XRAY
XB2
1/10 LUXURY ELECTRIC OFF-ROAD CAR 2WD
2018
CARPET EDITION
USA CHAMPION
REEDY International Offroad Race of Champions CHAMPION
REEDY International Offroad Race of Champions CHAMPION JUNIOR
2x EOS EURO OFFROAD SERIES WINNER
9x NATIONAL CHAMPION TITLES
MADE IN EUROPE
INSTRUCTION MANUAL

INTRODUCTION

The XRAY XB2 is a modern, high-competition premium luxury racing 1/10 electric 2WD off-road buggy that is the epitome of high-performance and fine distinctive design. Your XB2 offers highest performance, responsive handling, and traditionally exceptional XRAY quality, engineering, and design. The superb craftsmanship and attention to detail are clearly evident everywhere on the XRAY XB2.

XB2 was designed around a no compromise platform; the attention to detail creates a low maintenance, extra long life electric buggy. The ultra-low center of gravity (CG) and optimized weight balance makes set-up, driving, and maintenance easy and quick.

The XRAY XB2 was created by blending highest-quality materials and excellent design. On high-speed flat tracks or bumpy tracks, whether driving for fun or racing to win, the XB2 delivers outstanding performance, speed, and precision handling.

We have made every effort to make these instructions as easy to understand as possible. However, if you have any difficulties, problems, or questions, please do not hesitate to contact the XRAY support team at info@teamxray.com. Also, please visit our web site at www.teamxray.com to find the latest updates, set-up information, option parts, and many other goodies. We pride ourselves on taking excellent care of our customers.

CUSTOMER SUPPORT

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You can join thousands of XRAY fans and enthusiasts in our online community at: **www.teamxray.com**

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Failure to follow these instructions will be considered as abuse and/or neglect.

SAFETY PRECAUTIONS

Contains:
LEAD (CAS 7439-92-1) ANTIMONY (CAS 7440-36-0)
WARNING: This product contains a chemical known to the state of California to cause cancer and birth defects or other reproductive harm.
CAUTION: CANCER HAZARD
Contains lead, a listed carcinogen. Lead is harmful if ingested. Wash thoroughly after using. DO NOT use product while eating, drinking or using tobacco products. May cause chronic effects to gastrointestinal tract, CNS, kidneys, and blood. MAY CAUSE BIRTH DEFECTS.

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

Take appropriate safety precautions prior to operating this model. You are responsible for this model's assembly and safe operation! Please read the instruction manual before building and operating this model and follow all safety precautions. Always keep the instruction manual at hand for quick reference, even after completing the assembly. Use only genuine and original authentic XRAY parts for maximum performance. Using any third party parts on this model will void guaranty immediately.

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

IMPORTANT NOTES – GENERAL

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

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

IMPORTANT NOTES – ELECTRICAL

- Insulate any exposed electrical wiring (using heat shrink tubing or electrical tape) to prevent dangerous short circuits. Take maximum care in wiring, connecting and insulating cables. Make sure cables are always connected securely. Check connectors for if they become loose. And if so, reconnect them securely. Never use R/C models with damaged wires. A damaged wire is extremely dangerous, and can cause short-circuits resulting in fire. Please have wires repaired at your local hobby shop.
- Low battery power will result in loss of control. Loss of control can occur due to a weak battery in either the transmitter or the receiver. Weak running battery may also result in an out of control car if your car's receiver power is supplied by the running battery. Stop operation immediately if the car starts to slow down.
- When not using RC model, always disconnect and remove battery.
- Do not disassemble battery or cut battery cables. If the running battery short-circuits, approximately 300W of electricity can be discharged, leading to fire or burns. Never disassemble battery or cut battery cables.
- Use a recommended charger for the receiver and transmitter batteries and follow the instructions correctly. Over-charging, incorrect charging, or using inferior chargers can cause the batteries to become dangerously hot. Recharge battery when necessary. Continual recharging may damage battery and, in the worst case, could build up heat leading to fire. If battery becomes extremely hot during recharging, please ask your local hobby shop for check and/or repair and/or replacement.
- Regularly check the charger for potential hazards such as damage to the cable, plug, casing or other defects. Ensure that any damage is rectified before using the charger again. Modifying the charger may cause short-circuit or overcharging leading to a serious accident. Therefore do not modify the charger.
- Always unplug charger when recharging is finished.
- Do not recharge battery while battery is still warm. After use, battery retains heat. Wait until it cools down before charging.
- Do not allow any metal part to short circuit the receiver batteries or other electrical/electronic device on the model.
- Immediately stop running if your RC model gets wet as may cause short circuit.
- Please dispose of batteries responsibly. Never put batteries into fire.

R/C & BUILDING TIPS

- Make sure all fasteners are properly tightened. Check them periodically.
- Make sure that chassis screws do not protrude from the chassis.
- For the best performance, it is very important that great care is taken to ensure the free movement of all parts.
- Clean all ball-bearings so they move very easily and freely.
- Tap or pre-thread the plastic parts when threading screws.
- Self-tapping screws cut threads into the parts when being tightened. Do not use excessive force when tightening the self-tapping screws because you may strip out the thread in the plastic. We recommended you stop tightening a screw when you feel some resistance.
- Ask your local hobby shop for any advice.

Please support your local hobby shop. We at XRAY Model Racing Cars support all local hobby dealers. Therefore we ask you, if at all possible, to purchase XRAY products at your hobby dealer and give them your support like we do. If you have difficulty finding XRAY products, please check out www.teamxray.com to get advice, or contact us via email at info@teamxray.com, or contact the XRAY distributor in your country.

WARRANTY

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

Due to the high performance level of this model car you will need to periodically maintain and replace consumable components. Any and all warranty coverage will not cover replacement of any part or component damaged by neglect, abuse, or improper or unreasonable use. This includes but is not limited to damage from crashing, chemical and/or water damage, excessive moisture, improper or no maintenance, or user modifications which compromise the integrity of components. Warranty will not cover components that are considered consumable on RC vehicles. XRAY does not pay nor refund shipping on any component sent to XRAY or its distributors for warranty. XRAY reserves the right to make the final determination of the warranty status of any component or part.

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

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

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

QUALITY CERTIFICATE

XRAY MODEL RACING CARS uses only the highest quality materials, the best compounds for molded parts and the most sophisticated manufacturing processes of TQM (Total Quality Management). We guarantee that all parts of a newly-purchased kit are manufactured with the highest regard to quality. However, due to the many factors inherent in model racecar competition, we cannot guarantee any parts once you start racing the car. Products which have been worn out, abused, neglected or improperly operated will not be covered under warranty.
We wish you enjoyment of this high-quality and high-performance RC car and wish you best success on the track!

In line with our policy of continuous product development, the exact specifications of the kit may vary. In the unlikely event of any problems with your new kit, you should contact the model shop where you purchased it, quoting the part number.
We do reserve all rights to change any specification without prior notice. All rights reserved.

SYMBOLS USED

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

TOOLS REQUIRED

Scissors (HUDY #188990)

Special Tool for turnbuckles, nuts (HUDY #181090)

Turnbuckle Wrench 3mm (HUDY #181030)

Pocket Hobby Knife (HUDY #188981)

Side Cutters (HUDY #189010)

Combination Pliers (HUDY #189020)

RC Shock-Plier Uni Tool (HUDY #183011)

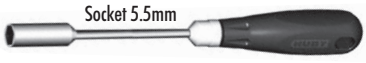
Tweezer

HUDY TOOLS:

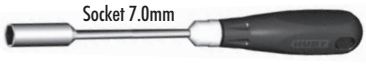
Allen 1.5mm

Allen 2.0mm

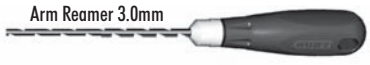
Socket 5.5mm



Socket 7.0mm



Arm Reamer 3.0mm



Reamer (HUDY #107600) or (HUDY #107601)

ITEMS INCLUDED

HUDY Premium Silicone Oils Oil 400cSt (#106340)

HUDY Premium Silicone Oils Oil 500cSt (#106350)

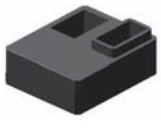
HUDY Premium Silicone Oils Oil 5000cSt (#106450)

Graphite Grease (HUDY #106210)

EQUIPMENT REQUIRED

Transmitter

Receiver



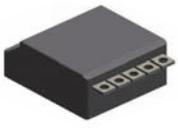
Steering Servo

Electric Motor & Pinion Gear with Setscrew

Bearing Oil (HUDY #106230)

CA glue

Speed Controller



LiPo Battery

Lexan™ Paint

Battery Charger

Double-sided Tape (HUDY #107875)

Tires & Inserts

NOT INCLUDED

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.

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

OPTION

SAMPLE OF OPTIONAL PARTS		
#32XXXX	TYPE	OPTION 1
#32XXXX	TYPE	OPTION 2
#32XXXX	TYPE	INCLUDED
#32XXXX	TYPE	OPTION 3

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:

365884 **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.

XB2 TECH TIPS

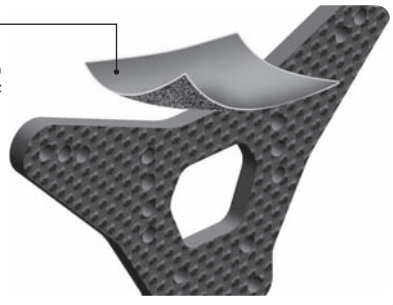
TIP GRAPHITE PARTS PROTECTION

Protect all XB2 Graphite Parts:

- Front shock tower
- Rear shock tower

Fine sandpaper

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

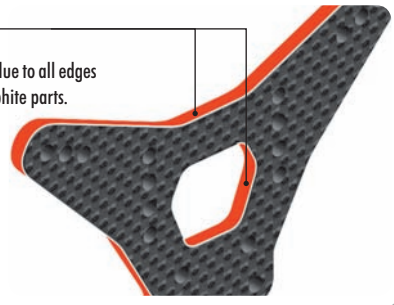


SHOCK TOWER PROTECTION

Please follow the Instruction Manual and seal the edges of the shock towers with CA to reinforce them and help prevent delamination.

CA

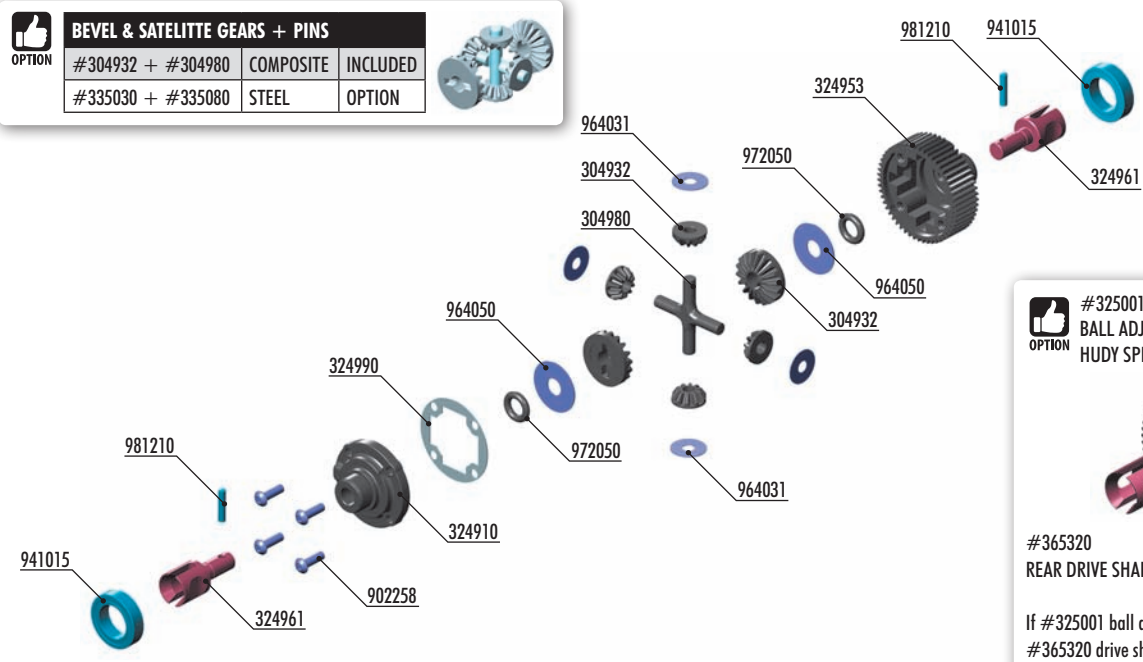
Apply CA glue to all edges of the graphite parts.



1. REAR DIFFERENTIAL

OPTION

BEVEL & SATELITTE GEARS + PINS		
#304932 + #304980	COMPOSITE	INCLUDED
#335030 + #335080	STEEL	OPTION



OPTION

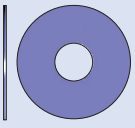
#325001
BALL ADJUSTABLE DIFFERENTIAL SET
HUDY SPRING STEEL™

#365320
REAR DRIVE SHAFT 67MM - HUDY SPRING STEEL™

If #325001 ball diff will be used than also #365320 drive shafts (2x) must be used together.

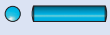
BAG 01

30 4932	GRAPHITE GEAR DIFF BEVEL & SATELLITE GEARS (2+4)	90 2258	HEX SCREW SH M2.5x8 (10)
30 4980	COMPOSITE GEAR DIFF CROSS PIN	94 1015	HIGH-SPEED BALL-BEARING 10x15x4 RUBBER SEALED (2)
32 4990	DIFF GASKET (4)	96 4031	WASHER S 3.5x10x0.2 (10)
32 4901	GEAR DIFFERENTIAL FOR 2.5MM PIN - SET	96 4050	WASHER S 5x15x0.3 (10)
32 4910	COMPOSITE GEAR DIFFERENTIAL CASE	97 2050	SILICONE O-RING 5x2 (10)
32 4953	COMPOSITE GEAR DIFFERENTIAL CASE WITH PULLEY 53T	98 1210	PIN 2x10 (10)
32 4961	GEAR DIFF OUTDRIVE ADAPTER - HUDY SPRING STEEL™ (2)		



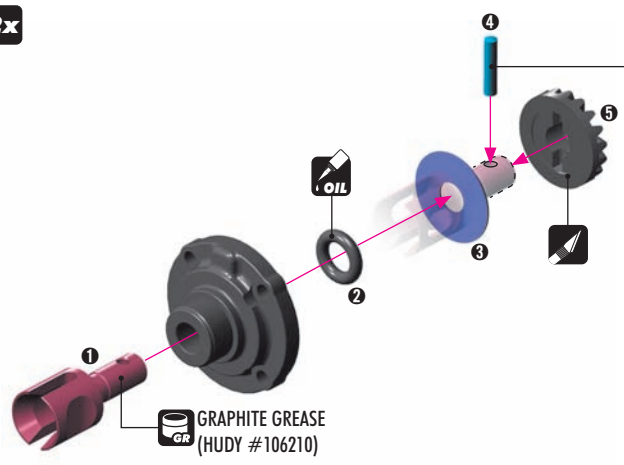
964050
S 5x15x0.3

972050
O 5x2

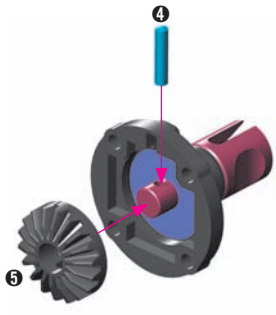


981210
P 2x10

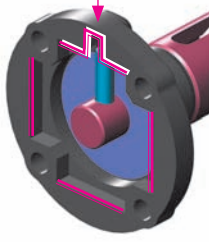
2x

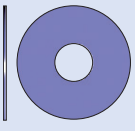


DETAIL STEP 4 5



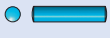
NOTE ORIENTATION





964050
S 5x15x0.3

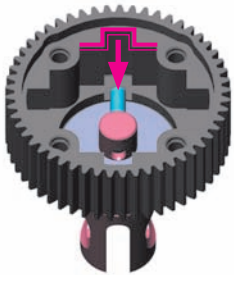
972050
O 5x2



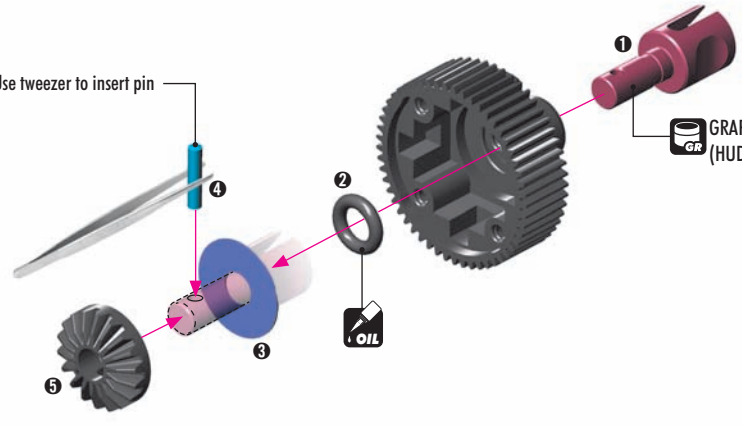
981210
P 2x10

DETAIL

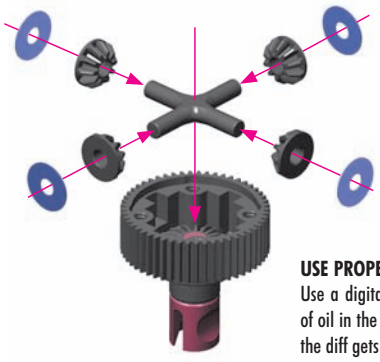
NOTE ORIENTATION



Use tweezer to insert pin



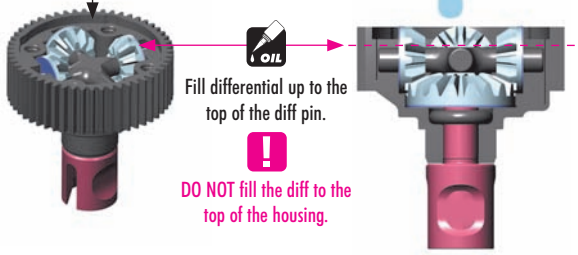
964031
S 3.5x10x0.2



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

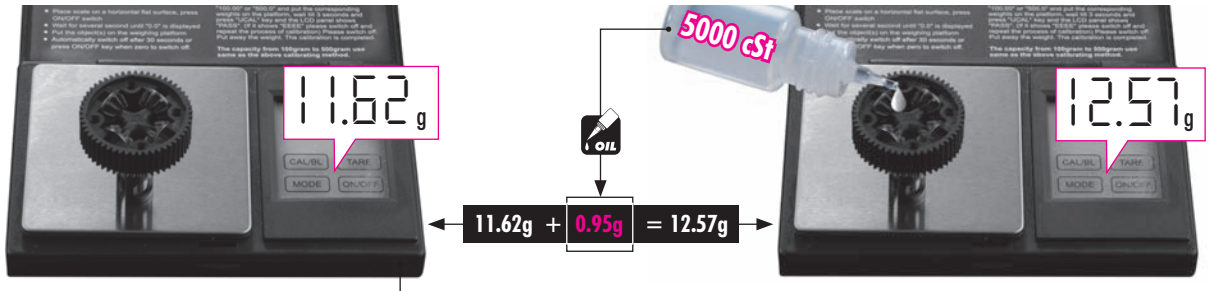
Silicone oil 5 000cSt
Fill just above the diff pin.



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:



❶ Put the diff (without oil) on the scale and check the weight (approximately 11.62g)

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

❷ Slowly pour oil into the diff and watch the weight. Add 0.95g of oil into the diff. The approximate weight of the diff including oil is 12.57g.

OPTION

HUDY ULTIMATE SILICONE OILS		
#106410	1000 cSt - 50ml	OPTION
#106420	2000 cSt - 50ml	OPTION
#106430	3000 cSt - 50ml	OPTION
#106440	4000 cSt - 50ml	OPTION
#106450	5000 cSt - 50ml	INCLUDED
#106460	6000 cSt - 50ml	OPTION
#106470	7000 cSt - 50ml	OPTION

TIP

TIPS FOR REAR DIFFERENTIAL

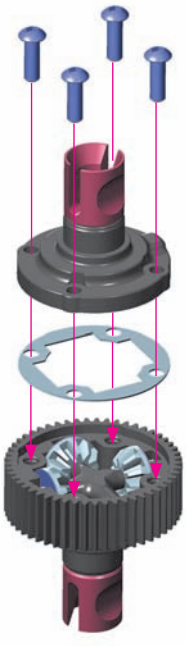
LOW-MEDIUM TRACTION	3 000cSt (HUDY #106430)
MEDIUM-HIGH TRACTION	5 000cSt (HUDY #106450)

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

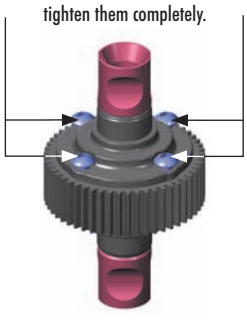
SET-UP BOOK
DIFFERENTIAL OIL

902258
SH M2.5x8

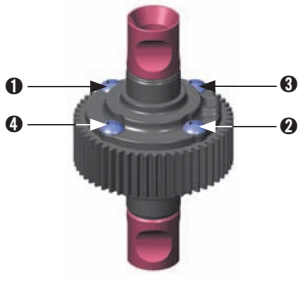
941015
BB 10x15x4

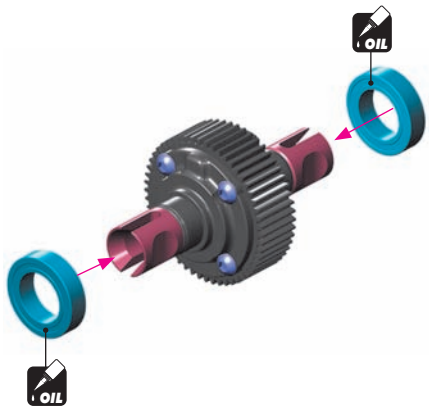


Tighten the screws equally but do NOT tighten them completely.

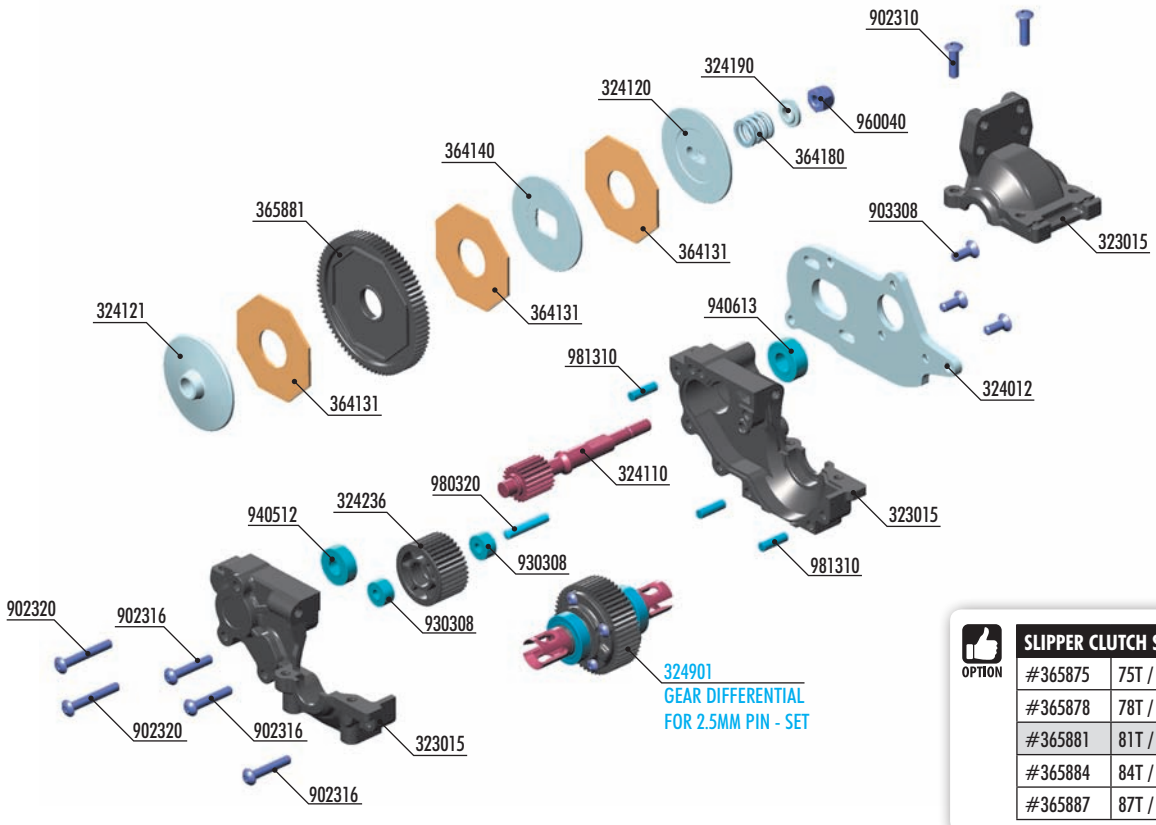


Finish tightening in this order.





