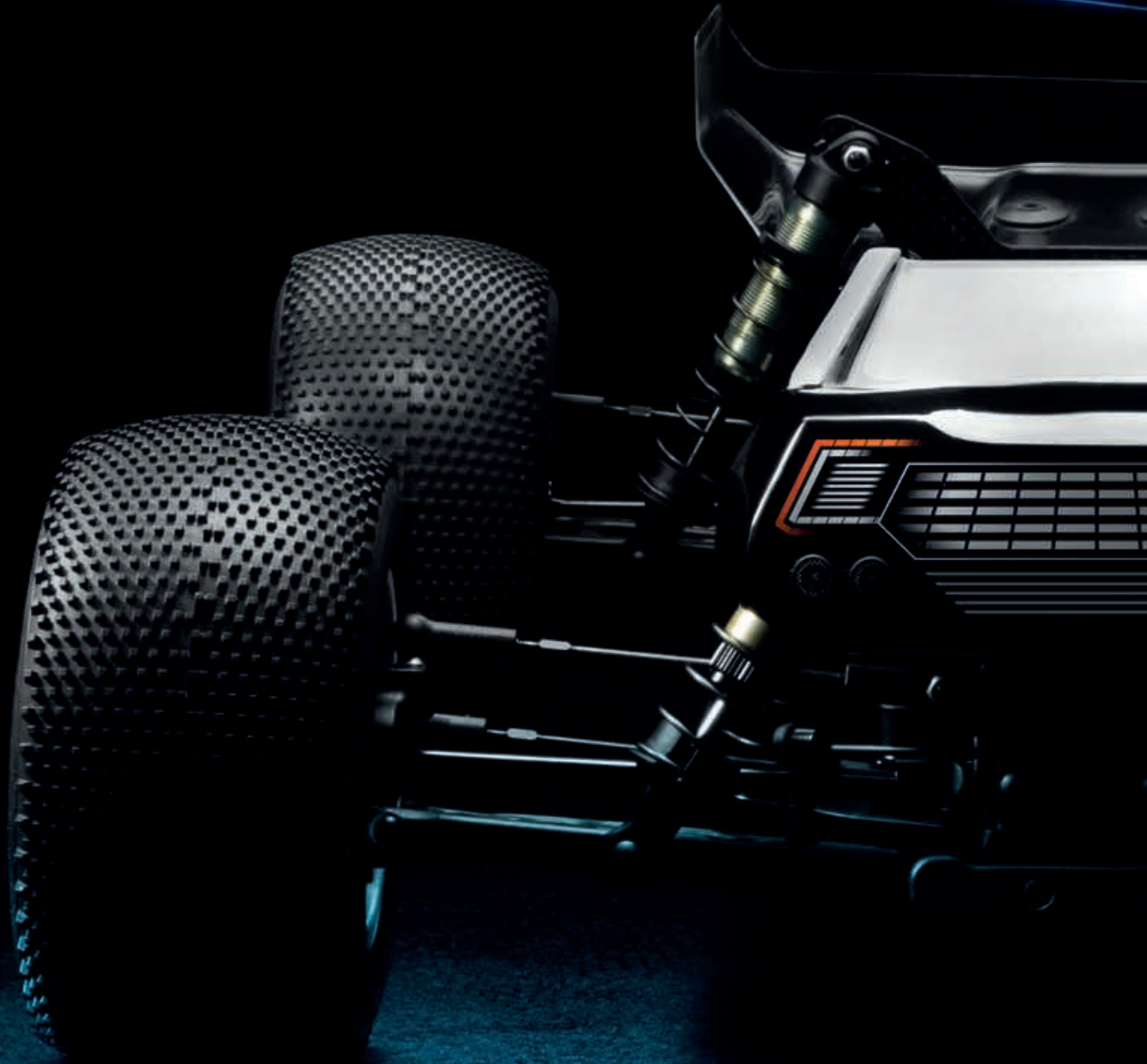


1/10 LUXURY ELECTRIC TRUGGY

XTRAY XT4



INSTRUCTION MANUAL
FOR XT4'25 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

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 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 NEGLECT.

SAFETY PRECAUTIONS

Contains:

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

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

CAUTION: CANCER HAZARD

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

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

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

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

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



IMPORTANT NOTES - GENERAL

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

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

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)



HUDY Tweezers Straight (HUDY #188970)



HUDY Tweezers Curved (HUDY #188971)



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



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



Arm Reamer 3.0mm (#107643 - HUDY EXCLUSIVE Limited Edition)



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



Socket 7.0mm (#177035 - HUDY EXCLUSIVE Limited Edition)



Reamer (#107602 - HUDY EXCLUSIVE Limited Edition)



Scissors (HUDY #188990)



Professional Multi Tool
(HUDY #183011)

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

| | | | | | |
|--|--|---|---|--|--|
| <p>Oil 300cSt (#106330) HUDY Premium Silicone Oils</p> <p>OIL</p> | <p>Oil 400cSt (#106340) HUDY Premium Silicone Oils</p> <p>OIL</p> | <p>Oil 10.000cSt (#106510) HUDY Premium Silicone Oils</p> <p>OIL</p> | <p>Oil 30.000cSt (#106530) HUDY Premium Silicone Oils</p> <p>OIL</p> | <p>Oil 100.000cSt (#106610) HUDY Premium Silicone Oils</p> <p>OIL</p> | <p>(HUDY #106210) Premium Graphite Grease</p> <p>GR</p> |
|--|--|---|---|--|--|

EQUIPMENT REQUIRED

| | | | | | | |
|------------------------|---|-------------------------|-------------------------------|---|------------------------------------|---------------------------------|
| <p>Transmitter</p> | <p>Receiver</p> | <p>Speed Controller</p> | <p>Steering Servo</p> | <p>Electric Motor & Pinion Gear with Setscrew</p> | <p>LiPo Battery</p> | |
| <p>Battery Charger</p> | <p>Double-sided Tape (HUDY #107875)</p> | <p>Lexan™ Paint</p> | <p>4x Tires & Inserts</p> | <p>Bearing Oil (HUDY #106230)</p> <p>OIL</p> | <p>Threadlock</p> <p>TL</p> | <p>CA glue</p> <p>CA</p> |

NOT INCLUDED



Follow Set-Up Book:

To ensure that you always have access to the most up-to-date version of the Set-up Book you can download the HUDY Set-up Book from their web site at [www.hudy.net] 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.



SAMPLE OF OPTIONAL PARTS

| #36XXXX | TYPE1 | OPTION 1 |
|---------|-------|----------|
| #36XXXX | TYPE2 | OPTION 2 |
| #36XXXX | TYPE | INCLUDED |
| #36XXXX | TYPE3 | OPTION 3 |

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

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:

361201

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

361113

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

364903

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

365100

STYLE D - indicates parts that are optional.

TECH TIPS

TIP DRIVE SHAFT PIN SERVICING

To enjoy the longest possible lifespan of the drive shafts and diff outdrives, it is extremely important to properly service the drive shaft pins. Inspect the pins after every 3 hours of runtime. If the pins show any wear, replace them with new pins.



DO NOT use drive shafts when the pins are worn.

Press out the worn pins.

Press in new pins and regularly inspect for wear.



For quick & easy drive pin replacements use #106000 HUDY Drive Pin Replacement Tool together with #106036 Ejector Pivot Pin & Alternating Pivot 2.5mm.



To replace the worn pins use only premium HUDY drive pins (#106053 2.5mm dia x 10mm length)

TIP GRAPHITE PARTS PREPARATION

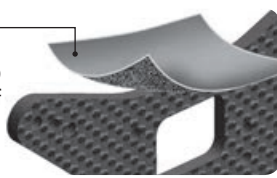
Follow this Tech Tip to prepare the graphite parts. Sand the edges with sandpaper, and then seal the edges with CA glue to reinforce them and help prevent delamination.

Prepare all Graphite Parts:

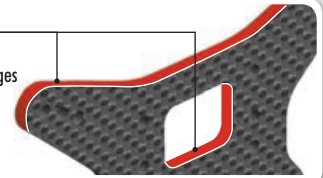
- Front shock tower
- Rear shock tower

Fine sandpaper

Use fine sandpaper to sand smooth the edges of all graphite parts.



Apply CA glue to all edges of the graphite parts.

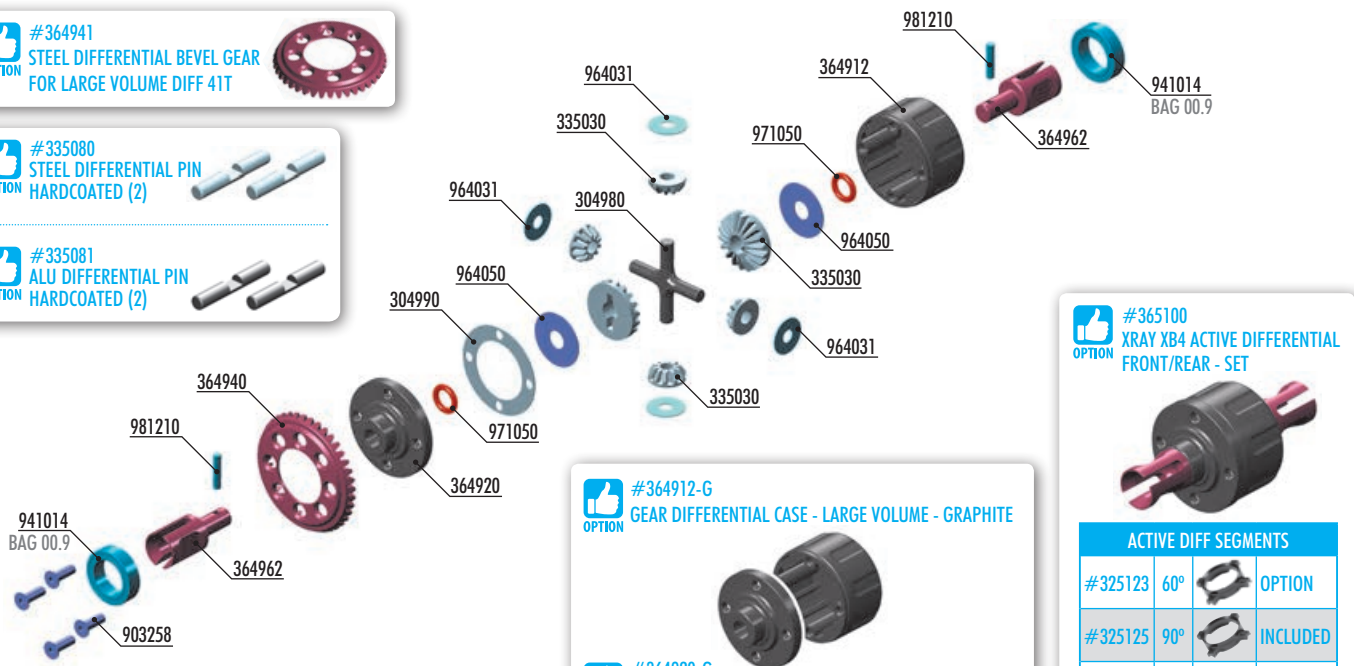


1. FRONT & REAR DIFFERENTIAL

#364941
OPTION
 STEEL DIFFERENTIAL BEVEL GEAR
 FOR LARGE VOLUME DIFF 41T

#335080
OPTION
 STEEL DIFFERENTIAL PIN
 HARDCOATED (2)

#335081
OPTION
 ALU DIFFERENTIAL PIN
 HARDCOATED (2)



#365100
OPTION
 XRAY XB4 ACTIVE DIFFERENTIAL
 FRONT/REAR - SET

| ACTIVE DIFF SEGMENTS | | | |
|----------------------|------|--|----------|
| #325123 | 60° | | OPTION |
| #325125 | 90° | | INCLUDED |
| #325127 | 120° | | OPTION |

#364912-G
OPTION
 GEAR DIFFERENTIAL CASE - LARGE VOLUME - GRAPHITE

#364920-G
OPTION
 GEAR DIFFERENTIAL COVER - LARGE VOLUME - GRAPHITE

BAG
01
2x
 Gear Differentials

- 304980 COMPOSITE GEAR DIFF CROSS PIN
- 304990 DIFF GASKET (4)
- 335030 STEEL DIFF BEVEL & SATELLITE GEARS (2+4)
- 364903 GEAR DIFFERENTIAL - LARGE VOLUME - SET
- 364912 COMPOSITE GEAR DIFFERENTIAL CASE - LARGE VOLUME
- 364920 COMPOSITE GEAR DIFFERENTIAL COVER - LARGE VOLUME
- 364940 STEEL DIFFERENTIAL BEVEL GEAR FOR LARGE VOLUME DIFF 40T
- 364962 GEAR DIFF OUTDRIVE ADAPTER FOR LARGE VOLUME DIFF (2)

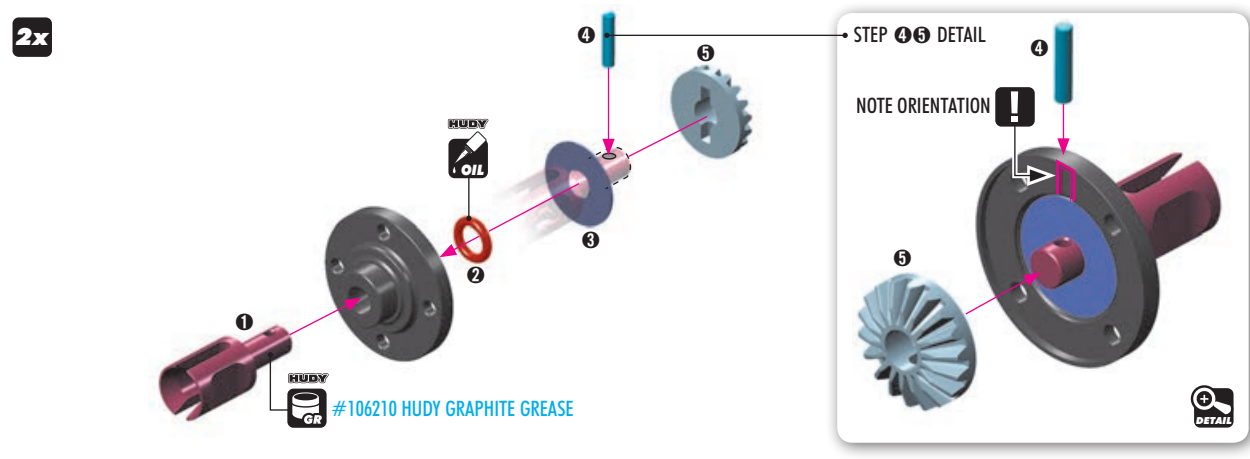
- 903258 HEX SCREW SFH M2.5x8 (10)
- 941014 BALL-BEARING 10x15x4 RUBBER SEALED - GREASE (2)
- 964031 WASHER S 3.5x10x0.2 (10)
- 964050 WASHER S 5x15x0.3 (10)
- 971050 SILICONE O-RING 5x1.5 (10)
- 981210 PIN 2x10 (10)

2x

1x 964050
S 5x15x0.3

1x 971050
O 5x1.5

1x 981210
P 2x10

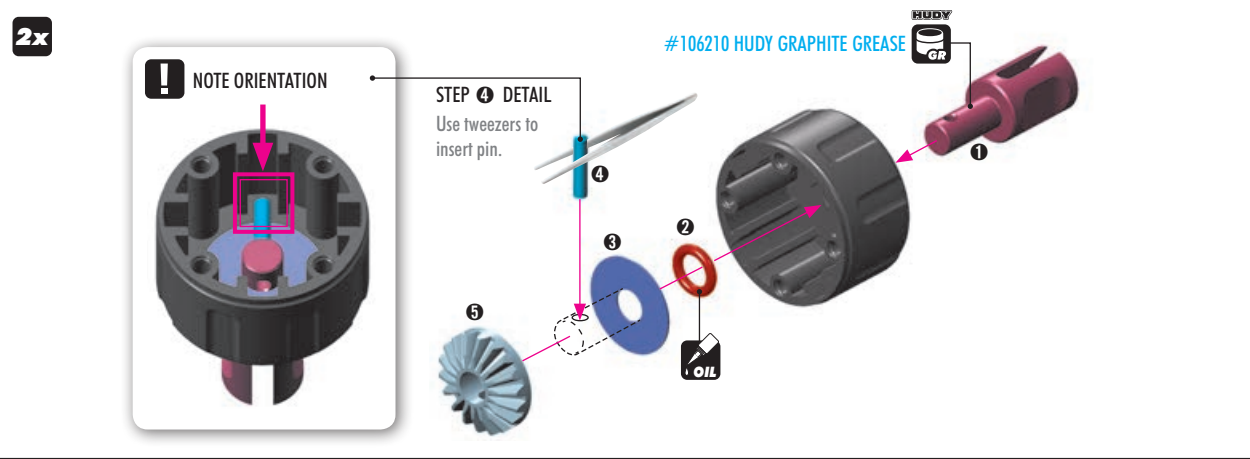


2x

1x 964050
S 5x15x0.3

1x 971050
O 5x1.5

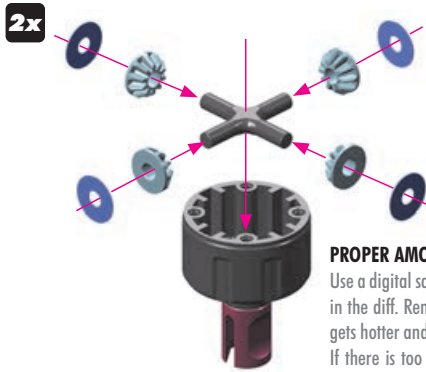
1x 981210
P 2x10



1. FRONT & REAR DIFFERENTIAL



964031
S 3.5x10x0.2



Front diff Silicone oil
30.000cSt
Fill just above the cross-pins.

Rear diff Silicone oil
10.000cSt
Fill just above the cross-pins.

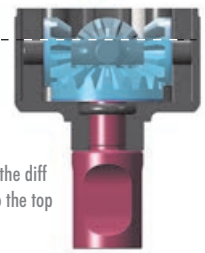
Wait 5min

PROPER AMOUNT OF OIL IN THE DIFFS

Use a digital scale to measure the exact amount of oil in the diff. Remember that during operation the diff gets hotter and the heat may allow the oil to expand. If there is too much oil inside it may interfere with the diff operation and damage the internal gears.



Fill differential up to the top of the diff cross-pins. DO NOT fill the diff to the top of the housing.



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



1 Put the diff (without oil) on the scale and check the weight (approximately 11.47g).



2 Slowly pour oil into the diff and watch the weight. Add 1.83g of oil into the diff. The approximate weight of the diff including oil is 13.30g.

$$11.47g + 1.83g = 13.30g$$

#107865
OPTION HUDY Professional Digital Pocket Scale 300g/0.01g

#107866
OPTION HUDY Professional Digital Pocket Scale 3000g/0.1g

TIPS FOR DIFFERENTIALS

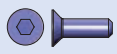
| TIP | FRONT DIFFERENTIAL | REAR DIFFERENTIAL | TIP |
|-----|---|---|-----|
| | LOW TRACTION 20.000cSt (HUDY #106521) | LOW TRACTION 7.000cSt (HUDY #106471) | |
| | MEDIUM-HIGH TRACTION 30.000cSt (HUDY #106531) | MEDIUM-HIGH TRACTION 10.000cSt (HUDY #106511) | |
| | SUPER-HIGH TRACTION 50.000cSt (HUDY #106551) | SUPER-HIGH TRACTION 15.000cSt (HUDY #106516) | |

NOTE:
Softer oil increases steering, harder oil increases stability.

NOTE:
Softer oil increases rear traction, harder oil increases on-power steering.

SET-UP BOOK

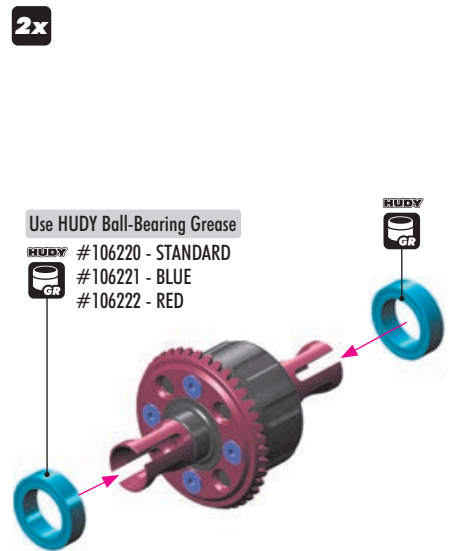
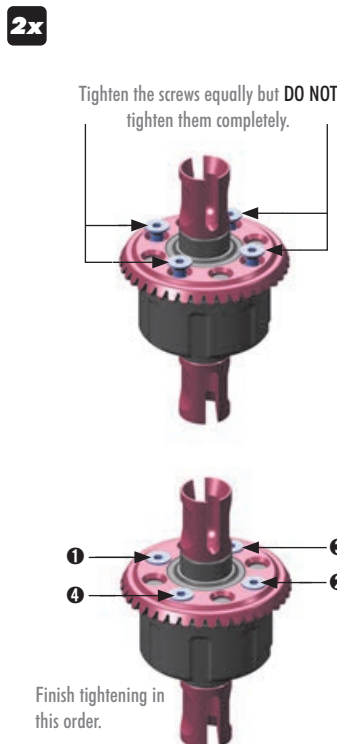
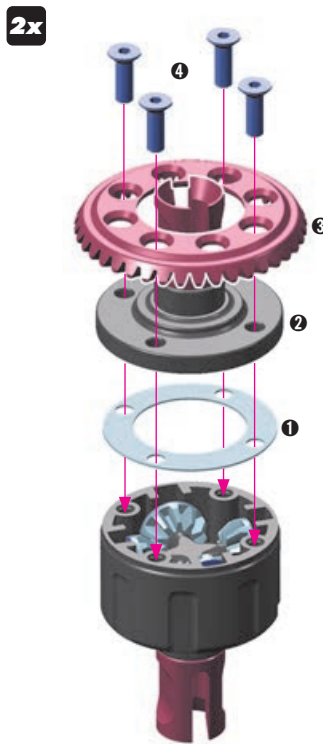
DIFFERENTIAL OIL



4x 903258
SFH M2.5x8



2x 941014
BB 10x15x4



1. GEAR CENTER DIFFERENTIAL

#365101 XRAY XB4 ACTIVE DIFFERENTIAL - CENTER - SET
OPTION



ACTIVE DIFF SEGMENTS

| | | | |
|---------|------|--|----------|
| #325123 | 60° | | OPTION |
| #325125 | 90° | | INCLUDED |
| #325127 | 120° | | OPTION |

#364912-G GEAR DIFF CASE - LARGE VOLUME - GRAPHITE
OPTION



OPTION

| BEVEL & SATELLITE GEARS | | |
|-------------------------|-----------|----------|
| #304930 | COMPOSITE | INCLUDED |
| #304932 | GRAPHITE | OPTION |
| #335030 | STEEL | OPTION |



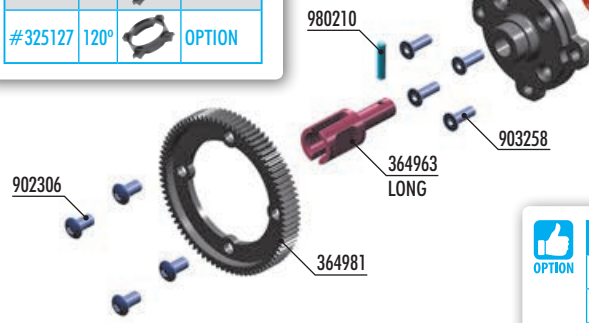
OPTION

| GEAR DIFF CROSS PINS | | |
|----------------------|-----------|----------|
| #304980 | COMPOSITE | INCLUDED |
| #335080 | STEEL | OPTION |
| #335081 | ALU | OPTION |



OPTION

| CENTER DIFF SPUR GEARS | | |
|------------------------|--------|----------|
| #364975 | 75T/48 | OPTION |
| #364978 | 78T/48 | OPTION |
| #364981 | 81T/48 | INCLUDED |

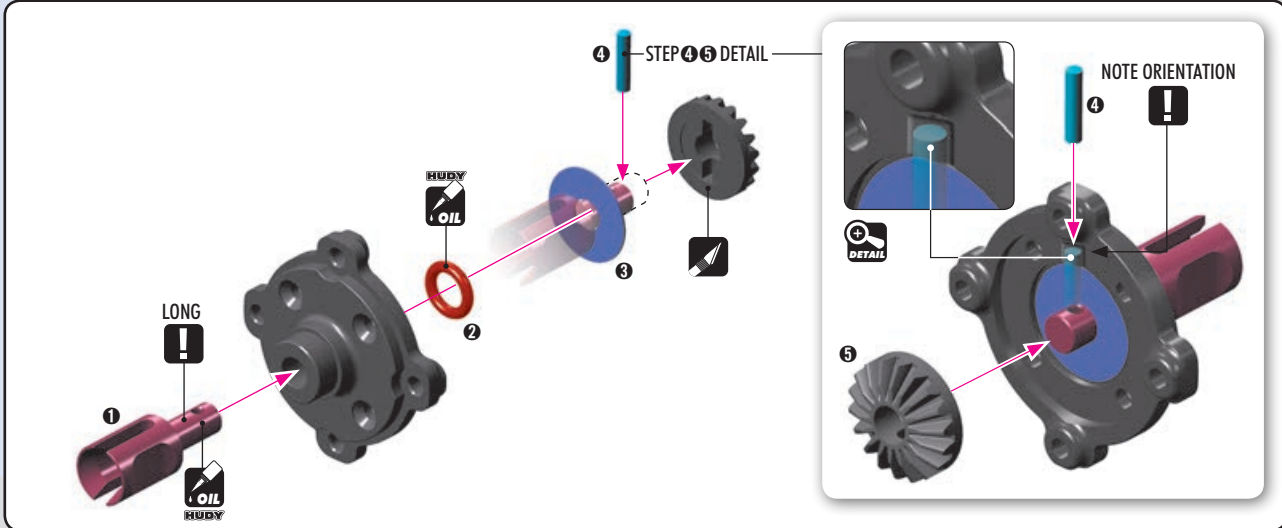


BAG
01.3

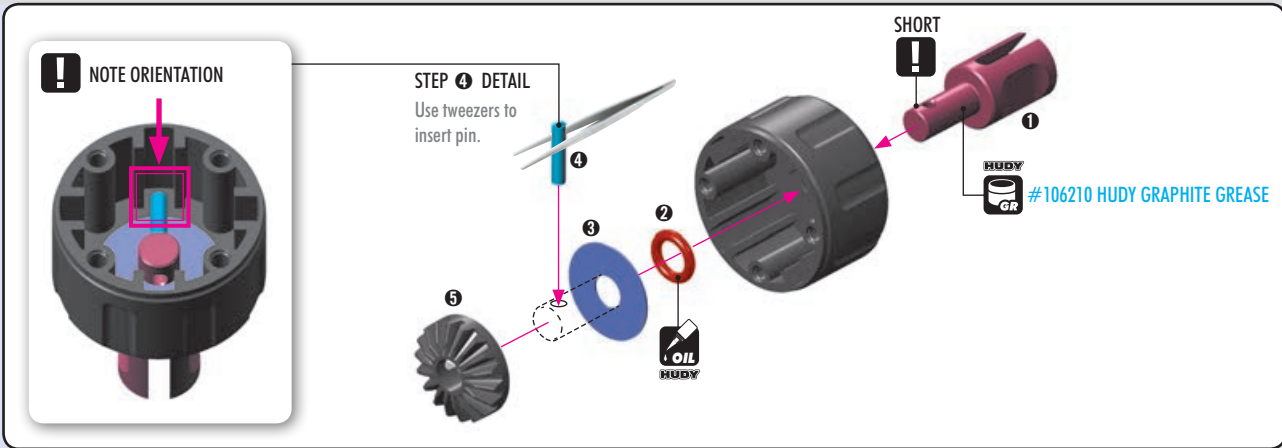
- 304930 COMPOSITE GEAR DIFF BEVEL & SATELLITE GEARS (2+4)
- 304980 COMPOSITE GEAR DIFF CROSS PIN
- 304990 DIFF GASKET (4)
- 364904 GEAR CENTER DIFFERENTIAL - LARGE VOLUME - SET
- 364912 COMPOSITE GEAR DIFFERENTIAL CASE - LARGE VOLUME
- 364913 COMPOSITE CENTER GEAR DIFF ADAPTER - LARGE VOLUME
- 364963 CENTER GEAR DIFF OUTDRIVE ADAPTER FOR LARGE VOLUME DIFF (1+1)
- 364981 COMPOSITE CENTER DIFF SPUR GEAR 81T / 48

- 902306 HEX SCREW SH M3x6 (10)
- 903258 HEX SCREW SFH M2.5x8 (10)
- 964031 WASHER S 3.5x10x0.2 (10)
- 964050 WASHER S 5x15x0.3 (10)
- 971050 SILICONE O-RING 5x1.5 (10)
- 980210 PIN 2x10 (10)

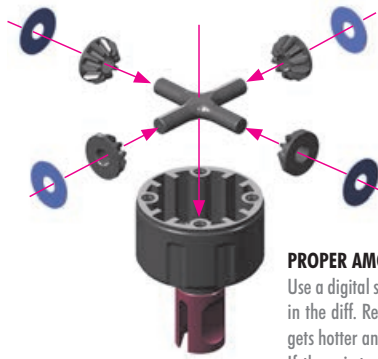
- 1x 964050 S 5x15x0.3
- 1x 971050 O 5x1.5
- 1x 980210 P 2x10



- 1x 964050 S 5x15x0.3
- 1x 971050 O 5x1.5
- 1x 980210 P 2x10



1. GEAR CENTER DIFFERENTIAL



PROPER AMOUNT OF OIL IN THE DIFFS

Use a digital scale to measure the exact amount of oil in the diff. Remember that during operation the diff gets hotter and the heat may allow the oil to expand. If there is too much oil inside it may interfere with the diff operation and damage the internal gears.



