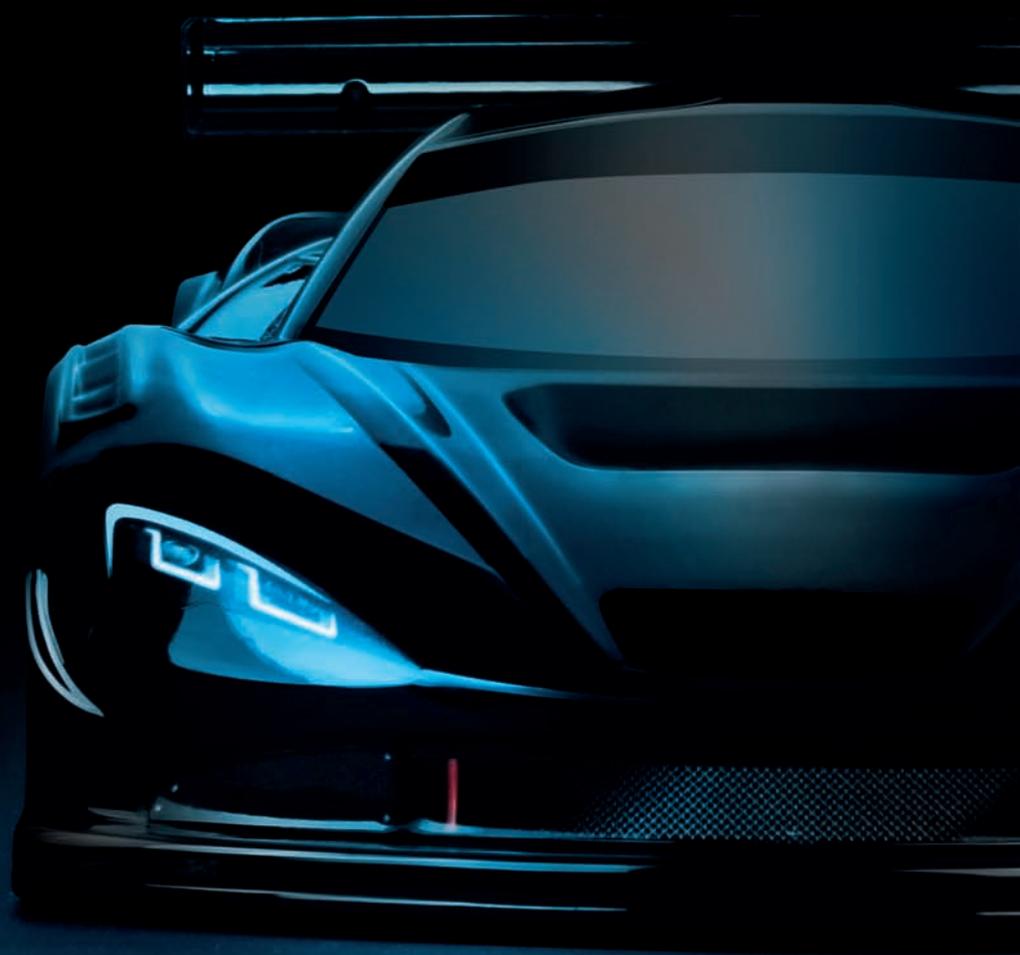


1/10 LUXURY ELECTRIC GT PANCAR

XRAY X10



INSTRUCTION MANUAL
FOR X10'22 EDITION

BEFORE YOU START

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

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

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

Carefully read and fully understand the instructions before beginning assembly.

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

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

XRAY Europe

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

XRAY USA

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

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

SAFETY PRECAUTIONS

Contains:

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

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

CAUTION: CANCER HAZARD

Contains lead, a listed carcinogen. Lead is harmful if ingested. Wash thoroughly after using. DO NOT use product while eating, drinking or using tobacco products. May cause chronic effects to gastrointestinal tract, CNS, kidneys, and blood. MAY CAUSE BIRTH DEFECTS.

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

Take appropriate safety precautions prior to operating this model. You are responsible for this model's assembly and safe operation! Please read the instruction manual before building and operating this model and follow all safety precautions. Always keep the instruction manual at hand for quick

reference, even after completing the assembly. Use only genuine and original authentic XRAY parts for maximum performance. Using any third party parts on this model will void guaranty immediately.

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

IMPORTANT NOTES - GENERAL

- This product is not suitable for children under 16 years of age without the direct supervision of a responsible and knowledgeable adult.
- Carefully read all manufacturers warnings and cautions for any parts used in the construction and use of your model.
- Assemble this kit only in places away from the reach of very small children.
- First-time builders and users should seek advice from people who have building experience in order to assemble the model correctly and to allow the model to reach its performance potential.
- Exercise care when using tools and sharp instruments.
- Take care when building, as some parts may have sharp edges.
- Keep small parts out of reach of small children. Children must not be allowed to put any parts in their mouth, or pull vinyl bag over their head.
- Read and follow instructions supplied with paints and/or cement, if used (not included in kit).
- Immediately after using your model, do NOT touch equipment on the model such as the motor and speed controller, because they generate high temperatures. You may seriously burn yourself seriously touching them.
- Follow the operating instructions for the radio equipment at all times.
- Do not put fingers or any objects inside rotating and moving parts, as this may cause damage or serious injury as your finger, hair, clothes, etc. may get caught.
- Be sure that your operating frequency is clear before turning on or running your model, and never share the same frequency with somebody else at the same time. Ensure that others are aware of the operating frequency you are using and when you are using it.
- Use a transmitter designed for ground use with RC cars. Make sure that no one else is using the same frequency as yours in your operating area. Using the same frequency at the same time, whether it is driving, flying or sailing, can cause loss of control of the RC model, resulting in a serious accident.
- Always turn on your transmitter before you turn on the receiver in the car. Always turn off the receiver before turning your transmitter off.
- Keep the wheels of the model off the ground when checking the operation of the radio equipment.
- Disconnect the battery pack before storing your model.
- When learning to operate your model, go to an area that has no obstacles that can damage your model if your model suffers a collision.
- Remove any sand, mud, dirt, grass or water before putting your model away.
- If the model behaves strangely, immediately stop the model, check and clear the problem.
- To prevent any serious personal injury and/or damage to property, be responsible when operating all remote controlled models.
- The model car is not intended for use on public places and roads or areas where its operation can conflict with or disrupt pedestrian or vehicular traffic.
- Because the model car is controlled by radio, it is subject to radio interference from many sources that are beyond your control. Since radio interference can cause momentary loss of control, always allow a safety margin in all directions around the model in order to prevent collisions.
- Do not use your model:
 - Near real cars, animals, or people that are unaware that an RC car is being driven.
 - In places where children and people gather
 - In residential districts and parks
 - In limited indoor spaces
 - In wet conditions
 - In the street
 - In areas where loud noises can disturb others, such as hospitals and residential areas.
 - At night or anytime your line of sight to the model may be obstructed or impaired in any way.

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

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.

TOOLS REQUIRED



Combination Pliers
(HUDY #189020)



Side Cutters
(HUDY #189010)



Pocket Hobby Knife
(HUDY #188981)



Special Tool for Turnbuckles, Nuts (HUDY #181090)



Turnbuckle Wrench 3mm (HUDY #181030)



Allen 1.5mm (#111545 - HUDY EXCLUSIVE Limited Edition)



Allen 2.0mm (#112045 - HUDY EXCLUSIVE Limited Edition)



Allen 2.5mm (#112545 - HUDY EXCLUSIVE Limited Edition)



Allen 3.0mm (#113045 - HUDY EXCLUSIVE Limited Edition)



Arm Reamer 4.0mm (#107644 - HUDY EXCLUSIVE Limited Edition)



Socket 5.5mm (#175535 - HUDY EXCLUSIVE Limited Edition)



Reamer (#107602 - HUDY EXCLUSIVE Limited Edition)



Scissors (HUDY #188990)



Professional Multi-Tool
(HUDY #183011)



Alexander Hagberg
(Factory Driver)

When a QR CODE is found in the instruction manual, scan the code to be directed to an online video that explains that feature or adjustment in more detail. Make sure to watch all of the instructional videos to get the most performance out of your car.

The Tech Tips videos that you can scan in this instruction manual and watch are for X12. Therefore, it is important to use these videos for X10 as information and as an extra aid to understand the correct settings, but you must not take it completely into detail.

VIDEO TECH TIP

INCLUDED

* Kit includes smaller but sufficient amount of oil and grease to build the car.

700cSt (#106370)
HUDY Premium Silicone Oils



10.000cSt (#106510)
HUDY Premium Silicone Oils



(HUDY #106211)
Differential Grease



ALSO REQUIRED

Transmitter



Receiver



Speed Controller



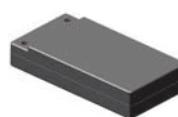
Steering Servo



Electric Motor & Pinion Gear
with Setscrew



LiPo Battery



Battery Charger



Bearing Oil
(HUDY #106230)



Tires



1/10 GT Bodyshell



Lexan™ Paint



Double-sided Tape
(HUDY #107875)



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.

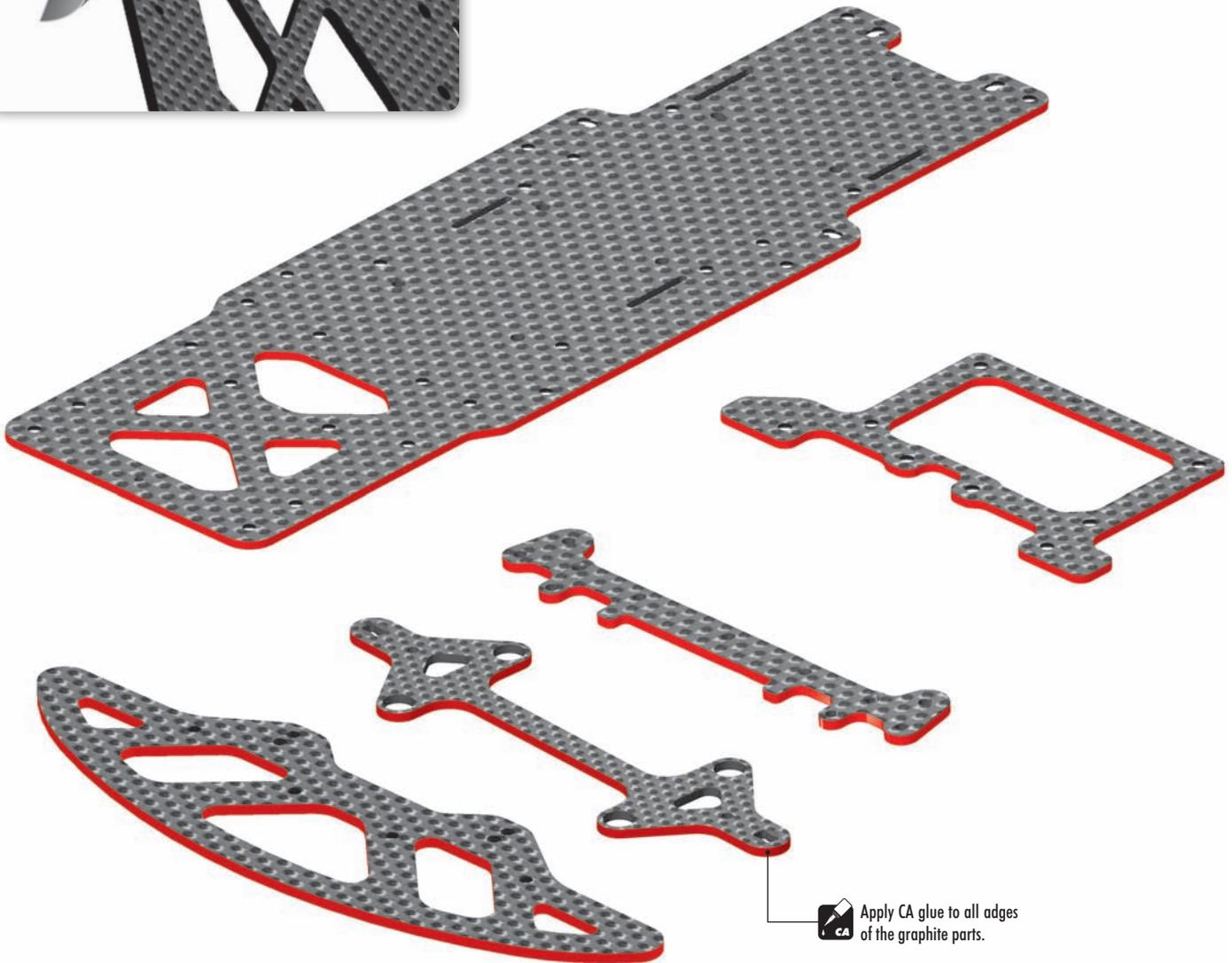
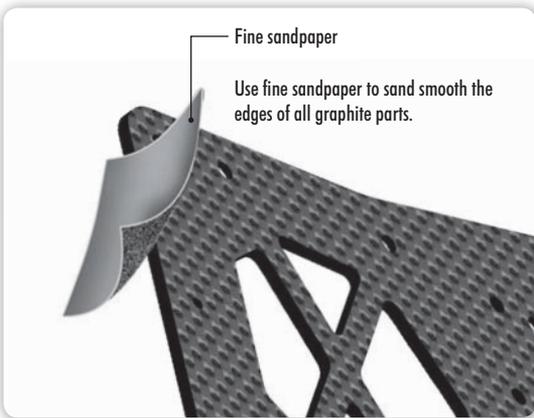
The part descriptions are color-coded to make it easier for you to identify the source of a part. Here are what the different colors mean:

- 371068 **STYLE A** - indicates parts that are included in the bag marked for the section.
- 371024 **STYLE B** - indicates parts that are included in the box.
- 378003 **STYLE C** - indicates parts that are already assembled from previous steps.

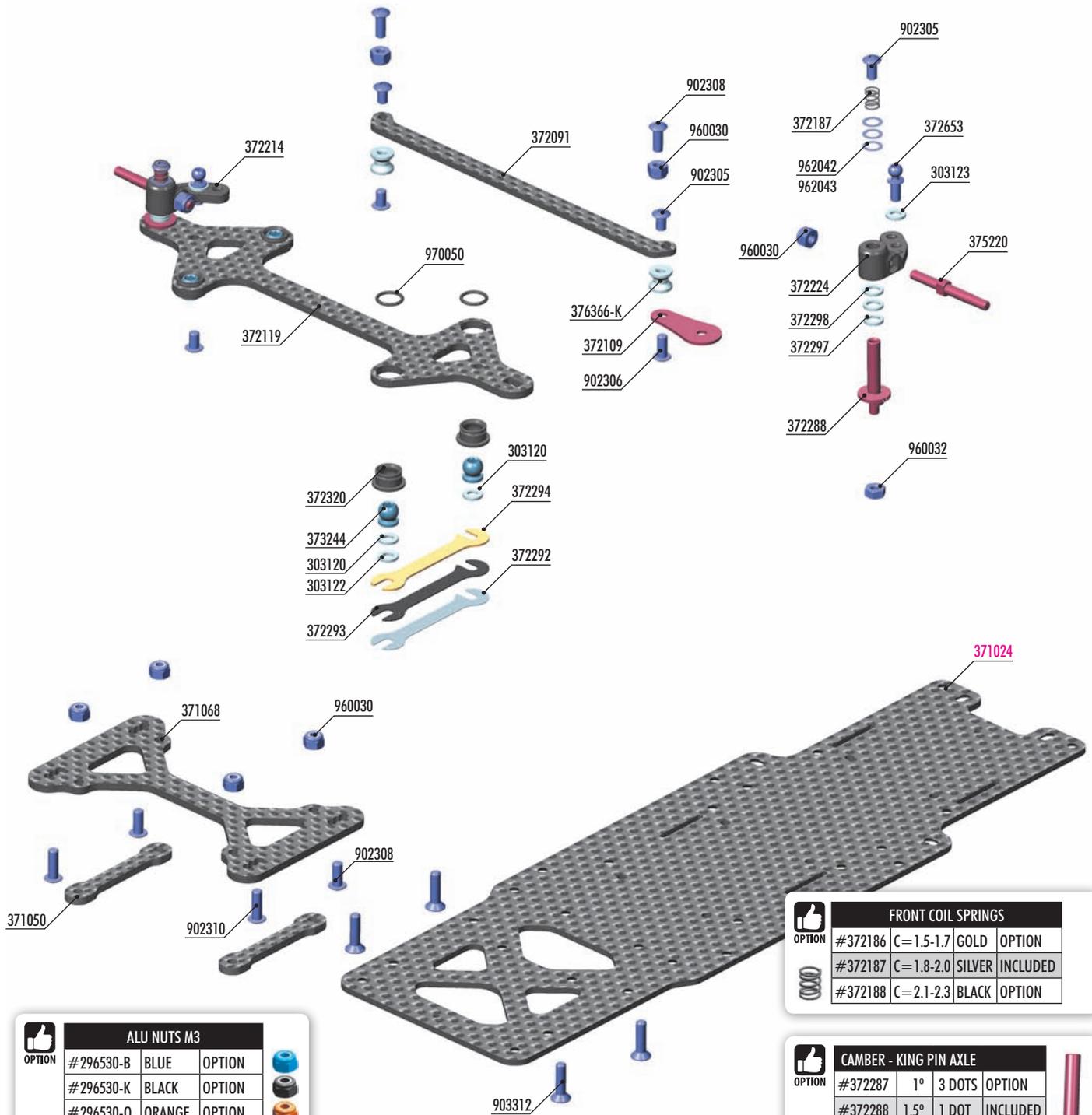
GRAPHITE PARTS PREPARATION

PREPARE ALL GRAPHITE PARTS

To protect and seal edges of graphite parts, sand edges smooth and then apply CA glue.



