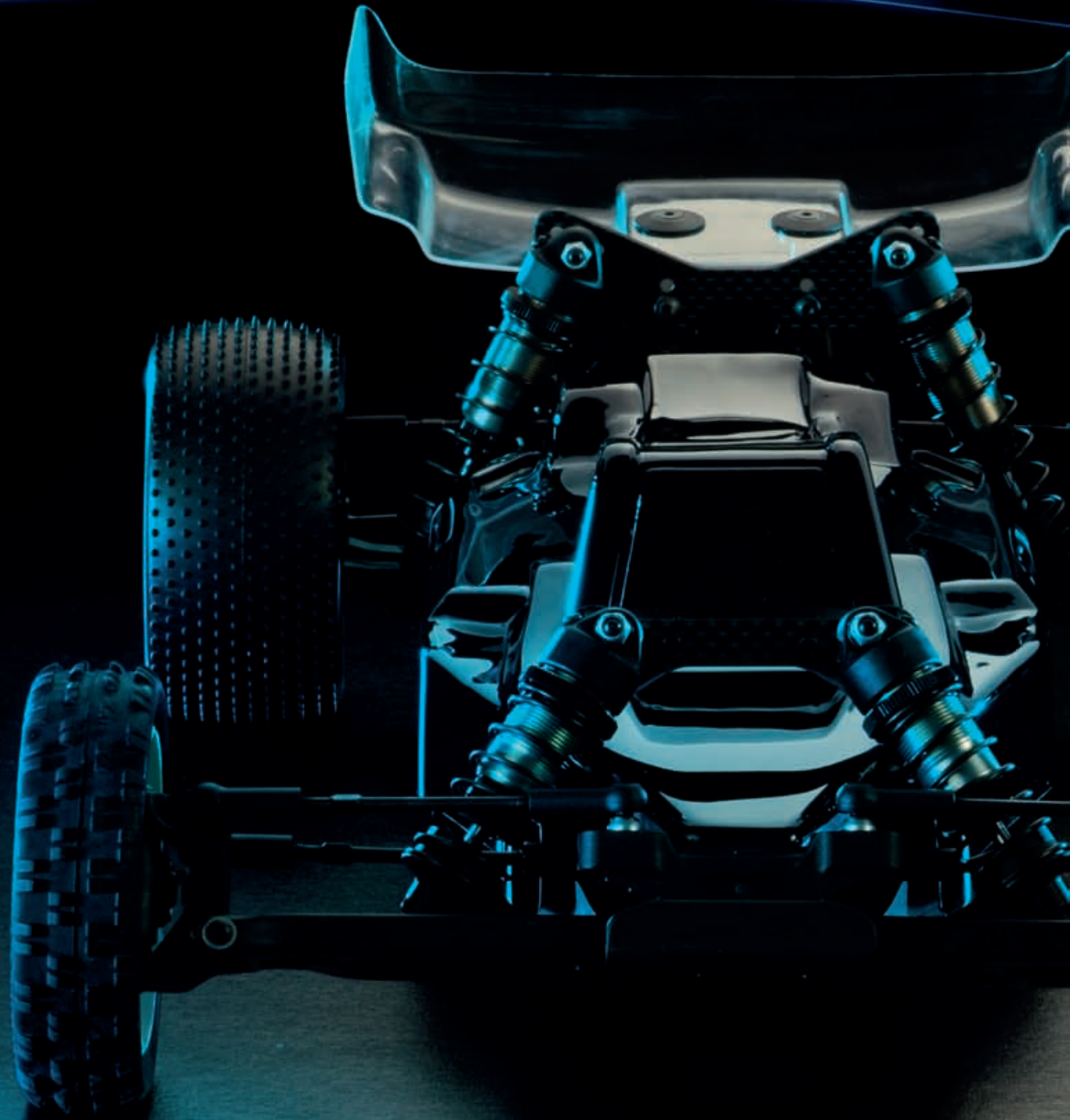


1/10 LUXURY ELECTRIC OFF-ROAD BUGGY 2WD

# XRAY XB2



**INSTRUCTION MANUAL**  
FOR XB2C'23 & XB2D'23 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](mailto:info@teamxray.com). Also, please visit our Web site at [www.teamxray.com](http://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](http://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](mailto: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](mailto:xray@rcamerica.com)

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

## SAFETY PRECAUTIONS

Contains:

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

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

CAUTION: CANCER HAZARD

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

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

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

reference, even after completing the assembly. Use only genuine and original authentic XRAY parts for maximum performance. Using any third party parts on this model will void warranty 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](http://www.teamxray.com) to get advice, or contact us via email at [info@teamxray.com](mailto:info@teamxray.com), or contact the XRAY distributor in your country.

## **WARRANTY**

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

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

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

### **Limitations of Liability**

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

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

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

**All rights reserved.**

## **QUALITY CERTIFICATE**

XRAY MODEL RACING CARS uses only the highest quality materials, the best compounds for molded parts and the most sophisticated manufacturing processes of TQM (Total Quality Management). We guarantee that all parts of a newly-purchased kit are manufactured with the highest regard to quality. However, due to the many factors inherent in model racecar competition, we

cannot guarantee any parts once you start racing the car. Products which have been worn out, abused, neglected or improperly operated will not be covered under warranty.

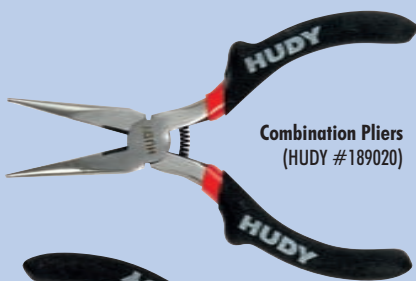
We wish you enjoyment of this high-quality and high-performance RC car and wish you best success on the track!

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

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



# TOOLS REQUIRED



Combination Pliers  
(HUDY #189020)



Side Cutters  
(HUDY #189010)



Pocket Hobby Knife (HUDY #188981)



Special Tool for turnbuckles, nuts (HUDY #181090)



Turnbuckle Wrench 3mm (HUDY #181030)



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



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



Allen 3.0mm (#113045 - 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)



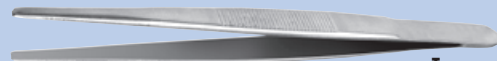
Reamer (#107602 - HUDY EXCLUSIVE Limited Edition)



Scissors (HUDY #188990)



Professional Multi Tool  
(HUDY #183011)



Tweezer

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

450cSt (#106345)  
HUDY Premium Silicone Oils



**OIL** CARPET

500cSt (#106350)  
HUDY Premium Silicone Oils



**OIL** CARPET DIRT

5.000cSt (#106450)  
HUDY Premium Silicone Oils



**OIL** CARPET

(HUDY #106211)  
Premium Diff Grease



**GR** DIRT

(HUDY #106210)  
Premium Graphite Grease



**GR** CARPET DIRT

# EQUIPMENT REQUIRED

Transmitter



Receiver



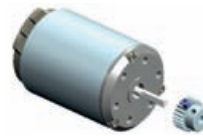
Speed Controller



Steering Servo



Electric Motor & Pinion Gear  
with Setscrew



LiPo Battery



Battery Charger



Double-sided Tape  
(HUDY #107875)



Lexan™ Paint



4x Tires & Inserts



Bearing Oil  
(HUDY #106230)



Threadlock



CA glue





# 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

OPTION	TYPE1	OPTION 1
#32XXXX	TYPE1	OPTION 1
#32XXXX	TYPE1	OPTION 2
#32XXXX	TYPE1	INCLUDED

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:

- 321200** **STYLE A** - indicates parts that are included in the bag marked for the section.
- 321100** **STYLE B** - indicates parts that are included in the box.
- 324900** **STYLE C** - indicates parts that are already assembled from previous steps.

## 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

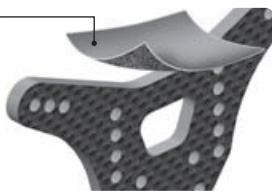
Follow this Tech Tip to prepare the graphite parts. Sand the edges with sandpaper, and then seal the edges with CA glue to reinforce them and help prevent delamination.

#### Prepare all Graphite Parts:

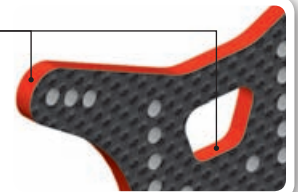
- Front shock tower
- Rear shock tower

Fine sandpaper

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



Apply CA glue to all edges of the graphite parts.



### MANUAL STEPS ONLY FOR DIRT

**1. BALL DIFFERENTIAL** **DIRT**

### MANUAL STEPS ONLY FOR CARPET

**1. GEAR DIFFERENTIAL** **CARPET**

### MANUAL DUAL STEPS FOR CARPET AND DIRT

**3. REAR DRIVETRAIN** **CARPET** **DIRT**

# 1. GEAR DIFFERENTIAL



### GEAR DIFF CASES

#324911	HARD	INCLUDED
#324911-G	GRAPHITE	OPTION

### GEAR DIFF PULLEYS

#324954	HARD	INCLUDED
#324954-G	GRAPHITE	OPTION

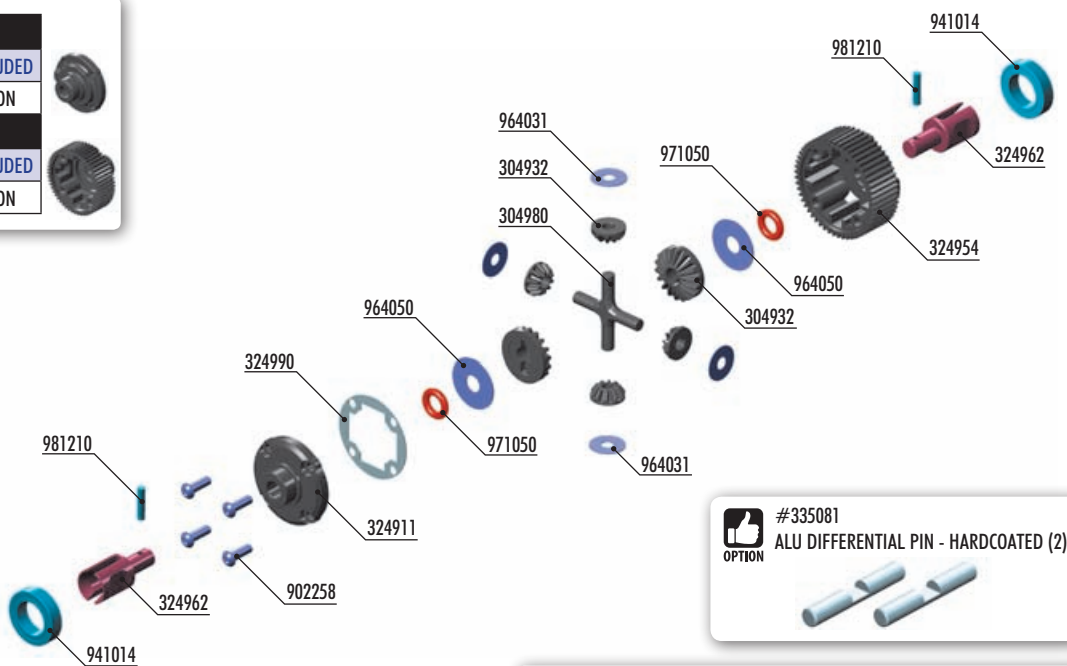


### #325100 XRAY XB2 ACTIVE DIFFERENTIAL - SET



### ACTIVE DIFF SEGMENTS

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



### #335081 ALU DIFFERENTIAL PIN - HARDCOATED (2)



### BEVEL & SATELLITE GEARS + PINS

#304932 + #304980	COMPOSITE	INCLUDED
#335030 + #335080	STEEL	OPTION



### BAG



- 304932 GRAPHITE GEAR DIFF BEVEL & SATELLITE GEARS (2+4)
- 304980 COMPOSITE GEAR DIFF CROSS PIN
- 324990 DIFF GASKET (4)
- 324902 GEAR DIFFERENTIAL - LCG - SET
- 324911 COMPOSITE GEAR DIFFERENTIAL COVER - LCG
- 324954 COMPOSITE GEAR DIFFERENTIAL CASE - LCG - 53T
- 324962 GEAR DIFF OUTDRIVE ADAPTER - LCG - HUDY SPRING STEEL™ (2)

- 902258 HEX SCREW SH 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



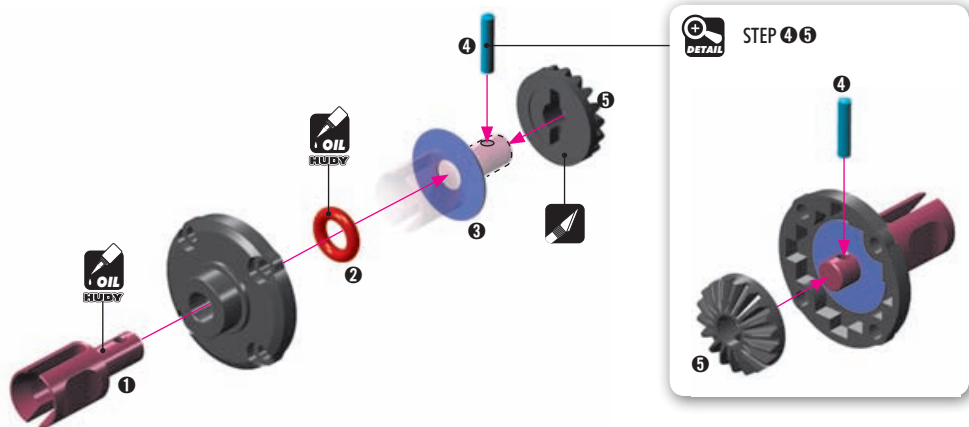
964050  
S 5x15x0.3



971050  
O 5x1.5



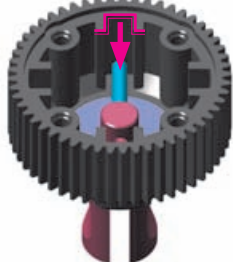
981210  
P 2x10



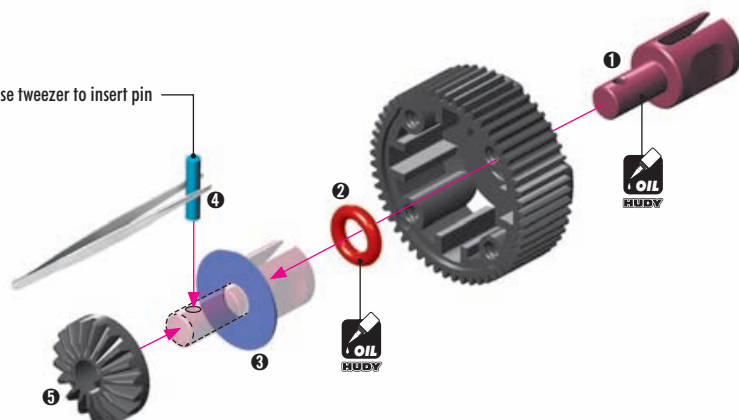
STEP 4 5



### NOTE ORIENTATION



Use tweezers to insert pin



964050  
S 5x15x0.3



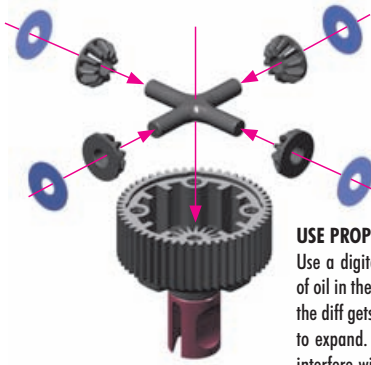
971050  
O 5x1.5



981210  
P 2x10



964031  
S 3.5x10x0.2



**USE 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.



### Rear diff

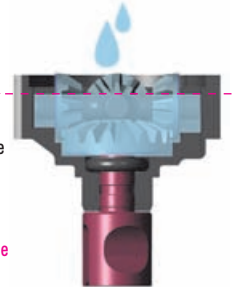
Silicone oil 5.000cSt  
Fill just above the diff pin.



Fill differential up to the top of the diff pin.



**DO NOT** fill the diff to the top of the housing.



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



1 Put the diff (without oil) on the scale and check the weight (approximately 11.92g)

$$11.92g + 1.30g = 13.22g$$

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



2 Slowly pour oil into the diff and watch the weight. Add 1.30g of oil into the diff. The approximate weight of the diff including oil is 13.22g.

### TIP TIPS FOR REAR DIFFERENTIAL

LOW-MEDIUM TRACTION 5.000cSt (HUDY #106450)  
MEDIUM-HIGH TRACTION 7.000cSt (HUDY #106470)

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



### HUDY ULTIMATE SILICONE OILS

OPTION	HUDY	Oil	Volume	Status
#106420	2.000cSt	50ml	OPTION	
#106430	3.000cSt	50ml	OPTION	
#106440	4.000cSt	50ml	OPTION	
#106450	5.000cSt	50ml	INCLUDED	
#106460	6.000cSt	50ml	OPTION	
#106470	7.000cSt	50ml	OPTION	
#106480	8.000cSt	50ml	OPTION	
#106490	9.000cSt	50ml	OPTION	
#106510	10.000cSt	50ml	OPTION	

### SET-UP BOOK

DIFFERENTIAL OIL



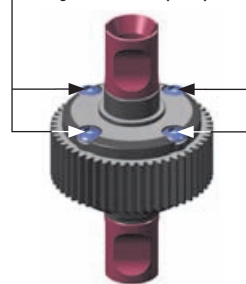
902258  
SH M2.5x8



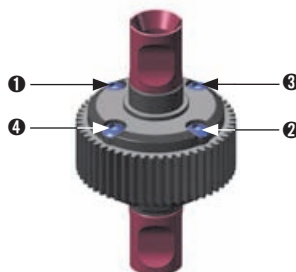
941014  
BB 10x15x4



Tighten the screws equally but **DO NOT** tighten them completely.

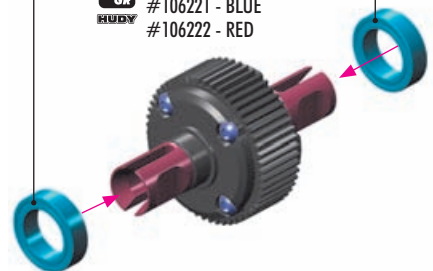


Finish tightening in this order.



Use HUDY Ball-Bearing Grease

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





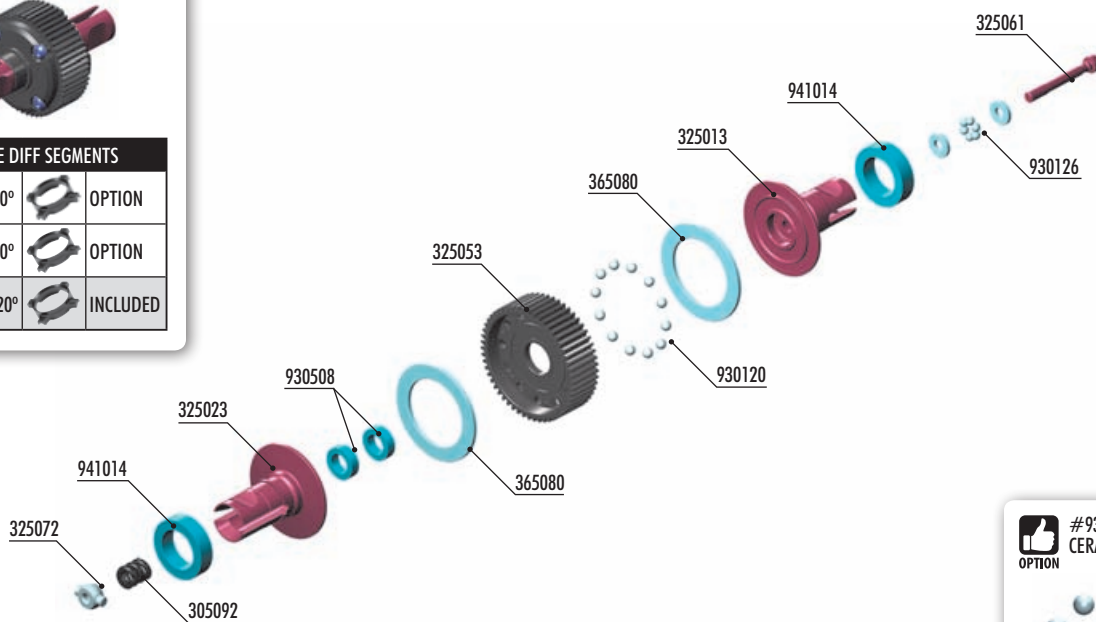
# 1. BALL DIFFERENTIAL

**DIRT**

#325100 XRAY XB2 ACTIVE DIFFERENTIAL - SET



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



**BAG**



- |        |   |        |   |
|--------|---|--------|---|
| 305092 | BALL DIFFERENTIAL SPRING  | 325072 | ALU BALL DIFFERENTIAL NUT                       |
| 325003 | BALL ADJUSTABLE DIFFERENTIAL - LCG - SET - HUDY SPRING STEEL™   | 365080 | DIFF WASHER 17 x 24.5 x 1 (2)                   |
| 325013 | BALL DIFFERENTIAL SHORT OUTPUT SHAFT - LCG - HUDY SPRING STEEL™ | 930120 | CARBIDE BALL 2.4MM FOR BALL DIFF (12)           |
| 325023 | BALL DIFFERENTIAL LONG OUTPUT SHAFT - LCG - HUDY SPRING STEEL™  | 930126 | CARBIDE BALL-BEARING AXIAL 2.6x6x1              |
| 325053 | COMPOSITE BALL DIFFERENTIAL GEAR 53T                            | 930508 | BALL-BEARING 5x8x2.5 STEEL SEALED - OIL (2)     |
| 325061 | SCREW FOR BALL DIFF ADJUSTMENT - SPRING STEEL™                  | 941014 | BALL-BEARING 10x15x4 RUBBER SEALED - GREASE (2) |



930126  
BA 2.6x6x1

2.0mm carbide balls (6x)



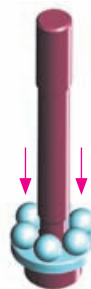
GRAPHITE GREASE  
(HUDY #106210)



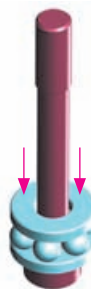
1



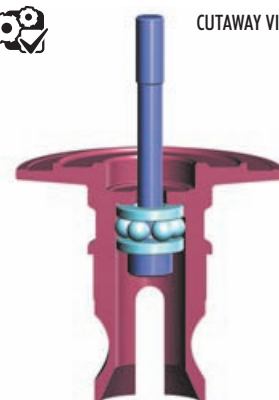
2



3



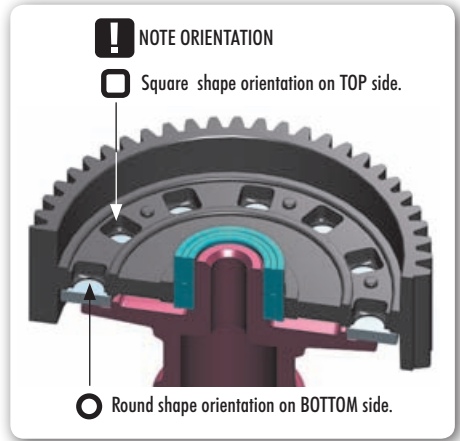
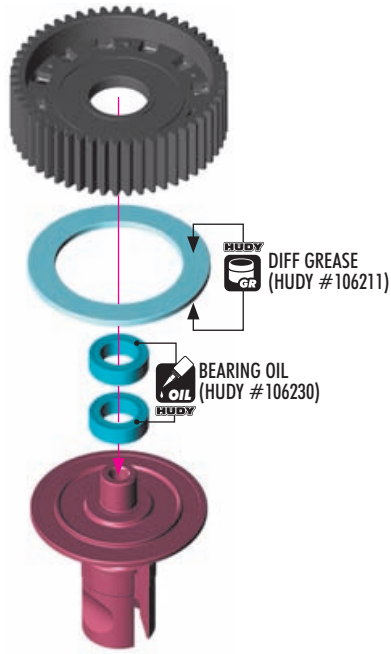
CUTAWAY VIEW



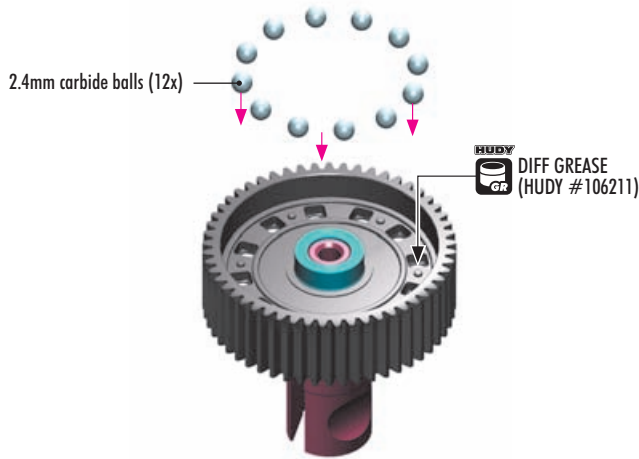
# 1. BALL DIFFERENTIAL



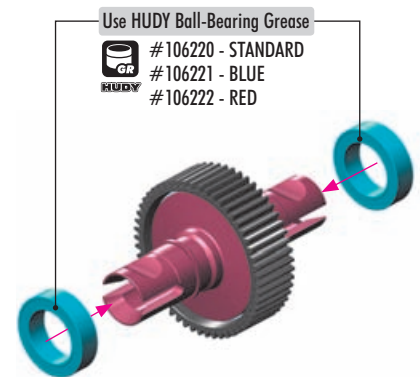
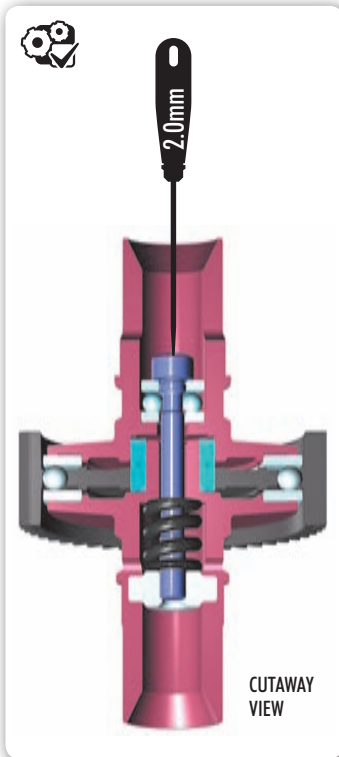
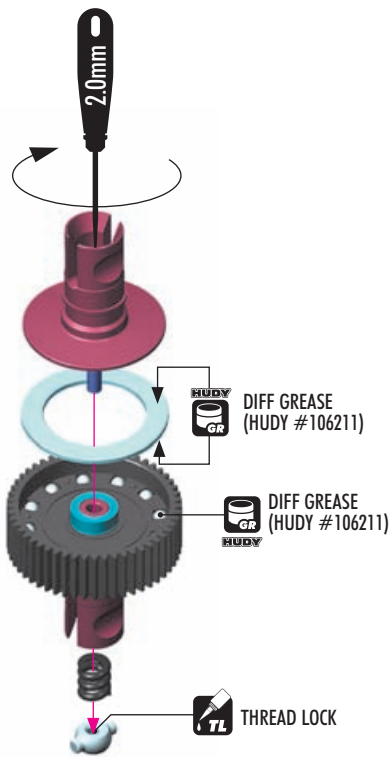
930508  
BB 5x8x2.5



930120  
B 2.4



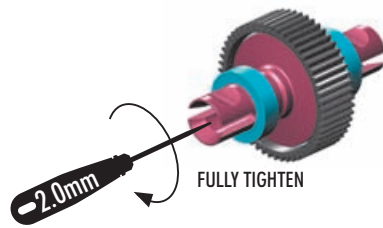
941014  
BB 10x15x4





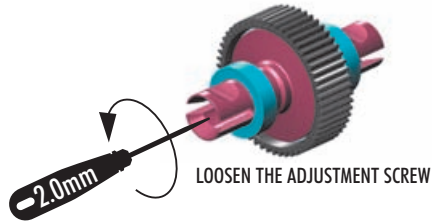
BEFORE RACING, follow these steps to properly break in the differential.

