ULP COMPOSITE SHOCK PARTS |
| 308037 | COMPOSITE PISTONS 4-HOLE 1.0-1.2MM, 3-HOLE 1.0-1.2MM | 308354-0 | ULP ALU SHOCK CAP-NUT WITH VENT HOLE - ORANGE (2) |
| 308044-0 | ULP ALU SHOCK ADJUSTABLE NUT - ORANGE (2) | 308364 | T4 HARDENED SHOCK SHAFT FOR ALU SHOCKS (2) |
| 308082 | T4 SHOCK ABSORBER MEMBRANE (4) | 308275 | XRAY SPRING-SET C=2.5 |
| 308092 | T4 SHOCK FOAM INSERTS (4) | 965023 | E-CLIP 2.3 (10) |
| 308308-0 | ULP ALU SHOCK ABSORBER-SET - ORANGE (2) | 970131 | O-RING 13 x 1.0 (10) |
| 308316 | SHOCK BALL JOINT - OPEN (4) | 972030 | SILICONE O-RING 3 x 2 (10) |
| 308324 | ULP ALU SHOCK BODY (2) | | |
| 308327-0 | ALU CAP FOR XRAY SHOCK BODY - ORANGE | | |

965023
 C 2.3

4x



6. SHOCK ABSORBERS



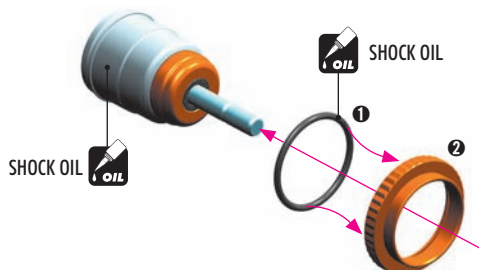
972030
0 3x2

4x

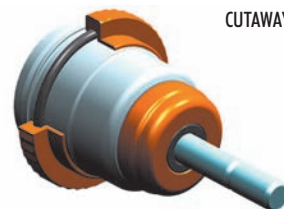


970131
0 13x1.0

4x



CUTAWAY VIEW



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

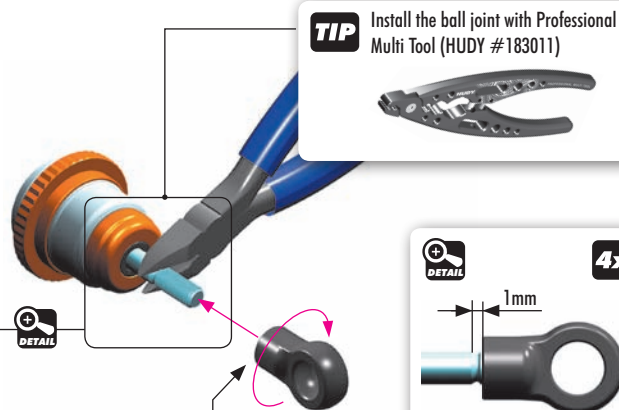
4x



INCORRECT X



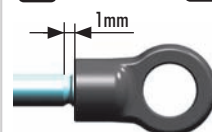
CORRECT ✓



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



4x



INITIAL SETTING

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.

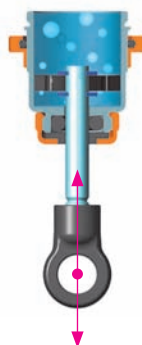
OIL 450cSt

SHOCK FILLING

4x



- 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.



TIP



#104002 HUDY AIR VAC – VACUUM PUMP



To make sure that all the air is removed from the shock oil, we recommend using the HUDY Air Vac.



SHOCK OILS (50ml)

#106325	250cSt
#106330	300cSt
#106335	350cSt
#106340	400cSt
INCLUDED #106345	450cSt
#106350	500cSt
#106355	550cSt
#106360	600cSt
#106365	650cSt
#106370	700cSt
#106375	750cSt
#106380	800cSt



50ml

4x



CUTAWAY VIEW

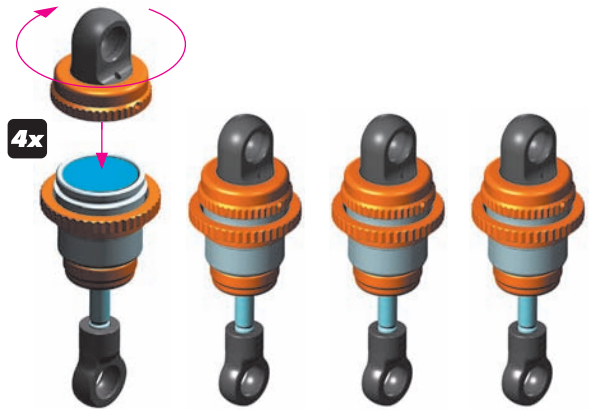


After you insert the membrane, ensure that it is fully seated inside the alu cap.

6. SHOCK ABSORBERS



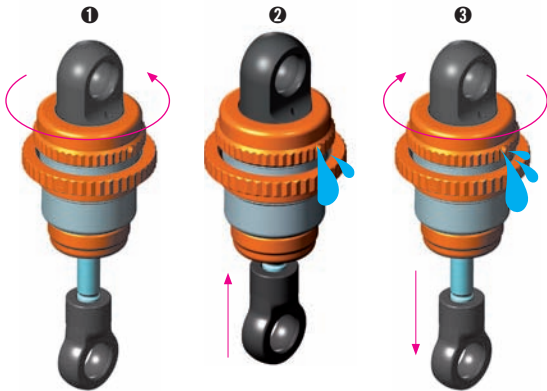
- 1 When installing the shock cap assembly on the shock body, some oil will leak out... this is normal.
- 2 Tighten the cap and clean off any excess oil.
- 3 After the shock is assembled, the shock rod will push itself out of the shock body fairly quickly.
- 4 Follow the next procedure to adjust the rebound.



4x

REBOUND ADJUSTMENT

RELEASE 2-3 turns

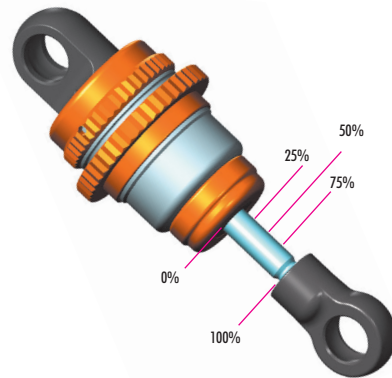


AFTER THE SHOCK IS ASSEMBLED YOU HAVE TO SET THE SHOCK REBOUND:

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

4x

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.

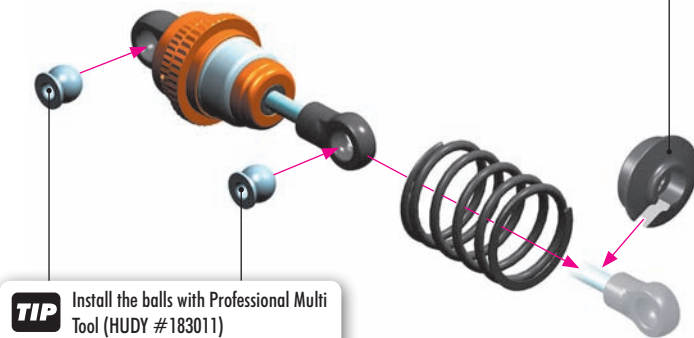
- 100% rebound - do not do step 2 and 3
- 75% rebound - repeat steps 1 to 3 until the shock shaft will push out 75% of its length
- 50% rebound - repeat steps 1 to 3 until the shock shaft will push out 50% of its length
- 25% rebound - repeat steps 1 to 3 until the shock shaft will push out 25% of its length
- 0% rebound - repeat steps 1 to 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.



