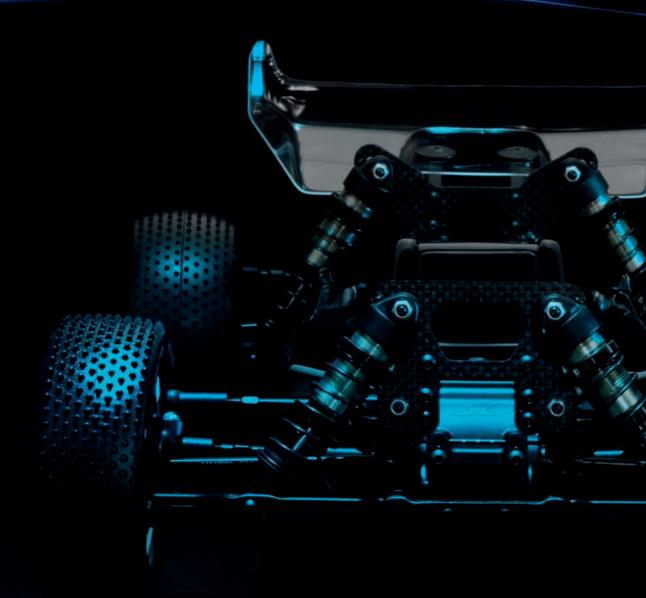
1/10 LUXURY ELECTRIC OFF-ROAD BUGGY 4WD

# 1 - 7 - 1 - 1 E 3 - 1 :



INSTRUCTION MANUAL
FOR XB4C'23 & XB4D'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, <u>YOU MUST</u> read through all of the operating instructions and instruction manual and fully understand them to get the maximum enjoyment and prevent unnecessary damage.

Read carefully and fully understand the instructions before beginning assembly.

Make sure you review this entire manual, download and use set-up book from

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, <u>DO NOT continue any further</u>. 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.

#### **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 <a href="info@teamxray.com">info@teamxray.com</a>. Also, please visit our Web site at <a href="www.teamxray.com">www.teamxray.com</a> 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

#### **XRAY Europe**

K Vystavisku 6992 91101 Trenčín Slovakia, EUROPE Phone: 421-32-7401100

Fax: 421-32-7401109 E-mail: info@teamxray.com

#### XRAY USA

RC America, 2030 Century Center Blvd #15 Irving, TX 75062

USA

Phone: (214) 744-2400 Fax: (214) 744-2401 E-mail: xray@rcamerica.com

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

#### **SAFETY PRECAUTIONS**

Contains:

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

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

**CAUTION: CANCER HAZARD** 

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

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

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

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

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

#### 🔼 IMPORTANT NOTES - GENERAL

- This product is not suitable for children under 16 years of age without the direct supervision of a responsible and knowledgeable adult.
- Carefully read all manufacturers warnings and cautions for any parts used in the construction and use of your model.
- Assemble this kit only in places away from the reach of very small children.
- First-time builders and users should seek advice from people who have building experience in order to assemble the model correctly and to allow the model to reach its performance potential.
- · Exercise care when using tools and sharp instruments.
- Take care when building, as some parts may have sharp edges.
- Keep small parts out of reach of small children. Children must not be allowed to put any parts in their mouth, or pull vinyl bag over their head.
- Read and follow instructions supplied with paints and/or cement, if used (not included in kit).
- Immediately after using your model, DO NOT touch equipment on the model such as the motor and speed controller, because they generate high temperatures. You may seriously burn yourself seriously touching them.
- Follow the operating instructions for the radio equipment at all times.
- DO NOT put fingers or any objects inside rotating and moving parts, as this
  may cause damage or serious injury as your finger, hair, clothes, etc. may
  get caught.
- Be sure that your operating frequency is clear before turning on or running your model, and never share the same frequency with somebody else at the same time. Ensure that others are aware of the operating frequency you are using and when you are using it.
- Use a transmitter designed for ground use with RC cars. Make sure that no
  one else is using the same frequency as yours in your operating area. Using
  the same frequency at the same time, whether it is driving, flying or sailing,
  can cause loss of control of the RC model, resulting in a serious accident.
- Always turn on your transmitter before you turn on the receiver in the car.
   Always turn off the receiver before turning your transmitter off.
- Keep the wheels of the model off the ground when checking the operation of the radio equipment.

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

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

#### A

#### **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 shortcircuit 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

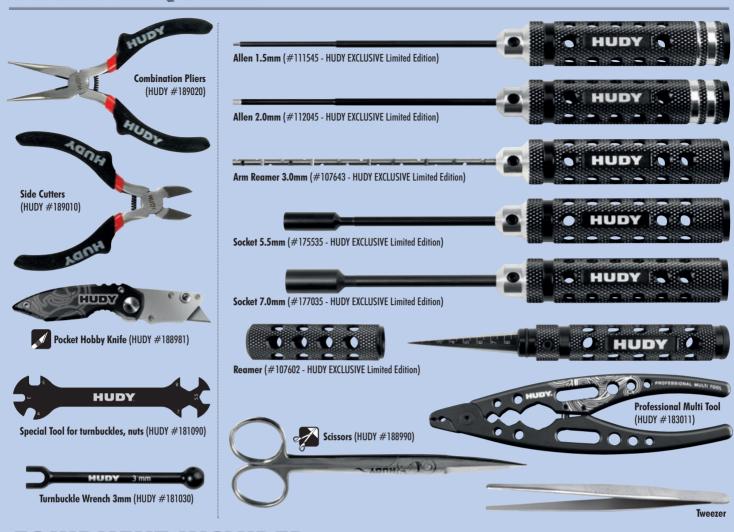
cannot guarantee any parts once you start racing the car. Products which have been worn out, abused, neglected or improperly operated will not be covered under warranty.

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.

#### **TOOLS REQUIRED**



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



#### **EQUIPMENT REQUIRED**





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 O	F OPTION	AL PARTS
N	#36XXXX	TYPE1	OPTION 1
	#36XXXX	TYPE1	OPTION 2
	#36XXXX	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:

364912

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

361112

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

364903

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 lenght).

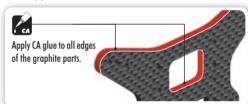
#### **TIP** GRAPHITE PARTS PREPARATION

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.

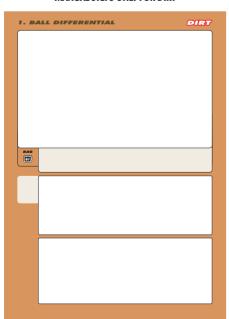
#### **Prepare all Graphite Parts:**

- Front shock tower
- Rear shock tower

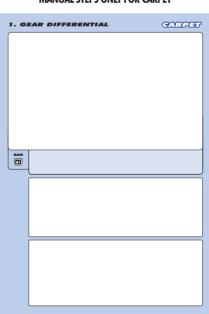




#### MANUAL STEPS ONLY FOR DIRT



#### MANUAL STEPS ONLY FOR CARPET

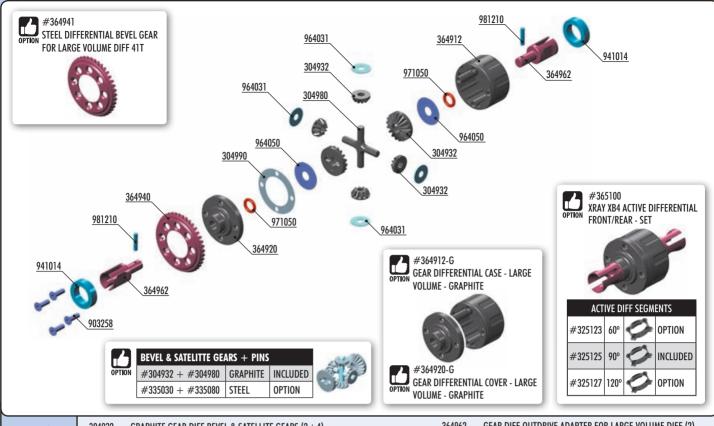


#### MANUAL DUAL STEPS FOR CARPET AND DIRT

3. REAR DRIVETRAIN	CARPET DIRT

#### 1. FRONT & REAR DIFFERENTIAL

# CARPET DIRT

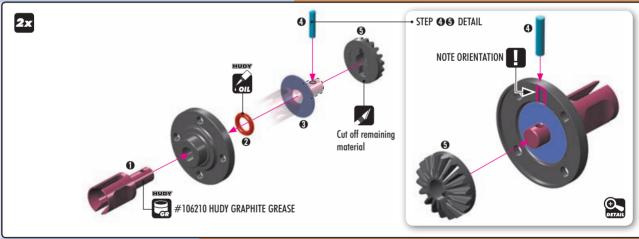




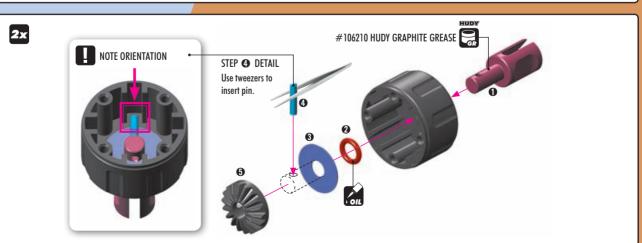
304932 GRAPHITE GEAR DIFF BEVEL & SATELLITE GEARS (2+4)
304980 COMPOSITE GEAR DIFF CROSS PIN
304990 DIFF GASKET (4)
364903 GEAR DIFFERENTIAL - LARGE VOLUME - SET
364912 COMPOSITE GEAR DIFFERENTIAL CASE - LARGE VOLUME
364920 COMPOSITE GEAR DIFFERENTIAL COVER - LARGE VOLUME
364940 STEEL DIFFERENTIAL BEVEL GEAR FOR LARGE VOLUME DIFF 40T