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



1 Put the diff (without oil) on the scale and check the weight (approximately 11.72g)



2 Slowly pour oil into the diff and watch the weight.

CENTER Diff. 11.72g + 1.50g = 13.22g

#107865
OPTION
HUDY Professional Digital Pocket Scale 300g/0.01g

#107866
OPTION
HUDY Professional Digital Pocket Scale 3000g/0.1g

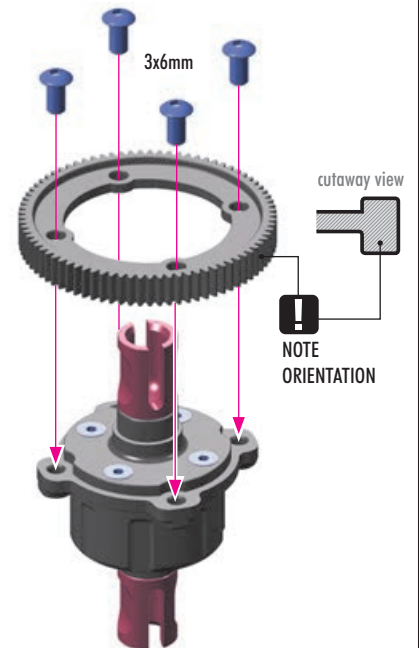
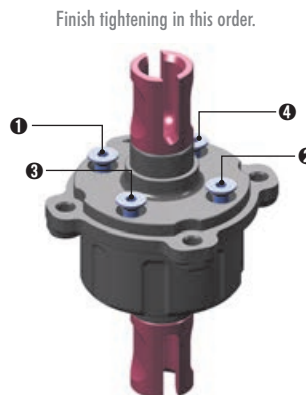
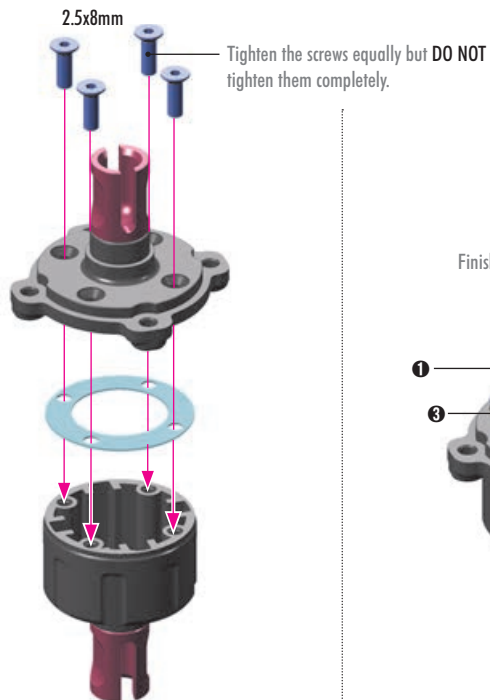
TIP FOR CENTER DIFFERENTIAL

| | |
|-----------------|---------------------------|
| LOW TRACTION | 50.000cSt (HUDY #106550) |
| MEDIUM TRACTION | 100.000cSt (HUDY #106610) |
| HIGH TRACTION | 500.000cSt (HUDY #106650) |

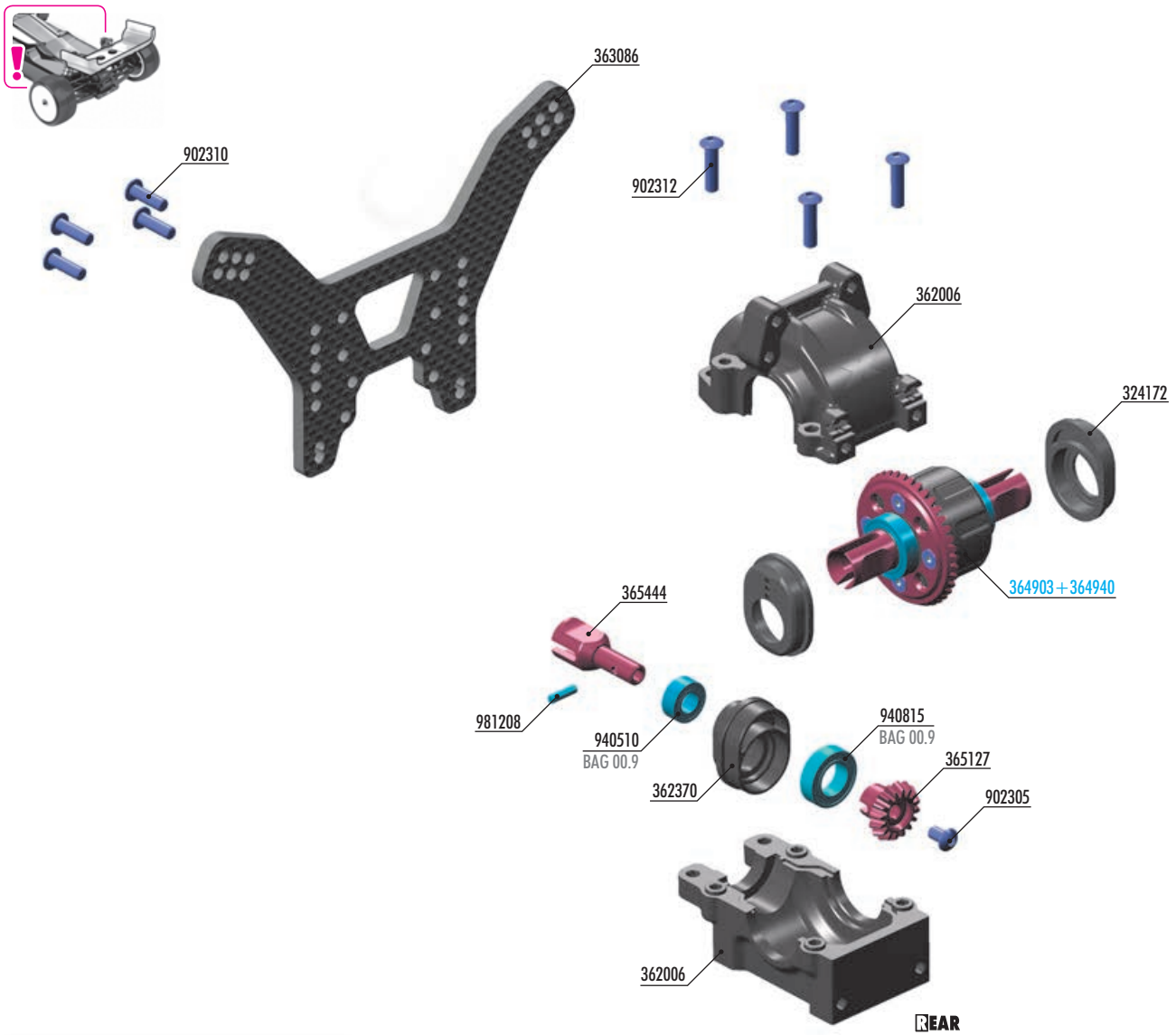
NOTE:
Softer oil increases steering, harder oil increases stability.

SET-UP BOOK

DIFFERENTIAL OIL



2. REAR CENTRAL TRANSMISSION



| XRAY BALL-BEARINGS | | | |
|--------------------|---------|--------|---------------|
| OPTION | #359050 | 5x10x4 | GREASE OPTION |
| | #940510 | 5x10x4 | OIL INCLUDED |
| | #940814 | 8x14x4 | GREASE OPTION |
| | #940815 | 8x14x4 | OIL INCLUDED |

| BALL-BEARING HUBS | | | |
|-------------------|---------|--------|----------|
| OPTION | #324172 | 1 DOT | OPTION |
| | #324172 | 2 DOTS | OPTION |
| | #324172 | 3 DOTS | INCLUDED |

| INLINE HUBS - REAR | | | |
|--------------------|---------|--------|----------|
| OPTION | #362370 | 1 DOT | OPTION |
| | #362370 | 2 DOTS | OPTION |
| | #362370 | 3 DOTS | INCLUDED |

OPTION #365100 XRAY XB4 ACTIVE DIFFERENTIAL FRONT/REAR - SET



| ACTIVE DIFF SEGMENTS | | | |
|----------------------|---------|------|----------|
| OPTION | #325123 | 60° | OPTION |
| | #325125 | 90° | INCLUDED |
| | #325127 | 120° | OPTION |

BAG

02.1

324172 COMPOSITE ADJUSTMENT BALL-BEARING HUB - 1+2+3 DOTS (2)
 362006 DIFF BULKHEAD - HORIZONTAL SPLIT DESIGN (HS) - FRONT/REAR - SET
 362370 INLINE HUB FOR BEVEL DRIVE GEAR - REAR HS BULKHEAD - 1+2+3 DOTS
 363086 GRAPHITE SHOCK TOWER FOR HS BULKHEAD - REAR - 3.5MM
 365127 STEEL BEVEL DRIVE GEAR - FOR HS BULKHEAD - CNC-MACHINED - 16T
 365444 CENTRAL DOGBONE SHAFT UNIVERSAL JOINT - HUDY SPRING STEEL™

902305 HEX SCREW SH M3x5 (10)
 902310 HEX SCREW SH M3x10 (10)
 902312 HEX SCREW SH M3x12 (10)
 940510 BALL-BEARING 5x10x4 RUBBER SEALED - OIL (2)
 940815 BALL-BEARING 8x14x4 RUBBER SEALED - OIL (2)
 981208 PIN 2x8 (10)

364903 GEAR DIFFERENTIAL - LARGE VOLUME - SET
 364940 STEEL DIFFERENTIAL BEVEL GEAR FOR LARGE VOLUME DIFF 40T

2. REAR CENTRAL TRANSMISSION



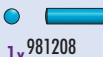
1x 902305
SH M3x5



1x 940510
BB 5x10x4



1x 940815
BB 8x14x4



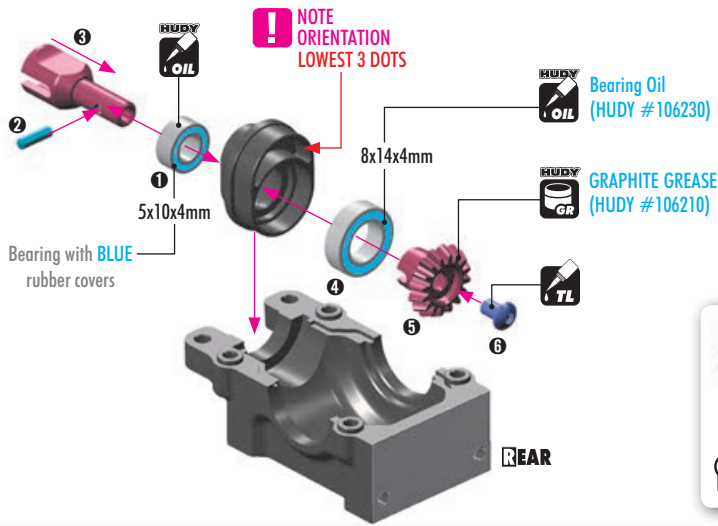
1x 981208
P 2x8



4x 902312
SH M3x12

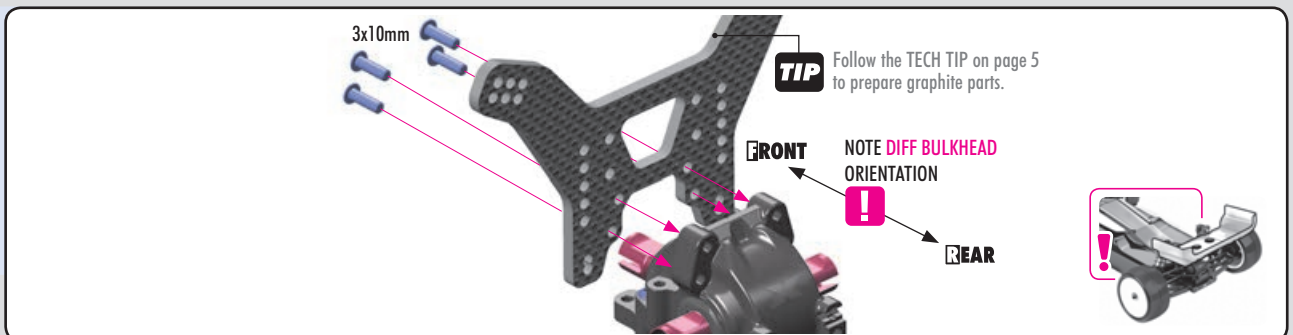
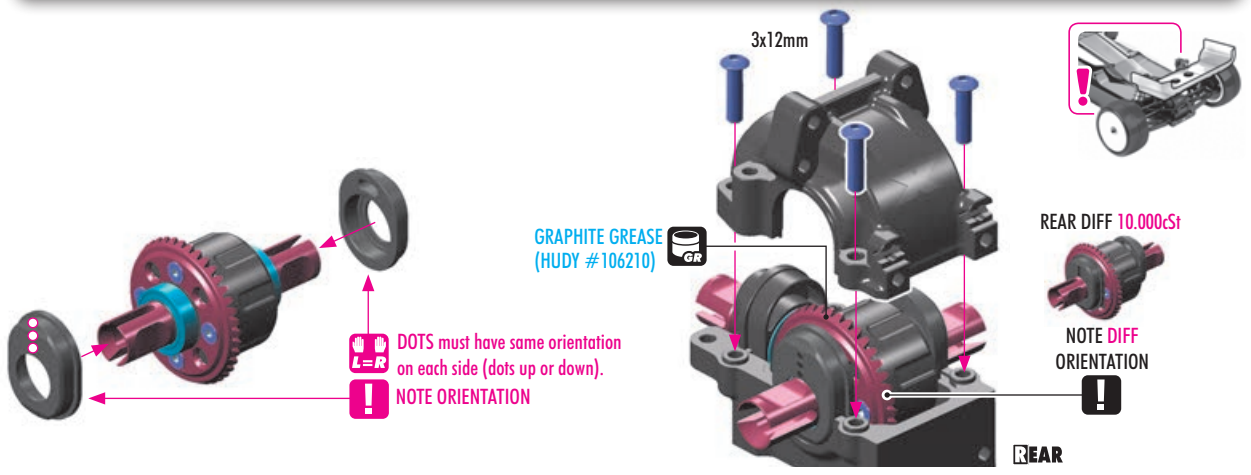
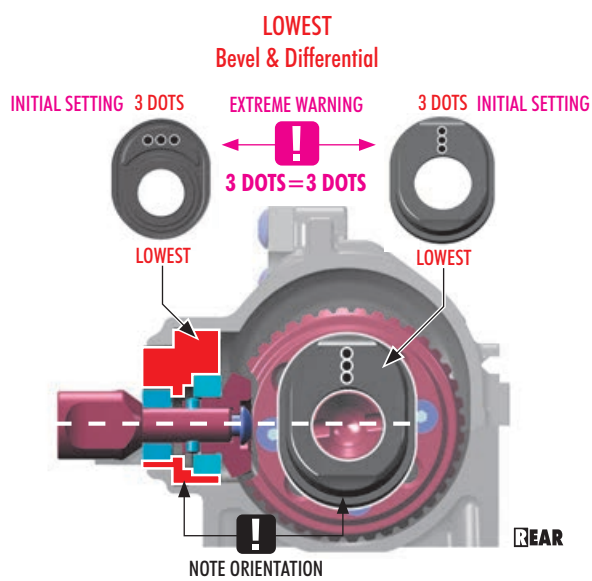


4x 902310
SH M3x10

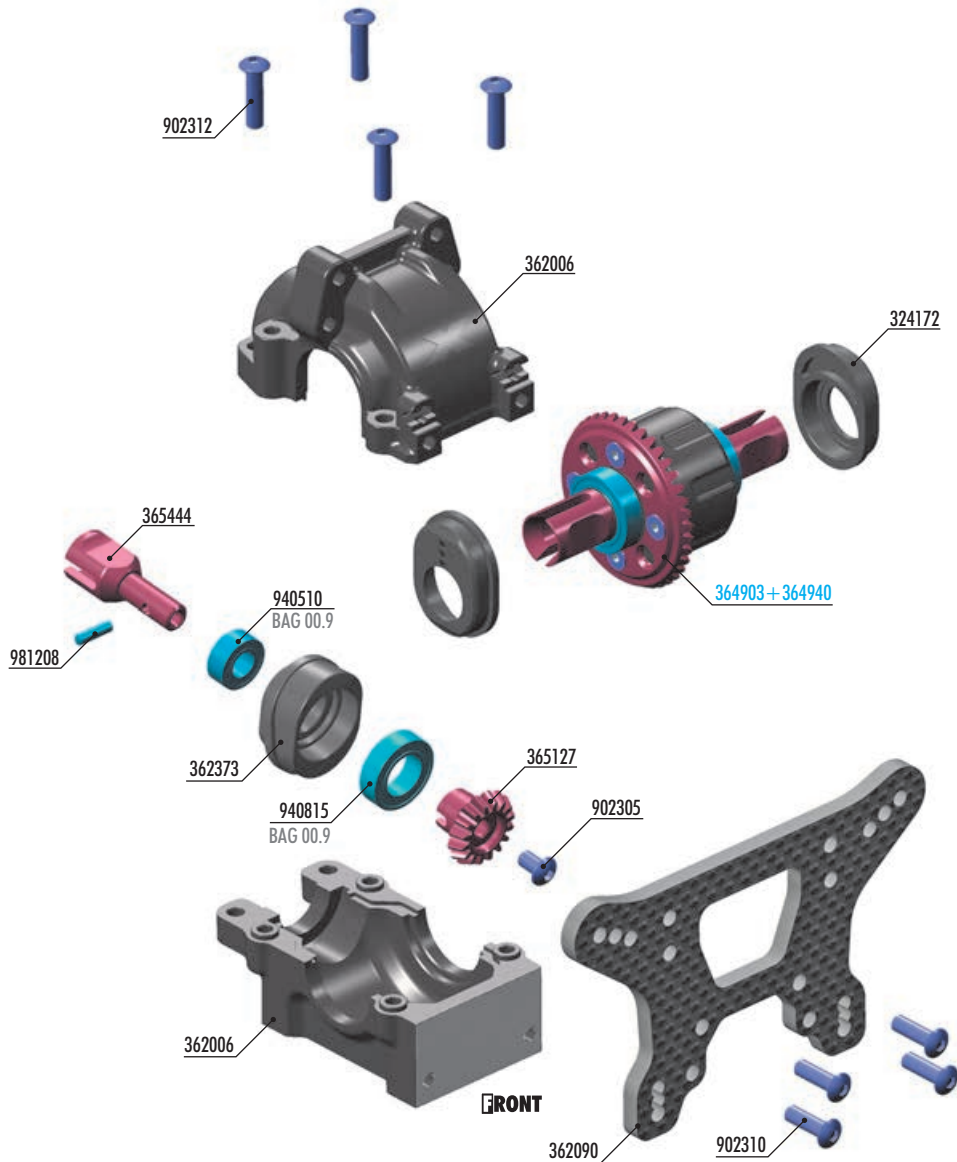


REAR BEVEL DRIVE GEAR & DIFFERENTIAL HEIGHT ADJUSTMENT

INITIAL SETTING



2. FRONT CENTRAL TRANSMISSION



#365100
OPTION XRAY XB4 ACTIVE DIFFERENTIAL
FRONT/REAR - SET

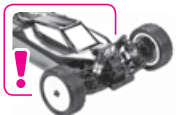


| ACTIVE DIFF SEGMENTS | | | |
|----------------------|------|--|------------------------|
| #325123 | 60° | | OPTION |
| #325125 | 90° | | INCLUDED in #365100 |
| #325127 | 120° | | OPTION |

| BALL-BEARING HUBS | | | |
|-------------------|---------|--------|----------|
| OPTION | #324172 | 1 DOT | OPTION |
| | #324172 | 2 DOTS | OPTION |
| | #324172 | 3 DOTS | INCLUDED |

| ANGLE HUBS - FRONT | | | |
|--------------------|---------|--------|----------|
| OPTION | #362371 | 1 DOT | OPTION |
| | #362372 | 2 DOTS | OPTION |
| | #362373 | 3 DOTS | INCLUDED |

| XRAY BALL-BEARINGS | | | |
|--------------------|---------|--------|---------------|
| OPTION | #359050 | 5x10x4 | GREASE OPTION |
| | #940510 | 5x10x4 | OIL INCLUDED |
| | #940814 | 8x14x4 | GREASE OPTION |
| | #940815 | 8x14x4 | OIL INCLUDED |



BAG

02.2

324172 COMPOSITE ADJUSTMENT BALL-BEARING HUB - 1+2+3 DOTS (2)
 362006 DIFF BULKHEAD - HORIZONTAL SPLIT DESIGN (HS) - FRONT/REAR - SET
 362090 GRAPHITE SHOCK TOWER FOR HS BULKHEAD - FRONT - 3.5MM
 362373 ANGLED HUB FOR BEVEL DRIVE GEAR - FRONT HS BULKHEAD - 3 DOTS
 365127 STEEL BEVEL DRIVE GEAR - FOR HS BULKHEAD - CNC-MACHINED - 16T
 365444 CENTRAL DOGBONE SHAFT UNIVERSAL JOINT - HUDY SPRING STEEL™

902305 HEX SCREW SH M3x5 (10)
 902310 HEX SCREW SH M3x10 (10)
 902312 HEX SCREW SH M3x12 (10)
 940510 BALL-BEARING 5x10x4 RUBBER SEALED - OIL (2)
 940815 BALL-BEARING 8x14x4 RUBBER SEALED - OIL (2)
 981208 PIN 2x8 (10)

364903 GEAR DIFFERENTIAL - LARGE VOLUME - SET
 364940 STEEL DIFFERENTIAL BEVEL GEAR FOR LARGE VOLUME DIFF 40T

2. FRONT CENTRAL TRANSMISSION



1x 902305
SH M3x5



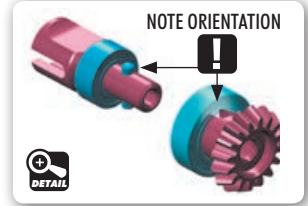
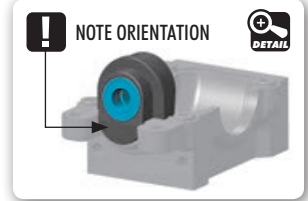
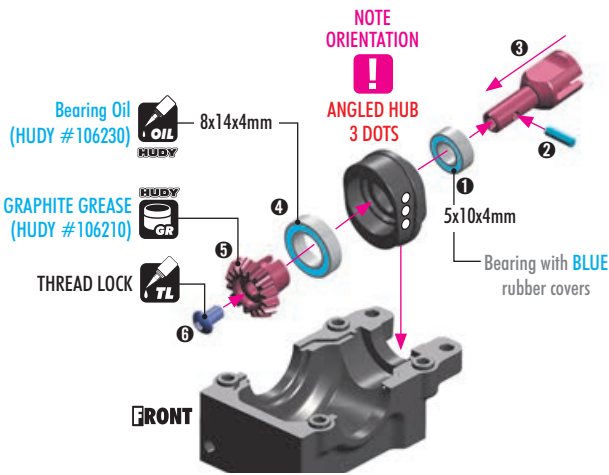
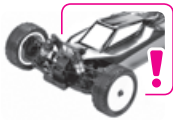
1x 940510
BB 5x10x4



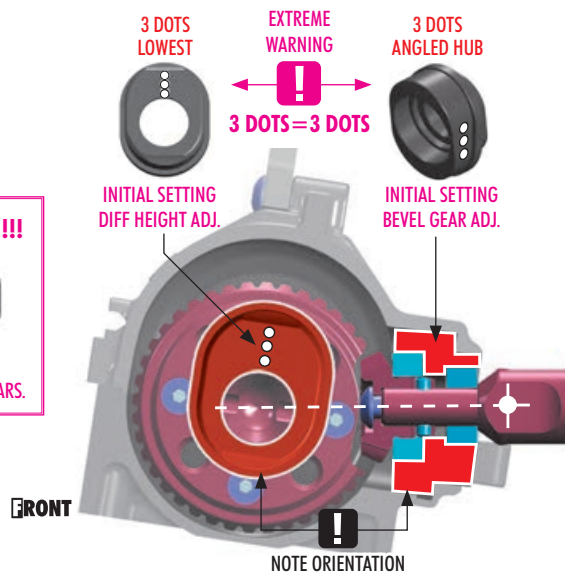
1x 940815
BB 8x14x4



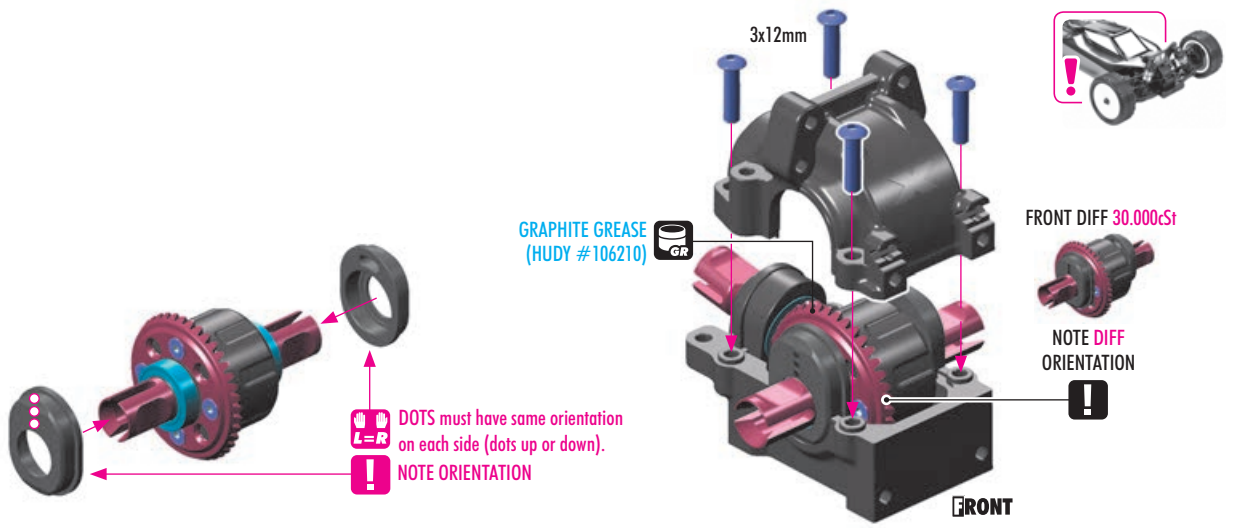
1x 981208
P 2x8



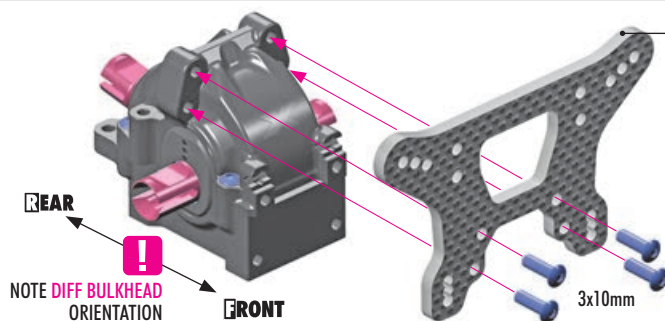
FRONT BEVEL DRIVE GEAR & DIFFERENTIAL HEIGHT ADJUSTMENT



4x 902312
SH M3x12

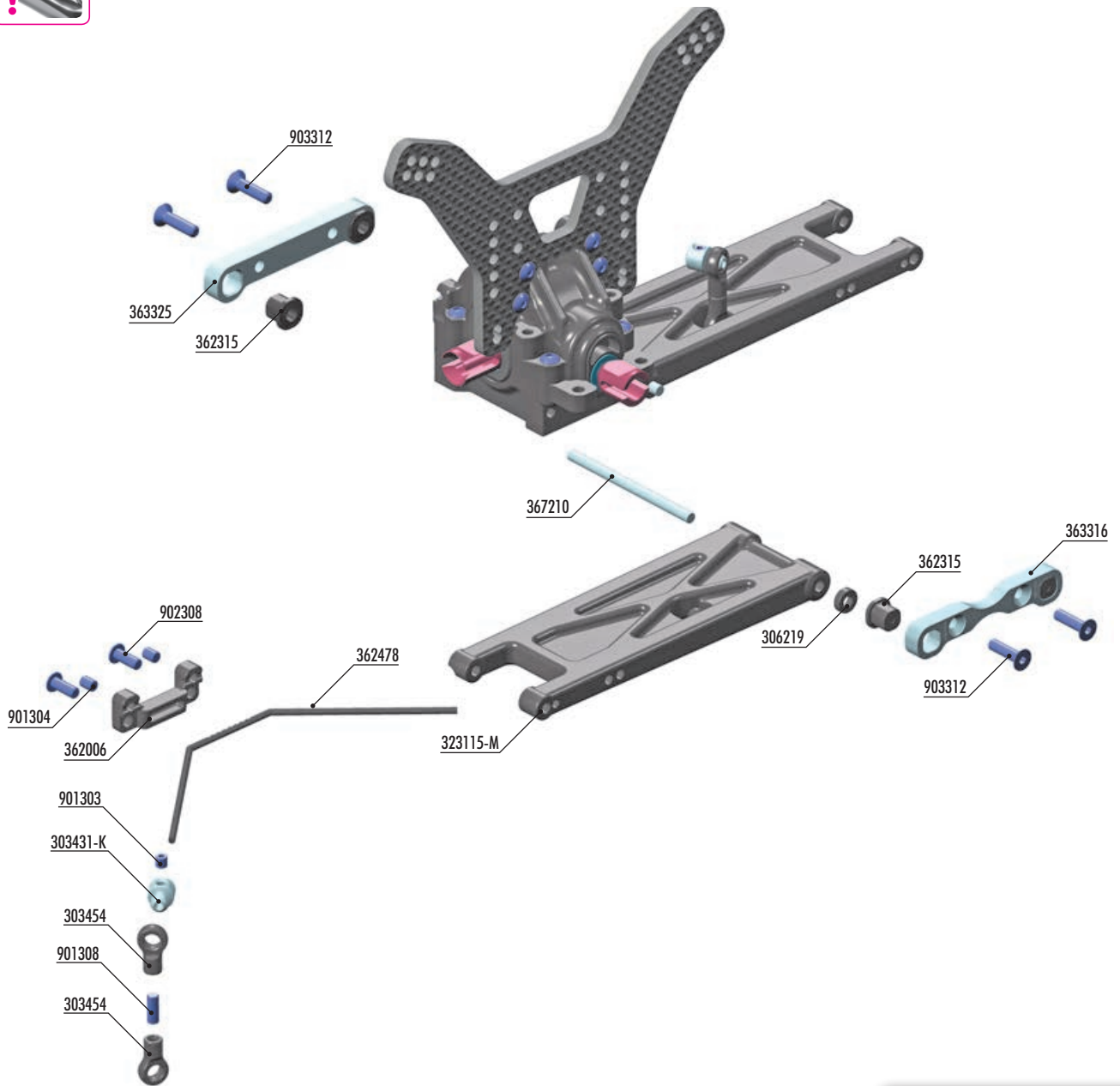


4x 902310
SH M3x10



TIP Follow the TECH TIP on page 5 to prepare graphite parts.