2. REAR TRANSMISSION

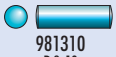


OPTION

SLIPPER CLUTCH SPUR GEARS		
#365875	75T / 48	OPTION
#365878	78T / 48	OPTION
#365881	81T / 48	INCLUDED
#365884	84T / 48	OPTION
#365887	87T / 48	OPTION

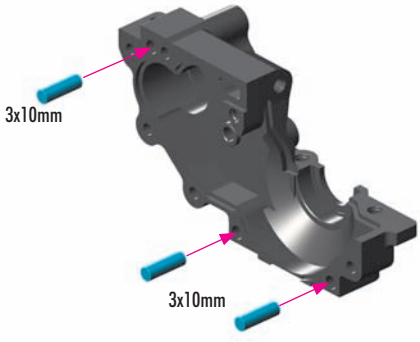
BAG 02

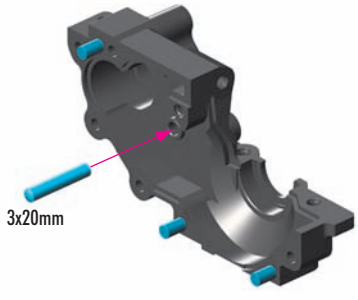
32 3015	COMPOSITE FRONT-MID MOTOR GEAR BOX (3 GEARS) - NARROW - SET
32 4012	ALU FRONT-MID MOTOR (3 GEARS) PLATE - SWISS 7075 T6 (3MM)
32 4110	ALU TOP SHAFT 20T - SWISS 7075 T6 - HARD COATED
32 4120	ALU 3-PAD SLIPPER CLUTCH PLATE - SWISS 7075 T6
32 4121	ALU 3-PAD SLIPPER CLUTCH PLATE WITH ADAPTER
32 4190	ALU 3-PAD SLIPPER CLUTCH SHIM
32 4236	COMPOSITE GEAR 36T - GRAPHITE
36 4131	SLIPPER CLUTCH PAD "SLS" - V2 (2)
36 4140	ALU 3-PAD SLIPPER CLUTCH PLATE DISC - 7075 T6
36 4180	SLIPPER CLUTCH SPRING C=30 - BLACK
36 5881	COMPOSITE 3-PAD SLIPPER CLUTCH SPUR GEAR 81T / 48
90 2310	HEX SCREW SH M3x10 (10)
90 2316	HEX SCREW SH M3x16 (10)
90 2320	HEX SCREW SH M3x20 (10)
90 3308	HEX SCREW SFH M3x8 (10)
93 0308	BALL-BEARING 3x8x4 (2)
94 0512	HIGH-SPEED BALL-BEARING 5x12x4 RUBBER SEALED (2)
94 0613	HIGH-SPEED BALL-BEARING 6x13x5 RUBBER SEALED (2)
96 0040	NUT M4 (10)
98 0320	PIN 3x20 (10)
98 1310	PIN 3x10 (10)
32 4901	GEAR DIFFERENTIAL FOR 2.5MM PIN - SET

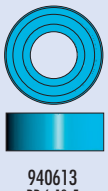


981310
P 3x10

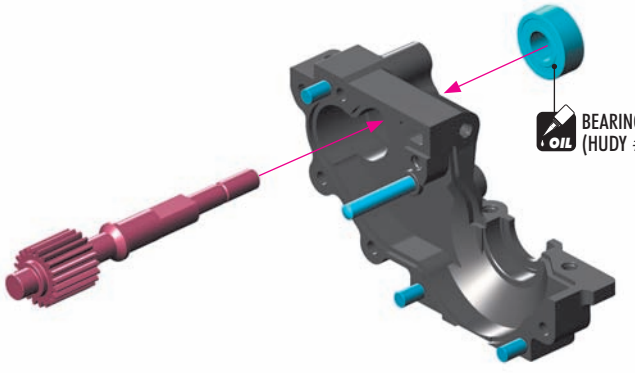
980320
P 3x20



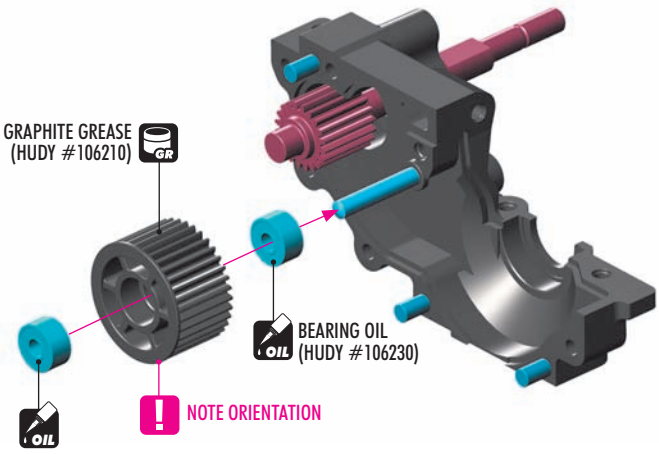


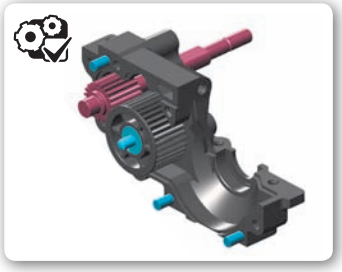


940613
BB 6x13x5



930308
BB 3x8x4

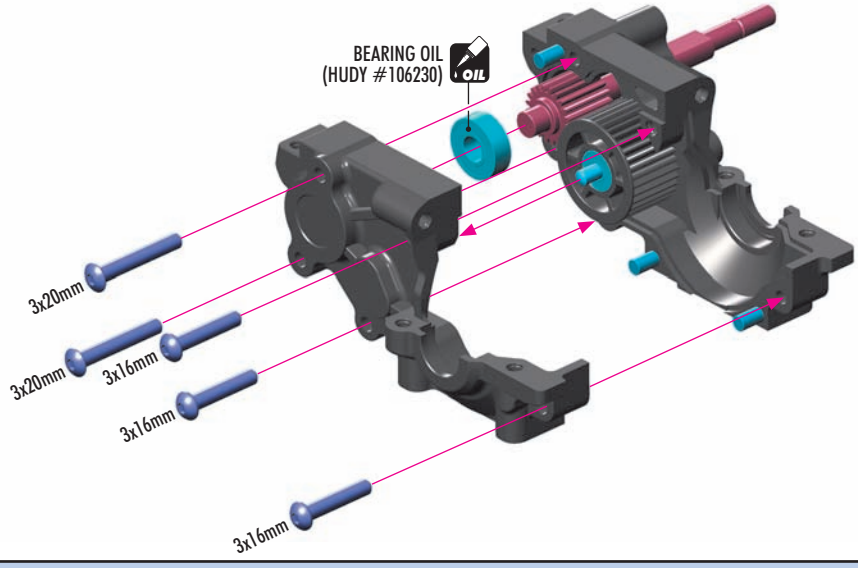




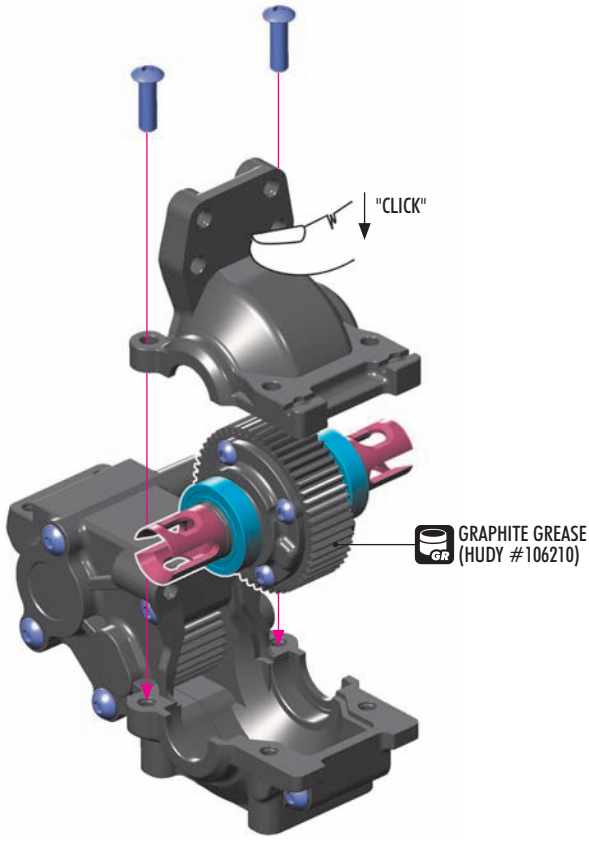
902316
SH M3x16

902320
SH M3x20

940512
BB 5x12x4

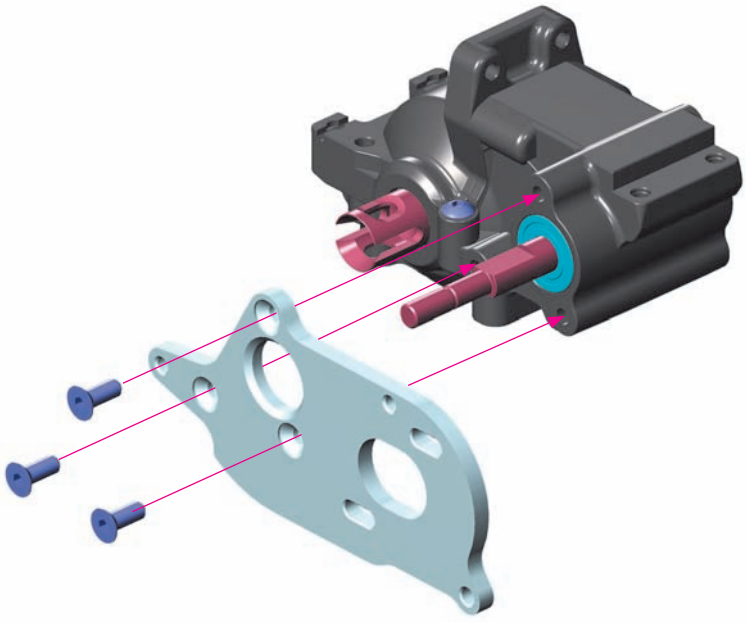


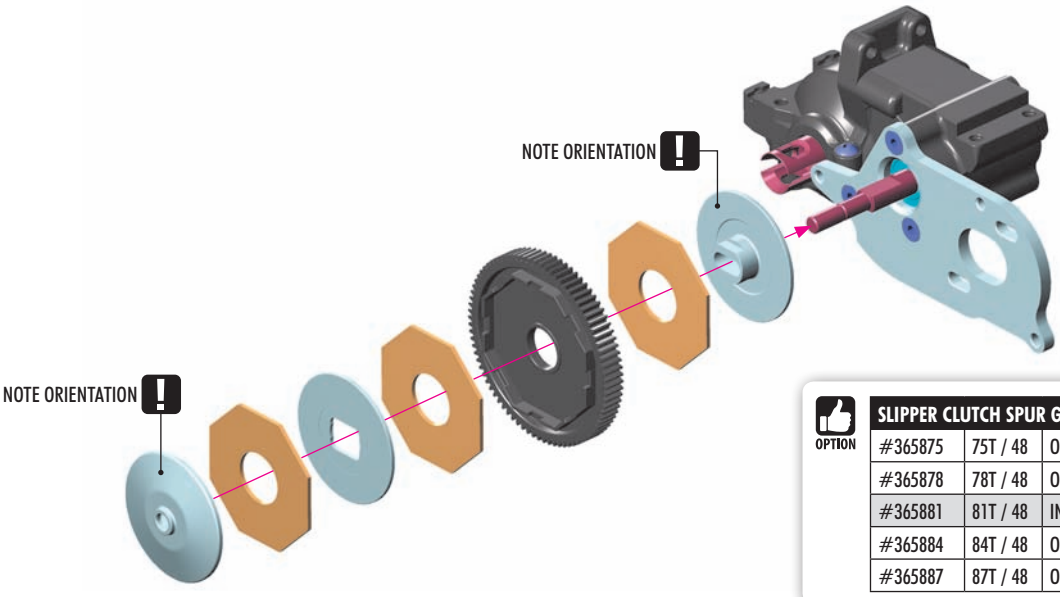
902310
SH M3x10



2. REAR TRANSMISSION

903308
SFH M3x8

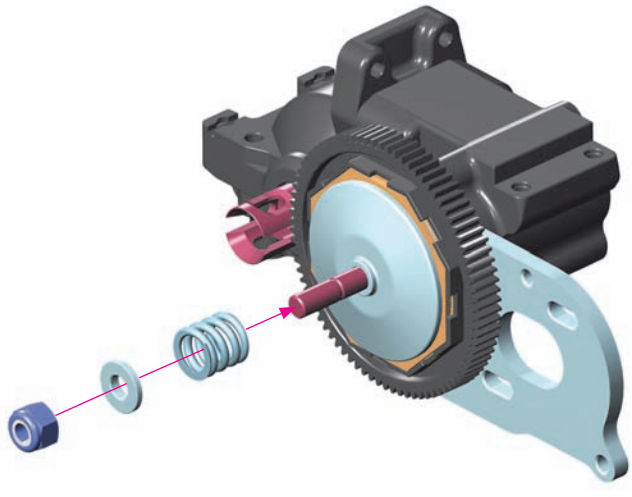




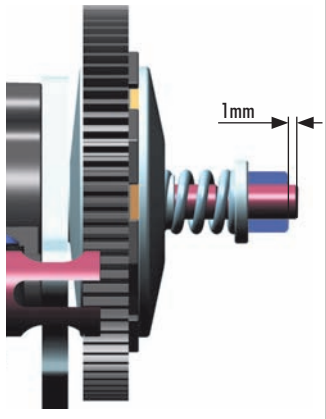
OPTION

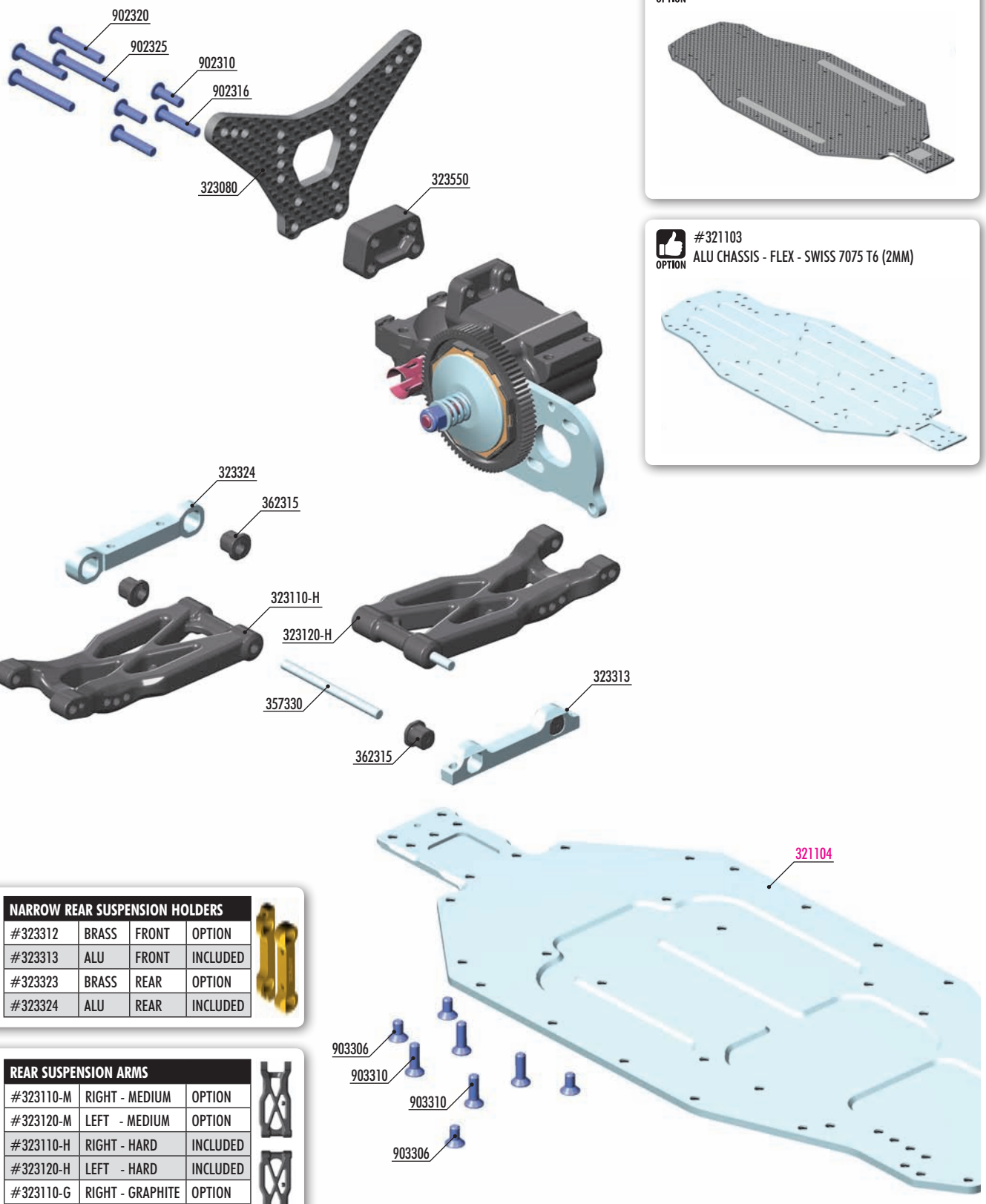
SLIPPER CLUTCH SPUR GEARS		
#365875	75T / 48	OPTION
#365878	78T / 48	OPTION
#365881	81T / 48	INCLUDED
#365884	84T / 48	OPTION
#365887	87T / 48	OPTION

960040
N M4



DETAIL





OPTION #321102
XB2 GRAPHITE CHASSIS 2.5MM

OPTION #321103
ALU CHASSIS - FLEX - SWISS 7075 T6 (2MM)

OPTION

NARROW REAR SUSPENSION HOLDERS			
#323312	BRASS	FRONT	OPTION
#323313	ALU	FRONT	INCLUDED
#323323	BRASS	REAR	OPTION
#323324	ALU	REAR	INCLUDED

OPTION

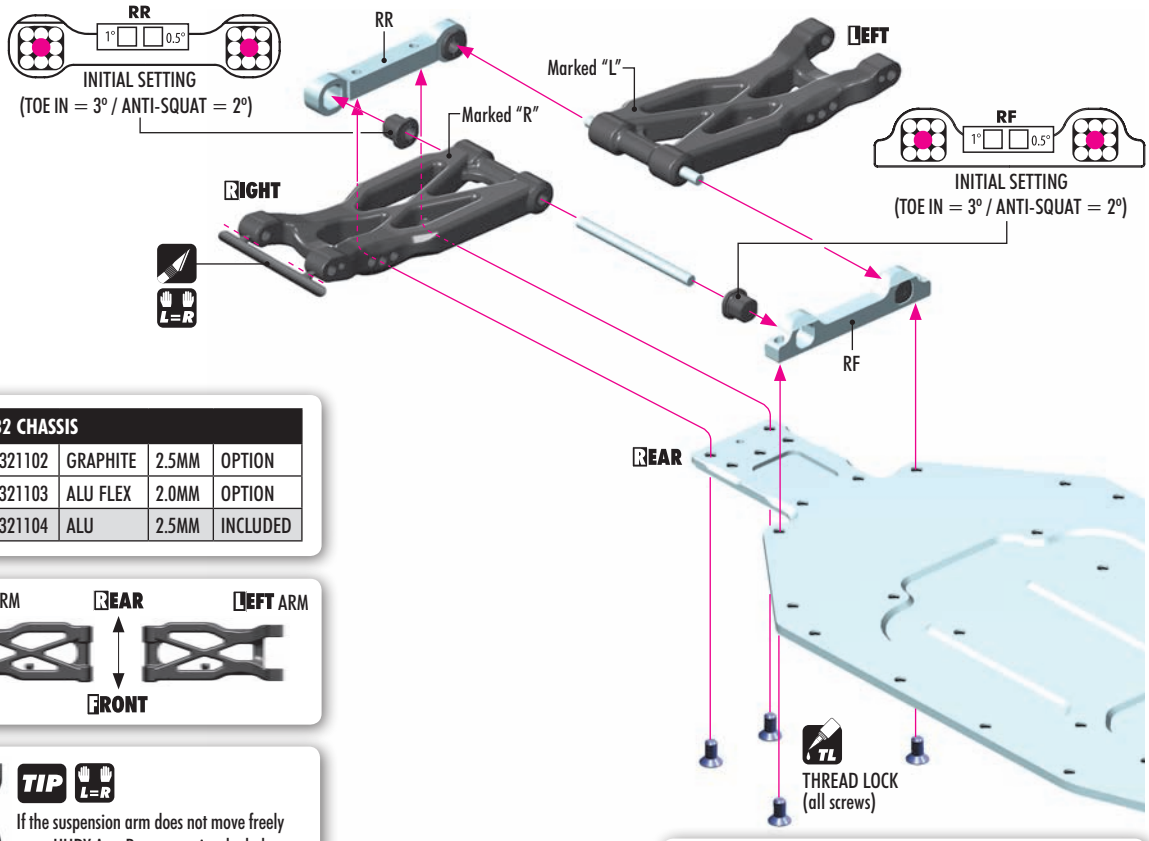
REAR SUSPENSION ARMS		
#323110-M	RIGHT - MEDIUM	OPTION
#323120-M	LEFT - MEDIUM	OPTION
#323110-H	RIGHT - HARD	INCLUDED
#323120-H	LEFT - HARD	INCLUDED
#323110-G	RIGHT - GRAPHITE	OPTION
#323120-G	LEFT - GRAPHITE	OPTION

BAG 03

32 3080	GRAPHITE SHOCK TOWER REAR 3.5MM	90 2310	HEX SCREW SH M3x10 (10)
32 3110-H	COMPOSITE SUSPENSION ARM REAR LOWER RIGHT - HARD	90 2316	HEX SCREW SH M3x16 (10)
32 3120-H	COMPOSITE SUSPENSION ARM REAR LOWER LEFT - HARD	90 2320	HEX SCREW SH M3x20 (10)
32 3313	ALU REAR LOWER SUSP. HOLDER - NARROW - FRONT - 7075 T6 (5MM)	90 2325	HEX SCREW SH M3x25 (10)
32 3324	ALU REAR LOWER SUSP. HOLDER - NARROW - REAR - 7075 T6 (5MM)	90 3306	HEX SCREW SFH M3x6 (10)
32 3550	COMPOSITE REAR SHOCK TOWER ADJUSTING SHIM	90 3310	HEX SCREW SFH M3x10 (10)
35 7330	REAR LOWER OUTER PIVOT PIN (2)		
36 2315	ECCENTRIC BUSHING SET (2)	32 1104	ALU CHASSIS - SWISS 7075 T6 (2.5MM)

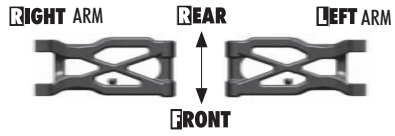
3. REAR SUSPENSION

903306
SFH M3x6



OPTION

XB2 CHASSIS			
#321102	GRAPHITE	2.5MM	OPTION
#321103	ALU FLEX	2.0MM	OPTION
#321104	ALU	2.5MM	INCLUDED



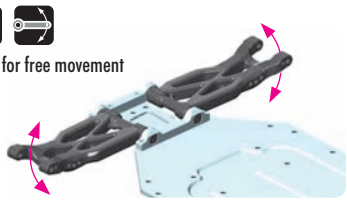
TIP L=R

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

Arm Reamer 3.0mm
(HUDY #107633)

DETAIL

Check for free movement



OPTION

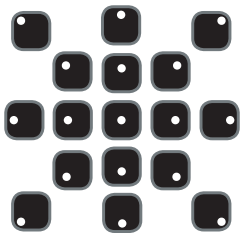
NARROW REAR SUSPENSION HOLDERS			
#323312	BRASS	FRONT	OPTION
#323313	ALU	FRONT	INCLUDED
#323323	BRASS	REAR	OPTION
#323324	ALU	REAR	INCLUDED

OPTION

REAR SUSPENSION ARMS			
#323110-M	RIGHT	MEDIUM	OPTION
#323120-M	LEFT	MEDIUM	OPTION
#323110-H	RIGHT	HARD	INCLUDED
#323120-H	LEFT	HARD	INCLUDED
#323110-G	RIGHT	GRAPHITE	OPTION
#323120-G	LEFT	GRAPHITE	OPTION

MEDIUM - For very-low & low traction
HARD - For medium & high traction
GRAPHITE - For high & very-high traction

All possible mounting alternatives of eccentric bushings



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.