1. FRONT SUSPENSION



| ALU NUTS M3 | | |
|-------------|-----------|---------------|
| OPTION | #296530-B | BLUE OPTION |
| | #296530-K | BLACK OPTION |
| | #296530-O | ORANGE OPTION |
| | #960031 | SILVER OPTION |

| FRONT COIL SPRINGS | | | |
|--------------------|---------|-----------|-----------------|
| OPTION | #372186 | C=1.5-1.7 | GOLD OPTION |
| | #372187 | C=1.8-2.0 | SILVER INCLUDED |
| | #372188 | C=2.1-2.3 | BLACK OPTION |

| CAMBER - KING PIN AXLE | | | |
|------------------------|---------|------|----------------|
| OPTION | #372287 | 1° | 3 DOTS OPTION |
| | #372288 | 1.5° | 1 DOT INCLUDED |
| | #372289 | 2° | 2 DOTS OPTION |

BAG
01

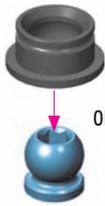
- | | | | |
|--------|--|----------|--|
| 303120 | SET OF ALU SHIM (0.5MM, 1.5MM, 2.5MM) | 372653 | BALL END 4.2MM WITH 8MM THREAD (2) |
| 303122 | ALU SHIM 3x6x1.0MM (10) | 373244 | BALL END 6.0MM WITH HEX - HUDY SPRING STEEL™ (2) |
| 303123 | ALU SHIM 3x6x2.0MM (10) | 375220 | FRONT WHEEL AXLE (2) |
| 371050 | GRAPHITE MOUNTING PLATE RISERS 2.5MM (2) | 376366-K | ALU MOUNT 6.0MM - BLACK (2) |
| 371068 | GRAPHITE ARM MOUNT PLATE 2.5MM | | |
| 372091 | GRAPHITE FRONT BRACE 2.0MM | 902305 | HEX SCREW SH M3x5 (10) |
| 372109 | STEEL LOWER SUSPENSION ARM BRACE (2) | 902306 | HEX SCREW SH M3x6 (10) |
| 372119 | GRAPHITE LOWER SUSPENSION ARM PLATE 2.5MM | 902308 | HEX SCREW SH M3x8 (10) |
| 372187 | FRONT COIL SPRING FOR 4MM PIN C=1.8-2.0 - SILVER (2) | 902310 | HEX SCREW SH M3x10 (10) |
| 372214 | COMPOSITE STEERING BLOCK FOR 4MM KING PIN - RIGHT - GRAPHITE | 903312 | HEX SCREW SFH M3x12 (10) |
| 372224 | COMPOSITE STEERING BLOCK FOR 4MM KING PIN - LEFT - GRAPHITE | 960030 | NUT M3 (10) |
| 372288 | X10 KING PIN 4MM - 1.5° (2) | 960032 | NUT M3 (10) |
| 372292 | STEEL SHIM 0.2MM - SILVER (2) | 962042 | WASHER S 4x6x0.1 (10) |
| 372293 | STEEL SHIM 0.4MM - BLACK (2) | 962043 | WASHER S 4x6x0.2 (10) |
| 372294 | STEEL SHIM 0.6MM - GOLD (2) | 970050 | O-RING 5x1 (10) |
| 372297 | ALU SHIM 4x6x1.0MM (10) | | |
| 372298 | ALU SHIM 4x6x0.5MM (10) | 371024 | X10'22 GRAPHITE CHASSIS 2.5MM |
| 372320 | COMPOSITE ARM BUSHING (4) | | |

1. FRONT SUSPENSION



970050
O 5x1

4x
L=R



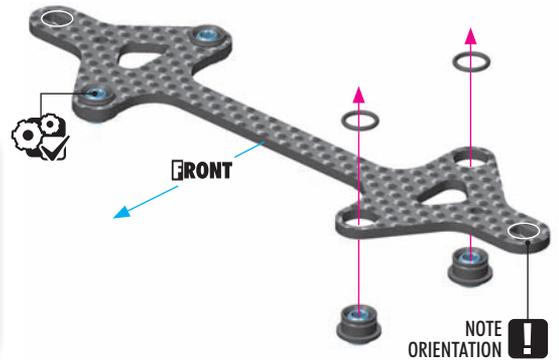
NOTE
ORIENTATION



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



CUTAWAY VIEW



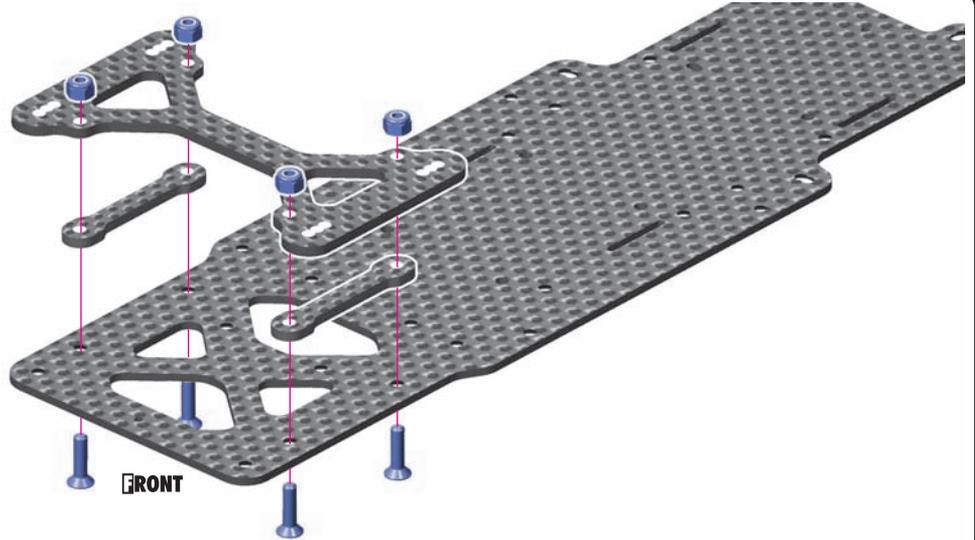
NOTE
ORIENTATION



903312
SFH M3x12



960030
N M3



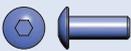
303120
SHIM 3x6x0.5



303122
SHIM 3x6x1

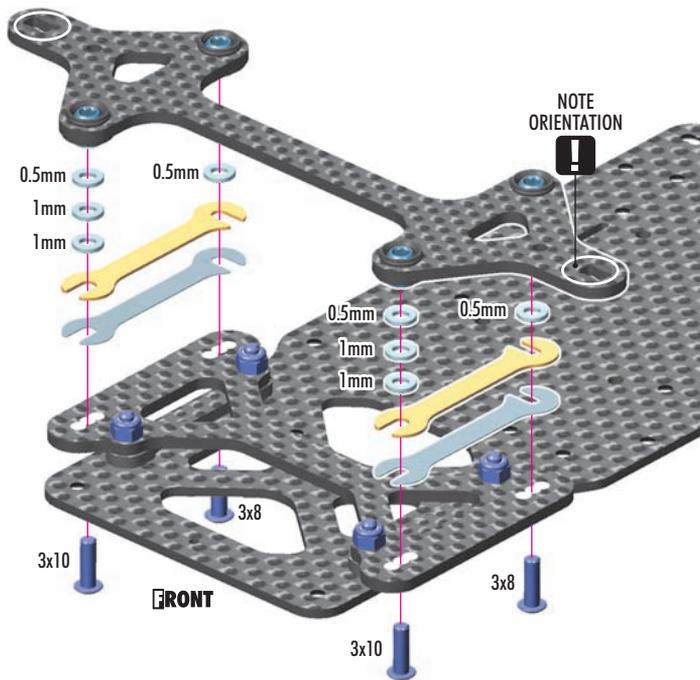


902310
SH M3x10



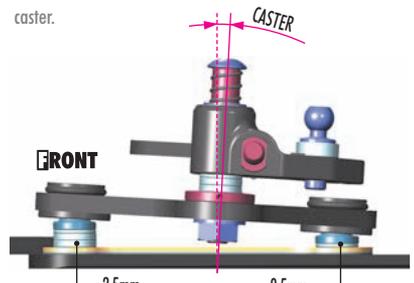
902308
SH M3x8

2x
L=R



CASTER ADJUSTMENT SETTING

Caster is adjusted by the shims placed under front ball. Please see the table beneath the to understand how to set caster.



2.5 - 0.5 = 2.0mm (Shim Difference and Caster 3°)

| EXTRA SHIM UNDER FRONT BALL | |
|-----------------------------|--------|
| SHIM DIFFERENCE | CASTER |
| 1mm | 1.5° |
| 2mm | 3° |
| 3mm | 4.5° |
| 4mm | 6° |
| 5mm | 7.5° |

INITIAL SETTING



VIDEO TECH TIP

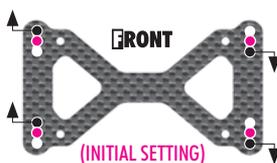


CASTER ADJUSTMENT

ALTERNATIVE FRONT POSITION LONG WHEELBASE

Longer wheelbase is recommended for bigger tracks with longer sweepers. Makes the car more stable and easier to drive.

FRONT WHEELBASE ADJUSTMENT



ALTERNATIVE REAR POSITION SHORT WHEELBASE

Shorter wheelbase allows the car to rotate better in corners to maintain cornering speed. Recommended for tight, technical tracks or tracks with numerous 180° hairpin corners.

RIDE HEIGHT & CASTER ADJUSTMENT

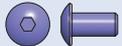
The number of washers and shims used affects the ride height and caster of the car, so determine the proper amount of shimming based on tire diameter and desired caster angle.

- INITIAL SETTING → 0.2mm - SILVER
- INITIAL SETTING → 0.4mm - BLACK
- INITIAL SETTING → 0.6mm - GOLD

1. FRONT SUSPENSION



902305
SH M3x5



902306
SH M3x6



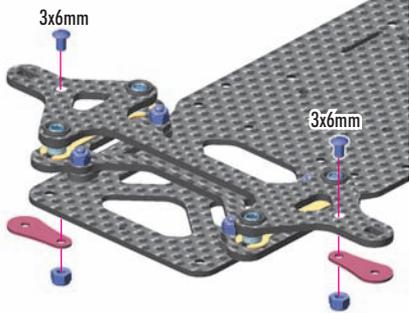
902308
SH M3x8



960030
ALU N M3

FRONT SUSPENSION FLEX SETTING

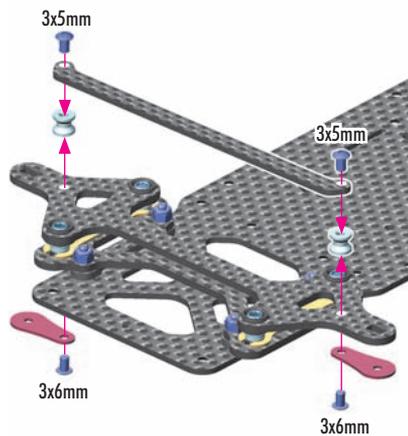
SOFT



SOFT - (NO BRACE)

Makes the car initially less responsive, but will provide more mechanical grip. Recommended for low-grip carpet conditions, and asphalt.

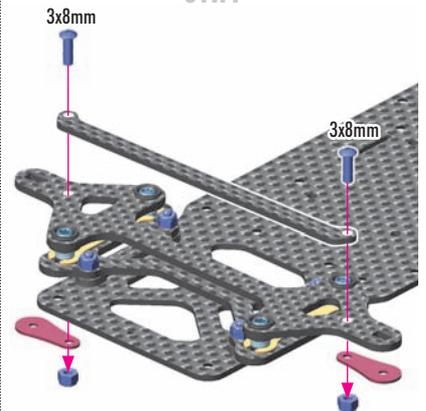
MEDIUM



MEDIUM (INITIAL SETTING)

Brace mounted to the graphite arm with posts provides a balance between initial response and mechanical grip. Recommended for most conditions.

STIFF



STIFF

Brace directly mounted to the graphite arm gives maximum responsiveness but decreases mechanical grip. Recommended for high-traction conditions (such as US black carpet).



303123
SHIM 3x6x2



960030
N M3

2x

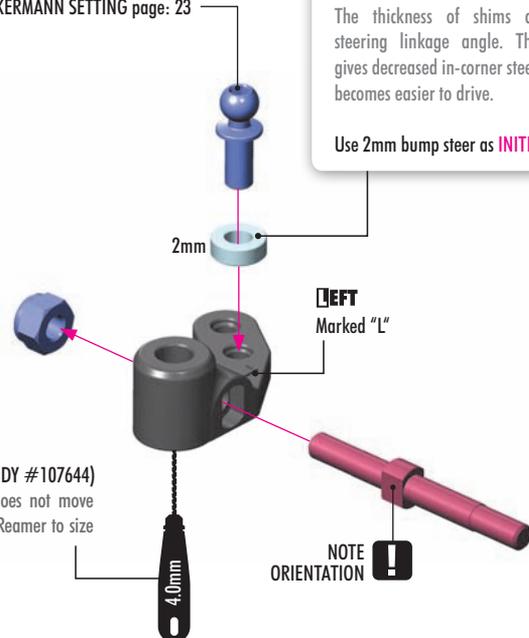
The steering link mounting position on the steering block has a direct effect on the Ackermann. Please see the ACKERMANN SETTING page: 23



RIGHT
Marked "R"

TIP

Arm Reamer 4.0mm (HUDY #107644)
If the suspension arm does not move freely, use a HUDY Arm Reamer to size the holes of the arms.



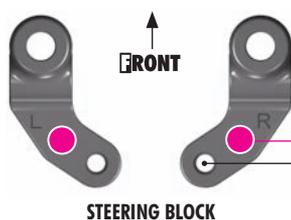
LEFT
Marked "L"

NOTE
ORIENTATION

BUMPSTEER SETTING

The thickness of shims changes the steering linkage angle. Thicker shims gives decreased in-corner steering, but car becomes easier to drive.

Use 2mm bump steer as **INITIAL SETTING**



STEERING BLOCK

FORWARD POSITION (INITIAL SETTING)

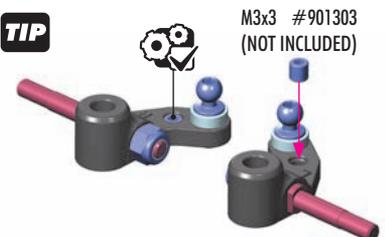
Initial setting for most tracks provides a neutral steering feel similar to that of the old X10. Provides a good balance between initial response and cornering speed.

REARWARD POSITION

Makes the car freer because of increased Ackermann (less steering lock on the outer wheel in relation to the inner). Recommended for medium- to high-traction tracks.



TIP



M3x3 #901303
(NOT INCLUDED)

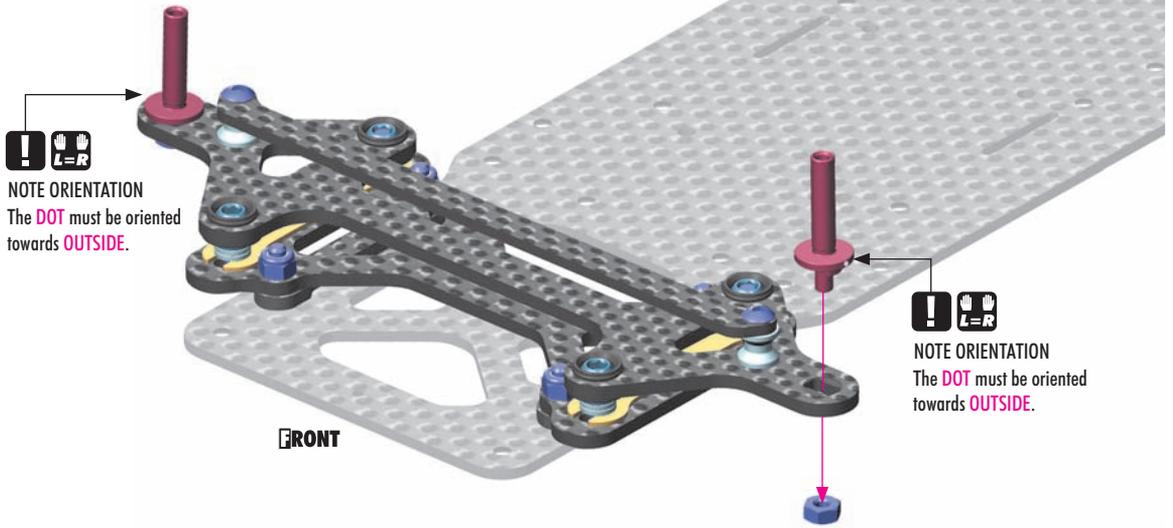
When using rearward hole, you can reinforce the steering block by installing an M3x3 setscrew in the forward hole.

1. FRONT SUSPENSION



960032
N M3

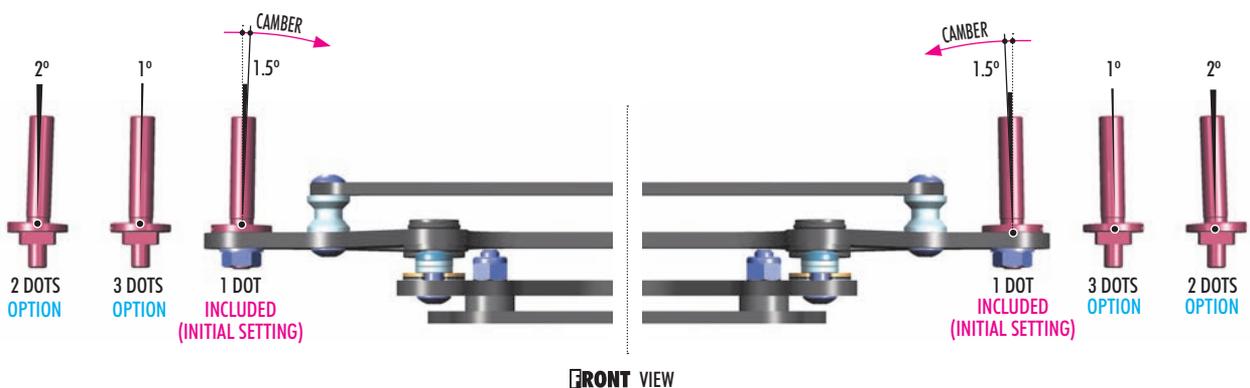
2x



| OPTION | CAMBER - KING PIN AXLE | | | |
|---------|------------------------|--------|----------|--|
| #372287 | 1° | 3 DOTS | OPTION | |
| #372288 | 1.5° | 1 DOT | INCLUDED | |
| #372289 | 2° | 2 DOTS | OPTION | |

CAMBER ADJUSTMENT

The car features 1.5° angled king pin axles which are the recommended starting camber for most tracks and traction conditions. There are 1° and 2° camber king pin axles optionally available.



INCREASING THE CAMBER ANGLE
will increase the car steering, however, will make the car more difficult to drive.

DECREASING THE CAMBER ANGLE
will decrease the steering which will make the car easier to drive and also helps to prevent traction rolling.

1. FRONT SUSPENSION



902305
SH M3x5



372297
SHIM 4x6x1



372298
SHIM 4x6x0.5



962042
S 4x6x0.1



962043
S 4x6x0.2



TIP

Alexander Hagberg
(Factory driver)

RIDE HEIGHT AND DROOP ADJUSTMENT SHIMS:

Ride height is adjusted with the supplied long shims (silver, black, gold) that can be placed under the arms. I recommend using the lowest possible ride height, unless the track surface is very bumpy or rough. In that case, the car can benefit from having a slightly higher ride height which will help to increase stability and improve handling over bumps.

The front axle height can be adjusted with shims under the steering block. You cannot change the roll center at the front of the X10'22 because there is no upper arm. Adding shims under the steering block – which raises the steering block – will raise the front axle height, and at the same time will decrease bump steer. Removing shims will lower the steering block and increase bump steer. For more information about Ackermann & Bumpsteer, see PAGE 23 (servo mounting).

I recommend using the kit shimming for the front steering block as a good basic setting for most conditions.



RIGHT

FRONT

LEFT

RIDE HEIGHT ADJUSTMENT

INITIAL SETTING

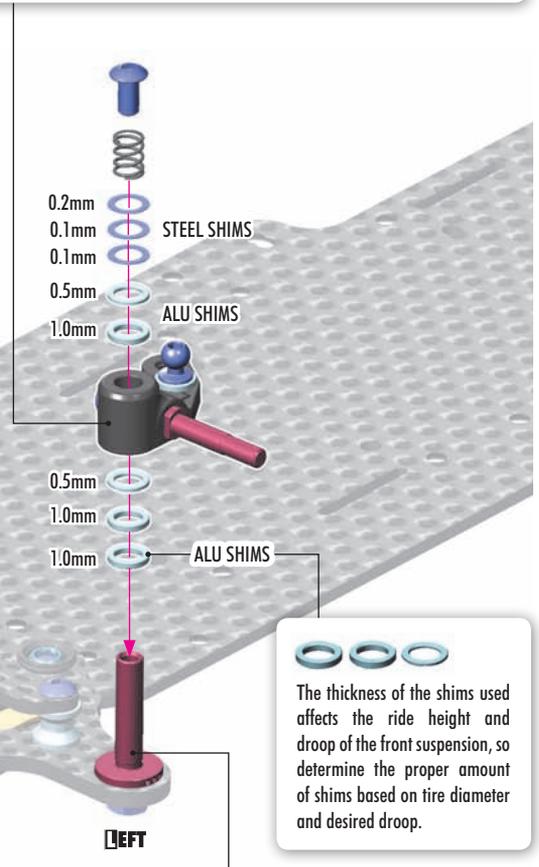
- above upper arm (1.9mm)
- below steering block (2.5mm)

FRONT DROOP

Front droop is adjusted by the preload of the front spring. More shims between the steering block and the spring will increase preload - and decrease droop. Fewer shims will decrease preload and increase droop.

MORE DROOP will make the car initially less responsive, but it will give the car more front grip, especially in the middle of the corner. The car will be less precise and more difficult to drive, because of increased roll. More droop is best suited for low- to medium-traction carpet, or asphalt.

LESS DROOP will decrease roll but the car will change direction quicker. Less droop is best suited for high-traction surfaces such as US black carpet, especially when traction rolling is an issue (and particularly when a rear solid axle is used).



The thickness of the shims used affects the ride height and droop of the front suspension, so determine the proper amount of shims based on tire diameter and desired droop.



use HUDY Silicone Oil
10K cSt (INCLUDED)



VIDEO TECH TIP



FRONT KINGPIN OIL



FRONT COIL SPRINGS

| OPTION | # | C | COLOR | STATUS |
|--------|--------|---------|--------|----------|
| | 372186 | 1.5-1.7 | GOLD | OPTION |
| | 372187 | 1.8-2.0 | SILVER | INCLUDED |
| | 372188 | 2.1-2.3 | BLACK | OPTION |

SOFTER SPRINGS

Makes the car easier to drive over bumps and increases steering as it makes the car roll more, especially in the middle of a corner.

HARDER SPRINGS

Makes the car more responsive and increases initial steering. Recommended for high-traction and flat tracks.

TIP

Arm Reamer 4.0mm
(HUDY #107644)

The front suspension parts were updated to eliminate play to ensure better steering performance. The updated holes in the steering blocks may cause a tighter fit on the king pin; it is important that the steering block moves freely but without excessive play. If the king pin does not insert into the steering block easily, use a 4mm Arm Reamer to enlarge the hole. Be very careful to remove only enough material so you can insert the kingpin without a lot of force.