3. REAR SUSPENSION



| SOLID REAR SUSPENSION ARMS | | | |
|----------------------------|----------|----------|--|
| #323115-M | MEDIUM | INCLUDED | |
| #323115-H | HARD | OPTION | |
| #323115-G | GRAPHITE | OPTION | |
| REAR SUSPENSION ARMS | | | |
| #323112-M | MEDIUM | OPTION | |
| #323112-H | HARD | OPTION | |
| #323112-G | GRAPHITE | OPTION | |

| ANTI-ROLL BARS | | | |
|----------------|-------|----------|--|
| #362470 | 1.0mm | OPTION | |
| #362471 | 1.1mm | OPTION | |
| #362472 | 1.2mm | OPTION | |
| #362473 | 1.3mm | OPTION | |
| #362474 | 1.4mm | OPTION | |
| #362476 | 1.6mm | OPTION | |
| #362478 | 1.8mm | INCLUDED | |
| #362480 | 2.0mm | OPTION | |



- 303431-K ALU 4.9MM BALL END - BLACK (2)
- 303454 BALL JOINT 4.9mm - OPEN (4)
- 306219 COMPOSITE SET OF SERVO SHIMS (4)
- 323115-M COMPOSITE SUSPENSION ARM REAR LOWER - SOLID - MEDIUM
- 362006 DIFF BULKHEAD - HORIZONTAL SPLIT DESIGN (HS) - FRONT/REAR - SET
- 362315 ECCENTRIC BUSHING SET (2)
- 362478 ANTI-ROLL BAR 1.8mm
- 363316 ALU LOWER SUSP. HOLDER FOR HS BULKHEAD - REAR-FRONT
- 363325 ALU LOWER SUSP. HOLDER FOR HS BULKHEAD - REAR-REAR
- 367210 SUSPENSION PIVOT PIN (2)

- 901303 HEX SCREW SB M3x3 (10)
- 901304 HEX SCREW SB M3x4 (10)
- 901308 HEX SCREW SB M3x8 (10)
- 902308 HEX SCREW SH M3x8 (10)
- 903312 HEX SCREW SFH M3x12 (10)

3. REAR SUSPENSION

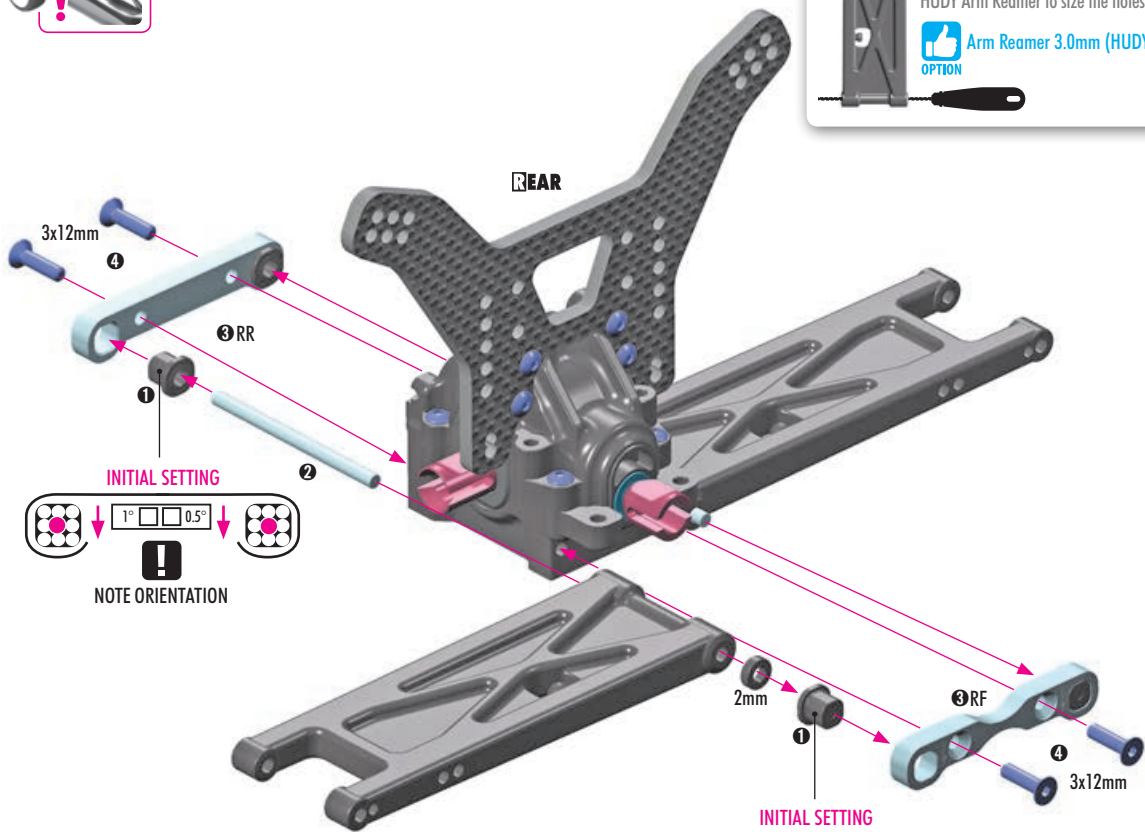
- 2x 306219 SHIM 3x6x2
- 4x 903312 SFH M3x12



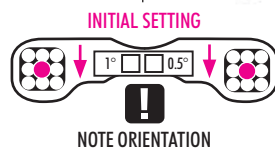
TIP **L=R**

If the suspension arm does not move freely use a HUDY Arm Reamer to size the holes of the arms.

Arm Reamer 3.0mm (HUDY #107633)
OPTION

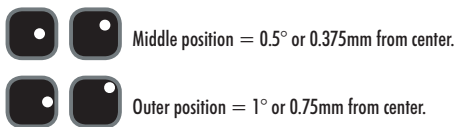


| SOLID REAR SUSPENSION ARMS | | | |
|----------------------------|-----------|----------|----------|
| | #323115-M | MEDIUM | INCLUDED |
| | #323115-H | HARD | OPTION |
| | #323115-G | GRAPHITE | OPTION |
| REAR SUSPENSION ARMS | | | |
| | #323112-M | MEDIUM | OPTION |
| | #323112-H | HARD | OPTION |
| | #323112-G | GRAPHITE | OPTION |



SET-UP BOOK
TOE-IN
ANTI-SQUAT
ROLL CENTER
TRACK-WIDTH

ECCENTRIC BUSHINGS HAVE TWO DIFFERENT OFFSETS FROM THE CENTER.



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

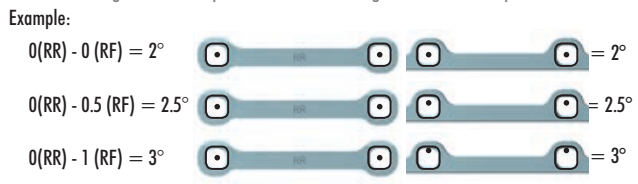
| ANTI-SQUAT | | |
|------------|----|------|
| RR | RF | (°) |
| □ | □ | = 2° |
| □ | □ | = 3° |
| □ | □ | = 1° |
| □ | □ | = 3° |
| □ | □ | = 2° |
| □ | □ | = 4° |
| □ | □ | = 1° |
| □ | □ | = 2° |
| □ | □ | = 0° |

| ROLL CENTER | | |
|-------------|----|-----------|
| RR | RF | (mm) |
| □ | □ | = +0.75mm |
| □ | □ | = 0mm |
| □ | □ | = -0.75mm |

| TRACK-WIDTH | | |
|-------------|----|----------|
| RR | RF | (mm) |
| □ | □ | = +1.5mm |
| □ | □ | = 0mm |
| □ | □ | = -1.5mm |

| TOE-IN | | |
|--------|----|------|
| RR | RF | (°) |
| □ | □ | = 3° |
| □ | □ | = 4° |
| □ | □ | = 2° |
| □ | □ | = 2° |
| □ | □ | = 3° |
| □ | □ | = 1° |
| □ | □ | = 4° |
| □ | □ | = 5° |
| □ | □ | = 3° |

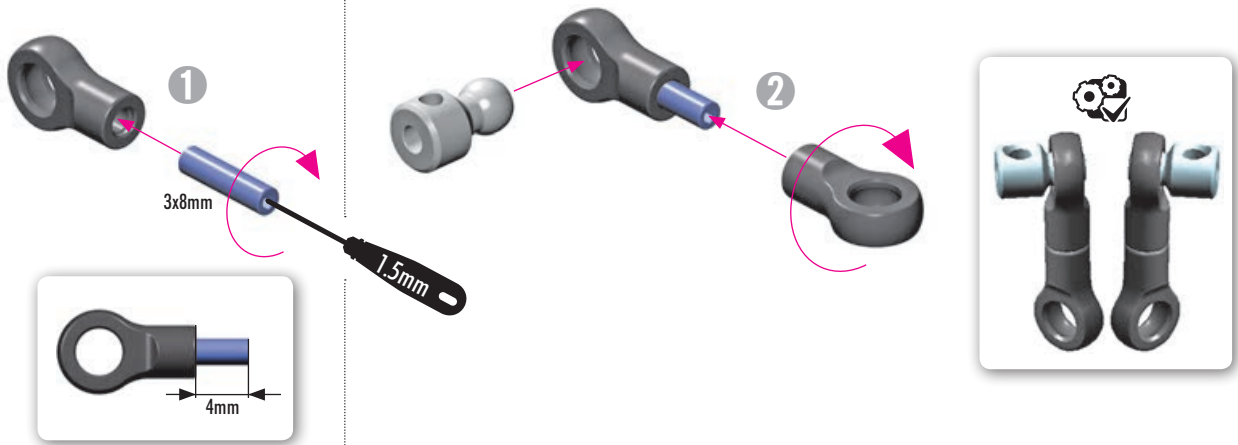
The tables describe the amounts of adjustment using the center and outside positions of the eccentric bushings. The middle position eccentric bushings allow for finer adjustment increments.



3. REAR SUSPENSION

2x 901308
SB M3x8

2x L=R



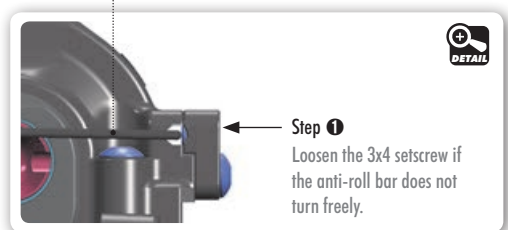
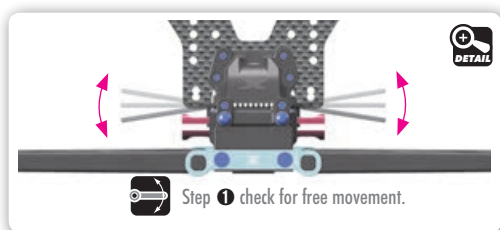
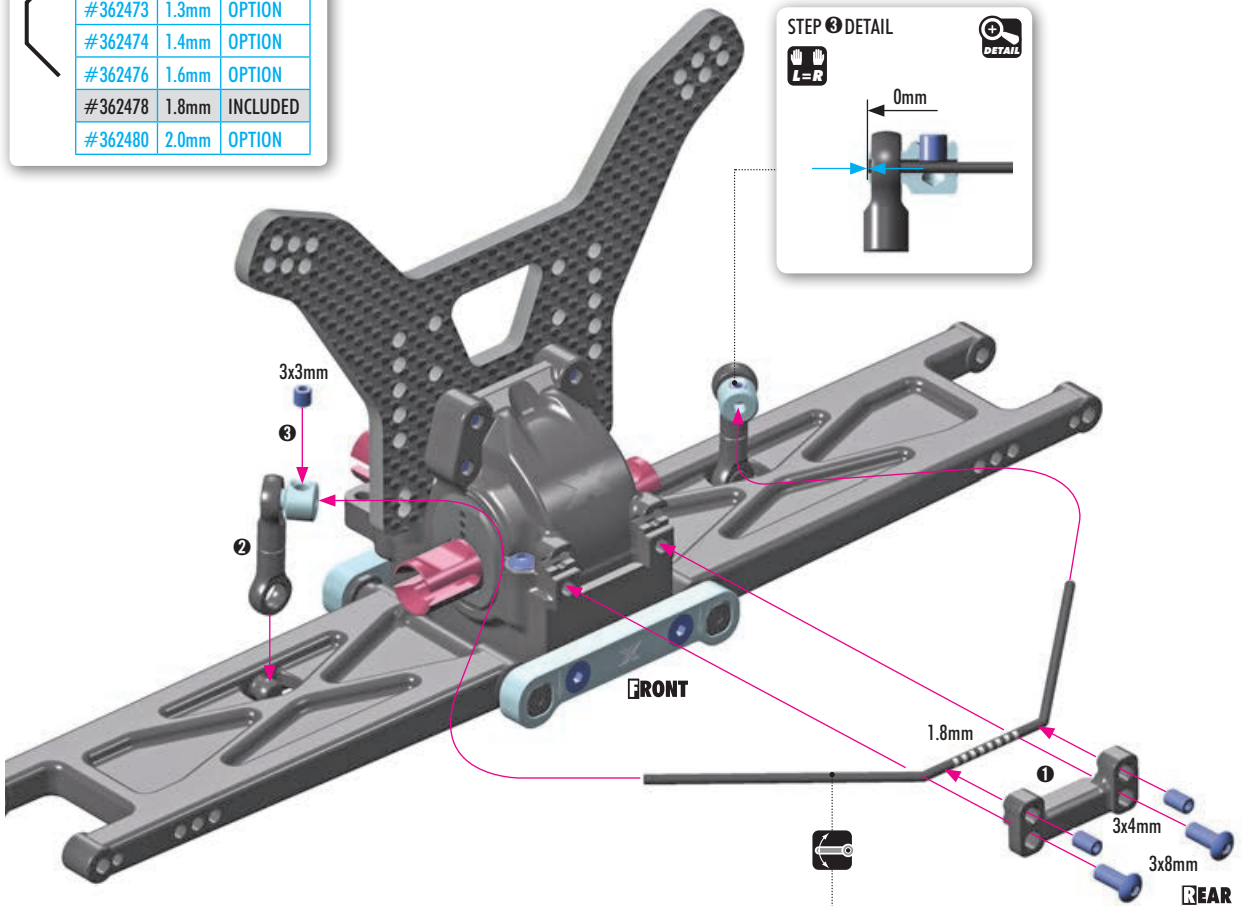
2x 901303
SB M3x3

2x 901304
SB M3x4



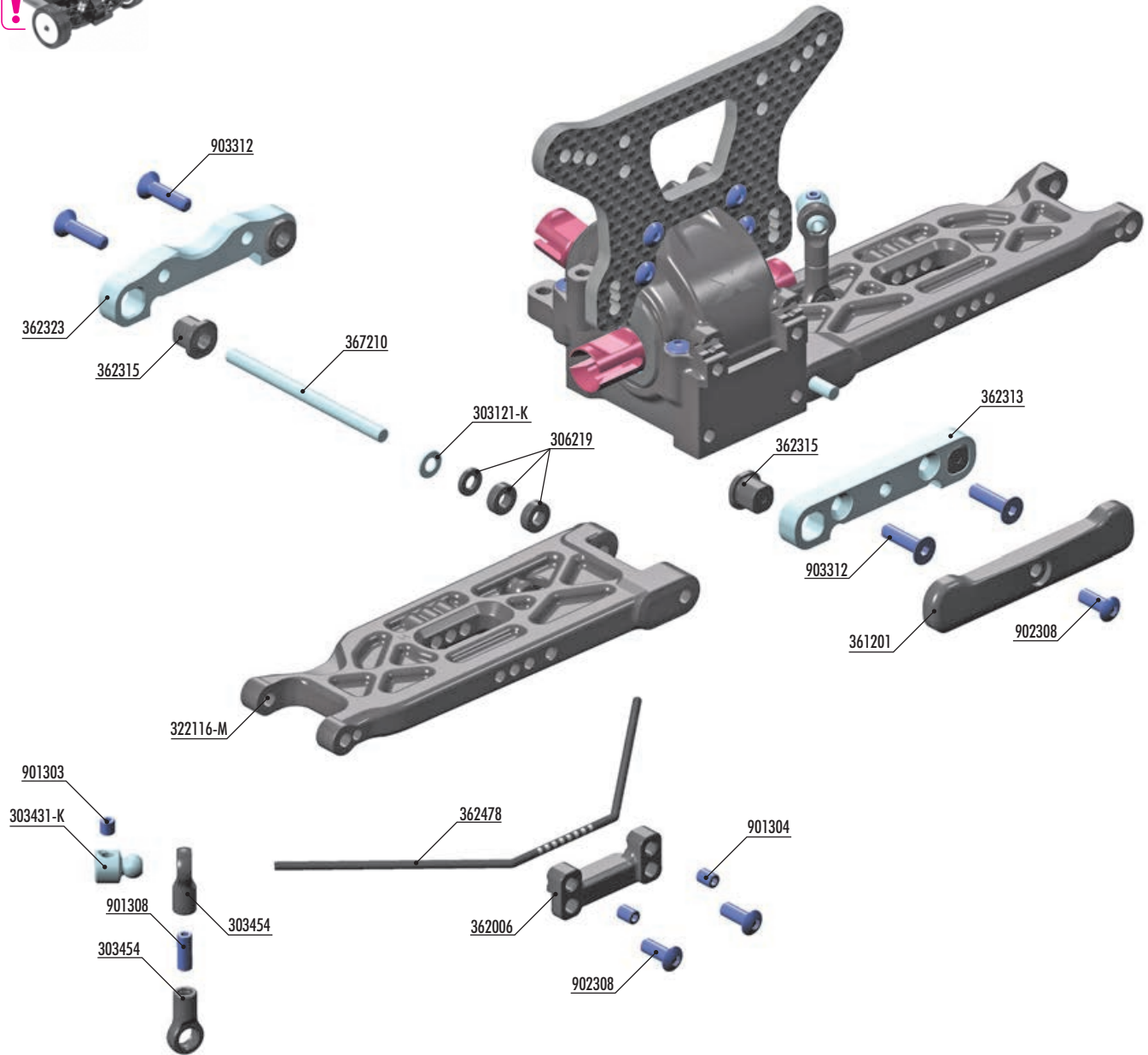
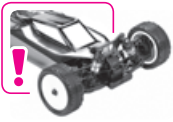
2x 902308
SH M3x8

| ANTI-ROLL BARS | | | |
|----------------|---------|-------|----------|
| OPTION | #362470 | 1.0mm | OPTION |
| | #362471 | 1.1mm | OPTION |
| | #362472 | 1.2mm | OPTION |
| | #362473 | 1.3mm | OPTION |
| | #362474 | 1.4mm | OPTION |
| | #362476 | 1.6mm | OPTION |
| | #362478 | 1.8mm | INCLUDED |
| | #362480 | 2.0mm | OPTION |



SET-UP BOOK
ANTI-ROLL BAR

3. FRONT SUSPENSION



| ANTI-ROLL BARS | | | |
|----------------|-------|----------|--|
| #362470 | 1.0mm | OPTION | |
| #362471 | 1.1mm | OPTION | |
| #362472 | 1.2mm | OPTION | |
| #362473 | 1.3mm | OPTION | |
| #362474 | 1.4mm | OPTION | |
| #362476 | 1.6mm | OPTION | |
| #362478 | 1.8mm | INCLUDED | |
| #362480 | 2.0mm | OPTION | |

| SOLID SUSPENSION ARMS | | | |
|-----------------------|----------|----------|--|
| #322116-M | MEDIUM | INCLUDED | |
| #322116-H | HARD | OPTION | |
| #322116-G | GRAPHITE | OPTION | |
| SUSPENSION ARMS | | | |
| #322112-M | MEDIUM | OPTION | |
| #322112-G | GRAPHITE | OPTION | |

BAG

03

- 303121-K ALU SHIM 3x6x0.5mm - BLACK (10)
- 303431-K ALU 4.9mm BALL END - BLACK (2)
- 303454 BALL JOINT 4.9mm - OPEN (4)
- 306219 COMPOSITE SET OF SERVO SHIMS (4)
- 322116-M XT4 COMPOSITE SUSPENSION ARM FRONT LOWER - SOLID - MEDIUM
- 361201 COMPOSITE FRONT BUMPER - ONE HOLE
- 362006 DIFF BULKHEAD - HORIZONTAL SPLIT DESIGN (HS) - FRONT/REAR - SET
- 362313 ALU LOWER SUSP. HOLDER FOR HS BULKHEAD - FRONT-FRONT
- 362315 ECCENTRIC BUSHING SET (2)

- 362323 ALU LOWER SUSP. HOLDER FOR HS BULKHEAD - FRONT-REAR
- 362478 ANTI-ROLL BAR 1.8mm
- 367210 SUSPENSION PIVOT PIN (2)
- 901303 HEX SCREW SB M3x3 (10)
- 901304 HEX SCREW SB M3x4 (10)
- 901308 HEX SCREW SB M3x8 (10)
- 902308 HEX SCREW SH M3x8 (10)
- 903312 HEX SCREW SFH M3x12 (10)

3. FRONT SUSPENSION

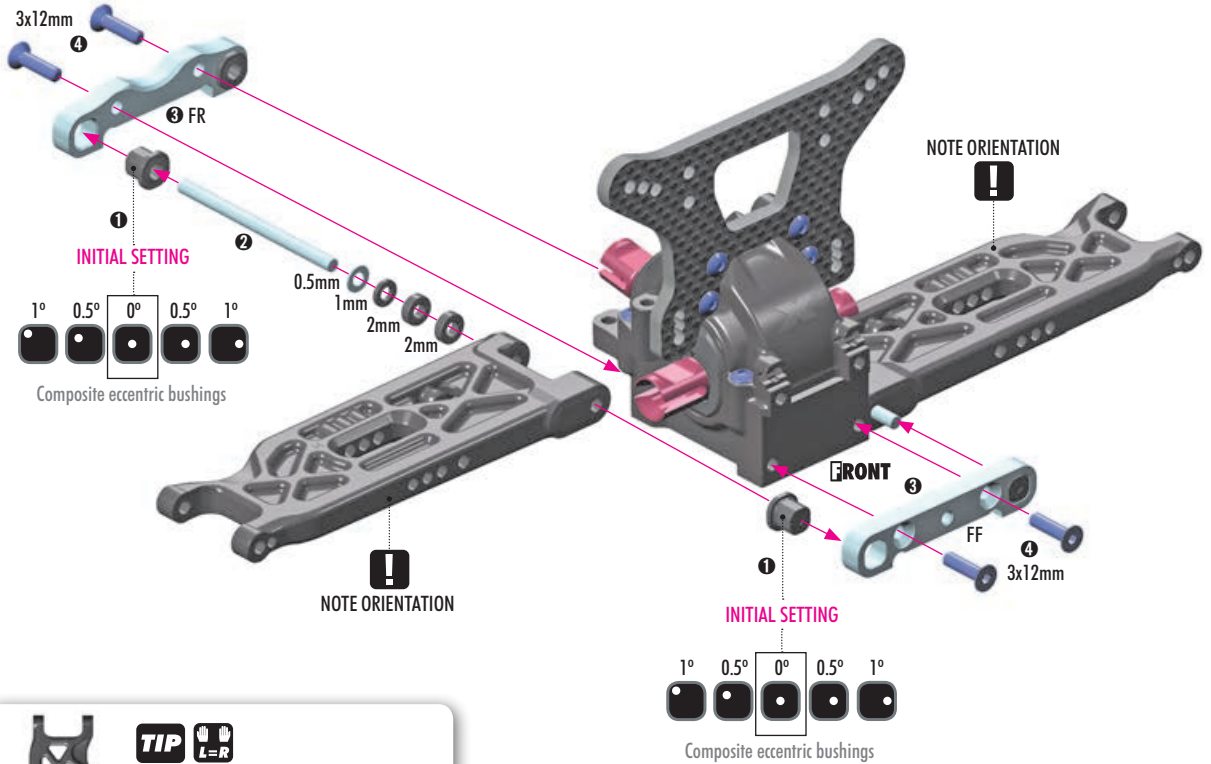
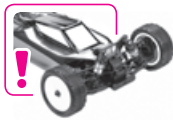
2x 303121-K SHIM 3x6x0.5

2x 306219 SHIM 3x6x1

4x 306219 SHIM 3x6x2



4x 903312 SFH M3x12



TIP **L=R**

If the suspension arm does not move freely use a HUDY Arm Reamer to size the holes of the arms.

Arm Reamer 3.0mm (HUDY #107633)

OPTION

| SOLID SUSPENSION ARMS | | |
|-----------------------|----------|----------|
| #322116-M | MEDIUM | INCLUDED |
| #322116-H | HARD | OPTION |
| #322116-G | GRAPHITE | OPTION |
| SUSPENSION ARMS | | |
| #322112-M | MEDIUM | OPTION |
| #322112-G | GRAPHITE | OPTION |

SET-UP BOOK
KICK UP
ROLL CENTER
TRACK-WIDTH

ECCENTRIC BUSHINGS HAVE TWO DIFFERENT OFFSETS FROM THE CENTER.



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

| KICK-UP | | |
|---------|----|-----|
| FF | FR | (°) |
| | | =7° |
| | | =6° |
| | | =8° |
| | | =6° |
| | | =5° |
| | | =7° |
| | | =8° |
| | | =7° |
| | | =9° |

| ROLL CENTER | | |
|-------------|----|-----------|
| FF | FR | (mm) |
| | | = +0.75mm |
| | | = 0mm |
| | | = -0.75mm |

| TRACK-WIDTH | | |
|-------------|----|----------|
| FF | FR | (mm) |
| | | = +1.5mm |
| | | = 0mm |
| | | = -1.5mm |

| TOTAL CASTER = C-HUB CASTER + KICK UP | | | | | |
|---------------------------------------|---------|-----|-----|-----|-----|
| C-HUB CASTER | KICK-UP | | | | |
| | 6° | 7° | 8° | 9° | 10° |
| 6° | 12° | 13° | 14° | 15° | 16° |
| 9° | 15° | 16° | 17° | 18° | 19° |

The tables describe the amounts of adjustment using the center and outside positions of the eccentric bushings. The middle position eccentric bushings allow for finer adjustment increments.

The track-width is directly influenced by the size of the wheels and tires used.

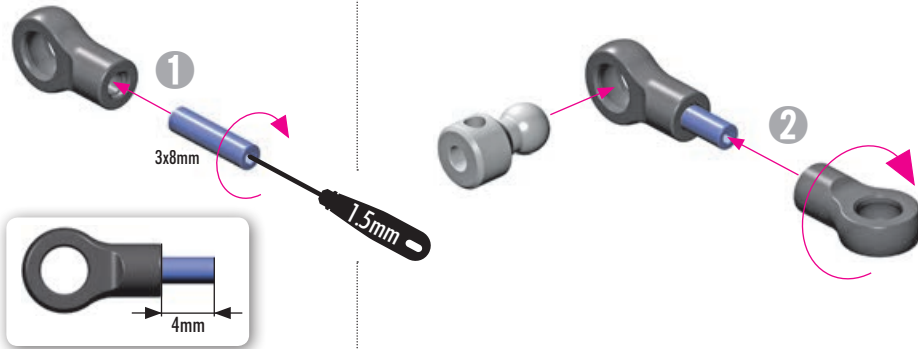
Caster is the angle between the steering pivot axis and the vertical plane. Caster is affected not only by the C-Hub caster, but also by the front kick-up angle relative to the flat chassis bottom. The table indicates how kick up angle effects total caster.

The stock caster blocks are 9°, but 6° blocks are available as an option.

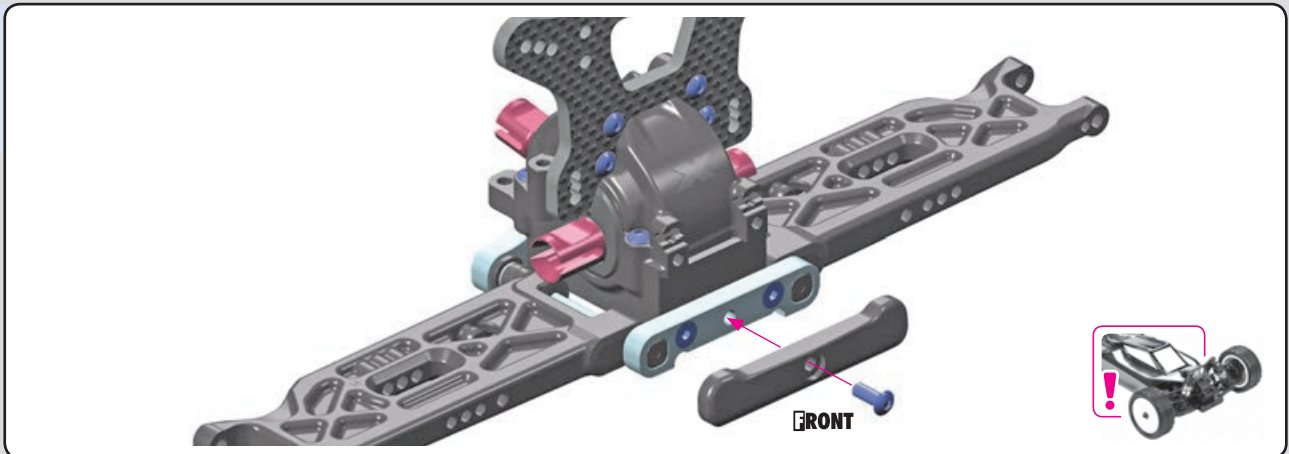
3. FRONT SUSPENSION

2x 901308
SB M3x8

2x L=R



1x 902308
SH M3x8



2x 901303
SB M3x3

2x 901304
SB M3x4

2x 902308
SH M3x8

STEP 3 DETAIL

L=R

0mm

ANTI-ROLL BARS

| OPTION | THICKNESS | STATUS |
|---------|-----------|----------|
| #362470 | 1.0mm | OPTION |
| #362471 | 1.1mm | OPTION |
| #362472 | 1.2mm | OPTION |
| #362473 | 1.3mm | OPTION |
| #362474 | 1.4mm | OPTION |
| #362476 | 1.6mm | OPTION |
| #362478 | 1.8mm | INCLUDED |
| #362480 | 2.0mm | OPTION |

DETAIL

Step 1 check for free movement.