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



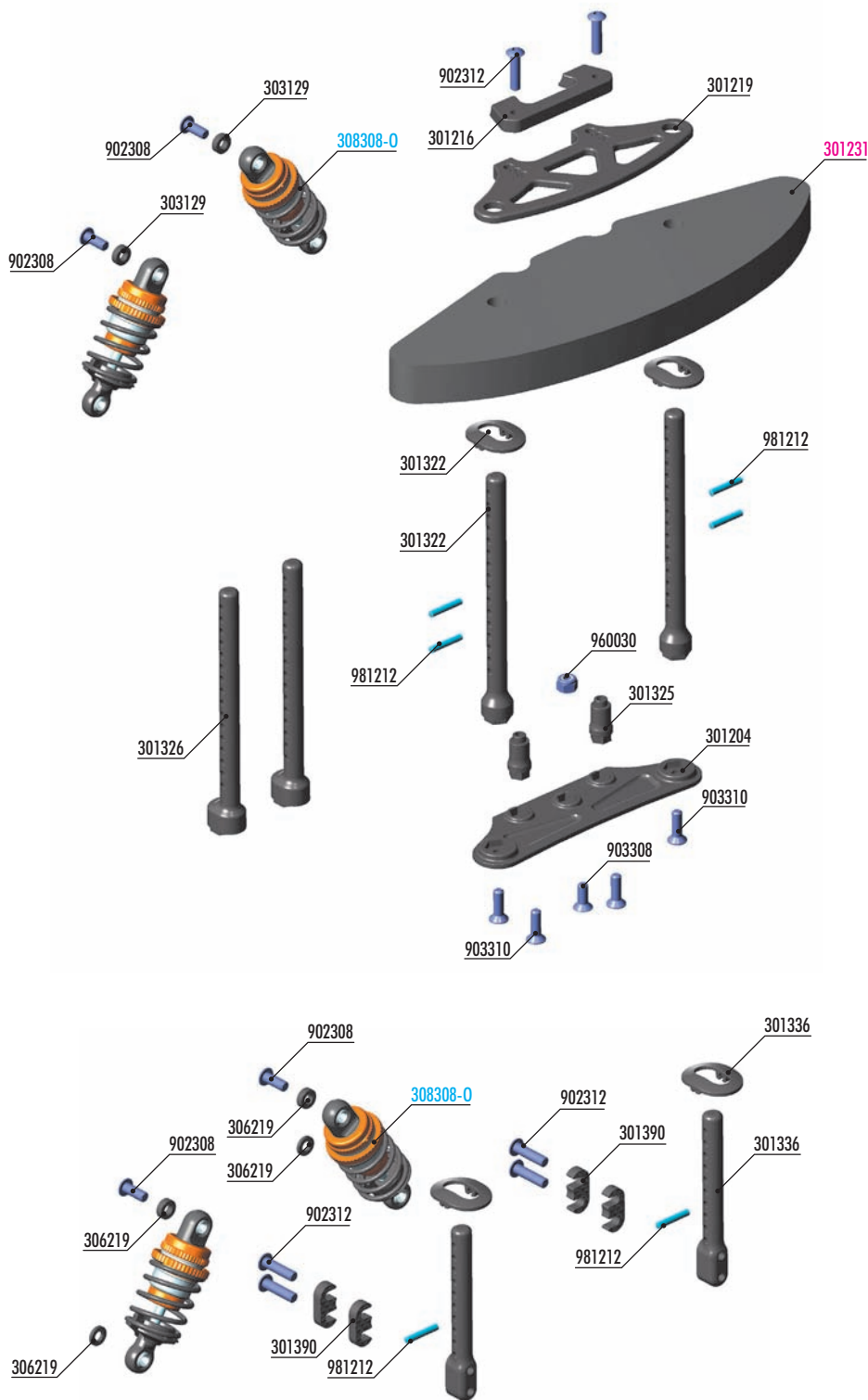
#308031-0
OPTION ALU XRAY SHOCK SPRING RETAINING COLLAR - ORANGE (4)



ASSEMBLY VIEW



7. FRONT & REAR ASSEMBLY



REAR BODY MOUNT SET

OPTION	#301336	0mm	INCLUDED
	#301337	+1mm	OPTION
	#301338	+2mm	OPTION

FRONT BODY MOUNT SET

OPTION	#301322	0mm	INCLUDED
	#301323	+1mm	OPTION
	#301324	+2mm	OPTION

FRONT ECC. BODY MOUNT SET

OPTION	#301326	0mm	INCLUDED
	#301327	+1mm	OPTION
	#301328	+2mm	OPTION

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

#301210
GRAPHITE UPPER HOLDER FOR BUMPER 2.5MM

#301232
T4 FOAM BUMPER WIDE - HARD

BAG

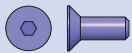
07

- 301204 COMPOSITE BUMPER
- 301216 COMPOSITE BUMPER UPPER HOLDER BRACE
- 301219 COMPOSITE UPPER HOLDER FOR BUMPER
- 301322 FRONT BODY MOUNT SET
- 301326 FRONT ECCENTRIC BODY MOUNT SET
- 301325 T4 COMPOSITE BRACE FOR BUMPER - LOW (2)
- 301336 REAR BODY MOUNT SET
- 301390 GRAPHITE ADJ. SHIM FOR REAR BODY POST 3.0MM (2)
- 303129 COMPOSITE SET OF WHEELBASE SHIMS (3x1MM; 1x2MM) (2)
- 306219 COMPOSITE SET OF SERVO SHIMS (4)

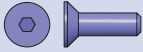
- 902308 HEX SCREW SH M3x8 (10)
- 902312 HEX SCREW SH M3x12 (10)
- 903308 HEX SCREW SFH M3x8 (10)
- 903310 HEX SCREW SFH M3x10 (10)
- 960030 NUT M3 (10)
- 981212 PIN 2x12 (10)

- 301231 T4 FOAM BUMPER - LIGHT & STRONG**
- 308308-0 ULP ALU SHOCK ABSORBER-SET - ORANGE (2)**

7. FRONT & REAR ASSEMBLY



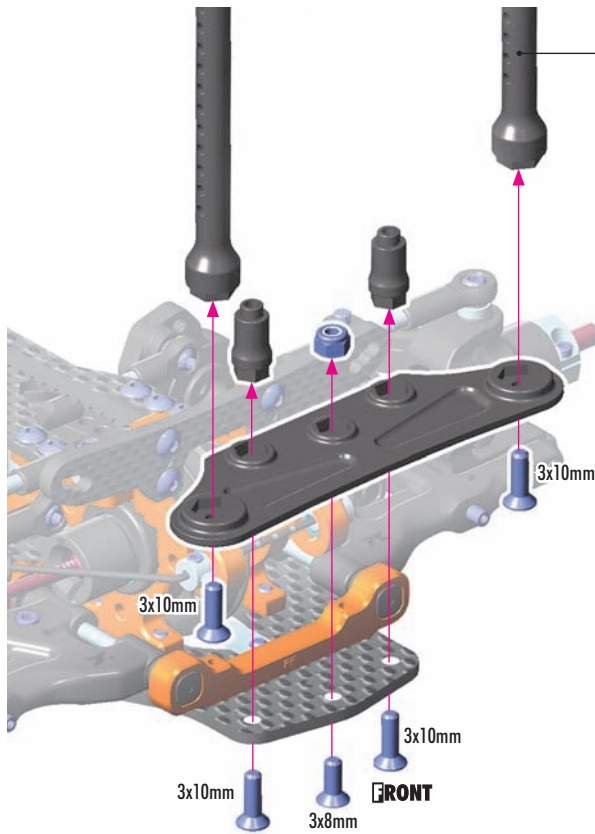
903308
SFH M3x8



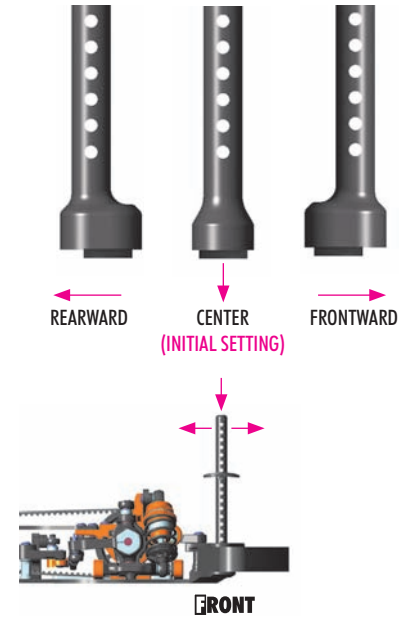
903310
SFH M3x10



960030
N M3



FRONT BODY POST ORIENTATION



It is important to use the same body setting (rearward, center, forward) both on front and rear body posts at the same time.