LOW traction & bumpy track

7K ~ 10K cSt

HIGH traction & smooth track

15K ~ 30K cSt

FRONT DAMPING with different oils.

TRACK CONDITIONS

Thinner oil is recommended for low-traction tracks, while thicker oil is recommended for high-traction tracks.

DAMPING

Using thicker oil on the king pin axle makes the car less responsive but easier to drive. Thicker oil also increases stability but decreases cornering speed.

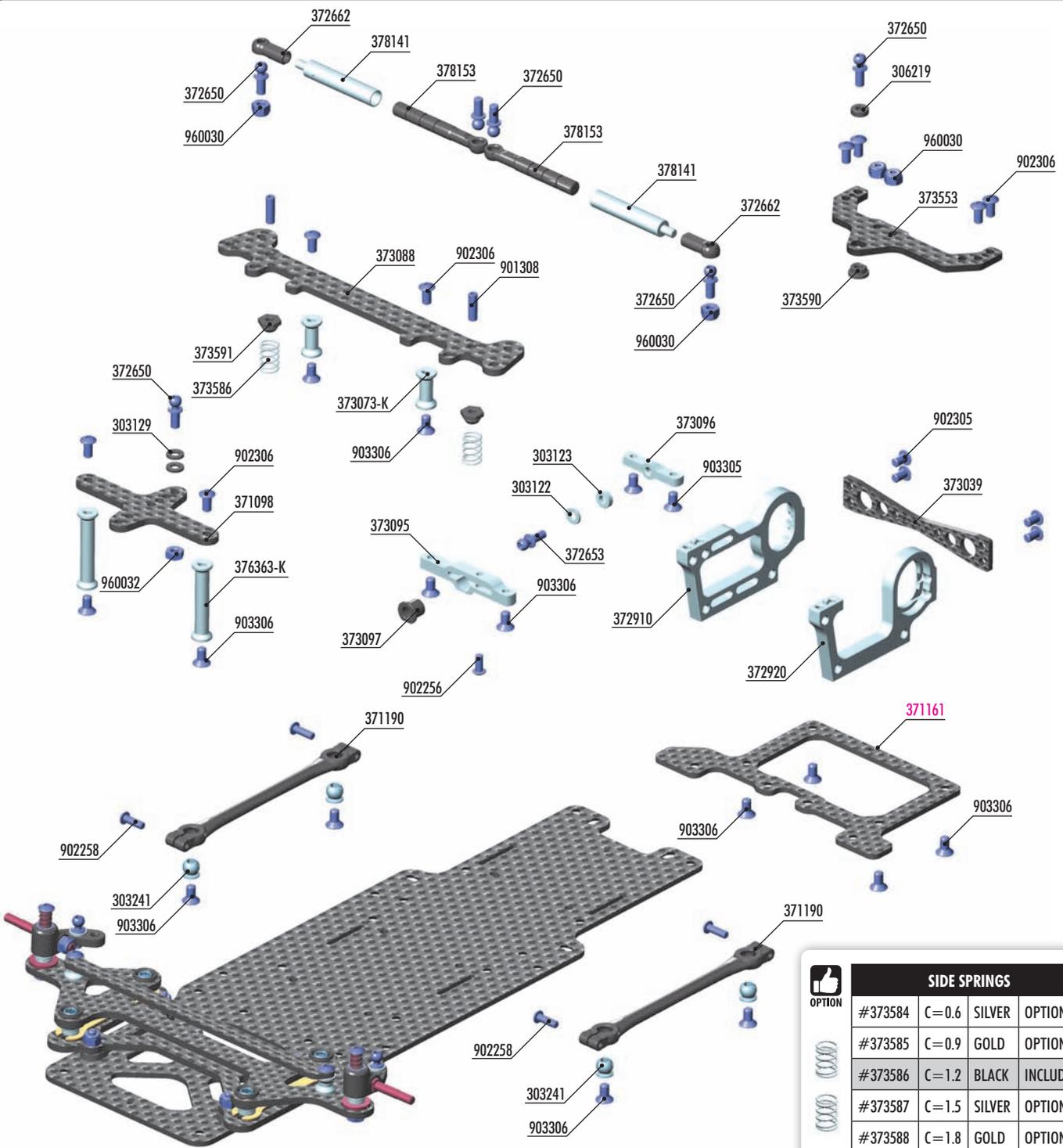


VIDEO TECH TIP



FRONT DROOP & RIDE HEIGHT

2. REAR SUSPENSION



| SIDE SPRINGS | | | | |
|---|---------|-------|--------|----------|
|  | #373584 | C=0.6 | SILVER | OPTION |
|  | #373585 | C=0.9 | GOLD | OPTION |
|  | #373586 | C=1.2 | BLACK | INCLUDED |
|  | #373587 | C=1.5 | SILVER | OPTION |
|  | #373588 | C=1.8 | GOLD | OPTION |

BAG
02

- 303122 ALU SHIM 3x6x1.0MM (10)
- 303123 ALU SHIM 3x6x2.0MM (10)
- 303129 COMPOSITE SET OF SHIMS 3x 3x6x1MM; 1x 3x6x2MM (2)
- 303241 BALL UNIVERSAL 5.8 MM HEX (4)
- 306219 COMPOSITE SET OF SERVO SHIMS (4)
- 371098 GRAPHITE PLATE FOR MOUNTS 2.5MM
- 371190 COMPOSITE POD LINK (2)
- 372650 BALL END 4.2MM WITH 6MM THREAD (2)
- 372653 BALL END 4.2MM WITH 8MM THREAD (2)
- 372662 COMPOSITE BALL-JOINT 4.2 MM (4)
- 372910 ALU REAR BULKHEAD - MOTOR - RIGHT
- 372920 ALU REAR BULKHEAD - LEFT
- 373039 GRAPHITE REAR BULKHEAD BRACE 2.0MM
- 373073-K ALU REAR BRACE MOUNT 16MM - BLACK (2)
- 373088 GRAPHITE REAR BRACE 2.5MM
- 373095 ALU CHASSIS PIVOT HOLDER - SWISS 7075 T6
- 373096 ALU POD PLATE PIVOT HOLDER - SWISS 7075 T6
- 373097 COMPOSITE PIVOT BRACE BUSHING
- 373553 GRAPHITE REAR POD UPPER PLATE 2.5MM

- 373586 SIDE SPRING C=1.2 - BLACK (2)
- 373590 COMPOSITE SPRING HOLDER & NUT (2+1)
- 373591 COMPOSITE SIDE SPRING HOLDER (2)
- 376363-K ALU MOUNT 28.5MM - BLACK (2)
- 378141 ALU SIDE TUBE (2)
- 378153 COMPOSITE SIDE TUBE SHAFT (2)
- 901308 HEX SCREW SB M3x8 (10)
- 902258 HEX SCREW SH M2.5x6 (10)
- 902258 HEX SCREW SH M2.5x8 (10)
- 902305 HEX SCREW SH M3x5 (10)
- 902306 HEX SCREW SH M3x6 (10)
- 903305 HEX SCREW SFH M3x5 (10)
- 903306 HEX SCREW SFH M3x6 (10)
- 960030 NUT M3 (10)
- 960032 NUT M3 (10)

371161 X10'22 GRAPHITE REAR POD LOWER PLATE 2.5MM

2. REAR SUSPENSION



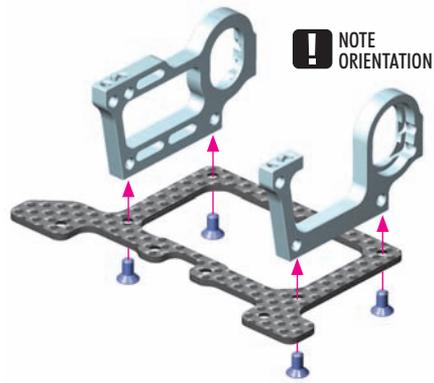
903306
SFH M3x6



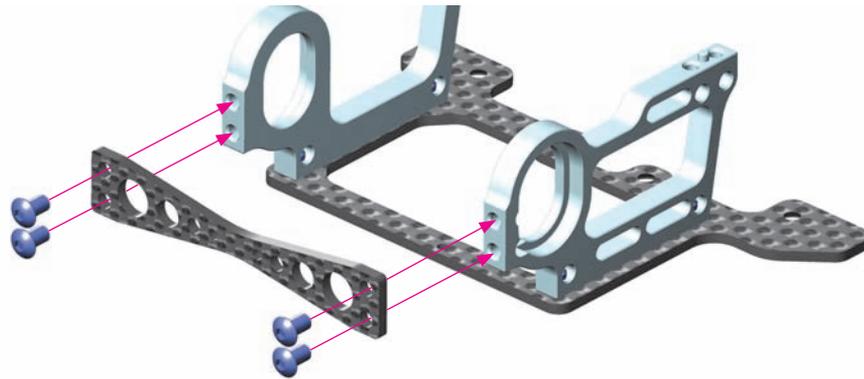
VIDEO TECH TIP



REAR POD BUILD



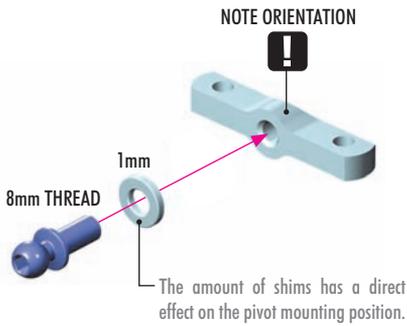
902305
SH M3x5



303122
SHIM 3x6x1

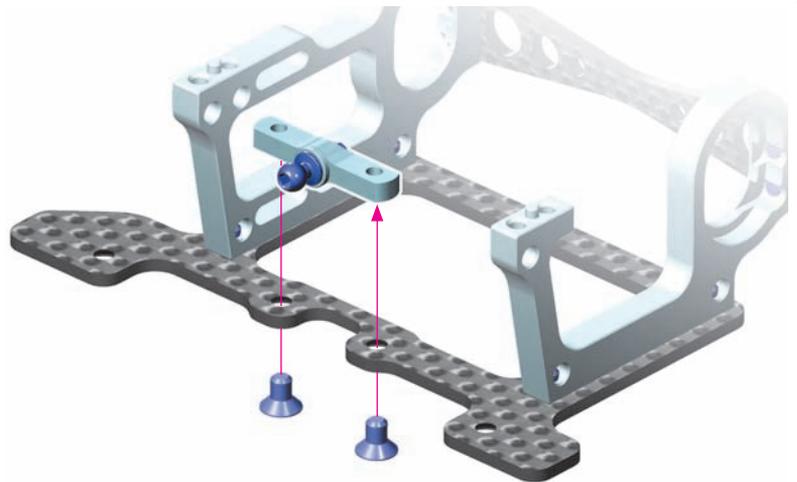


903305
SFH M3x5



The amount of shims has a direct effect on the pivot mounting position.

Please see: PAGE 13
INITIAL SETTING - rear pivot position
1mm shim



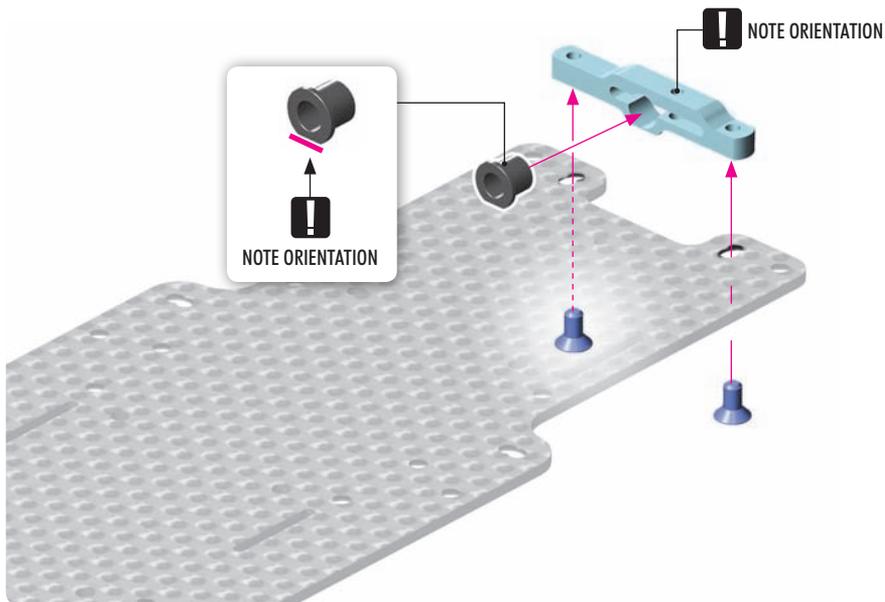
903306
SFH M3x6



VIDEO TECH TIP



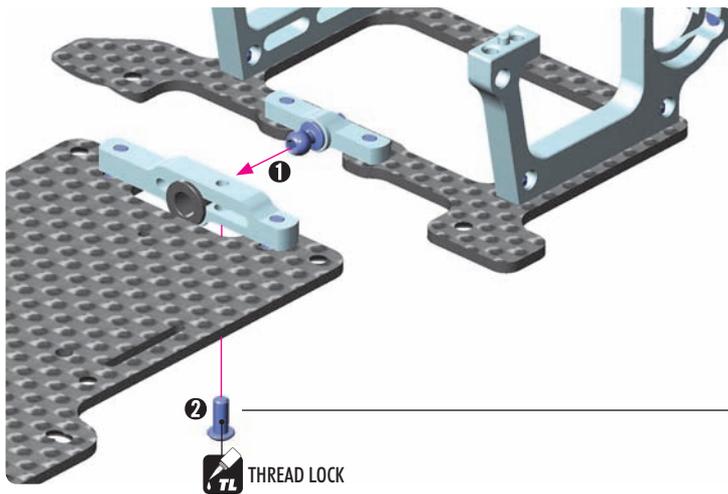
CENTER POD PIVOT BUILD



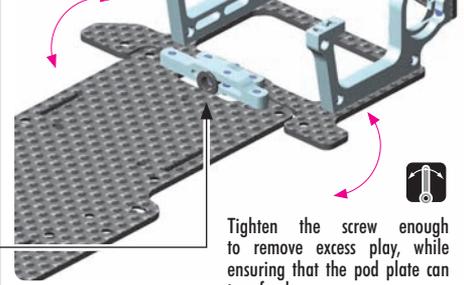
2. REAR SUSPENSION



902256
SH M2.5x6



Ensure free, smooth movement

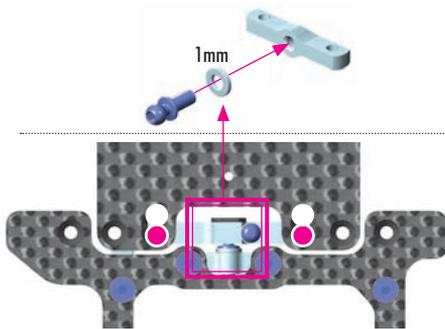


Tighten the screw enough to remove excess play, while ensuring that the pod plate can turn freely.

PIVOT MOUNTING ALTERNATIVE

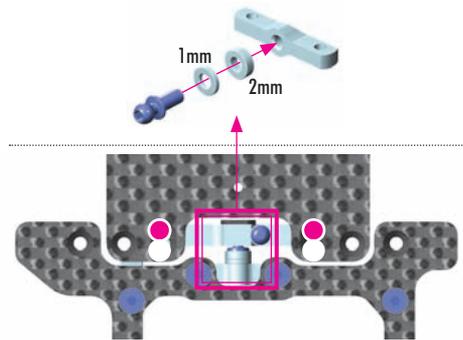
REARWARD: (INITIAL SETTING)

Pivot mounted in rearward chassis holes, and 1mm shim used under the pivot ball. The rearward pivot mounting position gives the most steering and most free rear end. Recommended for high-traction conditions such as US black carpet.



FORWARD:

Pivot mounted in forward chassis holes, with 3mm shims under the pivot ball. The forward pivot mounting position gives a good balance between front and rear traction.



303122
SHIM 3x6x1



303123
SHIM 3x6x2



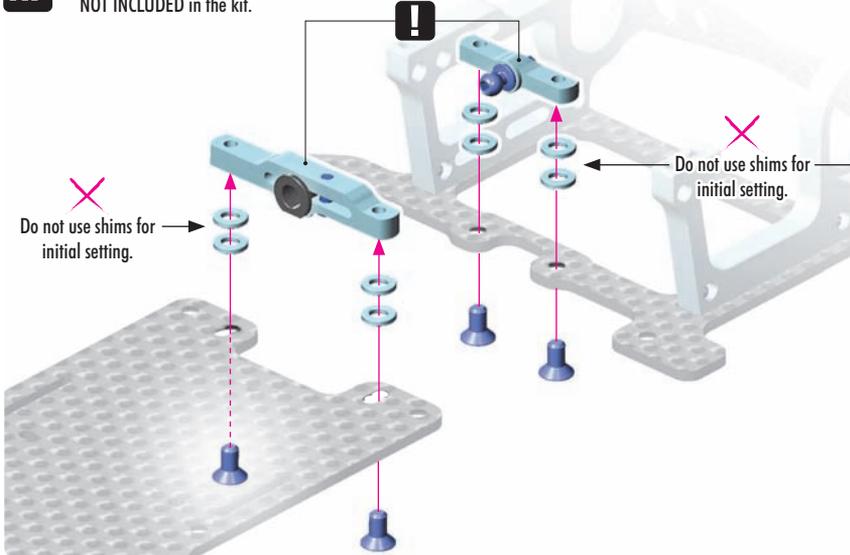
303122
SHIM 3x6x1



303123
SHIM 3x6x2

TIP #303122 & 303123 shims are NOT INCLUDED in the kit.

NOTE ORIENTATION



ROLL CENTER ADJUSTMENT

The roll center can be adjusted by adding or removing shims from beneath the aluminum pivot mounts.

LOWER ROLL CENTER

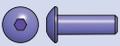
(INITIAL SETTING - NO SHIMS) will give more traction and increase chassis roll.

HIGHER ROLL CENTER

(adding shims) will increase steering by making the car rotate more on-and-off-power

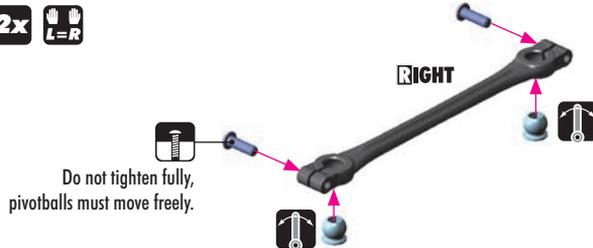


IMPORTANT! Always use same shim thickness on both sides of BOTH aluminum holders

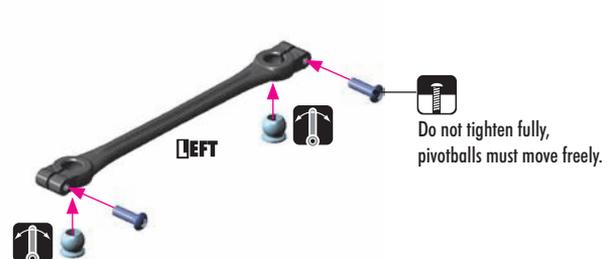


902258
SH M2.5x8

2x L=R



Do not tighten fully, pivotballs must move freely.

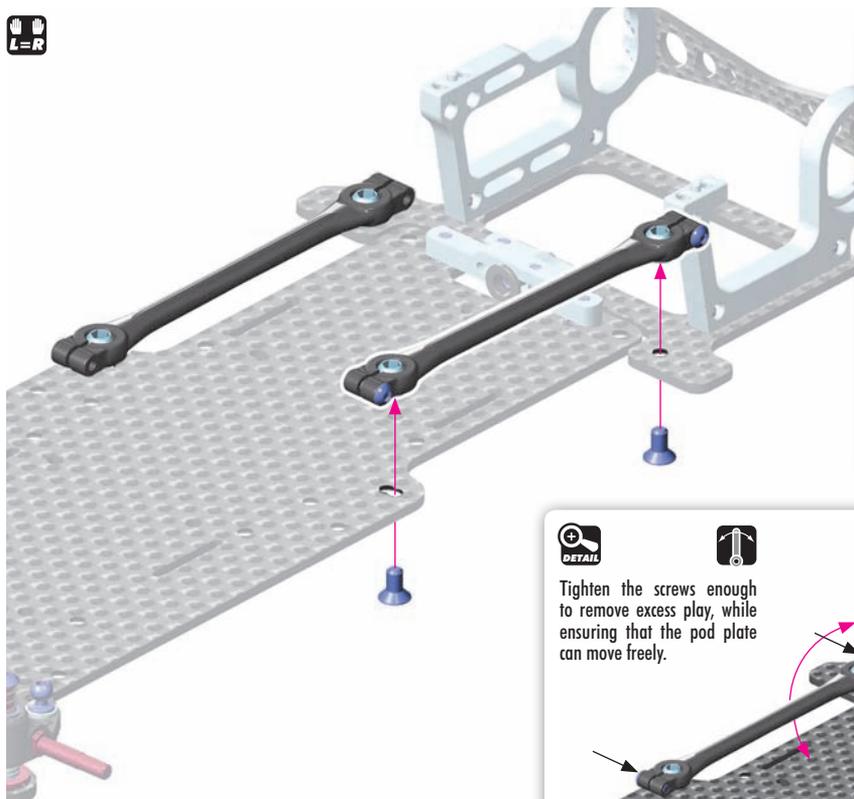


Do not tighten fully, pivotballs must move freely.