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

ANTI-SQUAT

RR	RF	(°)
		=2°
		=3°
		=1°
		=3°
		=2°
		=4°
		=1°
		=2°
		=0°

ROLL CENTER

RR	RF	(mm)
		=+0.75mm
		=0mm
		=-0.75mm

TRACK-WIDTH

RR	RF	(mm)
		=+1.5mm
		=0mm
		=-1.5mm

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

TOE-IN

RR	RF	(°)
		=4°
		=5°
		=3°
		=3°
		=4°
		=2°
		=5°
		=6°
		=4°

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.

Example:

0(RR) - 0 (RF) = 2°

0(RR) - 0.5 (RF) = 2.5°

0(RR) - 1 (RF) = 3°

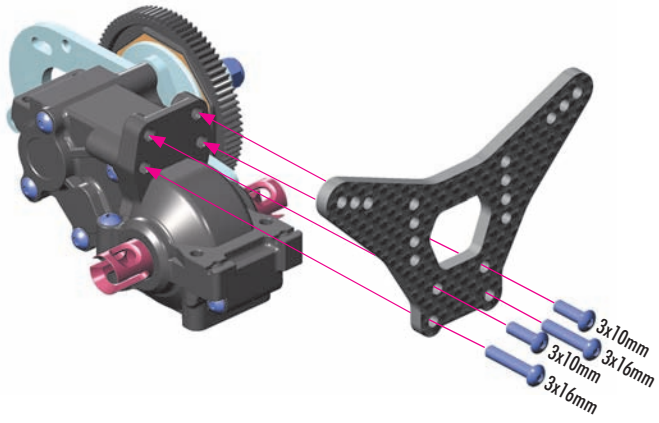
SET-UP BOOK
TOE-IN
ANTI-SQUAT
ROLL CENTER
TRACK-WIDTH

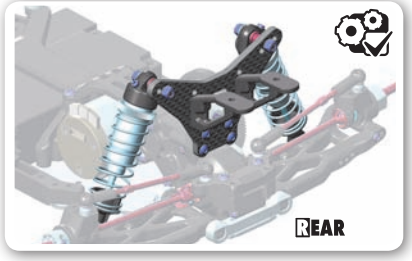
902310
SH M3x10

902316
SH M3x16

ALTERNATIVE 1

SHOCKS MOUNTED IN FRONT OF REAR SHOCK TOWER
(INITIAL SETTING)



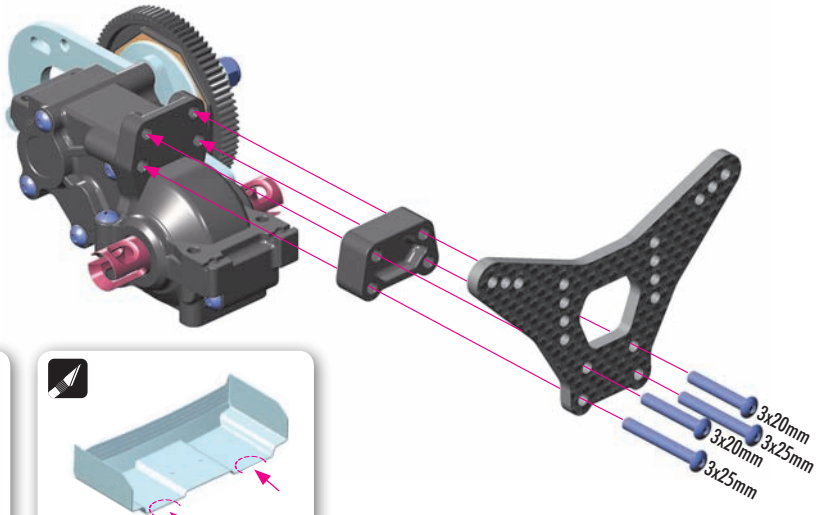


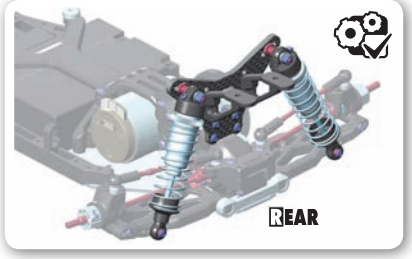
902320
SH M3x20

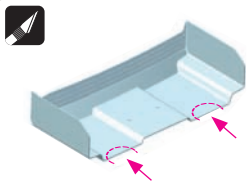
902325
SH M3x25

ALTERNATIVE 2

SHOCKS MOUNTED BEHIND REAR SHOCK TOWER
DO NOT USE FOR BASIC SET-UP

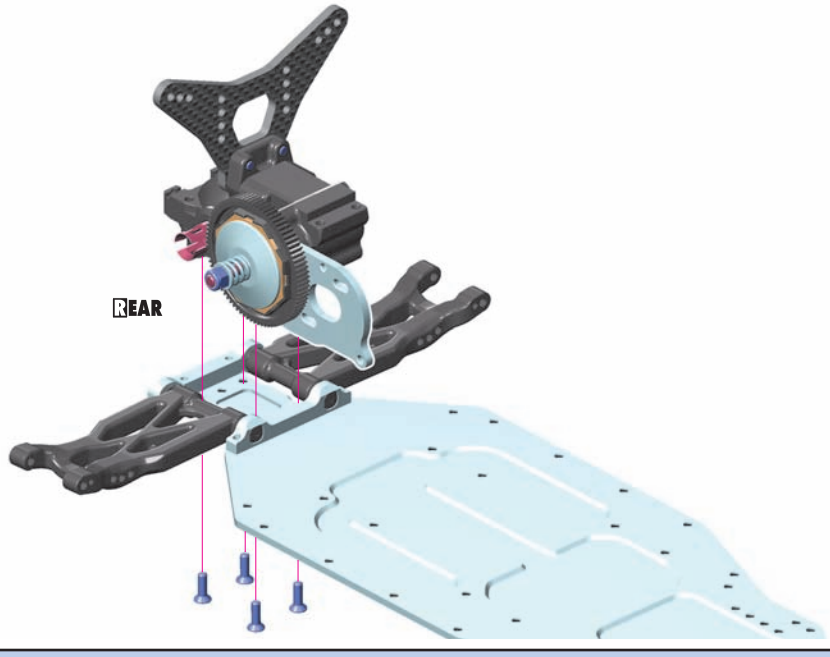






For the rear shock position cut holes into the Lexan rear wing.

903310
SFH M3x10



3. REAR DRIVETRAIN

OPTION

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

OPTION

REAR UPRIGHTS		
#323350-M	MEDIUM	OPTION
#323350-H	HARD	INCLUDED
#323351	ALU	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	OPTION
#365356	+1.5mm - 2 slots	OPTION
#365355	+0.75mm - 1 slot	OPTION
#365353	0mm - 0 slots	OPTION
#365354	-0.75mm - Lightw.	OPTION

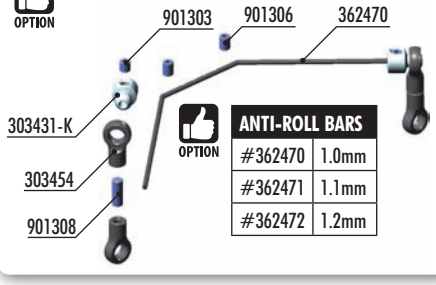
OPTION

REAR ROLL CENTER HOLDER		
#323040	COMPOSITE	INCLUDED
#323041	ALU	OPTION

OPTION

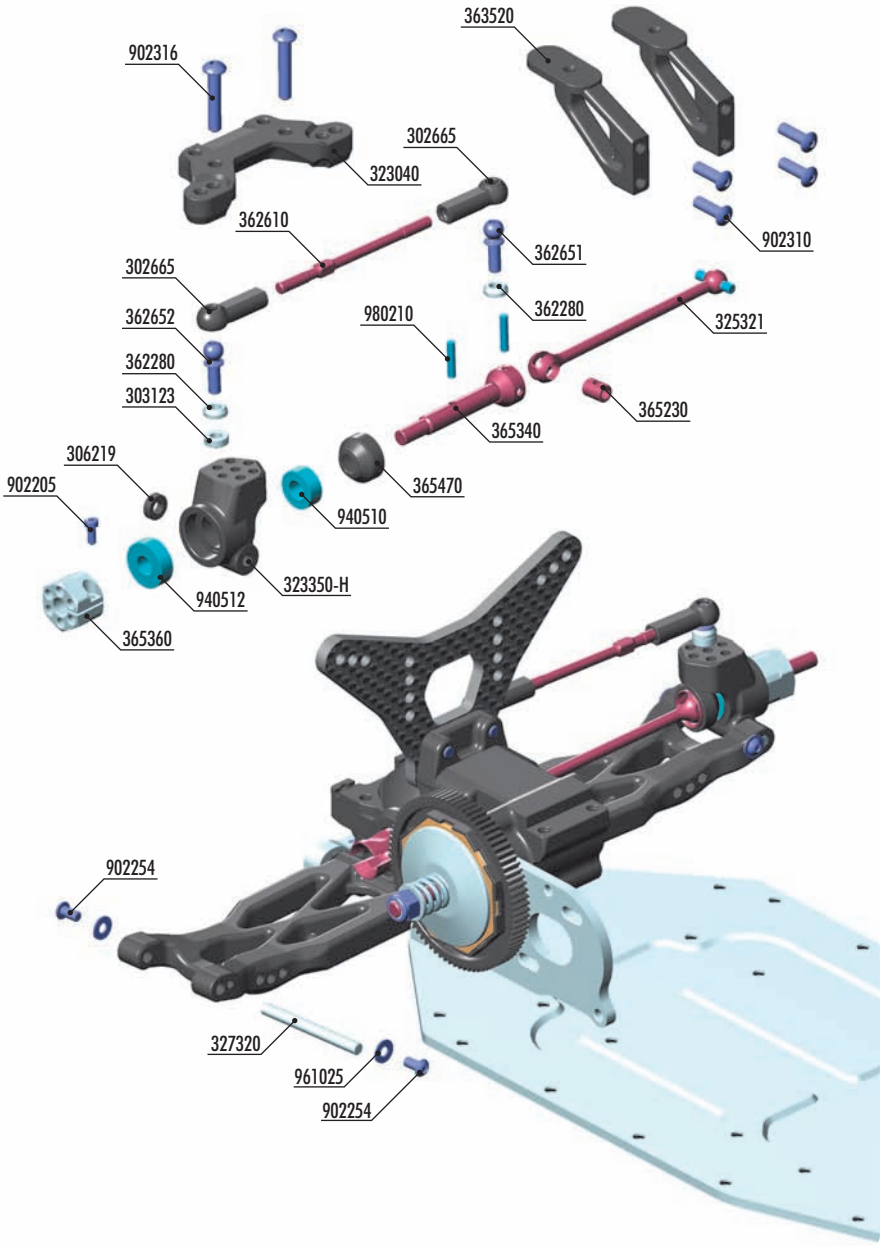
XRAY BALL-BEARING			
#359050	5x10x4	GREASE	OPTION
#359051	5x12x4	GREASE	OPTION
#940510	5x10x4	OIL	INCLUDED
#940512	5x12x4	OIL	INCLUDED

OPTION #362400 - ANTI-ROLL BAR 1.0MM SET



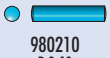
OPTION

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



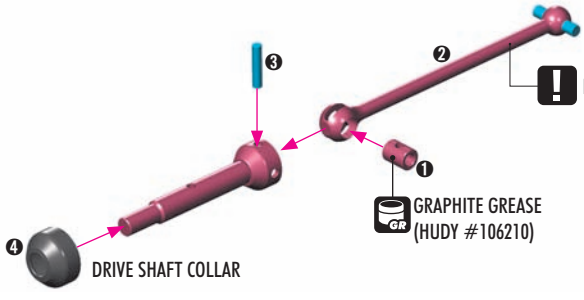
BAG 03

30 2665	COMPOSITE BALL JOINT 4.9MM - CLOSED WITH HOLE (4)
30 3123	ALU SHIM 3x6x2.0MM (10)
30 6219	COMPOSITE SET OF SERVO SHIMS (4)
32 3040	COMPOSITE REAR ROLL CENTER HOLDER - CARPET EDITION
32 3350-H	COMPOSITE UPRIGHT REAR - HARD
32 5321	REAR DRIVE SHAFT 67MM - HUDY SPRING STEEL™
32 7320	REAR ARM PIVOT PIN (2)
36 2280	ALU CONICAL SHIM 3x6x2.0MM (10)
36 2610	ADJUSTABLE TURNBUCKLE 50MM M3 L/R - HUDY SPRING STEEL™ (2)
36 2651	BALL END 4.9MM WITH THREAD 8MM (2)
36 2652	BALL END 4.9MM WITH THREAD 10MM (2)
36 3520	REAR WING POST - V2 (2)
36 5230	DRIVE SHAFT COUPLING - HUDY SPRING STEEL™
36 5340	REAR DRIVE AXLE - HUDY SPRING STEEL™
36 5360	ALU WHEEL HUB 12MM - OFFSET "+4.5MM" (2)
36 5470	COMPOSITE DRIVE SHAFT SAFETY COLLAR - V2 (3)
90 2205	HEX SCREW SH M2x5 (10)
90 2254	HEX SCREW SH M2.5x4 (10)
90 2310	HEX SCREW SH M3x10 (10)
90 2316	HEX SCREW SH M3x16 (10)
94 0510	HIGH-SPEED BALL-BEARING 5x10x4 RUBBER SEALED (2)
94 0512	HIGH-SPEED BALL-BEARING 5x12x4 RUBBER SEALED (2)
96 1025	WASHER S 2.5 (10)
98 0210	PIN 2x9.8 (10)



980210
P 2x10

2x L=R



OPTION

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

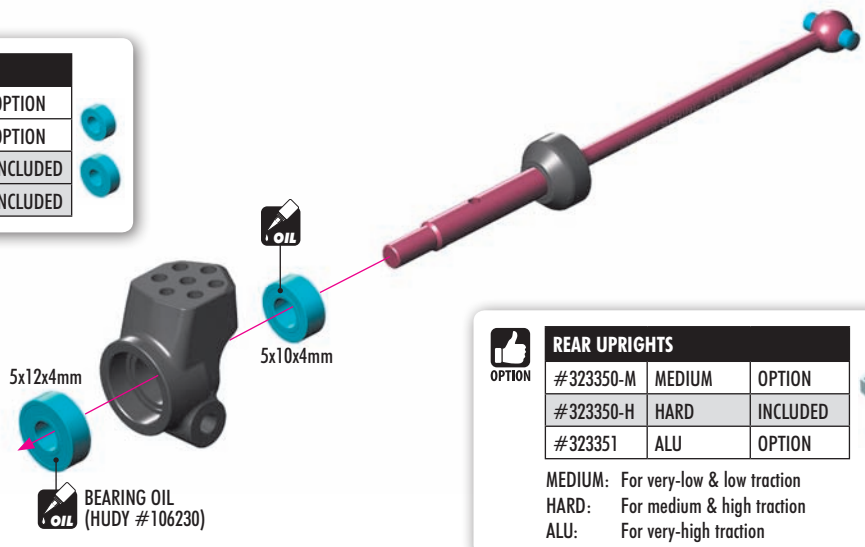
940510
BB 5x10x4

940512
BB 5x12x4

2x L=R

OPTION

XRAY BALL-BEARING			
#359050	5x10x4	GREASE	OPTION
#359051	5x12x4	GREASE	OPTION
#940510	5x10x4	OIL	INCLUDED
#940512	5x12x4	OIL	INCLUDED



OPTION

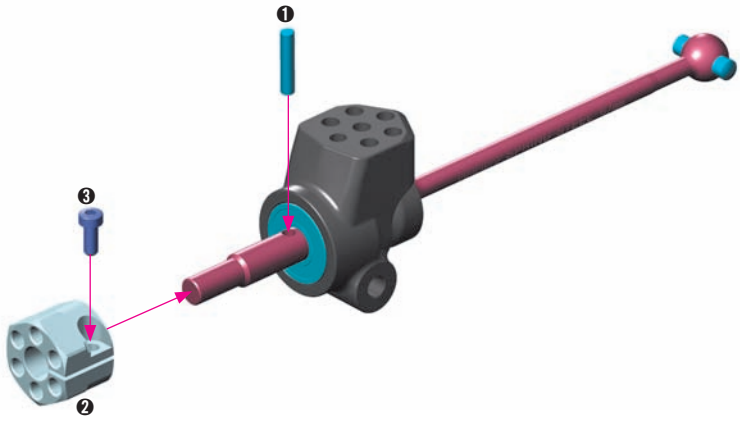
REAR UPRIGHTS		
#323350-M	MEDIUM	OPTION
#323350-H	HARD	INCLUDED
#323351	ALU	OPTION

MEDIUM: For very-low & low traction
HARD: For medium & high traction
ALU: For very-high traction

980210
P 2x10

902205
SH M2x5

2x L=R



OPTION

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

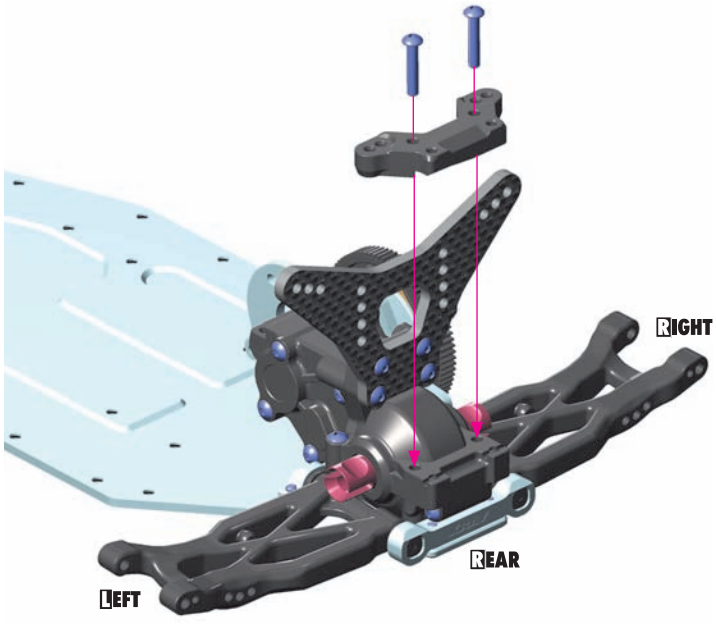
OPTIONAL HEX HUB EFFECTS

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

902316
SH M3x16



OPTION

REAR ROLL CENTER HOLDER		
#323040	COMPOSITE	INCLUDED
#323041	ALU	OPTION

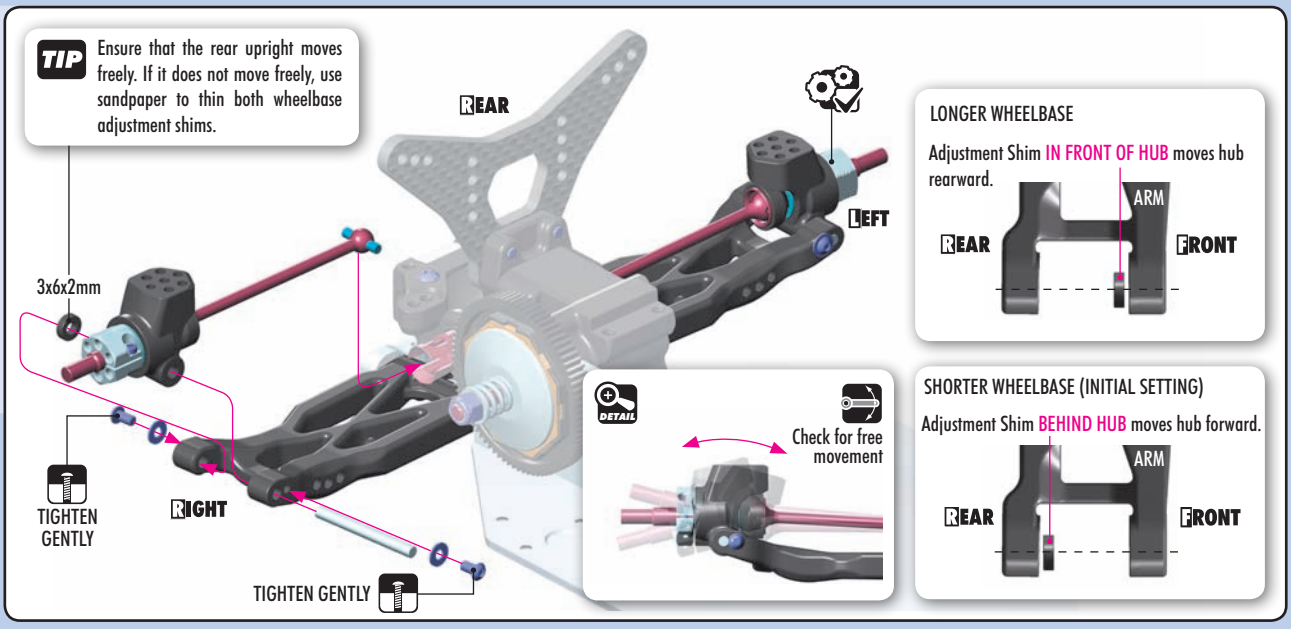
COMPOSITE - For low, medium & high traction
ALU - For very-high traction