364962 GEAR DIFF OUTDRIVE ADAPTER FOR LARGE VOLUME DIFF (2)
903258 HEX SCREW SFH M2.5x8 (10)
941014 BALL-BEARING 10x15x4 RUBBER SEALED - GREASE (2)
964031 WASHER S 3.5x10x0.2 (10)
964050 WASHER S 5x15x0.3 (10)
971050 SILICONE O-RING 5x1.5 (10)
981210 PIN 2x10 (10)









#### 1. FRONT & REAR DIFFERENTIAL







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



weight (approximately 11.47g)

LOW TRACTION

1.60g of oil into the diff. The approximate weight of the diff including oil is 13.07g.

**REAR DIFERENTIAL** 

#### TIPS FOR DIFFERENTIALS

TIP FRONT DIFERENTIAL

> LOW TRACTION 7.000cSt (HUDY #106470) 7.000cSt (HUDY #106470) MEDIUM-HIGH TRACTION 10.000cSt (HUDY #106510) MEDIUM-HIGH TRACTION 10.000cSt (HUDY #106510) SUPER-HIGH TRACTION 15.000cSt (HUDY #106515) SUPER-HIGH TRACTION 15.000cSt (HUDY #106515)

NOTE:

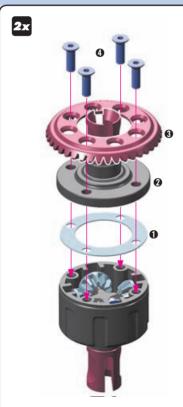
Softer oil increases steering, harder oil increases stability.

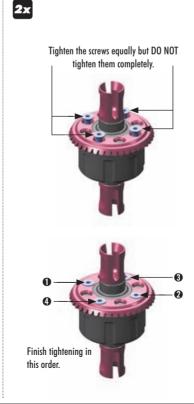
Softer oil increases rear traction, harder oil increases on-power steering.









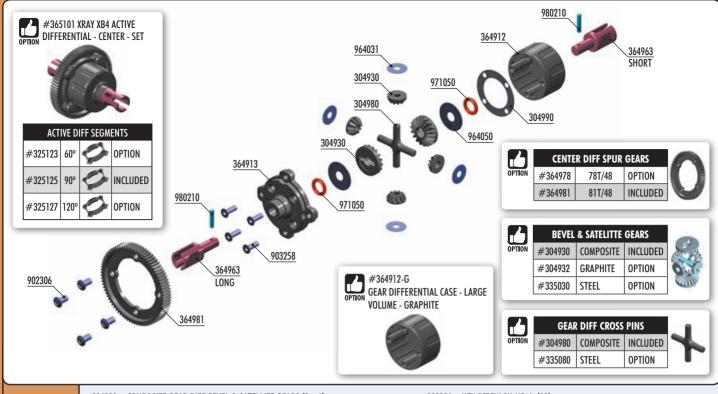




TIP

#### 1. CENTER GEAR DIFFERENTIAL







304930 COMPOSITE GEAR DIFF BEVEL & SATELLITE GEARS (2+4)

COMPOSITE GEAR DIFF CROSS PIN 304980

DIFF GASKET (4) 304990

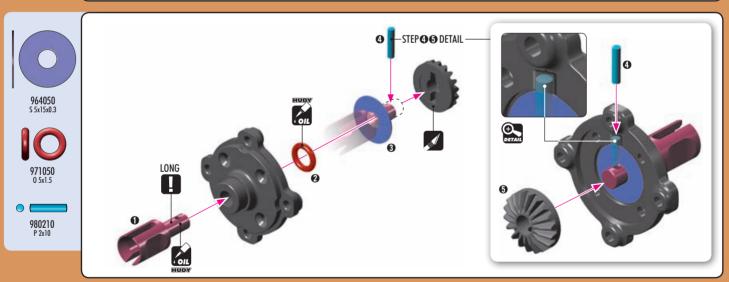
364904 GEAR CENTER DIFFERENTIAL - LARGE VOLUME - SET COMPOSITE GEAR DIFFERENTIAL CASE - LARGE VOLUME 364912

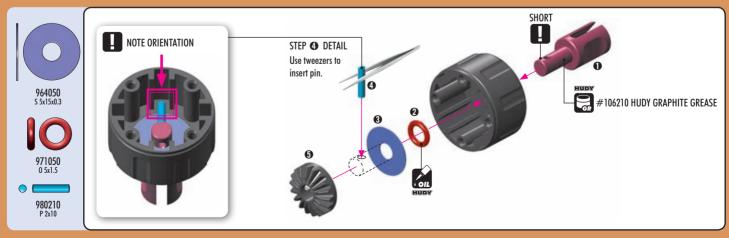
364913 COMPOSITE CENTER GEAR DIFF ADAPTER - LARGE VOLUME

CENTER GEAR DIFF OUTDRIVE ADAPTER FOR LARGE VOLUME DIFF (1+1)364963

COMPOSITE CENTER DIFF SPUR GEAR 81T / 48 364981

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











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



#### TIP FOR CENTER DIFFERENTIAL

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

#### NOTE:

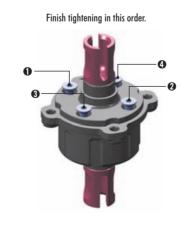
Softer oil increases steering, harder oil increases stability.

SET-UP BOOK DIFFERENTIAL OIL





Tighten the screws equally but DO NOT tighten them completely.

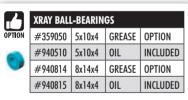




#### 2. REAR CENTRAL TRANSMISSION







	BALL-BEA	RING HU	BS	
OPTION	#324172	1 DOT	OPTION	
	#324172	2 DOTS	OPTION	
	#324172	3 DOTS	INCLUDED	
<b>63</b>	INLINE HU	JBS - REA	ıR	
OPTION	#362370	1 DOT	OPTION	
	#362370	2 DOTS	OPTION	(0)
	#362370	3 DOTS	INCLUDED	



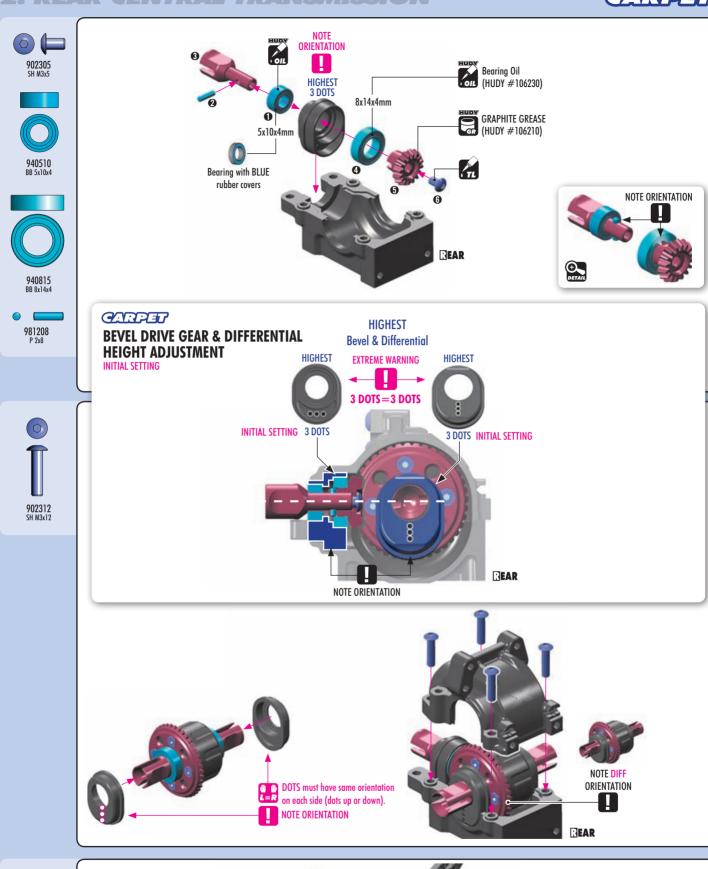


324172 COMPOSITE ADJUSTMENT BALL-BEARING HUB (2)
362006 DIFF BULKHEAD - HORIZONTAL SPLIT DESIGN (HS) - FRONT/REAR - SET
362370 INLINE HUB FOR BEVEL DRIVE GEAR - REAR HS BULKHEAD - 1+2+3 DOTS
363085 GRAPHITE SHOCK TOWER FOR HS BULKHEAD - REAR - 3.5MM
365127 STEEL BEVEL DRIVE GEAR - FOR HS BULKHEAD - CNC-MACHINED - 16T
365444 CENTRAL DOGBONE SHAFT UNIVERSAL JOINT - HUDY SPRING STEEL™