2. REAR SUSPENSION



903306
SFH M3x6



POD LINKAGE POSITION

OUTER POSITION - (INITIAL SETTING)

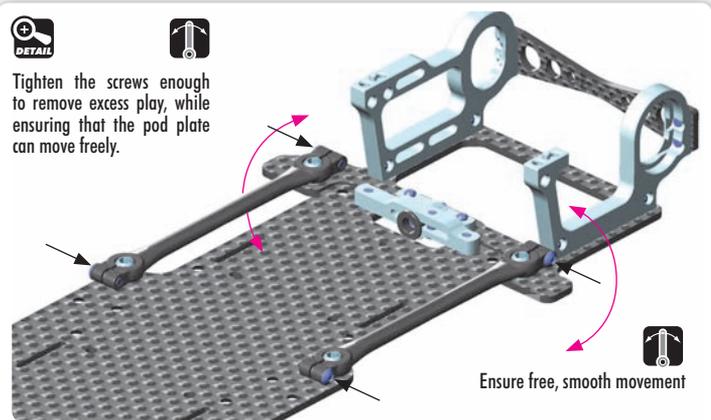
LESS ANGLED side links make the car easier to drive.

INNER POSITION

MORE ANGLED side links give increased in-corner steering.



Tighten the screws enough to remove excess play, while ensuring that the pod plate can move freely.



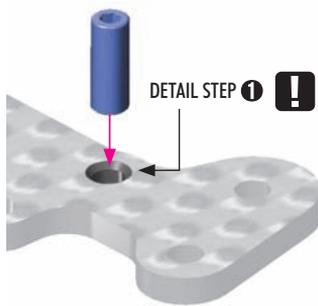
Ensure free, smooth movement



901308
SB M3x8

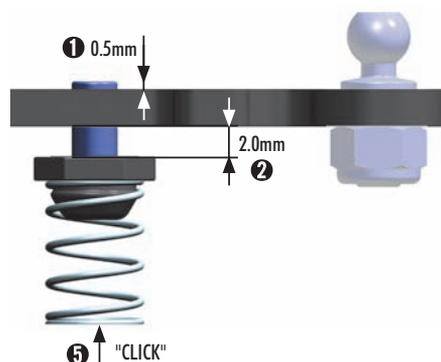


960030
N M3



DETAIL STEP 1

NOTE ORIENTATION
Top edge of hole is beveled



1

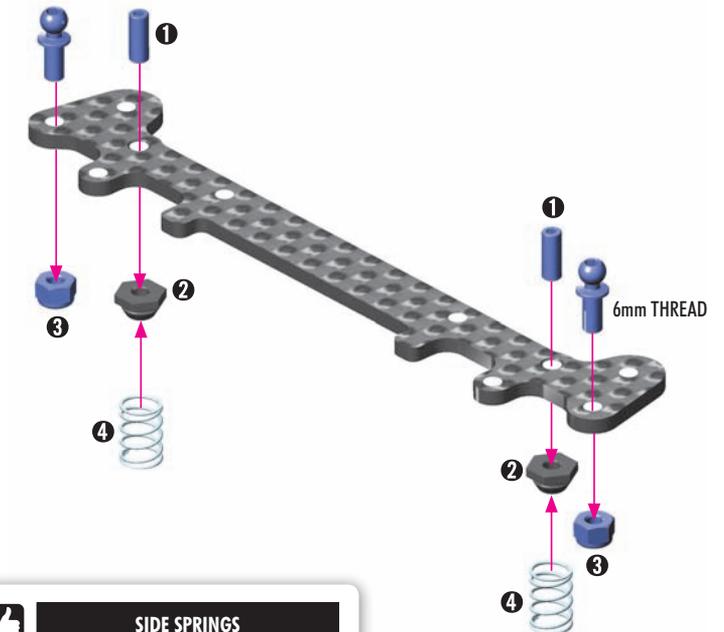
0.5mm

2.0mm

2

5 "CLICK"

6mm THREAD



6mm THREAD



OPTION

SIDE SPRINGS

| | | | |
|---------|-------|--------|----------|
| #373584 | C=0.6 | SILVER | OPTION |
| #373585 | C=0.9 | GOLD | OPTION |
| #373586 | C=1.2 | BLACK | INCLUDED |
| #373587 | C=1.5 | SILVER | OPTION |
| #373588 | C=1.8 | GOLD | OPTION |

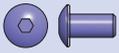


VIDEO TECH TIP



TWEAK & SIDE
SPRINGS SETTING

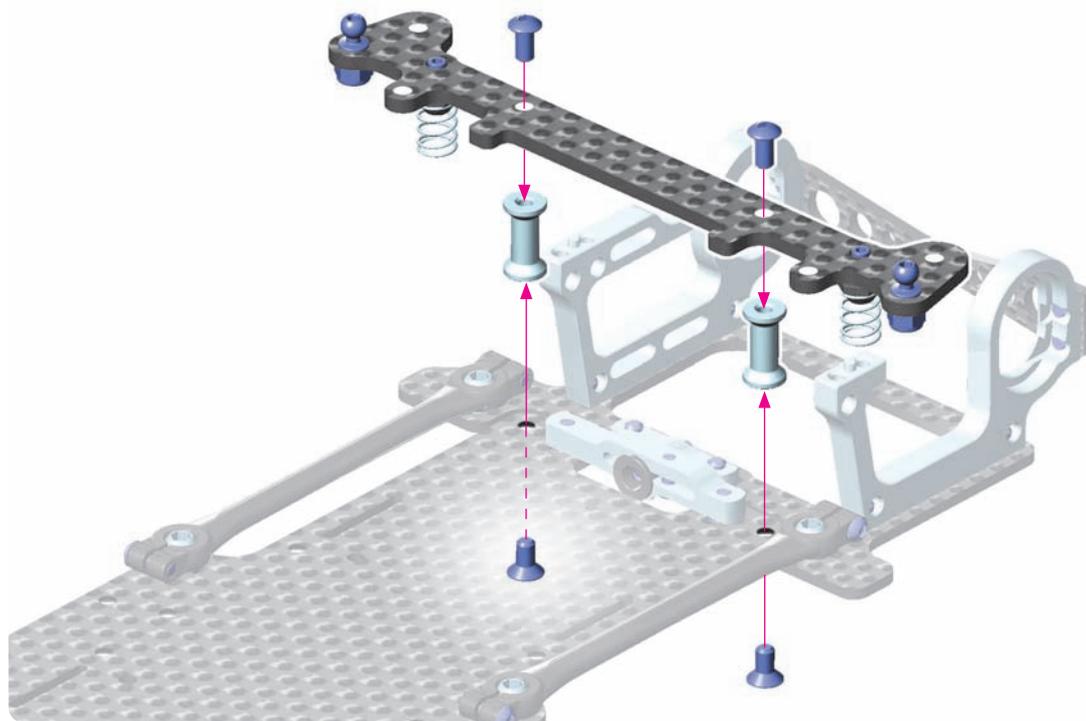
2. REAR SUSPENSION



902306
SH M3x6



903306
SFH M3x6

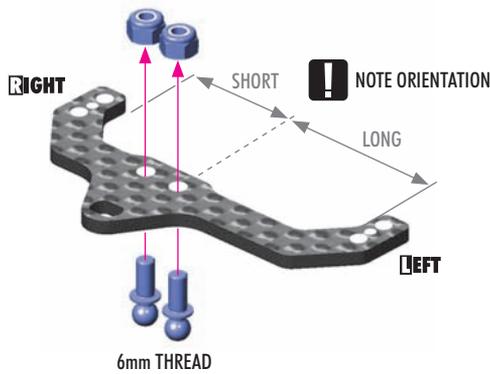


306219
SHIM 3x6x2

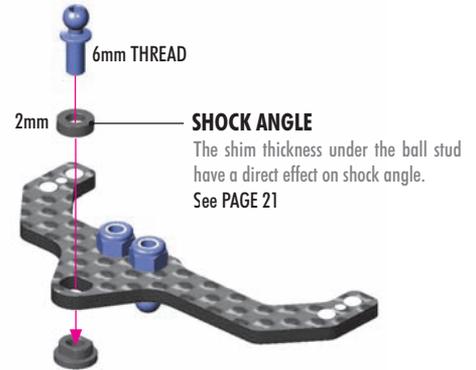


960030
N M3

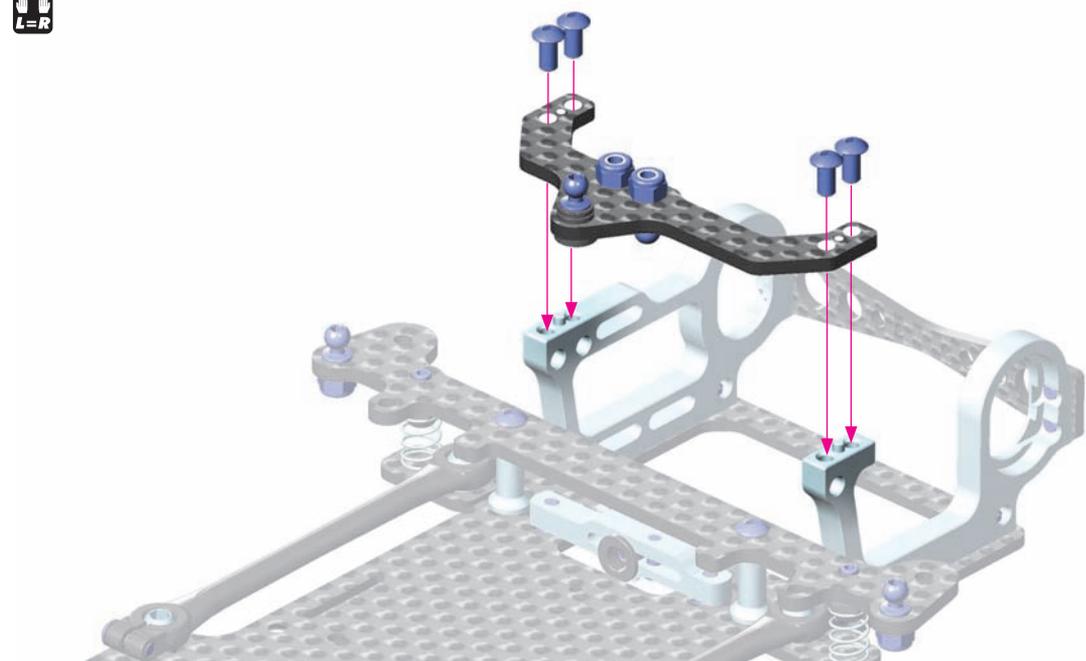
1



2



902306
SH M3x6



2. REAR SUSPENSION

10

303129
SHIM 3x6x1



902306
SH M3x6

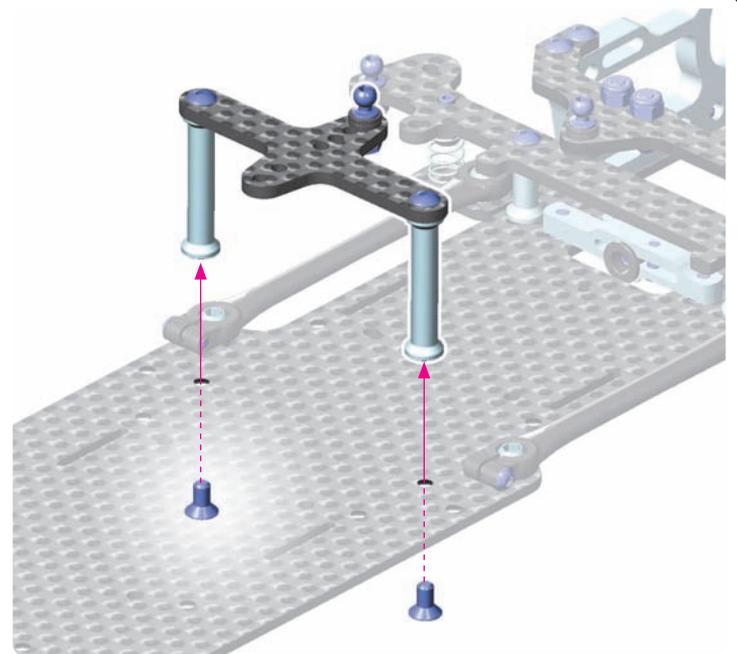
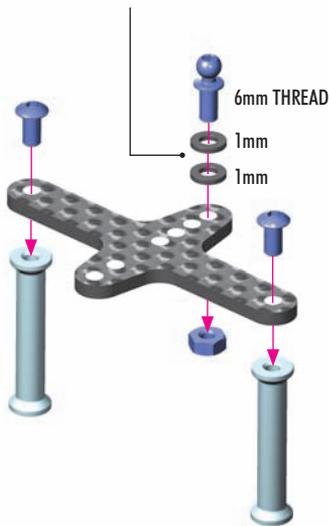


903306
SFH M3x6

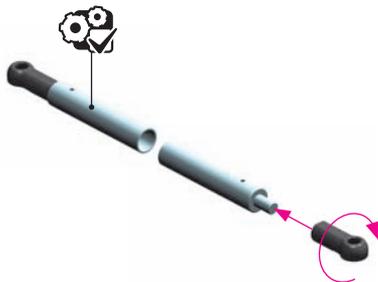


960032
N M3

The shim thickness under the ball stud has a direct effect on shock angle. See page 21.



2x



2x

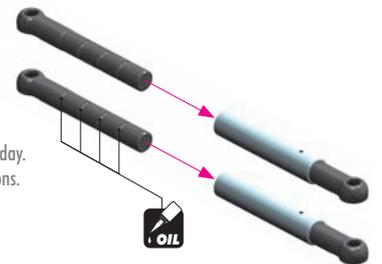
Add oil in each slot of the COMPOSITE side tubes.

NOTE:

Add oil only in the slots, not on the whole tube.
After assembling the side tubes, check for smooth operation.
It is very important to re-oil the side tubes at least once per race day.
You may use different oil thicknesses depending on track conditions.

TIP

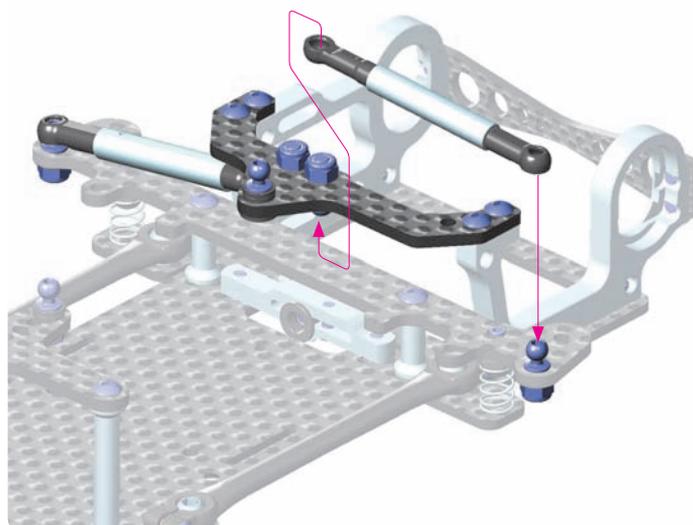
For HIGH grip use SOFTER oils
For LOW grip or ASPHALT use HARDER oils



HUDY OILS 50ml

| | | | | |
|---------|----------|---------|-----------|--|
| #106450 | 5.000cSt | #106510 | 10.000cSt | INCLUDED  |
| #106460 | 6.000cSt | #106492 | 11.000cSt | |
| #106470 | 7.000cSt | #106512 | 12.000cSt | |
| #106480 | 8.000cSt | #106515 | 15.000cSt | |
| #106490 | 9.000cSt | #106520 | 20.000cSt | |
| | | #106530 | 30.000cSt | |

L=R



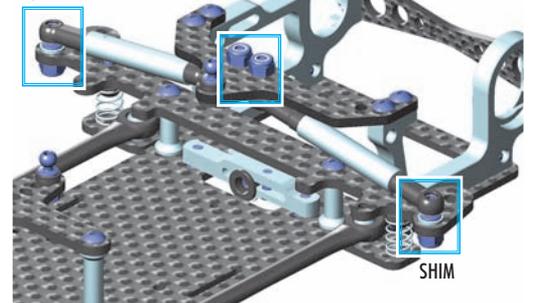
TIP

SIDE TUBE ANGLE
The angle of the side tubes has a fine effect on car performance.

HIGHER ANGLE:
Stiffer feeling, less roll

LOWER ANGLE (FLATTER):
Softer feeling, more roll

SHIM



3. BALL DIFFERENTIAL



| BALL DIFF - SPUR GEARS | | |
|------------------------|-----------|----------|
| #375872 | 72T / 64P | OPTION |
| #375875 | 75T / 64P | OPTION |
| #375876 | 76T / 64P | OPTION |
| #375878 | 78T / 64P | OPTION |
| #375880 | 80T / 64P | OPTION |
| #375884 | 84T / 64P | OPTION |
| #375888 | 88T / 64P | OPTION |
| #375892 | 92T / 64P | OPTION |
| #375896 | 96T / 64P | INCLUDED |



#930238
CERAMIC AXIAL THRUSTBEARING
F3-8 3x8x3.5mm



#930230
CERAMIC BALL 3.175mm (12)



#374902
XRAY GEAR DIFFERENTIAL
1/10 PAN CAR - SET



Included in set
#374902

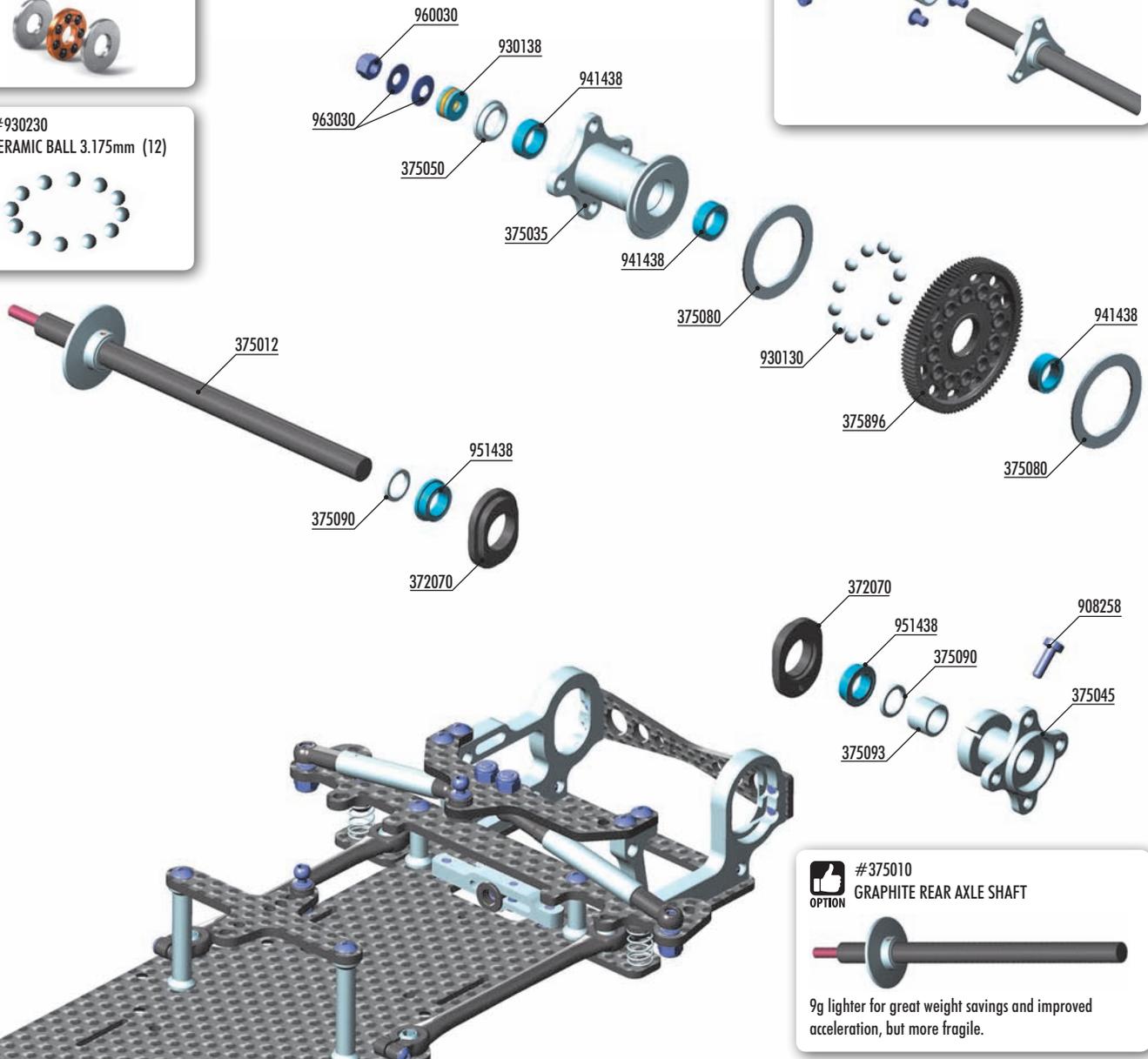
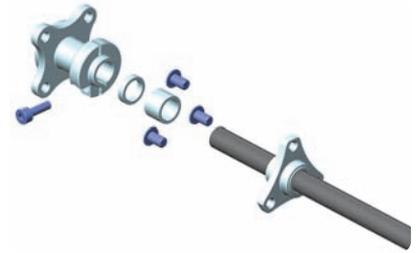