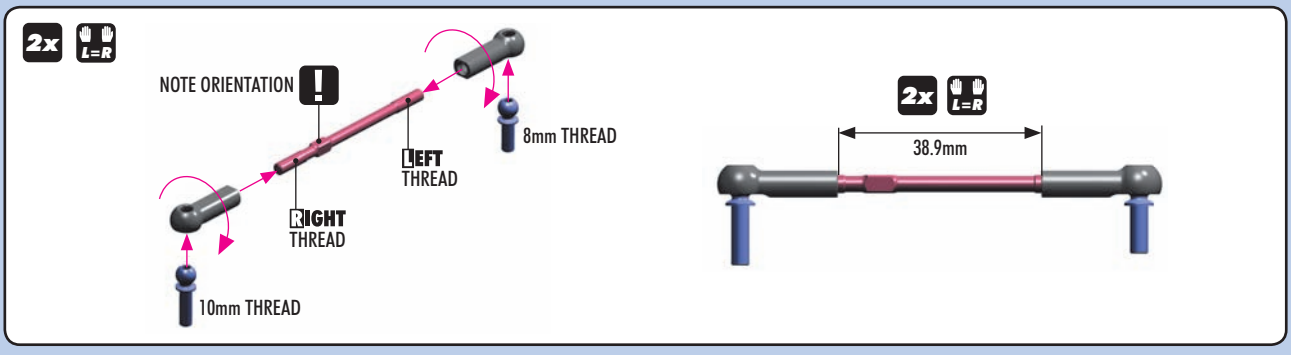
3. REAR DRIVETRAIN

306219
SHIM 3x6x2

902254
SH M2.5x4

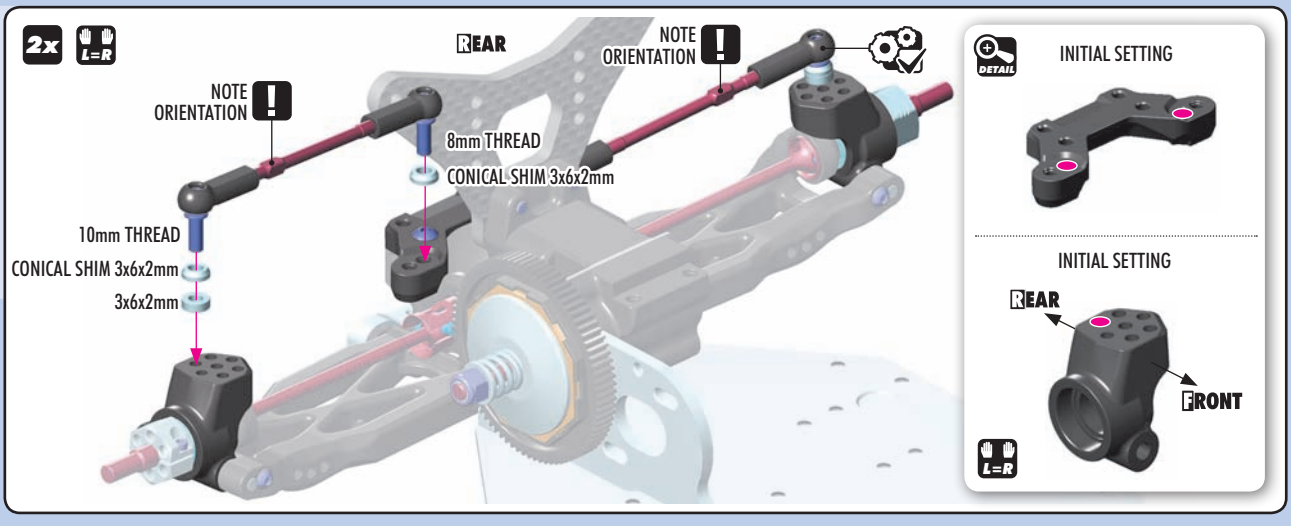
961025
WASHER S 2.5



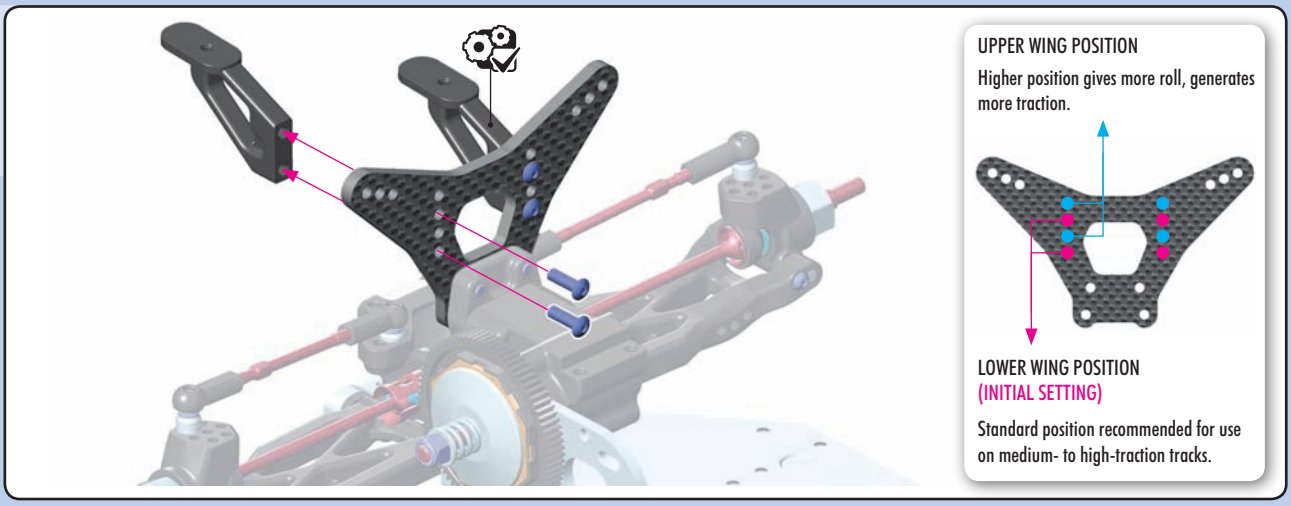


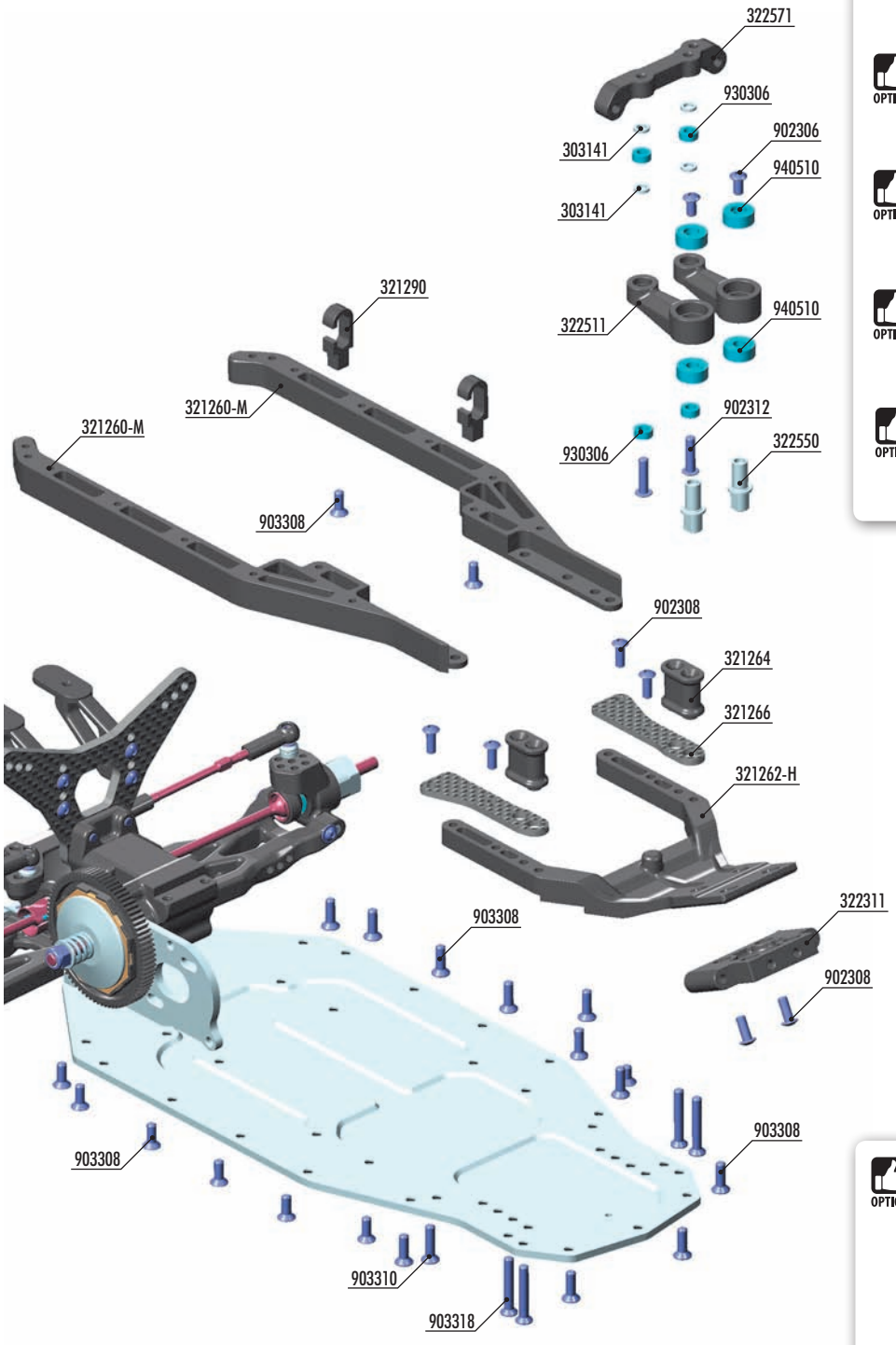
303123
SHIM 3x6x2

362280
CON. SHIM 3x6x2



902310
SH M3x10





OPTION	GRAPHITE SIDE GUARD BRACE		
	#321263	MEDIUM	OPTION
	#321266	SOFT	INCLUDED

OPTION	STEERING PLATE		
	#322570	ALU	OPTION
	#322571	COMPOSITE	INCLUDED

OPTION	STEERING ARMS		
	#322510	ALU	OPTION
	#322511	COMPOSITE	INCLUDED

OPTION	FRONT LOWER CHASSIS BRACE		
	#321262-M	MEDIUM	OPTION
	#321262-H	HARD	INCLUDED

OPTION	SIDE CHASSIS GUARDS		
	#321260-M	MEDIUM	INCLUDED
	#321260-H	HARD	OPTION

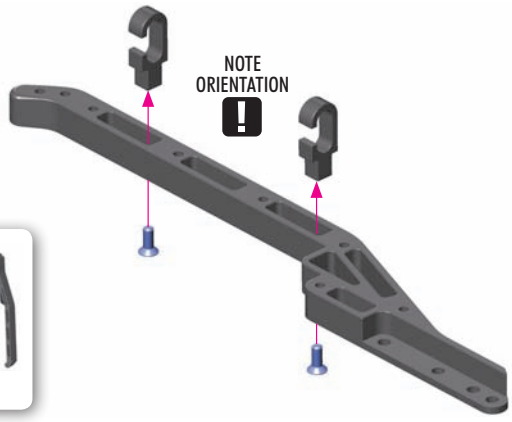
OPTION	FRONT LOWER ARM MOUNT		
	#322310	ALU 26°	OPTION
	#322311	COMPOSITE 26°	INCLUDED
	#322312	BRASS 26°	OPTION
	#322313	ALU 23°/29°	OPTION
	#321211	SUSP. HOLDER BRACE 23°/29°	OPTION
	#322314	BRASS 23°/29°	OPTION
	#321211	SUSP. HOLDER BRACE 23°/29°	OPTION

BAG 04

30 3141	ALU SHIM 3x5x1.0MM (10)
32 1260-M	COMPOSITE CHASSIS SIDE GUARDS L+R - MEDIUM
32 1262-H	COMPOSITE CHASSIS FRONT GUARD - HARD
32 1264	COMPOSITE FRONT CHASSIS SIDE BRACE - SHORT (2)
32 1266	GRAPHITE CHASSIS SIDE GUARD BRACE - SOFT
32 1290	COMPOSITE WIRE HOLDER (2)
32 2311	COMPOSITE FRONT LOWER SUSPENSION HOLDER
32 2571	COMPOSITE STEERING PLATE
32 2510	ALU STEERING ARM (2) (OPTION)
32 2511	COMPOSITE STEERING ARM (2)
32 2550	ALU SERVO SAVER PIVOT SHAFT (2)
90 2306	HEX SCREW SH M3x6 (10)
90 2308	HEX SCREW SH M3x8 (10)
90 2312	HEX SCREW SH M3x12 (10)
90 3308	HEX SCREW SFH M3x8 (10)
90 3310	HEX SCREW SFH M3x10 (10)
90 3318	HEX SCREW SFH M3x18 (10)
93 0306	BALL-BEARING 3x6x2.5 (2)
94 0510	HIGH-SPEED BALL-BEARING 5x10x4 RUBBER SEALED (2)

4. FRONT ASSEMBLY

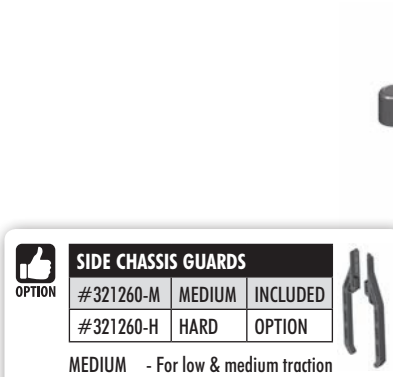
903308
SFH M3x8



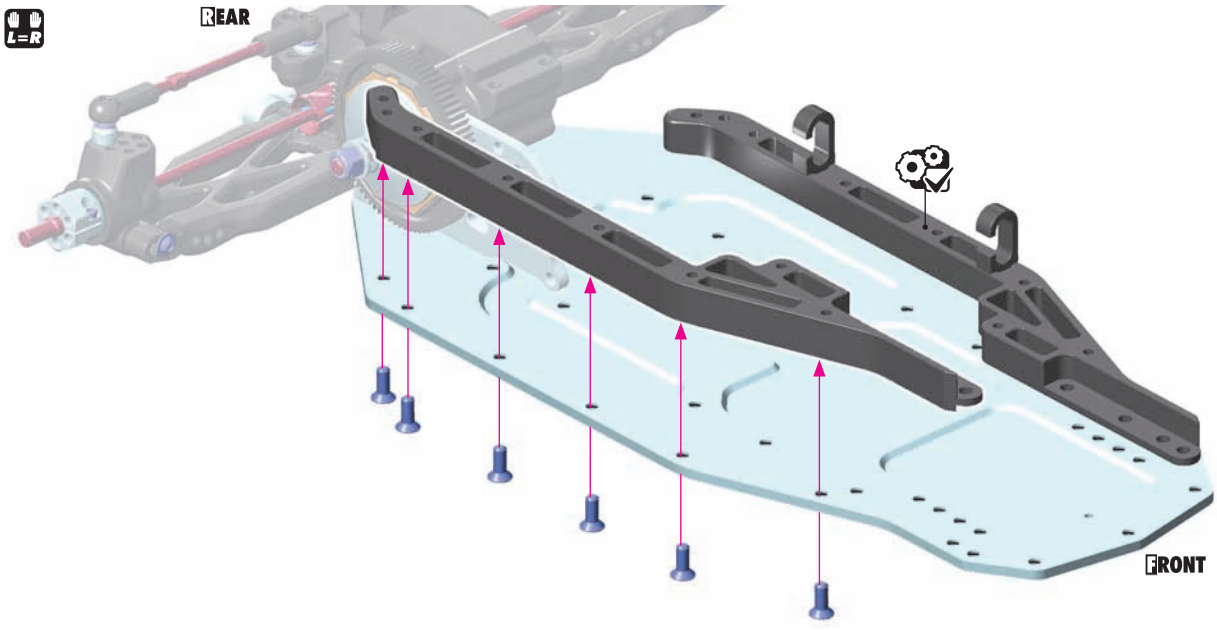
OPTION

SIDE CHASSIS GUARDS		
#321260-M	MEDIUM	INCLUDED
#321260-H	HARD	OPTION

MEDIUM - For low & medium traction
HARD - For high traction



903308
SFH M3x8

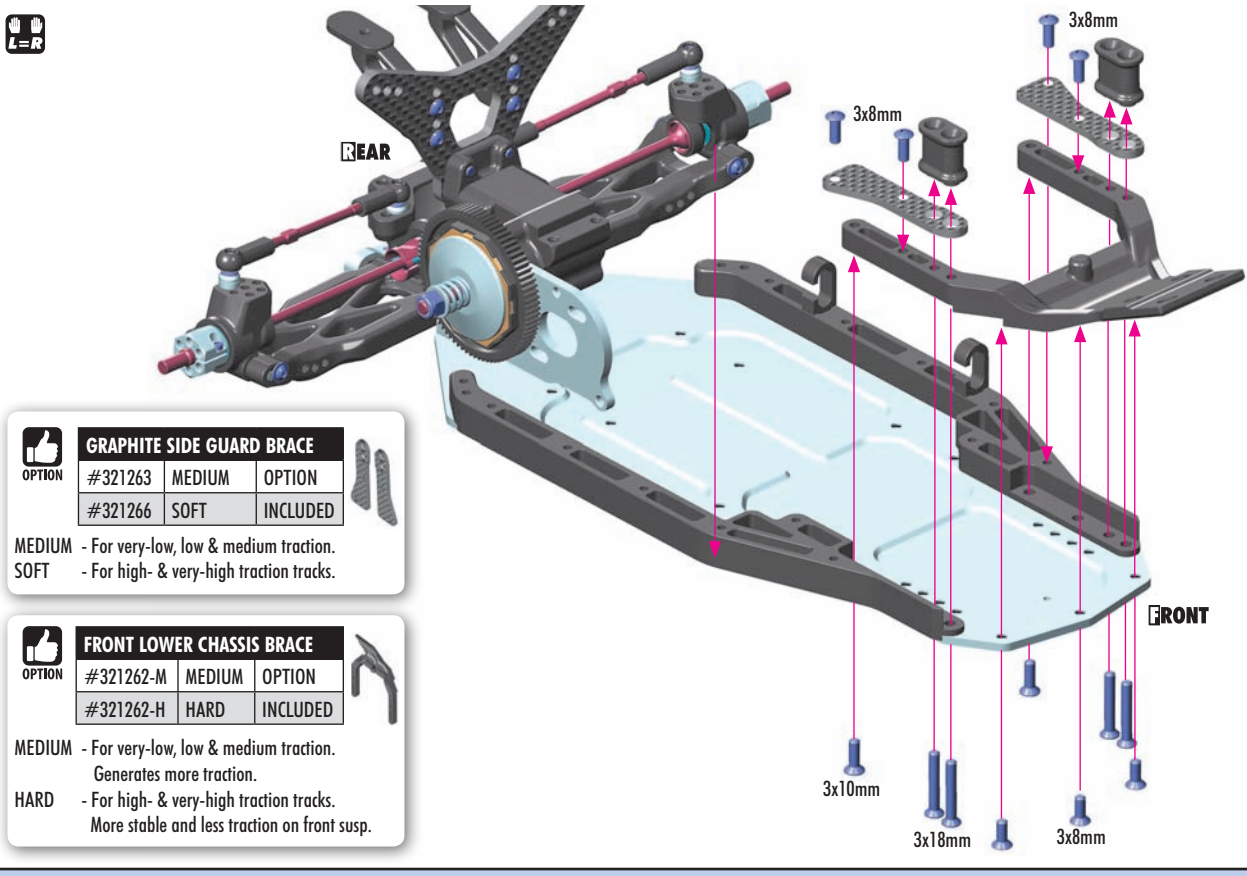


902308
SH M3x8

903308
SFH M3x8

903310
SFH M3x10

903318
SFH M3x18



OPTION

GRAPHITE SIDE GUARD BRACE		
#321263	MEDIUM	OPTION
#321266	SOFT	INCLUDED

MEDIUM - For very-low, low & medium traction.
SOFT - For high- & very-high traction tracks.

OPTION

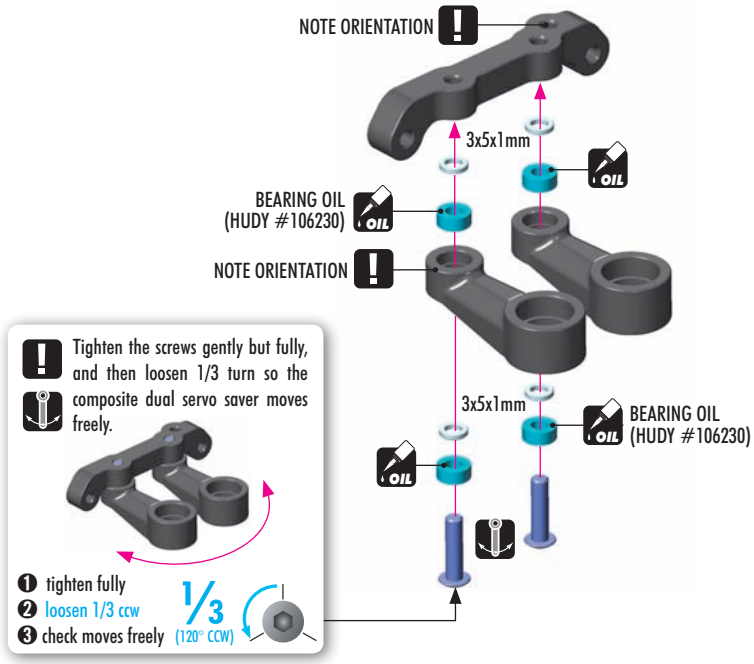
FRONT LOWER CHASSIS BRACE		
#321262-M	MEDIUM	OPTION
#321262-H	HARD	INCLUDED

MEDIUM - For very-low, low & medium traction.
Generates more traction.
HARD - For high- & very-high traction tracks.
More stable and less traction on front susp.

303141
SHIM 3x5x1

902312
SH M3x12

930306
BB 3x6x2.5



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

❶ tighten fully
❷ loosen 1/3 ccw
❸ check moves freely

1/3 (120° CCW)

OPTION

STEERING PLATE		
#322570	ALU	OPTION
#322571	COMPOSITE	INCLUDED

COMPOSITE - Easy to drive, more forgiving, less steering
ALU - More aggressive, more steering, more precise steering

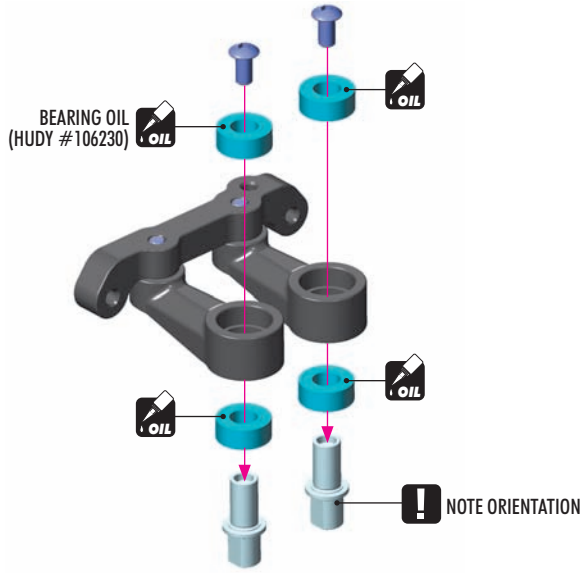
OPTION

STEERING ARMS		
#322510	ALU	OPTION
#322511	COMPOSITE	INCLUDED

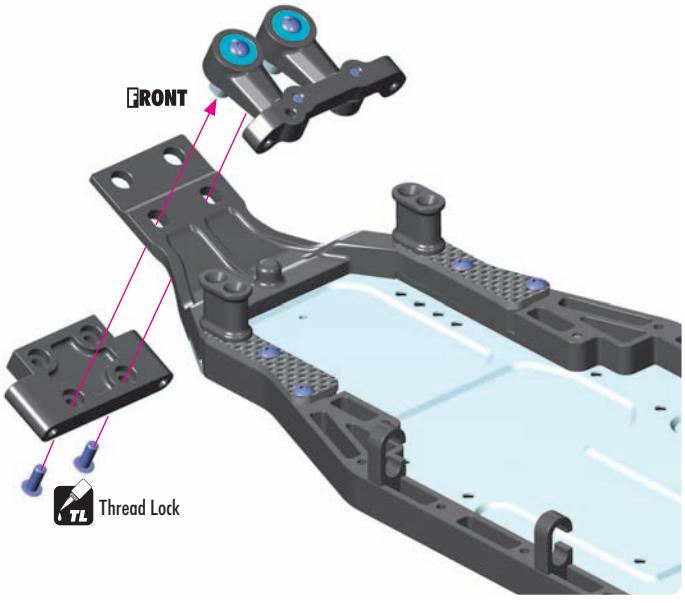
COMPOSITE - Easy to drive, more forgiving
ALU - More aggressive, more steering, more precise steering

902306
SH M3x6

940510
BB 5x10x4



902308
SH M3x8

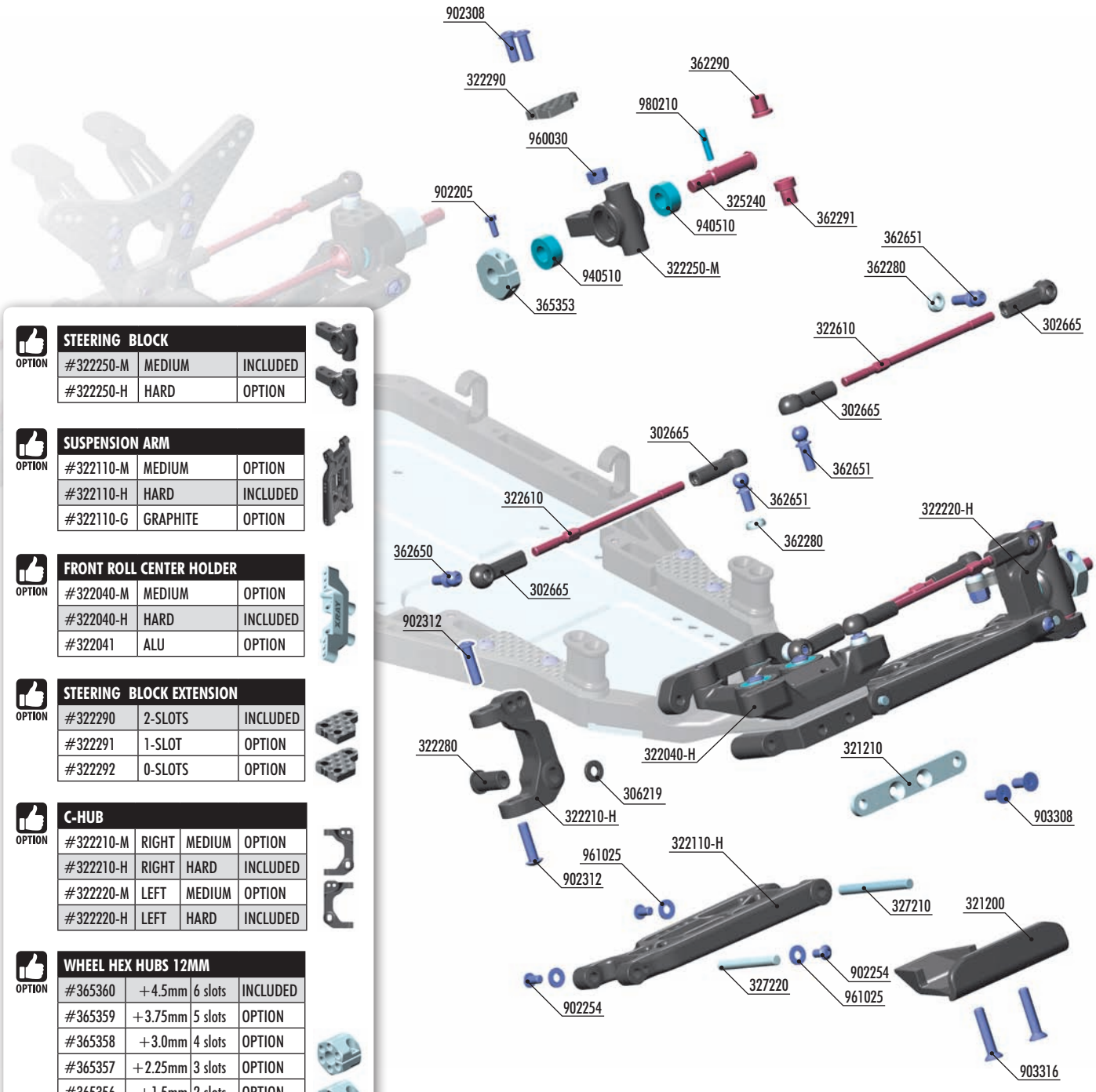


OPTION

FRONT LOWER ARM MOUNT		
#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

COMPOSITE - Generates more traction in front
ALU - Makes car more stable
BRASS - Adds more weight in front, less weight transfer