DETAIL

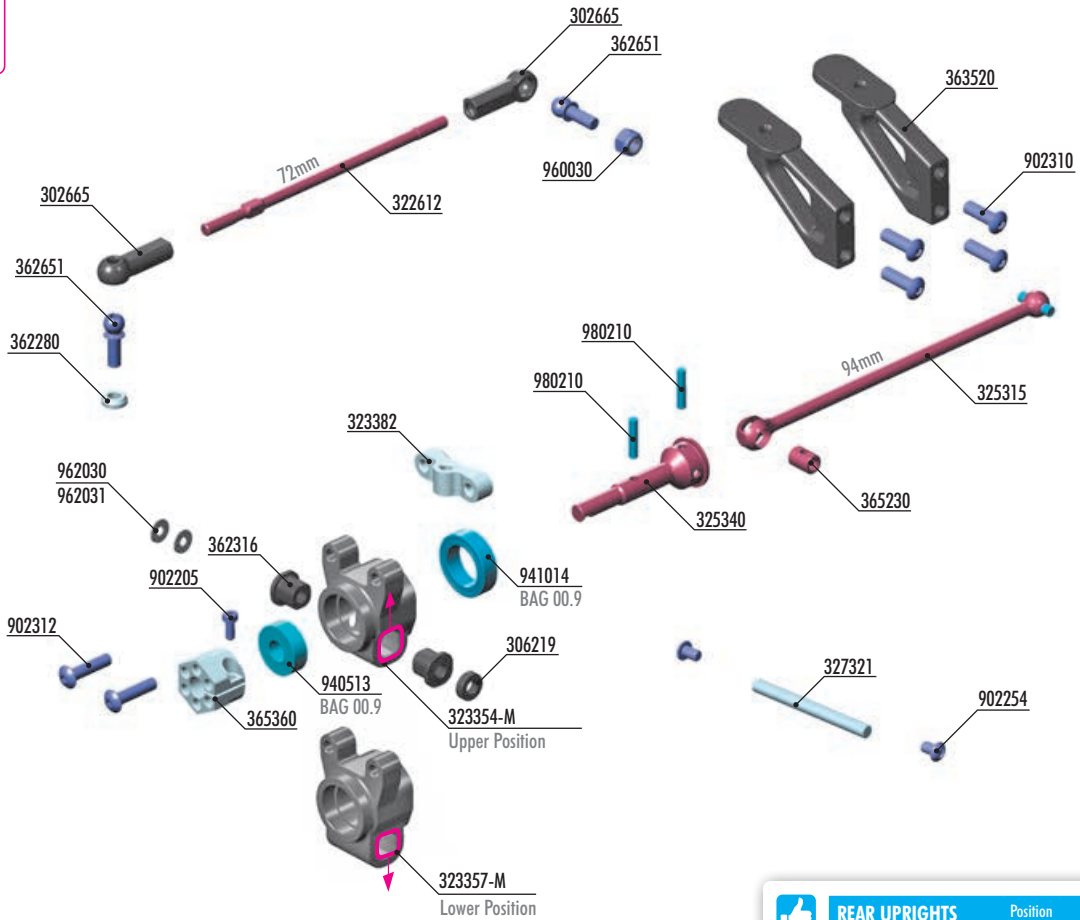
Step 1

Loosen the 3x4 setscrew if the anti-roll bar does not turn freely.

SET-UP BOOK

ANTI-ROLL BAR

4. REAR TRANSMISSION



HUDY TITAN BALL ENDS
 #990008 8mm Thread OPTION

OPTION
 #325341 REAR ADJ. DRIVE AXLE LB - HUDY SPRING STEEL™
 #325390 ALU SHIM 10x12x2MM (2)

XRAY BALL-BEARINGS

| | | | |
|---------|---------|--------|----------|
| #940512 | 5x12x4 | OIL | OPTION |
| #941015 | 10x15x4 | OIL | OPTION |
| #940513 | 5x12x4 | GREASE | INCLUDED |
| #941014 | 10x15x4 | GREASE | INCLUDED |

ALU CONICAL SHIMS

| | | |
|-----------|--------|----------|
| #362280 | SILVER | INCLUDED |
| #362280-K | BLACK | OPTION |
| #362280-O | ORANGE | OPTION |

ALU NUTS M3

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

REAR UPRIGHTS

| | | Position | |
|-----------|----------|----------|----------|
| #323354-M | MEDIUM | UPPER | INCLUDED |
| #323357-M | MEDIUM | LOWER | INCLUDED |
| #323354-H | HARD | UPPER | OPTION |
| #323354-G | GRAPHITE | UPPER | OPTION |
| #323357-G | GRAPHITE | LOWER | OPTION |
| #323355 | ALU HIGH | UPPER | OPTION |
| #323356 | ALU LOW | LOWER | OPTION |

WHEEL HUBS 12MM

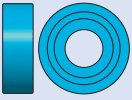
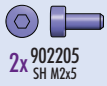
| | | |
|---------|-------------------|----------|
| #365360 | +4.5mm - 6 SLOTS | INCLUDED |
| #365359 | +3.75mm - 5 SLOTS | OPTION |
| #365358 | +3.0mm - 4 SLOTS | OPTION |
| #365357 | +2.25mm - 3 SLOTS | OPTION |
| #365356 | +1.5mm - 2 SLOTS | OPTION |
| #365355 | +0.75mm - 1 SLOT | OPTION |
| #365353 | 0mm - 0 SLOTS | OPTION |
| #365354 | -0.75mm - Lightw. | OPTION |
| #365361 | -1.25mm - Lightw. | OPTION |



- 302665 COMPOSITE BALL JOINT 4.9mm - CLOSED WITH HOLE (4)
- 306219 CCOMPOSITE SET OF SERVO SHIMS (4)
- 322612 ADJ. TURNBUCKLE 75mm M3 L/R - HUDY SPRING STEEL™ (2)
- 323354-M COMPOSITE UPRIGHT REAR - UPPER POSITION - MEDIUM
- 323357-M COMPOSITE UPRIGHT REAR - LOWER POSITION - MEDIUM
- 323382 ALU REAR HUB PLATE FOR MULTI ADJ. UPRIGHT - 1-HOLE
- 325315 XT4 REAR DRIVE SHAFT 94mm WITH 2.5mm PIN - HUDY SPRING STEEL™
- 325340 REAR DRIVE AXLE LB - HUDY SPRING STEEL™
- 327321 REAR ARM PIVOT PIN 3x34mm(2)
- 362280 ALU CONICAL SHIM 3x6x2.0mm (10)
- 362316 OPEN ECCENTRIC BUSHING SET (2)
- 362651 BALL END 4.9mm WITH THREAD 8mm (2)
- 363520 REAR WING POST - V2 (2)

- 365230 DRIVE SHAFT COUPLING - HUDY SPRING STEEL™
- 365360 ALU WHEEL HUB 12mm - OFFSET " +4.5mm" (2)
- 902205 HEX SCREW SH M2x5 (10)
- 902254 HEX SCREW SH M2.5x4 (10)
- 902310 HEX SCREW SH M3x10 (10)
- 902312 HEX SCREW SH M3x12 (10)
- 940513 BALL-BEARING 5x12x4 RUBBER SEALED - GREASE (2)
- 941014 BALL-BEARING 10x15x4 RUBBER SEALED - GREASE (2)
- 960030 NUT M3 (10)
- 962030 WASHER S 3x6x0.3 (10)
- 962031 WASHER S 3x6x0.1 (10)
- 980210 PIN 2x10 (10)

4. REAR TRANSMISSION

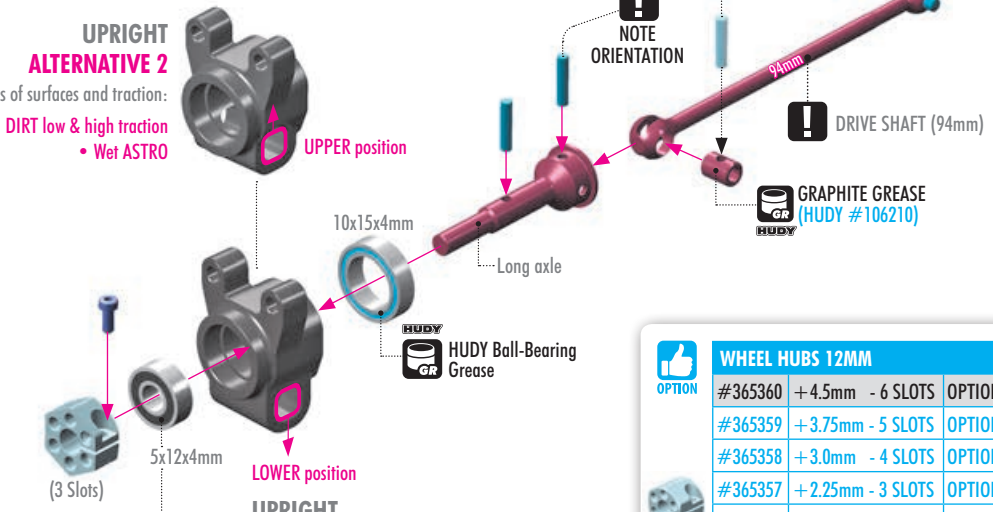


2x L=R

UPRIGHT ALTERNATIVE 2

We recommend for these types of surfaces and traction:

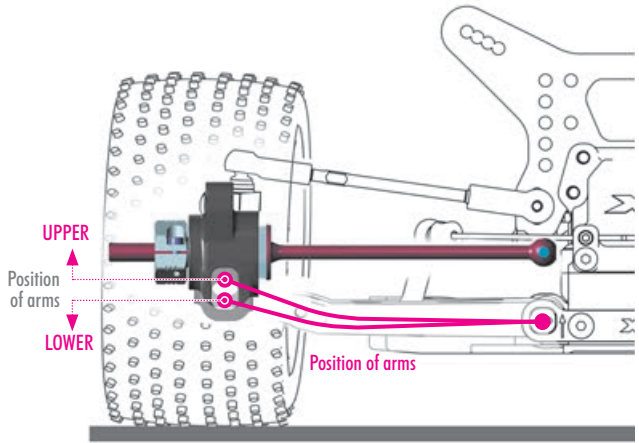
- DIRT low & high traction
- Wet ASTRO



UPRIGHT ALTERNATIVE 1

We recommend for these types of surfaces and traction:

- CARPET
- Dry ASTRO
- DIRT very high traction



#325341 REAR ADJ. DRIVE AXLE LB
#325390 ALU SHIM 10x12x2mm (2)

| WHEEL HUBS 12MM | | | |
|-----------------|---------|-------------------|--------|
| OPTION | #365360 | +4.5mm - 6 SLOTS | OPTION |
| | #365359 | +3.75mm - 5 SLOTS | OPTION |
| | #365358 | +3.0mm - 4 SLOTS | OPTION |
| | #365357 | +2.25mm - 3 SLOTS | OPTION |
| | #365356 | +1.5mm - 2 SLOTS | OPTION |
| | #365355 | +0.75mm - 1 SLOT | OPTION |
| | #365353 | 0mm - 0 SLOTS | OPTION |
| | #365354 | -0.75mm - Lightw. | OPTION |
| | #365361 | -1.25mm - Lightw. | OPTION |

OPTIONAL HEX HUB EFFECTS

Different offset hex hubs are used to increase or decrease the track-width.

LESS OFFSET

Rear - more traction
Front - more steering

MORE OFFSET

Rear - less traction
Front - less steering



XRAY BALL-BEARINGS

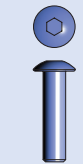
| | | | | |
|--------|---------|---------|--------|----------|
| OPTION | #940512 | 5x12x4 | OIL | OPTION |
| | #941015 | 10x15x4 | OIL | OPTION |
| | #940513 | 5x12x4 | GREASE | INCLUDED |
| | #941014 | 10x15x4 | GREASE | INCLUDED |



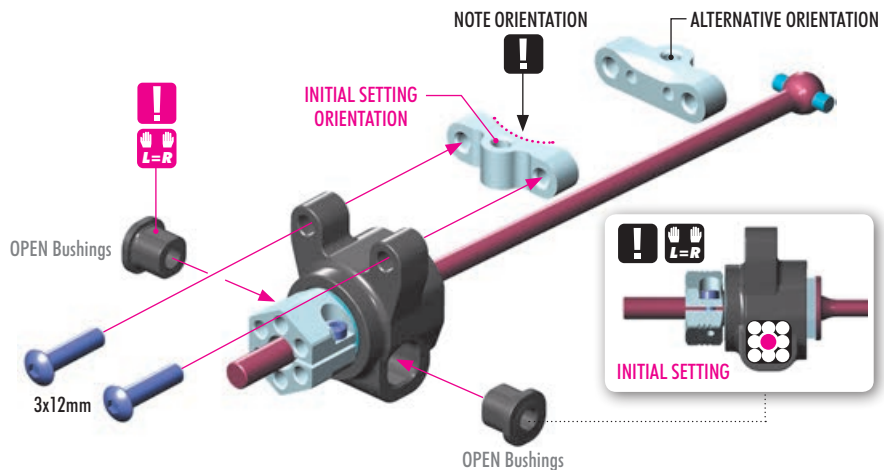
REAR UPRIGHTS

| | | | | |
|--------|-----------|----------|-------|----------|
| OPTION | #323354-M | MEDIUM | UPPER | INCLUDED |
| | #323357-M | MEDIUM | LOWER | INCLUDED |
| | #323354-H | HARD | UPPER | OPTION |
| | #323354-G | GRAPHITE | UPPER | OPTION |
| | #323357-G | GRAPHITE | LOWER | OPTION |
| | #323355 | ALU HIGH | UPPER | OPTION |
| | #323356 | ALU LOW | LOWER | OPTION |

2x L=R



4x 902312 SH M3x12



4. REAR TRANSMISSION

10

2x 306219 SHIM 3x6x2



4x 902254 SH M2.5x4



2x 962030 S 3x6x0.3



2x 962031 S 3x6x0.1

SET-UP BOOK

WHEELBASE

REAR

Use 0.1mm or 0.3mm shim to adjust the play.

0.1mm
0.3mm

2mm

TIGHTEN GENTLY

TIGHTEN GENTLY

Check for free movement

LONGER WHEELBASE (INITIAL SETTING)
Adjustment Shim IN FRONT OF HUB moves hub rearward.

ARM
REAR FRONT

SHORTER WHEELBASE
Adjustment Shim BEHIND HUB moves hub forward.

ARM
REAR FRONT

2x



NOTE ORIENTATION

8mm THREAD

72mm

LEFT THREAD

RIGHT THREAD

8mm THREAD

TIP

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



SET-UP BOOK

CAMBER

2x

NOTE ORIENTATION

8mm THREAD

72mm

LEFT THREAD

RIGHT THREAD

8mm THREAD

TIP

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

59.5mm

2x L-R



2x 362280 CON. SHIM 3x6x2



2x 960030 N M3

SET-UP BOOK

ROLL CENTER

2x

NOTE ORIENTATION

CONICAL SHIM 2mm

INITIAL SETTING

| OPTION | ALU CONICAL SHIMS | | |
|-----------|-------------------|----------|--|
| #362280 | SILVER | INCLUDED | |
| #362280-K | BLACK | OPTION | |
| #362280-O | ORANGE | OPTION | |



4x 902310 SH M3x10

2x

REAR

ALTERNATIVE 1 (INITIAL SETTING)

ALTERNATIVE 2
Additional holes for rear wing position.

4. FRONT TRANSMISSION



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



| WHEEL HUBS 12MM | | | |
|-----------------|-------------------|----------|--|
| #365360 | +4.5mm - 6 SLOTS | OPTION | |
| #365359 | +3.75mm - 5 SLOTS | OPTION | |
| #365358 | +3.0mm - 4 SLOTS | OPTION | |
| #365357 | +2.25mm - 3 SLOTS | OPTION | |
| #365356 | +1.5mm - 2 SLOTS | OPTION | |
| #365355 | +0.75mm - 1 SLOT | OPTION | |
| #365353 | 0mm - 0 SLOTS | INCLUDED | |
| #365354 | -0.75mm - Lightw. | OPTION | |
| #365361 | -1.25mm - Lightw. | OPTION | |



| XRAY BALL-BEARING | | | |
|-------------------|--------|--------|----------|
| #940510 | 5x10x4 | OIL | OPTION |
| #940512 | 5x12x4 | OIL | OPTION |
| #359050 | 5x10x4 | GREASE | INCLUDED |
| #940513 | 5x12x4 | GREASE | INCLUDED |



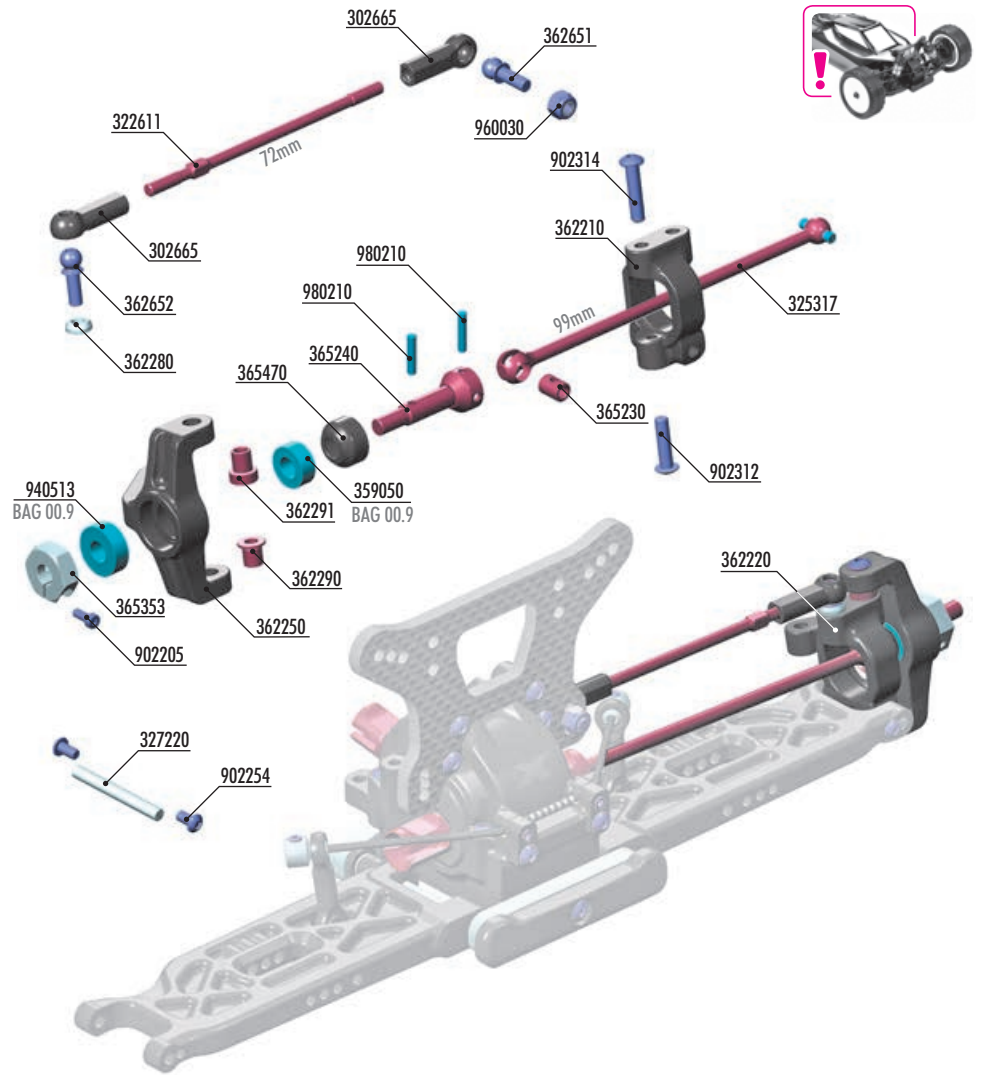
| DRIVE SHAFT COLLAR | | |
|--------------------|--------------|----------|
| #365470 | COMPOSITE | INCLUDED |
| #365471-K | ALU - BLACK | OPTION |
| #365471-O | ALU - ORANGE | OPTION |



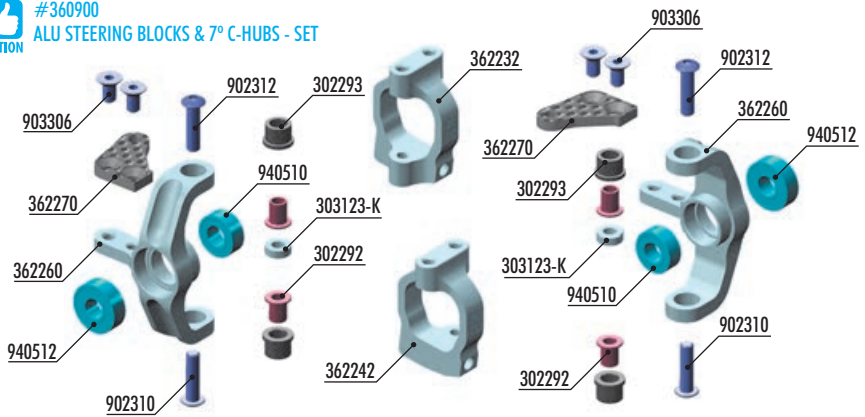
| STEERING BLOCK | | |
|----------------|----------|----------|
| #362250 | MEDIUM | INCLUDED |
| #362250-H | HARD | OPTION |
| #362250-G | GRAPHITE | OPTION |



| C-HUBS | | |
|-----------|---------------|----------|
| #362210 | RIGHT 9° - M | INCLUDED |
| #362210-H | RIGHT 9° - H | OPTION |
| #362210-G | RIGHT 9° - G | OPTION |
| #362211 | RIGHT 6° | OPTION |
| #362234 | ALU RIGHT 12° | OPTION |
| #362220 | LEFT 9° - M | INCLUDED |
| #362220-H | LEFT 9° - H | OPTION |
| #362220-G | LEFT 9° - G | OPTION |
| #362221 | LEFT 6° | OPTION |
| #362244 | ALU LEFT 12° | OPTION |



#360900 ALU STEERING BLOCKS & 7° C-HUBS - SET



BAG



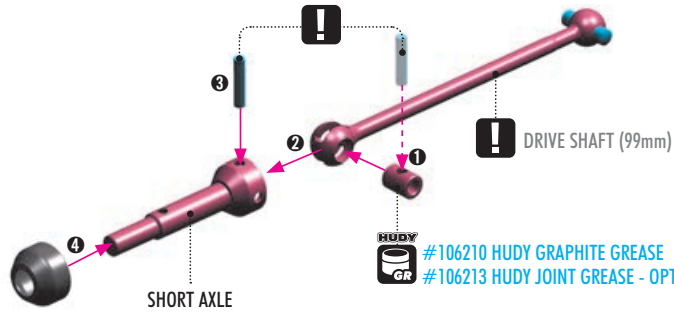
- 302665 COMPOSITE BALL JOINT 4.9mm - CLOSED WITH HOLE (4)
- 322611 ADJ. TURNBUCKLE 70mm M3 L/R - HUDY SPRING STEEL™ (2)
- 325317 XT4 FRONT DRIVE SHAFT 99mm WITH 2.5mm PIN - HUDY SPRING STEEL™
- 327220 FRONT ARM PIVOT PIN (2)
- 362210 COMPOSITE C-HUB 9° DEG. RIGHT - MEDIUM
- 362220 COMPOSITE C-HUB 9° DEG. LEFT - MEDIUM
- 362250 COMPOSITE STEERING BLOCK - MEDIUM
- 362280 ALU CONICAL SHIM 3x6x2.0mm (10)
- 362290 STEEL STEERING BUSHING - SHORT (2)
- 362291 STEEL STEERING BUSHING - LONG (2)
- 362651 BALL END 4.9mm WITH THREAD 8mm (2)
- 362652 BALL END 4.9mm WITH THREAD 10mm (2)
- 365230 DRIVE SHAFT COUPLING - HUDY SPRING STEEL™
- 365240 FRONT DRIVE AXLE - HUDY SPRING STEEL™
- 365353 ALU WHEEL HUB 12mm (2)

- 365470 COMPOSITE DRIVE SHAFT SAFETY COLLAR (3)
- 359050 BALL-BEARING 5x10x4 STEEL SEALED - GREASE (2)
- 902205 HEX SCREW SH M2x5 (10)
- 902254 HEX SCREW SH M2.5x4 (10)
- 902312 HEX SCREW SH M3x12 (10)
- 902314 HEX SCREW SH M3x14 (10)
- 940513 BALL-BEARING 5x12x4 RUBBER SEALED - GREASE (2)
- 960030 NUT M3 (10)
- 980210 PIN 2x10 (10)

4. FRONT TRANSMISSION

- 2x 980210 P 2x10

2x L=R

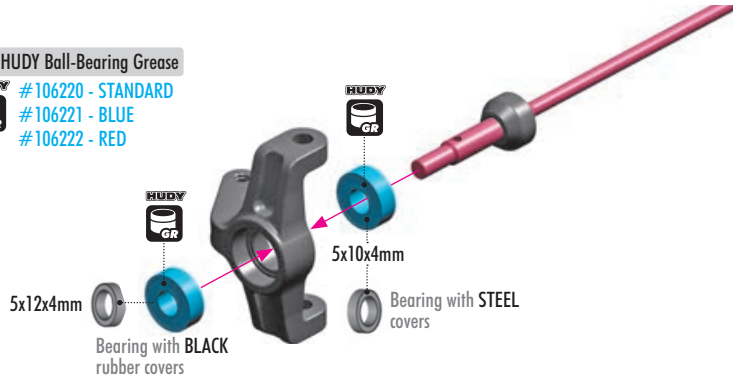


- 2x 359050 BB 5x10x4

- 2x 940513 BB 5x12x4

Use HUDY Ball-Bearing Grease

- #106220 - STANDARD
- #106221 - BLUE
- #106222 - RED

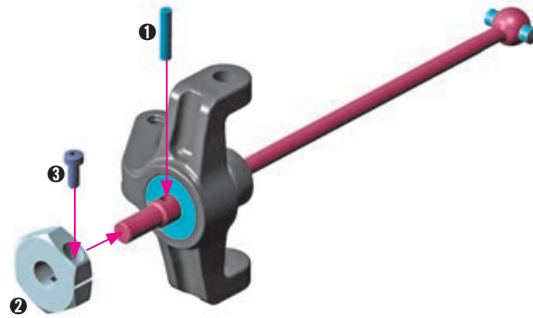


| OPTION | STEERING BLOCK | | |
|--------|----------------|----------|----------|
| | #362250 | MEDIUM | INCLUDED |
| | #362250-H | HARD | OPTION |
| | #362250-G | GRAPHITE | OPTION |

| OPTION | XRAY BALL-BEARINGS | | |
|--------|--------------------|--------|-----------------|
| | #940510 | 5x10x4 | OIL OPTION |
| | #940512 | 5x12x4 | OIL OPTION |
| | #359050 | 5x10x4 | GREASE INCLUDED |
| | #940513 | 5x12x4 | GREASE INCLUDED |

- 2x 902205 SH M2x5

- 2x 980210 P 2x10



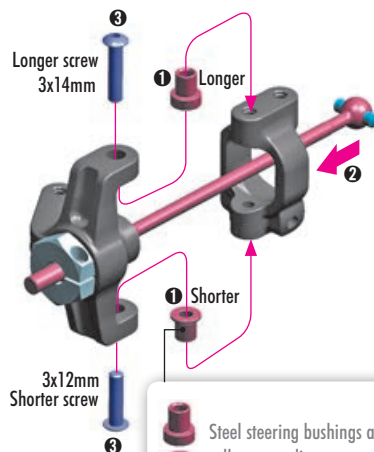
| OPTION | WHEEL HUBS 12MM | | |
|--------|-----------------|-------------------|----------|
| | #365360 | +4.5mm - 6 SLOTS | OPTION |
| | #365359 | +3.75mm - 5 SLOTS | OPTION |
| | #365358 | +3.0mm - 4 SLOTS | OPTION |
| | #365357 | +2.25mm - 3 SLOTS | OPTION |
| | #365356 | +1.5mm - 2 SLOTS | OPTION |
| | #365355 | +0.75mm - 1 SLOT | OPTION |
| | #365353 | 0mm - 0 SLOTS | INCLUDED |
| | #365354 | -0.75mm - Lightw. | OPTION |
| | #365361 | -1.25mm - Lightw. | OPTION |

- 2x 902312 SH M3x12

- 2x 902314 SH M3x14

2x L=R

Be sure to use the shorter screw with shorter bushing and longer screw with longer bushing.



INITIAL POSITION

LOWER ROLL CENTER

TOP = LONGER bushing & 3x14 screw
BOTTOM = SHORTER bushing & 3x12 screw

Recommended for rough tracks to improve stability.

HIGHER ROLL CENTER

TOP = SHORTER bushing & 3x12 screw
BOTTOM = LONGER bushing & 3x14 screw

Recommended for smooth tracks to gain more steering.

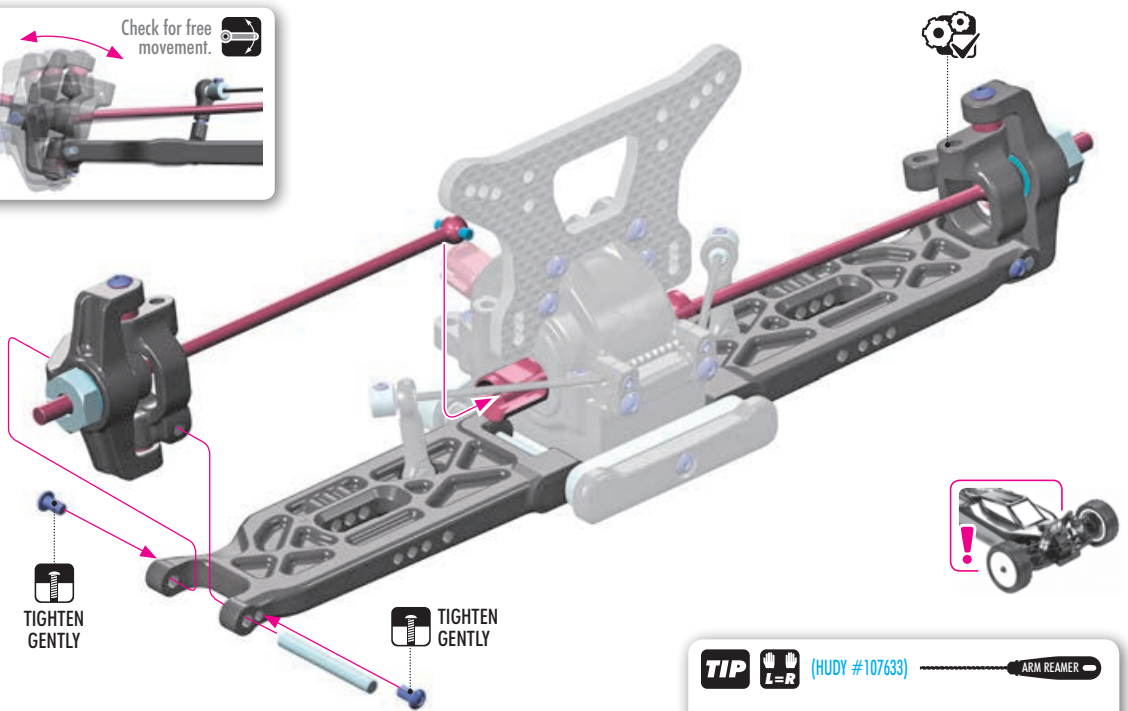
When inserting the bushings, make sure that bushings are inserted equally on both right and left hub to give the same roll center position.

SET-UP BOOK
CASTER
ROLL CENTER

4. FRONT TRANSMISSION

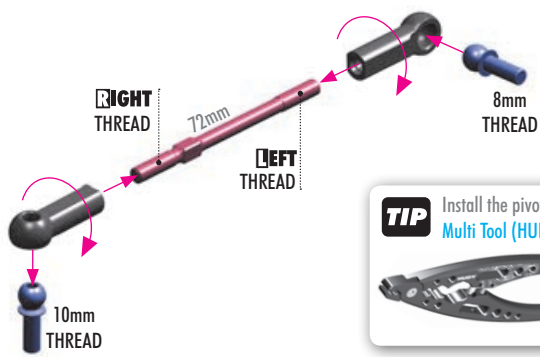
4x 902254
SH M2.5x4

2x
L=R



TIP (HUDY #107633) ARM REAMER
If the C-hub does not move freely, use a HUDY Arm Reamer to resize the hole.