GEAR DIFF - SPUR GEARS

| | | |
|---------|-----------|--------|
| #375776 | 76T / 64P | OPTION |
| #375780 | 80T / 64P | OPTION |
| #375784 | 84T / 64P | OPTION |
| #375788 | 88T / 64P | OPTION |
| #375792 | 92T / 64P | OPTION |



#375002
XRAY SOLID AXLE 1/10 PAN CAR-SET



BAG

03

- 372070 COMPOSITE RIDE HEIGHT ADJUSTER SET - V2 (2)
- 375012 STEEL REAR AXLE SHAFT - HUDY SPRING STEEL™
- 375035 ALU REAR WHEEL HUB - RIGHT
- 375045 ALU REAR WHEEL HUB - LEFT
- 375050 ALU DIFF HUB
- 375080 D-LOCK DIFF PLATE (2)
- 375090 SET OF ALU SHIMS (0.5MM, 1.0MM, 2.0MM)
- 375093 ALU SHIM 6.37x8.4x6.0MM (2)
- 375896 COMPOSITE SPUR GEAR - 96T / 64P

- 908258 HEX SCREW SOCKET HEAD CAP M2.5x8 (10)
- 930130 CARBIDE BALL 3.175MM (12)
- 930138 CARBIDE BALL-BEARING AXIAL F3-8 3x8x3.5
- 941438 HIGH-SPEED BALL-BEARING 1/4"x3/8"x1/8" RUBBER-SEALED (2)
- 951438 BALL-BEARING 1/4" x 3/8" x 1/8" FLANGED (2)
- 960030 NUT M3 (10)
- 963030 CONE WASHER ST 3x8x0.5 (10)

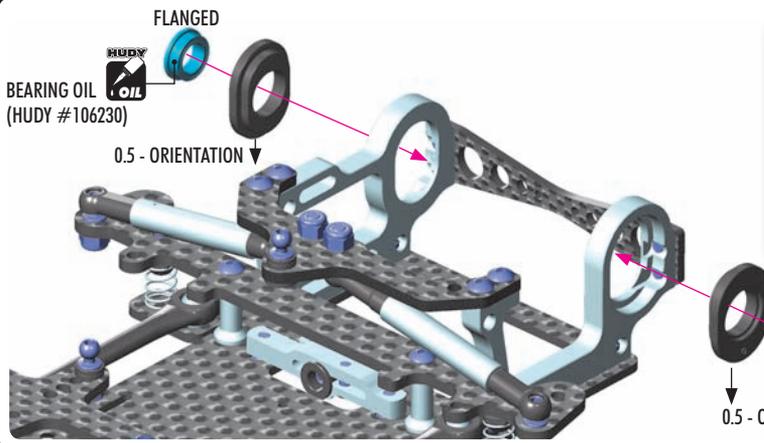


#375010
GRAPHITE REAR AXLE SHAFT

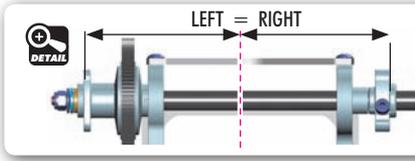
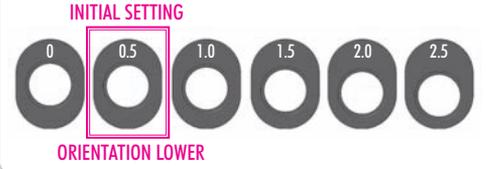


9g lighter for great weight savings and improved acceleration, but more fragile.

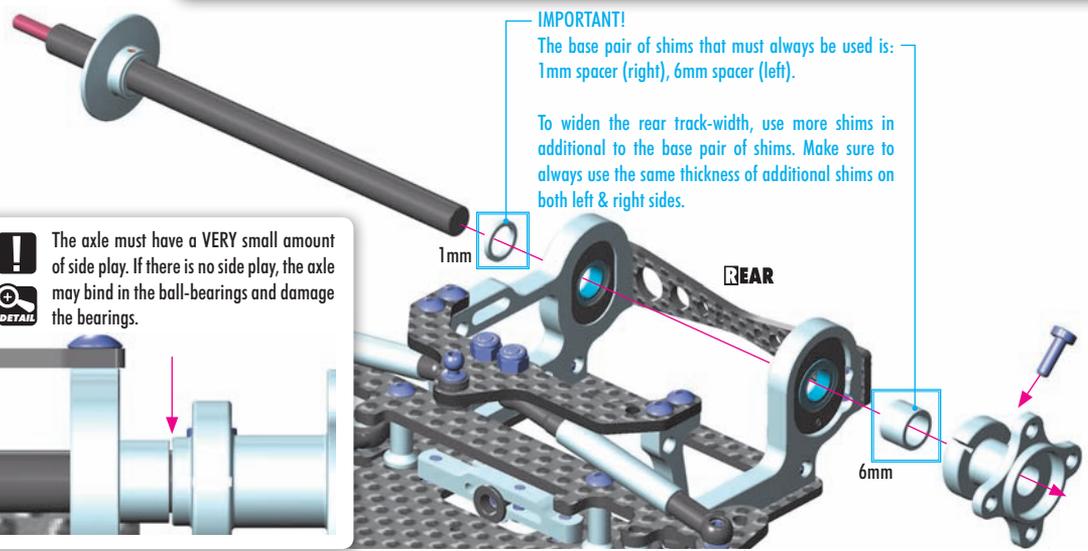
3. BALL DIFFERENTIAL



These eccentric bushings adjust the **RIDE HEIGHT** of the rear pod. Make sure to use the **SAME** eccentric bushings on **BOTH** sides.

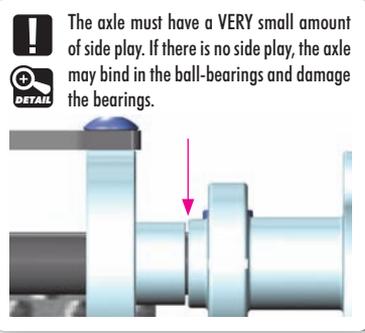


To set track-width, use the hole in the pod lower plate as the centre point; this hole should always be centred between the two rear wheels once overall track-width is set. To set the track-width more easily, set the car on a ruler or use a digital vernier caliper. Rear track-width is directly affected by wheel offsets, which can vary depending on tire brand.



IMPORTANT!
The base pair of shims that must always be used is: 1mm spacer (right), 6mm spacer (left).

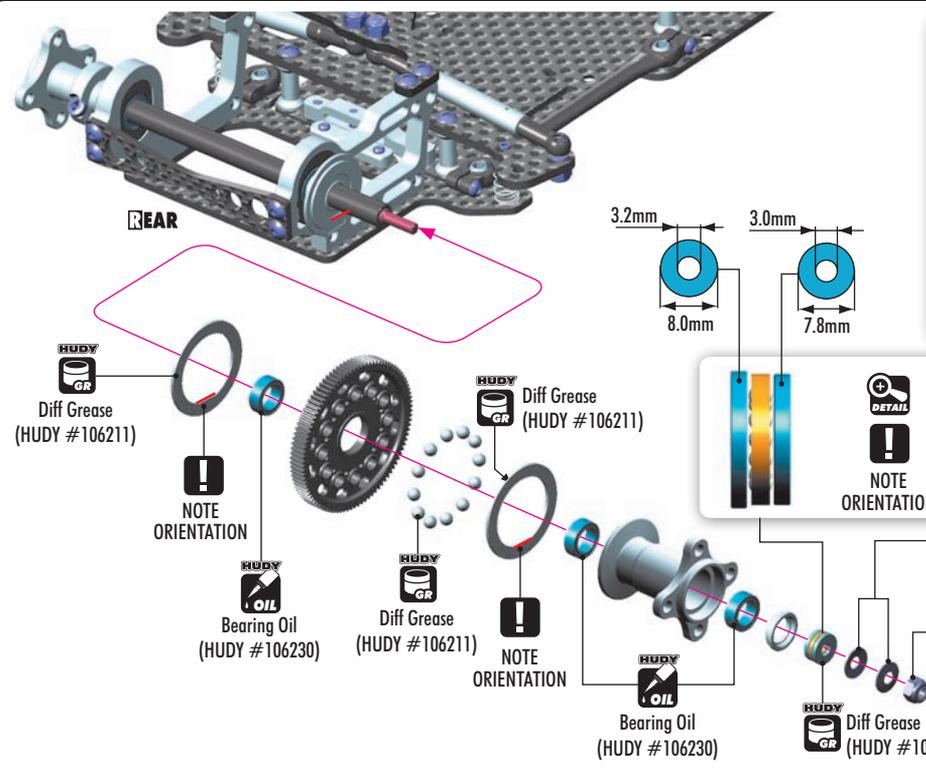
To widen the rear track-width, use more shims in addition to the base pair of shims. Make sure to always use the same thickness of additional shims on both left & right sides.



VIDEO TECH TIP



HOW TO BUILD THE BALL DIFF

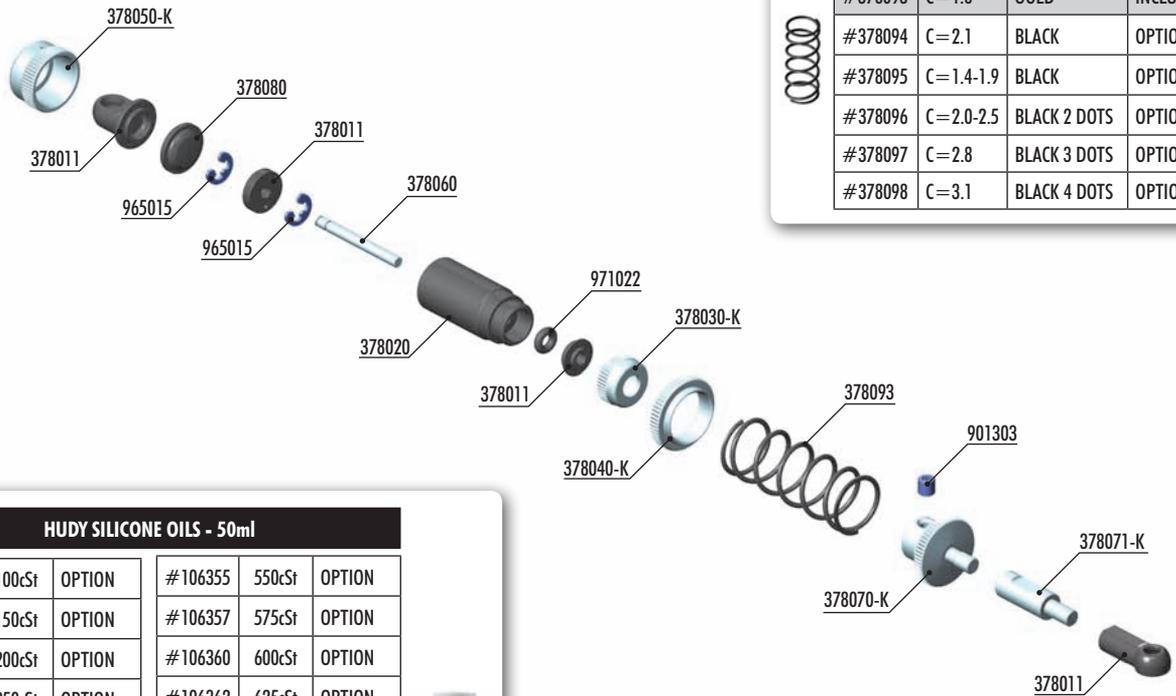


| BALL DIFF - SPUR GEARS | | |
|------------------------|-----------|----------|
| #375872 | 72T / 64P | OPTION |
| #375875 | 75T / 64P | OPTION |
| #375876 | 76T / 64P | OPTION |
| #375878 | 78T / 64P | OPTION |
| #375880 | 80T / 64P | OPTION |
| #375884 | 84T / 64P | OPTION |
| #375888 | 88T / 64P | OPTION |
| #375892 | 92T / 64P | OPTION |
| #375896 | 96T / 64P | INCLUDED |



IMPORTANT
This nut affects the tightness and stiffness of the rear differential. Tighten the nut gently so the diff does not slip under power, but do not overtighten or the diff balls and/or plates may be damaged.

4. SHOCK ABSORBER



SHOCK SPRINGS

| OPTION | SHOCK SPRINGS | | |
|---------|---------------|--------------|----------|
| #378092 | C=1.5 | SILVER | OPTION |
| #378093 | C=1.8 | GOLD | INCLUDED |
| #378094 | C=2.1 | BLACK | OPTION |
| #378095 | C=1.4-1.9 | BLACK | OPTION |
| #378096 | C=2.0-2.5 | BLACK 2 DOTS | OPTION |
| #378097 | C=2.8 | BLACK 3 DOTS | OPTION |
| #378098 | C=3.1 | BLACK 4 DOTS | OPTION |



HUDY SILICONE OILS - 50ml

| | | | | | |
|---------|--------|--------|---------|---------|----------|
| #106310 | 100cSt | OPTION | #106355 | 550cSt | OPTION |
| #106315 | 150cSt | OPTION | #106357 | 575cSt | OPTION |
| #106320 | 200cSt | OPTION | #106360 | 600cSt | OPTION |
| #106325 | 250cSt | OPTION | #106362 | 625cSt | OPTION |
| #106330 | 300cSt | OPTION | #106365 | 650cSt | OPTION |
| #106335 | 350cSt | OPTION | #106367 | 675cSt | OPTION |
| #106337 | 375cSt | OPTION | #106370 | 700cSt | INCLUDED |
| #106340 | 400cSt | OPTION | #106375 | 750cSt | OPTION |
| #106342 | 425cSt | OPTION | #106380 | 800cSt | OPTION |
| #106345 | 450cSt | OPTION | #106390 | 900cSt | OPTION |
| #106347 | 475cSt | OPTION | #106410 | 1000cSt | OPTION |
| #106350 | 500cSt | OPTION | #106420 | 2000cSt | OPTION |



BAG

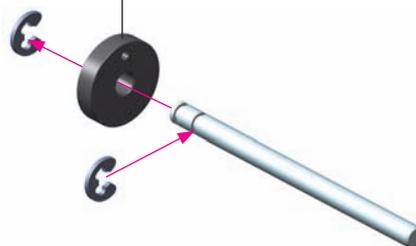
04

- 378003 SHOCK ABSORBER SET
- 378011 COMPOSITE SHOCK PARTS - FRAME
- 378020 ALU THREADED SHOCK BODY
- 378030-K ALU SHOCK BODY CAP - LOWER - BLACK
- 378040-K ALU SHOCK ADJUSTABLE COLLAR - BLACK
- 378050-K ALU SHOCK BODY CAP - UPPER - BLACK
- 378060 SHOCK SHAFT
- 378070-K ALU SHOCK SPRING COLLAR - BLACK
- 378071-K ALU SHOCK ADAPTER - BLACK
- 378080 SHOCK RUBBER MEMBRANE (2)
- 378093 SHOCK SPRING - GOLD
- 901303 HEX SCREW SB M3x3 (10)
- 965015 E-CLIP 1.5 (10)
- 971022 SILICONE O-RING 2x2 (10)



965015
C1.5

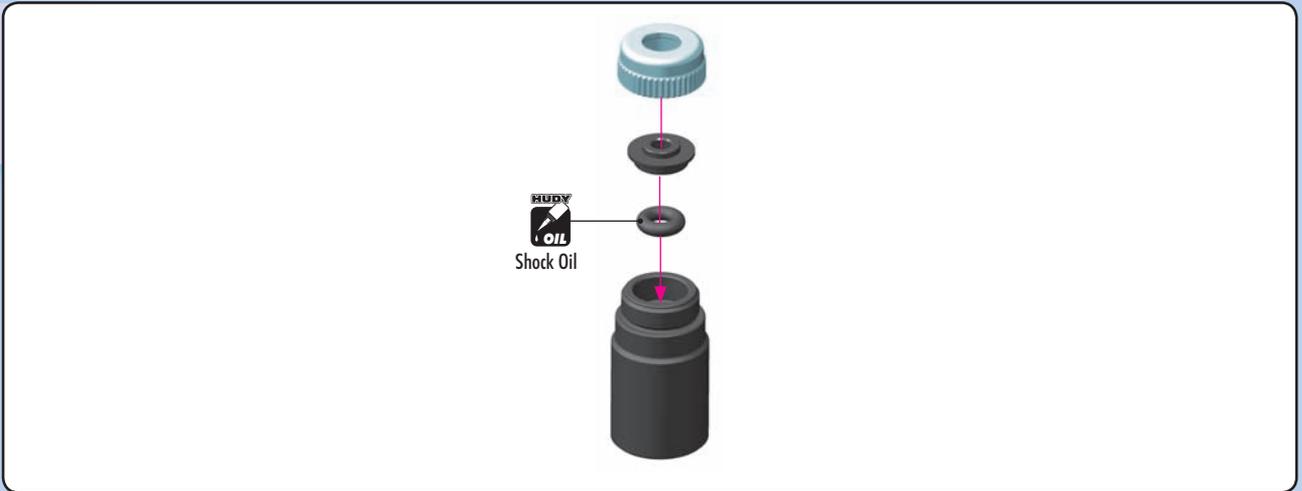
Carefully remove the shock piston from the frame, and remove all excess plastic flash.



4. SHOCK ABSORBER



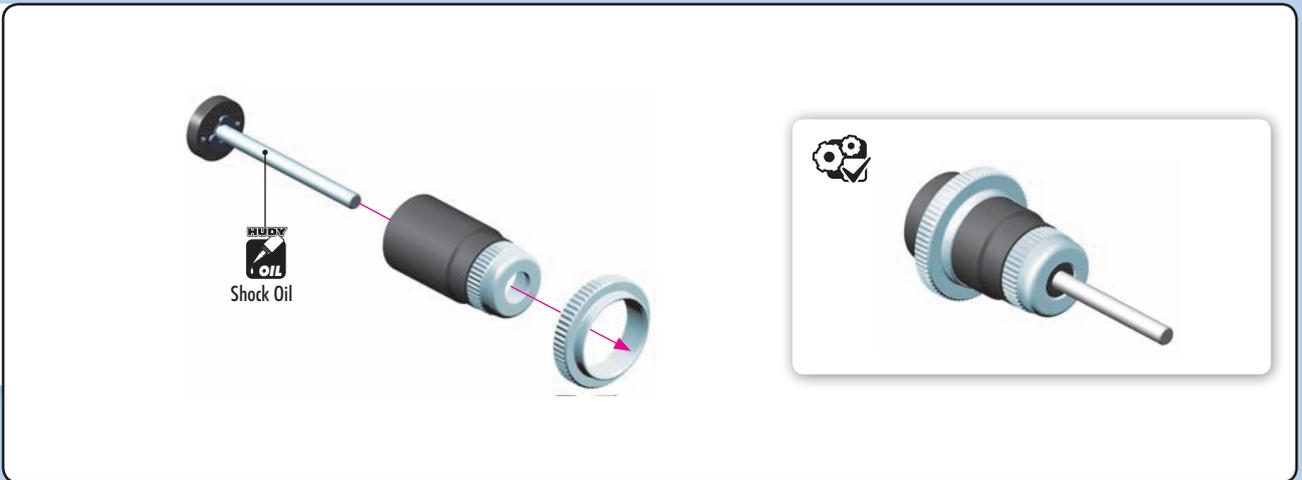
971022
0 2x2



VIDEO TECH TIP



HOW TO BUILD CENTER SHOCK



DEFAULT SHOCK SETTING FOR CENTER SHOCK ABSORBER Follow the steps below to set the shock.