5. FRONT SUSPENSION



OPTION	STEERING BLOCK		
	#322250-M	MEDIUM	INCLUDED
	#322250-H	HARD	OPTION

OPTION	SUSPENSION ARM		
	#322110-M	MEDIUM	OPTION
	#322110-H	HARD	INCLUDED
	#322110-G	GRAPHITE	OPTION

OPTION	FRONT ROLL CENTER HOLDER		
	#322040-M	MEDIUM	OPTION
	#322040-H	HARD	INCLUDED
	#322041	ALU	OPTION

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

OPTION	C-HUB			
	#322210-M	RIGHT	MEDIUM	OPTION
	#322210-H	RIGHT	HARD	INCLUDED
	#322220-M	LEFT	MEDIUM	OPTION
	#322220-H	LEFT	HARD	INCLUDED

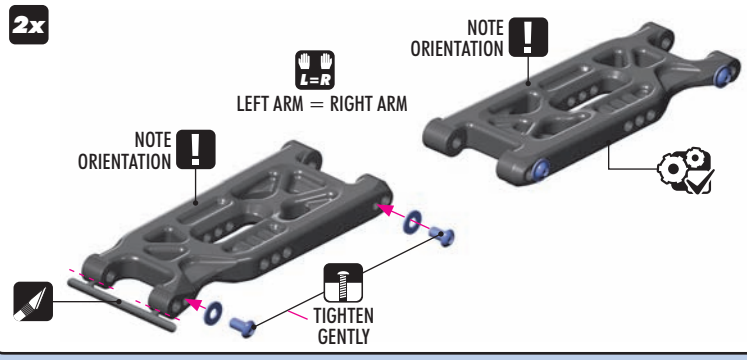
OPTION	WHEEL HEX HUBS 12MM			
	#365360	+4.5mm	6 slots	INCLUDED
	#365359	+3.75mm	5 slots	OPTION
	#365358	+3.0mm	4 slots	OPTION
	#365357	+2.25mm	3 slots	OPTION
	#365356	+1.5mm	2 slots	OPTION
	#365355	+0.75mm	1 slot	OPTION
	#365353	0mm	0 slots	INCLUDED
	#365354	-0.75mm	Lightw.	OPTION

BAG 05

30 2665	COMPOSITE BALL JOINT 4.9MM - CLOSED WITH HOLE (4)
30 6219	COMPOSITE SET OF SERVO SHIMS (4)
32 1200	COMPOSITE FRONT BUMPER
32 1210	ALU SUSPENSION HOLDER BRACE - SWISS 7075 T6 (3MM)
32 2040-H	COMPOSITE FRONT ROLL CENTER HOLDER - HARD
32 2110-H	COMPOSITE SUSPENSION ARM FRONT LOWER - HARD
32 2210-H	COMPOSITE C-HUB 0° DEG. RIGHT - HARD
32 2220-H	COMPOSITE C-HUB 0° DEG. LEFT - HARD
32 2250-M	COMPOSITE STEERING BLOCK - MEDIUM
32 2280	COMPOSITE CASTER ECCENTRIC BUSHING (2+2+2)
32 2290	GRAPHITE EXTENSION FOR STEERING BLOCK - 2 SLOTS (2)
32 2610	ADJUSTABLE TURNBUCKLE 55MM M3 L/R - HUDY SPRING STEEL™ (2)
32 5240	FRONT DRIVE AXLE - HUDY SPRING STEEL™
32 7210	FRONT SUSPENSION PIVOT PIN (2)
32 7220	FRONT ARM PIVOT PIN (2)
36 2280	ALU CONICAL SHIM 3x6x2.0MM (10)
36 2290	STEEL STEERING BUSHING - SHORT (2)
36 2291	STEEL STEERING BUSHING - LONG (2)
36 2650	BALL END 4.9MM WITH THREAD 6MM (2)
36 2651	BALL END 4.9MM WITH THREAD 8MM (2)
36 5353	ALU WHEEL HUB 12MM (2)
90 2205	HEX SCREW SH M2x5 (10)
90 2254	HEX SCREW SH M2.5x4 (10)
90 2308	HEX SCREW SH M3x8 (10)
90 2312	HEX SCREW SH M3x12 (10)
90 3308	HEX SCREW SFH M3x8 (10)
90 3316	HEX SCREW SFH M3x16 (10)
94 0510	HIGH-SPEED BALL-BEARING 5x10x4 RUBBER SEALED (2)
96 0030	NUT M3 (10)
96 1025	WASHER S 2.5 (10)
98 0210	PIN 2x9.8 (10)

902254
SH M2.5x4

961025
S 2.5

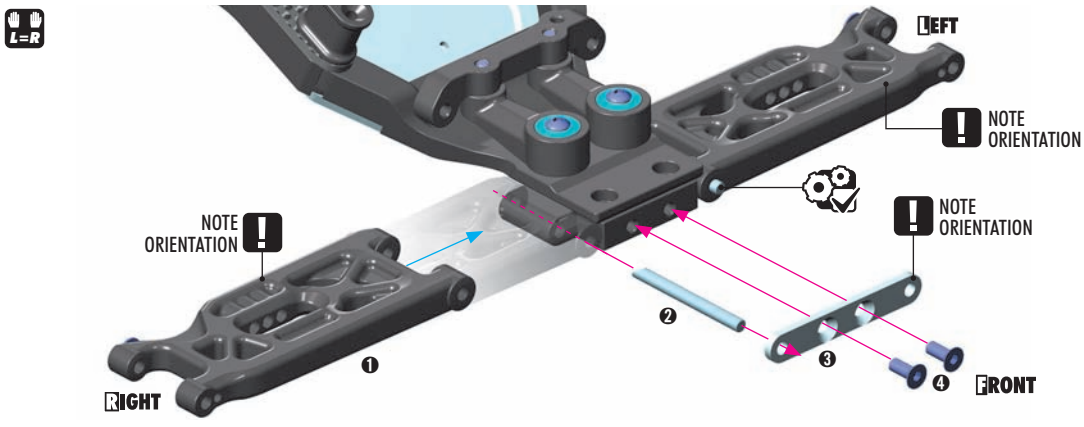


OPTION

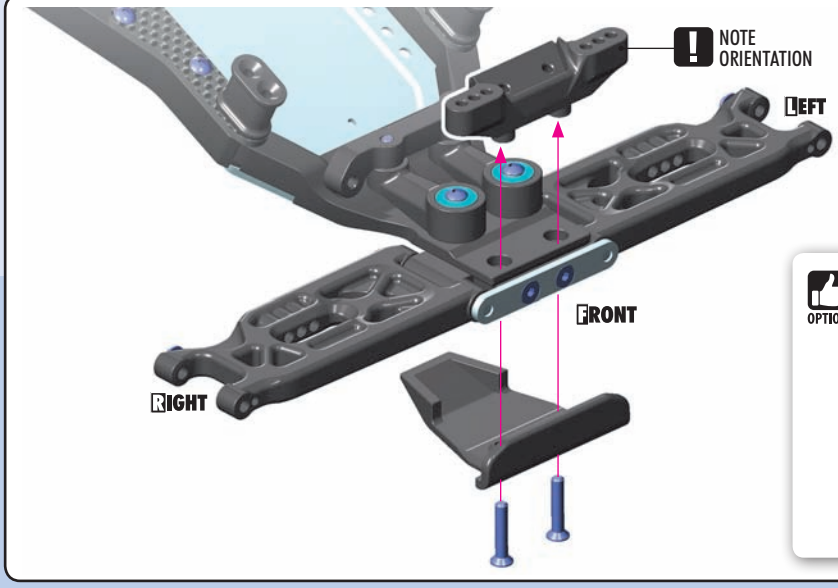
SUSPENSION ARM		
#322110-M	MEDIUM	OPTION
#322110-H	HARD	INCLUDED
#322110-G	GRAPHITE	OPTION

MEDIUM - For very-low & low traction
HARD - For medium & high traction
GRAPHITE - For high & very-high traction

903308
SFH M3x8



903316
SFH M3x16



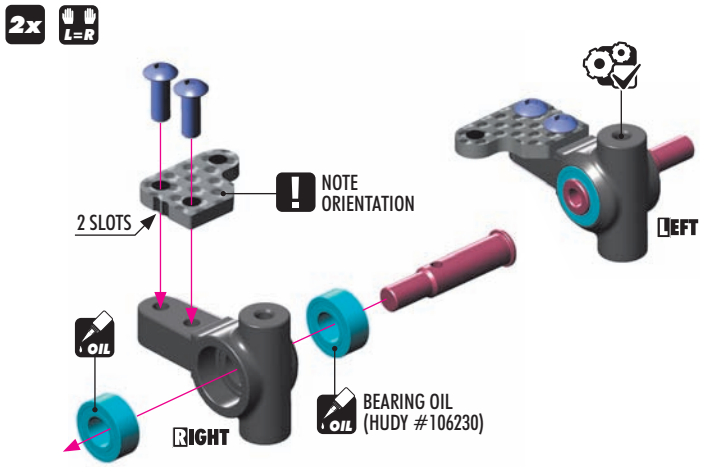
OPTION

FRONT ROLL CENTER HOLDER		
#322040-M	MEDIUM	OPTION
#322040-H	HARD	INCLUDED
#322041	ALU	OPTION

MEDIUM - Generates more traction, absorbs bumps better
HARD - More precise, absorbs less bumps than medium but still more than alu, more reactive than medium composite but less than alu
ALU - More precise, increased strength

902308
SH M3x8

940510
BB 5x10x4



OPTION

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

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

OPTION

STEERING BLOCK		
#322250-M	MEDIUM	INCLUDED
#322250-H	HARD	OPTION

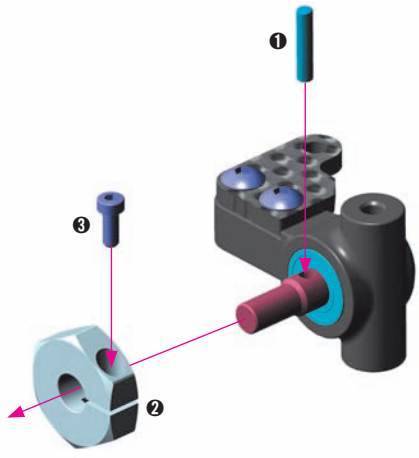
MEDIUM - More steering, more aggressive
HARD - Easy to drive, less on-power steering

5. FRONT SUSPENSION

902205
SH M2x5

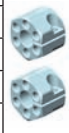
981210
P 2x10

2x L=R



OPTION

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



OPTIONAL HEX HUB EFFECTS

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

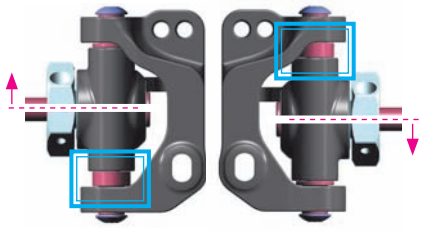
LESS OFFSET
Rear - more traction
Front - more steering

MORE OFFSET
Rear - less traction
Front - less steering

902312
SH M3x12

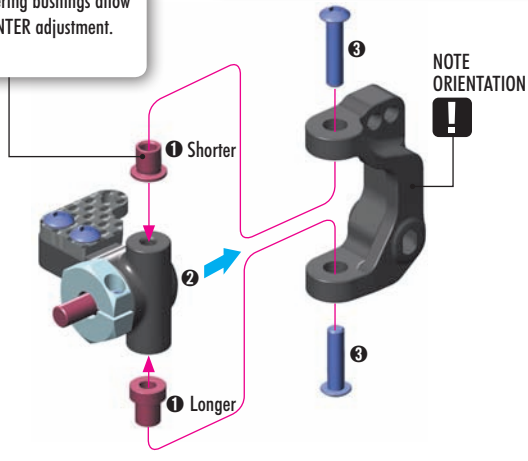
2x L=R

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



LOWER ROLL CENTER
TOP = LONGER bushing
BOTTOM = SHORTER bushing
Recommended for rough tracks to improve stability.

Steel steering bushings allow ROLL CENTER adjustment.



OPTION

C-HUB			
#322210-M	RIGHT	MEDIUM	OPTION
#322210-H	RIGHT	HARD	INCLUDED
#322220-M	LEFT	MEDIUM	OPTION
#322220-H	LEFT	HARD	INCLUDED

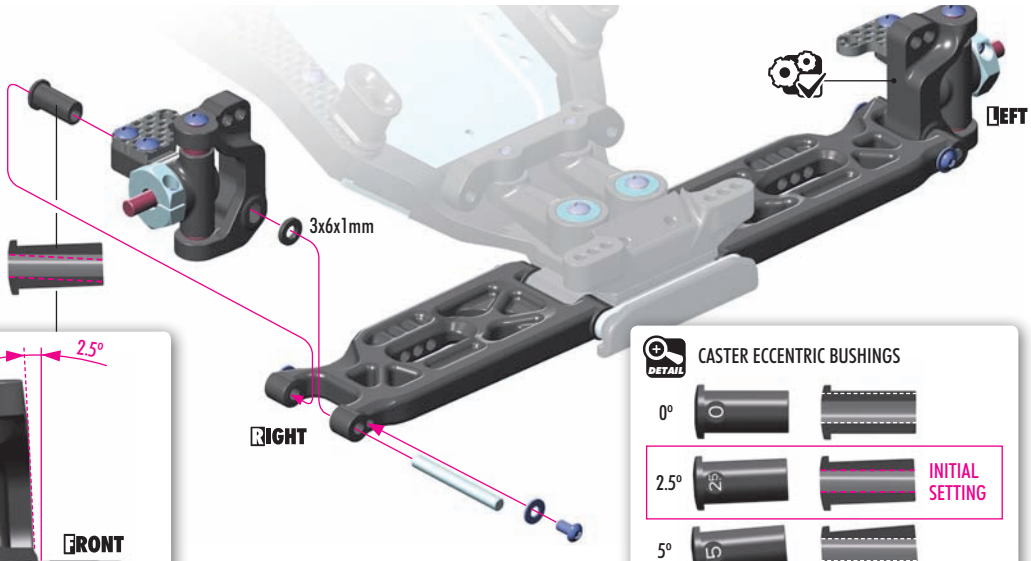
MEDIUM - For very-low, low & meidum traction. Absorbs bumps better, easy to drive.
HARD - For high & very-high traction. More steering, more aggressive.

306219
SHIM 3x6x1

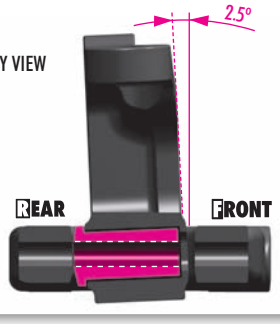
902254
SH M2.5x4

961025
S 2.5

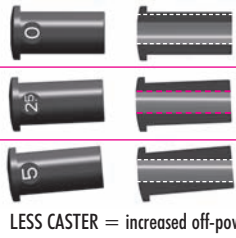
2x L=R



DETAIL
CUTAWAY VIEW



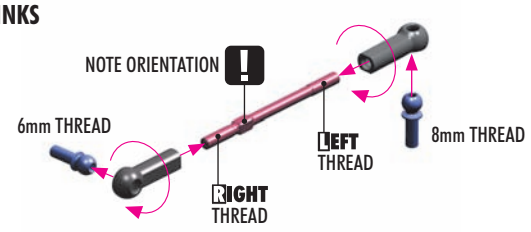
DETAIL
CASTER ECCENTRIC BUSHINGS

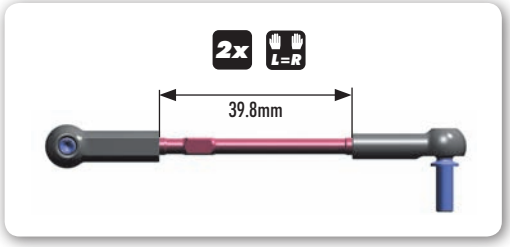


LESS CASTER = increased off-power steering
MORE CASTER = decreased off-power steering

ROLL CENTER LINKS

2x L=R

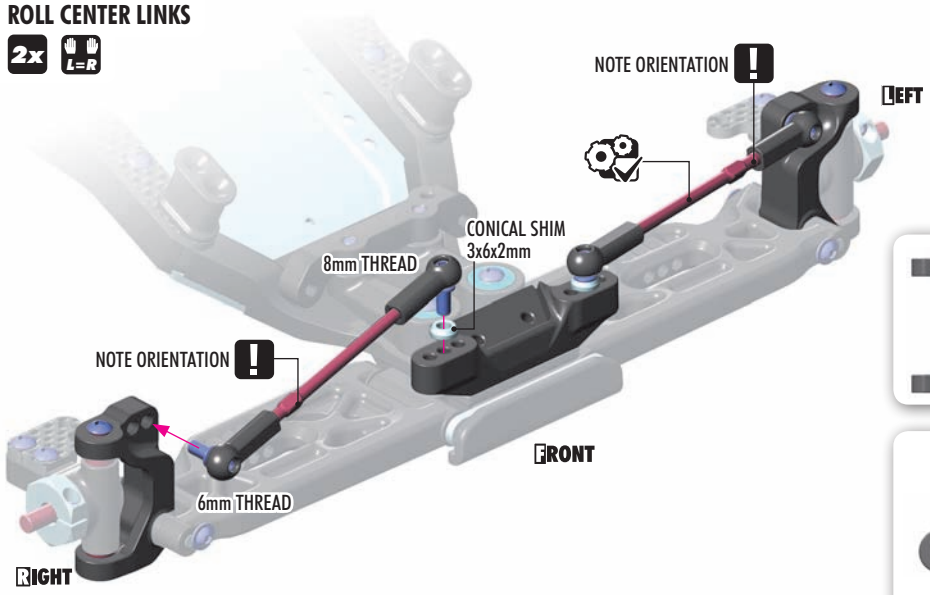


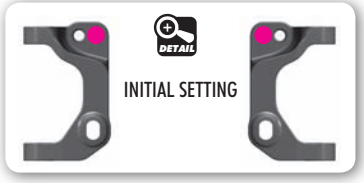


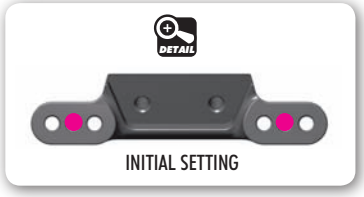
362280
CON. SHIM 3x6x2

ROLL CENTER LINKS

2x L=R

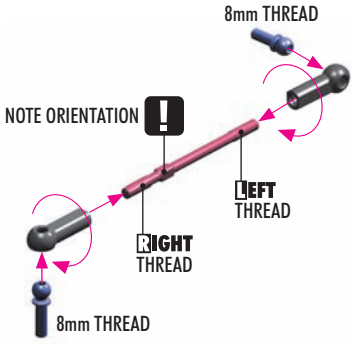


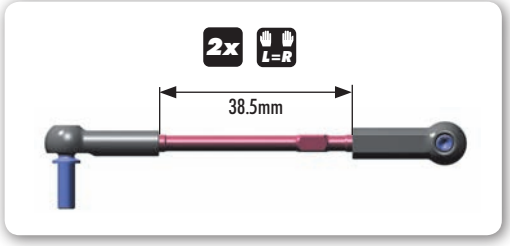




STEERING LINKS

2x L=R



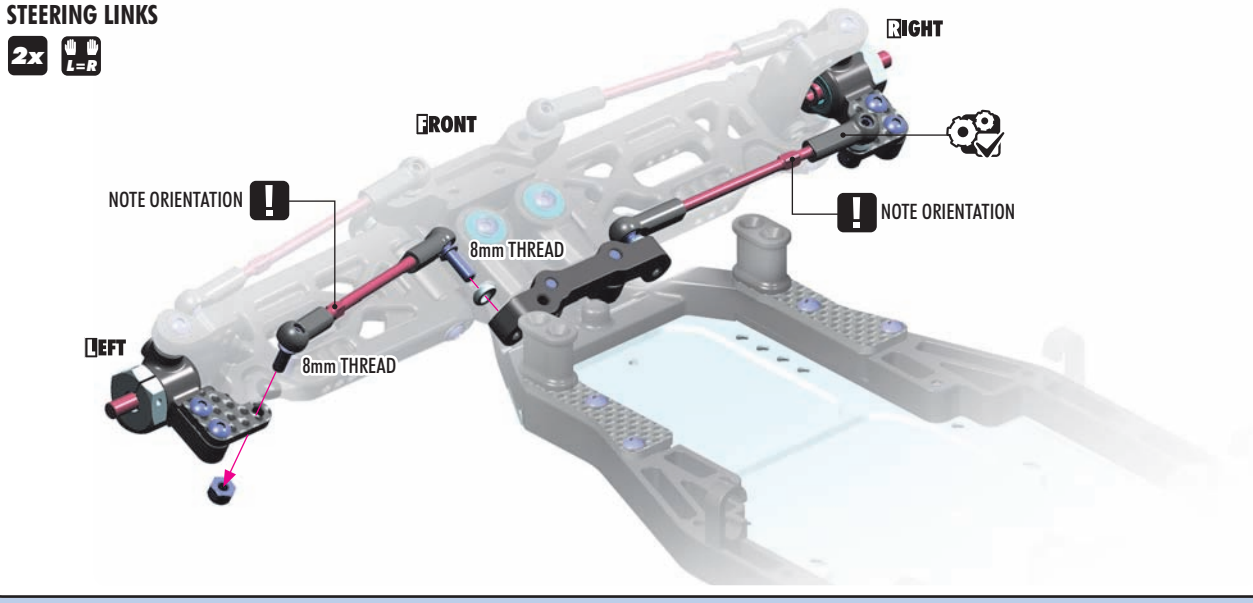


362280
CON. SHIM 3x6x2

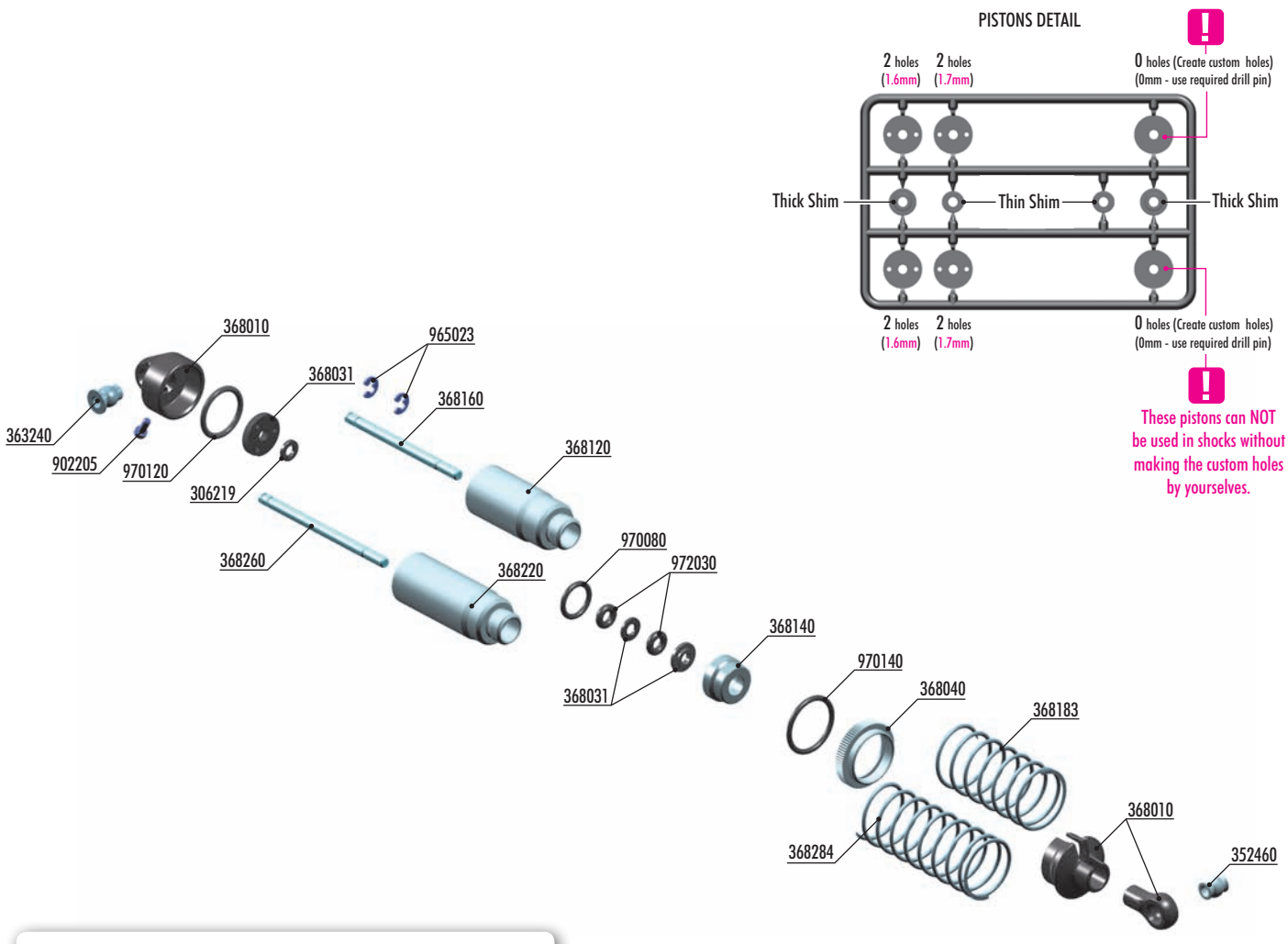
960030
NUT M3

STEERING LINKS

2x L=R



6. SHOCK ABSORBERS

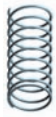


OPTION

FRONT SPRINGS			
#368174	PROGRESS.	2 STRIPES	OPTION
#368174	PROGRESS. 40mm	3 DOTS	OPTION
#368182	LINEAR	1 STRIPE & 3 DOTS	OPTION
#368183	LINEAR	1 DOT	INCLUDED
#368184	LINEAR	2 DOTS	OPTION
#368185	LINEAR	3 DOTS	OPTION
#368186	LINEAR	4 DOTS	OPTION