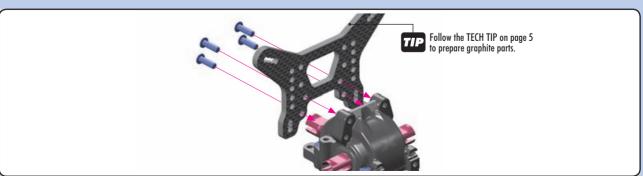
902305 HEX SCREW SH M3x5 (10)
902310 HEX SCREW SH M3x10 (10)
902312 HEX SCREW SH M3x12 (10)
940510 BALL-BEARING 5x10x4 RUBBER SEALED - OIL (2)
940815 BALL-BEARING 8x14x4 RUBBER SEALED - OIL (2)
981208 PIN 2x8 (10)

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



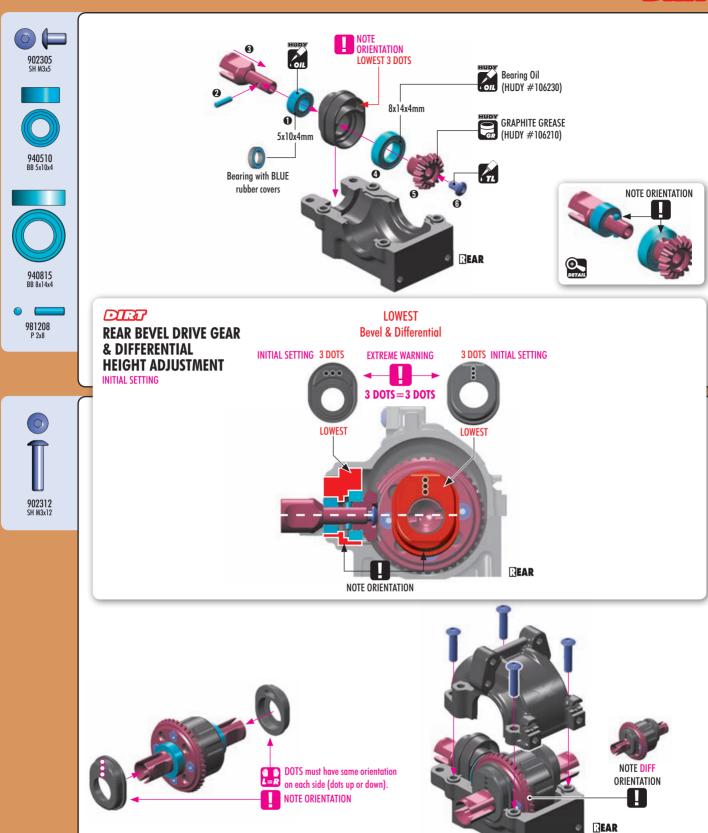




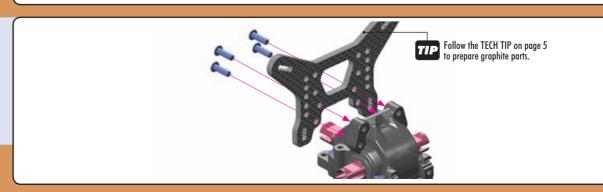


### 2. REAR CENTRAL TRANSMISSION









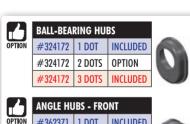
### 2. FRONT CENTRAL TRANSMISSION GARPET



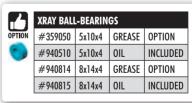














324172 COMPOSITE ADJUSTMENT BALL-BEARING HUB (2) DIFF BULKHEAD BLOCK SET 362006 362086 GRAPHITE SHOCK TOWER FOR HS BULKHEAD - FRONT - 3.5MM ANGLED HUB FOR BEVEL DRIVE GEAR - FRONT HS BULKHEAD - 1 DOT 362371 362373 ANGLED HUB FOR BEVEL DRIVE GEAR - FRONT HS BULKHEAD - 3 DOTS STEEL BEVEL DRIVE GEAR - FOR HS BULKHEAD - CNC-MACHINED - 16T 365127 CENTRAL DOGBONE SHAFT UNIVERSAL JOINT - HUDY SPRING STEEL™ 365444

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

BALL-BEARING 5x10x4 RUBBER SEALED - OIL (2) 940510 940815 BALL-BEARING 8x14x4 RUBBER SEALED - OIL (2)

981208 PIN 2x8 (10)

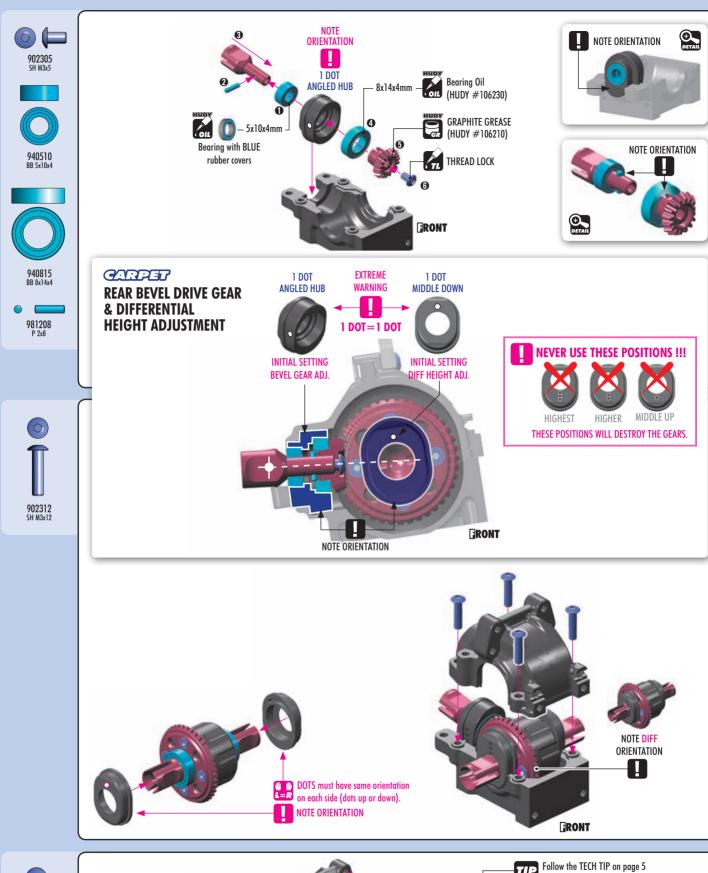
**GEAR DIFFERENTIAL - LARGE VOLUME - SET** 

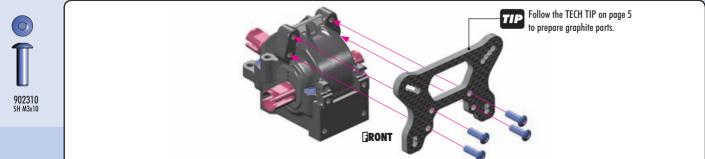
STEEL DIFFERENTIAL BEVEL GEAR FOR LARGE VOLUME DIFF 40T 364940