2x
L=R



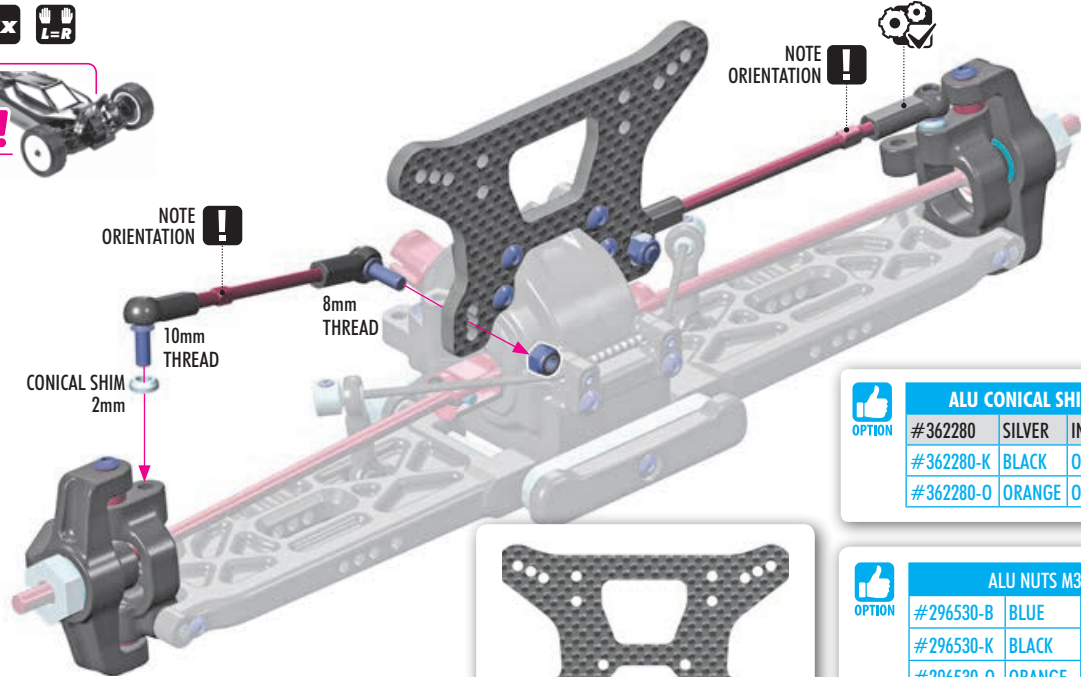
TIP Install the pivot balls with Professional Multi Tool (HUDY #183011).

SET-UP BOOK
CAMBER

2x 362280
CON. SHIM 3x6x2

2x 960030
N M3

2x
L=R



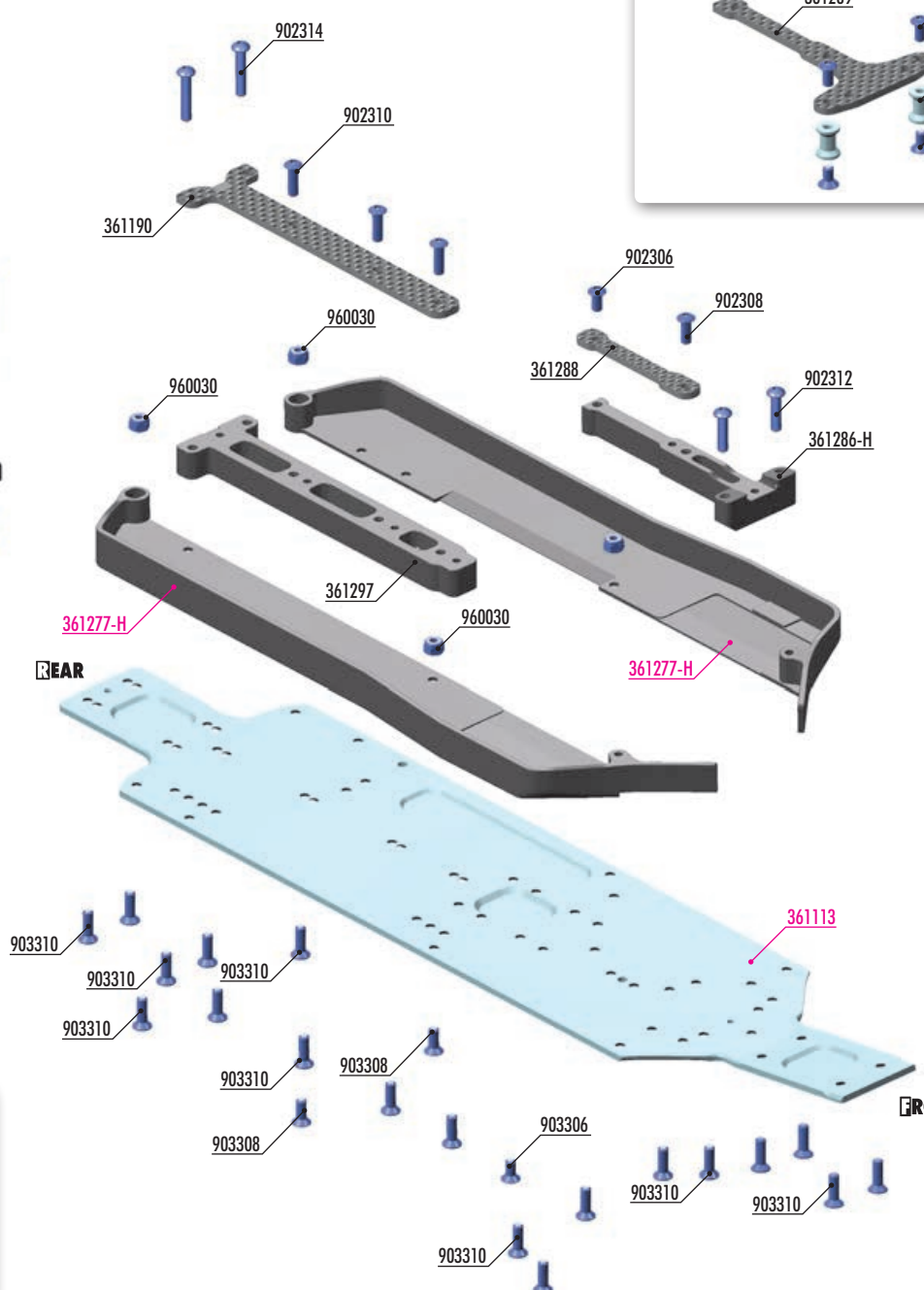
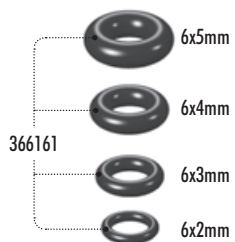
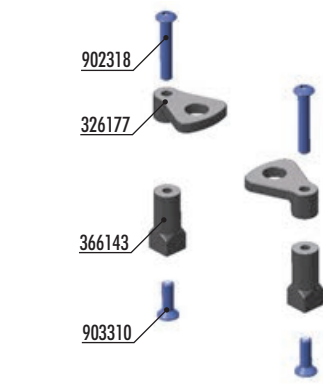
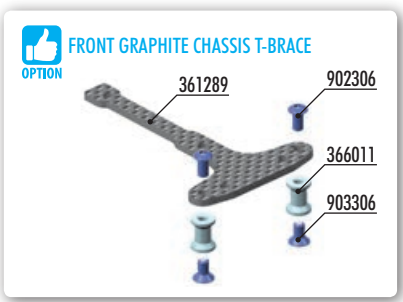
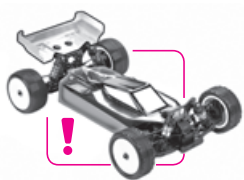
| ALU CONICAL SHIMS | | | |
|-------------------|-----------|--------|----------|
| | #362280 | SILVER | INCLUDED |
| | #362280-K | BLACK | OPTION |
| | #362280-O | ORANGE | OPTION |



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

SET-UP BOOK
ROLL CENTER

4. FRONT & REAR ASSEMBLY

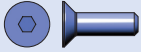


| | | | |
|----------|---|----------|---|
| 326177 | COMPOSITE BATTERY CLAMP (2) | 902314 | HEX SCREW SH M3x14 (10) |
| 361190 | GRAPHITE CHASSIS BRACE UPPER DECK 2.2mm | 902318 | HEX SCREW SH M3x18 (10) |
| 361286-H | COMPOSITE CHASSIS BRACE FRONT - HARD | 903306 | HEX SCREW SFH M3x6 (10) |
| 361288 | GRAPHITE CHASSIS WIRE COVER 2.2mm | 903308 | HEX SCREW SFH M3x8 (10) |
| 361297 | COMPOSITE CHASSIS BRACE REAR - HARD | 903310 | HEX SCREW SFH M3x10 (10) |
| 366143 | COMPOSITE BATTERY HOLDER STAND (2) | 960030 | NUT M3 (10) |
| 366161 | SET OF O-RINGS (6x2, 6x3, 6x4, 6x5mm) | 361113 | ALU CHASSIS ADJUSTABLE TRANSMISSION POSITION - 2.0mm |
| 902306 | HEX SCREW SH M3x6 (10) | 361277-H | COMPOSITE CHASSIS SIDE GUARDS L + R - NARROW FRONT - V2 |
| 902308 | HEX SCREW SH M3x8 (10) | | |
| 902310 | HEX SCREW SH M3x10 (10) | | |
| 902312 | HEX SCREW SH M3x12 (10) | | |

4. FRONT & REAR ASSEMBLY



2x 903308
SFH M3x8



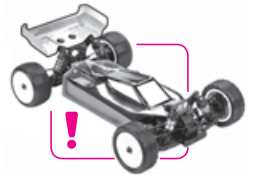
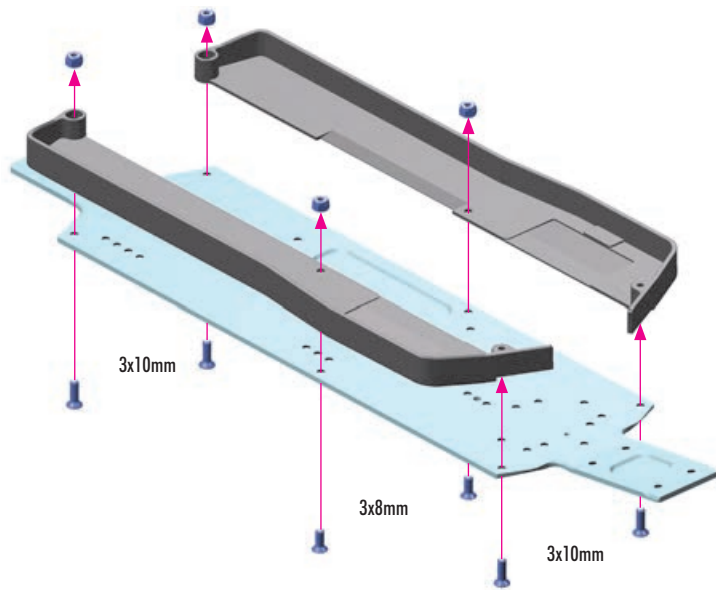
4x 903310
SFH M3x10



4x 960030
N M3

SET-UP BOOK

CHASSIS FLEX



NOTE
ORIENTATION



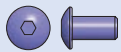
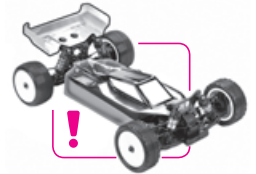
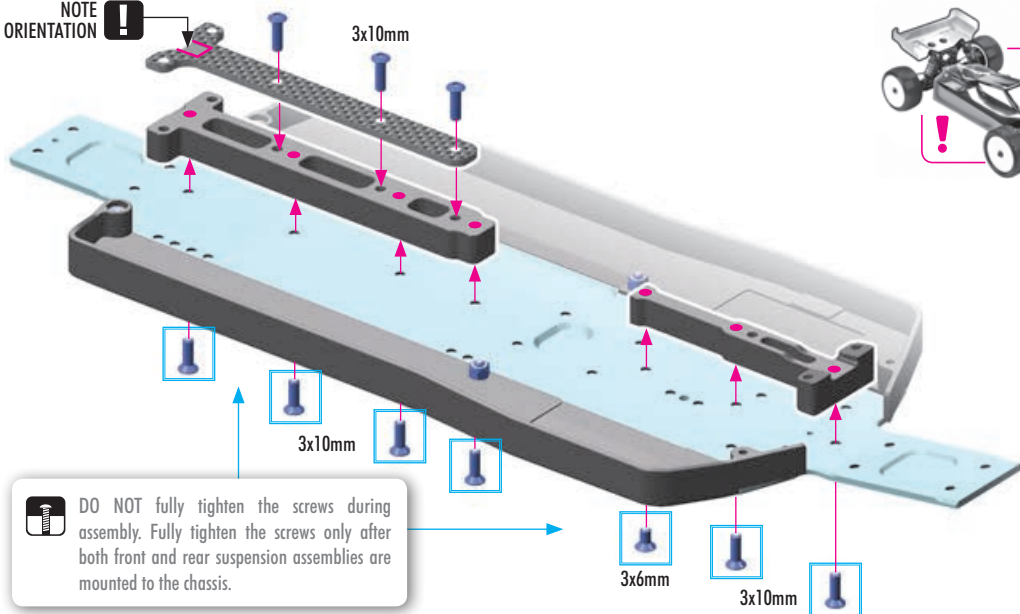
3x 902310
SH M3x10



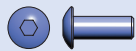
1x 903306
SFH M3x6



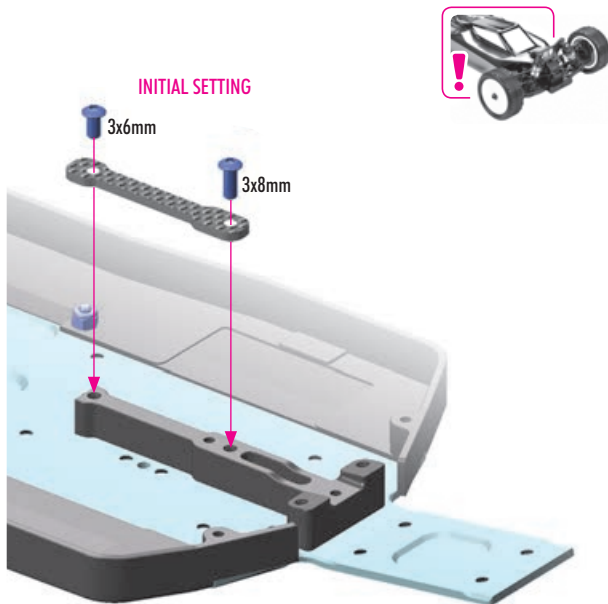
6x 903310
SFH M3x10



1x 902306
SH M3x6

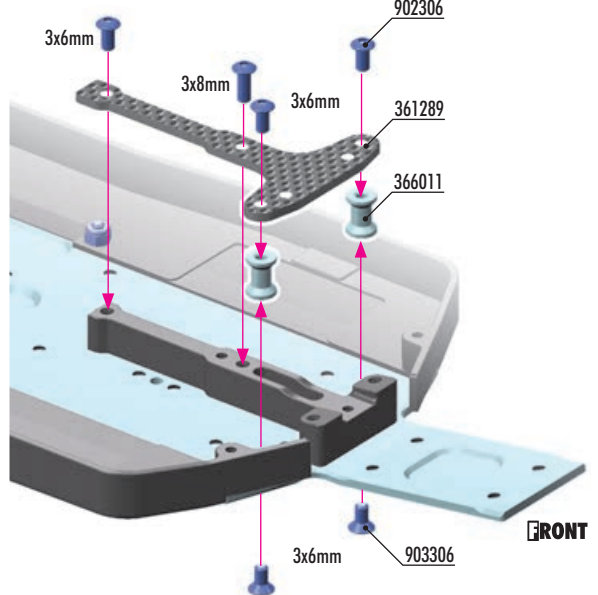


1x 902308
SH M3x8



FRONT GRAPHITE CHASSIS T-BRACE

OPTION



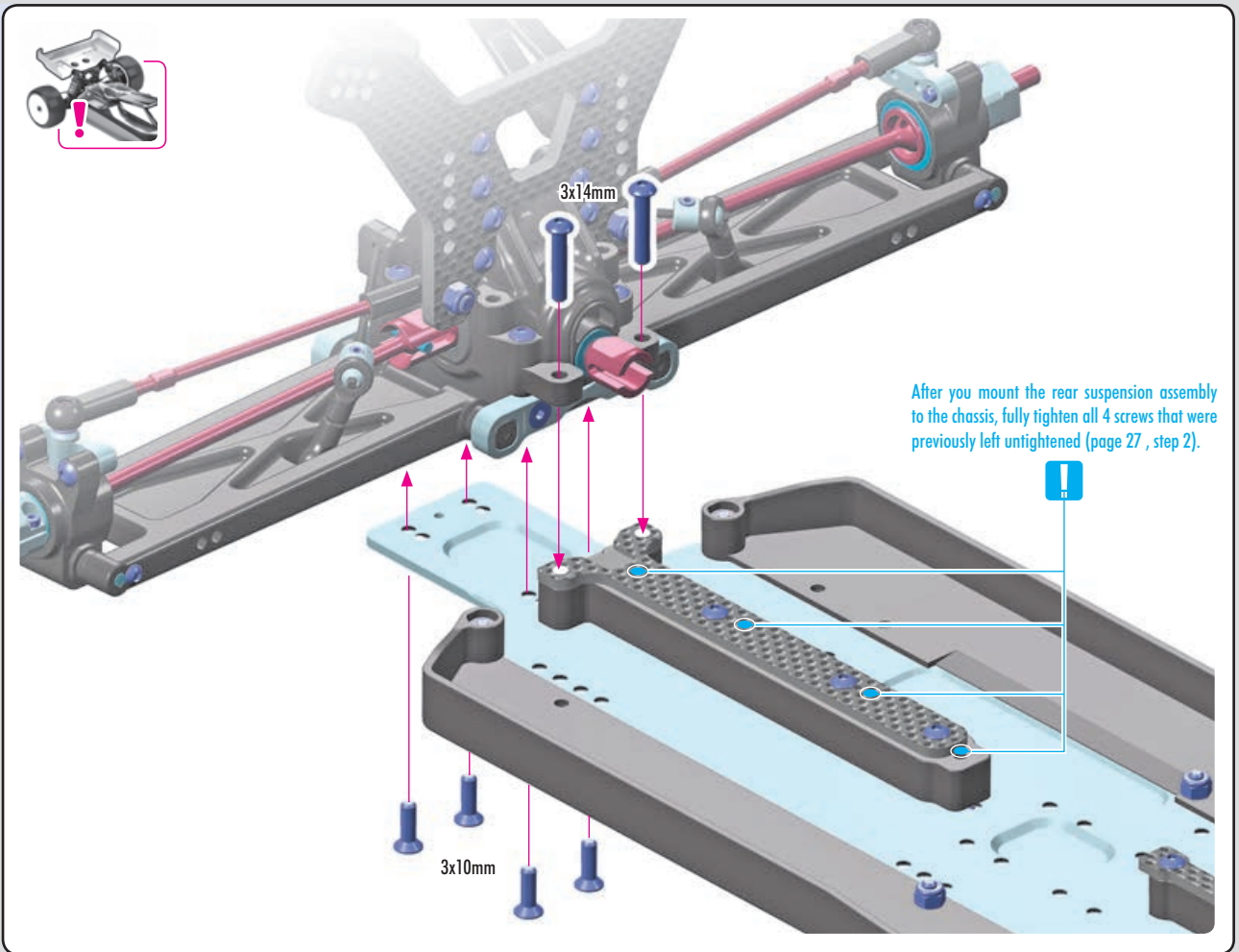
4. FRONT & REAR ASSEMBLY



2x 902314
SH M3x14



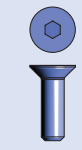
2x 903310
SFH M3x10



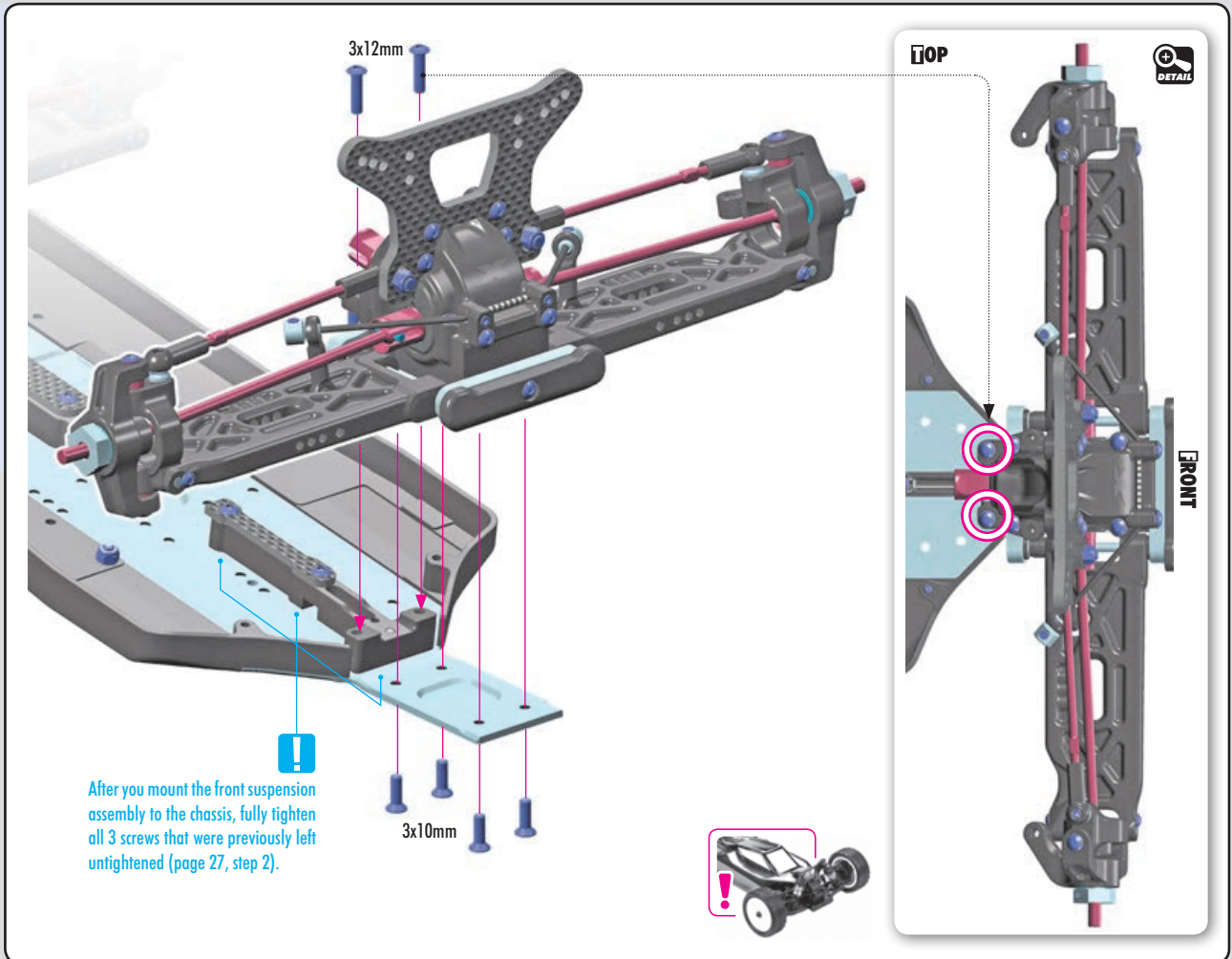
After you mount the rear suspension assembly to the chassis, fully tighten all 4 screws that were previously left untightened (page 27, step 2).



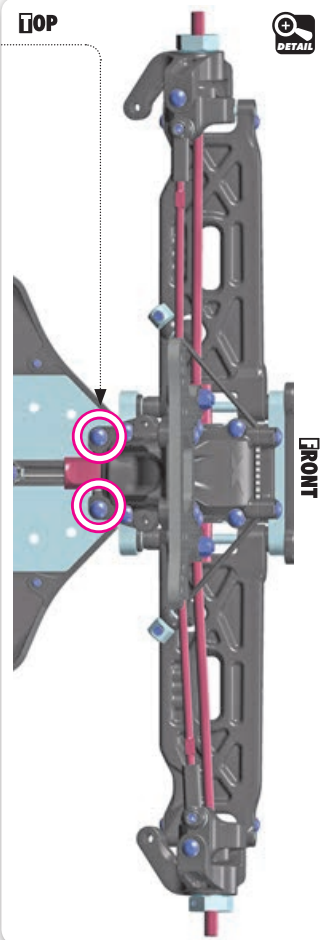
2x 902312
SH M3x12



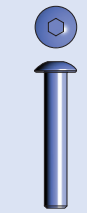
4x 903310
SFH M3x10



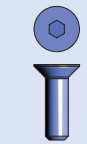
After you mount the front suspension assembly to the chassis, fully tighten all 3 screws that were previously left untightened (page 27, step 2).



4. FRONT & REAR ASSEMBLY



2x 902318
SH M3x18



2x 903310
SFH M3x10

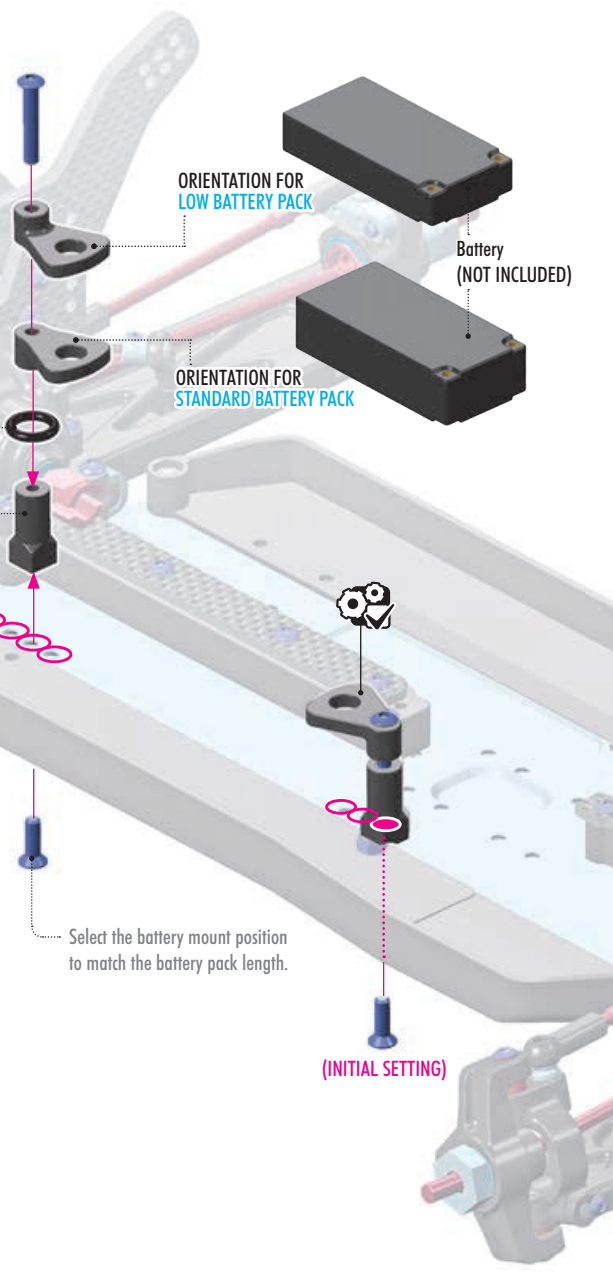
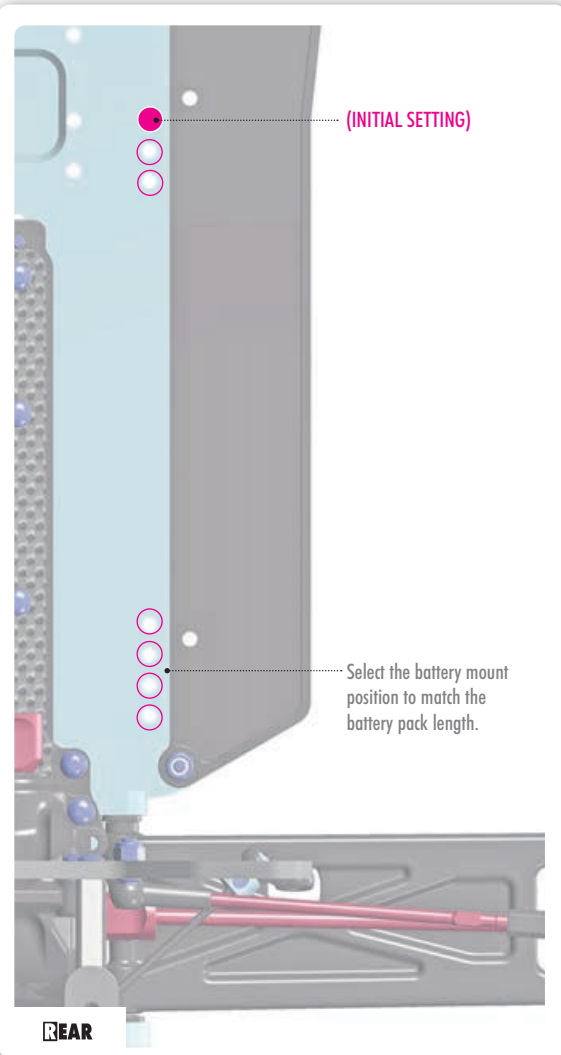
! #366161

Choose the diameter of O-ring to best eliminate play between the battery and post without being too tight.