OPTION

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



OPTION

#368051
ALU SHOCK CAP-NUT WITH VENT HOLE (2)

OPTION

#368021
ALU SHOCK SPRING RETAINING COLLAR (4)

BAG 06

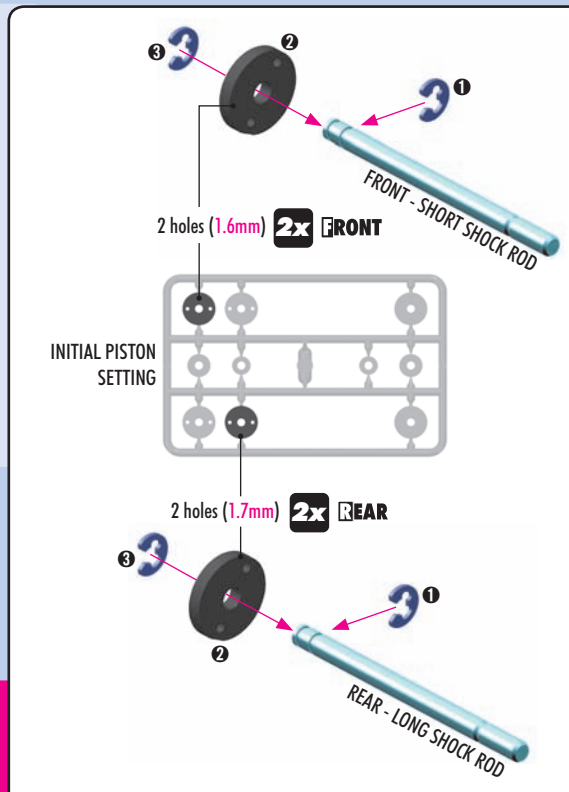
30 6219	COMPOSITE SET OF SERVO SHIMS (4)
35 2460	PIVOT BALL 5.8 - V3 (10)
36 3240	BALL UNIVERSAL 5.8MM WITH BACKSTOP (2)
36 8010	COMPOSITE SHOCK PARTS
36 8031	SHOCK PISTONS - COMPLETE SET - DERLIN - V2
36 8040	ALU SHOCK ADJUSTABLE NUT (2)
36 8100	FRONT SHOCK ABSORBERS COMPLETE SET (2)
36 8120	ALU FRONT SHOCK BODY - HARD COATED (2)
36 8140	ALU LOWER SHOCK BODY CAP (2)
36 8160	FRONT HARDENED SHOCK SHAFT (2)
36 8174	FRONT SPRING-SET PROGRESSIVE - 2 STRIPES (2) (OPTION)
36 8183	FRONT SPRING-SET LINEAR - 1 DOT (2)
36 8184	FRONT SPRING-SET LINEAR - 2 DOTS (2) (OPTION)
36 8185	FRONT SPRING-SET LINEAR - 3 DOTS (2) (OPTION)
36 8186	FRONT SPRING-SET - 4 DOTS (2) (OPTION)
36 8200	REAR SHOCK ABSORBERS COMPLETE SET (2)
36 8220	ALU REAR SHOCK BODY - HARD COATED (2)
36 8260	REAR HARDENED SHOCK SHAFT (2)
36 8273	REAR SPRING-SET PROGRESSIVE - 2 STRIPES (2) (OPTION)
36 8284	REAR SPRING-SET LINEAR - 1 DOT (2)
36 8285	REAR SPRING-SET LINEAR - 2 DOTS (2) (OPTION)
36 8286	REAR SPRING-SET LINEAR - 3 DOTS (2) (OPTION)
36 8287	REAR SPRING-SET LINEAR - 4 DOTS (2) (OPTION)
90 2205	HEX SCREW SH M2x5 (10)
96 5023	E-CLIP 2.3 (10)
97 0080	O-RING 8x1 (10)
97 0120	O-RING 12 x 1.0 (10)
97 0140	O-RING 14 x 1.5 (10)
97 2030	SILICONE O-RING 3x2 (10)

965023
C 2.3

972030
O 3x2

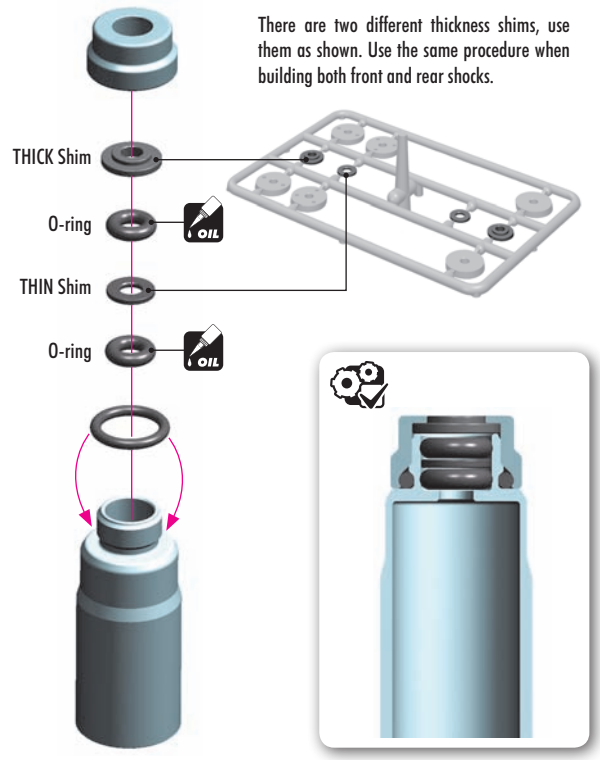
970080
O 8x1

SET-UP BOOK
SHOCK DAMPING
SHOCK PISTONS



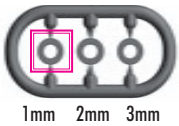
4x

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



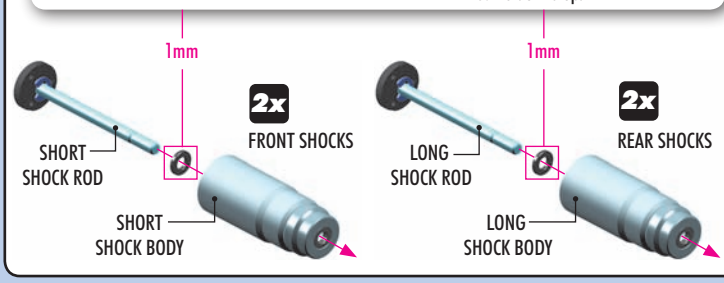
OPTION #306219 DOWNSTOP SHIMS

THICKER shim used, GREATER downstop is achieved.

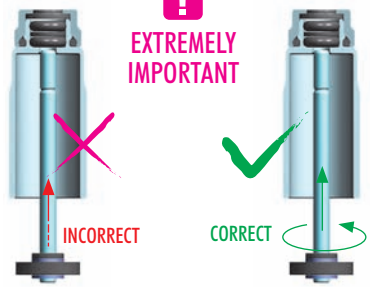


IMPORTANT

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



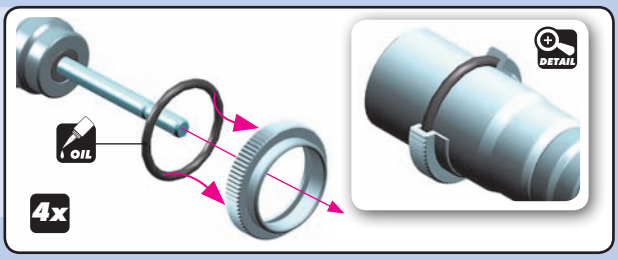
EXTREMELY IMPORTANT



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

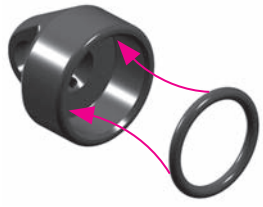
Twist the shock rod through the lower shock body assembly.

970140
O 14x1.5



970120
O 12x1

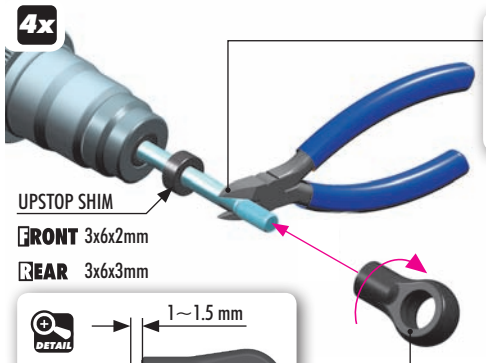
4x

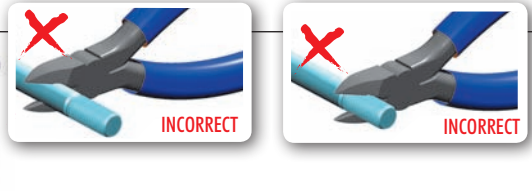


306219
SHIM 3x6x2

306219
SHIM 3x6x3

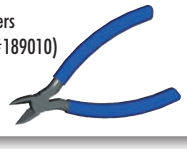
4x





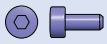
Grip the shock rod at top of exposed threads with side cutting pliers. Be careful not to damage the shock rod.

TIP Side Cutters (HUDY #189010)



or

RC Shock-Plier Uni Tool (HUDY #183011)



902205
SH M2x5

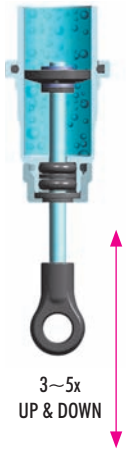
DEFAULT SHOCK REBOUND SETTING 0% REBOUND

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

2x FRONT (SHORT)
Oil 500cSt

2x REAR (LONG)
Oil 400cSt

❶ Extend the shock shaft completely. Fill the shock body with the shock oil. For the FRONT shocks (short) use 700cSt oil. For the REAR shocks (long) use 500cSt oil.



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

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

❹ Gently place the shock cap onto the filled shock body and start to tighten the cup. Tighten the cap fully.

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

❻ Keep the shock shaft pushed in the shock body and insert the screw into the shock cap. Tighten gently.

❼ 6x push the shaft up and down.

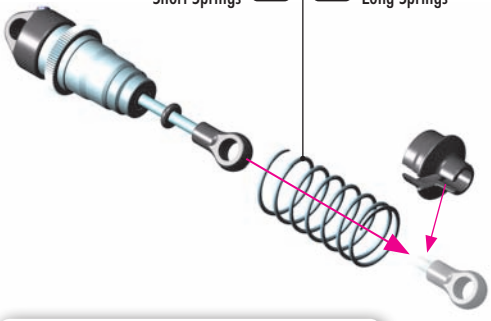
❽ Untighten the screw.

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

❿ Tighten the screw.
The rebound will be at approx. 0%

SET-UP BOOK
SHOCK OIL

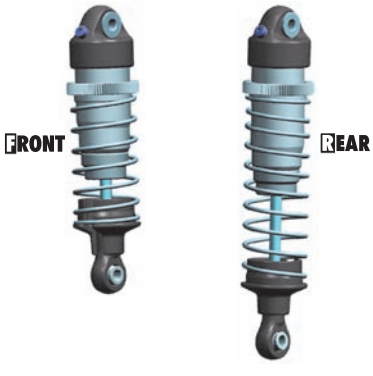
SHORT FRONT SHOCKS
Short Springs
2x 2x
LONG REAR SHOCKS
Long Springs



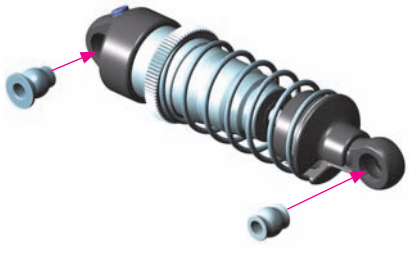
OPTION #368021
ALU SHOCK SPRING RETAINING COLLAR (4)

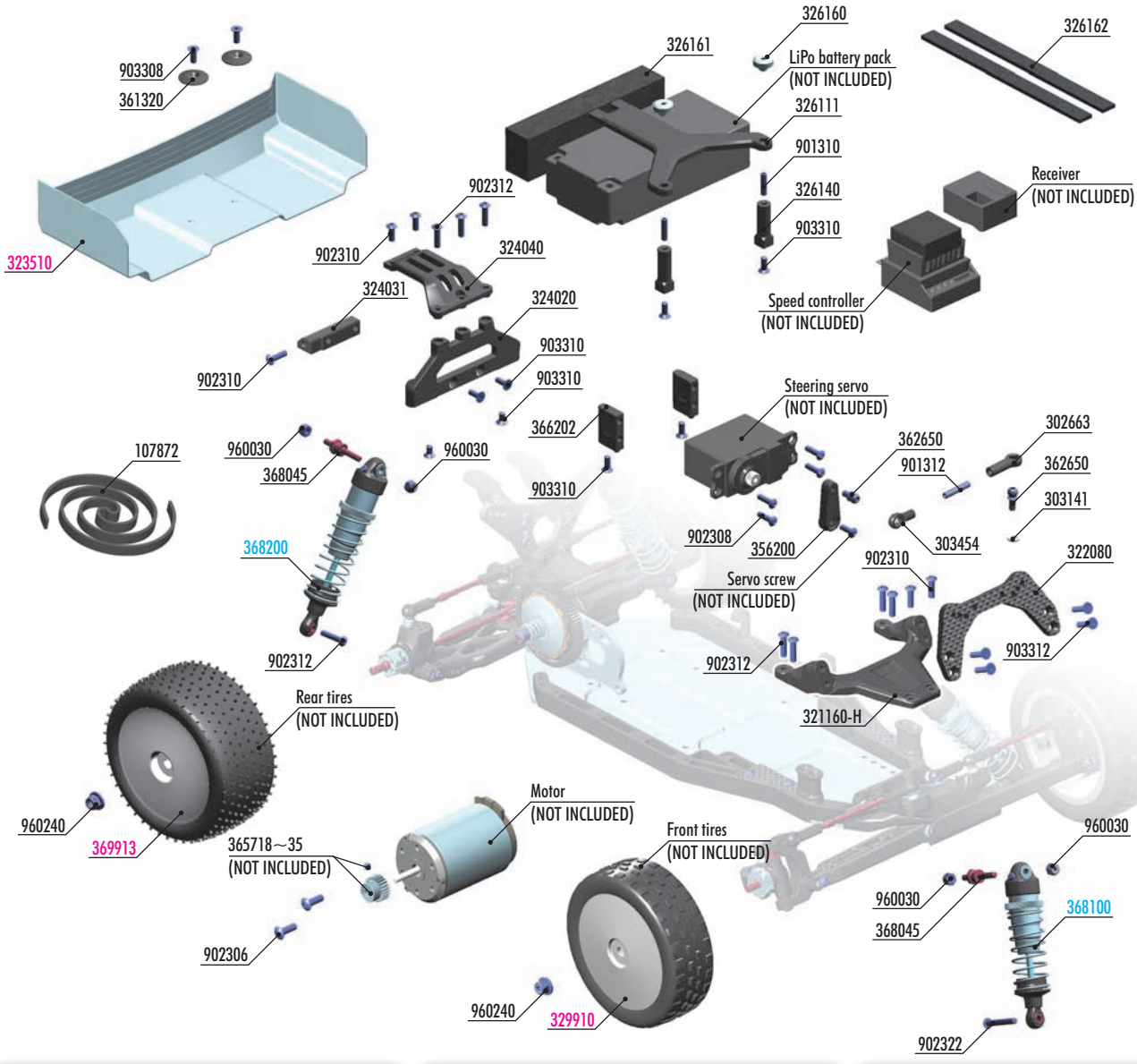
IMPORTANT

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)





OPTION	BATTERY STRAP		
	#326110	GRAPHITE	OPTION
	#326111	COMPOSITE	INCLUDED

OPTION	FRONT UPPER DECK		
	#321160-M	MEDIUM	OPTION
	#321160-H	HARD	INCLUDED

OPTION	LEXAN REAR WING		
	#323510	1.0MM	INCLUDED
	#323511	1.5MM	OPTION

OPTION	LEXAN BODY		
	#329700	0.75MM	INCLUDED
	#329701	0.5MM LIGHT	OPTION

OPTION	REAR WING SHIM		
	#293561	SILVER	OPTION
	#293561-O	ORANGE	OPTION

OPTION #324051
COMPOSITE GEAR COVER - CARPET EDITION

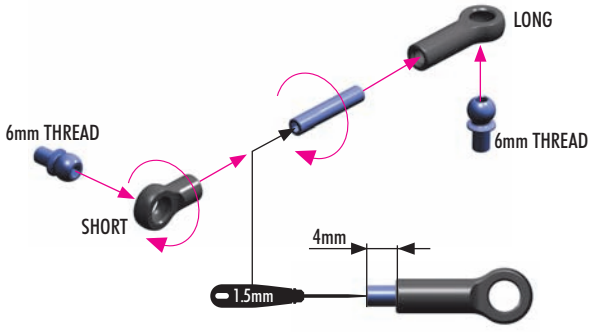
BAG 07

10 7872	VELCRO TAPE WITH DOUBLE SIDED TAPE 8x500MM
30 2663	COMPOSITE BALL JOINT 4.9MM - OPEN - V2 (8)
30 3141	ALU SHIM 3x5x1.0MM (10)
30 3454	BALL JOINT 4.9MM - OPEN (4)
32 1160-H	COMPOSITE FRONT UPPER DECK - HARD
32 2080	GRAPHITE SHOCK TOWER FRONT 4.0MM
32 4020	COMPOSITE MOUNT FOR UPPER BRACE - CARPET EDITION
32 4031	COMPOSITE FRONT-MID MOTOR (3 GEARS) PLATE BRACE
32 4040	COMPOSITE MOTOR UPPER BRACE - CARPET EDITION
32 6111	COMPOSITE BATTERY STRAP - CARPET EDITION
32 6140	COMPOSITE BATTERY HOLDER STAND (2)
32 6160	ALU BATTERY HOLDER NUT (2)
32 6161	FOAM SPACER FOR BATTERY
32 6162	SELF-ADHESIVE RUBBER 1.5x6.5x155MM (2)
35 6200	BRAKE/THROTTLE ARMS & STEERING SERVO ARMS - SET
36 1320	BODY MOUNT, BATTERY MOUNT - V2 & WING SHIM (2)
36 2650	BALL END 4.9MM WITH THREAD 6MM (2)
36 5718~35	ALU PINION GEAR HARD COATED 18~35T/48 (OPTION)
36 6202	COMPOSITE SERVO MOUNT - HIGHER
36 8045	STEEL SCREW SHOCK PIVOT BALL WITH HEX (2)

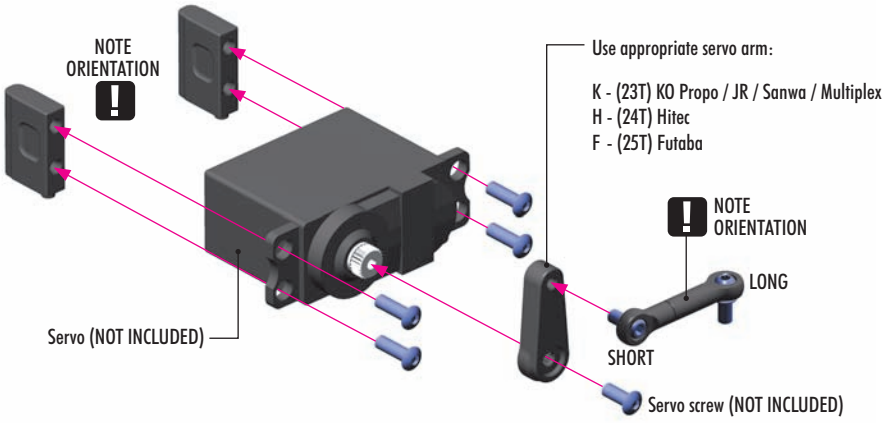
90 1310	HEX SCREW SB M3x10 (10)
90 1312	HEX SCREW SB M3x12 (10)
90 2306	HEX SCREW SH M3x6 (10)
90 2308	HEX SCREW SH M3x8 (10)
90 2310	HEX SCREW SH M3x10 (10)
90 2312	HEX SCREW SH M3x12 (10)
90 2322	HEX SCREW SH M3x22 (10)
90 3308	HEX SCREW SFH M3x8 (10)
90 3310	HEX SCREW SFH M3x10 (10)
90 3312	HEX SCREW SFH M3x12 (10)
96 0030	NUT M3 (10)
96 0240	NUT M4 WITH SERRATED FLANGE (10)
36 8100	FRONT SHOCK ABSORBERS COMPLETE SET (2)
36 8200	REAR SHOCK ABSORBERS COMPLETE SET (2)
32 3510	LEXAN REAR WING (2))
32 3512	LEXAN FRONT WING 0.75MM
32 9700	XRAY XB2 BODY
32 9910	2WD FRONT WHEEL AERODISK WITH 12MM HEX - WHITE (2)
36 9913	4WD/2WD REAR WHEEL AERODISK 12MM HEX - WHITE (2)