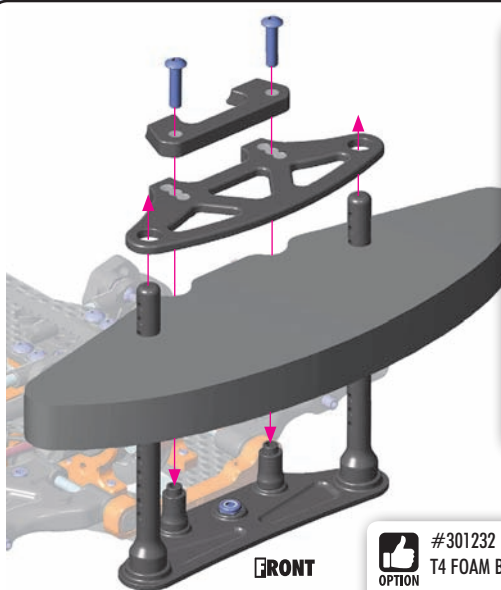


This new, innovative & unique feature allows adjustment of the body position for all kind of surfaces, traction conditions, touring classes, using only one body. There are three different body positions; rearward, center, and forward. Depending on the conditions the body posts position can be easily change which allows to move the body.

- The body in the **REARWARD POSITION** makes the car super stable and very easy to drive. It makes the car easier to drive over chicanes and is more predictable in high-traction conditions.
- The body in the **CENTER POSITION** makes the car more aggressive and steer faster, but is a bit more difficult to drive in low-grip conditions.
- The body in the **FORWARD POSITION** is the most aggressive. It makes the car steer a lot, but is more difficult to drive when the traction is high or when the track has a lot of chicanes.



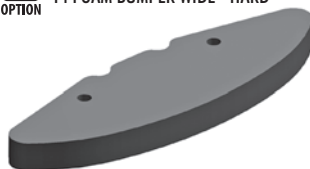
902312
SH M3x12



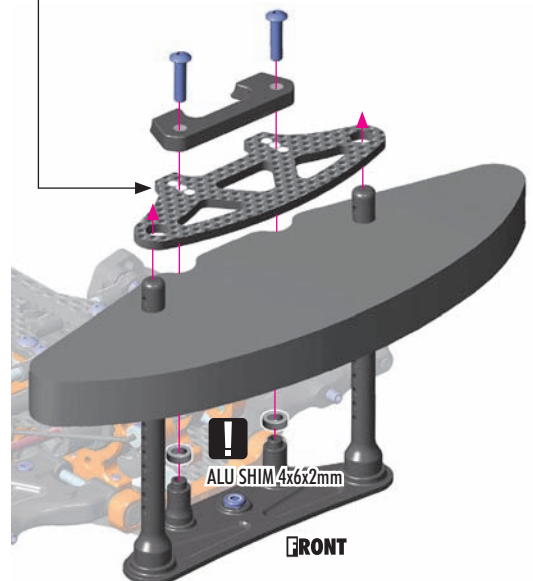
INITIAL SETTING



#301232
T4 FOAM BUMPER WIDE - HARD



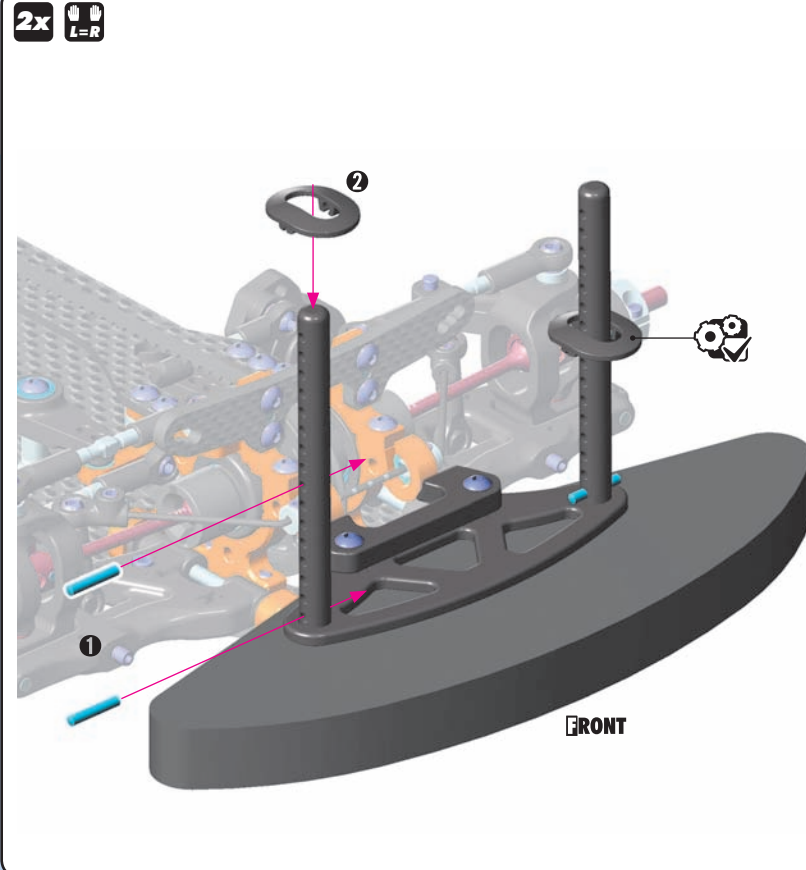
#301210
GRAPHITE UPPER HOLDER FOR BUMPER 2.5mm
(Alu shim 4x6x2mm - INCLUDED)



ALU SHIM 4x6x2mm

7. FRONT & REAR ASSEMBLY

981212
P 2x12



2x
L=R

#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.

FRONT ECC. BODY MOUNT SET

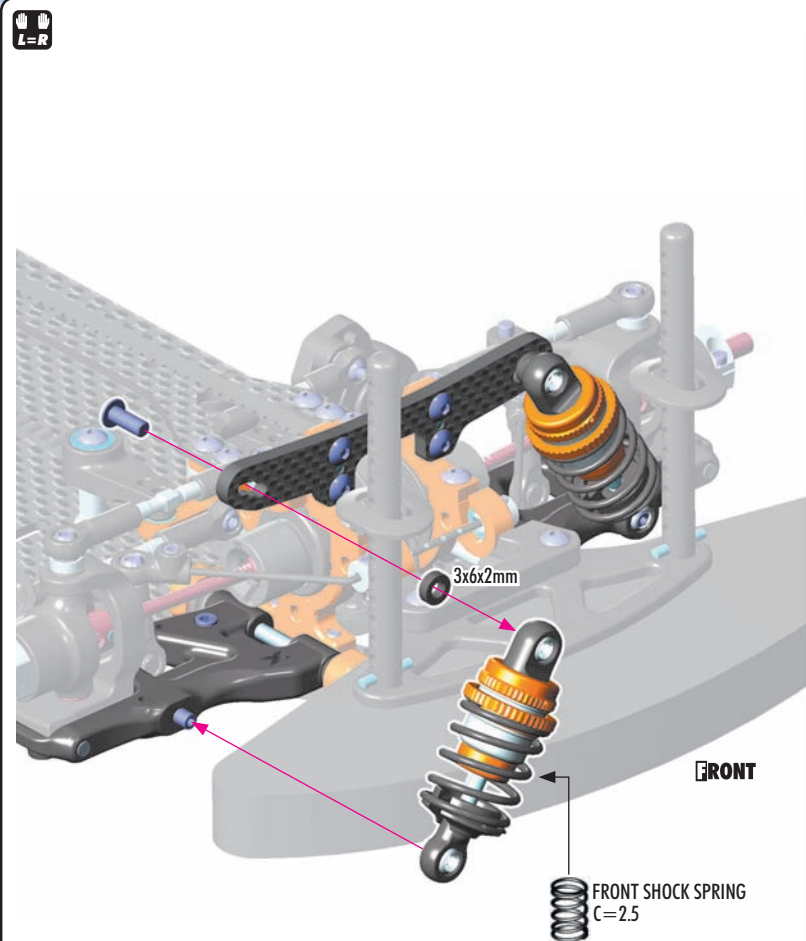
#301326	0mm	INCLUDED
#301327	+1mm	OPTION
#301328	+2mm	OPTION

FRONT BODY MOUNT SET

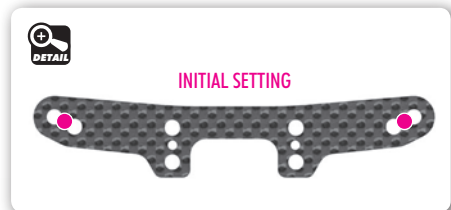
#301322	0mm	INCLUDED
#301323	+1mm	OPTION
#301324	+2mm	OPTION

902308
SH M3x8

10
303129
SHIM 3x6x2



L=R



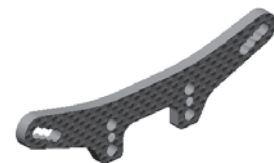
DETAIL

INITIAL SETTING

#308307-0
XRAY T4 ALU SHOCK ABSORBER-SET - ORANGE (2)



#302082
SLP SHOCK TOWER FRONT 3.0MM GRAPHITE



For some very specific racing conditions like extremely-low traction, these SLP shocks with SLP shock tower are available as an option.