Oil 700cSt

1 Extend the shock shaft completely. Fill the shock body with the shock oil.

2 Move the shock shaft up and down a few times to release the air bubbles trapped beneath the piston.

3~5x
UP & DOWN

3 Orient the filled shock vertically for several minutes with the shock shaft fully extended. The remaining air bubbles will release.

4 Install the shock membrane into the groove in the upper shock cap.

5 Gently place the shock cap assembly onto the filled shock body. Excess oil will spill from the shock. Screw the shock cap onto the body by only a few turns, approx. 50%. Excess oil will flow through the hole in the shock cap.

HALF TIGHTEN
50%

6 Gently push the shock shaft completely into the shock body. Excess oil will flow through the hole in the shock cap.

TIGHTEN FULLY
100%

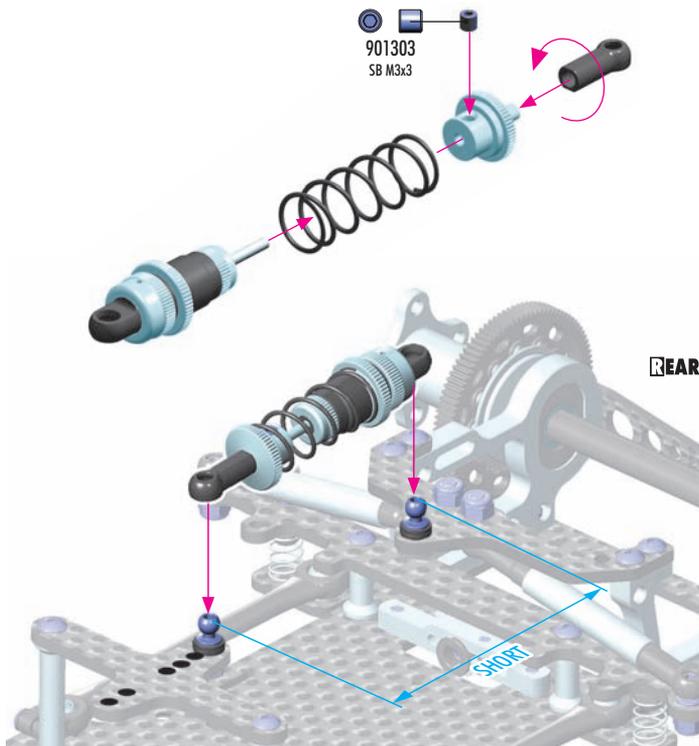
7 Keep the shock shaft pushed in the shock body and tighten the shock cap completely.

Tighten the cap fully but do not overtighten or the rubber membrane may be damaged. Make sure that there is no oil leakage after the cap is tightened.

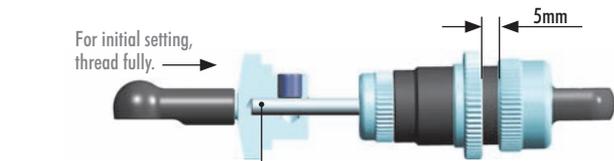
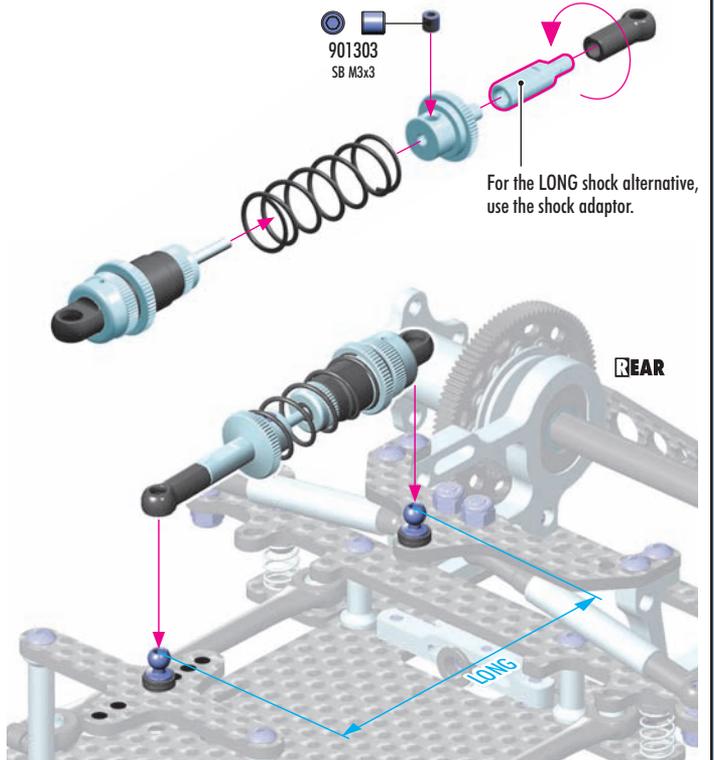
4. SHOCK ABSORBER

ALTERNATIVE 1 - SHORT SHOCK

(INITIAL SETTING)



ALTERNATIVE 2 - LONG SHOCK



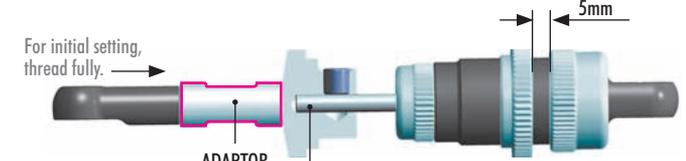
SHORT SHOCK:

Press the collar FULLY onto the end of the shock shaft and tighten the M3x3 setscrew.

Shock is built WITHOUT adaptor.

Front mount is REARWARD.

Improves steering response, quicker direction changes.



LONG SHOCK:

Press the collar FULLY onto the end of the shock shaft and tighten the M3x3 setscrew.

Shock is built WITH adaptor.

Front mount is FORWARD.

Improves driveability over bumps, improves on-power traction.

DROOP ADJUSTMENT

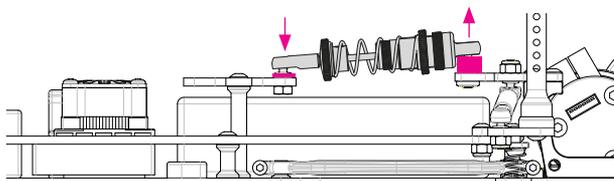
The overall length of the shock absorber affects the amount of droop. To adjust, thread the ball-joint on or off the bottom spring cap or adaptor.



MORE SHOCK ANGLE

Thinner shim in front, thicker shim in rear

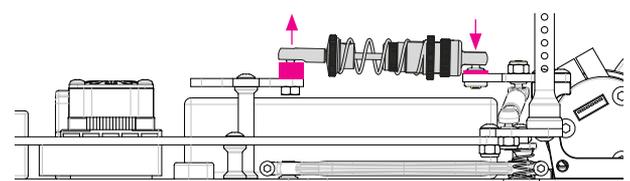
Makes the damping more progressive and increases on-power steering. Recommended for high-traction conditions when you need to free up the rear.



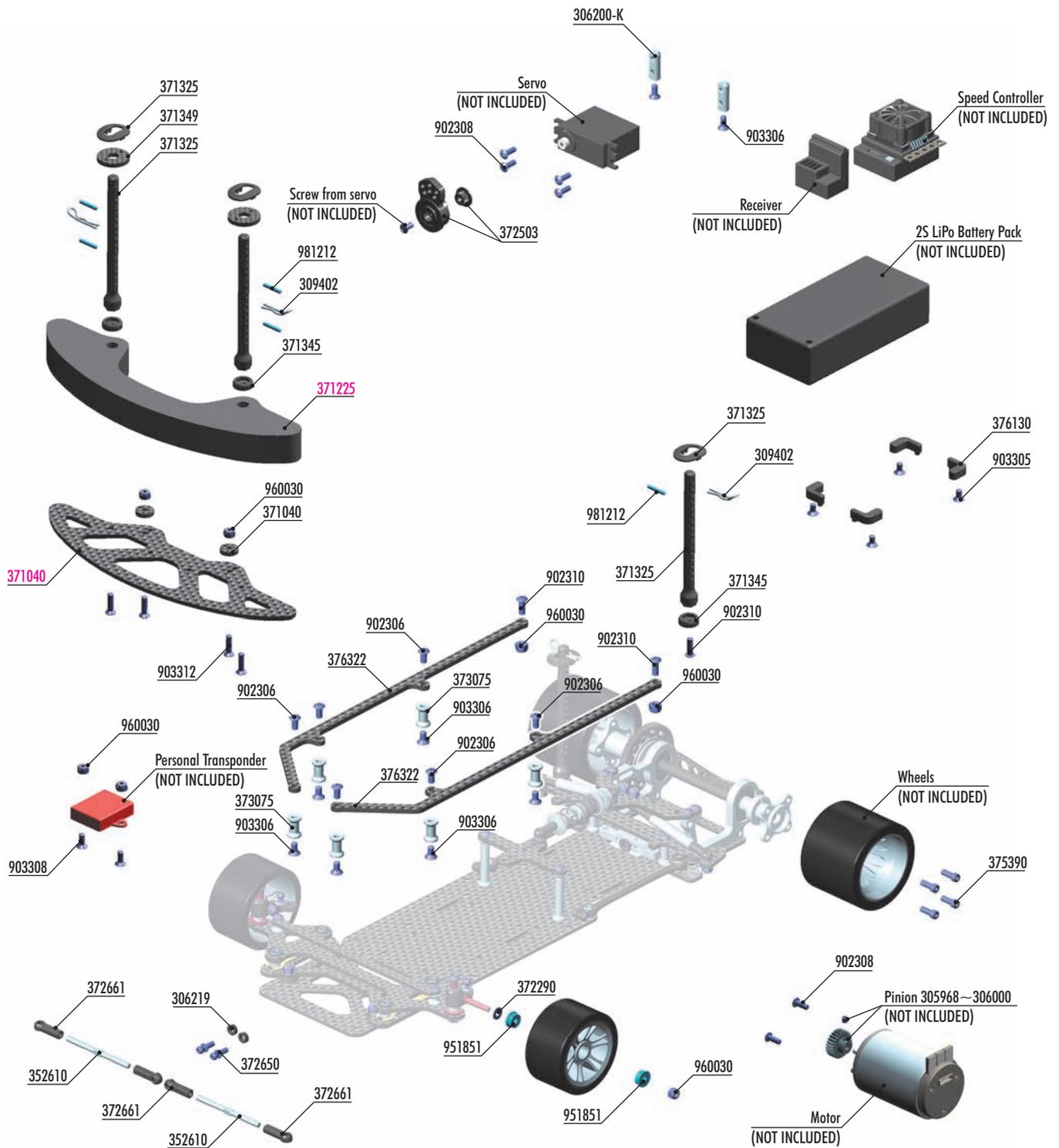
LESS SHOCK ANGLE

Thicker shim in front, thinner shim in rear

Makes the damping more linear. Increases stability, decreases on-power steering. Recommended for low- to medium-traction conditions.



5. FINAL ASSEMBLY



BAG

05

- | | | | |
|---------------|--|--------|---|
| 305968~306000 | PINION GEAR HARD COATED 18~50T/64P (OPTION) | 376322 | GRAPHITE SIDE BRACE 2.5MM (2) |
| 306200-K | ALU SERVO MOUNT - BLACK (2) | 902306 | HEX SCREW SH M3x6 (10) |
| 306219 | COMPOSITE SET OF SERVO SHIMS (4) | 902308 | HEX SCREW SH M3x8 (10) |
| 309402 | BODY CLIP FOR 6MM BODY POST (4) | 902310 | HEX SCREW SH M3x10 (10) |
| 352610 | ADJ. TURNBUCKLE M3 L/R 45 MM - SPRING STEEL - V3 (2) | 903305 | HEX SCREW SFH M3x5 (10) |
| 371325 | COMPOSITE BODY POST (2) | 903306 | HEX SCREW SFH M3x6 (10) |
| 371345 | COMPOSITE SHIM FOR BODY POST (2) | 903308 | HEX SCREW SFH M3x8 (10) |
| 371349 | GRAPHITE SHIM FOR 6MM BODY POST 2.5MM (2) | 903312 | HEX SCREW SFH M3x12 (10) |
| 372290 | ALU SHIM 3.2x4.8x0.5 (4) | 951851 | BALL-BEARING 1/8" x 5/16" x 9/64" FLANGED (2) |
| 372503 | COMPOSITE SERVO SAVER - X-STIFF - SET - V2 | 960030 | NUT M3 (10) |
| 372650 | BALL-END 4.2MM - THREADED - HUDY SPRING STEEL™ (2) | 981212 | PIN 2x12 (10) |
| 372661 | COMPOSITE STEERING BALL-JOINT 4.2 MM OPEN (4) | | |
| 373075 | ALU REAR BRACE MOUNT 10.5MM - BLACK (2) | 371040 | GRAPHITE FRONT BUMPER & SHIMS 2.5MM - V2 |
| 375390 | ALU HEX SCREW M3x8 FOR REAR WHEELS (6) | 371225 | FOAM BUMPER |
| 376130 | COMPOSITE LiPo BATTERY BACKSTOP (2) | | |

5. FINAL ASSEMBLY



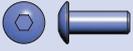
306219
SHIM 3x6x1



306219
SHIM 3x6x2

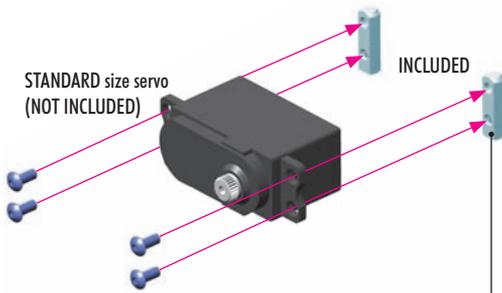


306219
SHIM 3x6x3



902308
SH M3x8

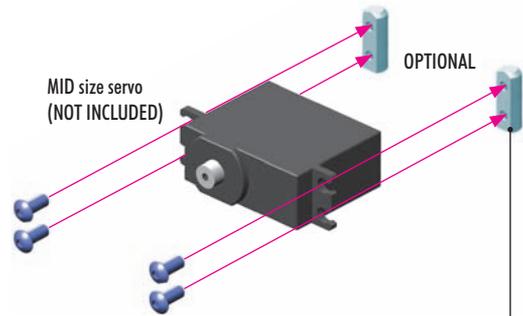
ALTERNATIVE 1 - STANDARD size servo (INITIAL SETTING)



For STANDARD size servo use the INCLUDED #306200-K alu servo mounts.



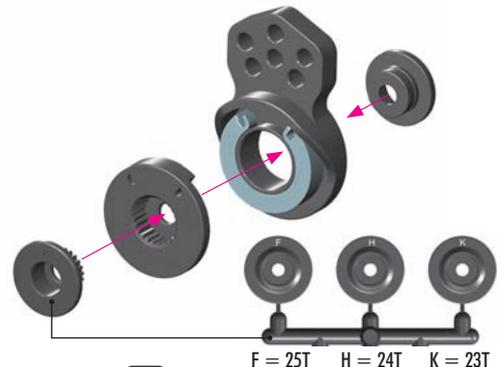
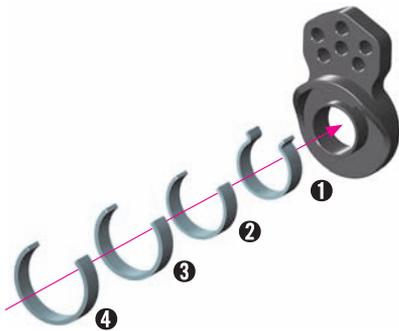
ALTERNATIVE 2 - MID size servo (OPTIONAL)



For MID size servo use the OPTIONAL #376255-0 alu servo mounts.



SERVO SAVER



F = 25T H = 24T K = 23T



Use the adapter that matches the steering servo.



VIDEO TECH TIP



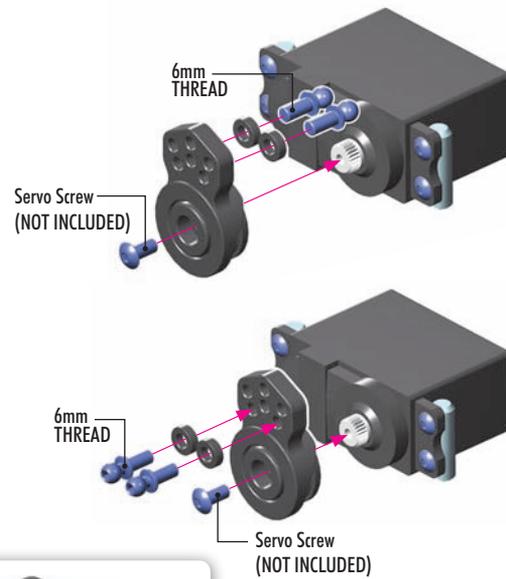
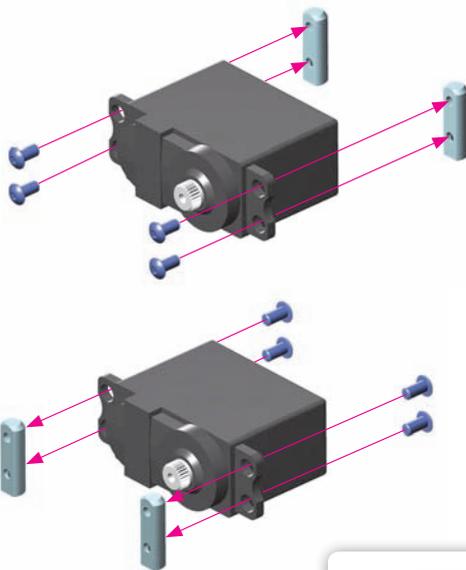
ACKERMANN & BUMPSTEER

ACKERMANN SETTING

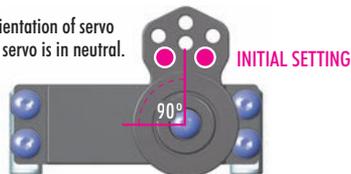
Ackermann is directly affected by wheelbase length and linkage position on the steering block.

Depending on the wheelbase and linkage position on the steering block you can either mount the servo behind or ahead of the servo posts.

You can also mount the ballstuds to the front or rear of the servo saver, and you can also use shims to set the required Ackermann setting.