1

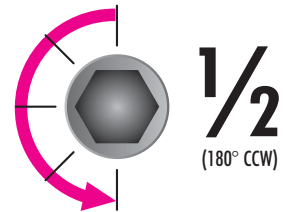


FULLY TIGHTEN

2 Loosen the adjustment screw 1/2 turn (180° CCW).

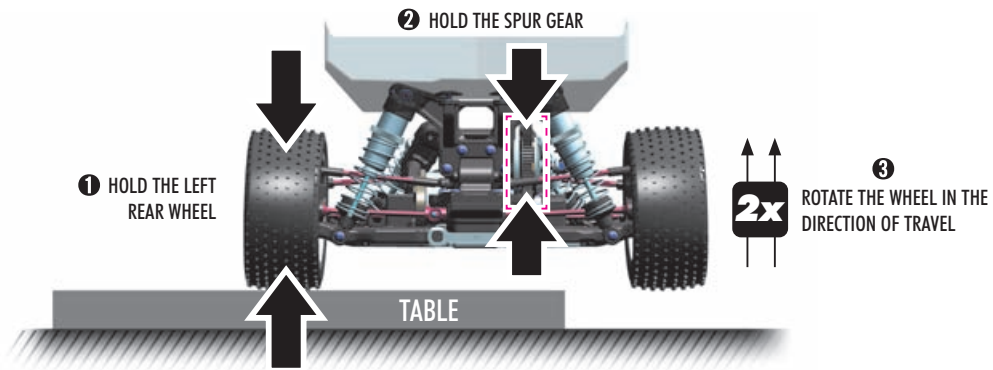


LOOSEN THE ADJUSTMENT SCREW



1/2  
(180° CCW)

3



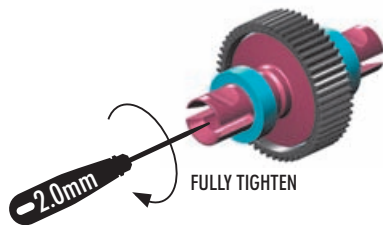
1 HOLD THE LEFT REAR WHEEL

2 HOLD THE SPUR GEAR

3 ROTATE THE WHEEL IN THE DIRECTION OF TRAVEL

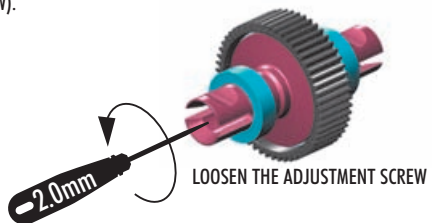
2x

4

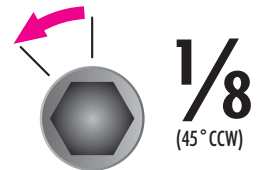


FULLY TIGHTEN

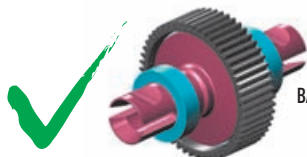
5 LOOSEN THE ADJUSTMENT SCREW 1/8 TURN (45° CCW).



LOOSEN THE ADJUSTMENT SCREW

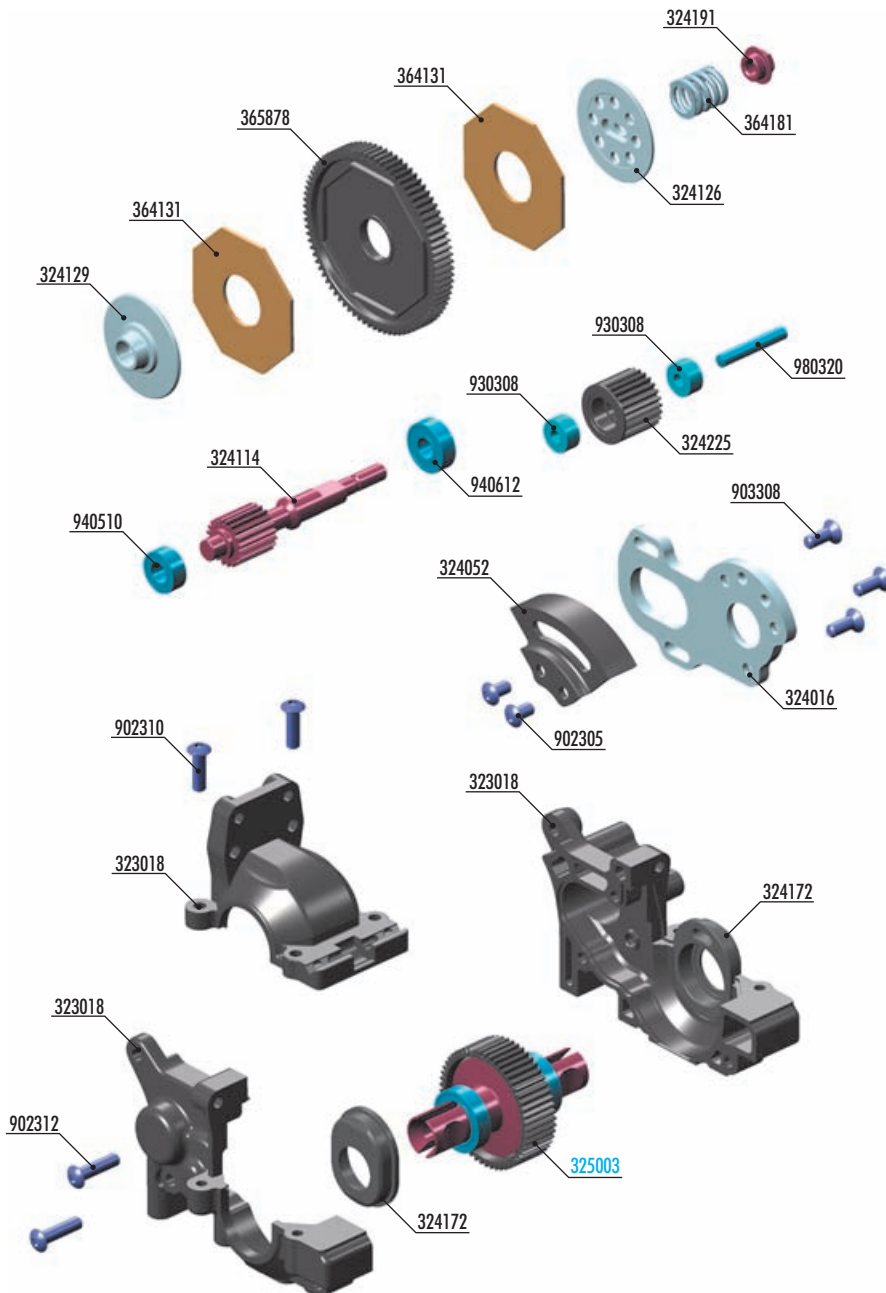


1/8  
(45° CCW)



BALL DIFFERENTIAL IS NOW READY





**#323018-G**  
REAR MOTOR GEAR BOX - LCG - GRAPHITE

OPTION

**324017**  
GRAPHITE MOTOR PLATE - LCG - 3.0MM

OPTION

**#980320-T**  
Titan Pin 3x20 (2)

OPTION

**SLIPPER CLUTCH SPUR GEARS**

#365875	75T / 48	OPTION	
#365878	78T / 48	INCLUDED	
#365881	81T / 48	OPTION	

**#324102**  
SOLID AXLE - LCG - LIGHTWEIGHT - SET

OPTION

**#324101**  
SLIPPER ELIMINATOR - SET  
(69T / 48 SPUR GEAR)

OPTION

**#325872**  
SLIPPER ELIMINATOR SPUR GEAR 72T / 48

OPTION

**BAG**

**02**

- 323018 COMPOSITE REAR MOTOR GEAR BOX - LCG - SET
- 324016 ALU MOTOR PLATE - LCG - SWISS 7075 T6
- 324052 COMPOSITE GEAR COVER - LCG
- 324114 ALU 2-PAD TOP SHAFT 20T - LCG - 7075 T6 - HARD COATED
- 324126 ALU 2-PAD SLIPPER CLUTCH PLATE - SHORT
- 324129 ALU 2-PAD SLIPPER CLUTCH PLATE WITH ADAPTER - LCG
- 324172 COMPOSITE ADJUSTMENT BALL-BEARING HUB (2)
- 324191 STEEL SLIPPER CLUTCH NUT - HUDY SPRING STEEL™
- 324225 COMPOSITE GEAR 25T - GRAPHITE
- 364131 SLIPPER CLUTCH PAD SLS - SOFT (3)
- 364181 SLIPPER CLUTCH SPRING C=45 - BLACK
- 365878 COMPOSITE 3-PAD SLIPPER CLUTCH SPUR GEAR 78T / 48

- 902305 HEX SCREW SH M3x5 (10)
- 902310 HEX SCREW SH M3x10 (10)
- 902312 HEX SCREW SH M3x12 (10)

- 903308 HEX SCREW SFH M3x8 (10)
- 930308 BALL-BEARING 3x8x4 STEEL SEALED - OIL (2)
- 940510 BALL-BEARING 5x10x4 RUBBER SEALED - OIL (2)
- 940612 BALL-BEARING 6x12x4 RUBBER SEALED - OIL (2)
- 980320 PIN 3x20 (10)

**325003 BALL ADJUSTABLE DIFFERENTIAL - LCG - SET - HUDY SPRING STEEL™**

**930308**  
BB 3x8x4

**940612**  
BB 6x12x4

**980320**  
P 3x20

**#324102**  
OPTION  
SOLID AXLE - LCG - LIGHTWEIGHT - SET

BEARING OIL (HUDY #106230)

Bearing with BLUE rubber covers

6x12x4mm

GRAPHITE GREASE (HUDY #106210)

BEARING OIL (HUDY #106230)

3x8x4mm

3x8x4mm

**NOTE ORIENTATION**

**#980320-T**  
OPTION  
Titan Pin 3x20 (2)

**902312**  
SH M3x12

**940510**  
BB 5x10x4

BEARING OIL (HUDY #106230)

Bearing with BLUE rubber covers

5x10x4mm

**#323018-G**  
OPTION  
REAR MOTOR GEAR BOX - LCG - GRAPHITE

**902310**  
SH M3x10

### DIFFERENTIAL HEIGHT ADJUSTMENT

HIGHEST  
3 dots

HIGHER  
2 dots

MIDDLE  
1 dots

1 dots  
MIDDLE

2 dots  
LOWER

2x  
3 dots  
LOWEST

INITIAL SETTING  
L=R

Dots must have same orientation on each side (dots up or down).  
**NOTE ORIENTATION**

**NOTE DIFF. ORIENTATION**

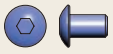
Ball differential must always be oriented with the screw on the right side. If the ball differential is oriented with the screw on the left side, the ball diff will become loose when the car is running.

GRAPHITE GREASE (HUDY #106210)

**GEAR RATIO** Internal Gear Ratio = **2.65**

# 2. REAR TRANSMISSION

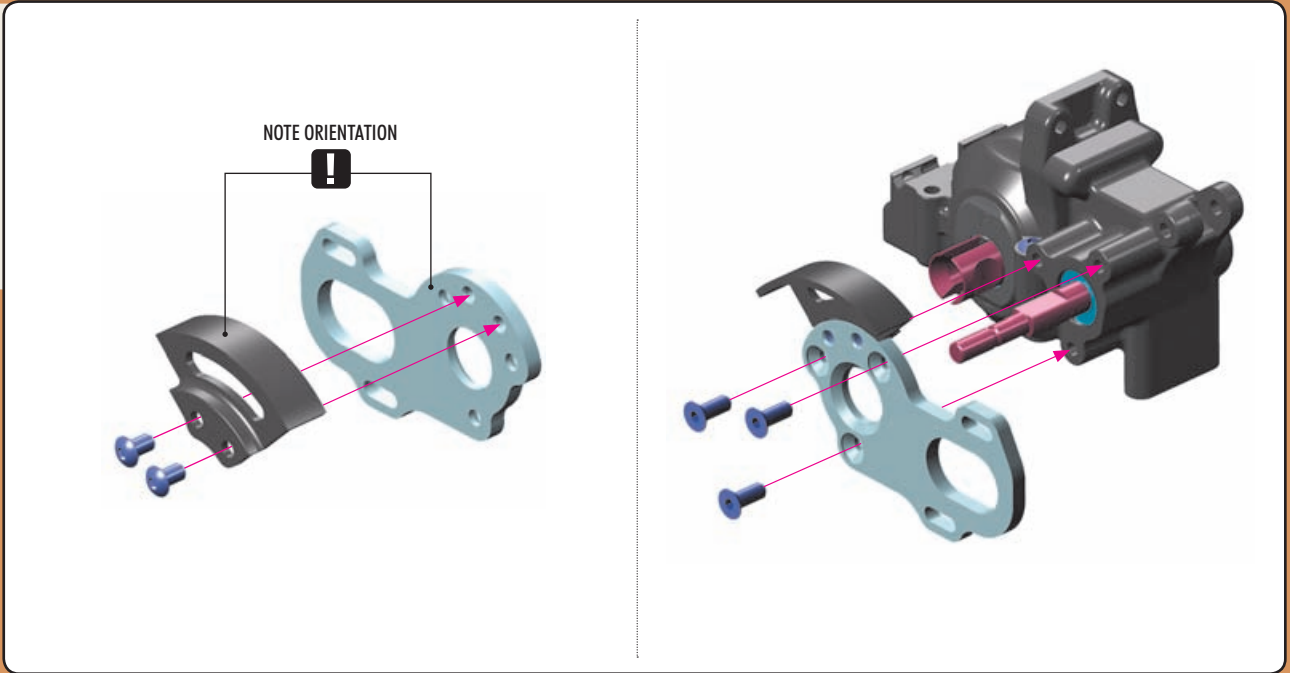
**DIRT**



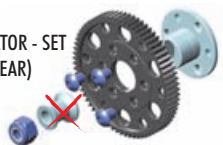
902305  
SH M3x5



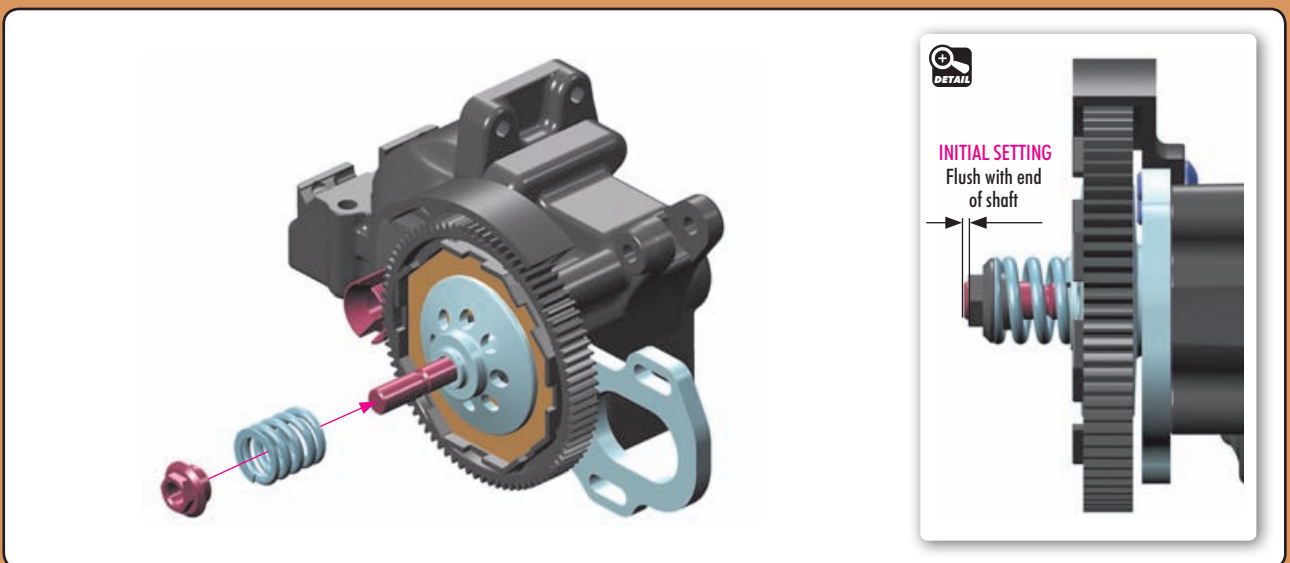
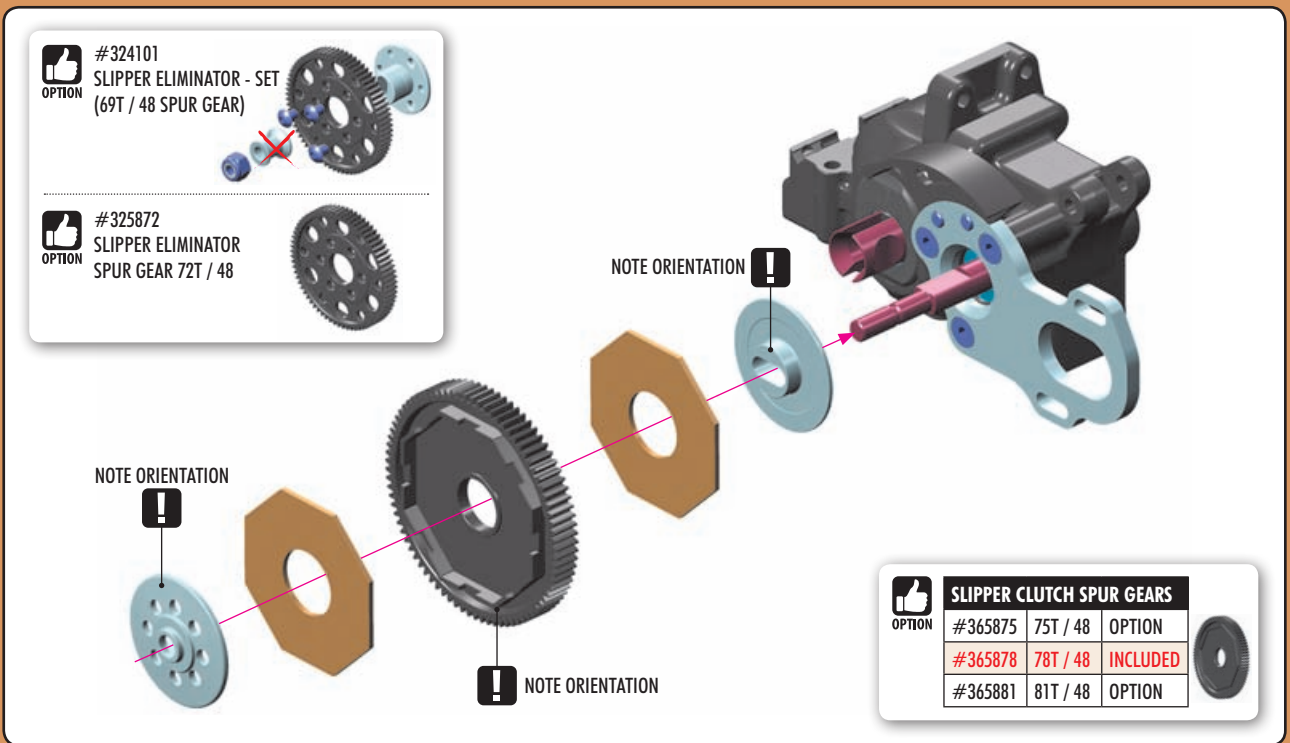
903308  
SFH M3x8



#324101  
SLIPPER ELIMINATOR - SET  
(69T / 48 SPUR GEAR)



#325872  
SLIPPER ELIMINATOR  
SPUR GEAR 72T / 48





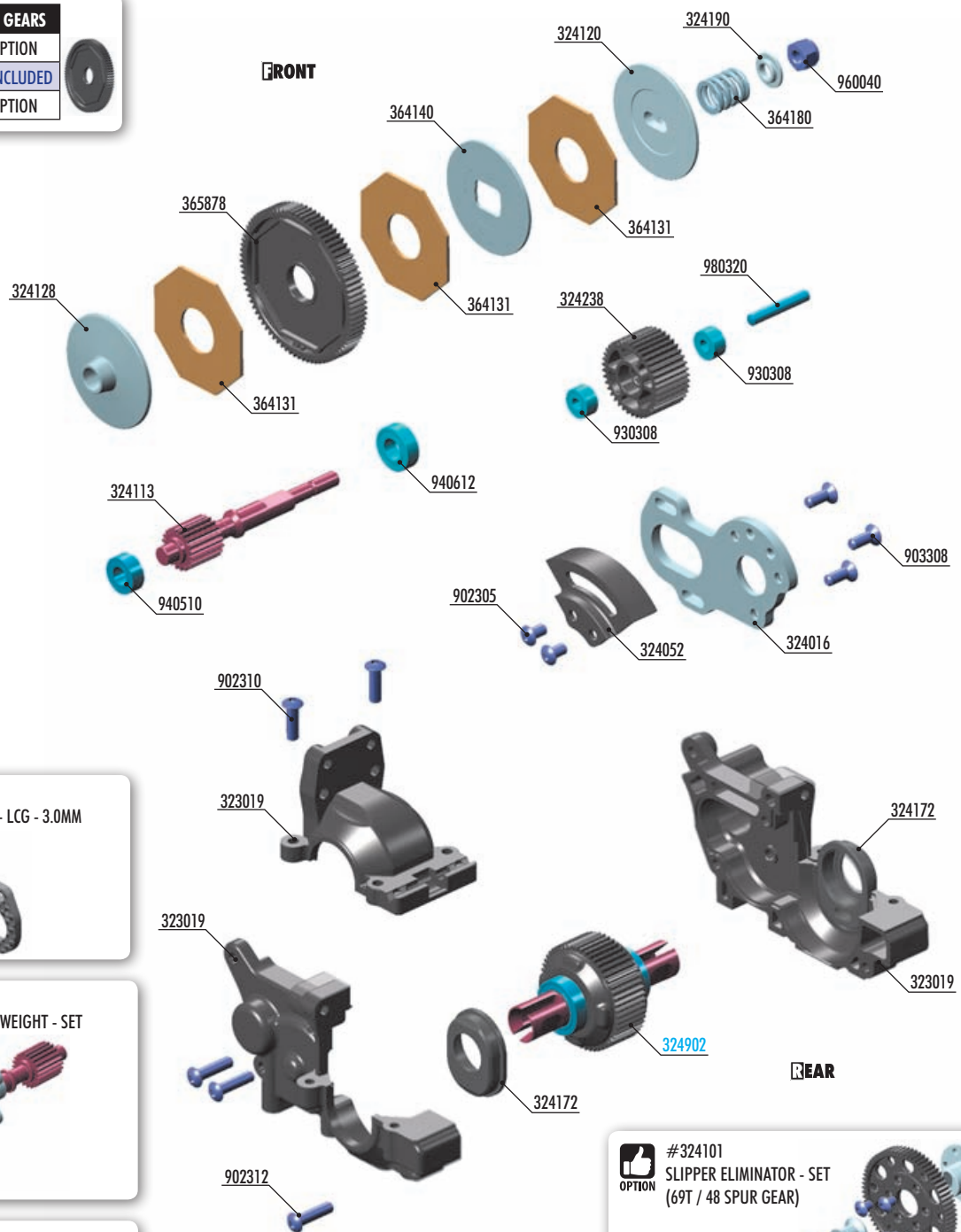
## 2. REAR TRANSMISSION

**CARPET**



### SLIPPER CLUTCH SPUR GEARS

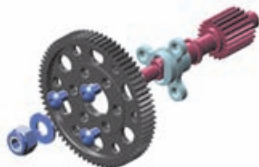
#365875	75T / 48	OPTION
#365878	78T / 48	INCLUDED
#365881	81T / 48	OPTION



**324017**  
GRAPHITE MOTOR PLATE - LCG - 3.0MM



**#324102**  
SOLID AXLE - LCG - LIGHTWEIGHT - SET



**#323019-G**  
FRONT MOTOR GEAR BOX - LCG - GRAPHITE



**#324101**  
SLIPPER ELIMINATOR - SET  
(69T / 48 SPUR GEAR)



**#325872**  
SLIPPER ELIMINATOR  
SPUR GEAR 72T / 48



**BAG**

**02**

323019 COMPOSITE FRONT MOTOR GEAR BOX - LCG - SET  
324016 ALU MOTOR PLATE - LCG - SWISS 7075 T6 (3MM)  
324052 COMPOSITE GEAR COVER - LCG  
324113 ALU 3-PAD TOP SHAFT 20T - LCG - SWISS 7075 T6 - HARD COATED  
324120 ALU 3-PAD SLIPPER CLUTCH PLATE - SWISS 7075 T6  
324128 ALU 3-PAD SLIPPER CLUTCH PLATE WITH ADAPTER - LCG  
324172 COMPOSITE ADJUSTMENT BALL-BEARING HUB (2)  
324190 ALU 3-PAD SLIPPER CLUTCH SHIM  
324238 COMPOSITE GEAR 38T - LCG - GRAPHITE  
364131 SLIPPER CLUTCH PAD "SLS" - V2 (2)  
364140 ALU 3-PAD SLIPPER CLUTCH PLATE DISC - 7075 T6  
364180 SLIPPER CLUTCH SPRING C=30 - BLACK  
365878 COMPOSITE 3-PAD SLIPPER CLUTCH SPUR GEAR 78T / 48