FRONT SHOCK SPRING
C=2.5

SET-UP BOOK

SHOCK POSITION
RIDE HEIGHT
DROOP

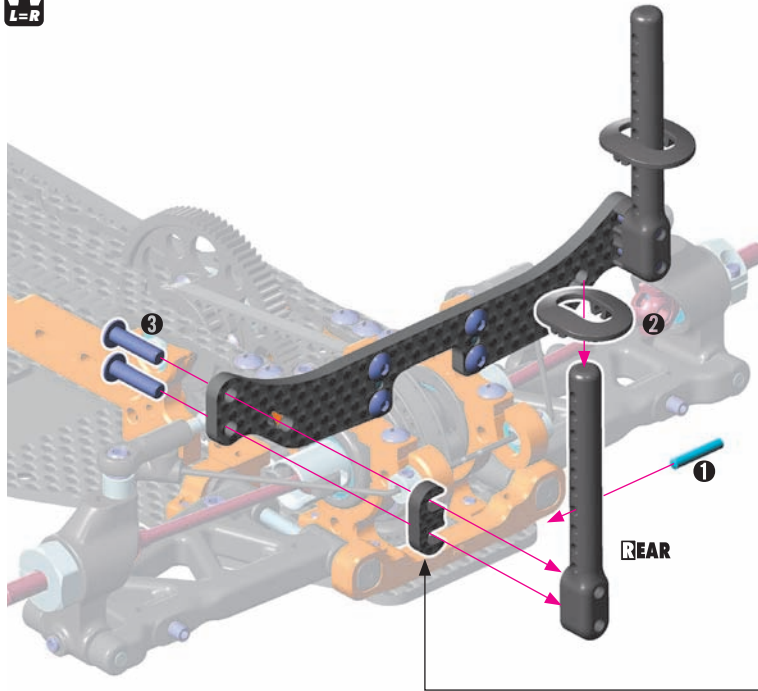
7. FRONT & REAR ASSEMBLY



902312
SH M3x12



981212
P 2x12

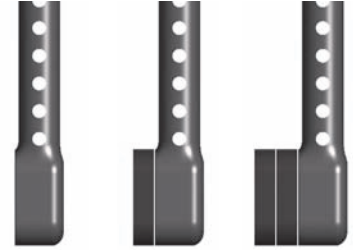


OPTION

REAR BODY MOUNT SET		
#301336	0mm	INCLUDED
#301337	+1mm	OPTION
#301338	+2mm	OPTION



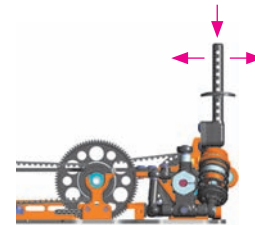
REAR BODY POST POSITION



FRONTWARD

CENTER
(INITIAL SETTING)

REARWARD



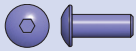
It is important to use the same body setting (rearward, center, frontward) both on front and rear body posts at the same time.



OPTION

#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.



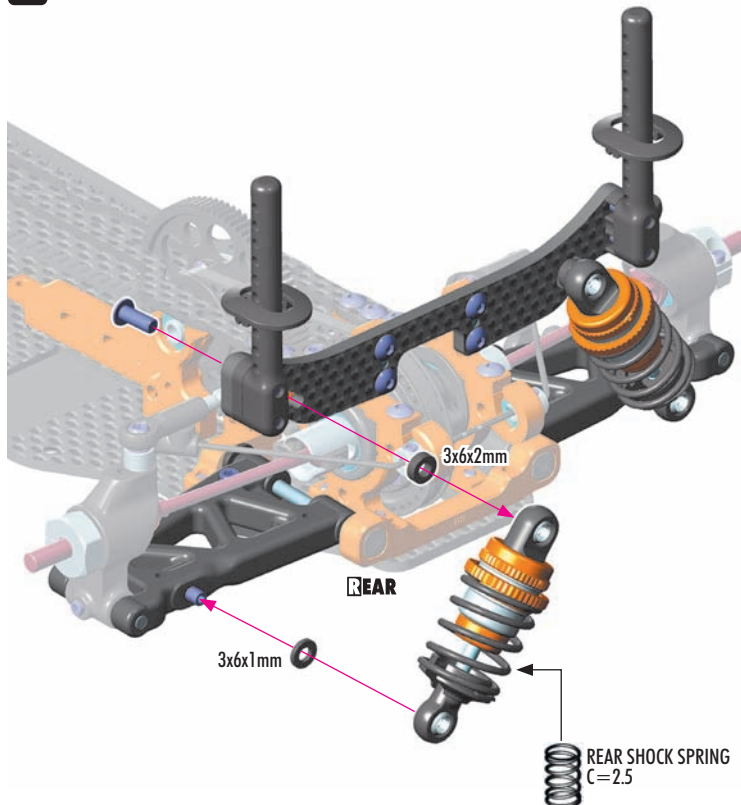
902308
SH M3x8



306219
SHIM 3x6x1



306219
SHIM 3x6x2



DETAIL



OPTION

#308307-0 XRAY T4 ALU SHOCK ABSORBER-SET - ORANGE (2)