- 6x5mm
- 6x4mm
- 6x3mm
- 6x2mm



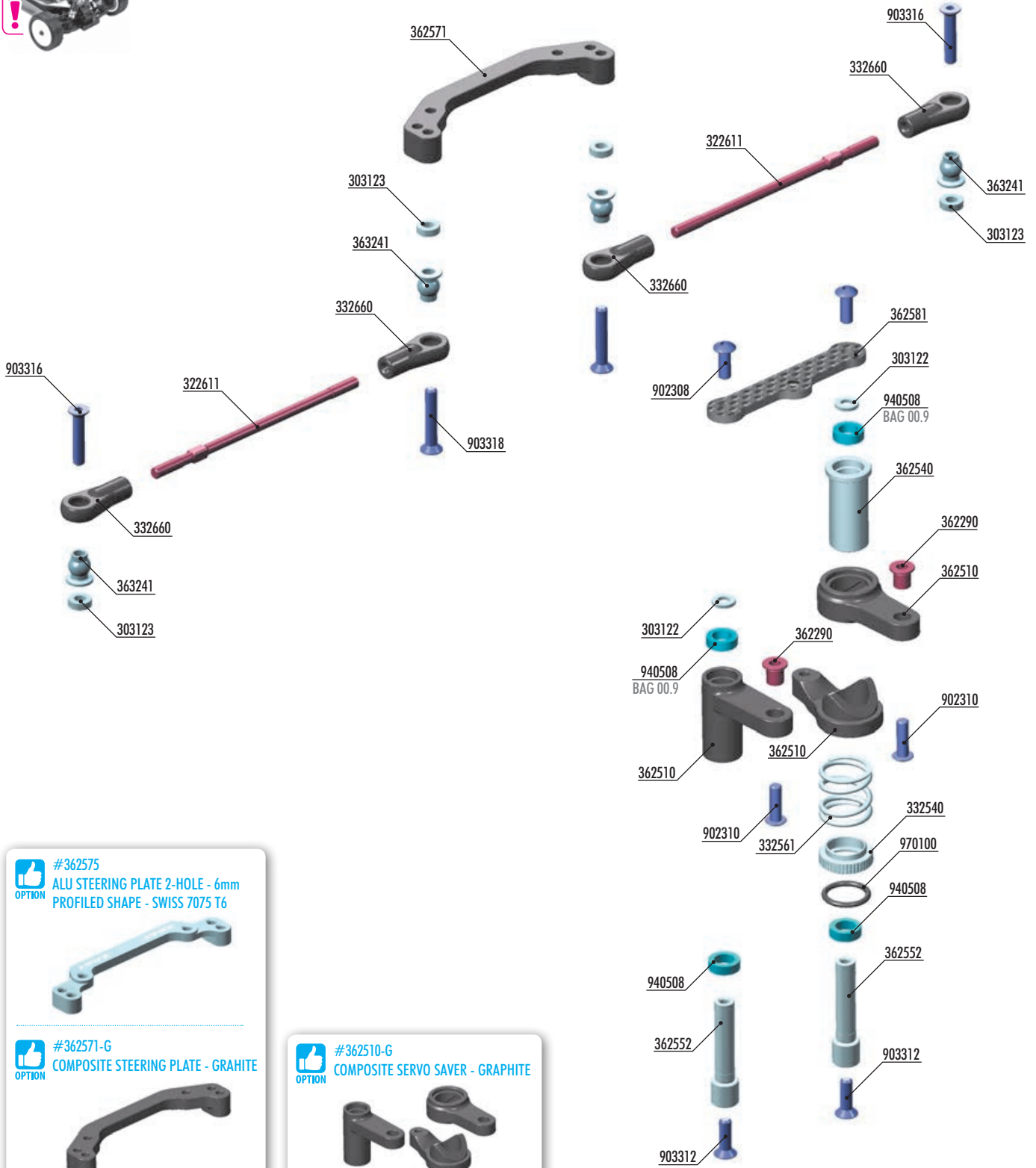
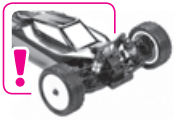
TIP Hold the battery holder with **Professional Multi Tool (HUDY #183011)**.



#326181
OPTION **STAINLESS STEEL BATTERY WEIGHT 35G**



5. STEERING



#362575
 ALU STEERING PLATE 2-HOLE - 6mm
 PROFILED SHAPE - SWISS 7075 T6

#362571-G
 COMPOSITE STEERING PLATE - GRAHITE

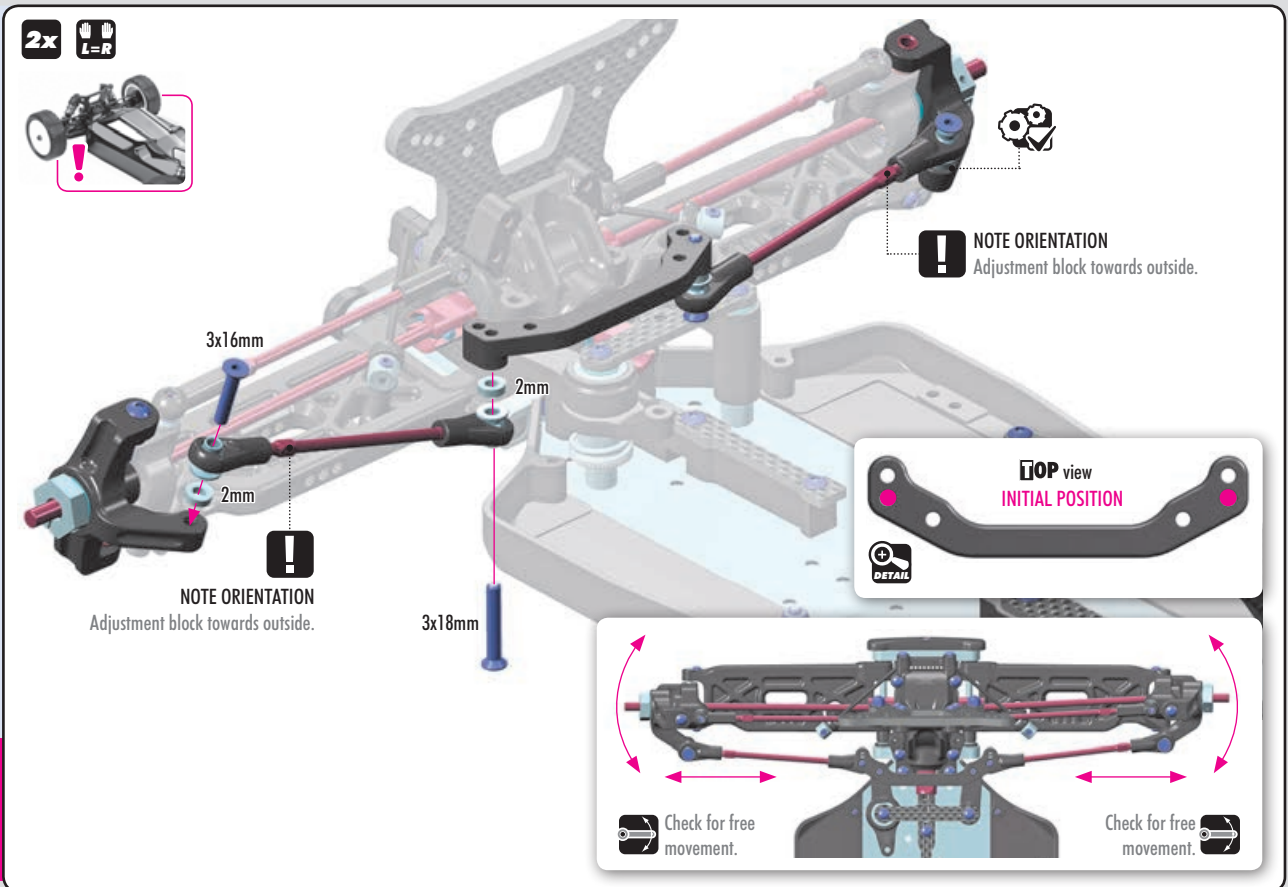
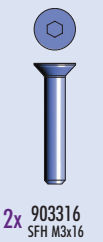
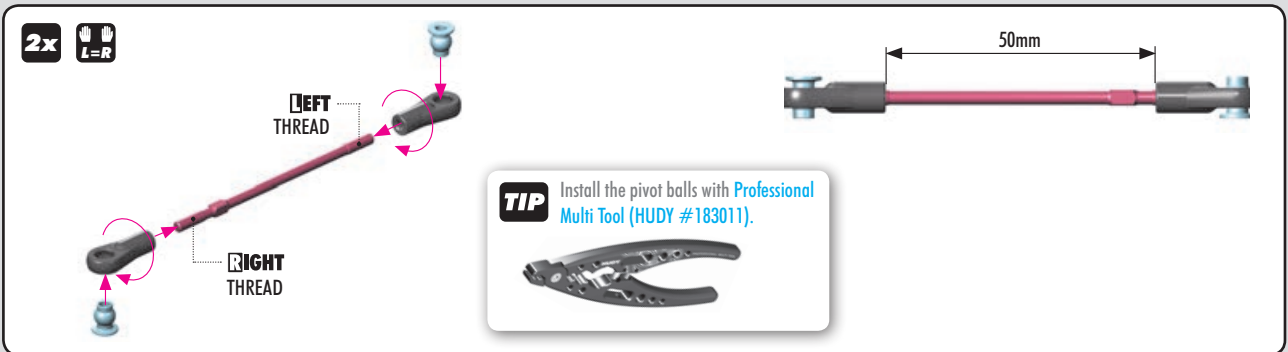
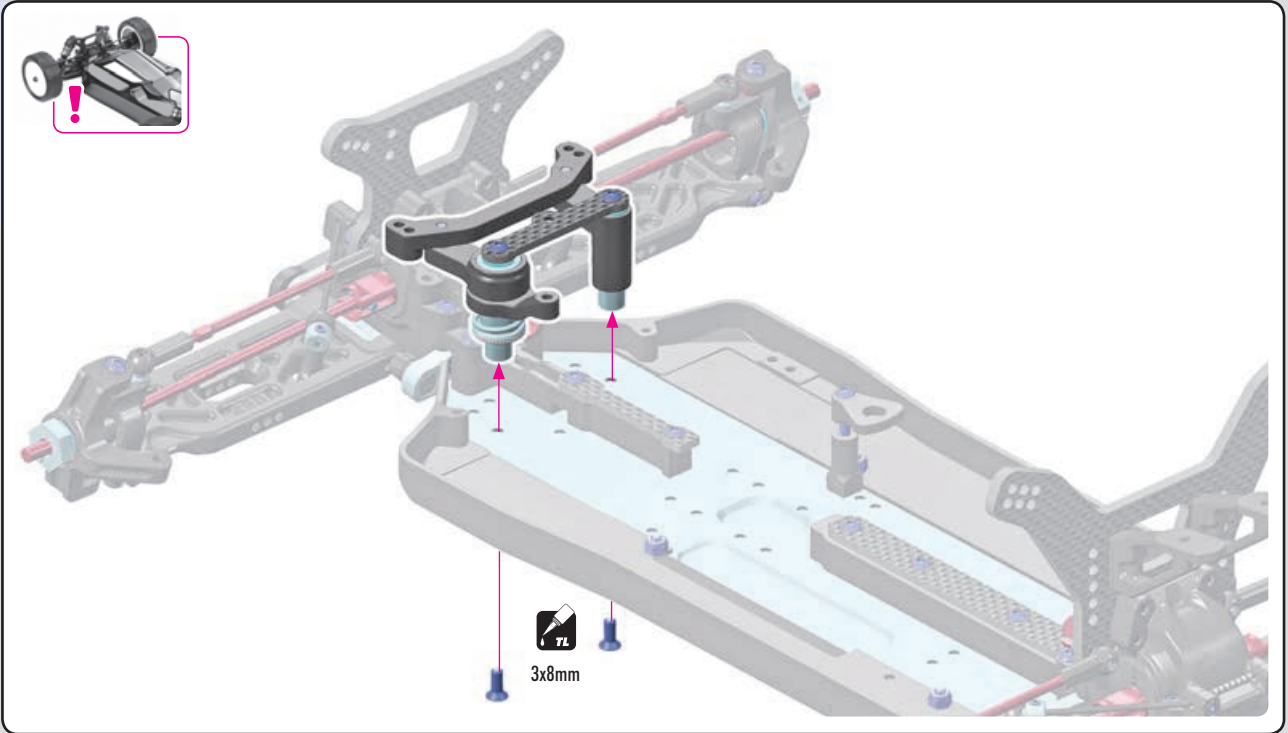
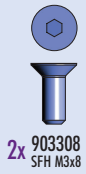
#362510-G
 COMPOSITE SERVO SAVER - GRAPHITE

BAG
05

| | |
|--------|--|
| 303122 | ALU SHIM 3x6x1.0mm (10) |
| 303123 | ALU SHIM 3x6x2.0mm (10) |
| 322611 | ADJ. TURNBUCKLE 70mm M3 L/R - HUDY SPRING STEEL™ (2) |
| 332540 | ALU SERVO SAVER ADJUSTABLE NUT |
| 332561 | SERVO SAVER SPRING C=14 |
| 332660 | COMPOSITE STEERING & SERVO BALL JOINT 5.8mm (4+2) |
| 362290 | STEEL STEERING BUSHING - SHORT (2) |
| 362510 | COMPOSITE SERVO SAVER |
| 362540 | ALU SERVO SAVER MAIN SHAFT |
| 362552 | SERVO SAVER PIVOT SHAFT +5mm (2) |
| 362571 | COMPOSITE STEERING PLATE |

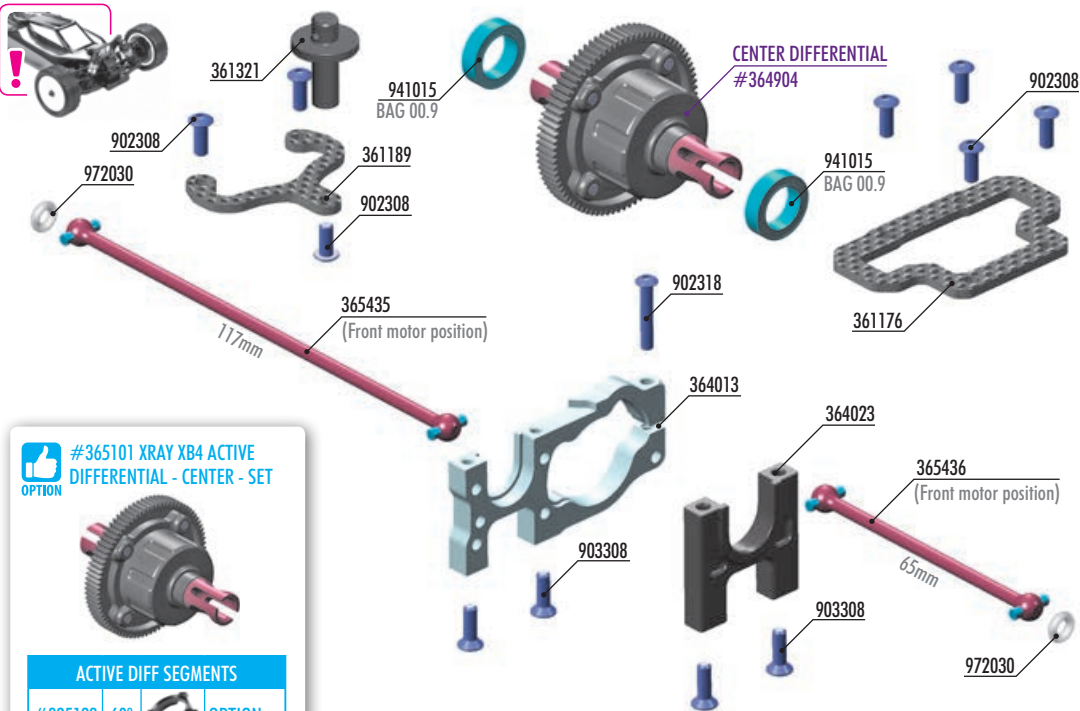
| | |
|--------|--|
| 362581 | STEERING BRACE 2.0mm GRAPHITE |
| 363241 | BALL UNIVERSAL 5.75mm WITH BACKSTOP (2) |
| 902308 | HEX SCREW SH M3x8 (10) |
| 902310 | HEX SCREW SH M3x10 (10) |
| 903312 | HEX SCREW SFH M3x12 (10) |
| 903316 | HEX SCREW SFH M3x16 (10) |
| 903318 | HEX SCREW SFH M3x18 (10) |
| 940508 | BALL-BEARING 5x8x2.5 RUBBER SEALED - OIL (2) |
| 970100 | O-RING 10 x 1.5 (10) |

5. STEERING



SET-UP BOOK
ACKERMANN
BUMP STEER
TOE-IN

6. CENTER DIFF ASSEMBLY



ONE-WAY SLIPPER CLUTCH CONVERSION

#364101 ONE-WAY SLIPPER CLUTCH SET



#364025 ALU CENTRAL BULKHEAD



#365434 CENTRAL DOGBONE DRIVE SHAFT 47mm



#361159 GRAPHITE CENTER UPPER DECK



#364024 ALU CENTRAL BULKHEAD



#365101 XRAY XB4 ACTIVE DIFFERENTIAL - CENTER - SET



| ACTIVE DIFF SEGMENTS | | | |
|----------------------|------|--|----------|
| #325123 | 60° | | OPTION |
| #325125 | 90° | | INCLUDED |
| #325127 | 120° | | OPTION |

#365433 CENTRAL DOGBONE DRIVE SHAFT 113mm
Central dogbone drive shafts for **SHORT TRANSMISSION POSITION**



#365438 CENTRAL DOGBONE DRIVE SHAFT 75mm



#365437 CENTRAL DOGBONE DRIVE SHAFT 107mm

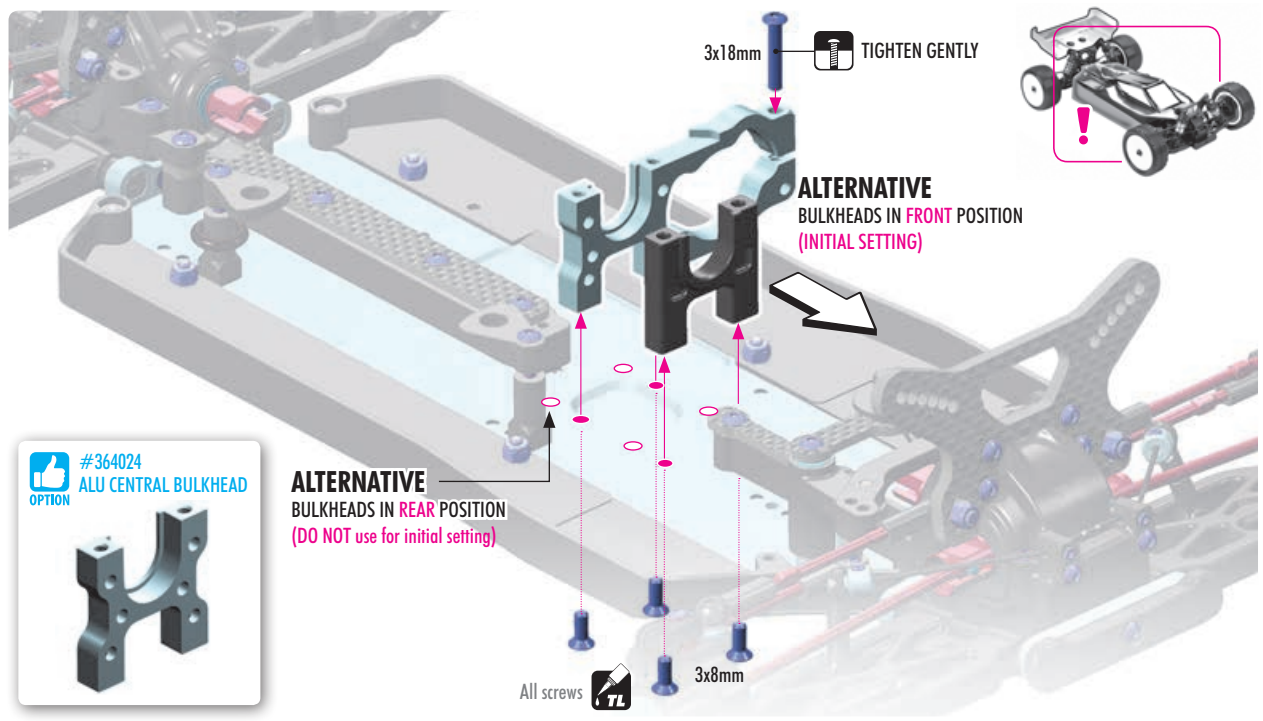
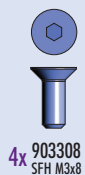


#364102 XB4 SLIPPER ELIMINATOR - SET





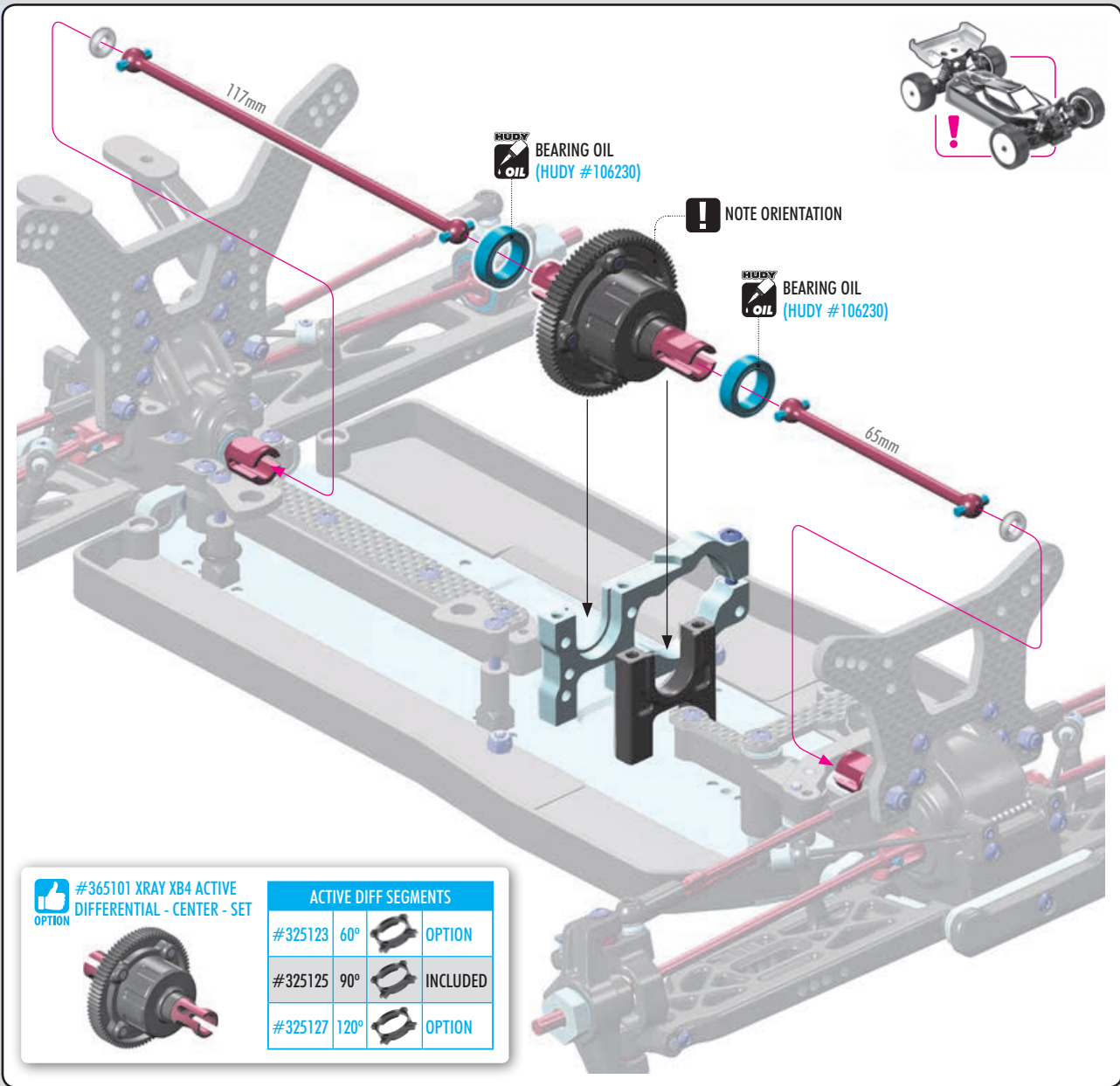
- 361176 GRAPHITE CENTER UPPER DECK 2.2mm - V2
- 361189 GRAPHITE REAR BODY POST HOLDER 2.2mm
- 361320 BODY MOUNT, BATTERY MOUNT - V2 & WING SHIM (2)
- 364013 ALU MOTOR BULKHEAD - LOWER
- 364023 COMPOSITE CENTRAL BULKHEAD - LOWER
- 365435 CENTRAL DOGBONE DRIVE SHAFT 117mm - HUDY SPRING STEEL™
- 365436 CENTRAL DOGBONE DRIVE SHAFT 65mm - HUDY SPRING STEEL™


- 902308 HEX SCREW SH M3x8 (10)
- 902318 HEX SCREW SH M3x18 (10)
- 903308 HEX SCREW SFH M3x8 (10)
- 972030 SILICONE O-RING 3x2 (10)
- 941015 BALL-BEARING 10x15x4 RUBBER SEALED - OIL (2)
- 364904 GEAR CENTER DIFFERENTIAL - LARGE VOLUME - SET







6. CENTER DIFF ASSEMBLY

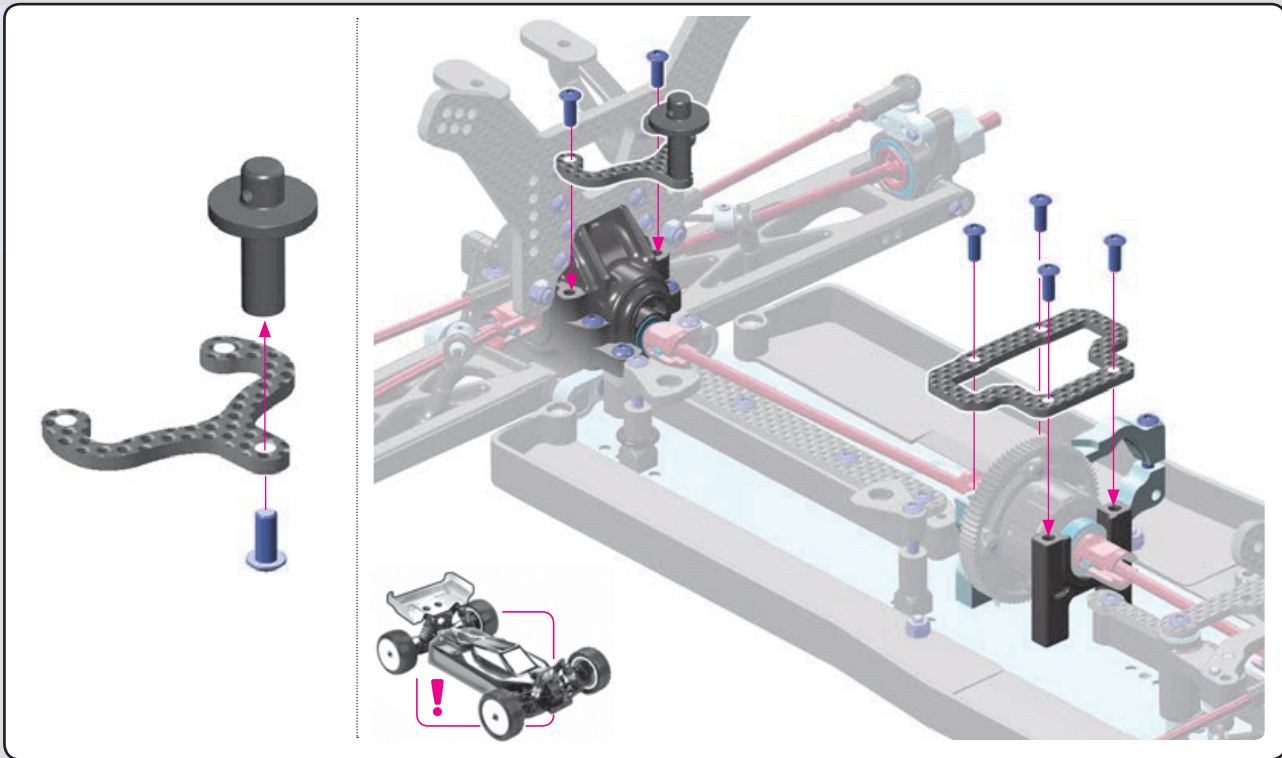
-  2x 941015 BB 10x15x4
-  2x 972030 0 3x2



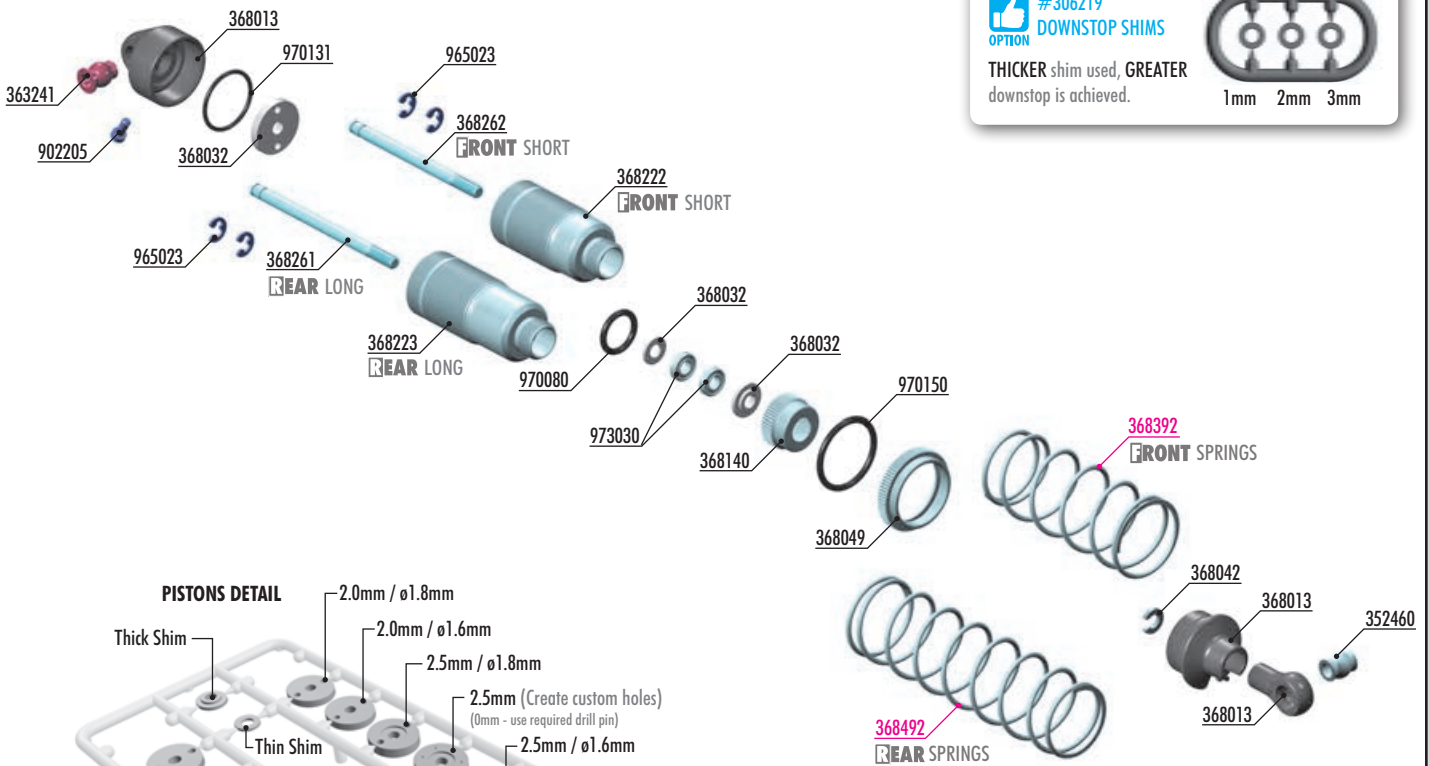
 #365101 XRAY XB4 ACTIVE DIFFERENTIAL - CENTER - SET

| ACTIVE DIFF SEGMENTS | | | |
|----------------------|------|---|----------|
| #325123 | 60° |  | OPTION |
| #325125 | 90° |  | INCLUDED |
| #325127 | 120° |  | OPTION |

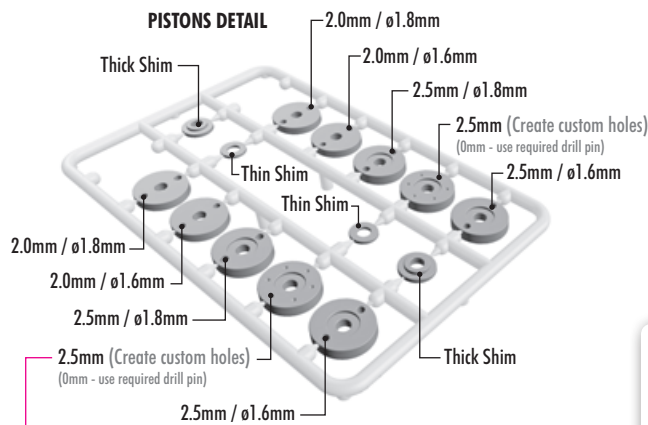
-  7x 902308 SH M3x8



7. SHOCK ABSORBERS



#306219
DOWNSTOP SHIMS
 THICKER shim used, GREATER downstop is achieved.
 1mm 2mm 3mm



! These pistons can NOT be used in shocks without making the custom holes by yourselves.