902305 HEX SCREW SH M3x5 (10)  
902310 HEX SCREW SH M3x10 (10)  
902312 HEX SCREW SH M3x12 (10)  
903308 HEX SCREW SFH M3x8 (10)  
930308 BALL-BEARING 3x8x4 STEEL SEALED - OIL (2)  
940510 BALL-BEARING 5x10x4 RUBBER SEALED - OIL (2)  
940612 BALL-BEARING 6x12x4 RUBBER SEALED - OIL (2)  
960040 NUT M4 (10)  
980320 PIN 3x20 (10)

**324902 GEAR DIFFERENTIAL - LCG - SET**

930308  
BB 3x8x4  
 940612  
BB 6x12x4  
 980320  
P 3x20

#980320-T  
Titan Pin 3x20 (2)  
 BEARING OIL (HUDY #106230)  
 6x12x4mm  
 3x8x4mm  
 GRAPHITE GREASE (HUDY #106210)  
 BEARING OIL (HUDY #106230)

902312  
SH M3x12  
 940510  
BB 5x10x4

BEARING OIL (HUDY #106230)  
 #323019-G  
FRONT MOTOR GEAR BOX - LCG - GRAPHITE  
 902310  
SH M3x10

902310  
SH M3x10

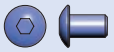
### DIFFERENTIAL HEIGHT ADJUSTMENT

<b>2x</b> HIGHEST	HIGHER	MIDDLE	1 dots	2 dots	3 dots
3 dots	2 dots	1 dots	MIDDLE	LOWER	LOWEST

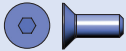
INITIAL SETTING  
 L=R  
 GRAPHITE GREASE (HUDY #106210)  
 NOTE ORIENTATION  
 L=R  
 "CLICK"  
 GEAR RATIO Internal Gear Ratio = 2.65

## 2. REAR TRANSMISSION

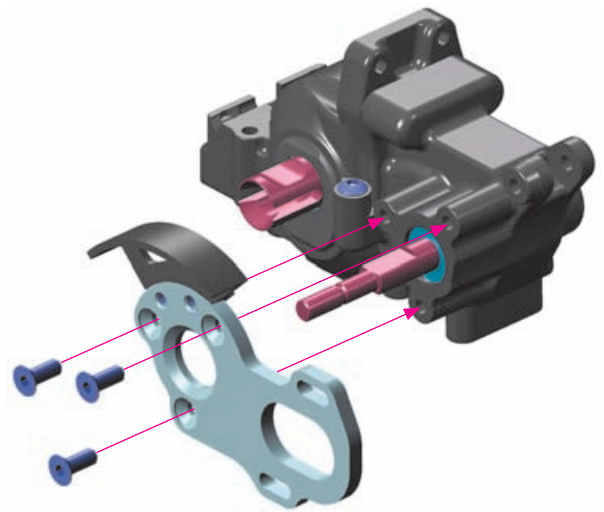
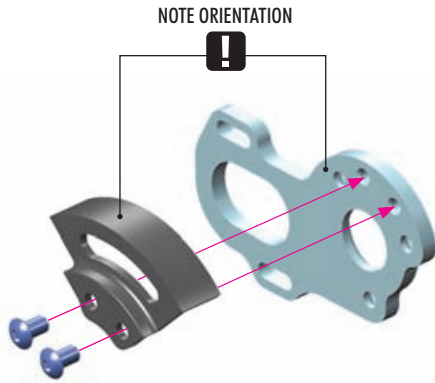
**CARPET**



902305  
SH M3x5



903308  
SFH M3x8

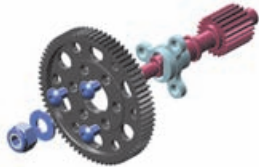


### SLIPPER CLUTCH SPUR GEARS

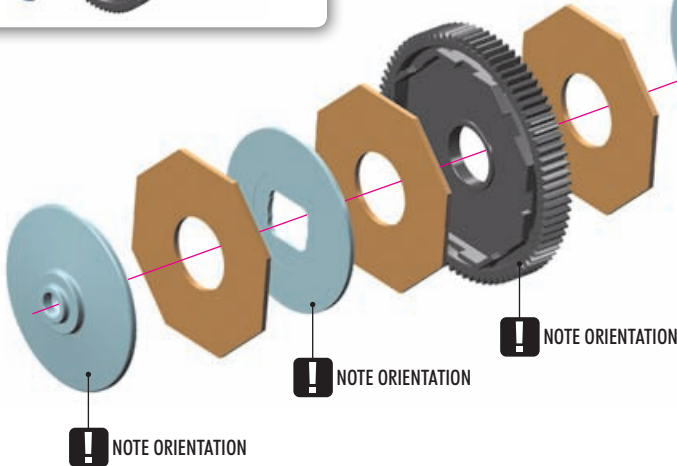
#365875	75T / 48	OPTION
#365878	78T / 48	INCLUDED
#365881	81T / 48	OPTION



#324102  
SOLID AXLE - LCG - LIGHTWEIGHT - SET



NOTE ORIENTATION



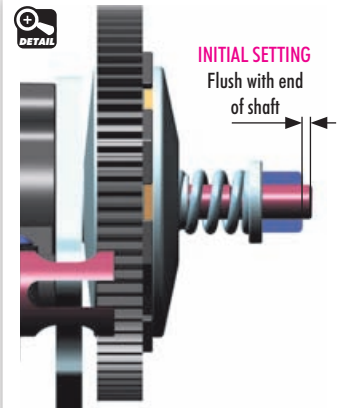
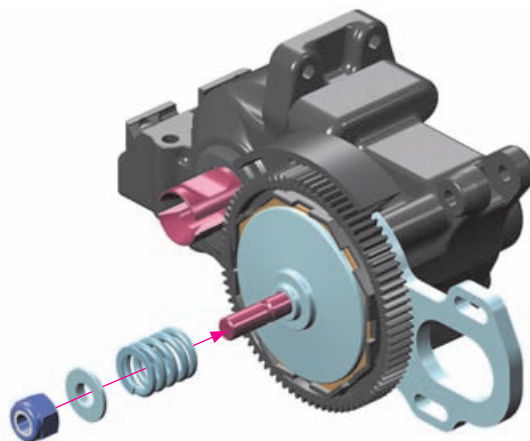
#324101  
SLIPPER ELIMINATOR - SET  
(69T / 48 SPUR GEAR)



#325872  
SLIPPER ELIMINATOR  
SPUR GEAR 72T / 48

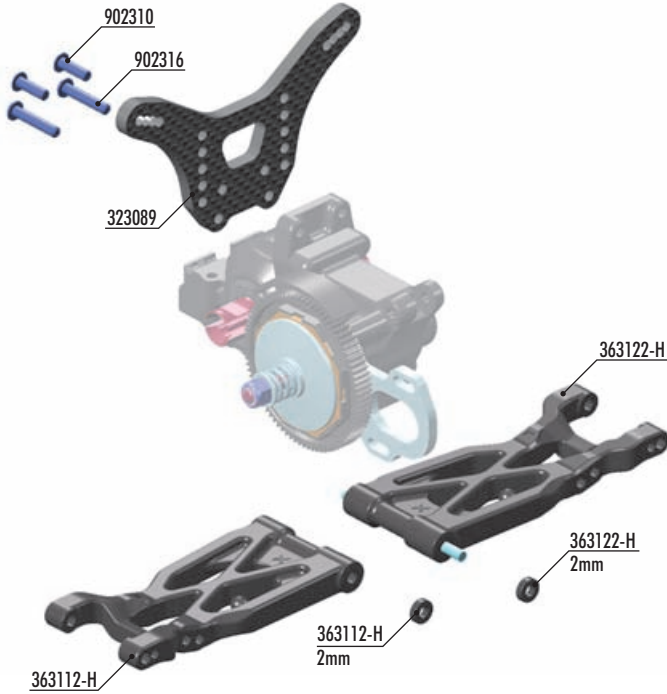


960040  
N M4

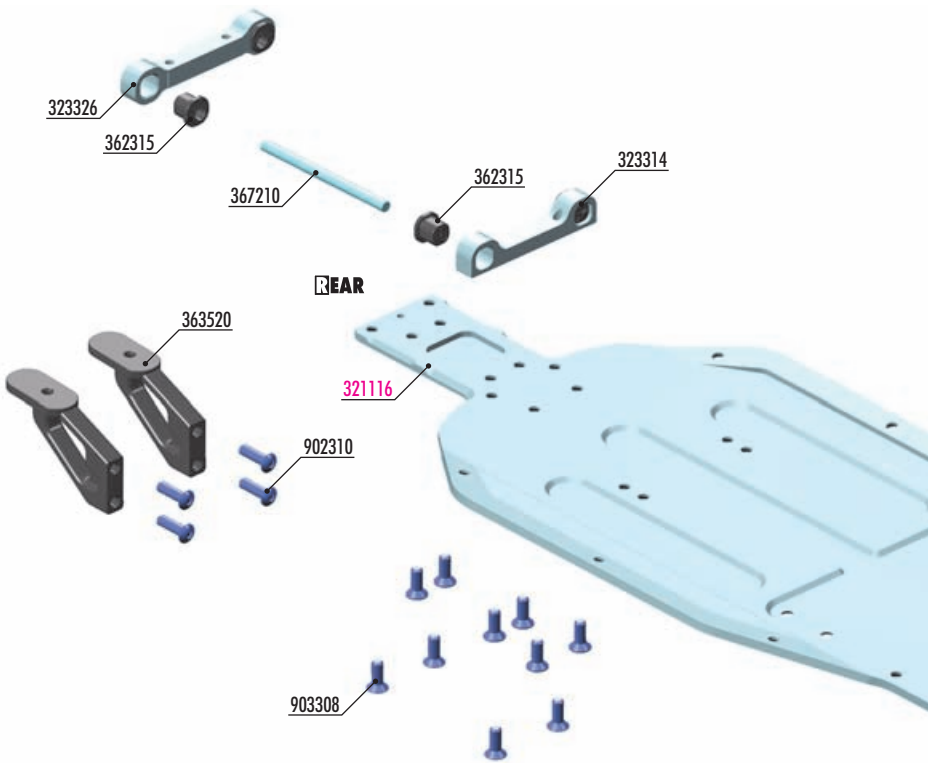
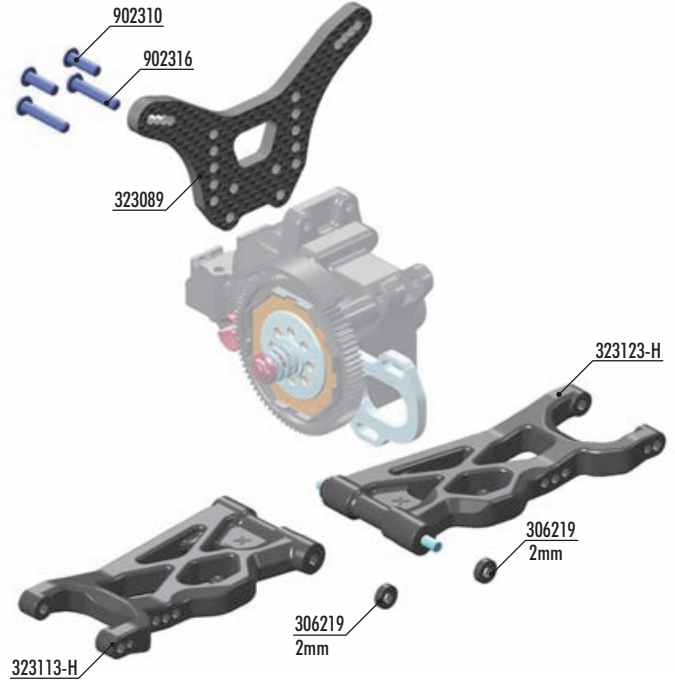




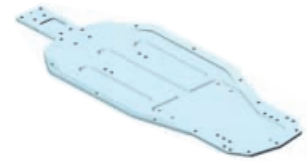
## GEAR BOX for CARPET FRONT MOTOR POSITION



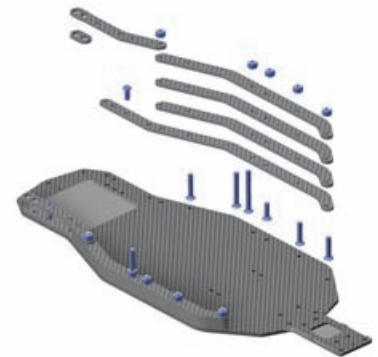
## GEAR BOX for DIRT REAR MOTOR POSITION



XB2 CHASSIS				
OPTION	#321116	MID	ALU	INCLUDED
	#321115	LONG	ALU	OPTION
	#321117	MID	GRAPHITE SET	OPTION



OPTION #321117  
XB2 GRAPHITE CHASSIS & SIDE BRACES - SET



**BAG**  
**03**

- 323089 XB2 GRAPHITE SHOCK TOWER - 4-HOLES - LCG - REAR - 4.0MM
- 323314 ALU REAR LOWER SUSP. HOLDER FOR BENT SIDES CHASSIS - FRONT
- 323326 ALU REAR LOWER SUSP. HOLDER FOR BENT SIDES CHASSIS - REAR
- 362315 ECCENTRIC BUSHING SET (2)
- 363520 REAR WING POST (2)
- 367210 REAR SUSPENSION PIVOT PIN (2)
- 902310 HEX SCREW SH M3x10 (10)
- 902316 HEX SCREW SH M3x16 (10)
- 903308 HEX SCREW SFH M3x8 (10)

321116 XB2'23 ALU CHASSIS WITH BENT SIDES - SWISS 7075 T6 - 2.5MM

**CARPET**

- 363112-H COMPOSITE SUSPENSION ARM REAR LOWER RIGHT - HARD
- 363122-H COMPOSITE SUSPENSION ARM REAR LOWER LEFT - HARD

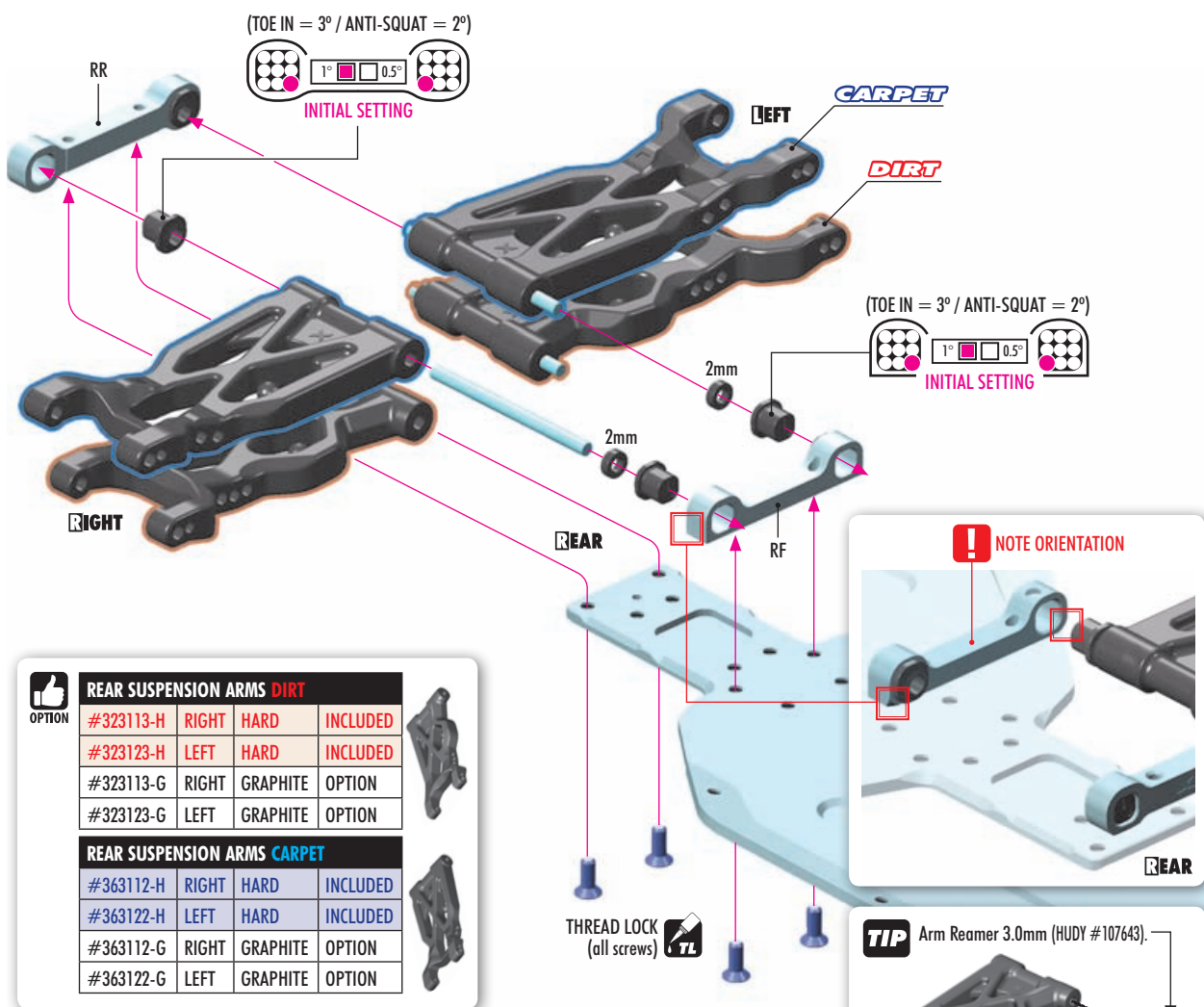
**DIRT**

- 306219 COMPOSITE SET OF SHIMS (4)
- 323113-H SUSPENSION ARM DISENGAGED REAR LOWER RIGHT - HARD
- 323123-H SUSPENSION ARM DISENGAGED REAR LOWER LEFT - HARD

**IO**  
From Rear Arm  
SHIM 3x6.5x2  
**CARPET**

**IO**  
306219  
SHIM 3x6x2  
**DIRT**

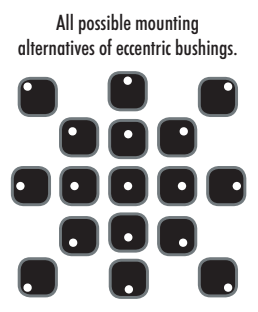
**903308**  
SFH M3x8



OPTION	REAR SUSPENSION ARMS DIRT		
#323113-H	RIGHT	HARD	INCLUDED
#323123-H	LEFT	HARD	INCLUDED
#323113-G	RIGHT	GRAPHITE	OPTION
#323123-G	LEFT	GRAPHITE	OPTION

REAR SUSPENSION ARMS CARPET			
#363112-H	RIGHT	HARD	INCLUDED
#363122-H	LEFT	HARD	INCLUDED
#363112-G	RIGHT	GRAPHITE	OPTION
#363122-G	LEFT	GRAPHITE	OPTION



**ECCENTRIC BUSHINGS HAVE TWO DIFFERENT OFFSETS FROM THE CENTER.**

Middle position = 0.5° or 0.375mm from center.

Outer position = 1° or 0.75mm from center.

**TIP** Arm Reamer 3.0mm (HUDY #107643).

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

Check for free movement.

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

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).

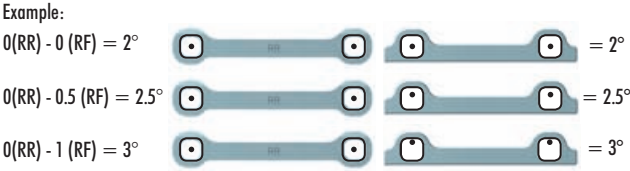
ANTI-SQUAT		
RR	RF	(°)
0	0	=2°
0	0.5	=3°
0	1	=1°
0.5	0	=3°
0.5	0.5	=2°
0.5	1	=4°
1	0	=1°
1	0.5	=2°
1	1	=0°

ROLL CENTER		
RR	RF	(mm)
0	0	=+0.75mm
0	0.5	=0mm
0	1	=-0.75mm

TRACK-WIDTH		
RR	RF	(mm)
0	0	=+1.5mm
0	0.5	=0mm
0	1	=-1.5mm

TOE-IN		
RR	RF	(°)
0	0	=3°
0	0.5	=4°
0	1	=2°
0.5	0	=2°
0.5	0.5	=3°
0.5	1	=1°
1	0	=4°
1	0.5	=5°
1	1	=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.



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

### 3. REAR SUSPENSION

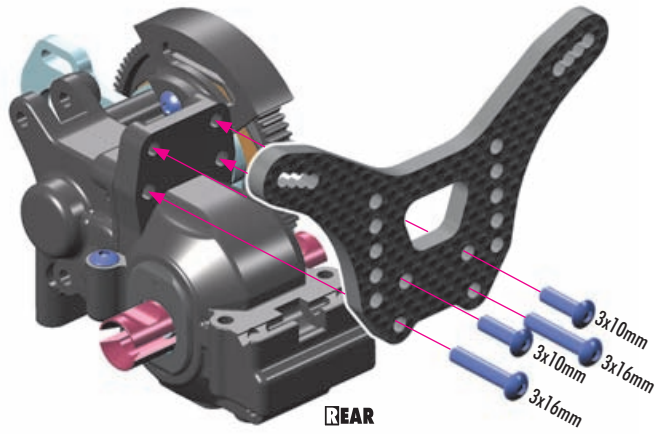
**CARPET DIRT**



902310  
SH M3x10



902316  
SH M3x16



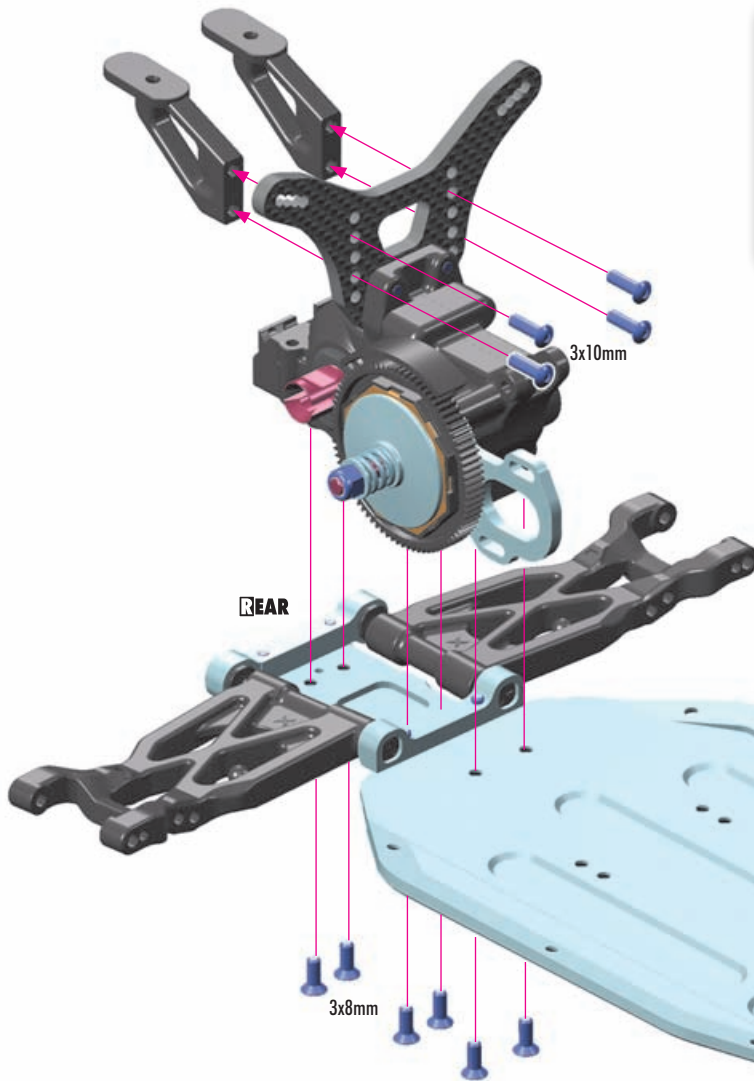
#323088  
ALU REAR SHOCK TOWER



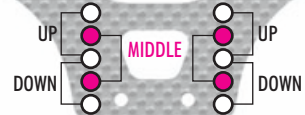
902310  
SH M3x10



903308  
SFH M3x8



WING POSITION  
INITIAL SETTING





# 3. REAR DRIVETRAIN

# CARPET DIRT



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	INCLUDED	
#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.