OPTION

#303083 SLP SHOCK TOWER REAR 3.0MM GRAPHITE

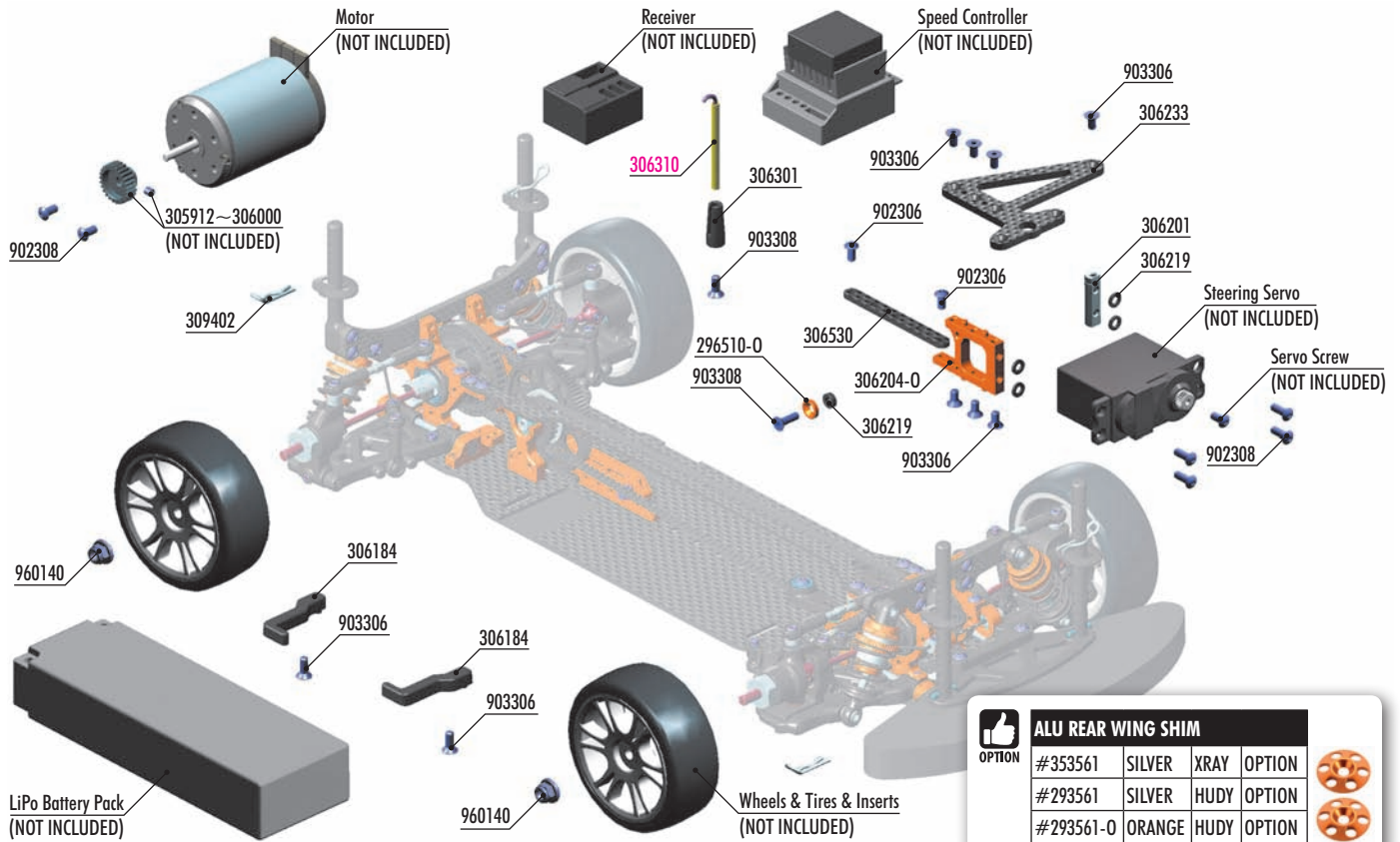


For some very specific racing conditions like extremely-low traction, these SLP shocks with SLP shock tower are available as an option.



SHOCK POSITION
RIDE HEIGHT
DROOP

7. FINAL ASSEMBLY



ALU REAR WING SHIM			
#353561	SILVER	XRAY	OPTION
#293561	SILVER	HUDDY	OPTION
#293561-0	ORANGE	HUDDY	OPTION

#306191
T4 GRAPHITE + ALU FULLY ADJUSTABLE BATTERY HOLDER

#306194
T4 GRAPHITE + BRASS FULLY ADJUSTABLE BATTERY HOLDER

#306410-0
ALU FAN MOUNT

#306531
BRASS CHASSIS STIFFENER

#306165
GRAPHITE BATTERY STRAP

#306186
ALU LIPO BATTERY BACKSTOPS (F+R)

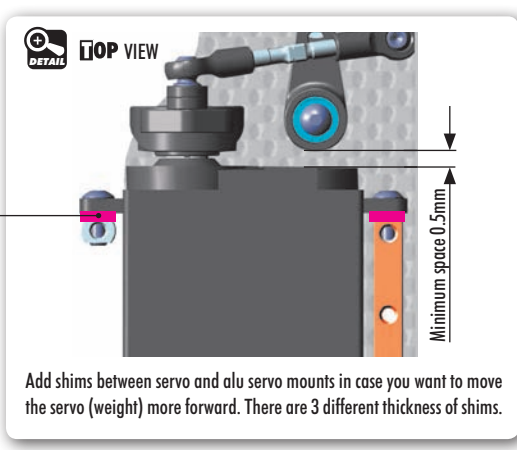
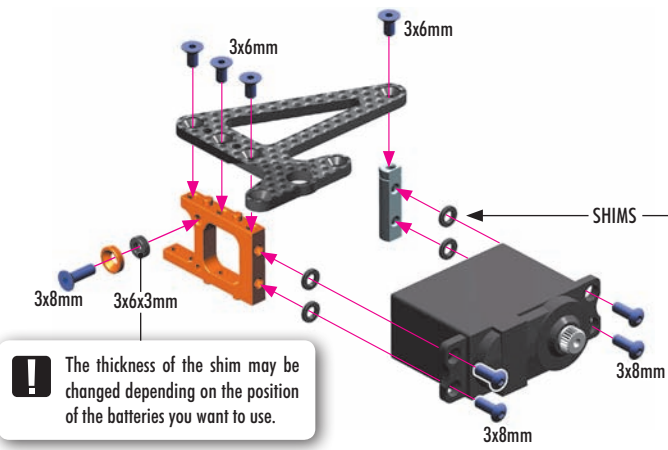
#303061
GRAPHITE MOTOR GUARD

BAG
07

- 296510-0 ALU COUNTERSUNK SHIM - ORANGE (10)
- 305912~306000 NARROW PINION GEAR ALU HARD COATED (OPTION)
- 306184 LONG COMPOSITE LIPO BATTERY BACKSTOP (1+1)
- 306201 ALU SERVO MOUNT - LONG
- 306204-0 T4'17 ALU SERVO MOUNT - ORANGE
- 306219 COMPOSITE SET OF SERVO SHIMS (4)
- 306301 ANTENNA MOUNT - THIN
- 306233 T4 GRAPHITE FLOATING SERVO HOLDER 3.0MM
- 306530 T4 GRAPHITE CHASSIS STIFFENER 2.0MM

- 309402 BODY CLIP FOR 6MM BODY POST (4)
 - 902306 HEX SCREW SH M3x6 (10)
 - 902308 HEX SCREW SH M3x8 (10)
 - 903306 HEX SCREW SFH M3x6 (10)
 - 903308 HEX SCREW SFH M3x8 (10)
 - 960140 NUT M4 WITH FLANGE (10)
- 306310** ANTENNA (2)

- 306219 SHIM 3x6x1
- 903308 SFH M3x8
- 306219 SHIM 3x6x2
- 903308 SFH M3x8
- 306219 SHIM 3x6x3
- 903308 SFH M3x8
- 903306 SFH M3x6
- 902308 SH M3x8



7. FINAL ASSEMBLY

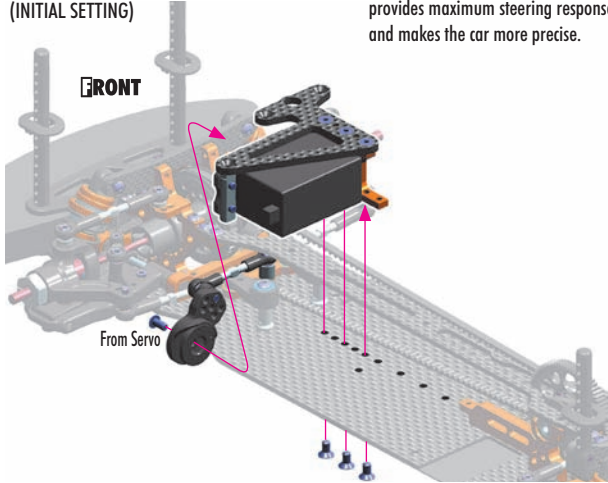


903306
SFH M3x6

ALTERNATIVE 1

STANDARD STEERING ARM MOUNTING (INITIAL SETTING)

Standard steering mounting system provides maximum steering response and makes the car more precise.



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



IMPORTANT!

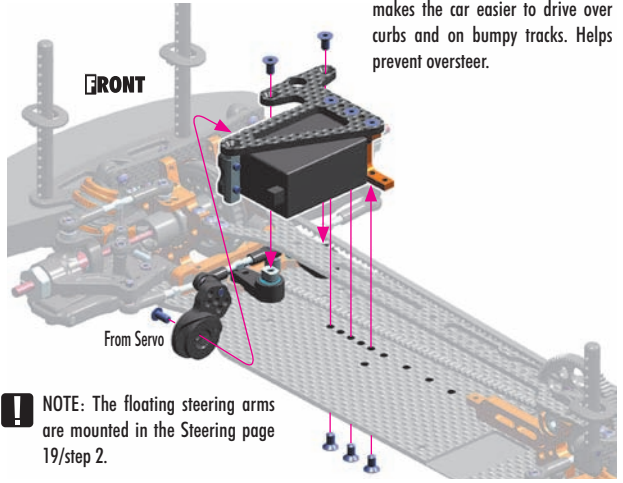


When adjusting steering on the radio, we recommend using full steering adjustment in order to get the best steering from the car. It is important to verify that the steering block does not touch the C-hub; that would lead to chassis tweak due to extra servo strain.