#368033
PRECISION GROUND SHOCK PISTON BLANKS 2.5MM - BIG BORE (4)



#368034
PRECISION GROUND SHOCK PISTON BLANKS 2.0MM - BIG BORE (4)



#104004
HUDY AIR VAC - VACUUM PUMP - 1/10 OFF-ROAD



#368054
ALU SHOCK CAP-NUT - BIG BORE (2)



#368021
ALU SHOCK SPRING RETAINING COLLAR (4)

#368022
ALU SHOCK SPRING RETAINING COLLAR -2mm (4)

#368023
ALU SHOCK SPRING RETAINING COLLAR -4mm (4)



#368011
COMPOSITE SHOCK BALL JOINT +2mm & +4mm (2+2)



BAG

06

- 352460 PIVOT BALL 5.8mm (2)
- 363241 BALL UNIVERSAL 5.75mm WITH BACKSTOP (2)
- 368013 COMPOSITE SHOCK PARTS FOR 2 SHOCKS - BIG BORE
- 368032 SHOCK PISTONS - COMPLETE SET - DELRIN - BIG BORE
- 368042 COMPOSITE SHOCK BUSHING & SHIM (2+2)
- 368049 ALU SHOCK ADJUSTABLE NUT - BIG BORE (2)
- 368140 ALU LOWER SHOCK BODY CAP (2)
- 368201 REAR SHOCK ABSORBERS - BIG BORE - SET (2)
- 368222 ALU SHOCK BODY - BIG BORE (2)
- 368223 XT2/XT4 ALU REAR SHOCK BODY - BIG BORE (2)
- 368261 XT2/XT4 REAR HARDENED SHOCK SHAFT 56mm (2)
- 368262 REAR HARDENED SHOCK SHAFT 47mm (2)

- 902205 HEX SCREW SH M2x5 (10)
- 965023 E-CLIP 2.3 (10)

- 970080 O-RING 8x1 (10)
- 970131 O-RING 13 x 1.0 (10)
- 970150 O-RING 15 x 1.5 (10)
- 973030 SILICONE X-RING PRE-OILED 3x2 (8)

- 368392 FRONT BIG BORE CONICAL SPRING-SET L=49mm - 2 DOTS (2)
- 368492 REAR BIG BORE CONICAL SPRING-SET L=67mm - 2 DOTS (2)

7. SHOCK ABSORBERS

8x 965023
C2.3

SET-UP BOOK

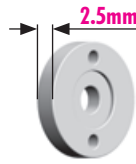
SHOCK DAMPING
SHOCK PISTONS

PISTONS

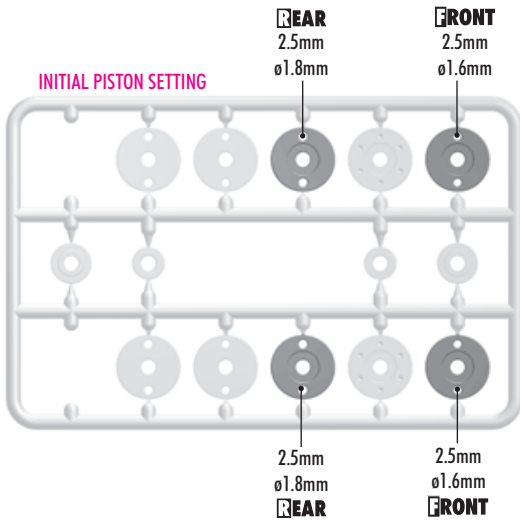
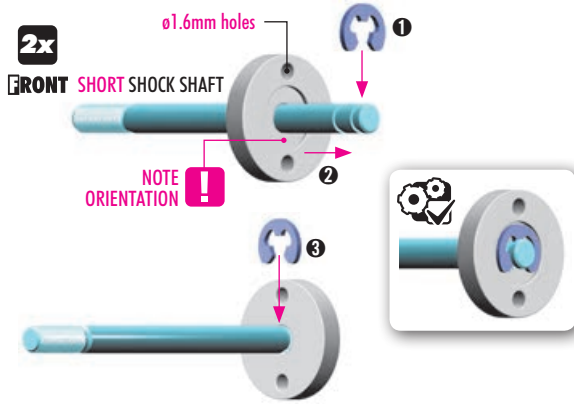
ALTERNATIVE 1

We recommend for these types of surfaces and traction levels:
CARPET •

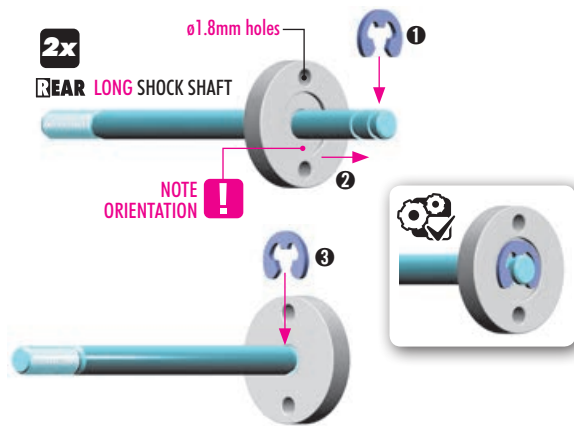
2.5mm



FRONT



REAR



#368033
PRECISION GROUND SHOCK PISTON BLANKS 2.5MM - BIG BORE (4)
OPTION



Use drill bits to create your own piston holes

PISTONS

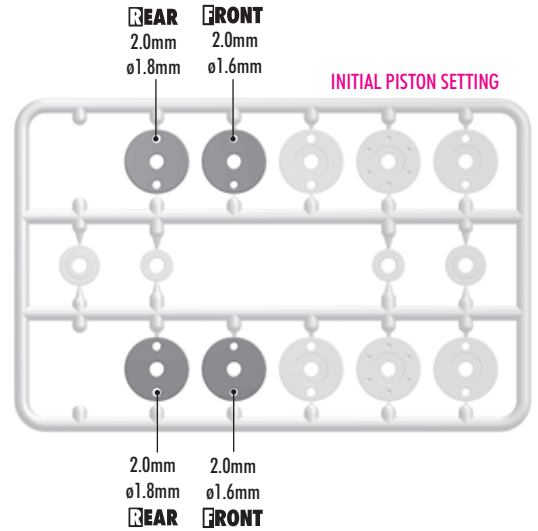
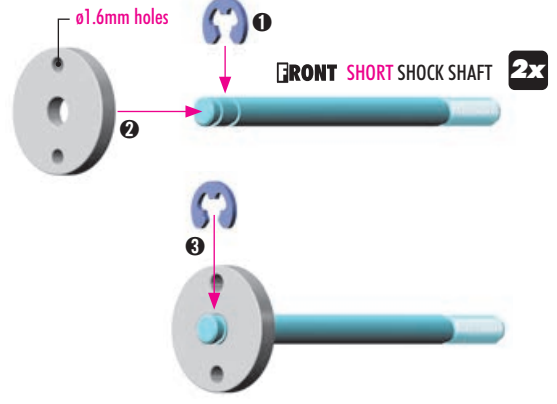
ALTERNATIVE 2

We recommend for these types of surfaces and traction levels:
**• ASTRO
• DIRT**

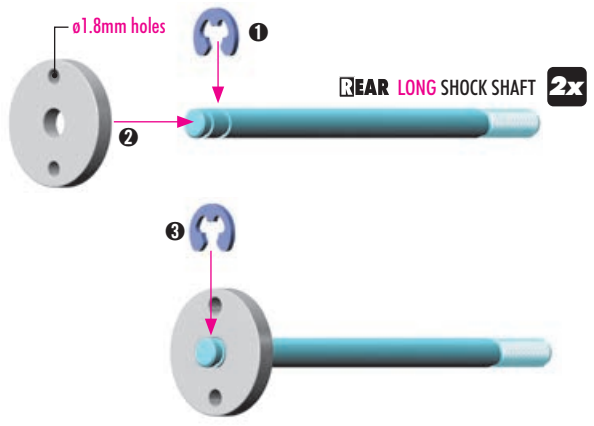
2.0mm



FRONT



REAR



#368034
PRECISION GROUND SHOCK PISTON BLANKS 2.0MM - BIG BORE (4)
OPTION



7. SHOCK ABSORBERS

4x 970080
0 8x1

8x 973030
X 3x2

There are two different thickness shims, use them as shown. Use the same procedure when building both front and rear shocks.

THICK Shim

Silicone X-ring

Silicone X-ring

THIN Shim

2x REAR LONG SHOCK BODY

2x FRONT SHORT SHOCK BODY

#306219 DOWNSTOP SHIMS
 Add downstop shims to limit suspension travel. Thicker shims increase downstop and reduce droop. Thicker downstop shims reduce suspension travel.

1mm 2mm 3mm

! IMPORTANT
 Always use same shim thickness on right and left side to achieve same downstop.

INITIAL SETTING (0mm)

SHORT SHOCK SHAFT

LONG SHOCK SHAFT

2x FRONT SHORT SHOCK BODY

2x REAR LONG SHOCK BODY

! EXTREMELY IMPORTANT

INCORRECT

CORRECT

DO NOT PUSH the shock rod straight through the lower shock body assembly; X-ring damage may result.

TWIST THE SHOCK ROD through the lower shock body assembly.

4x 970150
0 15x1.5

4x

OIL

DETAIL

4x 970131
0 13x1

4x

4x

UPSTOP "C" SHIM
 INITIAL SETTING (NO shim = 0mm)

2mm

1mm

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

28mm FRONT

36mm REAR

#368011 COMPOSITE SHOCK BALL JOINT +2mm & +4mm (2+2)

OPTION

+2mm

+4mm

7. SHOCK ABSORBERS

4x 902205
SH M2x5

OIL
FRONT (SHORT)
Oil 400cSt
REAR (LONG)
Oil 300cSt

DEFAULT SHOCK REBOUND SETTING 0% REBOUND

Follow the steps below to set the shock rebound to the default setting of 0%.

- Extend the shock shaft completely. Fill the shock body with the shock oil. For the **FRONT** shocks (short) use 400cSt oil. For the **REAR** shocks (long) use 300cSt oil.
- Move the shock shaft up and down a few times to release the air bubbles trapped beneath the piston. 3~5x UP & DOWN
- Orient the filled shock vertically for several minutes with the shock shaft fully extended. The remaining air bubbles will release.
- TIGHTEN FULLY. Gently place the shock cap onto the filled shock body and start to tighten the cap fully.
- Gently push the shock shaft completely into the shock body. Excess oil will flow through the hole in the shock cap.
- Keep the shock shaft pushed in the shock body and insert the screw into the shock cap. Tighten gently.
- 6x push the shaft up and down. The rebound will be at approx. 0%.
- Untighten the screw.
- Gently push the shock shaft completely into the shock body. Excess oil will flow through the hole in the shock cap.
- Tighten the screw. The rebound will be at approx. 0%.

SET-UP BOOK
SHOCK OIL

SHORT FRONT SHOCKS 2x Short Springs
LONG REAR SHOCKS 2x Long Springs

WIDE NUT
SPRINGS
NOTE ORIENTATION
NARROW COLLAR

WIDE SIDE ON TOP
REAR FRONT
NARROW SIDE ON BOTTOM

#368021
OPTION ALU SHOCK SPRING RETAINING COLLAR (4)

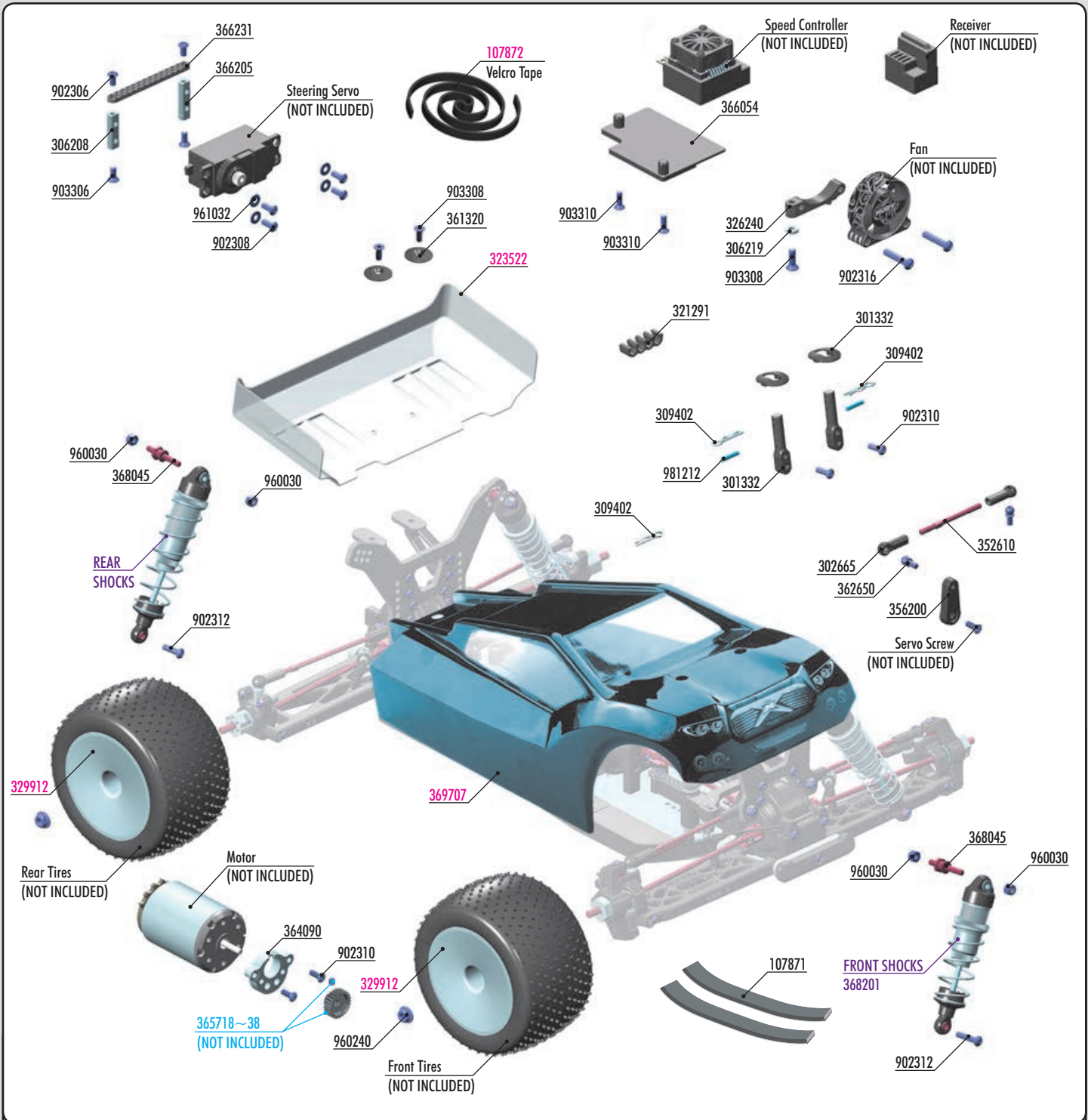
#368022
OPTION ALU SHOCK SPRING RETAINING COLLAR -2mm (4)

#368023
OPTION ALU SHOCK SPRING RETAINING COLLAR -4mm (4)

IMPORTANT
Check that Front and Rear shock pairs are the same overall length.

2x FRONT
2x REAR

8. FINAL ASSEMBLY



BAG

08

- | | | | |
|-----------|--|--------|--|
| 107871 | HUDY SELF-ADHESIVE FOAM STRIP (2) | 902306 | HEX SCREW SH M3x6 (10) |
| 301332 | REAR BODY MOUNT SET 6mm | 902308 | HEX SCREW SH M3x8 (10) |
| 302665 | COMPOSITE BALL JOINT 4.9mm - CLOSED WITH HOLE (4) | 902310 | HEX SCREW SH M3x10 (10) |
| 306208 | ALU SERVO MOUNT 21mm - BOTH SIDES THREADED | 902312 | HEX SCREW SH M3x12 (10) |
| 306219 | COMPOSITE SET OF SERVO SHIMS (4) | 902316 | HEX SCREW SH M3x16 (10) |
| 309402 | BODY CLIP FOR 6mm BODY POST (4) | 903306 | HEX SCREW SFH M3x6 (10) |
| 321291 | COMPOSITE 5-WIRES HOLDER - SET | 903308 | HEX SCREW SFH M3x8 (10) |
| 326240 | COMPOSITE FAN HOLDER | 903310 | HEX SCREW SFH M3x10 (10) |
| 352610 | ADJ. TURNBUCKLE 45mm M3 L/R - HUDY SPRING STEEL™ (2) | 960030 | NUT M3 (10) |
| 356200 | BRAKE/THROTTLE ARMS & STEERING SERVO ARMS - SET | 960240 | NUT M4 WITH SERRATED FLANGE (10) |
| 361320 | BODY MOUNT, BATTERY MOUNT - V2 & WING SHIM (2) | 961032 | WASHER S 3.2 (10) |
| 362650 | BALL END 4.9mm WITH THREAD 6mm (2) | 981212 | PIN 2x12 (10) |
| 364090 | ALU ECCENTRIC MOTOR BULKHEAD INSERT | 368201 | SHOCK ABSORBERS - BIG BORE - SET (2) |
| 365718~38 | ALU PINION GEAR HARD COATED 18~38T/48 (OPTION) | 107872 | VELCRO TAPE WITH DOUBLE SIDED TAPE 8x500mm |
| 366054 | COMPOSITE RADIO PLATE - SHORT | 323522 | LEXAN REAR WING - LUSH |
| 366205 | ALU SERVO MOUNT 22mm - BOTH SIDES THREADED | 329912 | STADIUM TRUCK WHEEL AERODISK WITH 12mm HEX - WHITE (2) |
| 366231 | GRAPHITE SERVO HOLDER | 369707 | XRAY XT4 BODY - V2 |
| 368045 | STEEL SCREW SHOCK PIVOT BALL WITH HEX (2) | | |

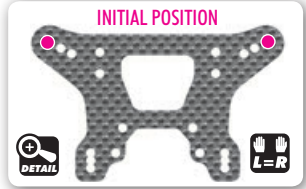
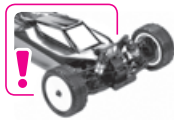
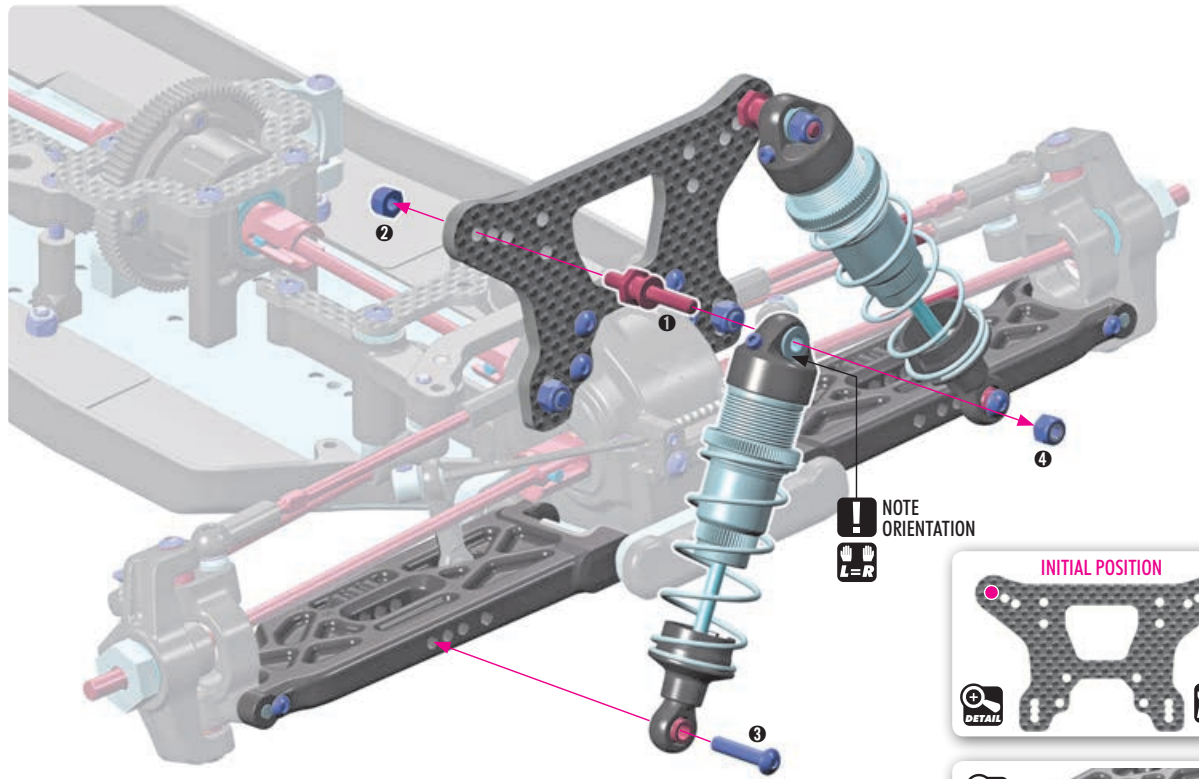
8. FINAL ASSEMBLY



2x 902312
SH M3x12



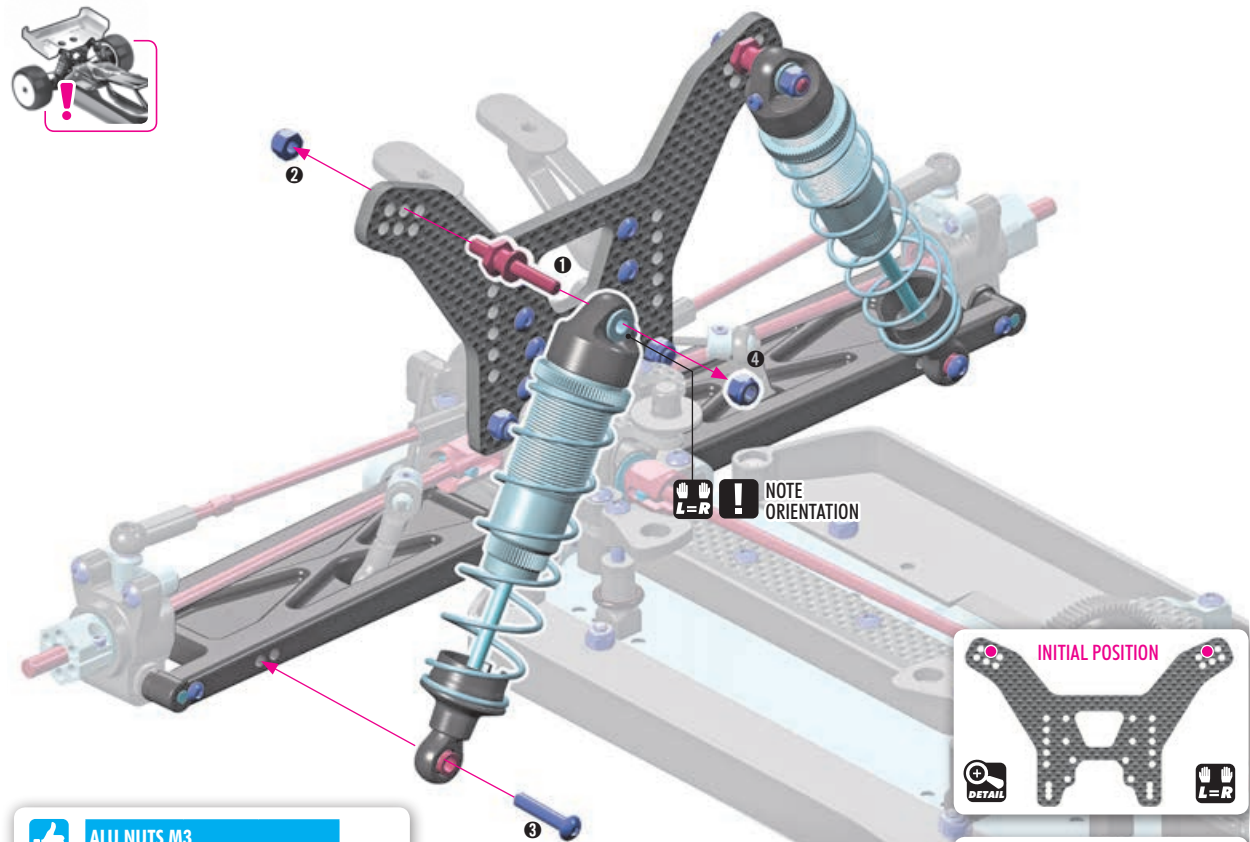
4x 960030
N M3



2x 902312
SH M3x12



4x 960030
N M3



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



8. FINAL ASSEMBLY

SERVO LINK
Adjust servo link to fit your servo.

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

OPTION **HUDY TITAN BALL ENDS**
#990006 6mm Thread **OPTION**

- 2x 902306 SH M3x6
- 4x 902308 SH M3x8
- 4x 961032 SHIM S.3.2

NOTE ORIENTATION

Servo (NOT INCLUDED)

3x6mm

Long

Short

3x8mm

NOTE ORIENTATION

Servo screw (NOT INCLUDED)

| OPTION | HUDY ALU SERVO HORNS | |
|--------|----------------------|-----|
| | #293497 | 23T |
| | #293498 | 24T |
| | #293499 | 25T |

| OPTION | HUDY CLAMP ALU SERVO HORNS | |
|--------|----------------------------|-----|
| | #293404 | 23T |
| | #293405 | 24T |
| | #293406 | 25T |

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

USE APPROPRIATE SERVO ARM:

K (23T) **H** (24T) **F** (25T)

- 2x 903306 SFH M3x6

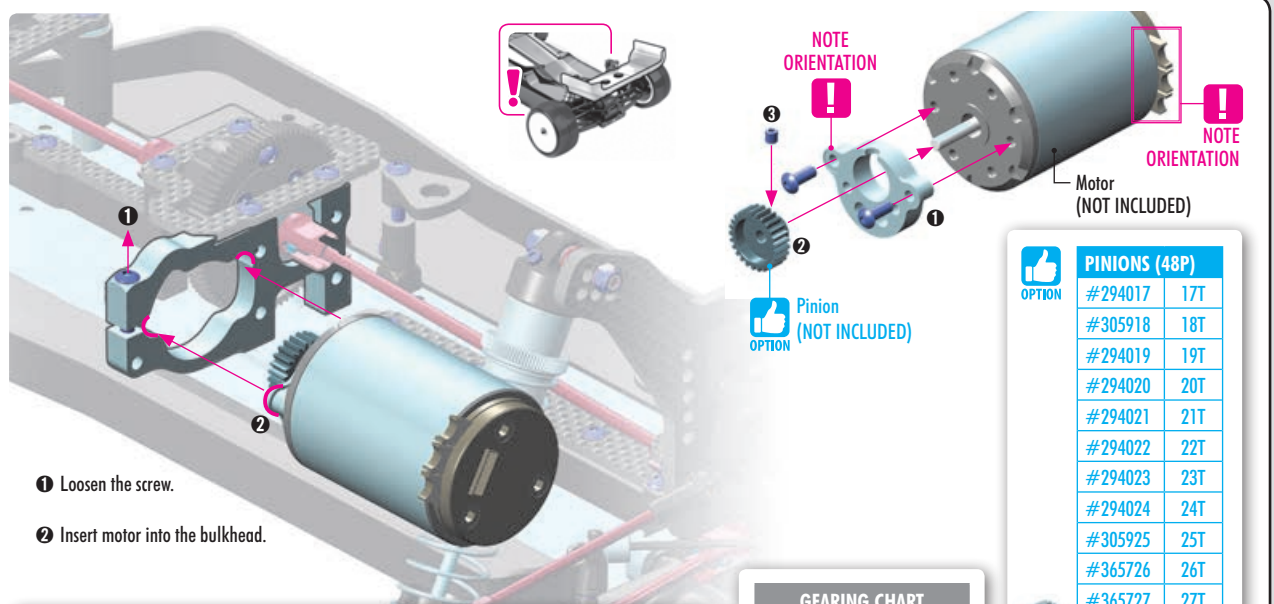
OPTION #366204-K **ALU MONOBLOCK SERVO HOLDER**

3x6mm

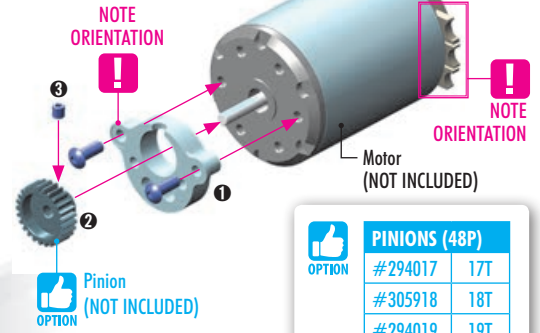
8. FINAL ASSEMBLY



2x 902310 SH M3x10



- 1 Loosen the screw.
- 2 Insert motor into the bulkhead.

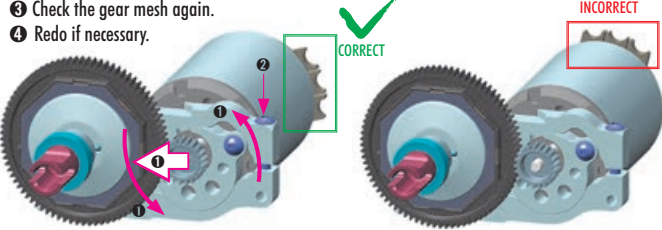


Pinion (NOT INCLUDED)

Motor (NOT INCLUDED)

- 1 Adjust gear mesh.
- 2 Tighten the screw.
- 3 Check the gear mesh again.
- 4 Redo if necessary.