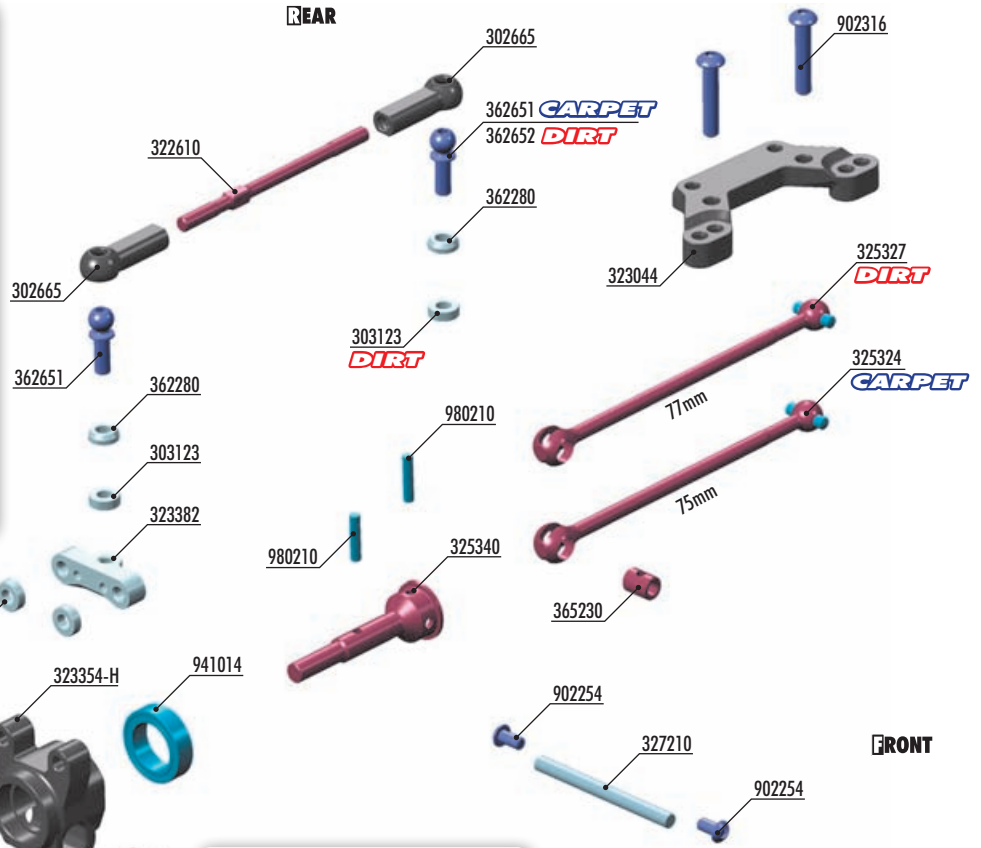
#### LESS OFFSET

Rear - more traction  
Front - more steering

#### MORE OFFSET

Rear - less traction  
Front - less steering

REAR



FRONT

CARPET  
DIRT



#305231  
DRIVE SHAFT COUPLING  
HUDY SPRING STEEL



#323381  
ALU REAR HUB PLATE FOR MULTI ADJUSTABLE  
UPRIGHT - SWISS 7075 T6



### REAR ROLL CENTER HOLDERS

#	MATERIAL	STATUS
#323044	HARD	INCLUDED
#323044-G	GRAPHITE	OPTION
#323043	ALU	OPTION



### REAR UPRIGHTS

#	MATERIAL	STATUS
#323354-H	HARD	INCLUDED
#323354-G	GRAPHITE	OPTION
#323355	ALU HIGH	OPTION
#323356	ALU LOW	OPTION



### XRAY BALL-BEARINGS

#	SIZE	LUBRICATION	STATUS
#940512	5x12x4mm	OIL	OPTION
#941015	10x15x4mm	OIL	OPTION
#940513	5x12x4mm	GREASE	INCLUDED
#941014	10x15x4mm	GREASE	INCLUDED



### ALU CONICAL SHIMS

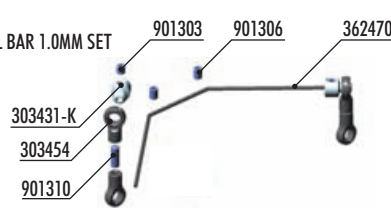
#	COLOR	STATUS
#362280	SILVER	INCLUDED
#362280-K	BLACK	OPTION
#362280-O	ORANGE	OPTION



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



#323400  
REAR ANTI-ROLL BAR 1.0MM SET



### ANTI-ROLL BARS

#362470	1.0mm
#362471	1.1mm
#362472	1.2mm
#362473	1.3mm

### BAG

03

- 302665 COMPOSITE BALL JOINT 4.9MM - CLOSED WITH HOLE (4)
- 303123 ALU SHIM 3x6x2.0MM (10)
- 306219 COMPOSITE SET OF SHIMS (4)
- 322610 ADJUSTABLE TURNBUCKLE 55MM M3 L/R - HUDY SPRING STEEL™ (2)
- 323044 COMPOSITE REAR ROLL CENTER HOLDER FOR ANTI-ROLL BAR
- 323354-H COMPOSITE UPRIGHT REAR - HARD
- 323382 ALU REAR HUB PLATE FOR MULTI ADJ. UPRIGHT - 1-HOLE - SWISS 7075 T6
- 325340 REAR DRIVE AXLE LB - HUDY SPRING STEEL™
- 327210 SUSPENSION PIVOT PIN (2)
- 362280 ALU CONICAL SHIM 3x6x2.0MM (10)
- 362316 ECCENTRIC BUSHING SET - OPEN (2)
- 362651 BALL END 4.9MM WITH THREAD 8MM (2)
- 365230 DRIVE SHAFT COUPLING - HUDY SPRING STEEL™
- 902205 HEX SCREW SH M2x5 (10)
- 902254 HEX SCREW SH M2.5x4 (10)

- 902312 HEX SCREW SH M3x12 (10)
- 902316 HEX SCREW SH M3x16 (10)
- 940513 BALL-BEARING 5x12x4 RUBBER SEALED - GREASE (2)
- 941014 BALL-BEARING 10x15x4 RUBBER SEALED - GREASE (2)
- 980210 PIN 2x9.8 (10)

### CARPET

- 325324 REAR DRIVE SHAFT 75MM WITH 2.5MM PIN - HUDY SPRING STEEL™
- 362651 BALL END 4.9MM WITH THREAD 8MM (2)
- 365360 ALU WHEEL HUB 12MM - OFFSET "+ 3.0MM" (2)

### DIRT

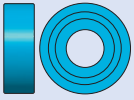
- 325327 REAR DRIVE SHAFT 77MM WITH 2.5MM PIN - HUDY SPRING STEEL™
- 362652 BALL END 4.9MM WITH THREAD 10MM (2)
- 365357 ALU WHEEL HUB 12MM - OFFSET "+ 2.25MM" (2)

# 3. REAR DRIVETRAIN

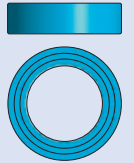
# CARPET DIRT



902205  
SH M2x5



940513  
BB 5x12x4

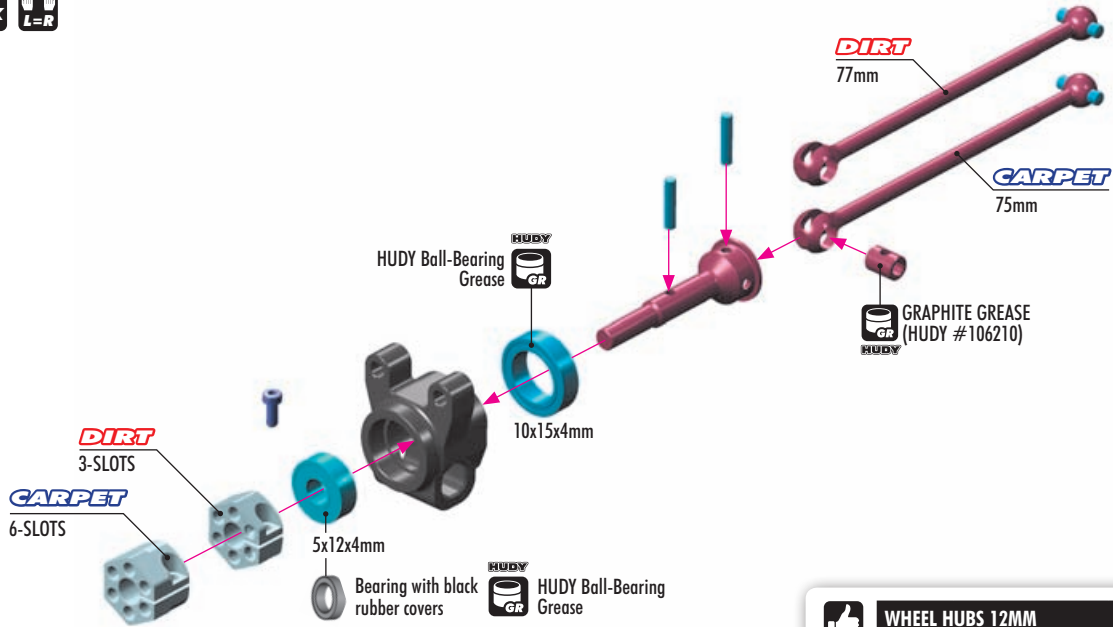


941014  
BB 10x15x4



980210  
P 2x10

2x L=R



**OPTION** #305231  
DRIVE SHAFT COUPLING  
HUDY SPRING STEEL

**OPTION** #325341  
REAR ADJUSTABLE DRIVE AXLE LB  
HUDY SPRING STEEL™

**OPTION** #325390  
ALU SHIM 10x12x2MM (2)

**OPTION**

XRAY BALL-BEARINGS				
#940512	5x12x4	OIL	OPTION	
#941015	10x15x4	OIL	OPTION	
#940513	5x12x4	GREASE	INCLUDED	
#941014	10x15x4	GREASE	INCLUDED	

**OPTION**

REAR UPRIGHTS		
#323354-H	HARD	INCLUDED
#323354-G	GRAPHITE	OPTION
#323355	ALU HIGH	OPTION
#323356	ALU LOW	OPTION

**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	INCLUDED
#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

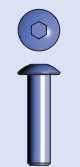
### OPTIONAL HEX HUB EFFECTS

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

**LESS OFFSET**      **MORE OFFSET**  
 Rear - more traction      Rear - less traction  
 Front - more steering      Front - less steering

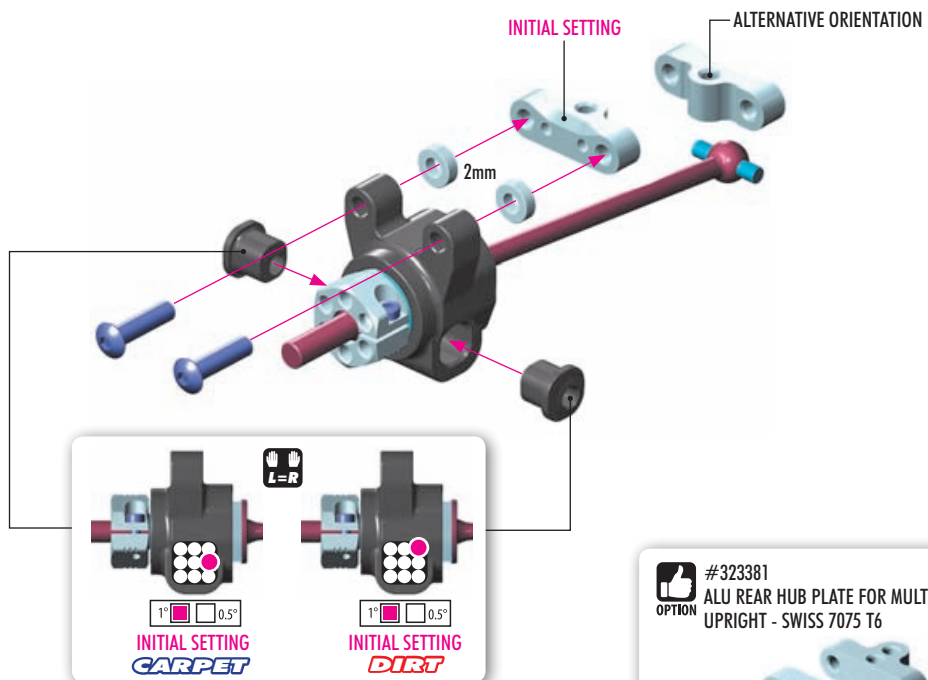


303123  
SHIM 3x6x2



902312  
SH M3x12

2x L=R



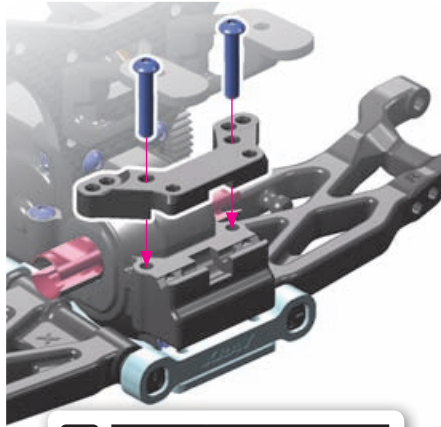
**OPTION** #323381  
ALU REAR HUB PLATE FOR MULTI ADJUSTABLE  
UPRIGHT - SWISS 7075 T6

### 3. REAR DRIVETRAIN

# CARPET DIRT

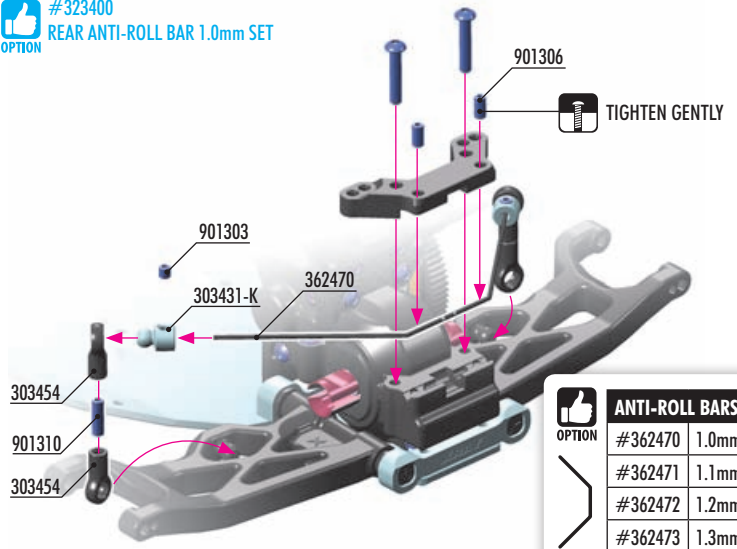


902316  
SH M3x16



OPTION	#323044	HARD	INCLUDED
	#323044-G	GRAPHITE	OPTION
	#323043	ALU	OPTION

#323400  
REAR ANTI-ROLL BAR 1.0mm SET



OPTION	ANTI-ROLL BARS	
	#362470	1.0mm
	#362471	1.1mm
	#362472	1.2mm
	#362473	1.3mm



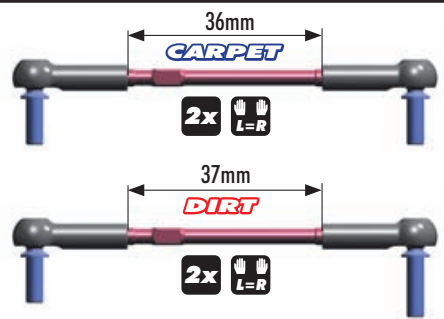
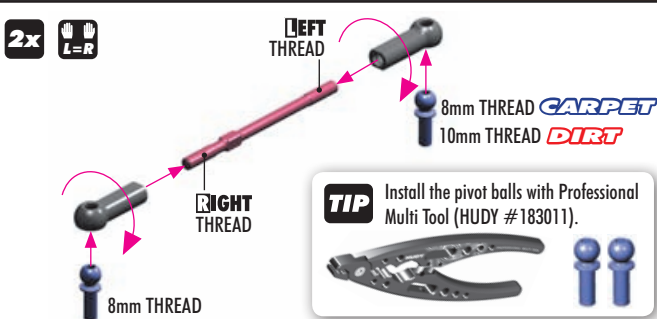
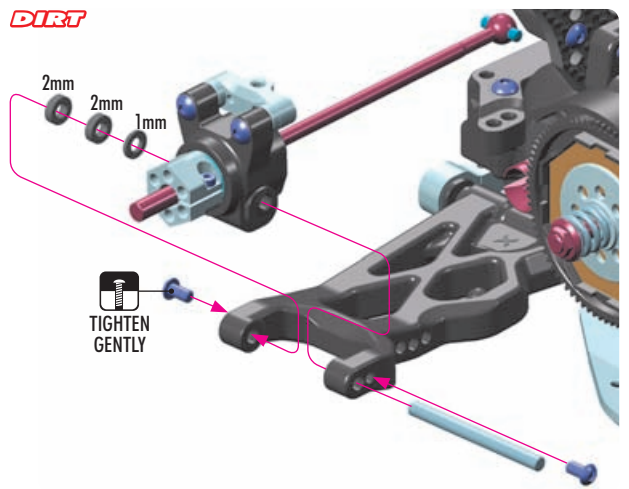
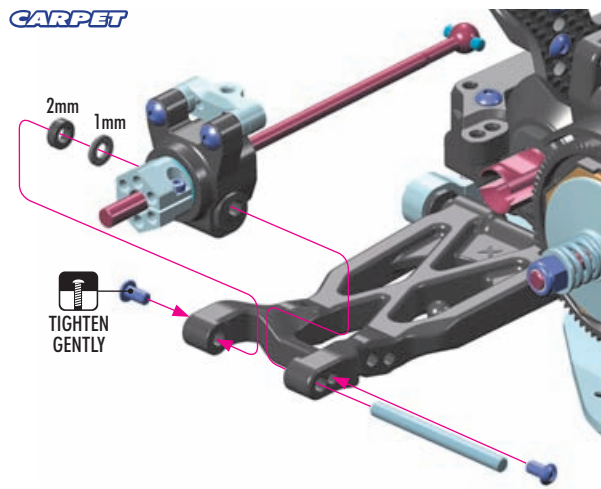
306219  
SHIM 3x6x1



306219  
SHIM 3x6x2



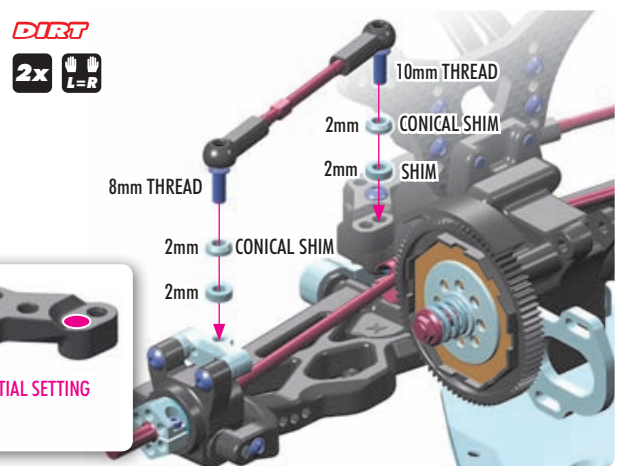
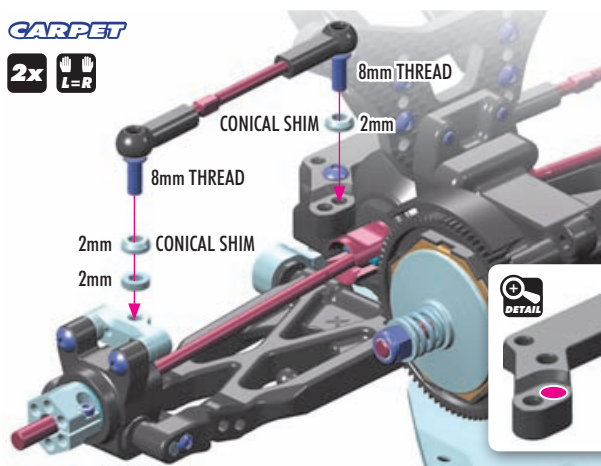
902254  
SH M2.5x4



303123  
SHIM 3x6x2



362280  
CON. SHIM 3x6x2







FRONT LOWER ARM MOUNTS		
#322310	ALU 26°	OPTION
#322311	COMPOSITE 26°	INCLUDED
#322312	BRASS 26°	OPTION
#322313	ALU 23°/29°	OPTION
#321211	SUSP. HOLDER BRACE 23°/29°	OPTION
#322314	BRASS 23°/29°	OPTION
#321211	SUSP. HOLDER BRACE 23°/29°	OPTION



#321250-G  
CHASSIS SIDE GUARDS FOR BENT SIDES  
CHASSIS L+R - GRAPHITE



### STEERING ARMS

#322514	HARD	INCLUDED
#322514-G	GRAPHITE	OPTION
#322513	ALU	OPTION



### STEERING PLATES

#322573	HARD	INCLUDED
#322573-G	GRAPHITE	OPTION
#322572	ALU	OPTION



### ALU NUTS M3

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

BAG

04

321250 COMPOSITE CHASSIS SIDE GUARDS FOR BENT SIDES CHASSIS L+R  
 321262-H COMPOSITE CHASSIS FRONT GUARD - HARD - V2  
 321264 COMPOSITE FRONT CHASSIS SIDE BRACE - SHORT (2)  
 321271 GRAPHITE CHASSIS SIDE GUARD BRACE FOR BENT SIDES CHASSIS (2)  
 322311 COMPOSITE FRONT LOWER SUSPENSION HOLDER  
 322514 COMPOSITE STEERING ARM WITH STEERING MOUNT HOLE (2)  
 322550 ALU SERVO SAVER PIVOT SHAFT (2)  
 322573 COMPOSITE STEERING PLATE - FRONT/REAR MOUNTING POSITIONS  
 322590 ALU SHIM 3x4.7x1.0MM (10)

902306 HEX SCREW SH M3x6 (10)  
 902308 HEX SCREW SH M3x8 (10)  
 902312 HEX SCREW SH M3x12 (10)

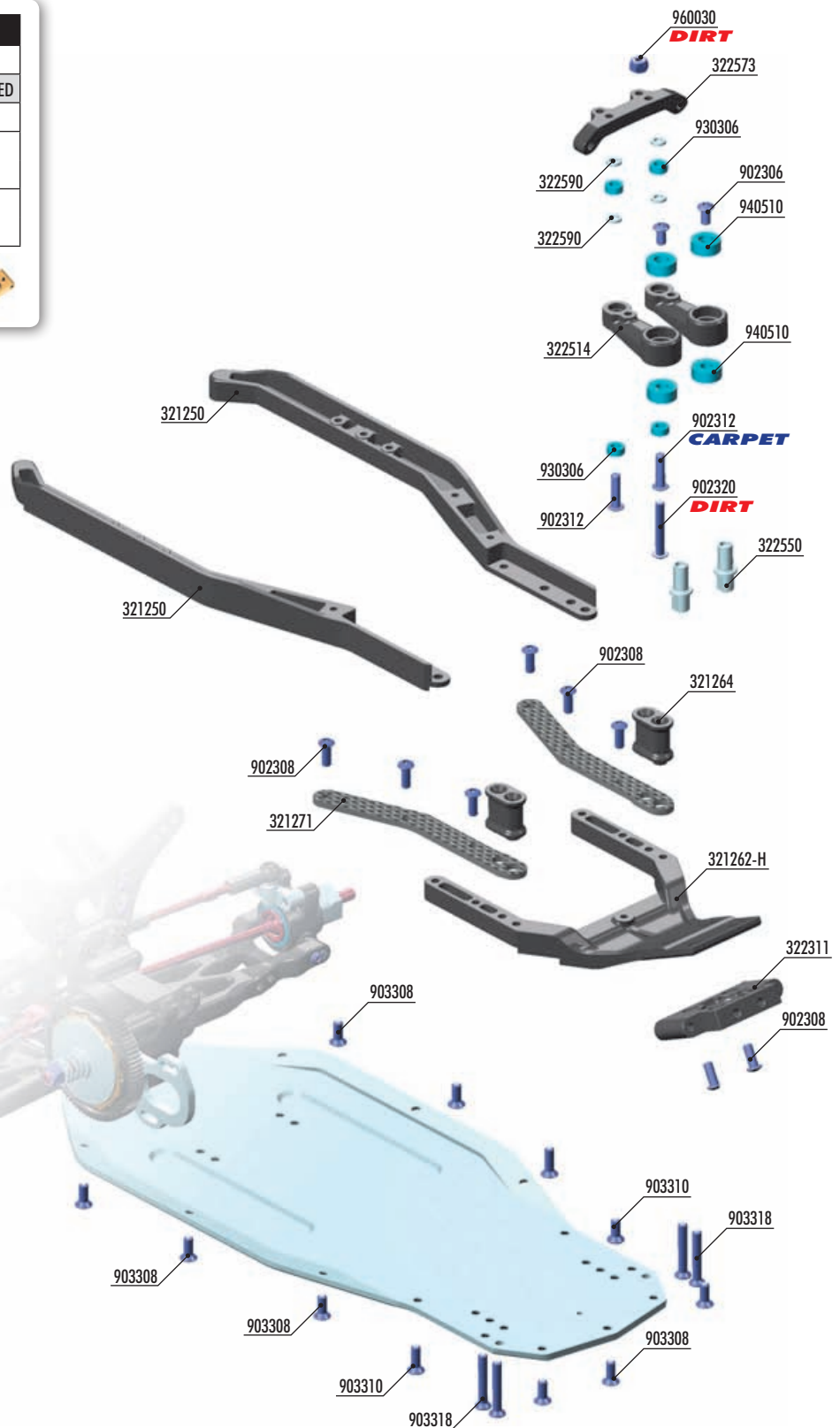
903308 HEX SCREW SFH M3x8 (10)  
 903310 HEX SCREW SFH M3x10 (10)  
 903318 HEX SCREW SFH M3x18 (10)  
 930306 BALL-BEARING 3x6x2.5 STEEL SEALED - OIL (2)  
 940510 BALL-BEARING 5x10x4 RUBBER SEALED - OIL (2)