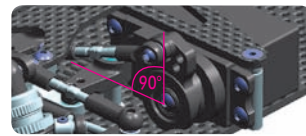
ALTERNATIVE 2

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 in the Steering page 19/step 2.

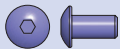


Attach servo arm to servo output shaft using screw from servo. Servo saver must be perpendicular to chassis when servo is in neutral.



INLINE FLEX CHASSIS ADJUSTMENT

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.



902306
SH M3x6



903308
SFH M3x8



960030
N M3



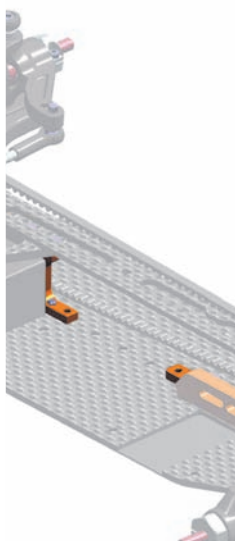
303123-0
SHIM 3x6x2



306219
SHIM 3x6x2

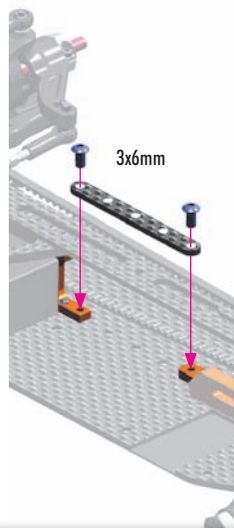
1

INITIAL SETTING



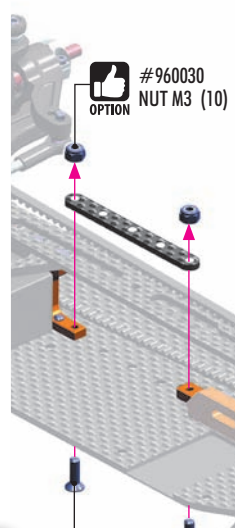
2

Attach the graphite reinforcement plate from the top so the chassis stays independent from inline chassis flex.



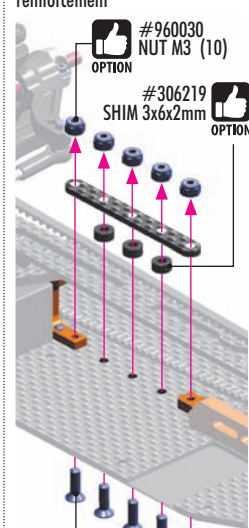
3

Attach the graphite reinforcement plate from the bottom so the chassis is now part of the inline chassis flex.



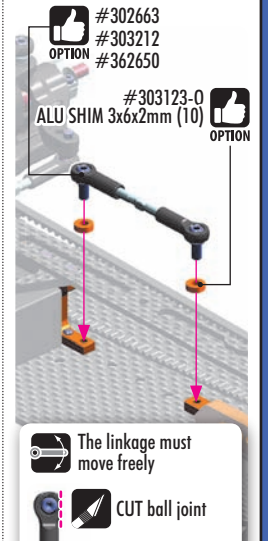
4

Attach the graphite reinforcement plate from the bottom so the chassis is now part of the inline chassis flex and use also extra holes between the servo holder and motor mount for even more reinforcement



5

Use the linkage - mounted from the top - for inline chassis reinforcement. By using the linkage, the chassis stays stiff in the inline direction, but flexes to the sides.



#306531
BRASS CHASSIS STIFFENER



The brass stiffener adds extra 4 g weight into the absolute chassis center and eliminates any negative chassis flex.



#903308
HEX SCREW SFH
M3x8 (10)



#903308
HEX SCREW SFH
M3x8 (10)

The linkage must move freely

CUT ball joint

18mm

CUT ball joint

The ball joints must be modified (cut as shown) in order to prevent ball joints touching the belt.

7. FINAL ASSEMBLY

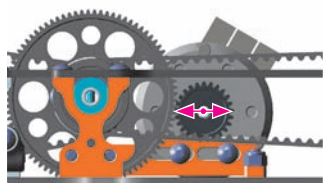


902308
SH M3x8

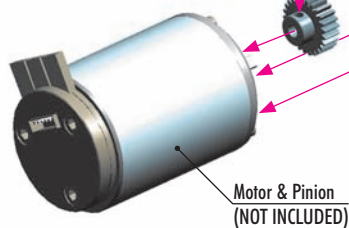


Adjust the motor so the pinion meshes with the spur gear properly. Make sure the gear mesh is not too tight.

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



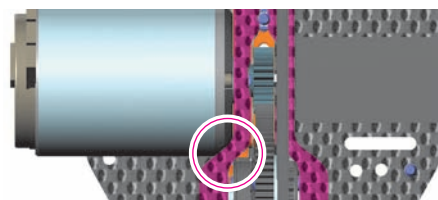
3x2.5mm set screw
(#901302)
(NOT INCLUDED)



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
GRAPHITE MOTOR GUARD



#306410-0
ALU FAN MOUNT



GEARING ADJUSTMENT



903308
SFH M3x8



NOTE: If 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.



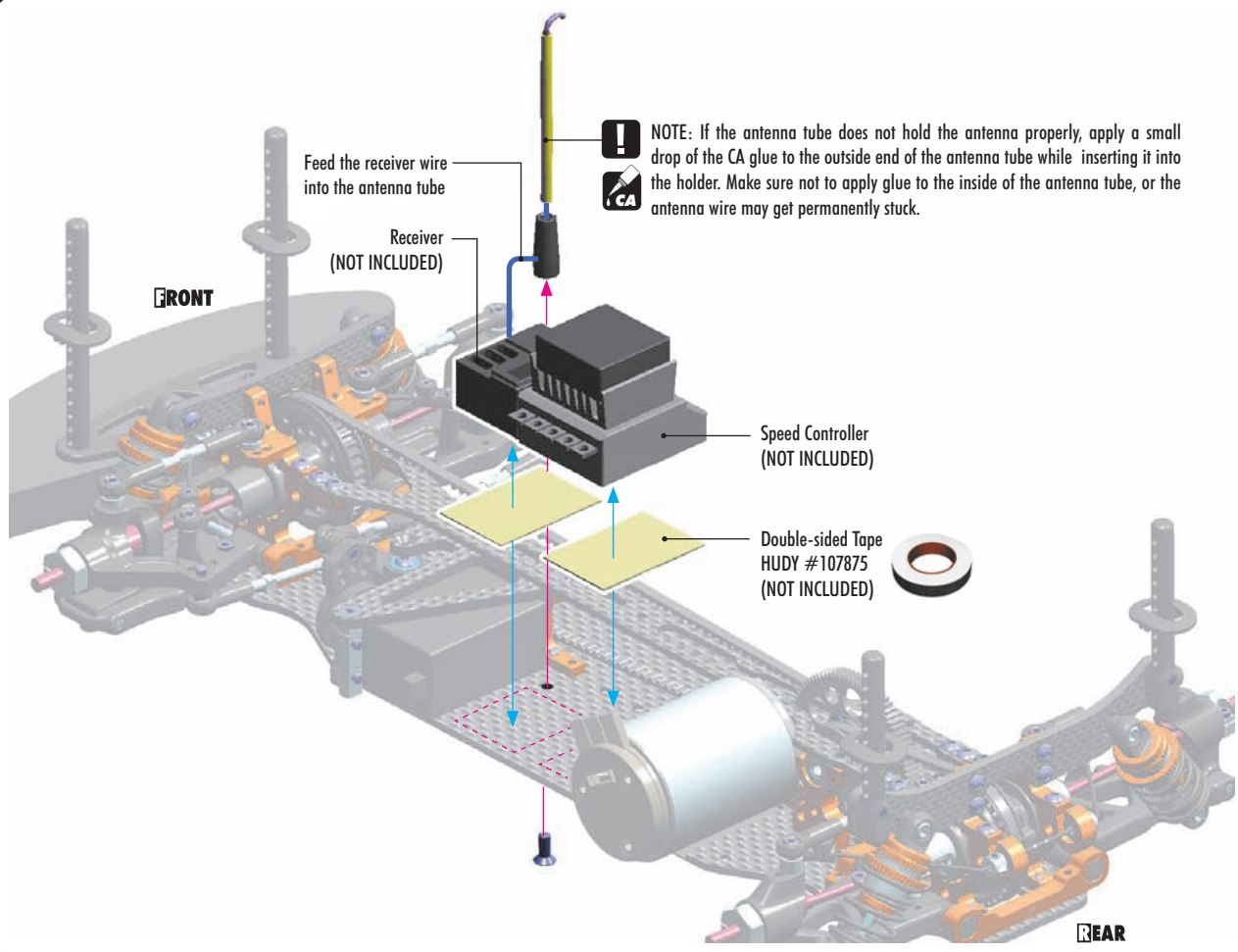
Feed the receiver wire into the antenna tube