13

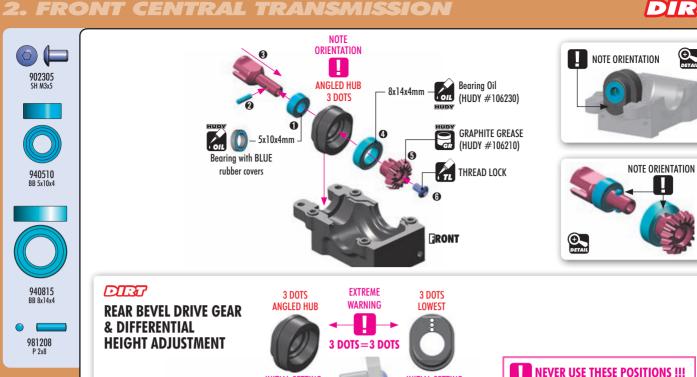
#### 2. FRONT CENTRAL TRANSMISSION



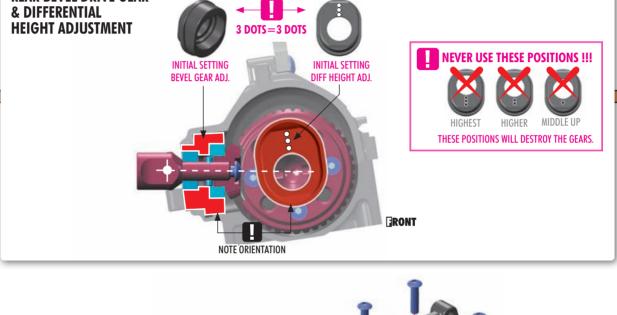


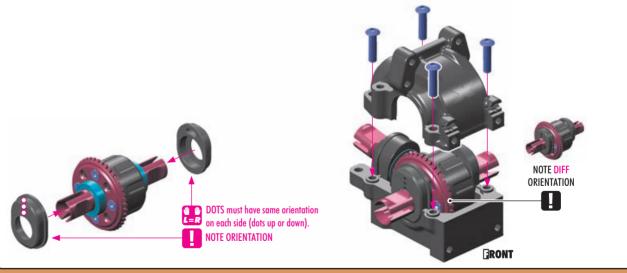




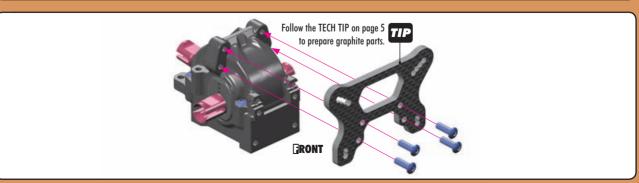






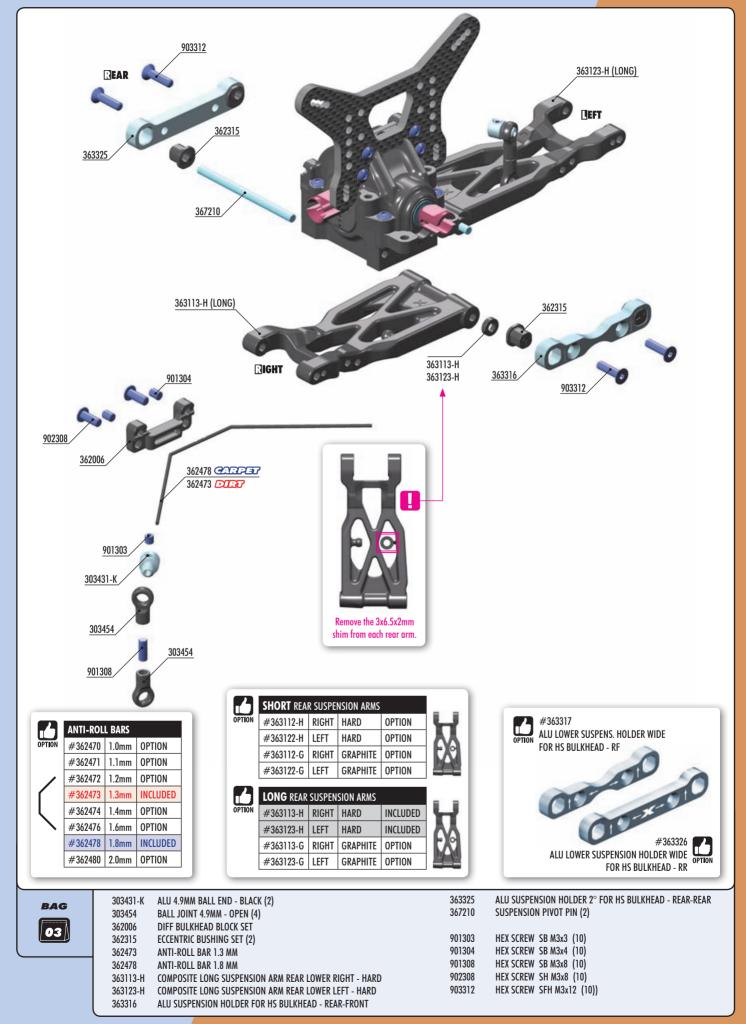






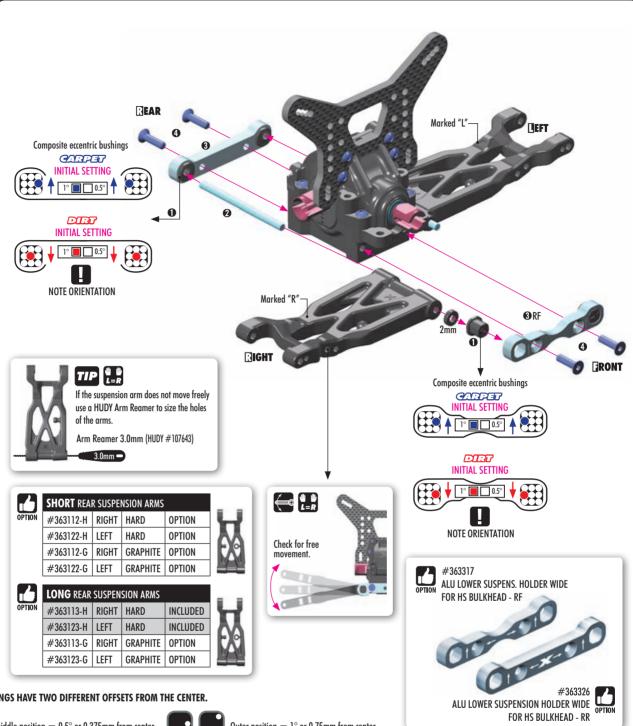
#### 3. REAR SUSPENSION











TOE-IN **ANTI-SQUAT ROLL CENTER** 

TRACK-WIDTH

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





Middle position  $= 0.5^{\circ}$  or 0.375mm from center.





Outer position  $= 1^{\circ}$  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).

		ANT	I-SQUA		
0	RR	-0	0	RF	(°) 1 = 2°
		•••			
0		•••		C	) =3°
0	10	0		- C	) =1°
	10		0		) =3°
	14				) =2°
0				C	) =4°
	10	<u> </u>	0	- C	) =1°
0	-	<u> </u>	0	c	) =2°
0	-	0			) =0°

RO RO	LL CENTEK	
RR	RF	(mm)
0 0	0 0	=+0.75 <sub>mm</sub>
0 0	0 0	=0 <sub>mm</sub>
	0 0	=-0.75 <sub>mm</sub>

	IKA	CK-WIDIU	
	RR	RF	(mm)
0	•	0 0	=+1.5mm
0	0	0 0	=0 <sub>mm</sub>
0	•	0 0	=-1.5 <sub>mm</sub>

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

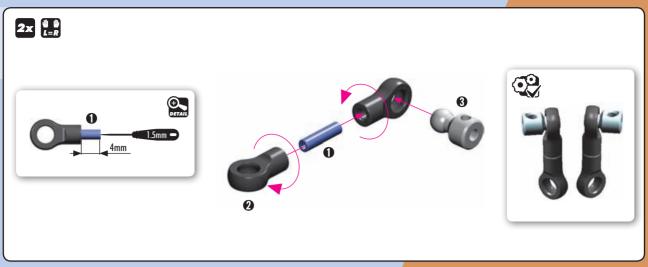
The tables describe the amounts of adjustment using the center and outside positions of the eccentric bushings. The middle position eccentric bushings allow for finer adjustment increments.