CARPET

902312 HEX SCREW SH M3x12 (10)

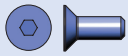
DIRT

902320 HEX SCREW SH M3x20 (10)  
 960030 NUT M3 (10)

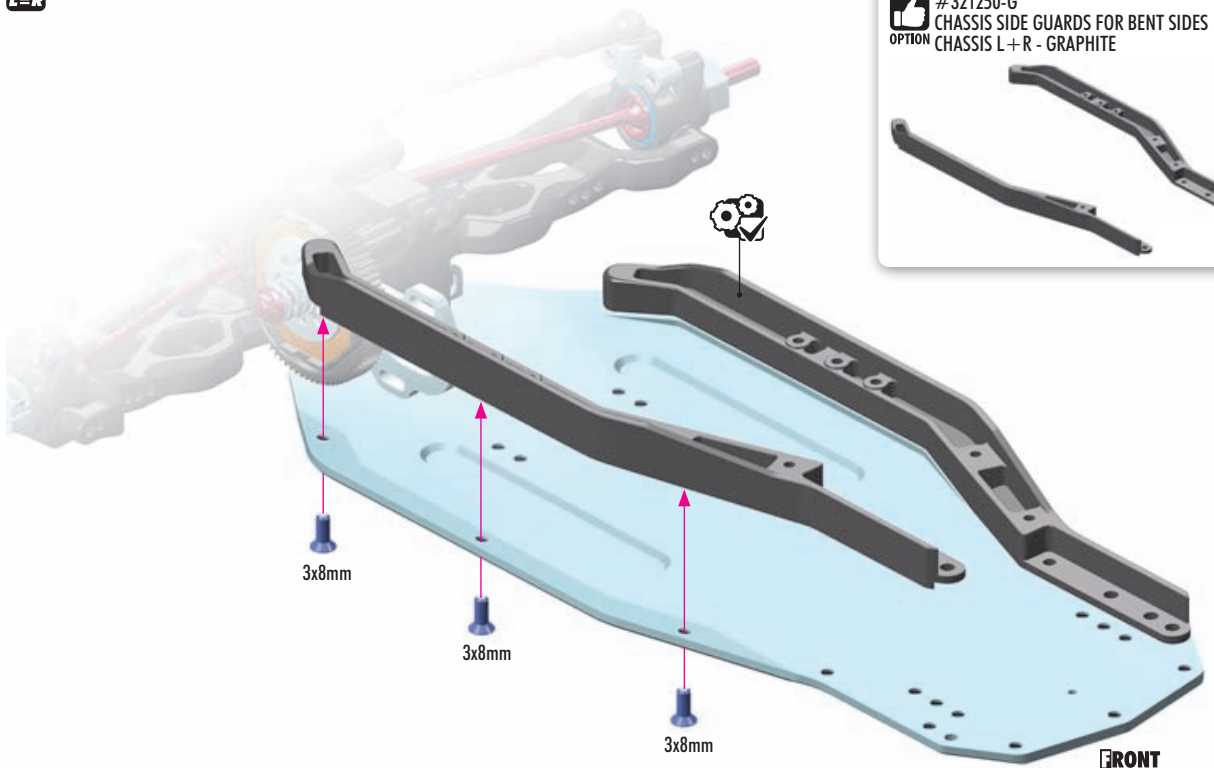


# 4. FRONT ASSEMBLY

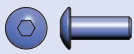
# CARPET DIRT



903308  
SFH M3x8



#321250-G  
CHASSIS SIDE GUARDS FOR BENT SIDES  
OPTION CHASSIS L+R - GRAPHITE



902308  
SH M3x8



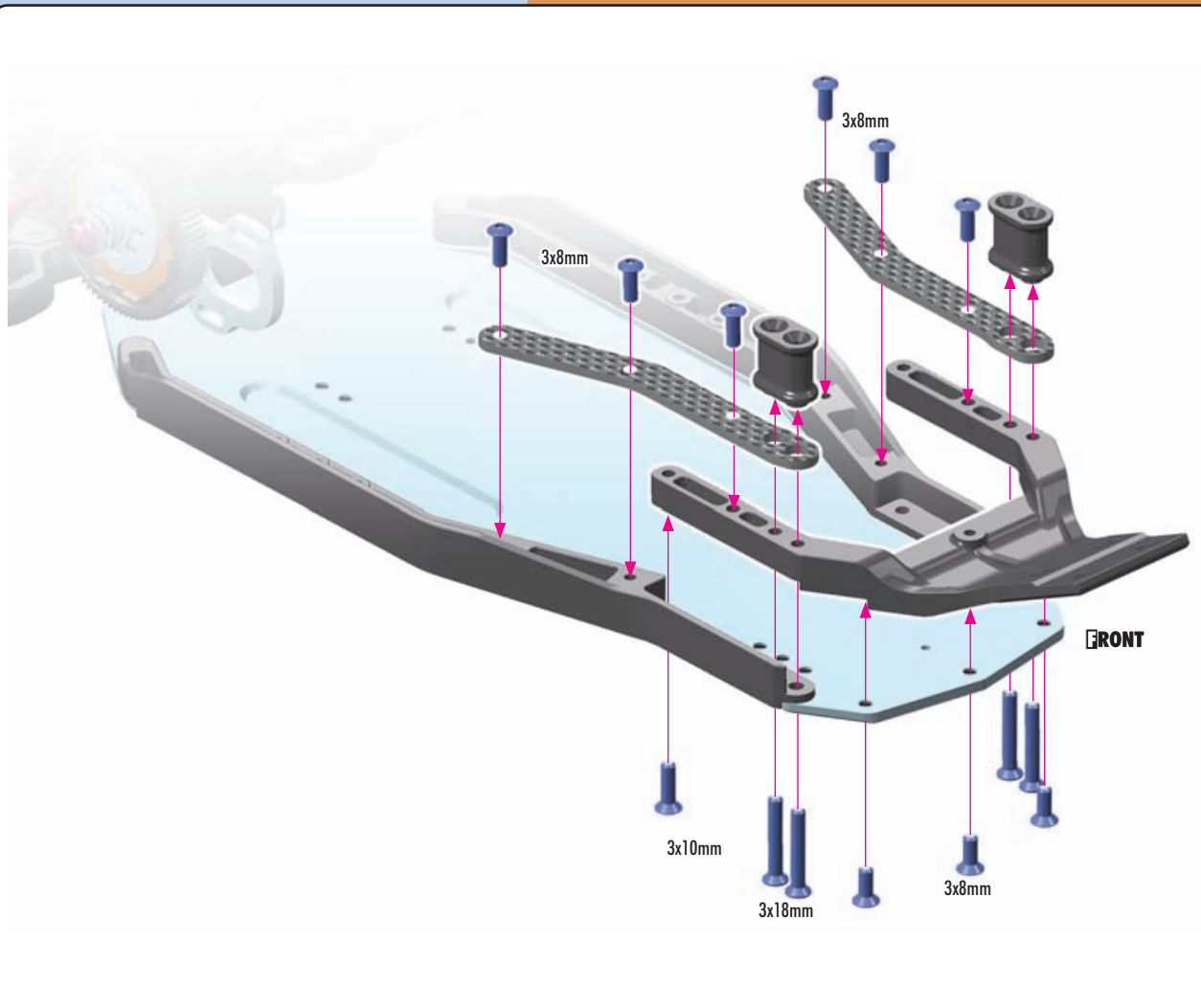
903308  
SFH M3x8



903310  
SFH M3x10



903318  
SFH M3x18









XRAY BALL-BEARINGS			
#940510	5x10x4	OIL	OPTION
#359050	5x10x4	GREASE	INCLUDED



STEERING BLOCKS		
#322250-M	MEDIUM	OPTION
#322250-H	HARD	INCLUDED
#322250-G	GRAPHITE	OPTION



FRONT LSM SUSPENSION ARMS			
#322113-H	RIGHT	HARD	INCLUDED
#322123-H	LEFT	HARD	INCLUDED
#322113-G	RIGHT	GRAPHITE	OPTION
#322123-G	LEFT	GRAPHITE	OPTION



FRONT ROLL CENTER HOLDERS		
#322044-H	HARD	INCLUDED
#322043	ALU	OPTION



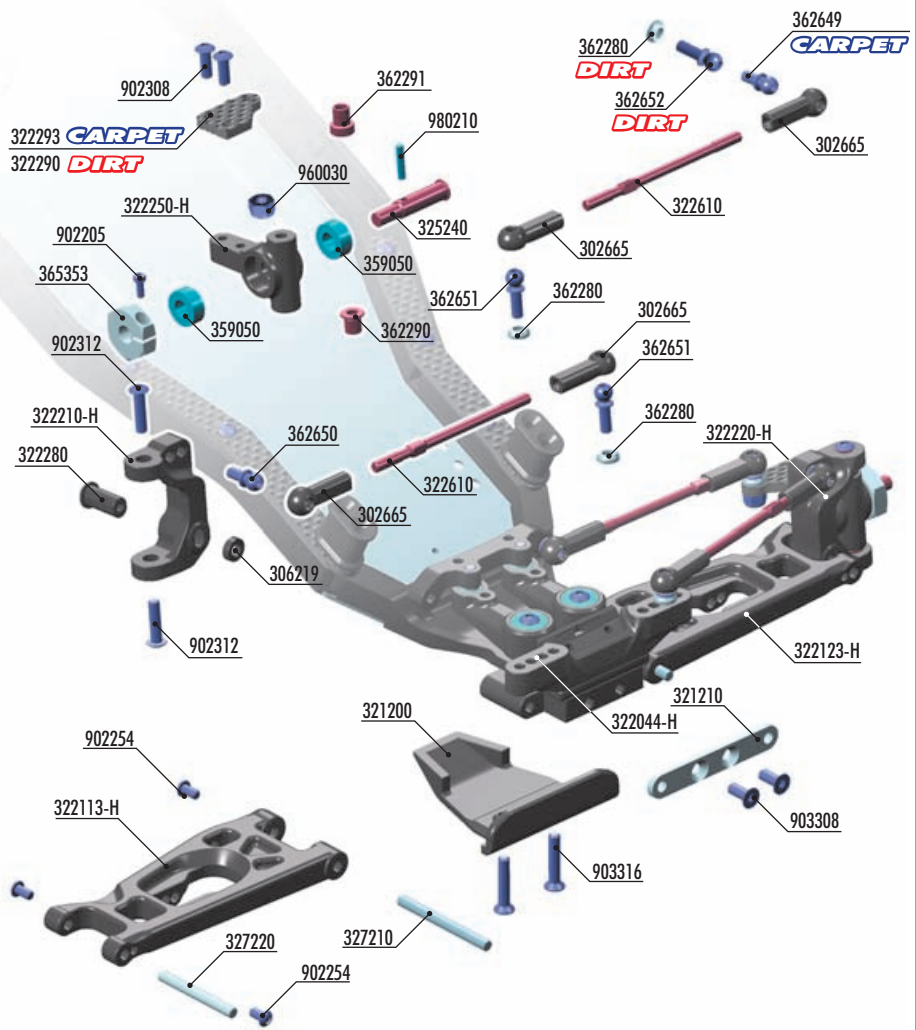
STEERING BLOCK EXTENSION		
#322290	2 SLOTS	INCLUDED
#322291	1 SLOT	OPTION
#322292	0 SLOTS	OPTION
#322293	3 SLOTS	INCLUDED



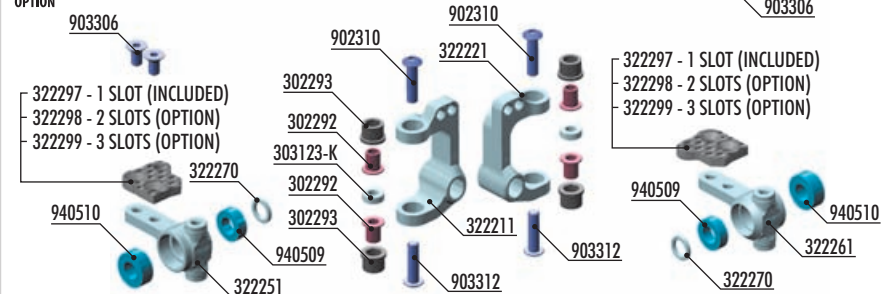
C-HUBS			
#322210-M	RIGHT	MEDIUM	OPTION
#322210-H	RIGHT	HARD	INCLUDED
#322210-G	RIGHT	GRAPHITE	OPTION
#322220-M	LEFT	MEDIUM	OPTION
#322220-H	LEFT	HARD	INCLUDED
#322220-G	LEFT	GRAPHITE	OPTION



WHEEL HEX 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



#320903 XB2 ALU STEERING BLOCKS & C-HUBS - SET



### BAG

05

- 302665 COMPOSITE BALL JOINT 4.9MM - CLOSED WITH HOLE (4)
- 306219 COMPOSITE SET OF SERVO SHIMS (4)
- 321200 COMPOSITE FRONT BUMPER
- 321210 ALU SUSPENSION HOLDER BRACE - SWISS 7075 T6 (3MM)
- 322044-H COMPOSITE FRONT ROLL-CENTER HOLDER - WIDE - HARD
- 322113-H SUSP. ARM FRONT - LOW SHOCK MOUNTING - LOWER RIGHT - HARD
- 322123-H SUSP. ARM FRONT - LOW SHOCK MOUNTING - LOWER LEFT - HARD
- 322210-H COMPOSITE C-HUB 0° DEG. RIGHT - HARD
- 322220-H COMPOSITE C-HUB 0° DEG. LEFT - HARD
- 322250-H COMPOSITE STEERING BLOCK - HARD
- 322280 COMPOSITE CASTER ECCENTRIC BUSHING (2+2+2)
- 322610 ADJUSTABLE TURNBUCKLE 55MM M3 L/R - HUDY SPRING STEEL™ (2)
- 325240 FRONT DRIVE AXLE - HUDY SPRING STEEL™
- 327210 FRONT SUSPENSION PIVOT PIN (2)
- 327220 FRONT ARM PIVOT PIN (2)
- 362280 ALU CONICAL SHIM 3x6x2.0MM (10)
- 362290 STEEL STEERING BUSHING - SHORT (2)
- 362291 STEEL STEERING BUSHING - LONG (2)
- 362650 BALL END 4.9MM WITH THREAD 6MM (2)
- 362651 BALL END 4.9MM WITH THREAD 8MM (2)

- 365353 ALU WHEEL HUB 12MM (2)
- 359050 BALL-BEARING 5x10x4 STEEL SEALED - GREASE (2)
- 902205 HEX SCREW SH M2x5 (10)
- 902254 HEX SCREW SH M2.5x4 (10)
- 902308 HEX SCREW SH M3x8 (10)
- 902312 HEX SCREW SH M3x12 (10)
- 903308 HEX SCREW SFH M3x8 (10)
- 903316 HEX SCREW SFH M3x16 (10)
- 960030 NUT M3 (10)
- 980210 PIN 2x9.8 (10)

### CARPET

- 322293 GRAPHITE EXTENSION FOR STEERING BLOCK (2) - 3 SLOTS
- 362649 BALL END 4.9MM WITH THREAD 5MM (2)

### DIRT

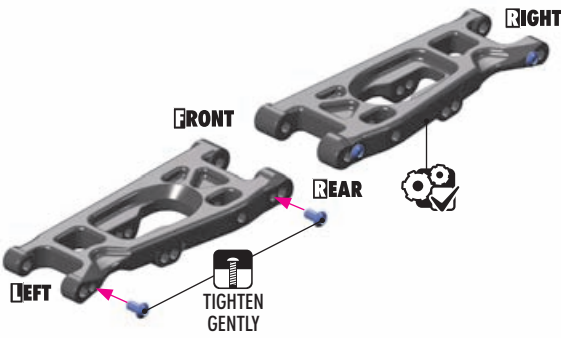
- 322290 GRAPHITE EXTENSION FOR STEERING BLOCK - 2 SLOTS (2)
- 362280 ALU CONICAL SHIM 3x6x2.0MM (10)
- 362652 BALL END 4.9MM WITH THREAD 10MM (2)

# 5. FRONT SUSPENSION

# CARPET DIRT



902254  
SH M2.5x4



### FRONT LSM SUSPENSION ARMS

#322113-H	RIGHT	HARD	INCLUDED
#322123-H	LEFT	HARD	INCLUDED
#322113-G	RIGHT	GRAPHITE	OPTION
#322123-G	LEFT	GRAPHITE	OPTION

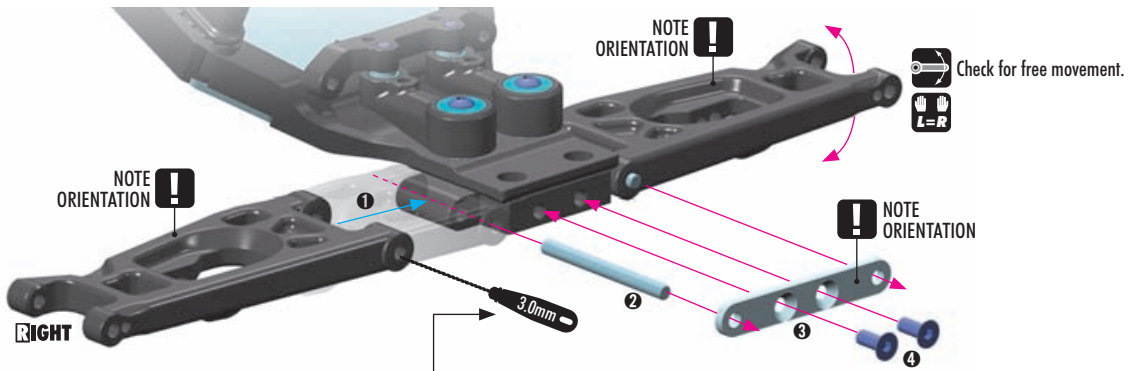


### FRONT SUSPENSION ARMS

#322110-M	MEDIUM	OPTION
#322110-H	HARD	OPTION
#322110-G	GRAPHITE	OPTION



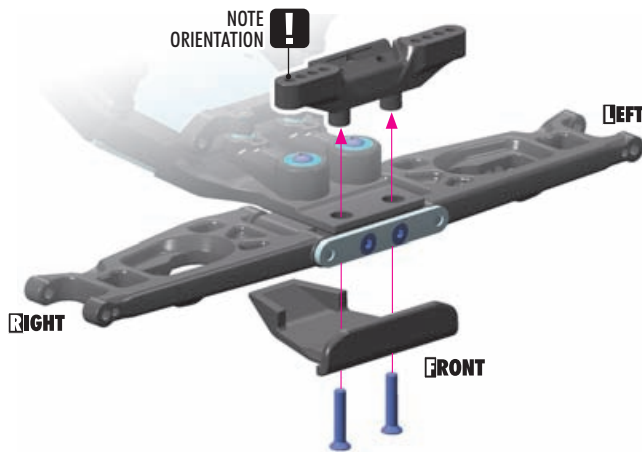
903308  
SFH M3x8



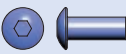
Arm Reamer 3.0mm (HUDY #107643). **TIP** If the suspension arm does not move freely use a HUDY Arm Reamer to size the holes of the arms.



903316  
SFH M3x16



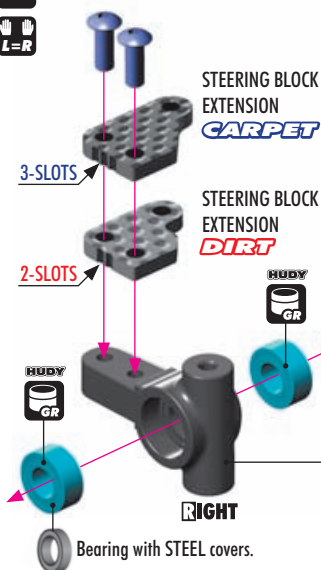
#322043  
ALU FRONT ROLL-CENTER HOLDER FOR ANTI-ROLL BAR - WIDE



902308  
SH M3x8



940510  
BB 5x10x4



#320903  
XB2 ALU STEERING BLOCKS & C-HUBS - SET



### STEERING BLOCK EXTENSIONS

#322293	3 SLOTS	INCLUDED	CARPET
#322290	2 SLOTS	INCLUDED	DIRT
#322291	1 SLOT	OPTION	
#322292	0 SLOTS	OPTION	

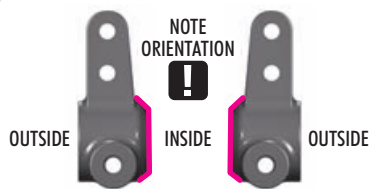
3 SLOTS - Increased steering angle which increases steering in slow corners.  
 2 SLOTS - Turns outside wheels less, easier to drive, less aggressive.  
 1 SLOT - Between 2 and 0.  
 0 SLOTS - Most aggressive steering, recommended for very technical small tracks.



### STEERING BLOCKS

#322250-M	MEDIUM	OPTION
#322250-H	HARD	INCLUDED
#322250-G	GRAPHITE	OPTION

MEDIUM - More steering on low traction.  
 HARD - More free in corner on high grip.  
 GRAPHITE - Less stopping in corner on high traction.

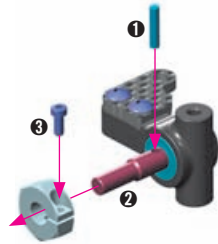


# 5. FRONT SUSPENSION

# CARPET DIRT

- 902205 SH M2x5
- 981210 P 2x10

2x L=R



OPTION

WHEEL HEX 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

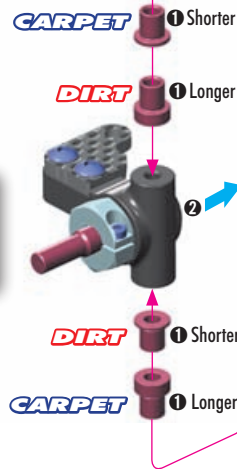
#365356	+1.5mm	2 SLOTS	OPTION
#365355	+0.75mm	1 SLOT	OPTION
#365353	0mm	0 SLOTS	INCLUDED
#365354	-0.75mm	Lightw.	OPTION
#365361	-1.25mm	Lightw.	OPTION



- 902312 SH M3x12

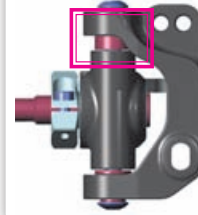
2x L=R

Steel steering bushings allow ROLL CENTER adjustment.



NOTE ORIENTATION

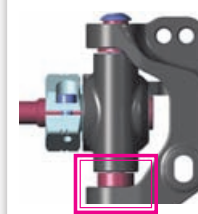
DIRT



LOWER ROLL CENTER

(INITIAL SETTING) DIRT  
TOP = LONGER bushing  
BOTTOM = SHORTER bushing  
Recommended for rough tracks to improve stability.

CARPET



HIGHER ROLL CENTER

(INITIAL SETTING) CARPET  
TOP = SHORTER bushing  
BOTTOM = LONGER bushing  
Recommended for smooth tracks to gain more steering.

OPTION

C-HUBS - LEFT		
#322220-M	MEDIUM	OPTION
#322220-H	HARD	INCLUDED
#322220-G	GRAPHITE	OPTION

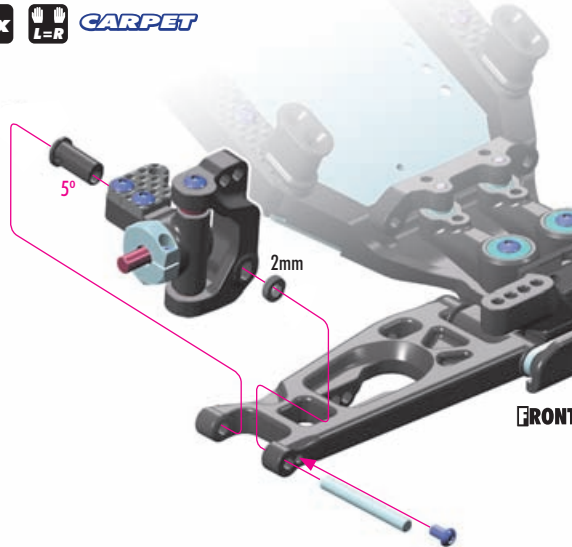
C-HUBS - RIGHT		
#322210-M	MEDIUM	OPTION
#322210-H	HARD	INCLUDED
#322210-G	GRAPHITE	OPTION



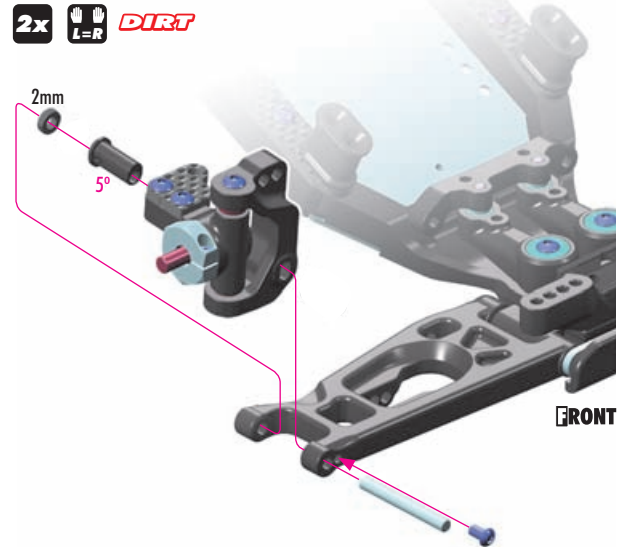
MEDIUM - For low traction. More steering on low grip.  
HARD - For medium traction. More steering, more free in corners.  
GRAPHITE - For high traction. More precise steering, less stopping in corners.

- 306219 SHIM 3x6x2
- 902254 SH M2.5x4

2x L=R CARPET

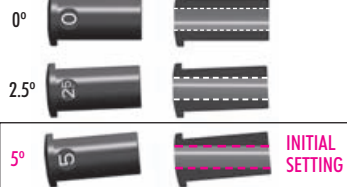


2x L=R DIRT

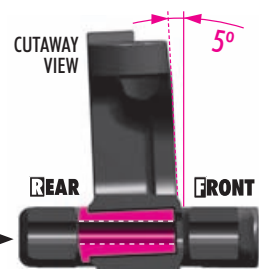


DETAIL

CASTER ECCENTRIC BUSHINGS



LESS CASTER = increased steering off-power  
MORE CASTER = less steering off-power





# 5. FRONT SUSPENSION **CARPET** **DIRT**

### ROLL CENTER LINKS

**2x** **L=R**

NOTE ORIENTATION **!**

6mm THREAD

RIGHT THREAD


LEFT THREAD

8mm THREAD

35.7mm

**2x** **L=R**

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



**362280**  
CON. SHIM 3x6x2



### ROLL CENTER LINKS

**2x** **L=R**

NOTE ORIENTATION **!**

8mm THREAD

CONICAL SHIM 2mm


6mm THREAD

RIGHT




NOTE ORIENTATION **!**

LEFT

**INITIAL SETTING**



**ALU CONICAL SHIMS**

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

### CARPET STEERING LINKS

**2x** **L=R**

NOTE ORIENTATION **!**

8mm THREAD


RIGHT THREAD

LEFT THREAD

5mm THREAD

40mm

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



### DIRT STEERING LINKS

**2x** **L=R**

NOTE ORIENTATION **!**

8mm THREAD

RIGHT THREAD

LEFT THREAD

10mm THREAD

40.5mm

**362280**  
CON. SHIM 3x6x2

**960030**  
NUT M3




### CARPET STEERING LINKS

**2x** **L=R**

NOTE ORIENTATION **!**

8mm THREAD

RIGHT THREAD

LEFT THREAD

5mm THREAD

2mm CONICAL SHIM

### DIRT STEERING LINKS

**2x** **L=R**

**!**

- Remove steering arms together with steering plate.
- Install steering links.
- Install and tighten the entire steering system back.