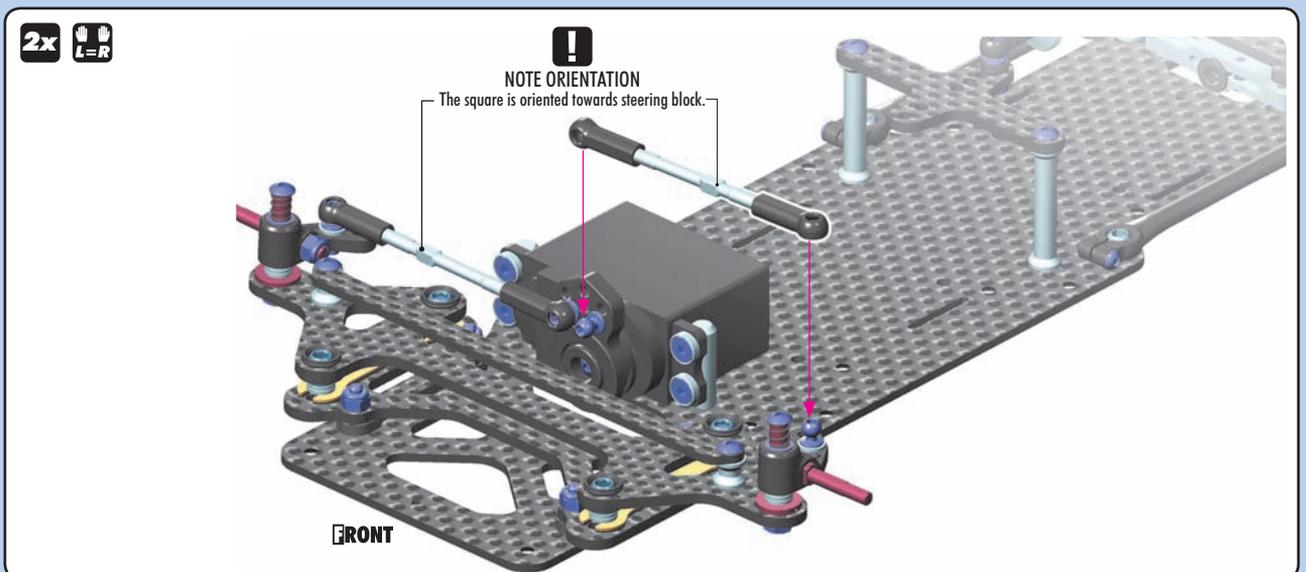
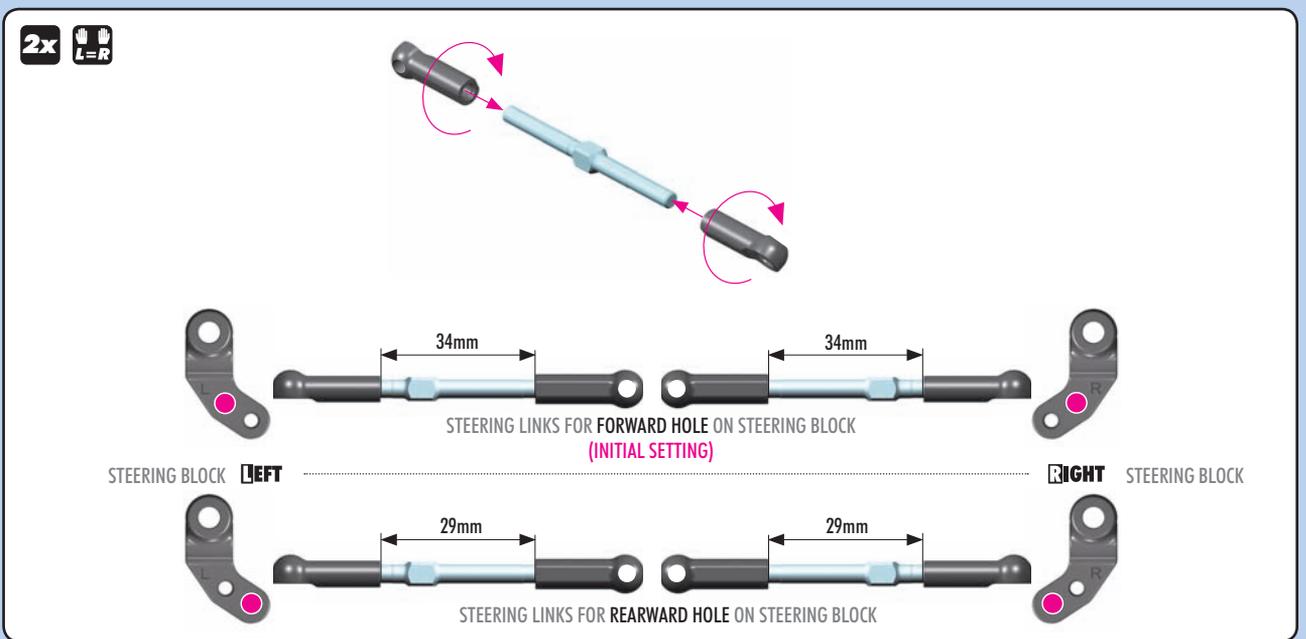
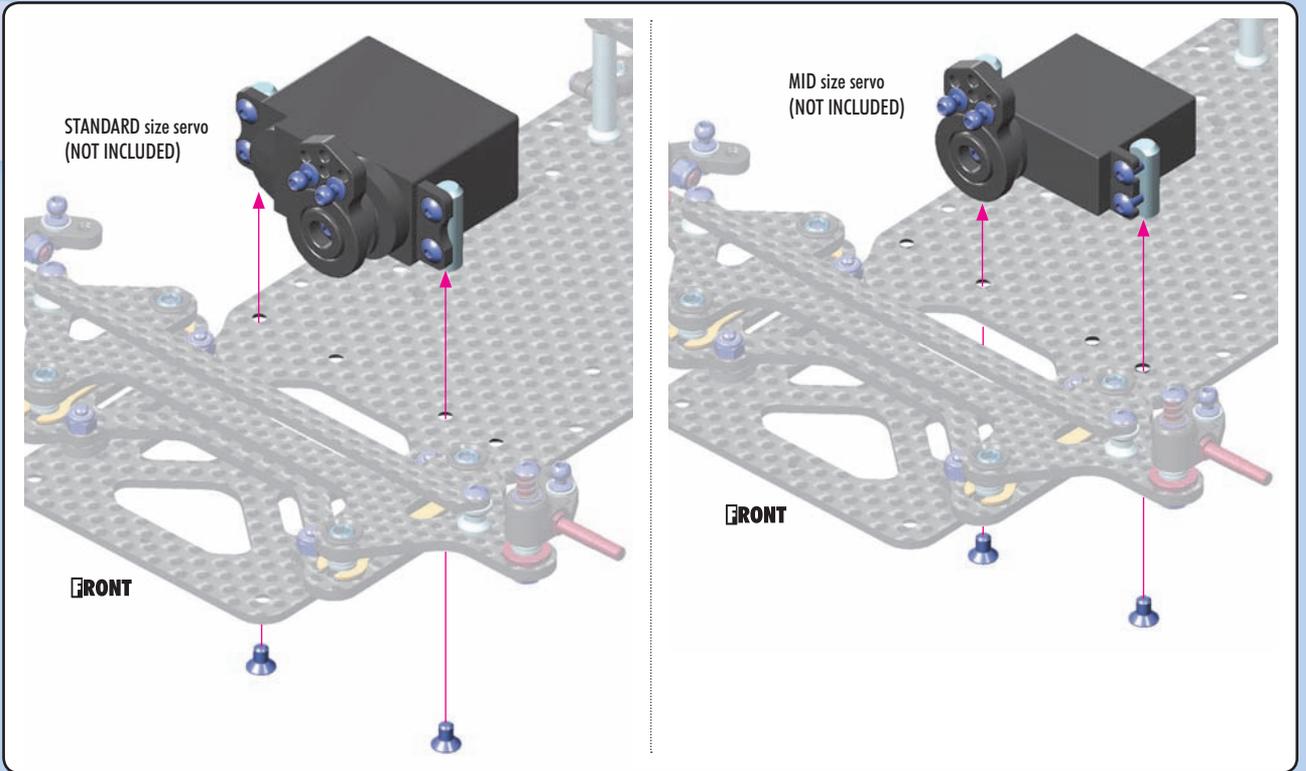
Note the orientation of servo saver when servo is in neutral.



5. FINAL ASSEMBLY



903306
SFH M3x6



5. FINAL ASSEMBLY

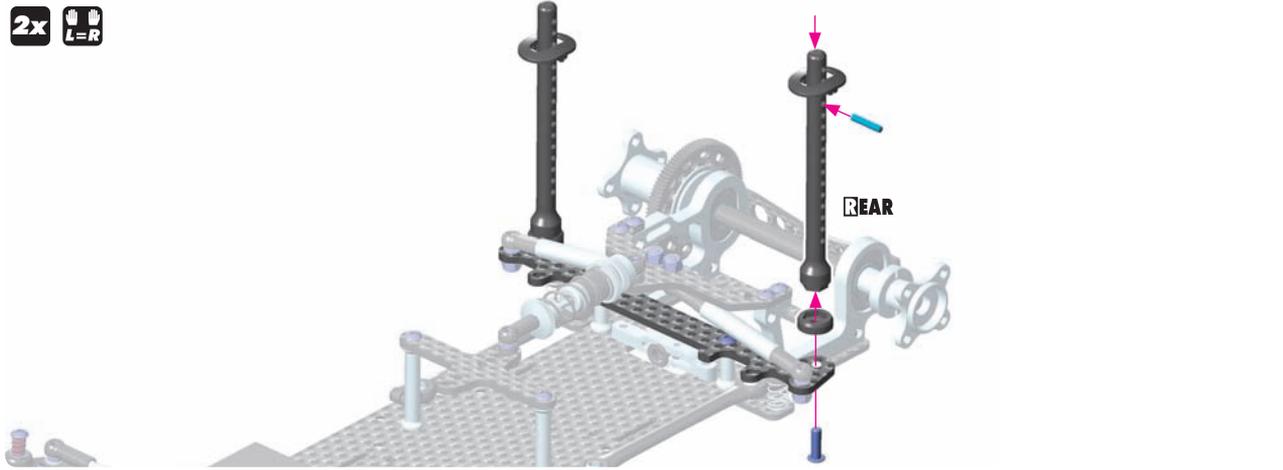


902310
SH M3x10

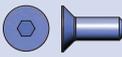


981212
P 2x12

2x **L=R**



REAR



903308
SFH M3x8

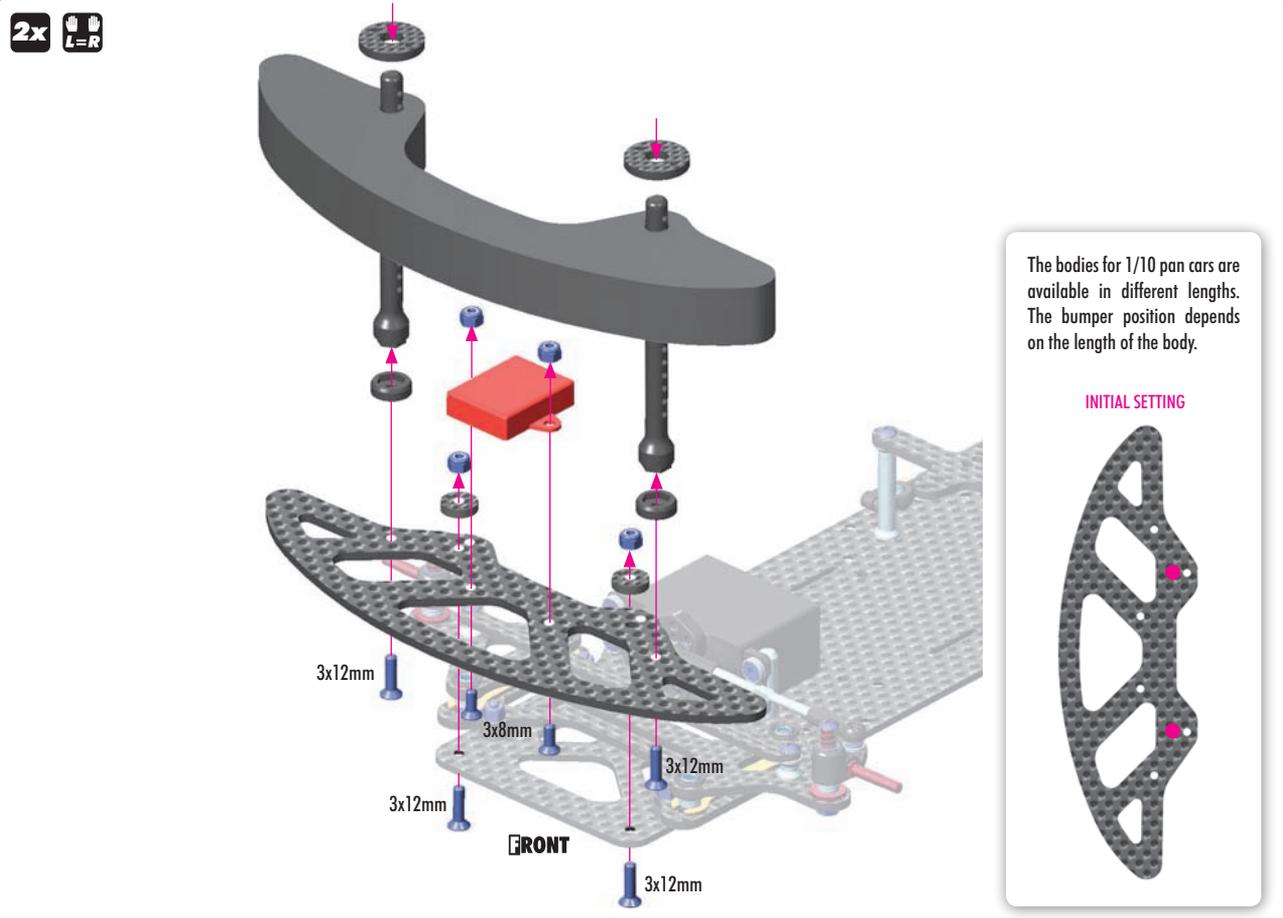


903312
SFH M3x12



960030
N M3

2x **L=R**



FRONT

The bodies for 1/10 pan cars are available in different lengths. The bumper position depends on the length of the body.

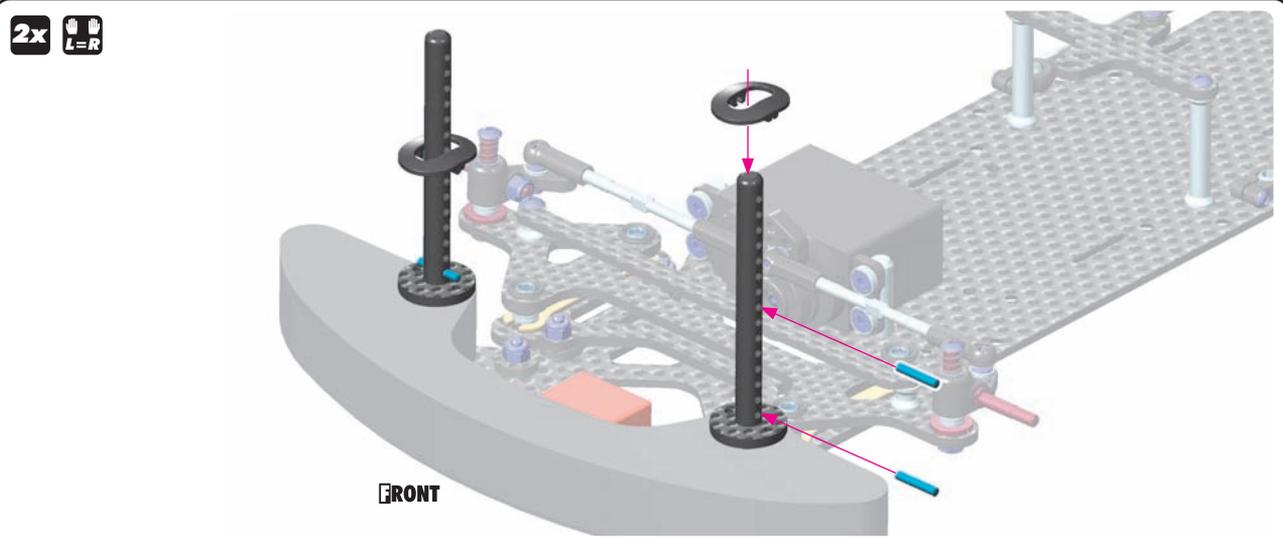
INITIAL SETTING





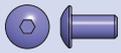
981212
P 2x12

2x **L=R**



FRONT

5. FINAL ASSEMBLY



902306
SH M3x6



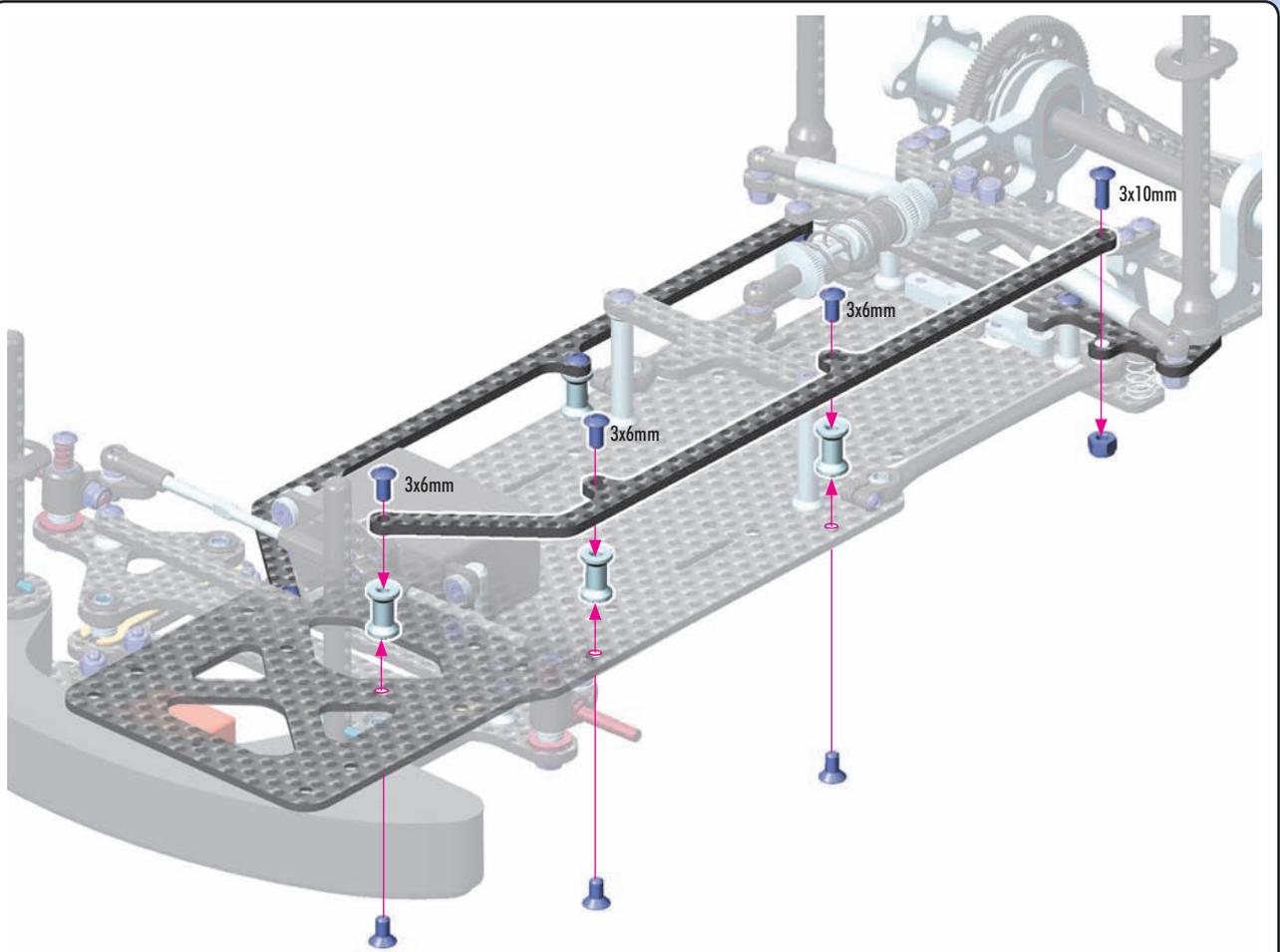
902310
SH M3x10



903306
SFH M3x6



960030
N M3



CHASSIS FLEX ADJUSTMENT



VIDEO TECH TIP



CHASSIS FLEX ADJUSTMENT

SOFT (NO BRACES)

Recommended for low- to medium-traction carpet, and asphalt. Generates more mechanical grip.