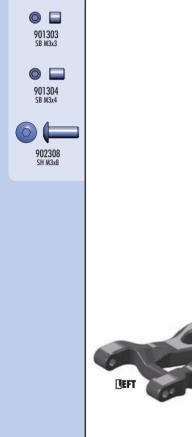
RR		RF	(°)
0	0	0	=2°
0	0 0	•	=3°
0	0	<u> </u>	=1°
0	0	<u> </u>	=1°
0	0	0	=2°
0	0	<u> </u>	=0°
0	<u> </u>	<u> </u>	=3°
0	o 🕒	•	=4°
0	0	•	=2°

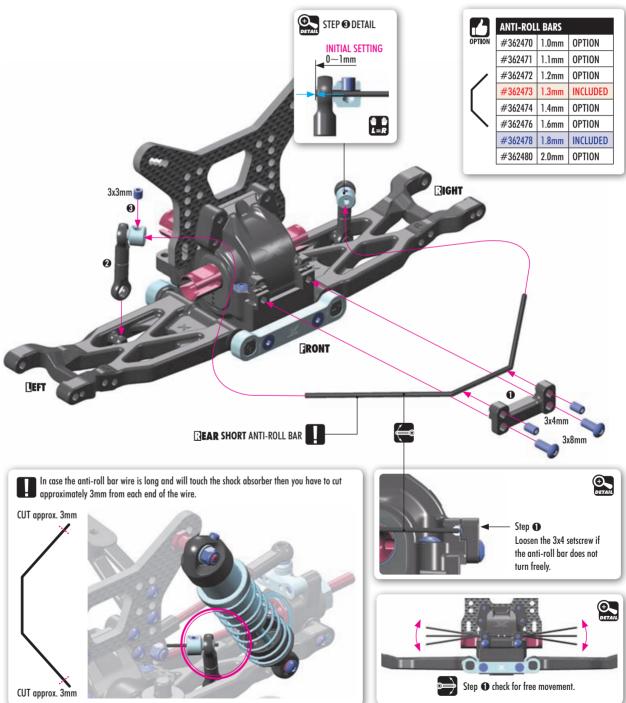
#### 3. REAR SUSPENSION





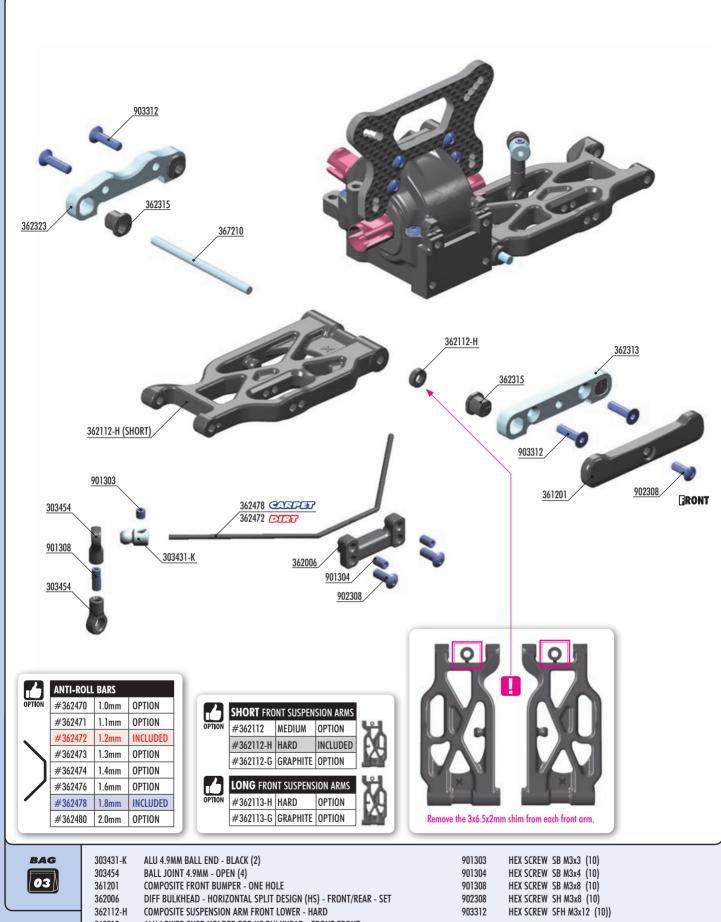






SET-UP BOOK **ANTI-ROLL BAR** 



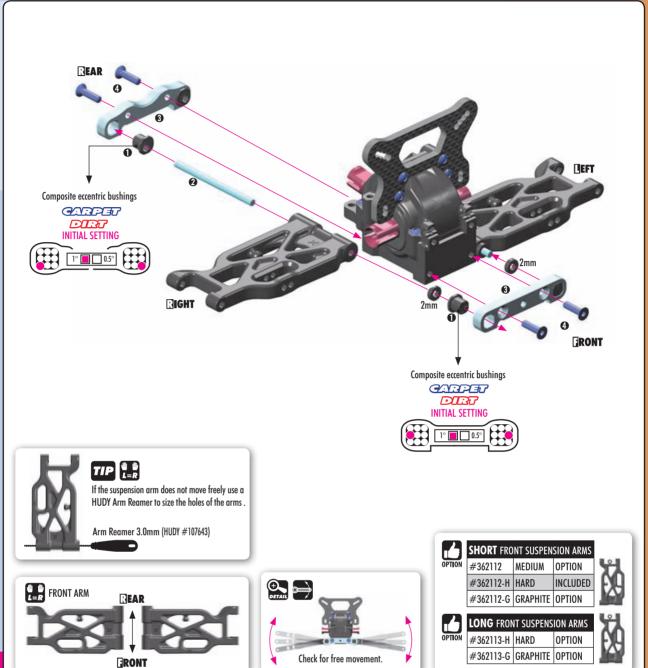


303431-K	ALU 4.9MM BALL END - BLACK (2)
303454	BALL JOINT 4.9MM - OPEN (4)
361201	COMPOSITE FRONT BUMPER - ONE HOLE
362006	DIFF BULKHEAD - HORIZONTAL SPLIT DESIGN (HS) - FRONT/REAR - SET
362112-H	COMPOSITE SUSPENSION ARM FRONT LOWER - HARD
362313	ALU LOWER SUSP. HOLDER FOR HS BULKHEAD - FRONT-FRONT
362315	ECCENTRIC BUSHING SET (2)
362323	ALU LOWER SUSP. HOLDER FOR HS BULKHEAD - FRONT-REAR
362472	ANTI-ROLL BAR 1.2 MM
362478	ANTI-ROLL BAR 1.8 MM
367210	SUSPENSION PIVOT PIN (2)

19







KICK UP **ROLL CENTER** TRACK-WIDTH

# ECCENTRIC BUSHINGS HAVE TWO DIFFERENT OFFSETS FROM THE CENTER.





Middle position  $= 0.5^{\circ}$  or 0.375mm from center.





Outer position  $= 1^{\circ}$  or 0.75mm from center.

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

KI	CK-UP	
FF	FR	(°)
00-00	0	⊙ =7°
00	0	6°
00		■ =8°
	0	<b>⊡</b> =6°
00-00	0	□ =5°
		<b>□</b> =7°
	0	<b>⊡</b> =8°
00-00	0	=7°
00-00		. =9°

ROLL CENTER			
FF	FR	(mm)	
	•	+0.75mm	
0.000	••••	= Omm	
0.000		-0.75mm	

IKACK-WIDIN			
FF	FR	(mm)	
<b>○</b> 2220	•	=+1.5mm	
0220	•	= 0mm	
0		=-1.5mm	

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

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.

TOTAL CAST	ER=C-HUB CASTER+KICK UP
	KICK-UP

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

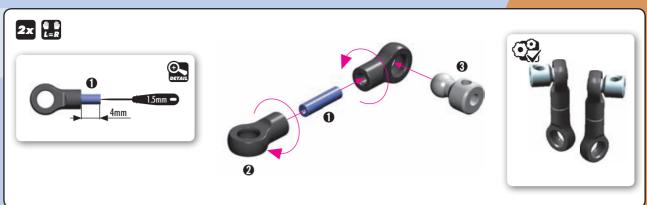
Caster is the angle between the steering pivot axis and the vertical plane. Caster is affected not only by the C-Hub caster, but also by the front kick-up angle relative to the flat chassis bottom. The table indicates how kick up angle effects total caster.

The XB4's stock caster blocks are  $9^{\circ}$ , but  $6^{\circ}$ blocks are available as an option.