NOTE ORIENTATION **!**

8mm THREAD

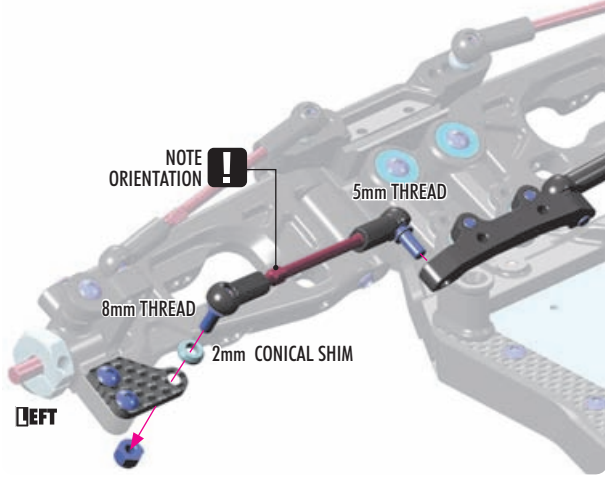
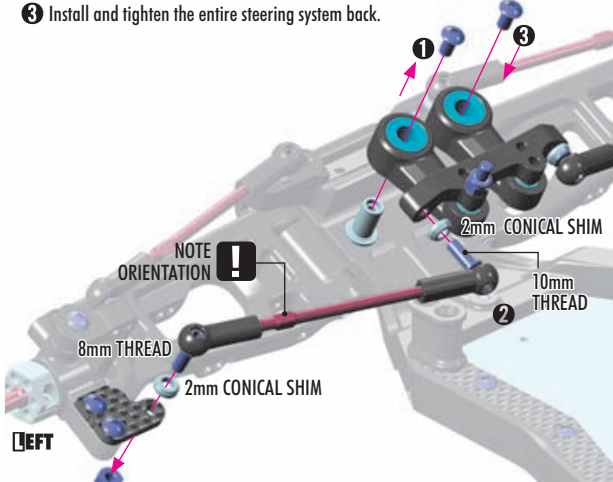
RIGHT THREAD

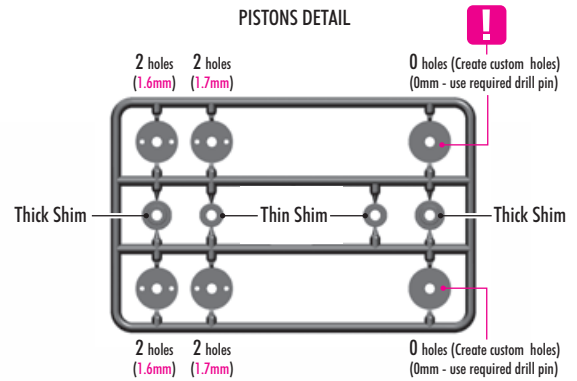
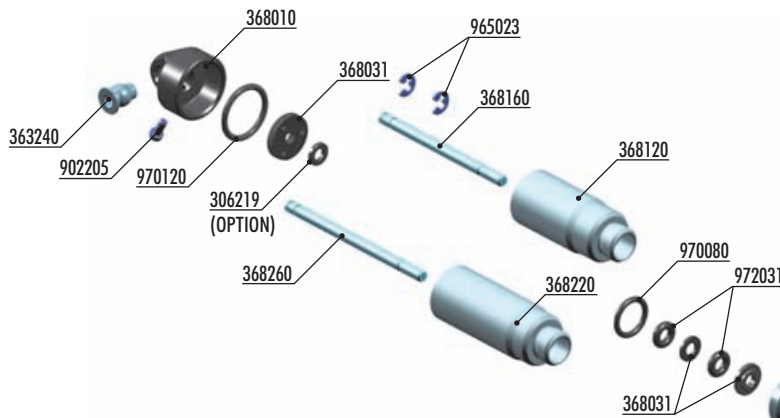
LEFT THREAD

5mm THREAD

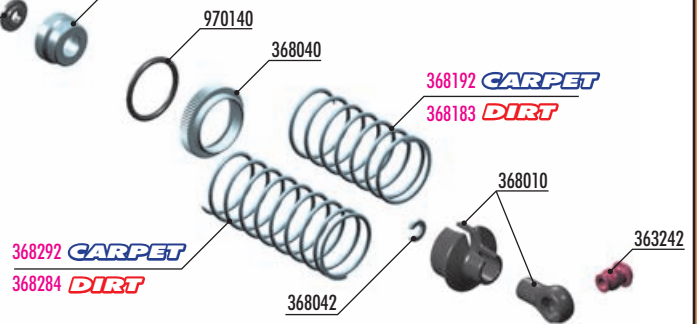
2mm CONICAL SHIM

10mm THREAD



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



FRONT SPRINGS			
#368177	PROGRESS. 41mm	2 DOTS	OPTION
#368191	LINEAR 42mm	1 DOTS	OPTION
#368192	LINEAR 42mm	2 DOTS	INCLUDED
#368193	LINEAR 42mm	3 DOTS	OPTION
#368194	LINEAR 42mm	4 DOTS	OPTION
#368195	LINEAR 42mm	5 DOTS	OPTION



REAR SPRINGS			
#368277	PROGRESS. 55mm	2 DOTS	OPTION
#368292	LINEAR 57mm	2 DOTS	INCLUDED
#368293	LINEAR 57mm	3 DOTS	OPTION
#368294	LINEAR 57mm	4 DOTS	OPTION



FRONT SPRINGS			
#368175	PROGRESS. 40mm	3 DOTS	OPTION
#368182	LINEAR 45mm	1 STRIPE & 3 DOTS	OPTION
#368183	LINEAR 45mm	1 DOT	INCLUDED
#368184	LINEAR 45mm	2 DOTS	OPTION
#368185	LINEAR 45mm	3 DOTS	OPTION
#368186	LINEAR 45mm	4 DOTS	OPTION



REAR SPRINGS			
#368273	PROGRESS. 60mm	2 STRIPES	OPTION
#368275	PROGRESS. 55mm	2 DOTS	OPTION
#368283	LINEAR 63mm	1 STRIPE & 3 DOTS	OPTION
#368284	LINEAR 60mm	1 DOT	INCLUDED
#368285	LINEAR 60mm	2 DOTS	OPTION
#368286	LINEAR 60mm	3 DOTS	OPTION
#368287	LINEAR 60mm	4 DOTS	OPTION



**#328011**  
OPTION COMPOSITE SHOCK BALL JOINT 21MM (2)

**#972030**  
OPTION SILICONE O-RING 3x2mm (10)

**#368052**  
OPTION ALU SHOCK CAP-NUT WITH VENT HOLE (2)

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

**#368021**  
OPTION ALU SHOCK SPRING RETAINING COLLAR (4)

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

### BAG

06

- 306219 COMPOSITE SET OF SERVO SHIMS (4) (OPTION)
- 363240 BALL UNIVERSAL 5.8MM WITH BACKSTOP (2)
- 363242 PIVOT BALL 5.8MM ECCENTRIC (2)
- 368010 COMPOSITE SHOCK PARTS
- 368031 SHOCK PISTONS - COMPLETE SET - DERLIN - V2
- 368040 ALU SHOCK ADJUSTABLE NUT (2)
- 368042 COMPOSITE SHOCK BUSHING & SHIM (2+2)
- 368100 FRONT SHOCK ABSORBERS COMPLETE SET - V3 (2)
- 368120 ALU FRONT SHOCK BODY - V3 (2)
- 368140 ALU LOWER SHOCK BODY CAP (2)
- 368160 FRONT HARDENED SHOCK SHAFT (2)
- 368200 REAR SHOCK ABSORBERS COMPLETE SET (2)
- 368220 ALU REAR SHOCK BODY (2)
- 368260 REAR HARDENED SHOCK SHAFT (2)

- 902205 HEX SCREW SH M2x5 (10)
- 965023 E-CLIP 2.3 (10)
- 970080 O-RING 8x1 (10)
- 970120 O-RING 12 x 1.0 (10)
- 970140 O-RING 14 x 1.5 (10)
- 972031 SILICONE O-RING 3x2.1 (10)

### CARPET

- 368192 FRONT SPRING-SET LINEAR - 2 DOTS (2)
- 368292 REAR SPRING-SET LINEAR - 2 DOTS (2)

### DIRT

- 368183 FRONT SPRING-SET LINEAR - 1 DOT (2)
- 368284 REAR SPRING-SET LINEAR - 1 DOT (2)

# 6. SHOCK ABSORBERS

# CARPET DIRT

965023  
C 2.3

970080  
O 8x1

972031  
O 3x2.1

### SET-UP BOOK

SHOCK DAMPING  
SHOCK PISTONS

2 holes (1.6mm) **2x** FRONT

FRONT - SHORT SHOCK ROD

INITIAL PISTON SETTING

INITIAL PISTON SETTING

2 holes (1.7mm) **2x** REAR

REAR - LONG SHOCK ROD

4x

THICK Shim

O-ring

THIN Shim

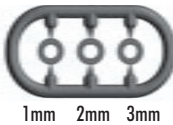
O-ring

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



#306219  
OPTION DOWNSTOP SHIMS

THICKER shim used, GREATER downstop is achieved.



IMPORTANT

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

INITIAL SETTING (0mm)

SHORT SHOCK ROD

SHORT SHOCK BODY

**2x** FRONT SHOCKS

INITIAL SETTING (0mm)

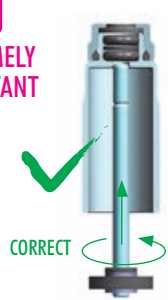
LONG SHOCK ROD

LONG SHOCK BODY

**2x** REAR SHOCKS



EXTREMELY IMPORTANT



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

Twist the shock rod through the lower shock body assembly.

970140  
O 14x1.5

OIL

4x

DETAIL

970120  
O 12x1

4x

### UPSTOP "C" SHIMS

CARPET

FRONT REAR

1+1mm 2+2mm

DIRT

FRONT REAR

1+1mm 2mm

UPSTOP SHIM

24mm FRONT

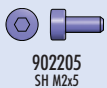
29mm REAR

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



#328011  
OPTION COMPOSITE SHOCK BALL JOINT 21MM (2)





**CARPET**  
FRONT (SHORT)  
Oil 500cSt  
REAR (LONG)  
Oil 450cSt

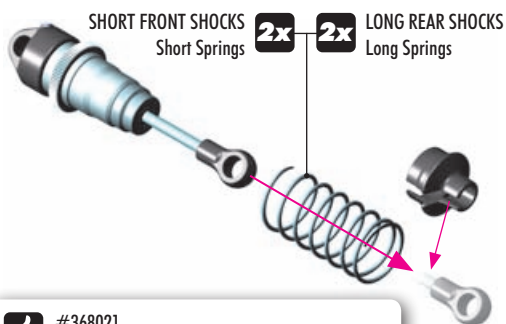
**DIRT**  
FRONT (SHORT)  
Oil 500cSt  
REAR (LONG)  
Oil 500cSt

## DEFAULT SHOCK REBOUND SETTING 0% REBOUND

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

- 1** Extend the shock shaft completely. Fill the shock body with the shock oil. For the FRONT shocks (short) use 500cSt oil. For the REAR shocks (long) use 450cSt or 500cSt oil.
- 2** Move the shock shaft up and down a few times to release the air bubbles trapped beneath the piston.  
3~5x UP & DOWN
- 3** Orient the filled shock vertically for several minutes with the shock shaft fully extended. The remaining air bubbles will release.
- 4** Gently place the shock cap onto the filled shock body and start to tighten the cup. Tighten the cap fully.  
TIGHTEN FULLY
- 5** Gently push the shock shaft completely into the shock body. Excess oil will flow through the hole in the shock cap.
- 6** Keep the shock shaft pushed in the shock body and insert the screw into the shock cap. Tighten gently.
- 7** 6x push the shaft up and down.  
6x UP & DOWN
- 8** Untighten the screw.
- 9** Gently push the shock shaft completely into the shock body. Excess oil will flow through the hole in the shock cap.
- 10** Tighten the screw. The rebound will be at approx. 0%.

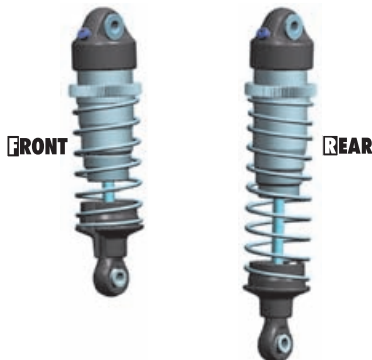
**SET-UP BOOK**  
SHOCK OIL



- #368021**  
OPTION ALU SHOCK SPRING RETAINING COLLAR (4)
  - #368022**  
OPTION ALU SHOCK SPRING RETAINING COLLAR -2MM (4)
- 

### ! IMPORTANT

Both FRONT SHOCKS must be the same overall length.  
Both REAR SHOCKS must be the same overall length.

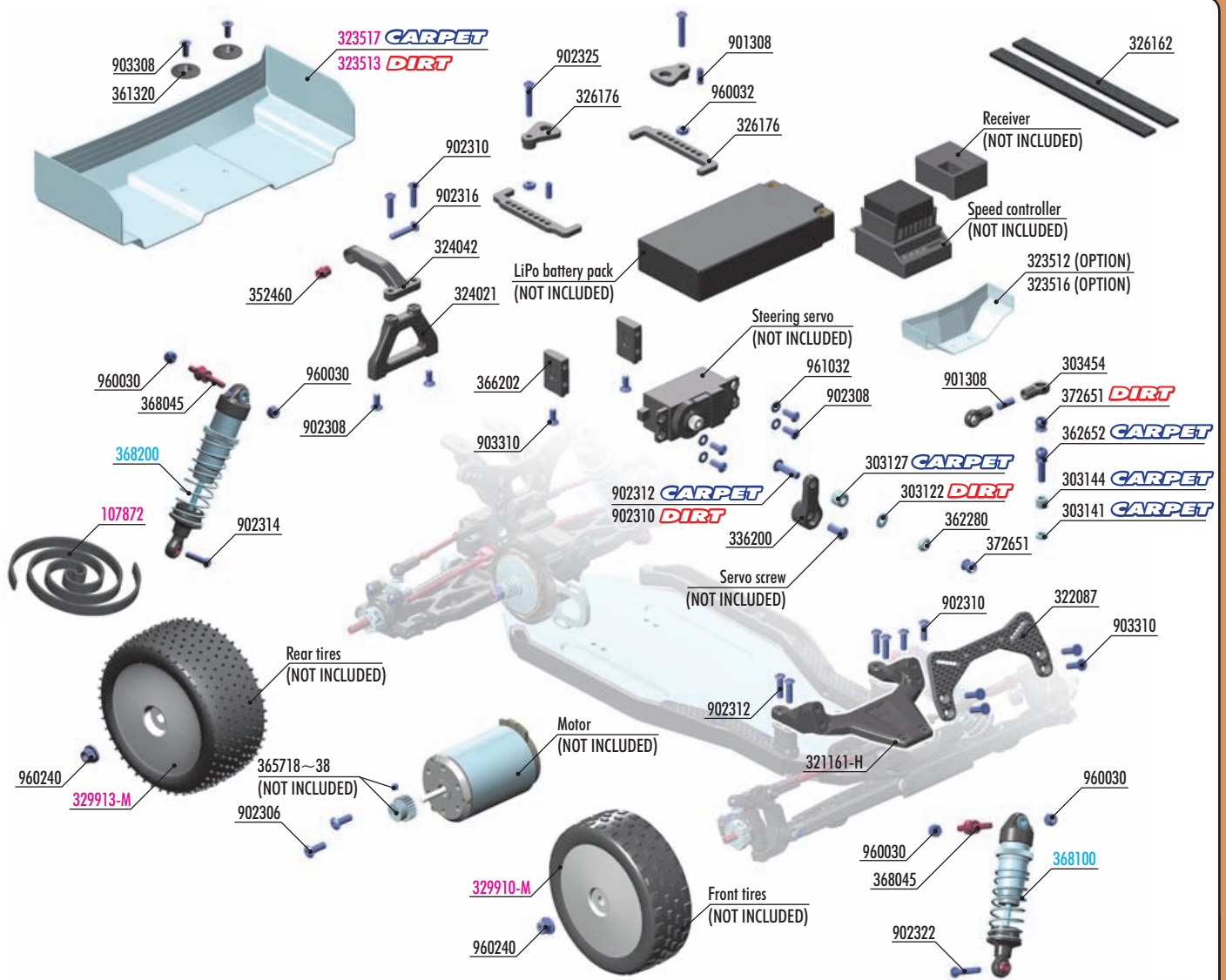


- 2x** FRONT SHOCKS (SHORT)
- 2x** REAR SHOCKS (LONG)



# 7. FINAL ASSEMBLY

# CARPET DIRT



OPTION	XRAY LEXAN BODY			
#329701	0.50mm	-	OPTION	
#329710	0.75mm	GAMMA 2D	INCLUDED	<b>DIRT</b>
#329711	0.50mm	GAMMA 2DL	OPTION	
#329712	0.75mm	GAMMA 2C	INCLUDED	<b>CARPET</b>
#329713	0.50mm	GAMMA 2CL	OPTION	

**OPTION** #329914-M  
2WD FRONT SLIM WHEEL AERODISK WITH NARROW OFFSET - WHITE (2)

**OPTION** #322400  
FRONT ANTI-ROLL BAR 1.0MM SET

ANTI-ROLL BARS	
#322458	0.8mm
#322460	1.0mm
#322461	1.1mm
#322462	1.2mm

**!** Front anti-roll bar can be used only with #322043



- 303454 BALL JOINT 4.9MM - OPEN (4)
- 321161-H COMPOSITE FRONT UPPER DECK FOR ANTI-ROLL BAR - HARD
- 322087 GRAPHITE SHOCK TOWER - FRONT - 3.5MM
- 324021 COMPOSITE MOUNT FOR UPPER BRACE - LCG
- 324042 COMPOSITE MOTOR UPPER BRACE - LCG
- 326162 SELF-ADHESIVE RUBBER 1.5x6.5x155MM (2)
- 326176 COMPOSITE LIPO BATTERY HOLDER FOR BENT SIDES CHASSIS (2+2)
- 336200 COMPOSITE STEERING SERVO ARMS - SET
- 352460 PIVOT BALL 5.8 (10)
- 361320 BODY MOUNT, BATTERY MOUNT - V2 & WING SHIM (2)
- 362280 ALU CONICAL SHIM 3x6x2.0MM (10)
- 365718~38 ALU PINION GEAR HARD COATED 18~38T/48 (OPTION)
- 366202 COMPOSITE SERVO MOUNT - HIGHER
- 368045 STEEL SCREW SHOCK PIVOT BALL WITH HEX (2)
- 372651 PIVOT BALL UNIVERSAL 4.9 MM - HUDY SPRING STEEL™ (2)
- 901308 HEX SCREW SB M3x8 (10)
- 902306 HEX SCREW SH M3x6 (10)
- 902308 HEX SCREW SH M3x8 (10)
- 902310 HEX SCREW SH M3x10 (10)
- 902312 HEX SCREW SH M3x12 (10)
- 902314 HEX SCREW SH M3x14 (10)
- 902316 HEX SCREW SH M3x16 (10)
- 902322 HEX SCREW SH M3x22 (10)
- 902325 HEX SCREW SH M3x25 (10)
- 903308 HEX SCREW SFH M3x8 (10)
- 903310 HEX SCREW SFH M3x10 (10)

- 960030 NUT M3 (10)
- 960032 NUT M3 (10)
- 960240 NUT M4 WITH SERRATED FLANGE (10)
- 961032 WASHER S 3.2 (10)
- 368100 FRONT SHOCK ABSORBERS COMPLETE SET (2)
- 368200 REAR SHOCK ABSORBERS COMPLETE SET (2)
- 107872 VELCRO TAPE WITH DOUBLE SIDED TAPE 8x500MM
- 329910-M FRONT WHEEL AERODISK WITH 12MM HEX IFMAR - WHITE (2)
- 329913-M REAR WHEEL AERODISK WITH 12MM HEX IFMAR - WHITE (2)

### CARPET

- 303127 ALU SHIM 3x6x4.0MM (10)
- 303141 ALU SHIM 3x5x1.0MM (10)
- 303144 ALU SHIM 3x5x4.0MM (10)
- 362652 BALL END 4.9MM WITH THREAD 10MM (2)
- 902312 HEX SCREW SH M3x12 (10)
- 323517 LEXAN REAR WING - TEC
- 329712 BODY FOR 1/10 2WD OFF-ROAD BUGGY - GAMMA 2C

### DIRT

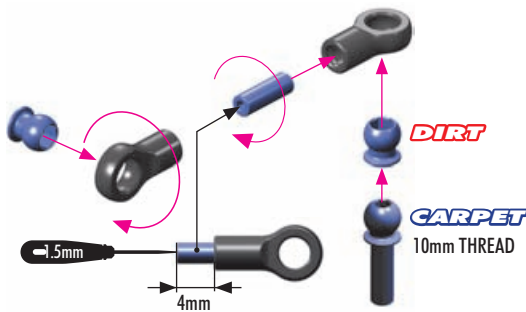
- 303122 ALU SHIM 3x6x1.0MM (10)
- 372651 PIVOT BALL UNIVERSAL 4.9 MM - HUDY SPRING STEEL™ (2)
- 902310 HEX SCREW SH M3x10 (10)
- 323513 LEXAN REAR WING - RANK (2)
- 329710 BODY FOR 1/10 2WD OFF-ROAD BUGGY - GAMMA 2D

# 7. FINAL ASSEMBLY

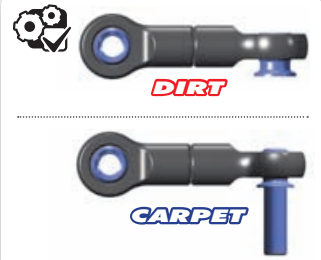
# CARPET DIRT



901308  
SB M3x8



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



DIRT

CARPET



303122  
SHIM 3x6x1



303127  
SHIM 3x6x4



362280  
CON. SHIM 3x6x2



902308  
SH M3x8



902310  
SH M3x10

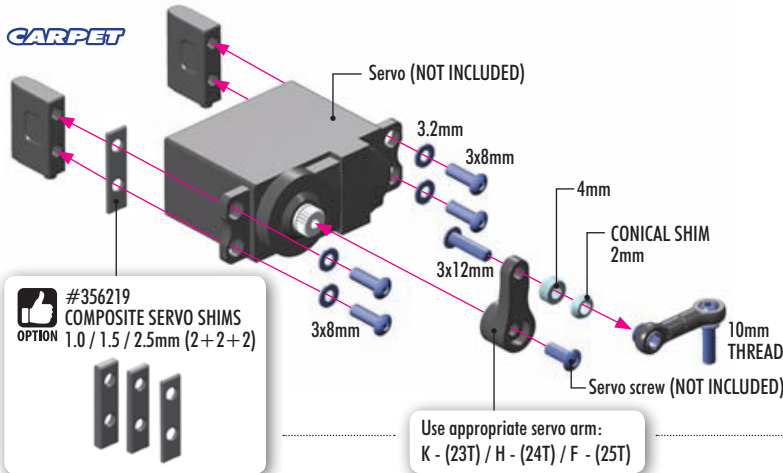


902312  
SH M3x12

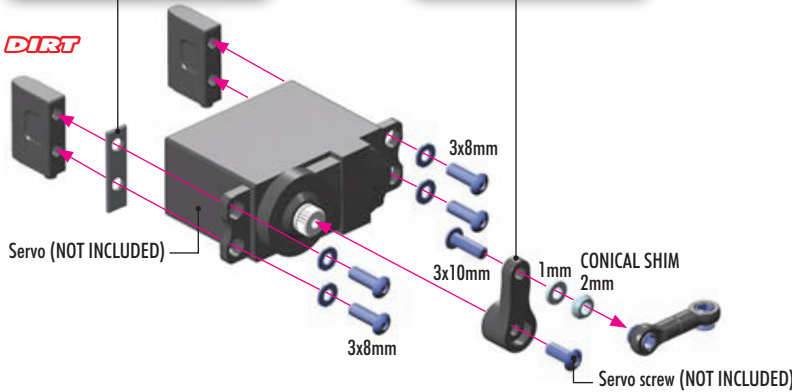


961032  
SHIM S 3.2

CARPET



DIRT



ALU SERVO HORNS - OFFSET

#293491 KO, Sanwa - 23T

#293492 Hitec - 24T

#293493 Futaba - 25T

CLAMP ALU SERVO HORNS - OFFSET

#293401 KO, Sanwa - 23T

#293402 Hitec - 24T

#293403 Futaba - 25T

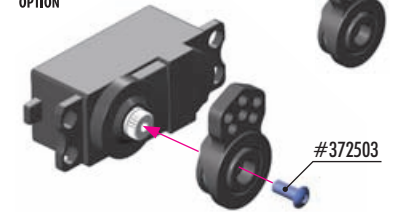
For more in-corner steering and better steering response, aluminum servo horns may be used.



**TIP** For increased safety of the servo during a crash we suggest to use optional servo saver that will absorb impacts and will eliminate servo damage. To install the servo saver the optional alu stands.