7. FINAL ASSEMBLY

901312
SB M3x12



902308
SH M3x8



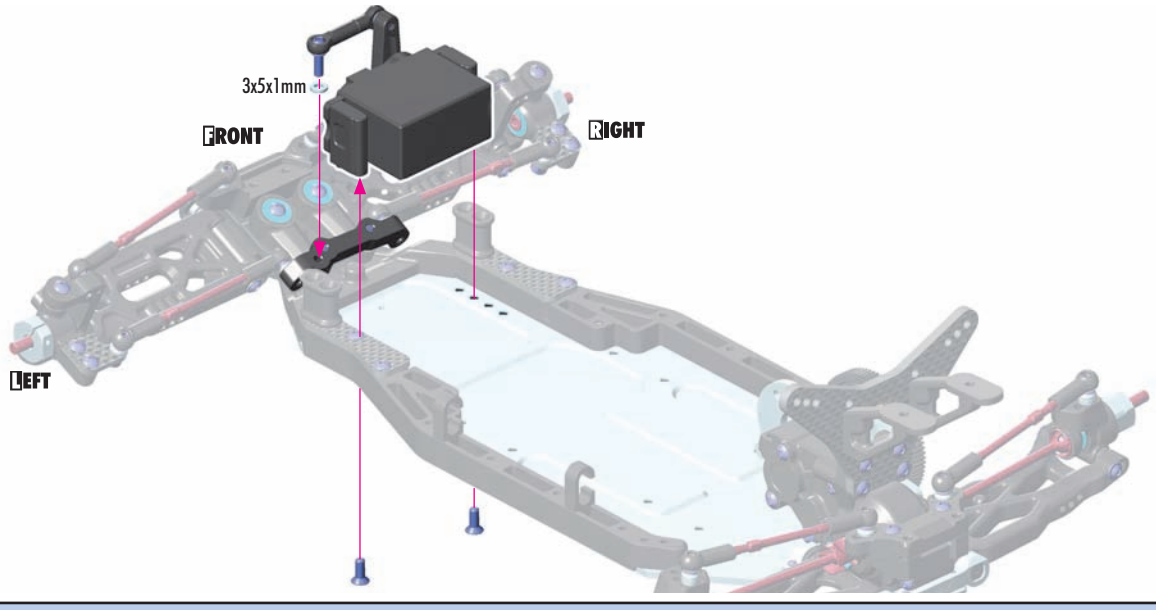
OPTION

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

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

303141
SHIM 3x5x1

903310
SFH M3x10



902310
SH M3x10

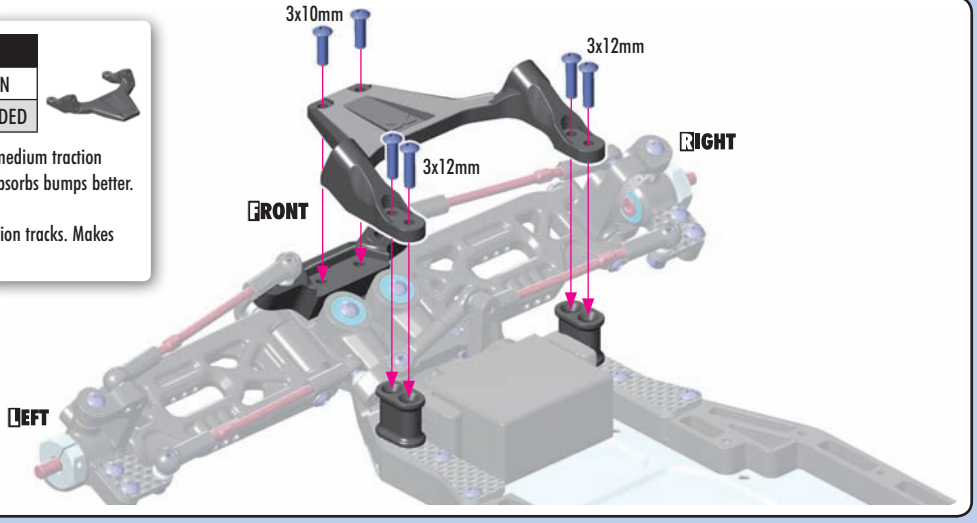
902312
SH M3x12

OPTION

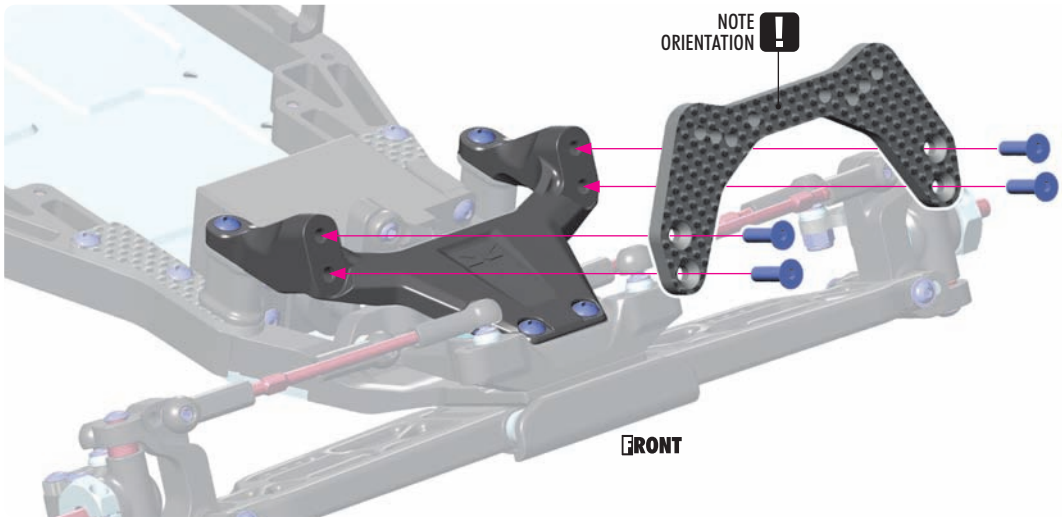
FRONT UPPER DECK		
#321160-M	MEDIUM	OPTION
#321160-H	HARD	INCLUDED

MEDIUM - For very-low, low and medium traction tracks. Generates more traction, absorbs bumps better.

HARD - For high & very-high traction tracks. Makes the car more precise.

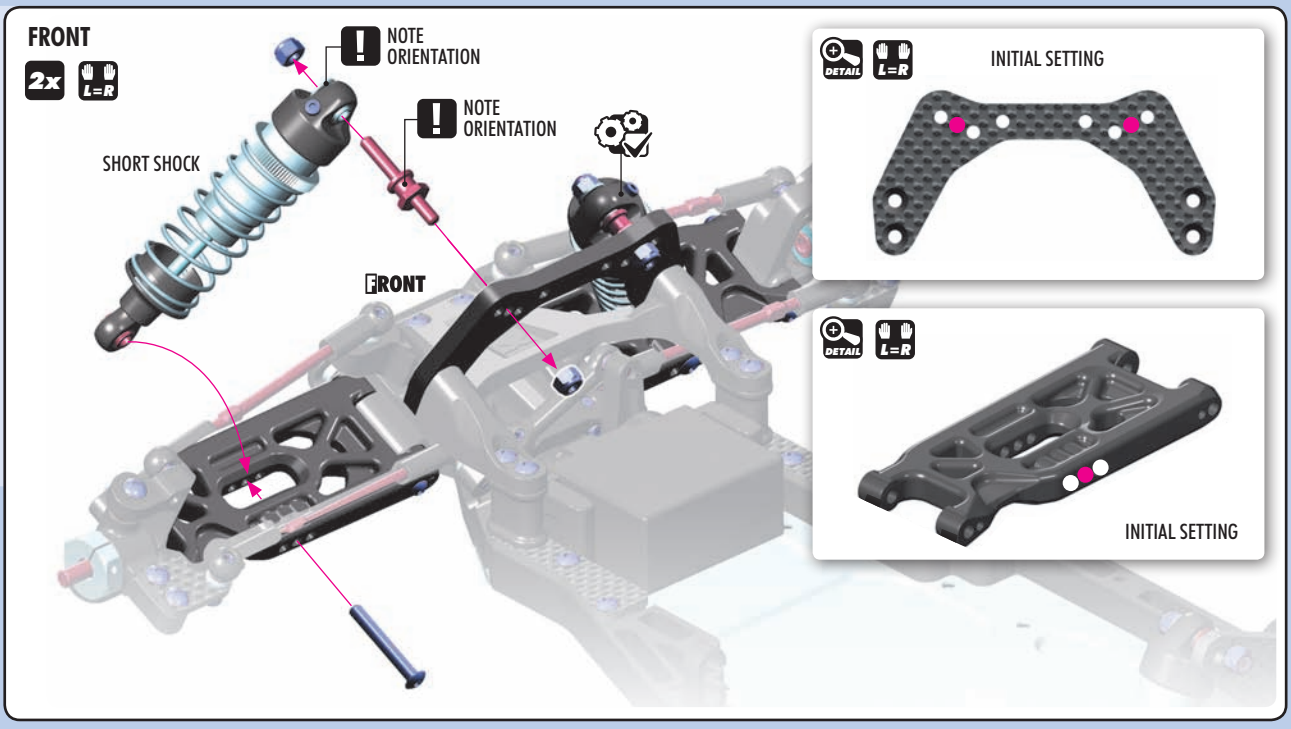


903312
SFH M3x12



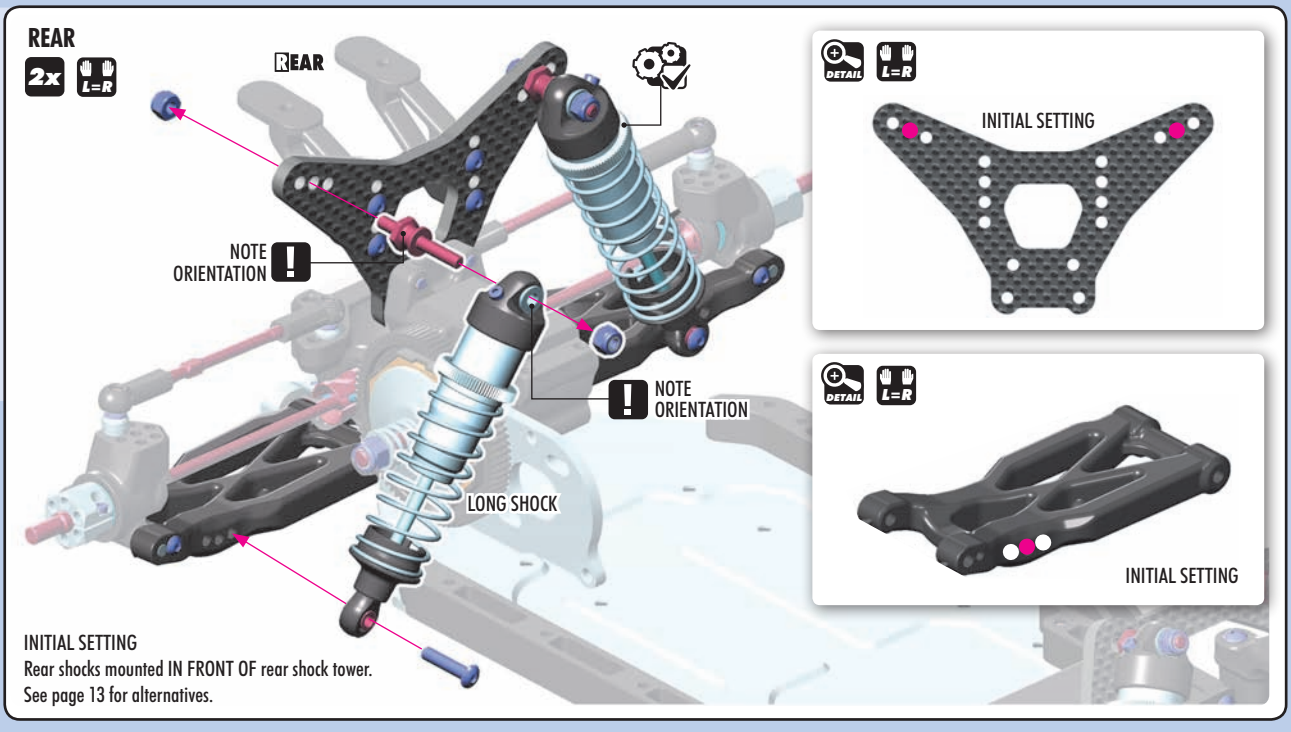
902322
SH M3x22

960030
NUT M3



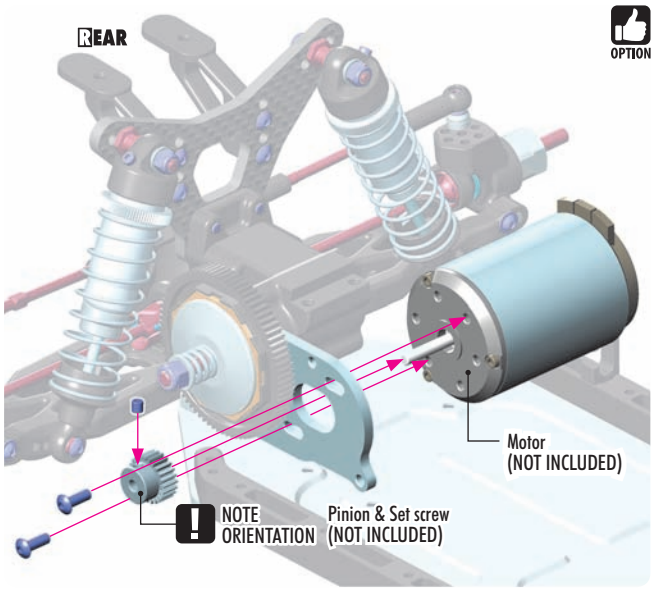
902312
SH M3x12

960030
NUT M3



7. FINAL ASSEMBLY

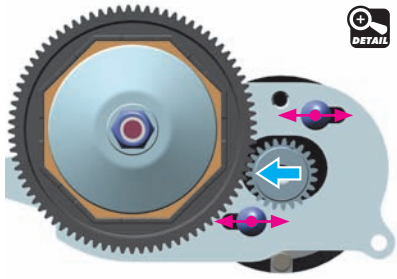
902306
SH M3x6



OPTION

XRAY PINIONS	
#365718	18T / 48P
#365719	19T / 48P
#365720	20T / 48P
#365721	21T / 48P
#365722	22T / 48P
#365723	23T / 48P
#365724	24T / 48
#365725	25T / 48
#365726	26T / 48
#365727	27T / 48
#365728	28T / 48
#365729	29T / 48
#365730	30T / 48
#365731	31T / 48
#365732	32T / 48
#365733	33T / 48
#365734	34T / 48
#365735	35T / 48

DETAIL



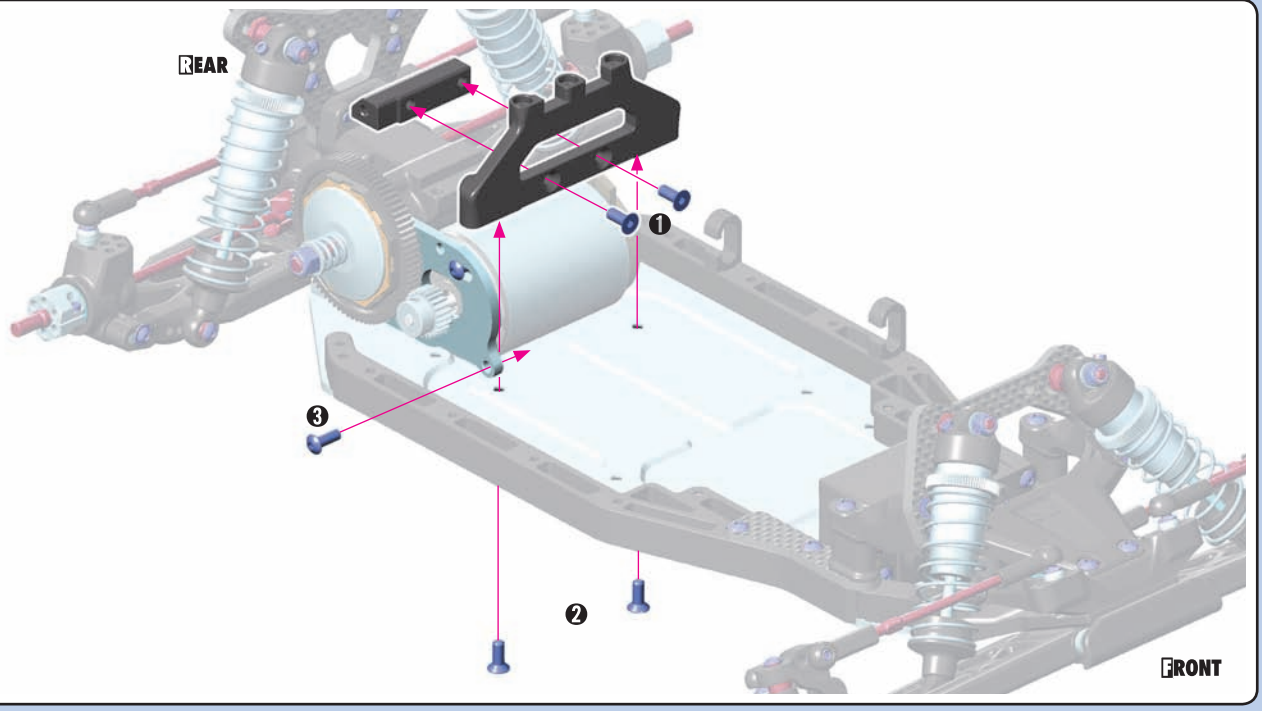
Adjust the motor so the pinion meshes with the spur gear properly. Make sure the gear mesh is not too tight.