Receiver
(NOT INCLUDED)

FRONT

Speed Controller
(NOT INCLUDED)

Double-sided Tape
HUDY #107875
(NOT INCLUDED)



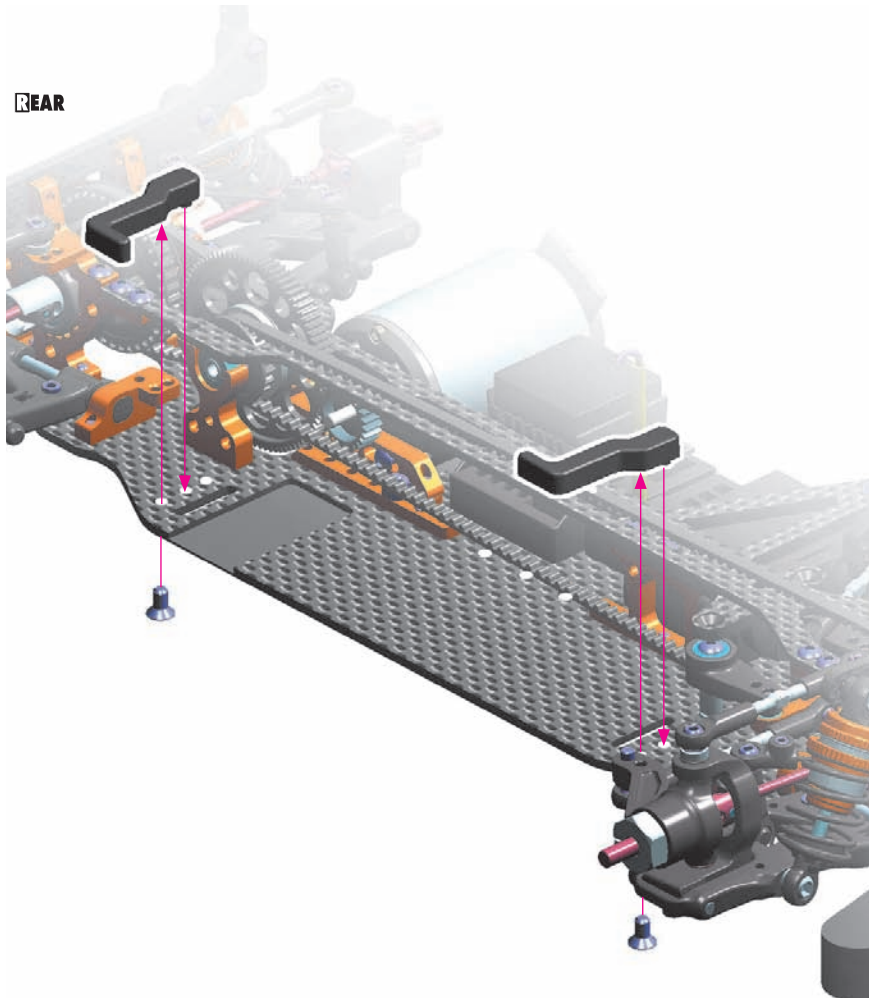
REAR

7. FINAL ASSEMBLY



903306
SFH M3x6

REAR



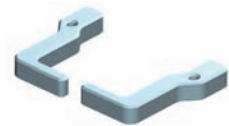
#306191
OPTION T4 GRAPHITE + ALU FULLY ADJUSTABLE BATTERY HOLDER



#306194
OPTION T4 GRAPHITE + BRASS FULLY ADJUSTABLE BATTERY HOLDER



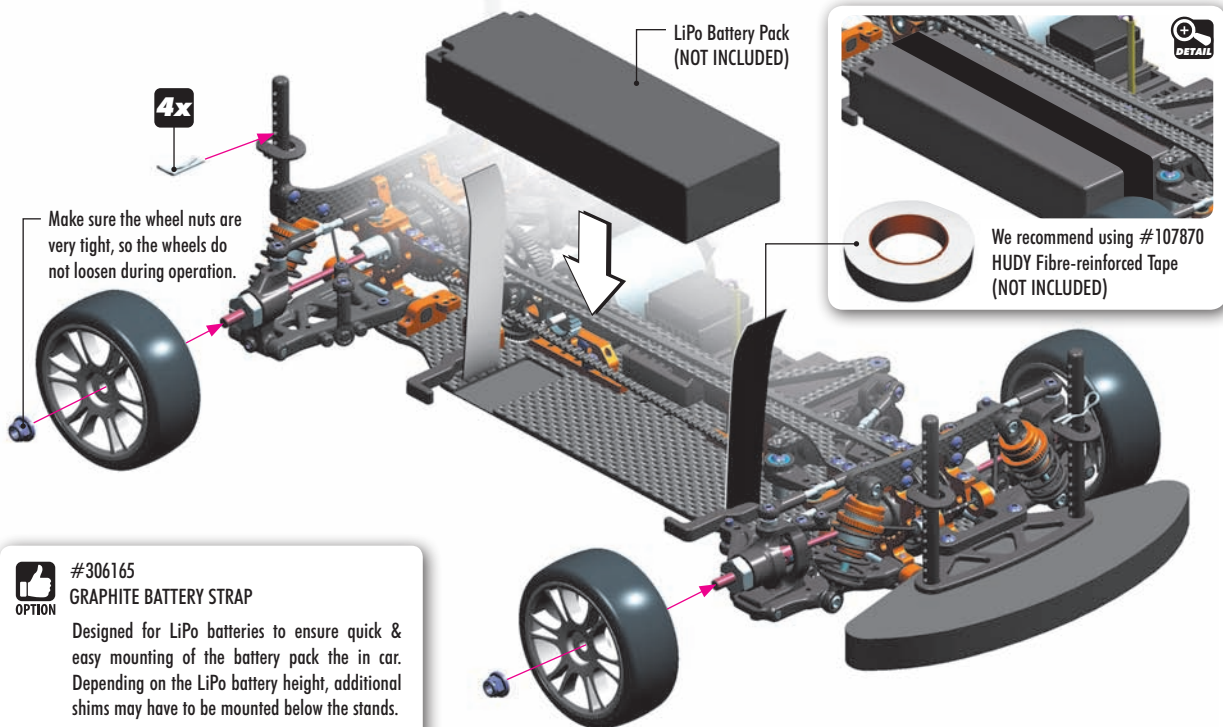
#306186
OPTION ALU LIPO BATTERY BACKSTOPS (F+R)



FRONT



960140
N M4



#306165
OPTION GRAPHITE BATTERY STRAP

Designed for LiPo batteries to ensure quick & easy mounting of the battery pack the in car. Depending on the LiPo battery height, additional shims may have to be mounted below the stands.