#### 3. FRONT SUSPENSION





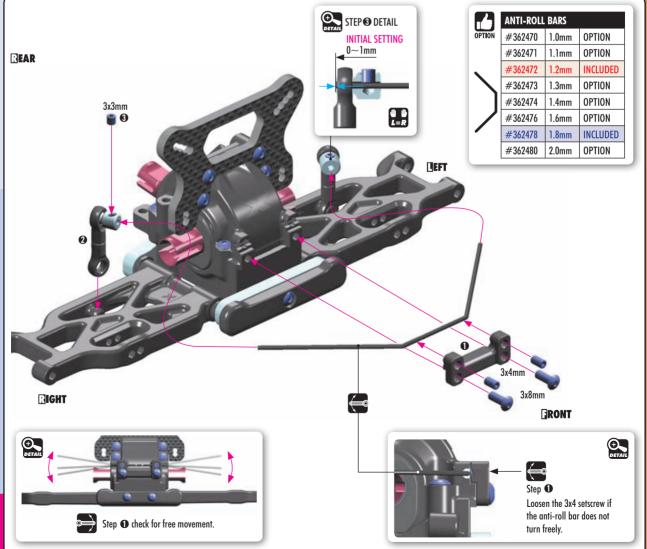








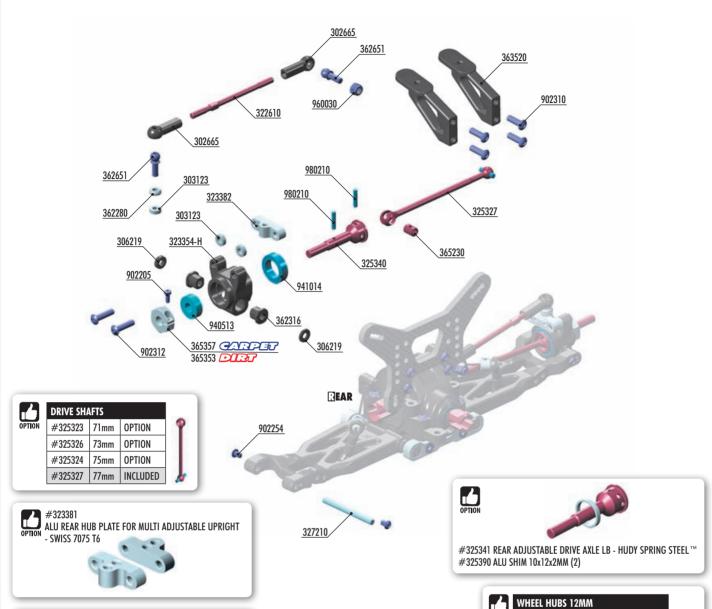




SET-UP BOOK ANTI-ROLL BAR

#### 4. REAR TRANSMISSION







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

HARD

GRAPHITE

ALU HIGH

ALU LOW

362651 363520

**REAR UPRIGHTS** 

#323354-H

#323354-G

#323355

#323356



**INCLUDED** 

OPTION

OPTION

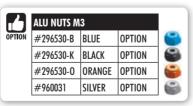
OPTION

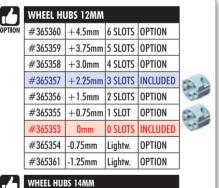
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302665	COMPOSITE BALL JOINT 4.9MM - CLOSED WITH HOLE (4)
303123	ALU SHIM 3x6x2.0MM (10)
306219	CCOMPOSITE SET OF SERVO SHIMS (4)
322610	ADJ. TURNBUCKLE M3 L/R 55 MM - SPRING STEEL (2)
323354-H	COMPOSITE UPRIGHT REAR - HARD
323382	ALU REAR HUB PLATE FOR MULTI ADJ. UPRIGHT - 1-HOLE
325327	REAR DRIVE SHAFT 77MM WITH 2.5MM PIN - SPRING STEEL™
325340	REAR DRIVE AXLE LB - HUDY SPRING STEEL™
327210	FRONT SUSPENSION PIVOT PIN (2)
362280	ALU CONICAL SHIM 3x6x2.0MM (10)
362316	OPEN ECCENTRIC BUSHING SET (2)

BALL END 4.9MM WITH THREAD 8MM (2)

REAR WING POST - V2 (2)

365230 365353 365357	DRIVE SHAFT COUPLING - HUDY SPRING STEEL™ ALU WHEEL HUB 12MM (2) ALU WHEEL HUB 12MM - OFFSET "+2.25MM" (2)
902205	HEX SCREW SH M2x5 (10)
902254	HEX SCREW SH M2.5x4 (10)
902310	HEX SCREW SH M3x10 (10)
902312	HEX SCREW SH M3x12 (10)
940513	BALL-BEARING 5x12x4 RUBBER SEALED - GREASE (2)
941014	BALL-BEARING 10x15x4 RUBBER SEALED - GREASE (2)
960030	NUT M3 (10)
980210	PIN 2x10 (10)

#365352

#365351

+0.75mm

-0.75mm

OPTION

OPTION





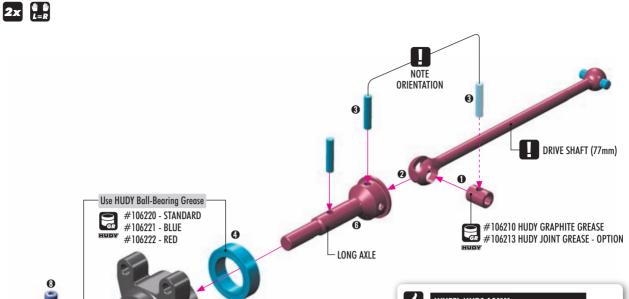




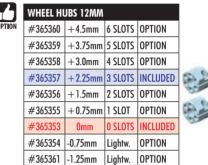
941014 BB 10x15x4







10x15x4mm





WHEEL HUBS 14MM				
#365352	+0.75mm	OPTION		
#365351	-0.75mm	OPTION		

#### **OPTIONAL HEX HUB EFFECTS**

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

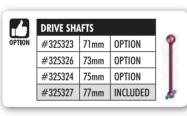
**LESS OFFSET** Rear - more traction Front - more steering

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



	REAR UPRIG	HTS	
ĺ	#323354-H	HARD	INCLUDED
	#323354-G	GRAPHITE	OPTION
	#323355	ALU HIGH	OPTION
	#323356	ALU LOW	OPTION



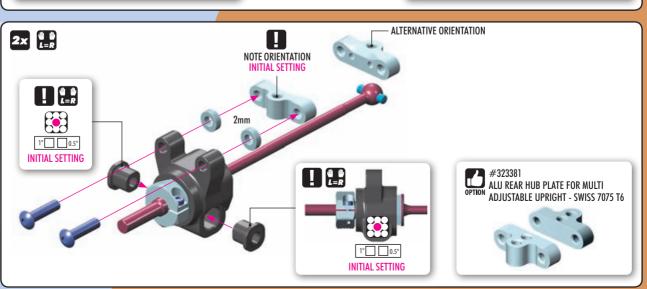


5x12x4mm

Bearing with BLACK rubber covers

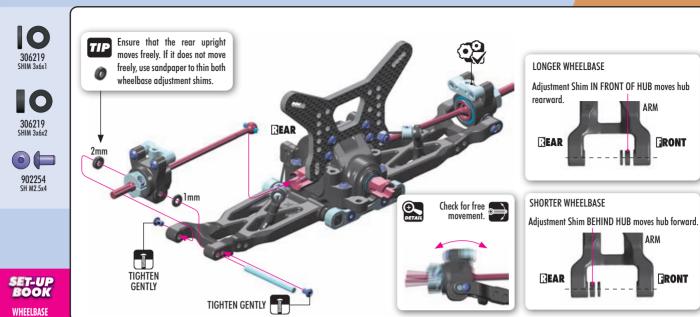
	XRAY BALL	-BEARING	GS		
OPTION	#940512	5x12x4	OIL	OPTION	
	#941015	10x15x4	OIL	OPTION	U
	#940513	5x12x4	GREASE	INCLUDED	
	#941014	10x15x4	GREASE	INCLUDED	





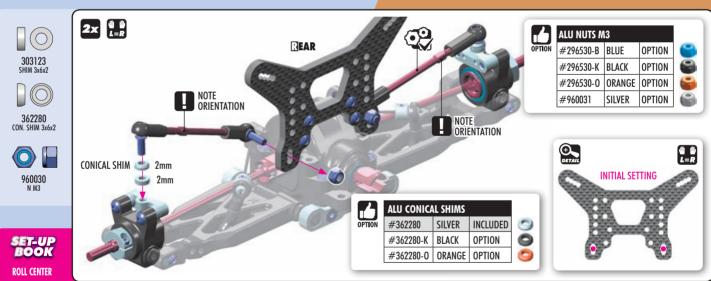
#### 4. REAR TRANSMISSION



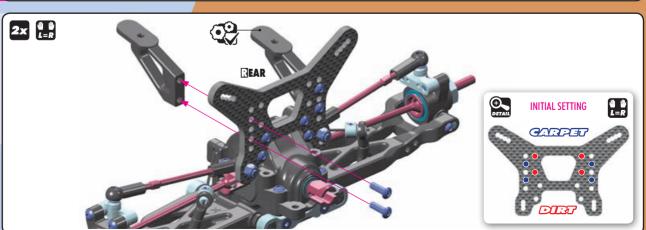




SET-UP BOOK CAMBER







#### 4. FRONT TRANSMISSION



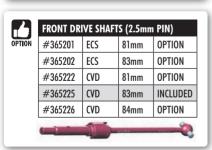


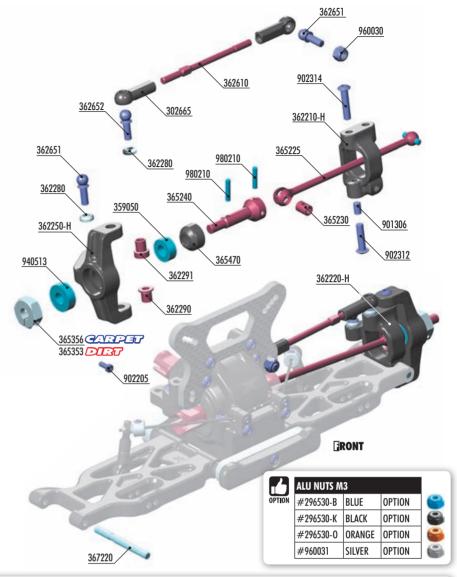
	XRAY BALL	-BEARIN	GS	
OPTION	#940510	5x10x4	OIL	OPTION
	#940512	5x12x4	OIL	OPTION
	#359050	5x10x4	GREASE	INCLUDED
9	#940513	5x12x4	GREASE	INCLUDED