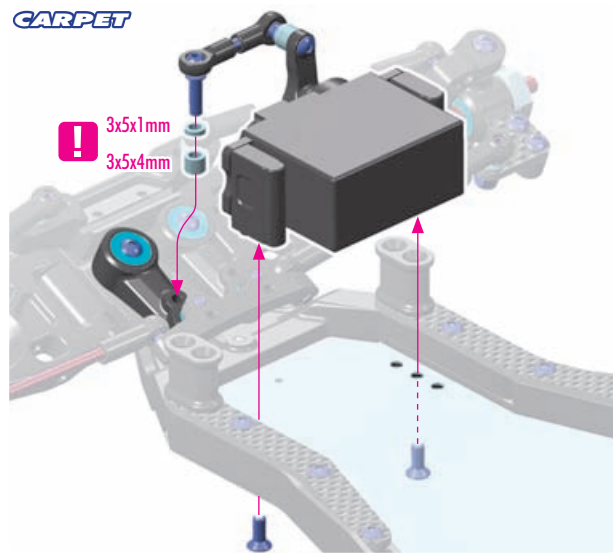
#372503 COMPOSITE SERVO SAVER - STIFF



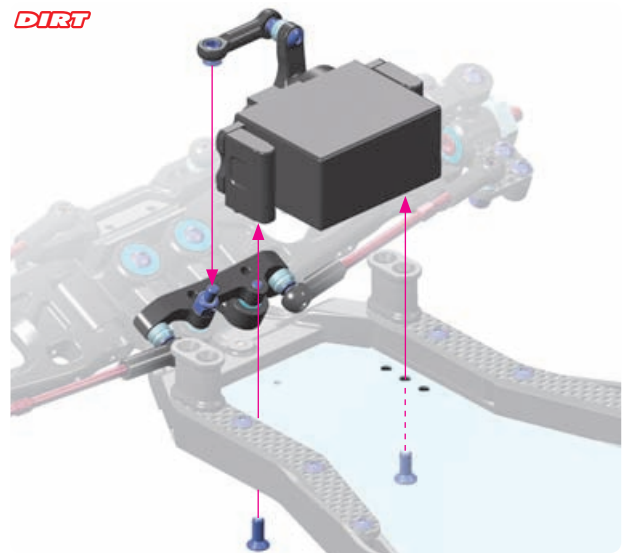
#326201 ALU SERVO HOLDERS & GRAPHITE BRIDGE



CARPET



DIRT



303141  
SHIM 3x5x1




303144  
SHIM 3x5x4

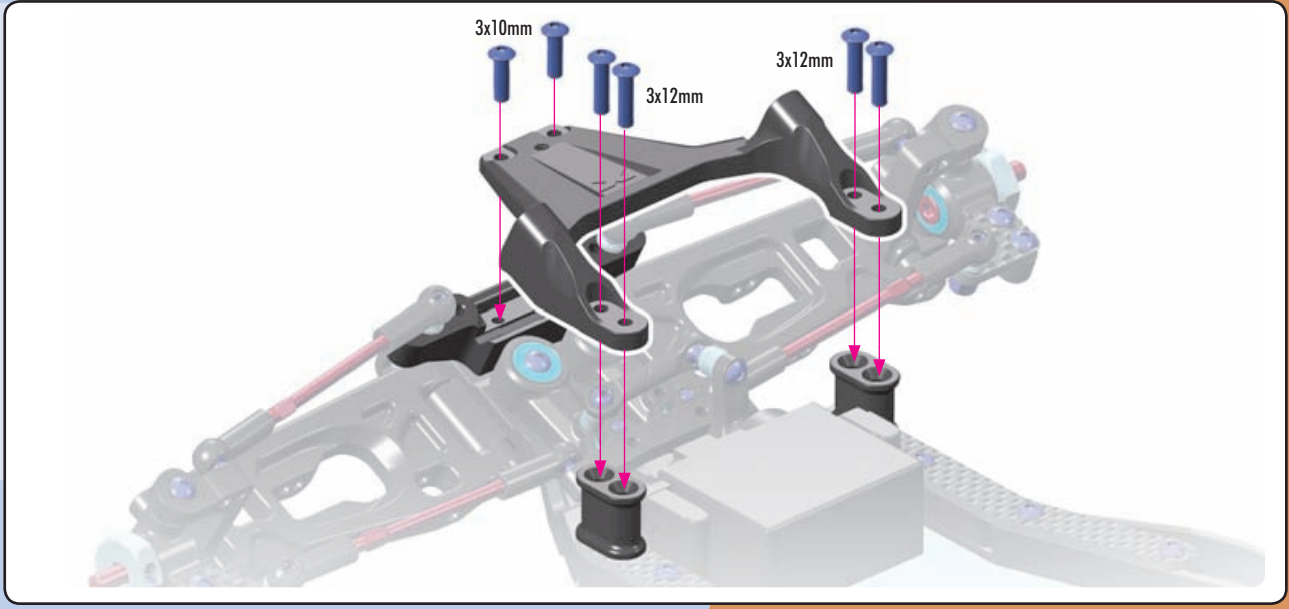



903310  
SFH M3x10






  
 902310  
 SH M3x10



  
 902312  
 SH M3x12





**FRONT ANTI-ROLL BAR**  
 OPTION


**TIGHTEN GENTLY**


**#322043**  
 ALU FRONT ROLL-CENTER HOLDER FOR ANTI-ROLL BAR - WIDE

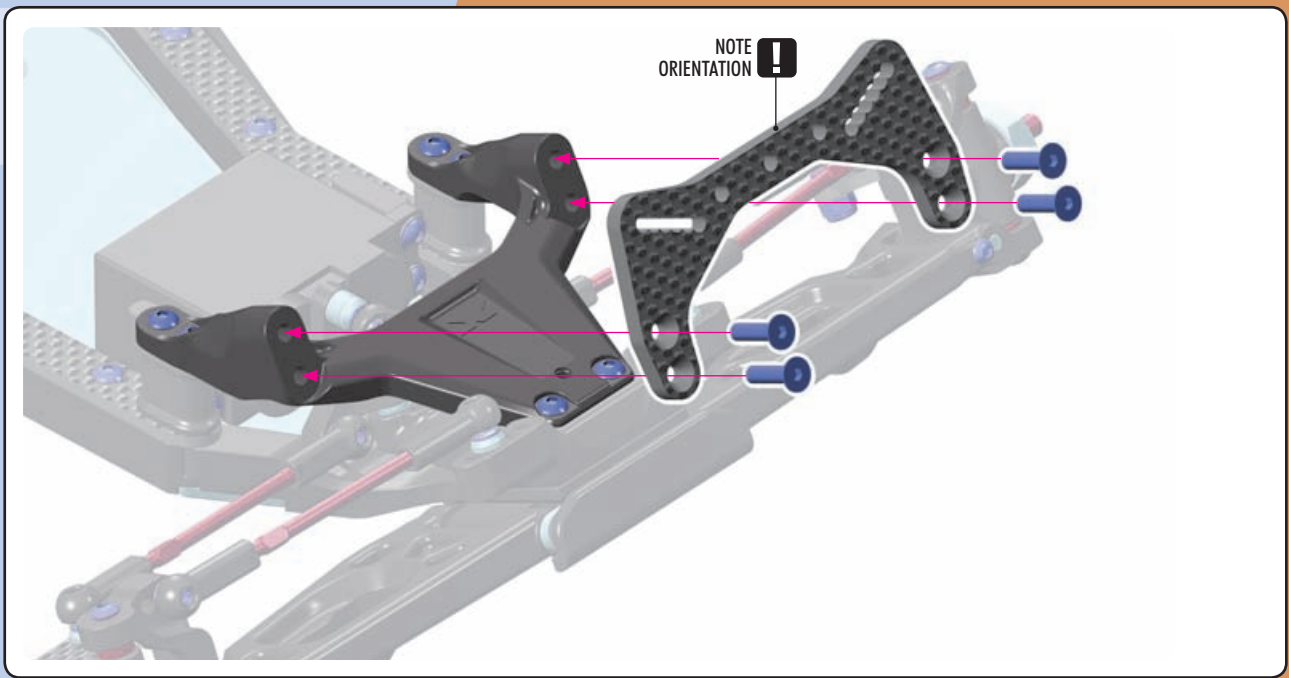

**#322400**  
 FRONT ANTI-ROLL BAR 1.0MM SET


**ANTI-ROLL BARS**

#322458	0.8mm
#322460	1.0mm
#322461	1.1mm
#322462	1.2mm

901305  
 322460  
 901304  
 303455  
 362650  
 303454  
 307455  
 902312


  
 903310  
 SFH M3x10





902322  
SH M3x22

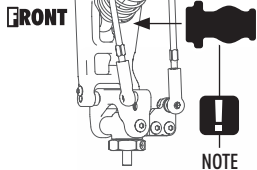


960030  
NUT M3

2x L-R

ECCENTRIC SHOCK BALL

FRONT



NOTE ORIENTATION



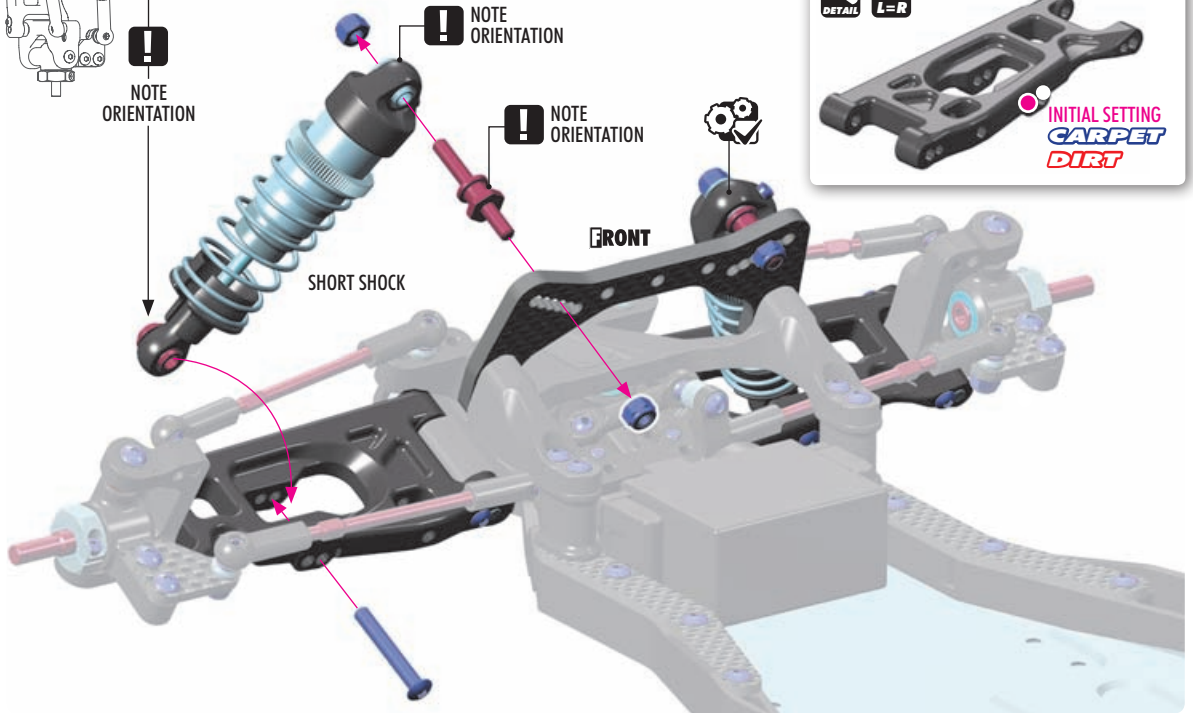
OPTION

ALU NUTS M3

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



DETAIL L-R



NOTE ORIENTATION

NOTE ORIENTATION

SHORT SHOCK

FRONT

2x L-R



902314  
SH M3x14



960030  
NUT M3

REAR

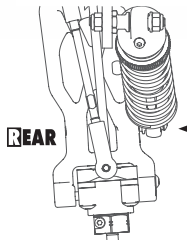
NOTE ORIENTATION

NOTE ORIENTATION

LONG SHOCK

ECCENTRIC SHOCK BALL

REAR



NOTE ORIENTATION

CARPET

DIRT



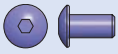
OPTION

ALU NUTS M3

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

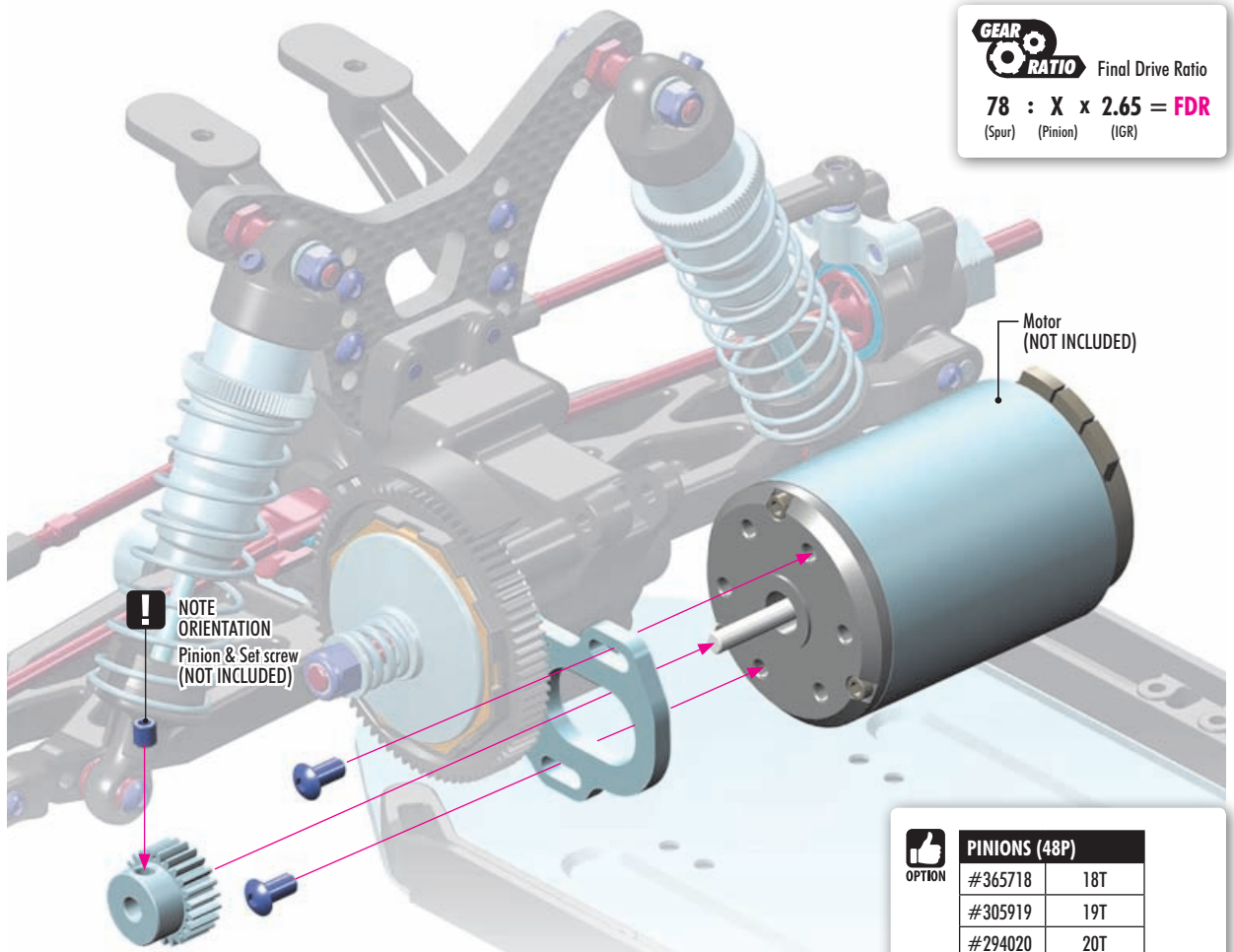






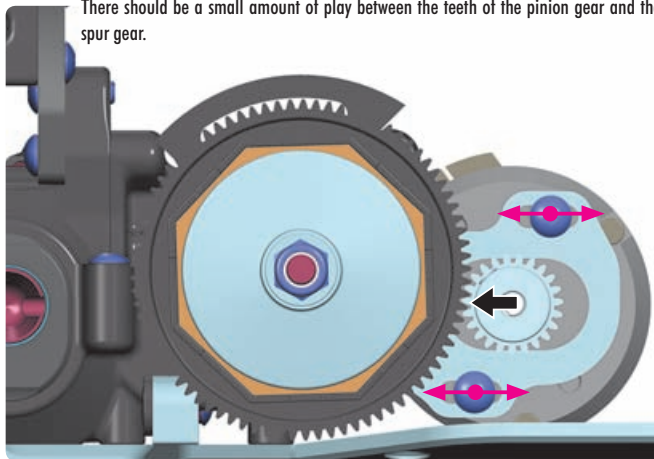
902306  
SH M3x6

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



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.



**PINIONS (48P)**

#365718	18T
#305919	19T
#294020	20T
#294021	21T
#294022	22T
#294023	23T
#305924	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



#293110 HUDY BRUSHLESS RC FAN 30MM - WITH EXTERNAL SOLDERING TABS  
 #293112 HUDY BRUSHLESS RC FAN 30MM - WITH INTERNAL SOLDERING TABS



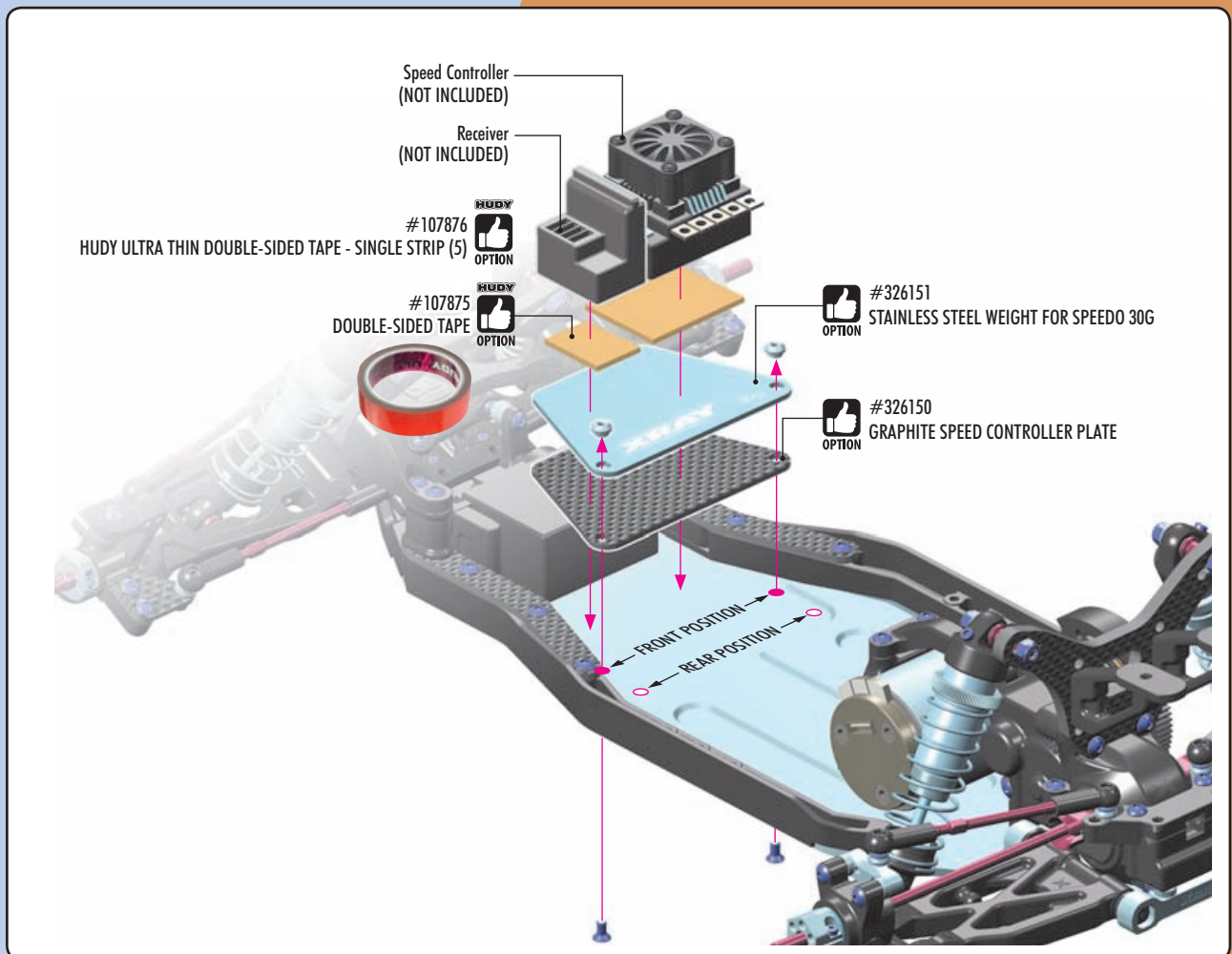
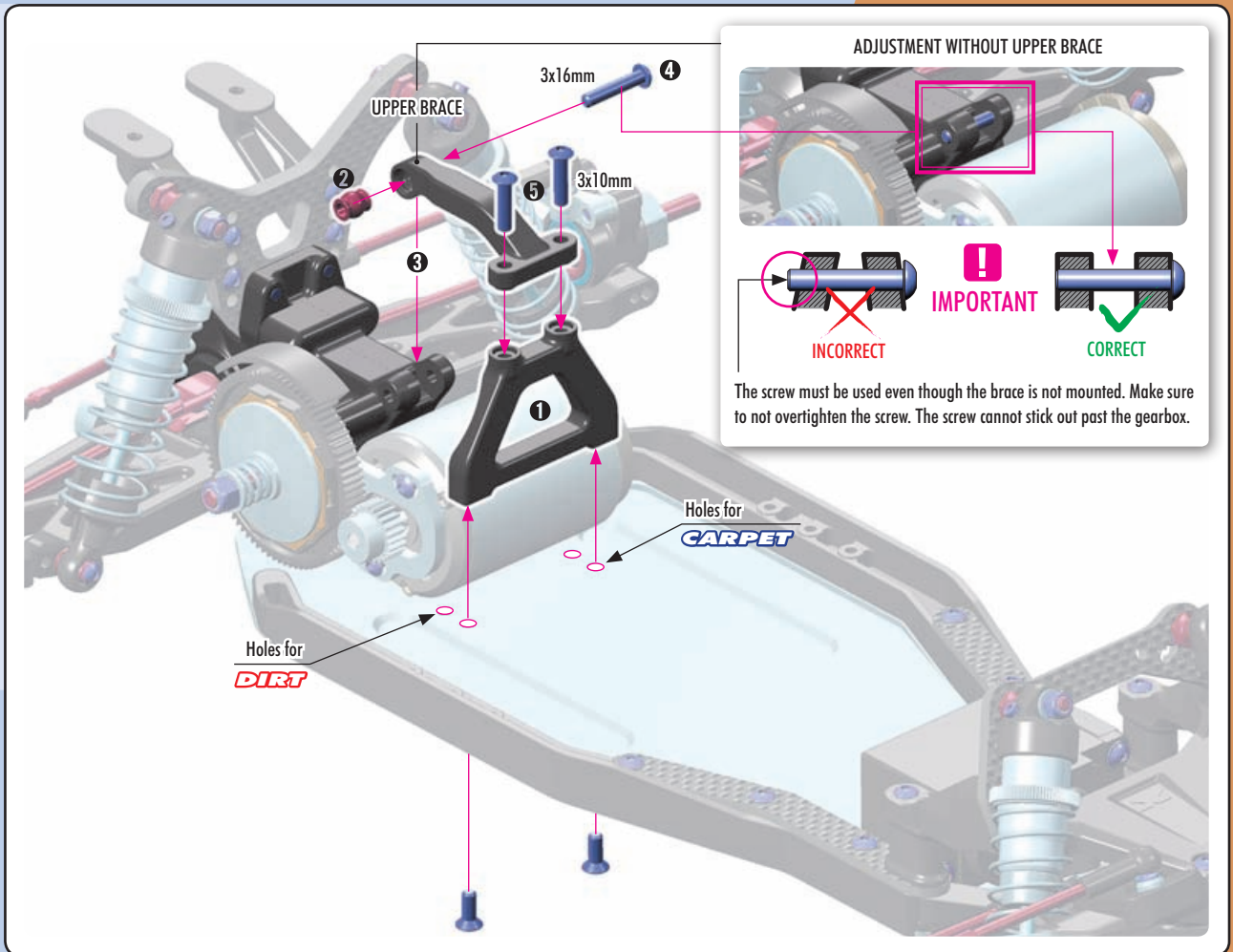
#293101 HUDY ALU RC FAN 30MM - SIDE MOUNT 2 HOLE



#293100 HUDY ALU RC FAN 30MM - BOTTOM MOUNT 2 HOLE



-  902310  
SH M3x10
-  902316  
SH M3x16
-  903308  
SFH M3x8





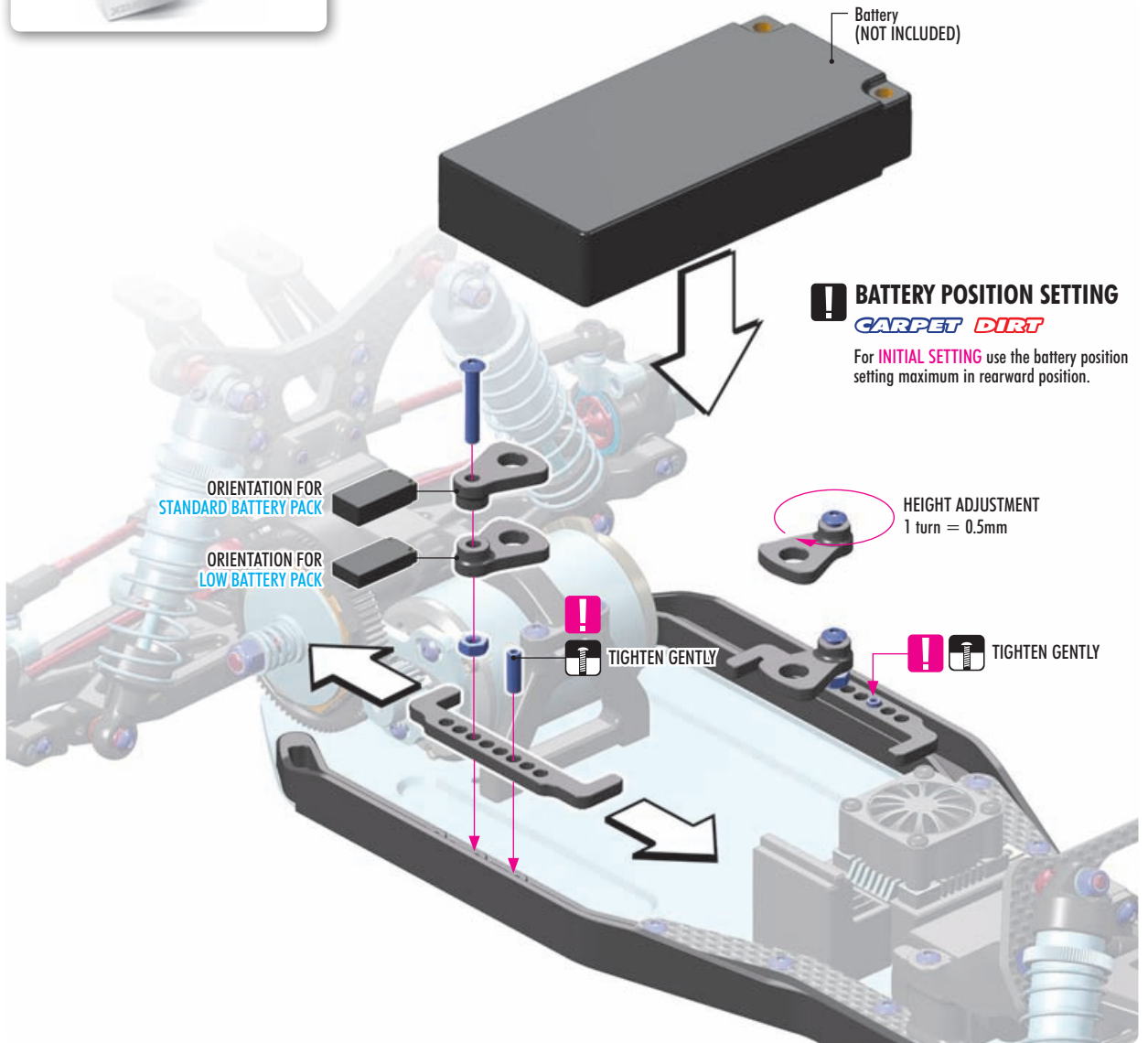
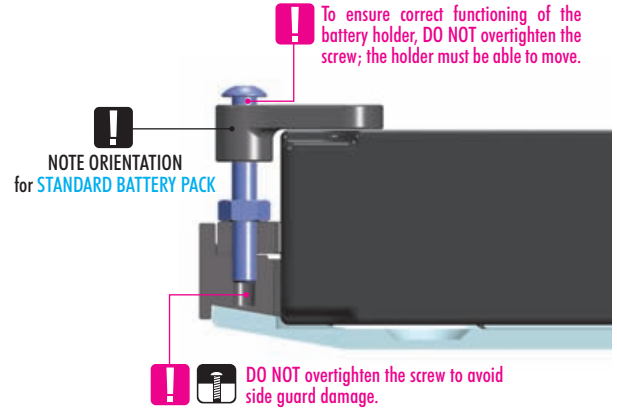
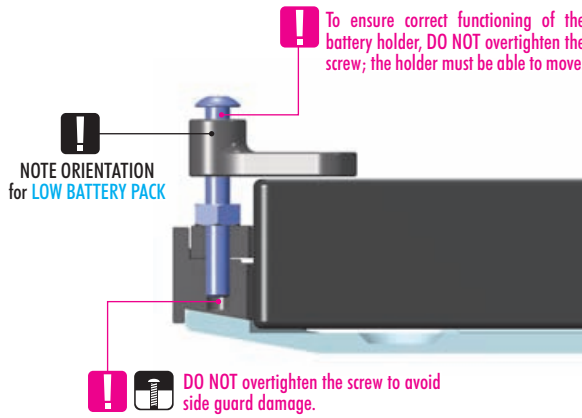
901308  
SB M3x8