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

OPTION
#324051
COMPOSITE GEAR COVER - CARPET EDITION

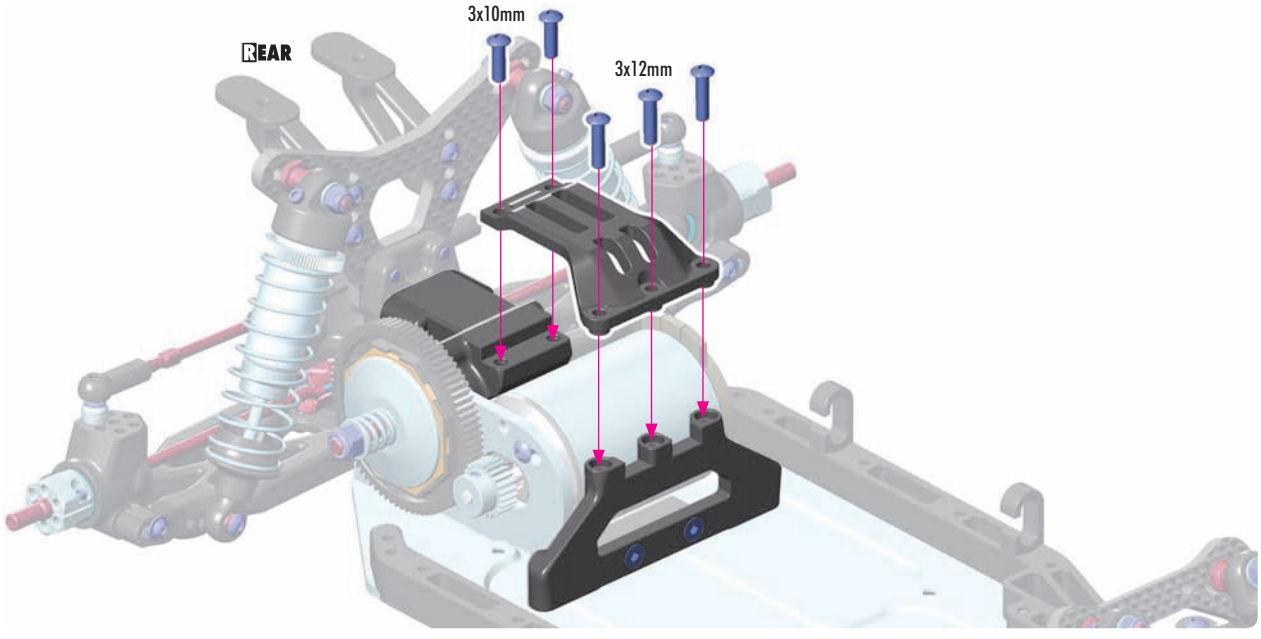
902310
SH M3x10

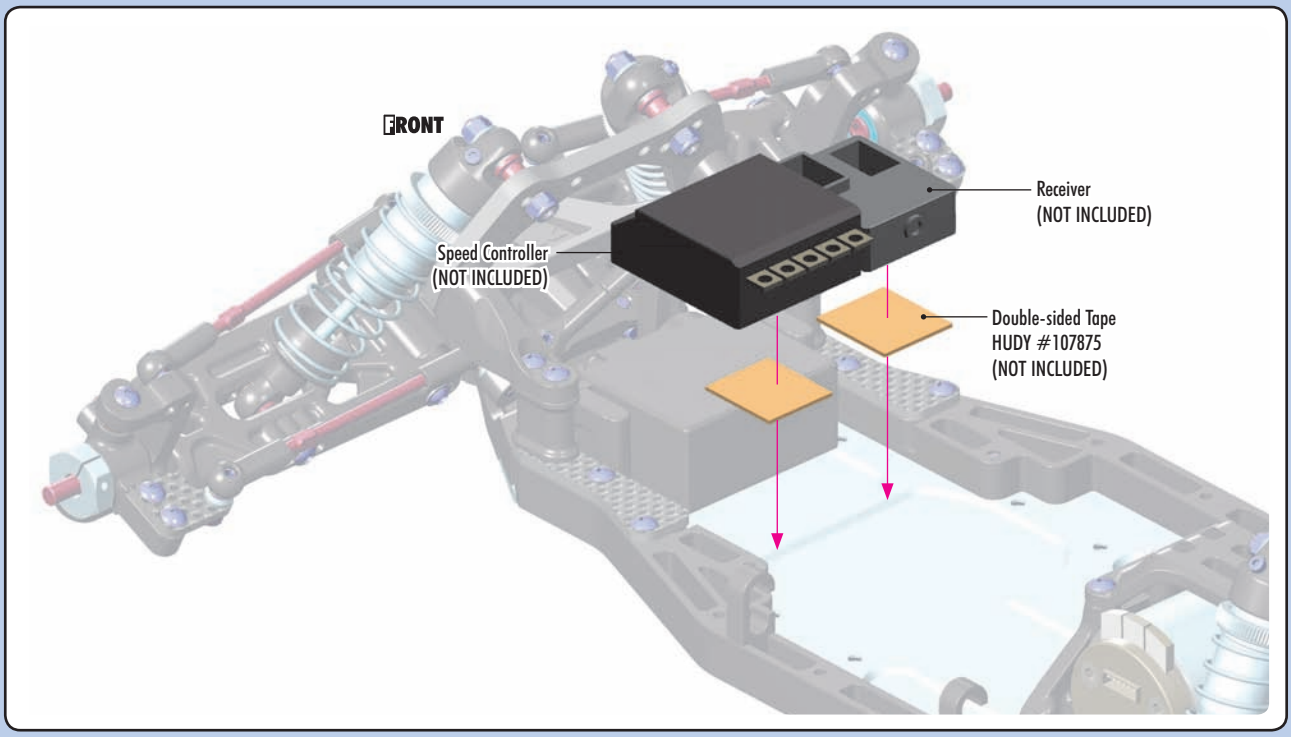
903310
SFH M3x10



902310
SH M3x10

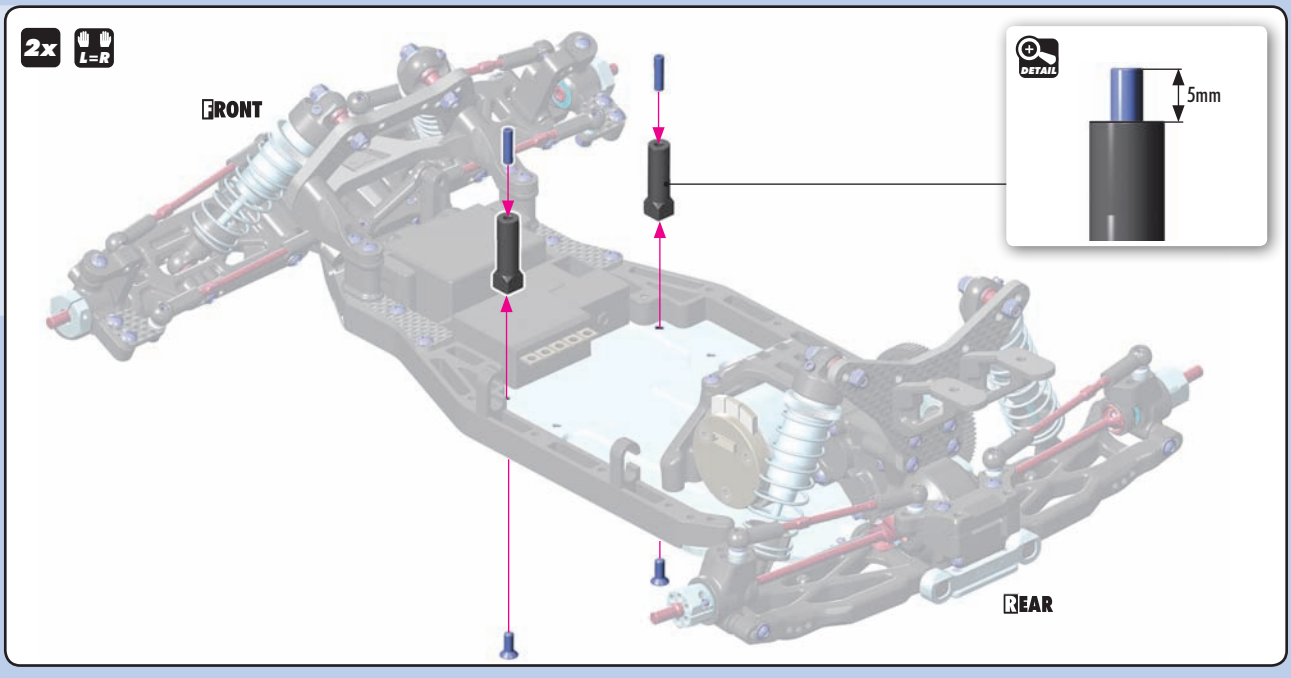
902312
SH M3x12

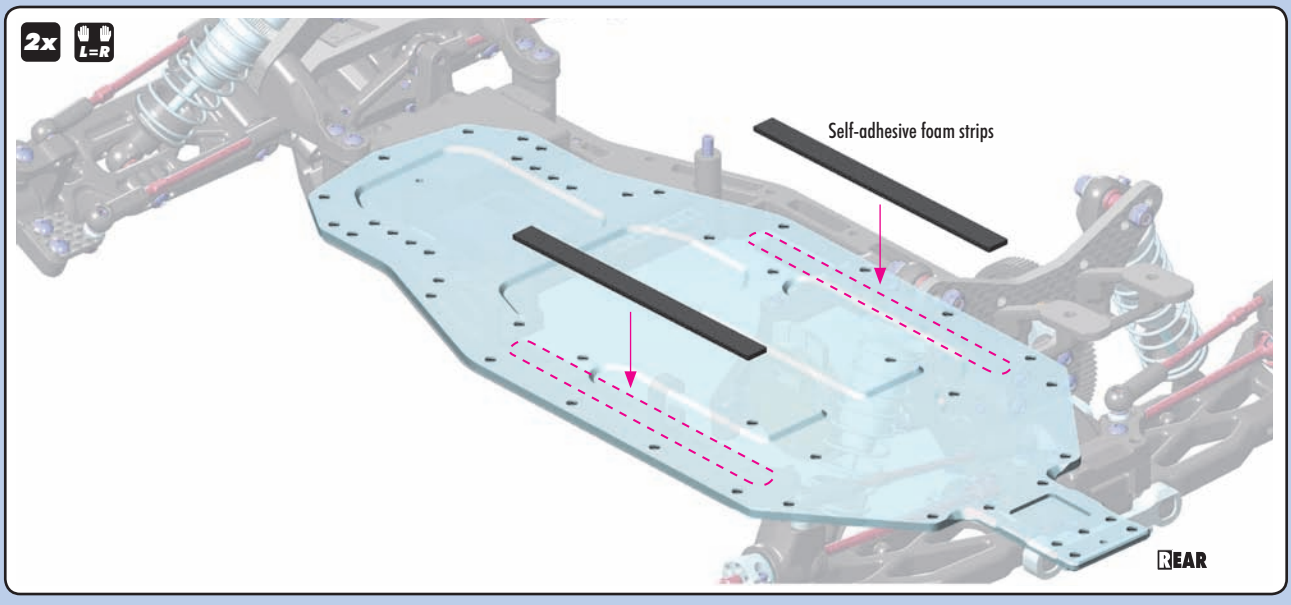


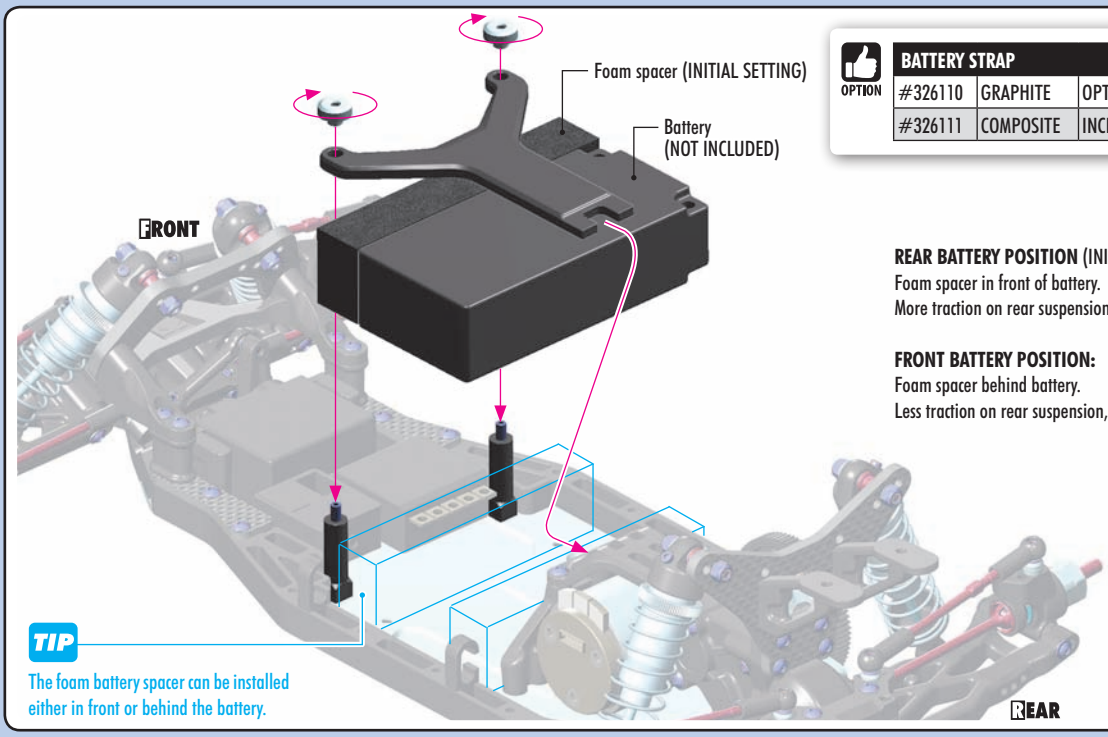


901310
SB M3x10

903310
SFH M3x10







OPTION	BATTERY STRAP		
	#326110	GRAPHITE	OPTION
	#326111	COMPOSITE	INCLUDED

REAR BATTERY POSITION (INITIAL SETTING):
Foam spacer in front of battery.
More traction on rear suspension, less steering

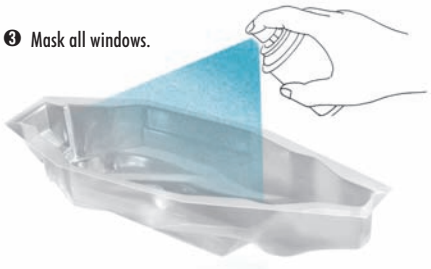
FRONT BATTERY POSITION:
Foam spacer behind battery.
Less traction on rear suspension, more cornering speed

TIP
The foam battery spacer can be installed either in front or behind the battery.

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.



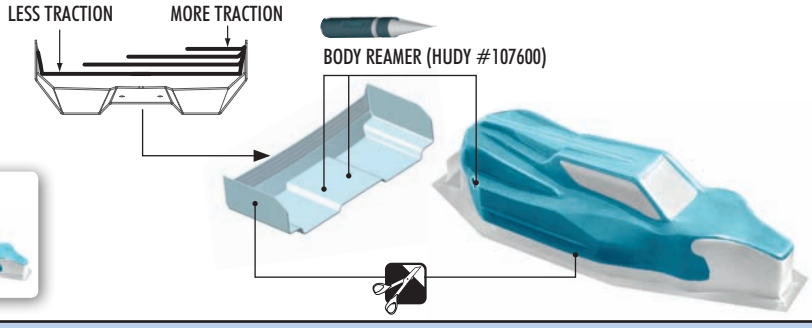
❹ Apply paint masks as appropriate.

❺ Paint the body using paints formulated for polycarbonate bodies.

❻ When the paint is dry, remove the masking.

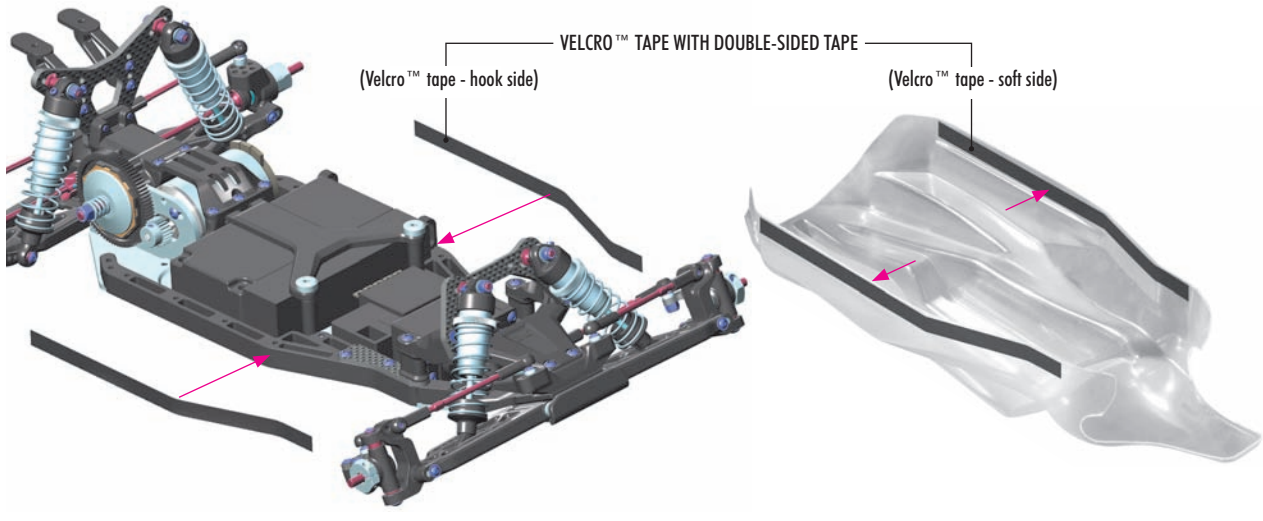
❼ Carefully cut out the body using appropriate scissors or cutting tools.

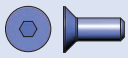
❽ When you have finished cutting, peel off the external protective films.



OPTION	LEXAN BODY		
	#329700	0.75MM	INCLUDED
	#329701	0.5MM LIGHT	OPTION

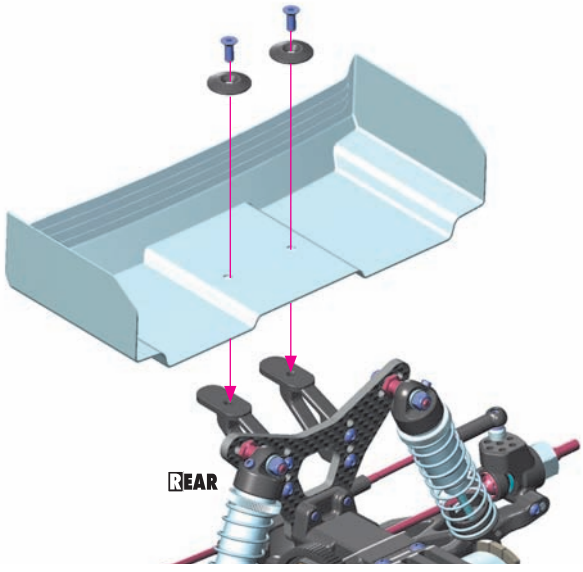
2x L=R





903308
SFH M3x8

2x



OPTION

REAR WING SHIM		
#293561	SILVER	OPTION
#293561-O	ORANGE	OPTION

OPTION

LEXAN REAR WING		
#323510	1.0MM	INCLUDED
#323511	1.5MM	OPTION

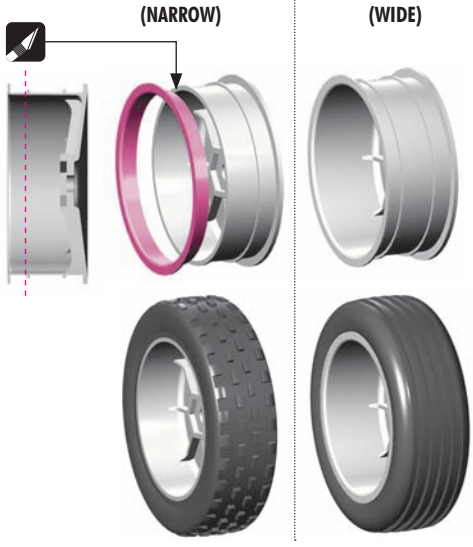
1.0mm THICK - More aggressive
1.5mm THICK - More stable, less aggressive

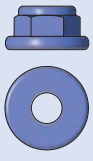
FRONT WHEELS ADJUSTMENT

For racing on CARPET cut from the inner part of the wheels based on tires that will be used on your XB2.

WHEELS FOR CARPET (NARROW)

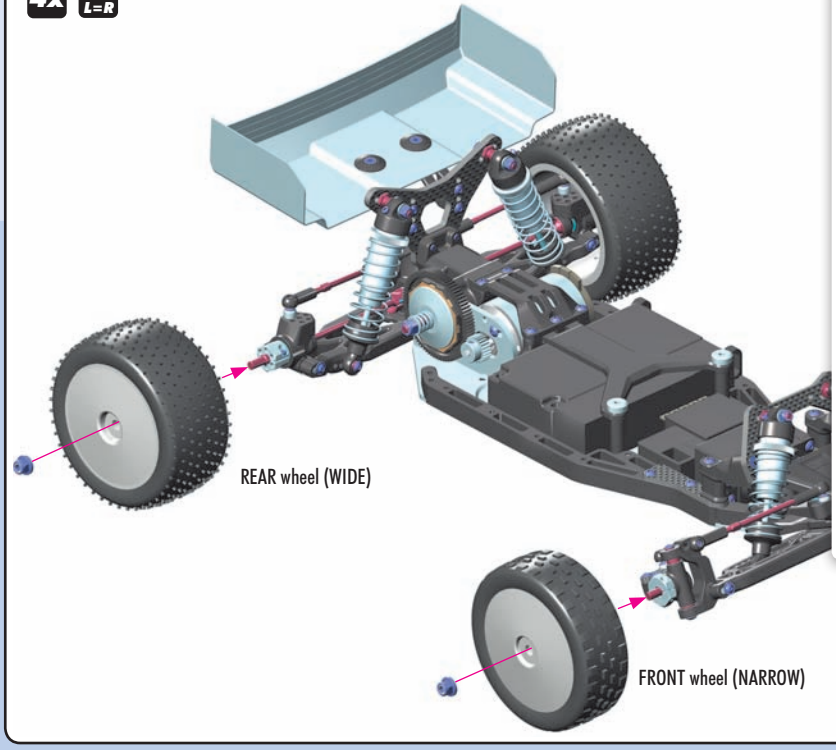
WHEELS FOR DIRT (WIDE)





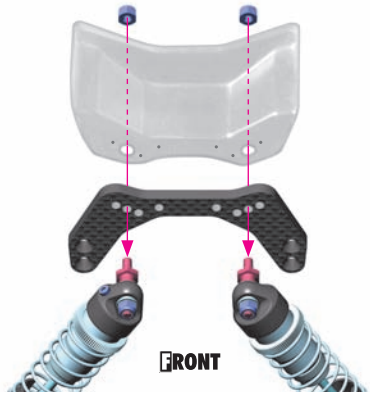
960240
N M4

4x L=R



FRONT WING

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



Using front wing increases steering.

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 XB2 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.

❶ 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.

❷ Spray the seals with motor cleaner and blow dry with compressed air.

❸ Spray the bearing on both sides with motor cleaner.

❹ Spin the bearing while it is still wet to dislodge any particles with the cleaner.

❺ Spray the bearing on both sides again.

❻ Blow both sides of the bearing dry with compressed air to make sure particles come out.

❼ 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.

❽ Place one drop of bearing oil into each side of the bearing.

❾ 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 #106230 HUDY Bearing Oil to lubricate the bearings.

HUDY #106230

SUSPENSION & DRIVETRAIN MAINTENANCE

- Check suspension for free movement during building and operation, and especially after running and if you have crashed the car. If the suspension does not move freely, use the appropriate HUDY Arm Reamer to clean and resize the holes of the suspension arms.
- Regularly 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 #106210

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.

SET-UP SHEET

XRAY XB2

RACE
TRACK
NAME DATE

LAPS | BEST LAP TIME (sec)
QUALIFYING POSITION | FINAL POSITION

TRACK

SIZE ☐ OPEN ☐ MEDIUM ☐ TIGHT
TRACTION ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
VERY-LOW MEDIUM VERY-HIGH
SURFACE ☐ SMOOTH ☐ MEDIUM ☐ BUMPY
TYPE ☐ CLAY ☐ CARPET ☐ ASTRO
CONDITION ☐ BLUE GROOVE ☐ HARD PACKED ☐ DRY ☐ DUSTY ☐ LOAMY ☐ WET

TRANSMISSION

DIFFERENTIAL BALL DIFF ☐ ☐ GEAR DIFF OIL (cSt)
SATELITE GEARS COMPOSITE ☐ ☐ STEEL
SLIPPER ADJUSTMENT (mm)

GEARING

GEAR BOX GEAR 3 GEARS ☐ ☐ 4 GEARS
PINION (T) | SPUR GEAR (T)

FRONT SHOCKS REAR

SPRINGS
OIL (cSt)
REBOUND (%)
PISTONS

☐ 2 HOLES ☐ ø1.2mm ☐ ☐ 2 HOLES ☐
☐ 3 HOLES ☐ ø1.3mm ☐ ☐ 3 HOLES ☐
☐ 6 HOLES ☐ ø1.4mm ☐ ☐ 6 HOLES ☐
☐ HOLES ☐ ø1.6mm ☐ ☐ HOLES
ø mm ø mm
☐ ø1.7mm ☐

DOWNSTOP SHIM (mm) INSERT UNDER PISTON
LENGTH (mm)
UPSTOP SHIM (mm) INSERT ABOVE COLLAR
KIT — BALL JOINT — KIT

FRONT SHOCK TOWER REAR

GRAPHITE ☐ ☐ COMPOSITE GRAPHITE ☐ ☐ COMPOSITE

REAR ANTI ROLL BAR

YES ☐ ☐ NO THICKNESS (mm)

FRONT TIRES REAR

TYPE
INSERTS
WHEELS

ELECTRONICS

MOTOR
SPEEDO
BATTERIES

ELECTRONICS LAYOUT

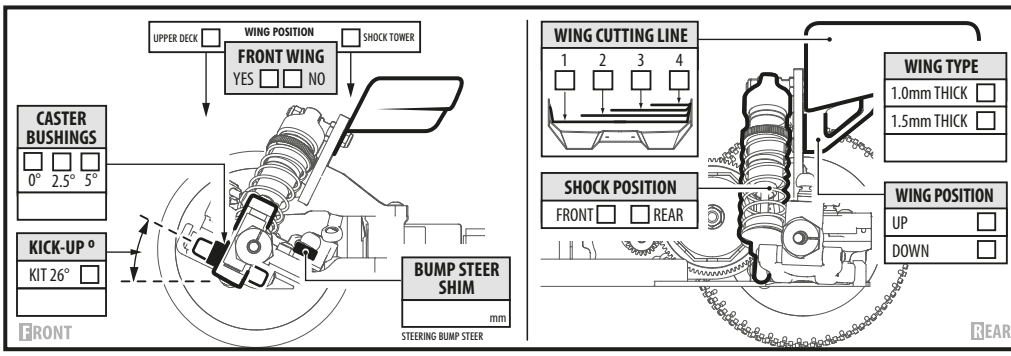
MOTOR POSITION ☐ FRONT ☐ MIDDLE ☐ REAR
BATTERY POSITION ☐ FRONT ☐ MIDDLE ☐ REAR

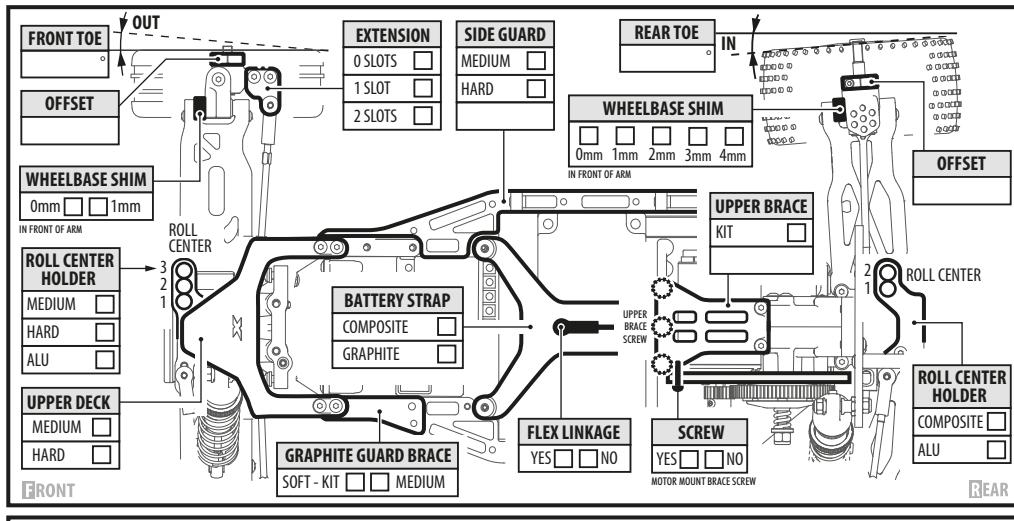
BODY

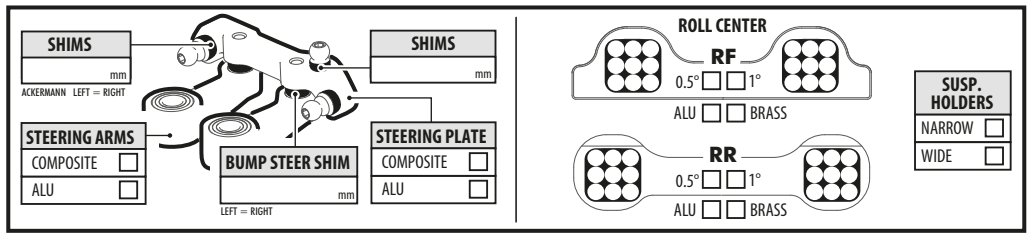
STANDARD ☐ ☐ LIGHT OTHER

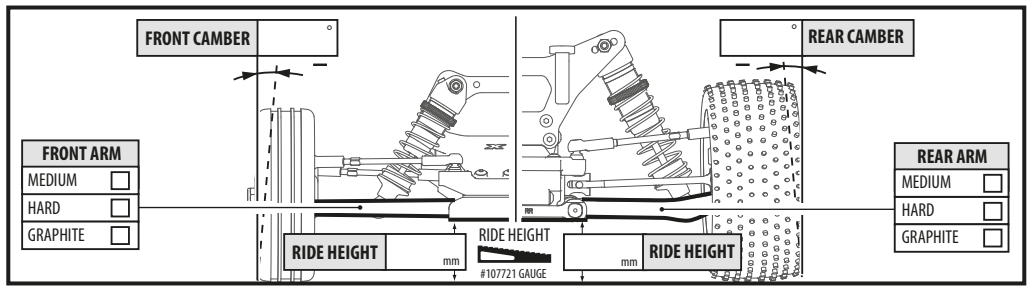
FRONT — APPLIED ◉ ☒ APPLIED — REAR

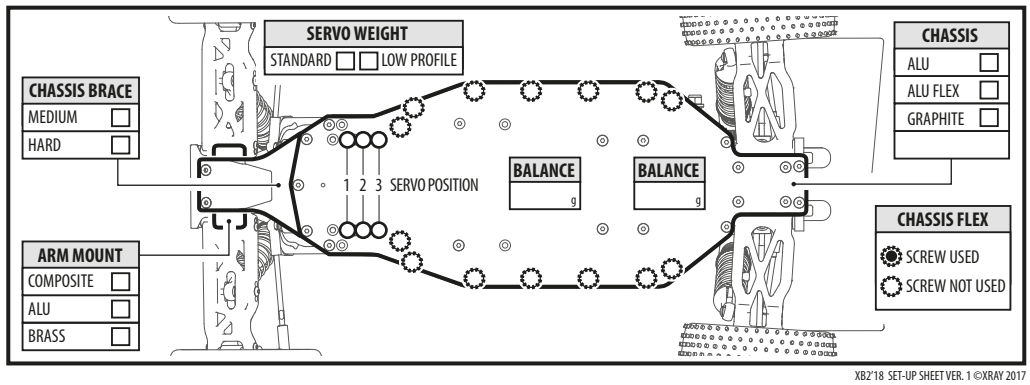
STEERING BLOCK: ☐ MEDIUM ☐ HARD
LONGER BUSHINGS: ☐ UP ☐ DOWN
SHIM (mm)
CAMBER LINK LOCATION 2 1
CASTER BLOCK: ☐ MEDIUM ☐ HARD
3 2 1 LOWER SHOCK POSITION
UPPER SHOCK POSITION 3 2 1
DRIVE SHAFT: ☐ CVD ☐ ECS
SHIM (mm) SHIM (mm)
1 2 3 LOWER SHOCK POSITION
REAR UPRIGHT: FRONT / REAR ☐ MEDIUM ☐ HARD ☐ ALU











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