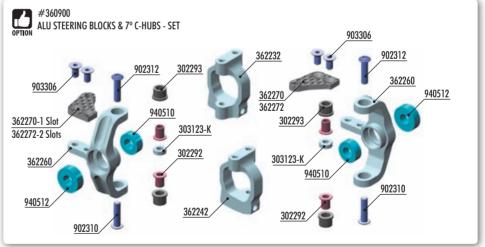
	DRIVE SHAF	T COLLARS	
OPTION	#365470	COMPOSITE	INCLUDED
	#365471-K	ALU - BLACK	OPTION
	#365471-0	ALU - ORANGE	OPTION

7	STEERING B	LOCKS	
OPTION	#362250	MEDIUM	OPTION
	#362250-H	HARD	INCLUDED
	#362250-G	GRAPHITE	OPTION

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









COMPOSITE BALL JOINT 4.9MM - CLOSED WITH HOLE (4) 302665 362210-H COMPOSITE C-HUB 9° DEG. RIGHT - HARD 362220-H COMPOSITE C-HUB 9° DEG. LEFT - HARD 362250-H COMPOSITE STEERING BLOCK - HARD 362280 ALU CONICAL SHIM 3x6x2.0MM (10) 362290 STEEL STEERING BUSHING - SHORT (2) STEEL STEERING BUSHING - LONG (2) 362291 ADJ. TURNBUCKLE M3 L/R 50 MM - SPRING STEEL (2) 362610 BALL END 4.9MM WITH THREAD 8MM (2) 362651 BALL END 4.9MM WITH THREAD 10MM (2) 362652 365225 FRONT DRIVE SHAFT 83MM WITH 2.5MM PIN - HUDY SPRING STEEL™ 365230 DRIVE SHAFT COUPLING - HUDY SPRING STEEL™ 365240 FRONT DRIVE AXLE - HUDY SPRING STEEL™

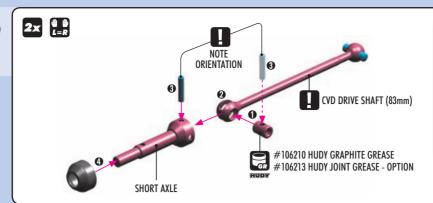
ALU WHEEL HUB 12MM (2) 365353 ALU WHEEL HUB 12MM - OFFSET "+1.50MM" (2) COMPOSITE DRIVE SHAFT SAFETY COLLAR (3) 365356 365470 367220 FRONT ARM PIVOT PIN (2) 359050 BALL-BEARING 5x10x4 STEEL SEALED - GREASE (2) 901306 HEX SCREW SB M3x6 (10) 902205 HEX SCREW SH M2x5 (10) HEX SCREW SH M3x12 (10) 902312 HEX SCREW SH M3x14 (10) 902314 940513 BALL-BEARING 5x12x4 RUBBER SEALED - GREASE (2) 960030 NUT M3 (10) 980210 PIN 2x10 (10)

X 3 4 2 3

#### 4. FRONT TRANSMISSION









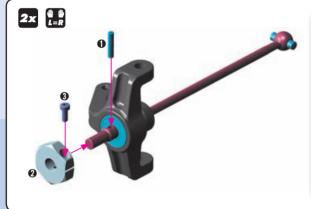






	XRAY BALL-BEARINGS					
OPTION	#940510	5x10x4	OIL	OPTION		
	#940512	5x12x4	OIL	OPTION		
	#359050	5x10x4	GREASE	INCLUDED		
	#940513	5x12x4	GREASE	INCLUDED		





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

#### **OPTIONAL HEX HUB EFFECTS** Different off-set hex hubs are used to increase or decrease the track-width. LESS OFF-SET Rear - more traction Front - more steering

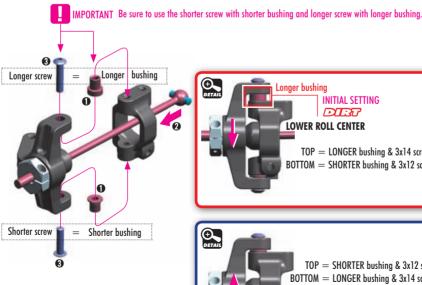
#### **MORE OFF-SET** Rear - less traction Front - less steering