Note orientation of the motor soldering tabs to install cables as low as possible.



INCORRECT

CORRECT

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.

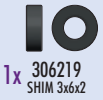
GEARING CHART

| SPUR GEAR | PINION MIN. | PINION MAX. |
|-----------|-------------|-------------|
| 69T | 27T | 43T |
| 72T | 24T | 40T |
| 75T | 21T | 37T |
| 78T | 18T | 34T |
| 81T | 15T | 31T |

GEAR RATIO Final Drive Ratio
 $78 : X \times 2.65 = \text{FDR}$
 (Spur) (Pinion) (IGR)

PINIONS (48P)

| | |
|---------|-----|
| #294017 | 17T |
| #305918 | 18T |
| #294019 | 19T |
| #294020 | 20T |
| #294021 | 21T |
| #294022 | 22T |
| #294023 | 23T |
| #294024 | 24T |
| #305925 | 25T |
| #365726 | 26T |
| #365727 | 27T |
| #365728 | 28T |
| #365729 | 29T |
| #365730 | 30T |
| #365731 | 31T |
| #365732 | 32T |
| #365733 | 33T |
| #365734 | 34T |
| #365735 | 35T |
| #365736 | 36T |
| #365737 | 37T |
| #365738 | 38T |



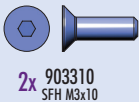
1x 306219 SHIM 3x6x2



2x 902316 SH M3x16



1x 903308 SFH M3x8



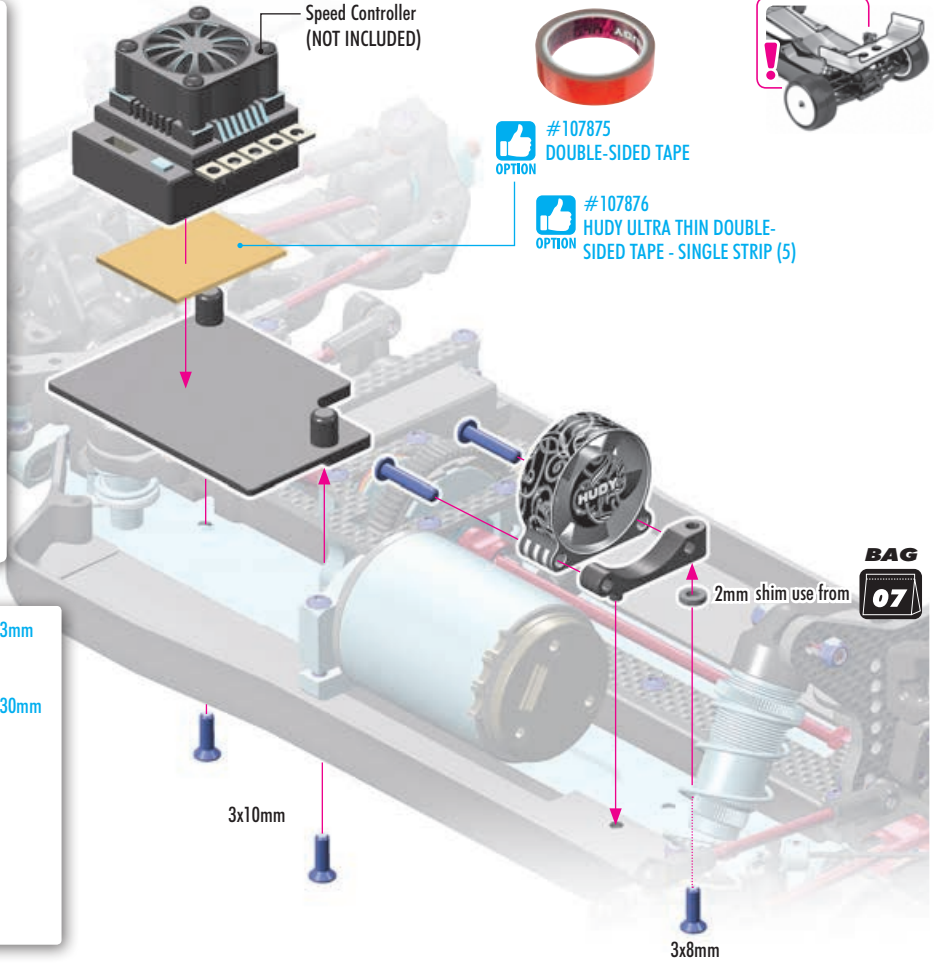
2x 903310 SFH M3x10

#293101 HUDY ALU RC FAN 30mm SIDE MOUNT 2 HOLE

#293100 HUDY ALU RC FAN 30mm BOTTOM MOUNT 2 HOLE

#293110 HUDY BRUSHLESS RC FAN 3mm WITH EXTERNAL SOLDERING TABS

#293112 HUDY BRUSHLESS RC FAN 30mm WITH INTERNAL SOLDERING TABS



Speed Controller (NOT INCLUDED)

#107875 DOUBLE-SIDED TAPE

#107876 HUDY ULTRA THIN DOUBLE-SIDED TAPE - SINGLE STRIP (5)

BAG 07

3x10mm

2mm shim use from

3x8mm

8. FINAL ASSEMBLY

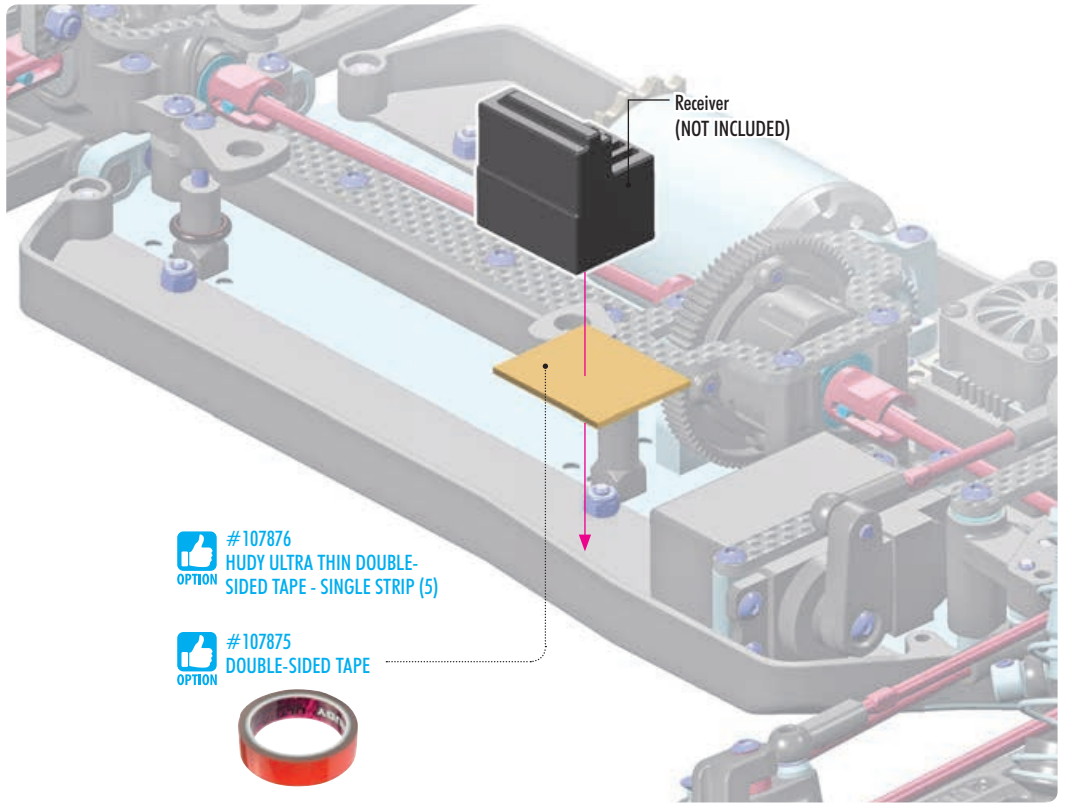
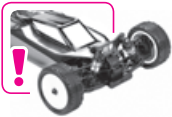
OPTION #293081
HUDY PURE TUNGSTEN WEIGHT 5g



OPTION #293082
HUDY PURE TUNGSTEN WEIGHT 10g



OPTION #293083
HUDY PURE TUNGSTEN WEIGHT 15g



OPTION #107876
HUDY ULTRA THIN DOUBLE-SIDED TAPE - SINGLE STRIP (5)

OPTION #107875
DOUBLE-SIDED TAPE



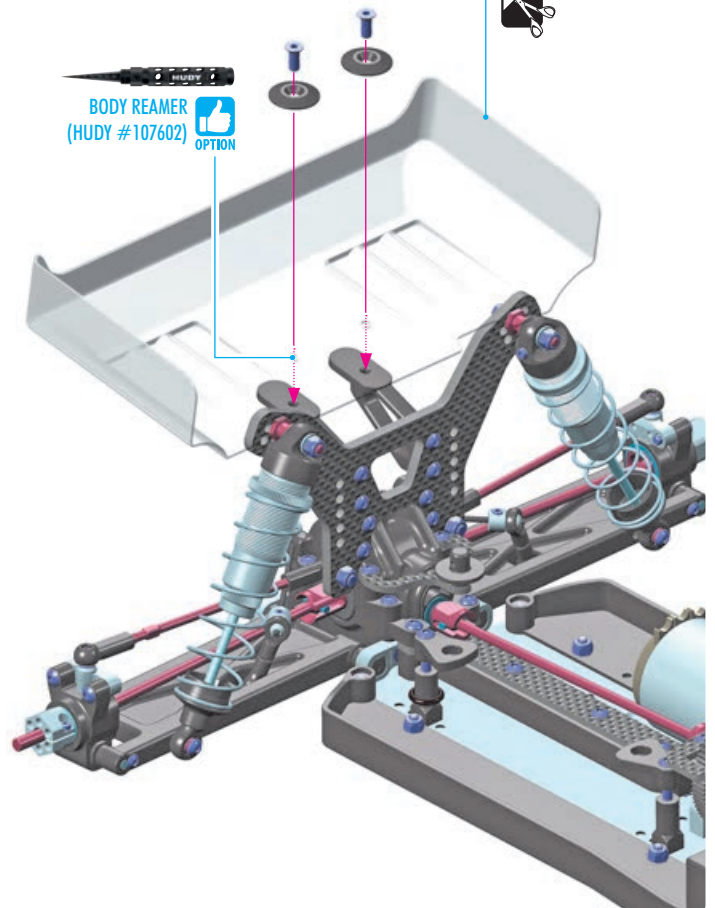
2x 903308
SFH M3x8



OPTION SCISSORS
(HUDY #188990)



BODY REAMER
(HUDY #107602) **OPTION**



OPTION

| REAR WING SHIMS | | | |
|-----------------|--------|--------|--|
| #293561 | SILVER | OPTION | |
| #293561-0 | ORANGE | OPTION | |
| #293561-K | BLACK | OPTION | |

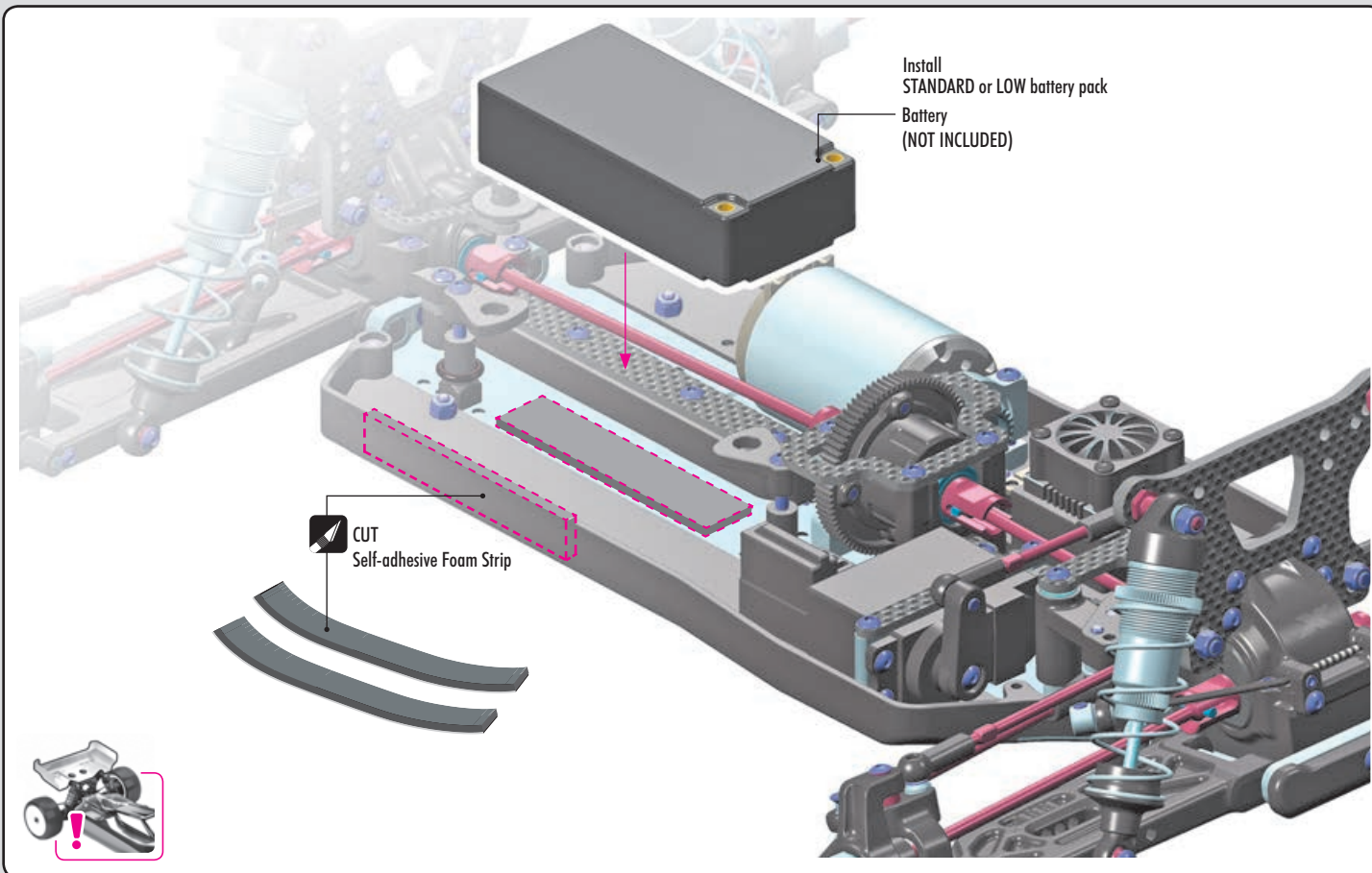
OPTION

| XRAY LEXAN REAR WINGS | | | |
|-----------------------|-------|--------|----------|
| #323510 | 1.0mm | OPTION | |
| #323511 | 1.5mm | OPTION | |
| #323513 | 1.0mm | RANK | |
| #323517 | 1.0mm | TEC | |
| #323522 | Std. | LUSH | INCLUDED |
| #323523 | Thick | LUSH | OPTION |
| #363510 | 1.0mm | OPTION | |
| #363511 | 1.5mm | OPTION | |
| #363512 | 2.0mm | OPTION | |

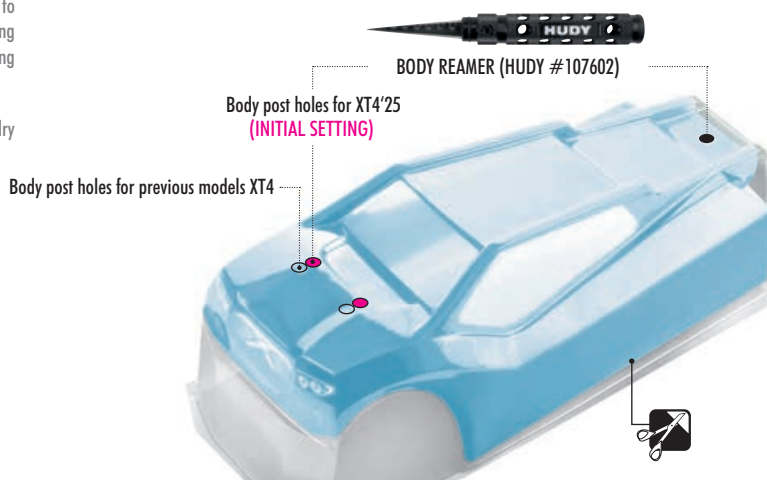
OPTION

| XRAY LEXAN CENTER FIN | | | |
|-----------------------|-------|-----|--------|
| #323515 | 1.0mm | ZAP | OPTION |

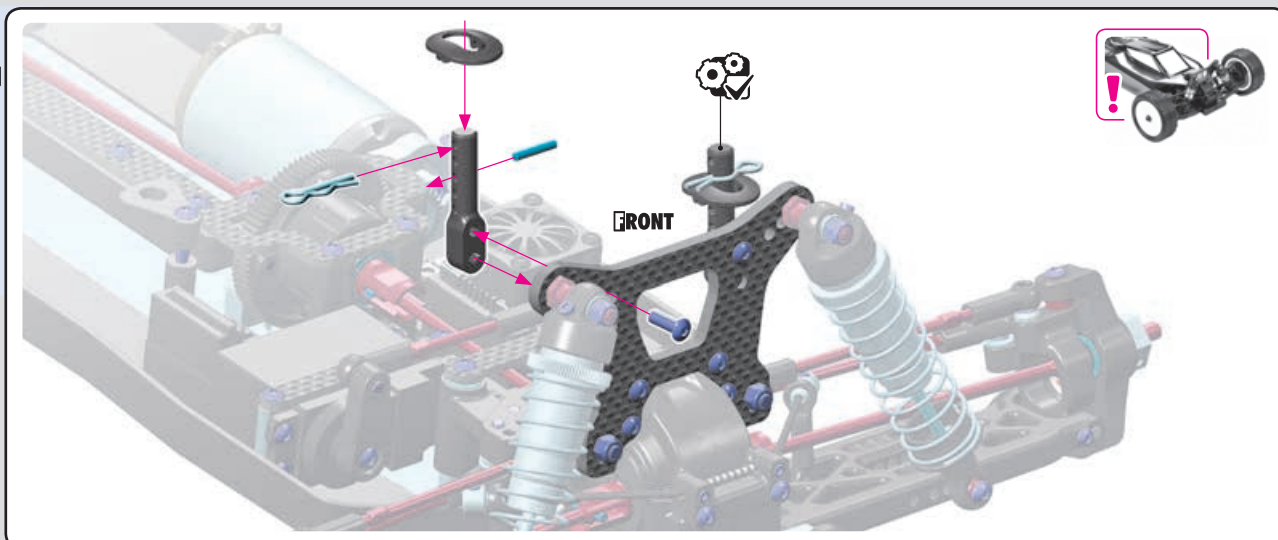
8. FINAL ASSEMBLY



- 1 Before cutting and making holes on the BODY, put the unpainted body on the chassis to confirm the mounting position and location for holes and cutouts. Before cutting and making holes on the WING, put the unpainted wing on the wing holders to confirm the mounting position and location for holes and cutouts.
- 2 Before painting, wash the inside of the body with mild detergent, and then rinse and dry thoroughly.
- 3 Mask all windows.
- 4 Apply paint masks as appropriate.
- 5 Paint the body using paints formulated for polycarbonate bodies.
- 6 When the paint is dry, remove the masking.
- 7 Carefully cut out the body using appropriate scissors or cutting tools.
- 8 When you have finished cutting, peel off the external protective films.



- 2x 902310 SH M3x10
- 2x 981212 P 2x12



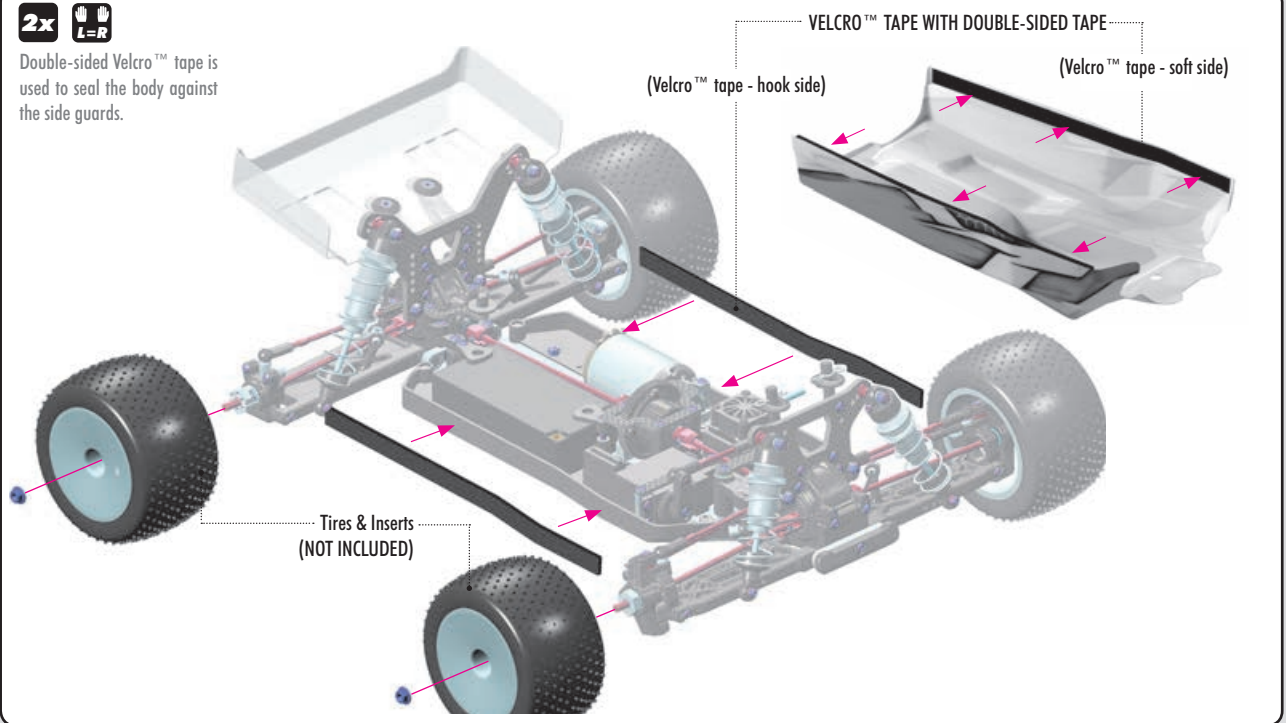
8. FINAL ASSEMBLY



4x 960240
N M4

2x L=R

Double-sided Velcro™ tape is used to seal the body against the side guards.



MAINTENANCE

SHOCK MAINTENANCE

The most important maintenance task for keeping consistent shock performance is refilling and bleeding them correctly. If built correctly, it will not be necessary to re-build them often. Replacing warped/hard o-rings, scarred piston rods, or shaved/split/loose composite upper and lower ball joints are also important.

- For club racing, it is recommended to check the shocks for air inside before each race and only re-fill and bleed them if necessary. Before each race day, make sure you take the spring off of each shock, hold it up to your ear, and quickly compress the shock rod fully into the body while listening for any air making a "whistling" or "squishy" sound as it passes through the piston holes. If you hear any air, refill and bleed your shocks. For high-competition racing, it is recommended that the shocks be re-filled and bled before a large event.
- If building or pairing new shocks, always make sure they are the same length using a shock length measuring tool and adjust the lower ball joints as needed.
- During regular shock operation, oil naturally gets on the shock shaft and drop-by-drop slightly gets out of the shock body. Shocks should be inspected regularly after each race, and oil replaced as required.

BEARING MAINTENANCE

Ball-bearings in an off-road car must be properly maintained for smooth operation and long lifespan. The XB4 ball-bearings are degreased and are lubricated with HUDY Bearing Oil or HUDY Grease. The following procedures are recommended to clean all of the bearings in your off-road car. For high-competition racing, we recommended doing this every 3-4 weeks, or before a major race.

- 1 Remove the seals on both sides of the bearing (if present). If the seals bend a little and you can see a kink, carefully flatten the kink out by hand.
- 2 Spray the seals with motor cleaner and blow dry with compressed air.
- 3 Spray the bearing on both sides with motor cleaner.
- 4 Spin the bearing while it is still wet to dislodge any particles with the cleaner.
- 5 Spray the bearing on both sides again.
- 6 Blow both sides of the bearing dry with compressed air to make sure particles come out.
- 7 Hold the inner part of the bearing with my left thumb/forefinger and spin it to make sure it spins free without any abnormal vibrations or sounds.
- 8 Place one drop of bearing oil into each side of the bearing.
- 9 Replace both seals at the same time by lining them up on each side of the bearing and lightly pressing them in all the way around the bearings circumference with your thumb and forefinger. Do not press too hard or use any type of tool, such as a wrench tip, to push the blue seals in as they will push in too far, bend and cause drag.

If you spin test the bearing after you have re-oiled and sealed it, it will not spin freely for an extended period of time. The lightest of oils may allow it to spin for 1-2 seconds. This is normal and once you have mounted the bearings in the car again, the drive train will spin freely. Make sure you use a motor cleaner that does not leave a residue after it dries as this may cause drag and wear in the bearings.

RECOMMENDED PRODUCTS

- Use correct oil or grease to lubricate the bearings:

#106230 HUDY Bearing Oil
#106220 HUDY Bearing Grease - Standard
#106221 HUDY Bearing Grease - Blue
#106222 HUDY Bearing Grease - Red



HUDY #106220



HUDY #106221



HUDY #106222



HUDY #106230

SUSPENSION & DRIVETRAIN MAINTENANCE

- Check suspension for free movement during building and operation, and especially after running and if you have crashed the car. If the suspension does not move freely, use the appropriate HUDY Arm Reamer to clean and resize the holes of the suspension arms.
- Regularly check the drive shaft pins (both side and center) and if they show any wear must be immediately replaced by new pins. If the car is run with worn pins, excessive wear on the diff outdrives will result. The #106000 HUDY Drive Pin Replacement Tool (for 3mm Pins) is a compact, rugged multi-use tool set for replacing 3mm drive pins in drive shafts. Use the HUDY replacement drive shaft pins 3x12 (#106051).
- Regularly inspect and replace the connecting pins which connect the center drive shafts with the pinion gear, and also the pins that connect the wheel drive shafts with wheel axles. Use HUDY Graphite Grease to lubricate the drive shaft connecting joints and the diff gears.
- Pivot balls and ball-joints will naturally wear for some time and will generate play. If there is too much play the pivot balls and ball joints need to be replaced.
- If the car is run in wet conditions, apply WD-40® on all drivetrain parts before the run. After the run, clean and dry the parts again.



#106210 HUDY GRAPHITE GREASE



or #106213 HUDY JOINT GREASE

HUDY SPRING STEEL™

The HUDY Spring Steel™ used in the car is the strongest and most durable steel material on the RC market. While items made from HUDY Spring Steel™ are still subject to wear, the lifespan is considerably longer than any other material. As parts made from HUDY Spring Steel™ wear, the brown color will fade (get lighter) but it will not affect

the strength of the material. The brown color is only a surface treatment and if the brown color will wear the durability of the part will be still strong.

EXCLUSIVE PROFESSIONAL

HUDY



104004 HUDY AIR VAC - VACUUM PUMP - 1/10 OFF-ROAD
105500 HUDY UNIVERSAL TIRE BALANCING STATION
105520 WHEEL ADAPTER FOR 1/10 TOURING CARS - 12mm
106000 HUDY DRIVE PIN REPLACEMENT TOOL (FOR 3mm PINS)
106036 EJECTOR PIVOT PIN & ALTERNATING PIVOT 2.5mm FOR #106000
107090 HUDY BEARING CHECKING TOOL
107601 LIMITED EDITION - REAMER FOR BODY 0-9mm + COVER - SMALL
107701 CHASSIS DROOP GAUGE SUPPORT BLOCKS 20mm FOR 1/8 - LW(2)
107740 HUDY ADJUSTABLE RIDE HEIGHT GAUGE 14-20mm
107742 HUDY ADJUSTABLE RIDE HEIGHT GAUGE 20-30mm
107855 HUDY PIT LED
107880 CHASSIS BALANCING TOOL (2)

293110 293101
293100 293112

106000 + 106036

181090

107742

107740

181030

199183

104004

108201

108205

108203

108204

107701

109801

108840

108160 HUDY 1/10 OFF-ROAD CAR STAND - V2
108190 HUDY ALU TRAY FOR PARTS
108201 FLAT SET-UP BOARD FOR 1/10 TOURING CARS
108203 FLAT SET-UP BOARD FOR 1/10 TOURING CARS - SILVER GREY
108204 FLAT SET-UP BOARD FOR 1/10 TOURING CARS - TITAN
108205 FLAT SET-UP BOARD FOR 1/10 TOURING CARS - DARK GREY
108840 UPSIDE MEASURE PLATE FOR 1/8 OFF-ROAD
108905 UNIVERSAL EXCLUSIVE SET-UP SYSTEM FOR 1/10 OFF-ROAD CARS
108960 ALU NUT FOR 1/10 OFF-ROAD SET-UP SYSTEM (4)
109801 HUDY ALU TRAY FOR 1/10 OFF-ROAD DIFF & SHOCKS
109840 HUDY ALU TRAY FOR 1/10 OFF-ROAD DIFF ASSEMBLY
109860 HUDY ALU TRAY FOR SET-UP SYSTEM



109880 HUDY ALU TRAY FOR ACCESSORIES & PIT LED
 111545 LIMITED EDITION - ALLEN WRENCH # 1.5mm
 112045 LIMITED EDITION - ALLEN WRENCH # 2.0mm
 132045 LIMITED EDITION - ALLEN WRENCH + BALL REPL. TIP # 2.0mm
 153055 LIMITED EDITION - SLOTTED SCREWDRIVER # 3.0mm - LONG
 175535 LIMITED EDITION - SOCKET DRIVER # 5.5mm
 177035 LIMITED EDITION - SOCKET DRIVER # 7.0mm
 181030 HUDY SPRING STEEL™ TURNBUCKLE WRENCH 3mm
 181090 HUDY SPECIAL TOOL FOR TURNBUCKLES & NUTS
 183011 HUDY PROFESSIONAL MULTI TOOL
 188990 HUDY PROFESSIONAL BODY SCISSORS
 199060 HUDY ALU TOOL STAND

199183 HUDY CAR BAG - 1/10 OFF-ROAD
 199270 HUDY LIPO SAFETY BAG
 293110 HUDY BRUSHLESS RC FAN 30mm
 298100 HUDY TIN ROUND BOX 80X30mm
 293100 HUDY ALU RC FAN 30mm - BOTTOM MOUNT 2 HOLE
 293101 HUDY ALU RC FAN 30mm - SIDE MOUNT 2 HOLE
 293110 HUDY BRUSHLESS RC FAN 30mm - WITH EXTERNAL SOLDERING TABS
 293112 HUDY BRUSHLESS RC FAN 30mm - WITH INTERNAL SOLDERING TABS

For more information about tools, set-up equipment and accessories suitable for your car please visit:

www.hudy.net



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