MEDIUM (INITIAL SETTING)

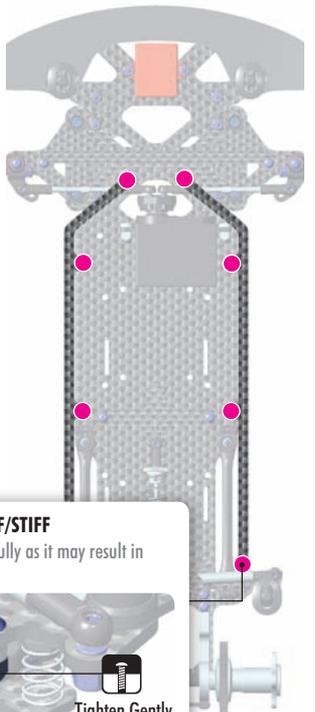
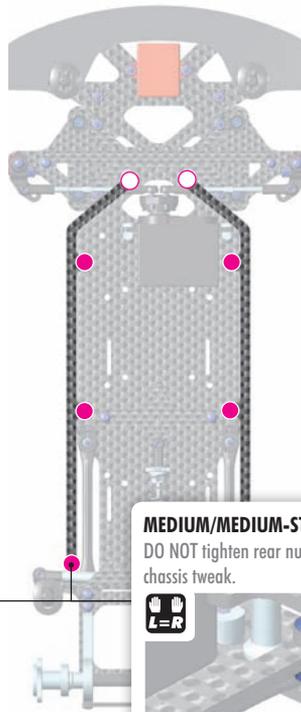
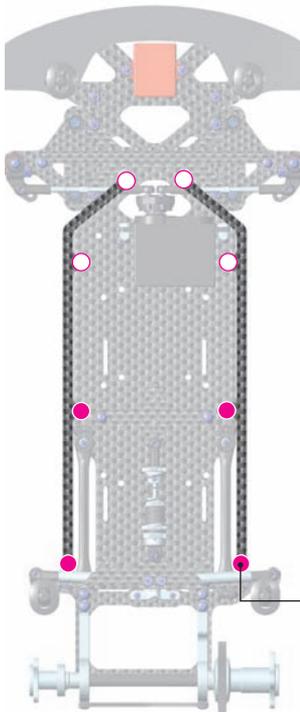
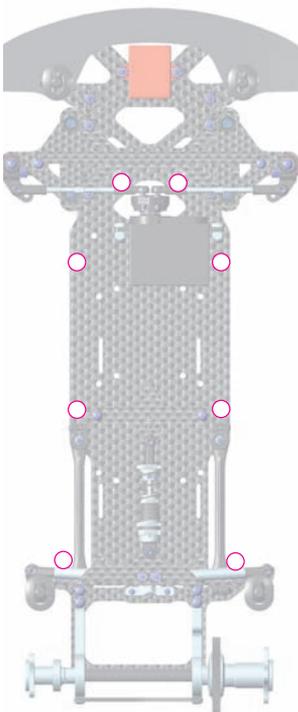
Braces installed, attached at middle & rear only. This setting is a good compromise between mechanical grip and steering response. Ideal for most conditions.

MEDIUM-STIFF

Braces installed, attached at middle-front, middle, and rear. This setting is recommended for medium-high to high traction conditions.

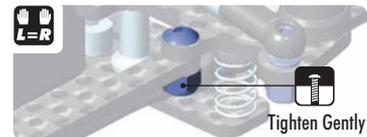
STIFF

Braces installed, attached at all positions. This is the stiffest, most stable setting. Recommended for high-traction carpet (such as US black carpet). The car will have less roll but will also have less overall grip.



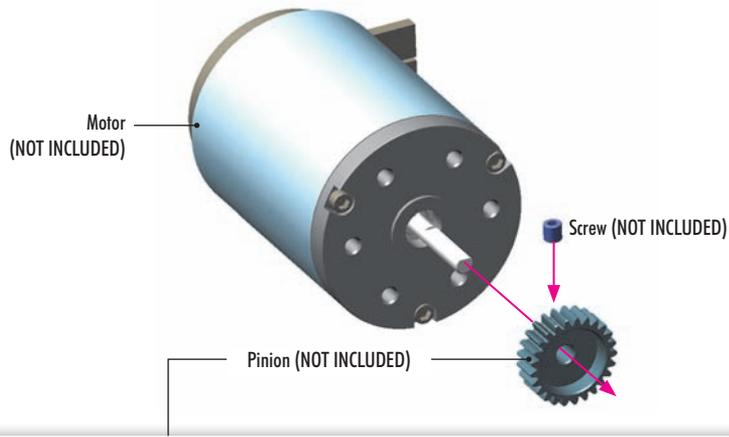
MEDIUM/MEDIUM-STIFF/STIFF

DO NOT tighten rear nuts fully as it may result in chassis tweak.



Tighten Gently

5. FINAL ASSEMBLY



PINION GEARS ALU HARDCOATED

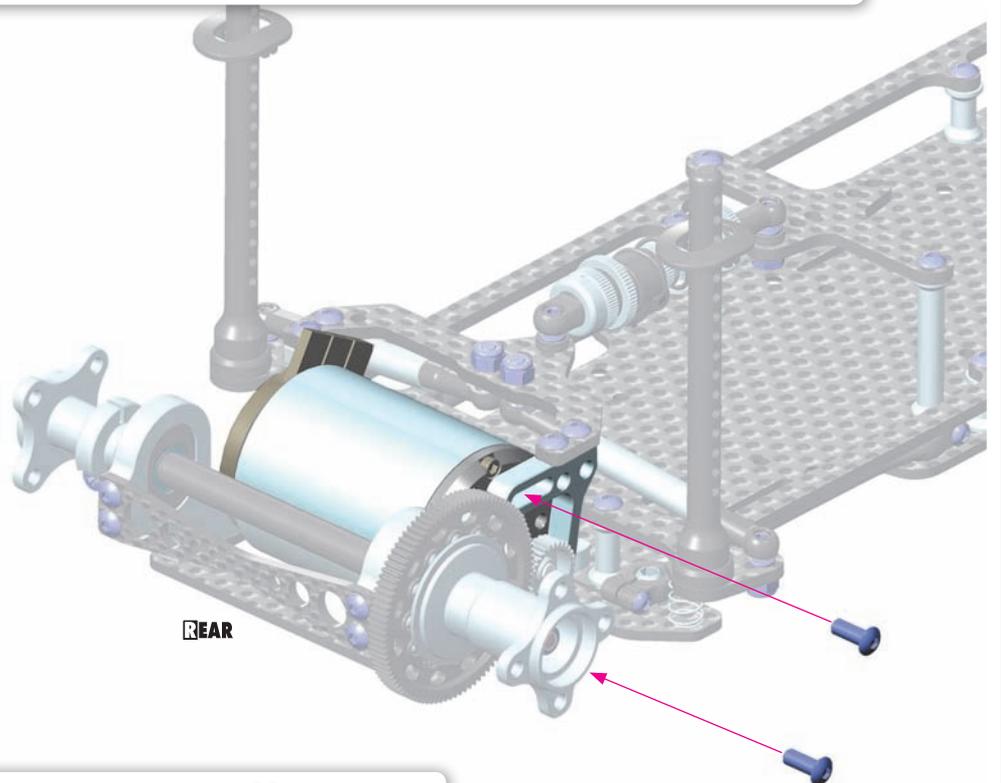
| | | |
|---------|-----------|--------|
| #305968 | 18T / 64P | OPTION |
| #305969 | 19T / 64P | OPTION |
| #305970 | 20T / 64P | OPTION |
| #305971 | 21T / 64P | OPTION |
| #305972 | 22T / 64P | OPTION |
| #305973 | 23T / 64P | OPTION |
| #305974 | 24T / 64P | OPTION |
| #305975 | 25T / 64P | OPTION |
| #305976 | 26T / 64P | OPTION |
| #305977 | 27T / 64P | OPTION |
| #294128 | 28T / 64P | OPTION |
| #305979 | 29T / 64P | OPTION |

| | | |
|---------|-----------|--------|
| #294130 | 30T / 64P | OPTION |
| #294131 | 31T / 64P | OPTION |
| #305982 | 32T / 64P | OPTION |
| #294133 | 33T / 64P | OPTION |
| #305984 | 34T / 64P | OPTION |
| #305985 | 35T / 64P | OPTION |
| #294136 | 36T / 64P | OPTION |
| #294137 | 37T / 64P | OPTION |
| #294138 | 38T / 64P | OPTION |
| #294139 | 39T / 64P | OPTION |
| #294140 | 40T / 64P | OPTION |
| #294141 | 41T / 64P | OPTION |
| #294142 | 42T / 64P | OPTION |

| | | |
|---------|-----------|--------|
| #294143 | 43T / 64P | OPTION |
| #294144 | 44T / 64P | OPTION |
| #294145 | 45T / 64P | OPTION |
| #305996 | 46T / 64P | OPTION |
| #294147 | 47T / 64P | OPTION |
| #294148 | 48T / 64P | OPTION |
| #294149 | 49T / 64P | OPTION |
| #294150 | 50T / 64P | OPTION |
| #294152 | 52T / 64P | OPTION |
| #294154 | 54T / 64P | OPTION |
| #294156 | 56T / 64P | OPTION |
| #294158 | 58T / 64P | OPTION |
| #294160 | 60T / 64P | OPTION |

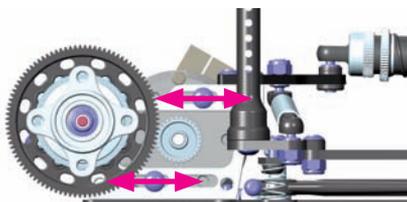


902308
SH M3x8



GEAR MESH

Adjust the gear mesh so there is appropriate space between the spur gear and pinion teeth. There should be a very small amount of free play.



5. FINAL ASSEMBLY

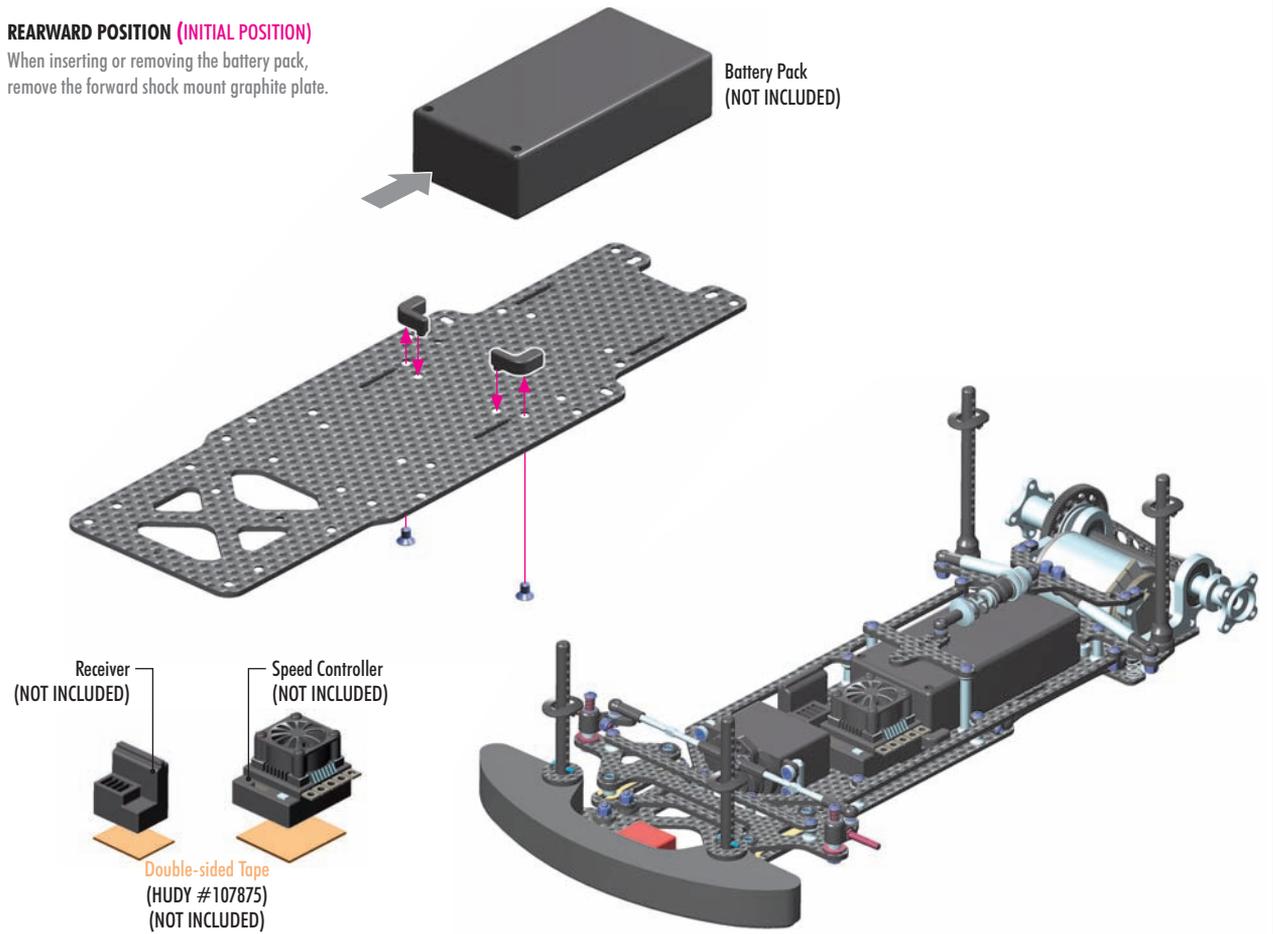


903305
SFH M3x5

ELECTRONICS CONFIGURATION:

REARWARD POSITION (INITIAL POSITION)

When inserting or removing the battery pack, remove the forward shock mount graphite plate.

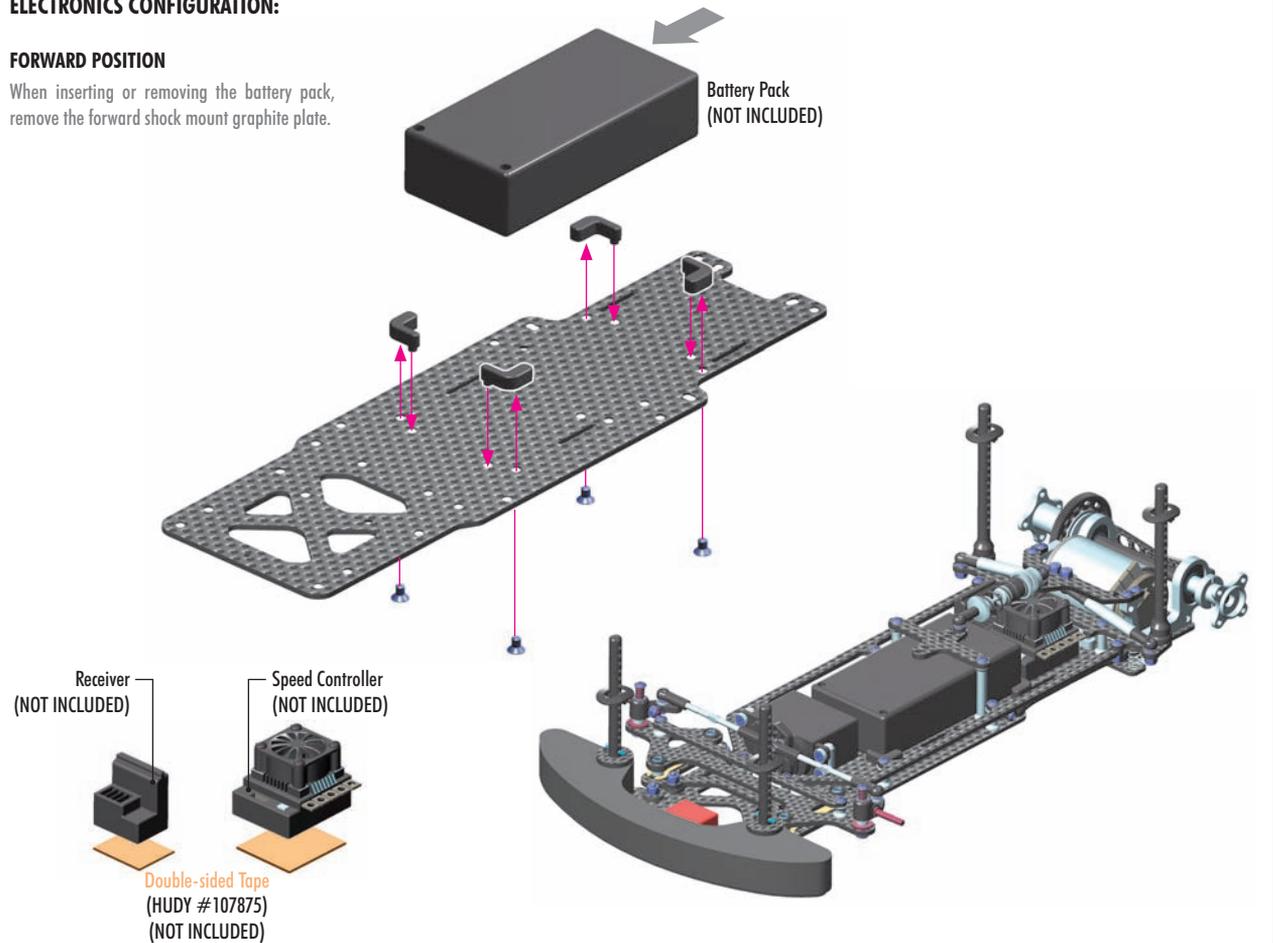


903305
SFH M3x5

ELECTRONICS CONFIGURATION:

FORWARD POSITION

When inserting or removing the battery pack, remove the forward shock mount graphite plate.



5. FINAL ASSEMBLY



372290
SHIM 3.2x4.8x0.5



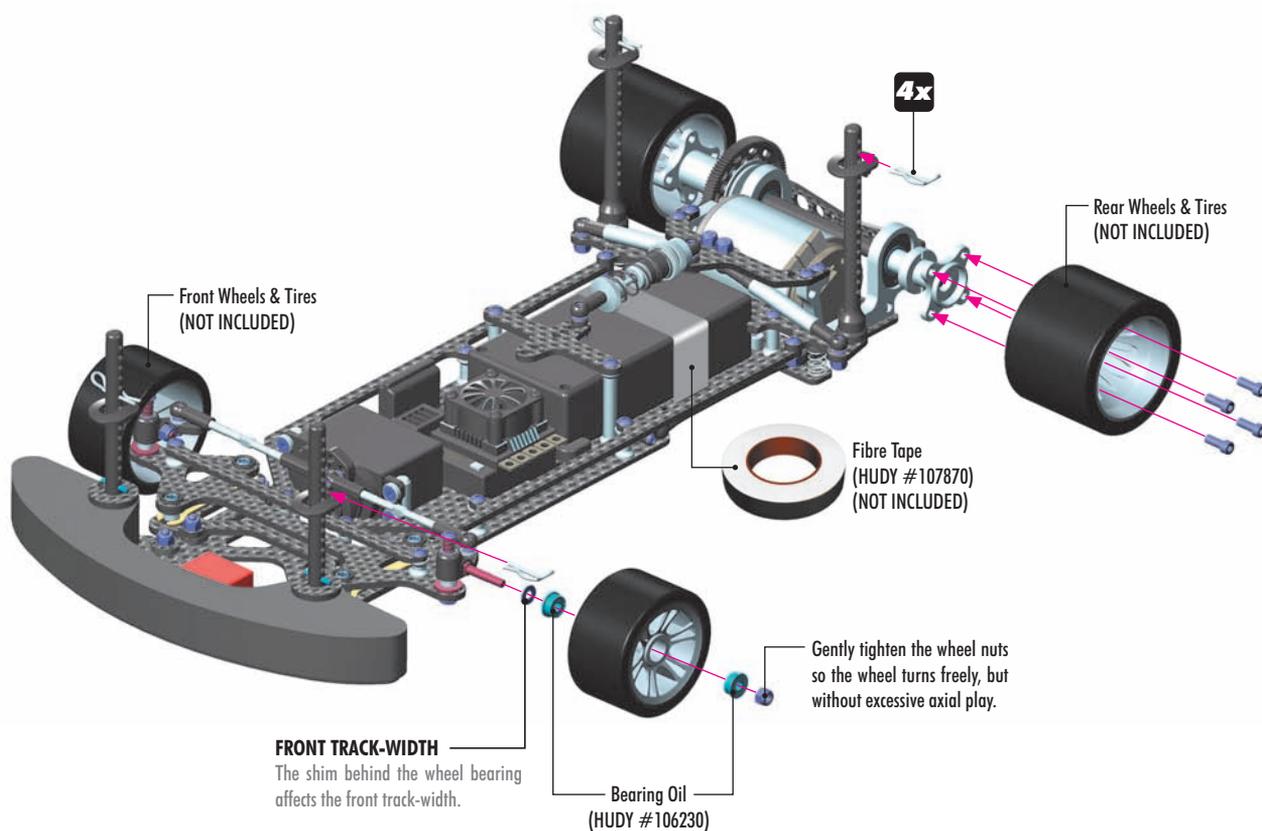
375390
ALU SCH M3x8



951851
BB 1/8"x5/16"x9/64"



960030
N M3



FRONT TRACK-WIDTH

The shim behind the wheel bearing affects the front track-width.

WIDER TRACK-WIDTH

Easier to drive, less steering, less responsive.

NARROWER TRACK-WIDTH

More steering, more responsive, but more difficult to drive.

www.teamxray.com

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[/+TeamXrayRC](#)