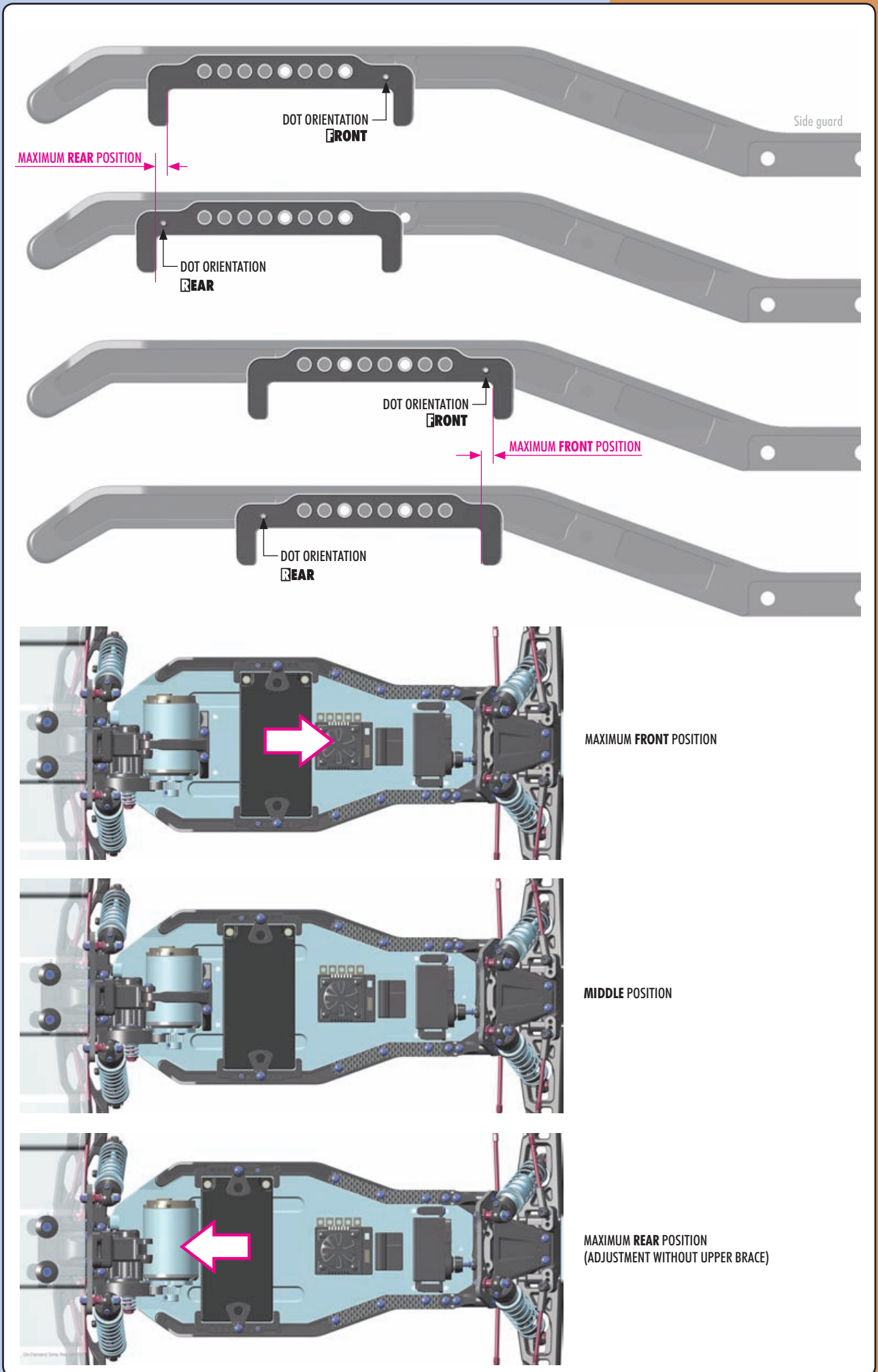


902325  
SH M3x25

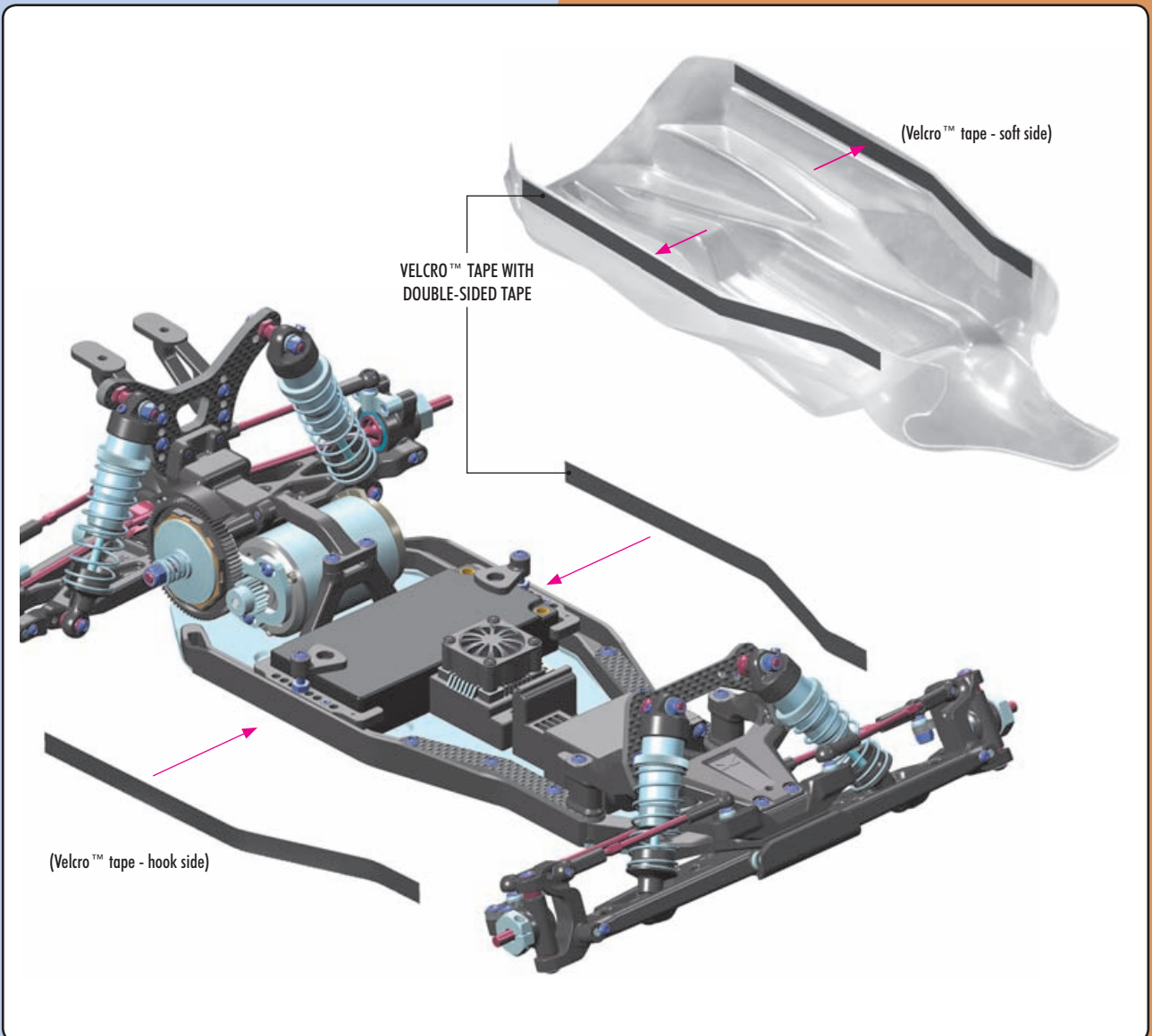
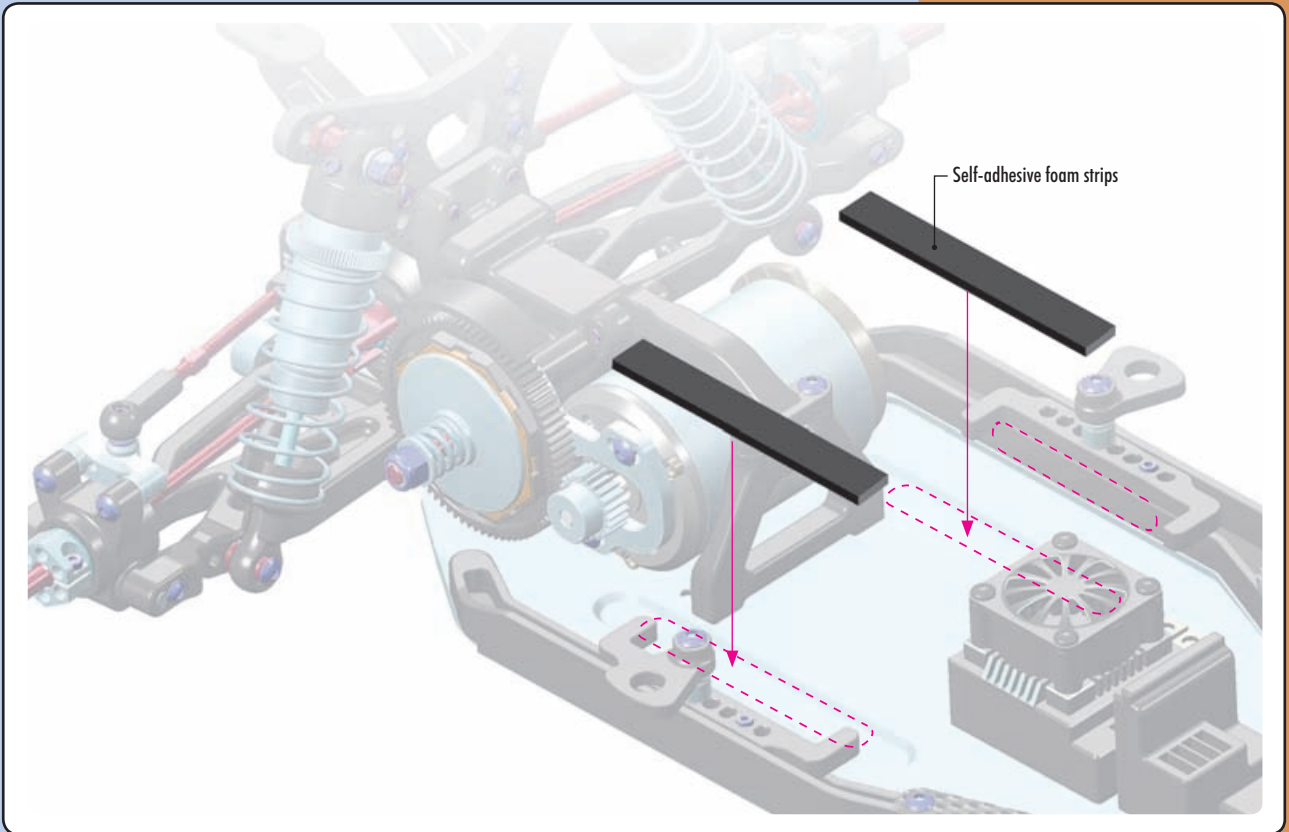


960032  
NUT M3

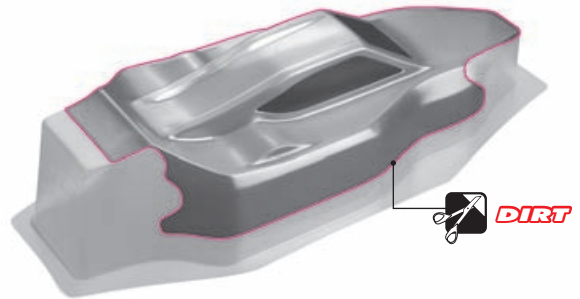
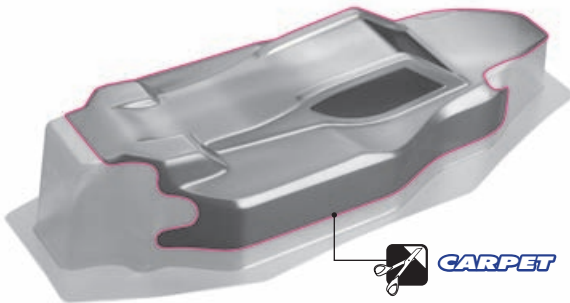
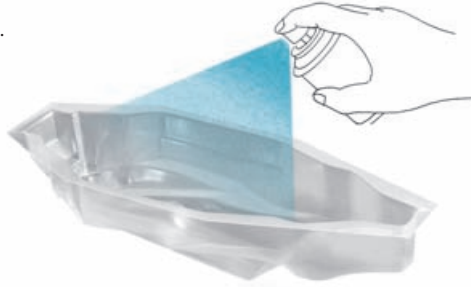








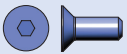
- ❶ Before cutting and making holes on the BODY, put the unpainted body on the chassis to confirm the mounting position and location for holes and cutouts. Before cutting and making holes on the WING, put the unpainted wing on the wing holders to confirm the mounting position and location for holes and cutouts.
- ❷ Before painting, wash the inside of the body with mild detergent, and then rinse and dry thoroughly.
- ❸ Mask all windows.



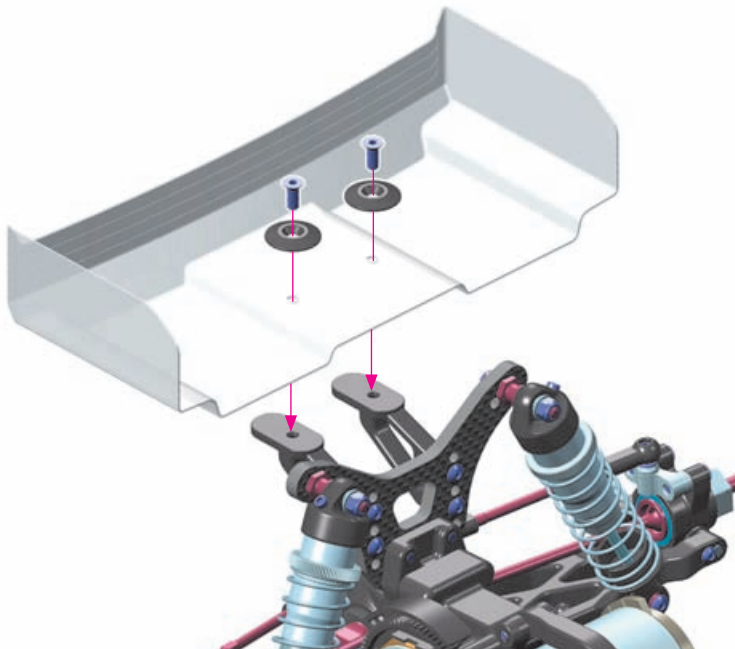
- ❹ Apply paint masks as appropriate.
- ❺ Paint the body using paints formulated for polycarbonate bodies.
- ❻ When the paint is dry, remove the masking.
- ❼ Carefully cut out the body using appropriate scissors or cutting tools.
- ❽ When you have finished cutting, peel off the external protective films.



XRAY LEXAN BODY			
#329701	0.50mm		OPTION
#329710	0.75mm	GAMMA 2D	INCLUDED
#329711	0.50mm	GAMMA 2DL	OPTION
#329712	0.75mm	GAMMA 2C	INCLUDED
#329713	0.50mm	GAMMA 2CL	OPTION



903308  
SFH M3x8



REAR WING SHIMS		
#293561	SILVER	OPTION
#293561-O	ORANGE	OPTION
#293561-K	BLACK	OPTION



XRAY LEXAN REAR WINGS			
#323510	1.0mm		OPTION
#323511	1.5mm		OPTION
#323513	1.0mm	RANK	INCLUDED
#323517	1.0mm	TEC	INCLUDED
#363510	1.0mm		OPTION
#363511	1.5mm		OPTION
#363512	2.0mm		OPTION

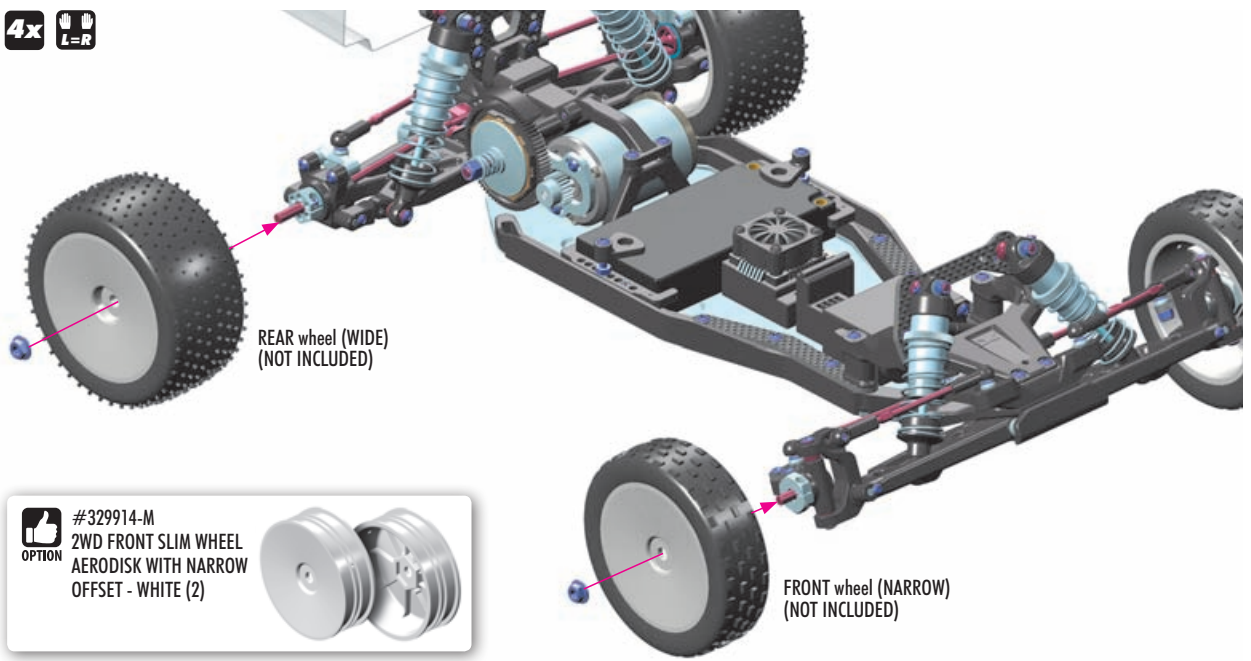


XRAY LEXAN CENTER FIN			
#323515	1.0mm	ZAP	OPTION



960240  
N M4

4x



#329914-M  
2WD FRONT SLIM WHEEL  
AERODISK WITH NARROW  
OFFSET - WHITE (2)



#209200  
HUDY CHASSIS PROTECTOR VINYL  
STICKER 360x125MM



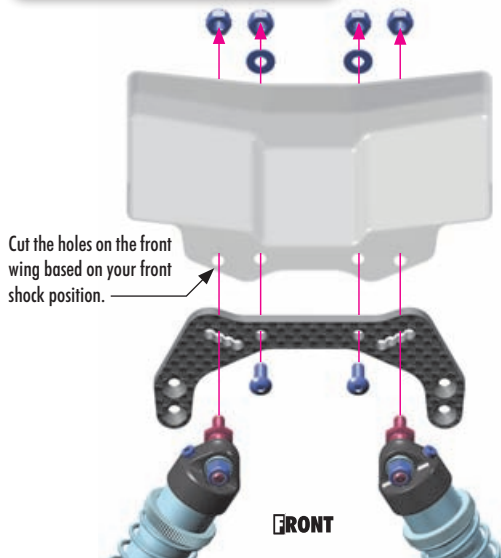
960030  
NUT M3



### XRAY FRONT WINGS

#323512	-	OPTION
#323516	DIV	OPTION

### ALTERNATIVE 1 UPPER POSITION



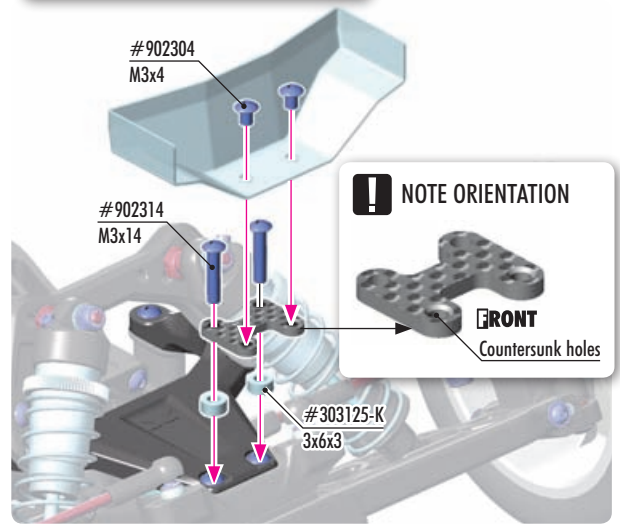
Cut the holes on the front wing based on your front shock position.

Using front wing in upper position gives more steering but also more roll.



#321190  
XB2 GRAPHITE FRONT WING HOLDER

### ALTERNATIVE 2 LOWER POSITION



**NOTE ORIENTATION**



Cut the holes on the front wing based on your wing holder. Using front wing in lower position gives more steering and less roll.



## 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 ball-bearings are degreased and are lubricated with HUDY Bearing Oil. 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



## 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 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 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.



## 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

108601 - Grey

108603 - Dark Gray

108602 - Silver Gray

108604 - Titan

108605 - Black

199183

104004



107701



106000 + 106036



109801



181090



107742



107740



293100

293101

293110

293112



181030

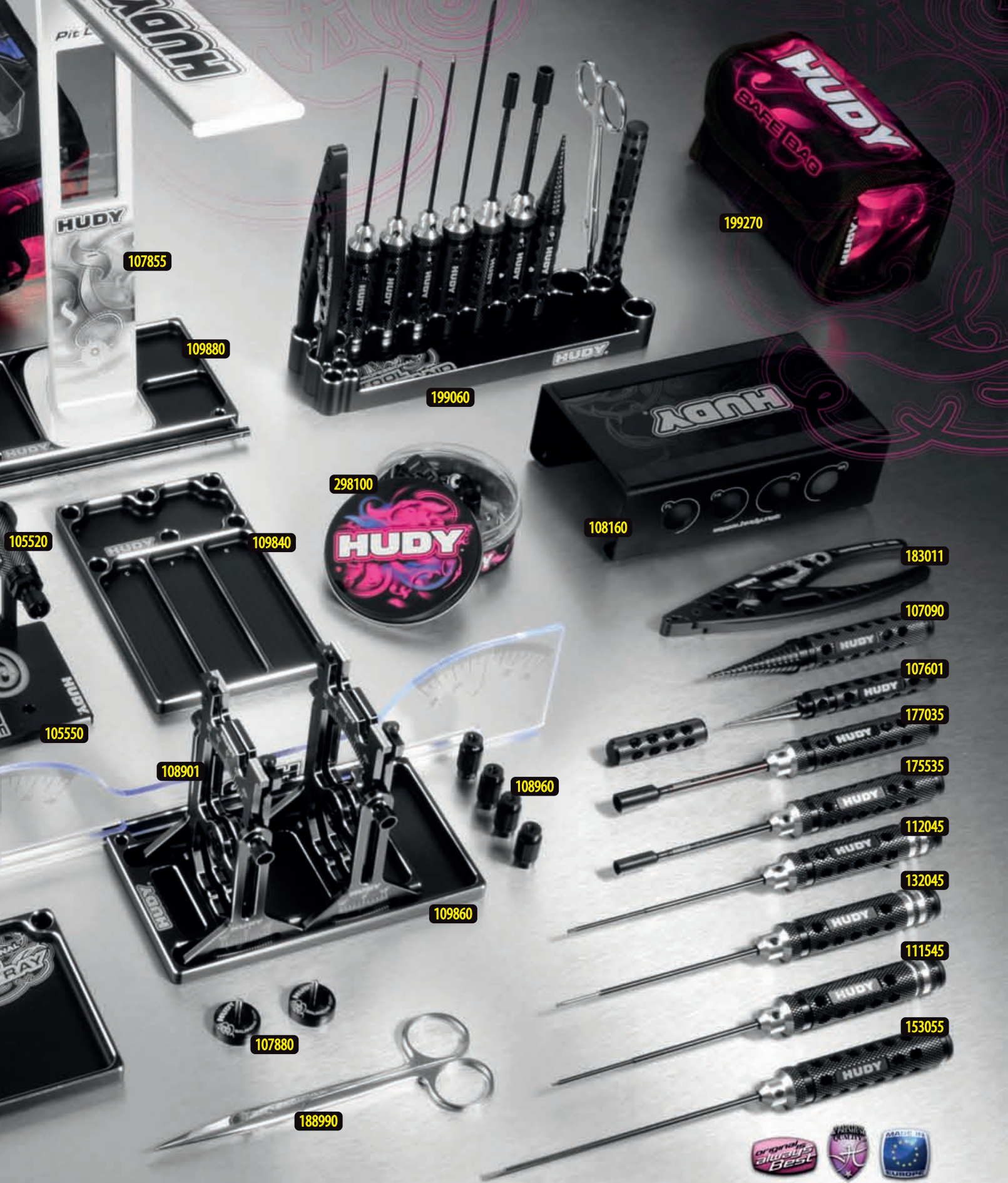


108190

- 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)

- 108160 HUDY 1/10 OFF-ROAD CAR STAND - V2
- 108190 HUDY ALU TRAY FOR PARTS
- 108601 FLAT SET-UP BOARD FOR 1/10 OFF-ROAD - LIGHTWEIGHT - GREY
- 108602 FLAT SET-UP BOARD FOR 1/10 OFF-ROAD - LIGHTWEIGHT - SILVER GRAY
- 108603 FLAT SET-UP BOARD FOR 1/10 OFF-ROAD - LIGHTWEIGHT - DARK GRAY
- 108604 FLAT SET-UP BOARD FOR 1/10 OFF-ROAD - LIGHTWEIGHT - TITAN
- 108605 FLAT SET-UP BOARD FOR 1/10 OFF-ROAD - LIGHTWEIGHT - BLACK
- 108901 HUDY SET-UP STATION 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 3 MM  
 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  
 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](http://www.hudy.net)



[www.teamxray.com](http://www.teamxray.com)

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