ALU REAR WING SHIM

OPTION	Part #	Color	Brand	Option	Image
	#353561	SILVER	XRAY	OPTION	
	#293561	SILVER	HUDY	OPTION	
	#293561-0	ORANGE	HUDY	OPTION	

RACE/TRACK	
NAME	
DATE	

TEMPERATURE AIR		TEMPERATURE TRACK	
-----------------	--	-------------------	--

QUAL POSITION	FINAL POSITION	BEST LAP TIME	LAPS	TIME
		/sec	/	

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
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
GEAR DIFFERENTIAL - OIL	/cSt	GEAR DIFFERENTIAL - OIL	/cSt

PINION / T	SPUR GEAR / T	FINAL DRIVE RATIO

FRONT	SHOCKS	REAR	
ULTRA LOW PROFILE	<input type="checkbox"/>	SUPER LOW PROFILE	<input type="checkbox"/>
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		<input type="checkbox"/> 4 HOLES
<input type="checkbox"/> PSS		<input type="checkbox"/> PSS
1.0mm		
1.1mm		
1.2mm		
PROGRESSIVE		

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

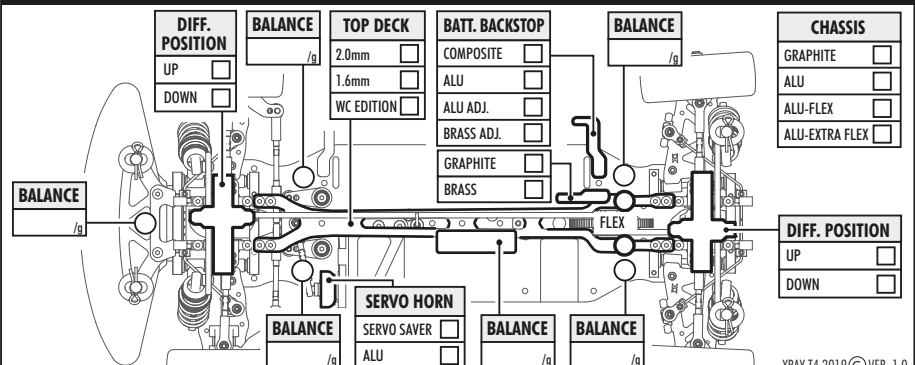
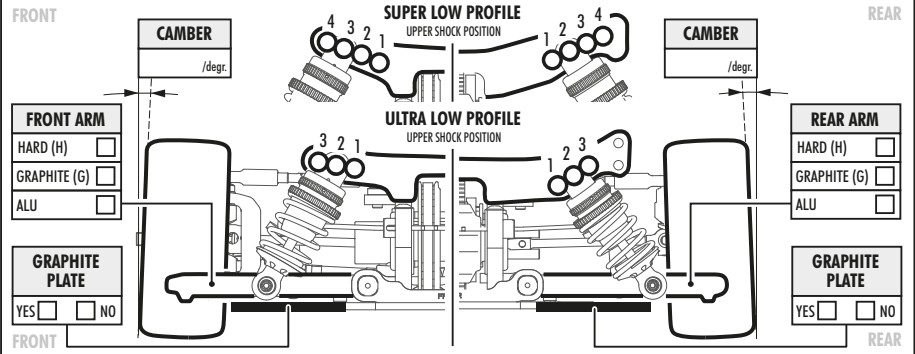
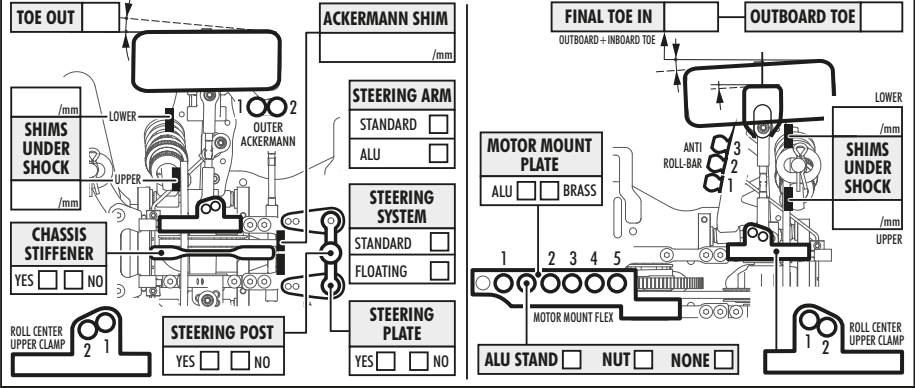
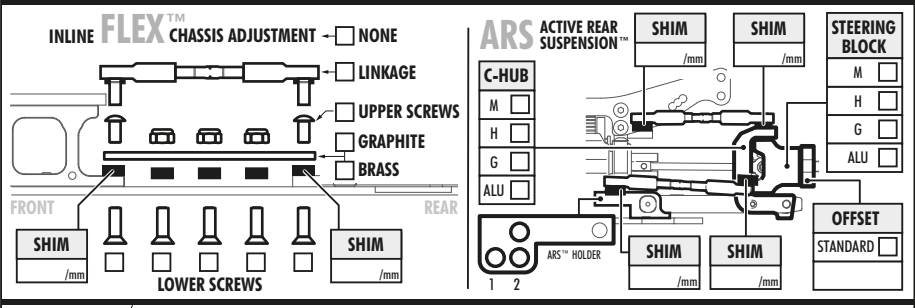
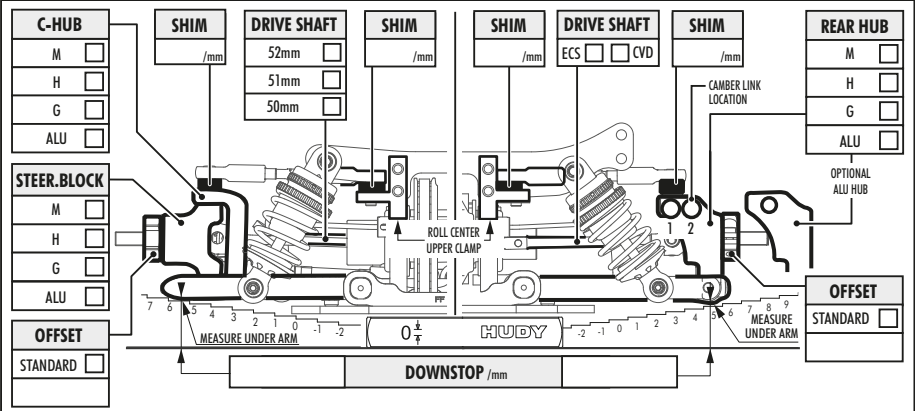
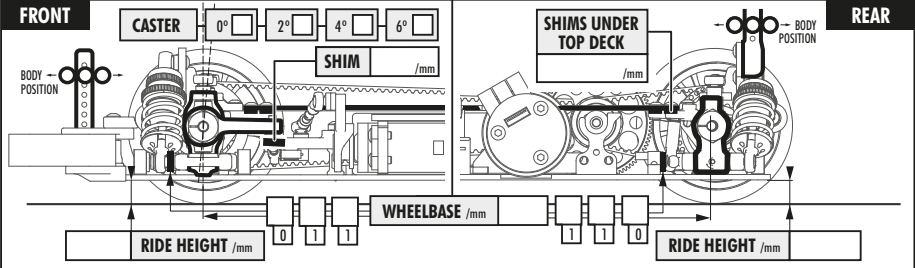
FRONT LEFT	FRONT RIGHT	REAR LEFT	REAR RIGHT
TREATED AREA			

FRONT	SUSPENSION HOLDERS	REAR	
FF - STANDARD	<input type="checkbox"/>	RR - STANDARD	<input type="checkbox"/>
FF - LOWER	<input type="checkbox"/>	RR - LOWER	<input type="checkbox"/>
FF - BRASS	<input type="checkbox"/>	RR - BRASS	<input type="checkbox"/>
FR - STANDARD	<input type="checkbox"/>	RF - 2-PIECE STANDARD	<input type="checkbox"/>
FR - LOWER	<input type="checkbox"/>	RF - 2-PIECE LOWER	<input type="checkbox"/>
FR - 2-PIECE LOWER	<input type="checkbox"/>	RF - 2-PIECE 0.25	<input type="checkbox"/>
FR - BRASS	<input type="checkbox"/>	RF - 2-PIECE BRASS	<input type="checkbox"/>

ECCENTRIC BUSHINGS	ROLL CENTER	ECCENTRIC BUSHINGS
FF	1 <input type="checkbox"/> 0.5 <input type="checkbox"/>	RR
FR	1 <input type="checkbox"/> 0.5 <input type="checkbox"/>	RF

MOTOR	TIMING
ESC	BATTERIES
BODY	WING

COMMENTS





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