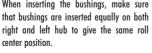
SET-UP BOOK

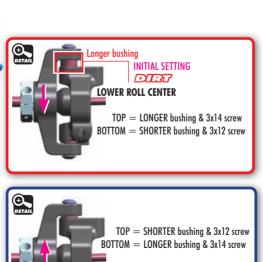
CASTER

**ROLL CENTER** 









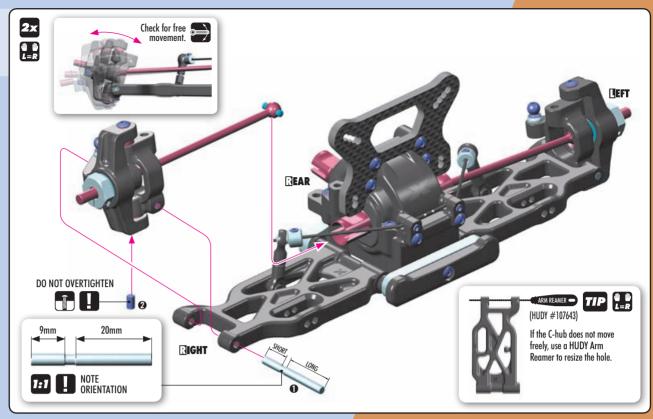


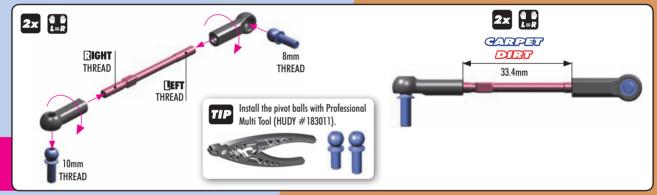










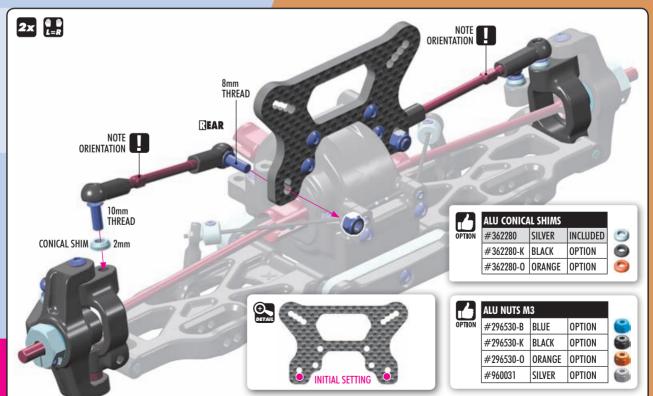








960030 N M3

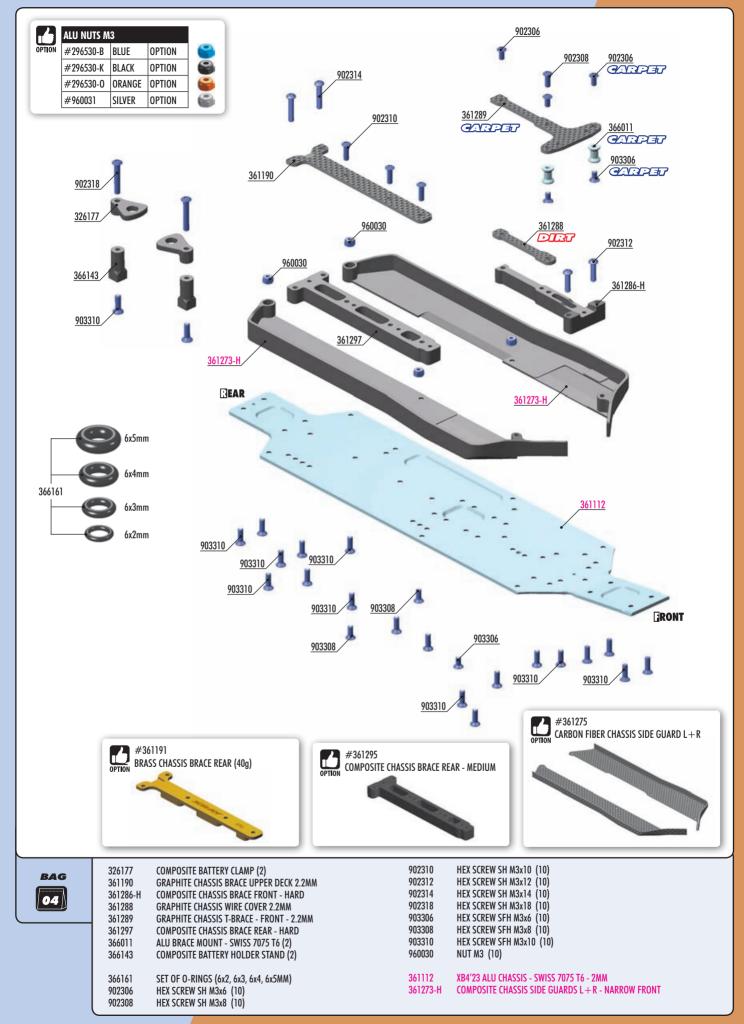


SET-UP BOOK ROLL CENTER

X 3 4 2 3

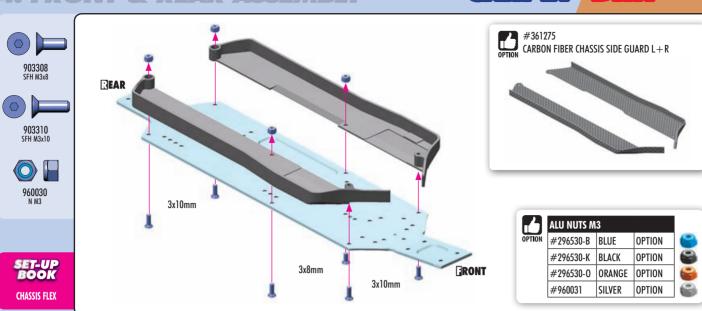
### 4. FRONT & REAR ASSEMBLY

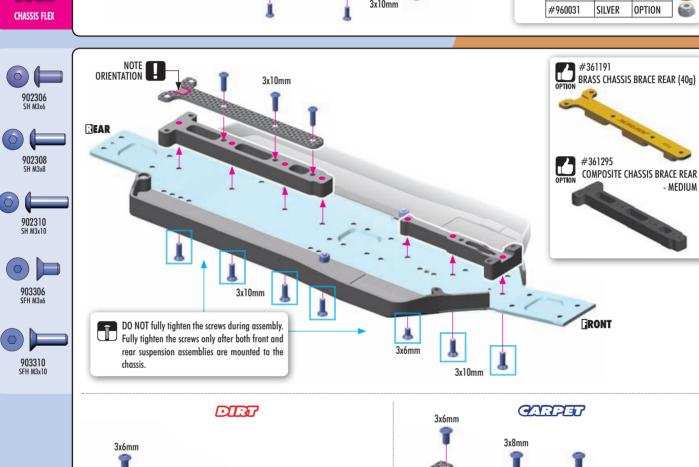


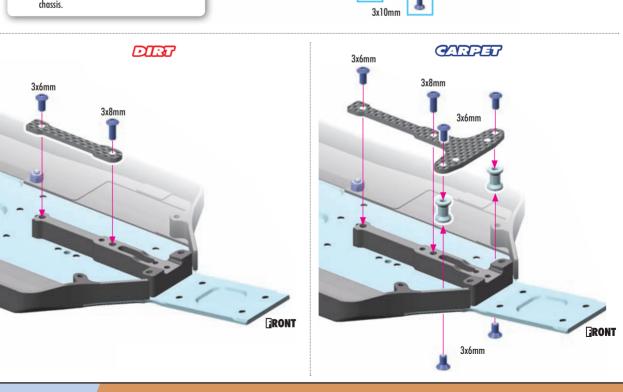


### 4. FRONT & REAR ASSEMBLY







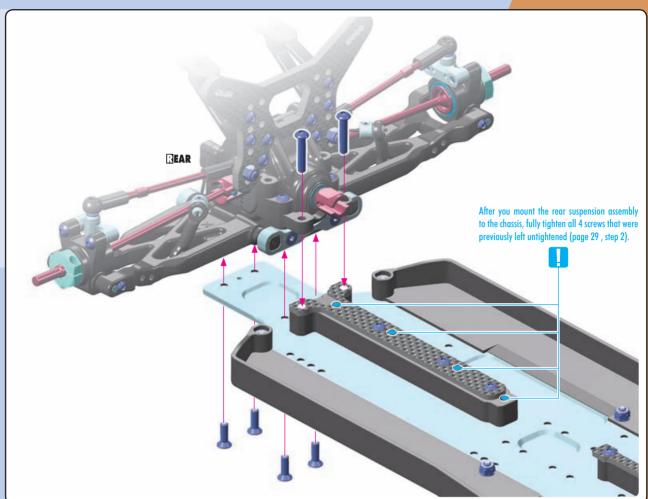


29



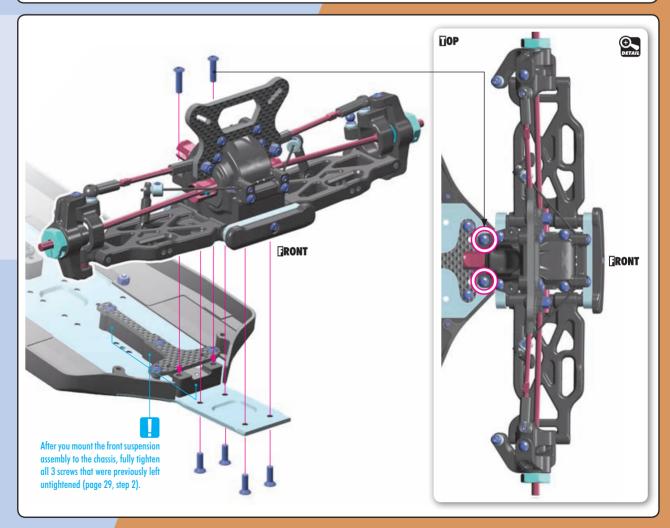








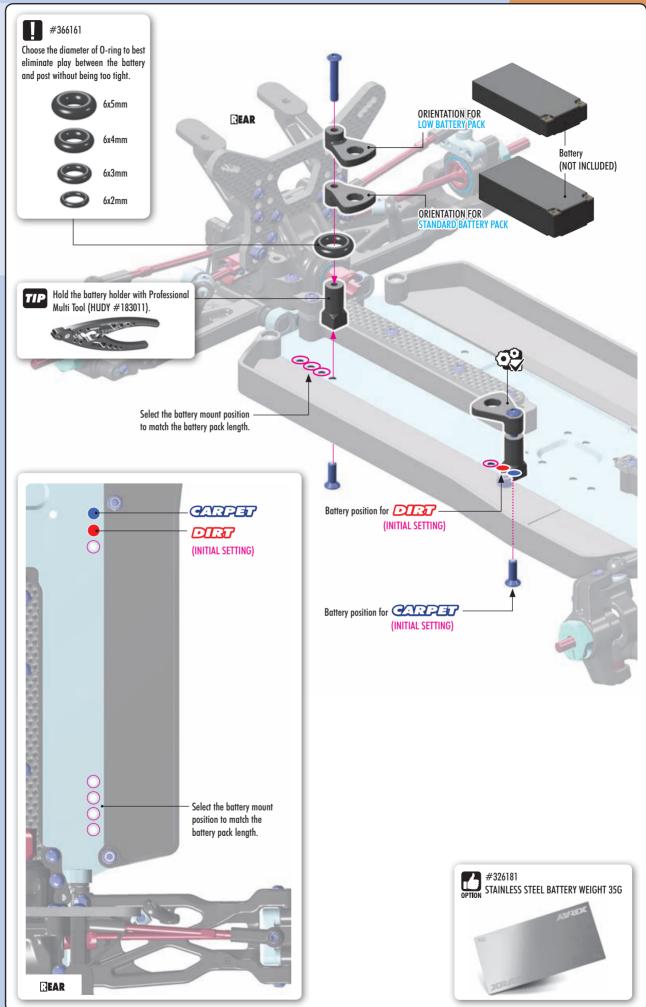




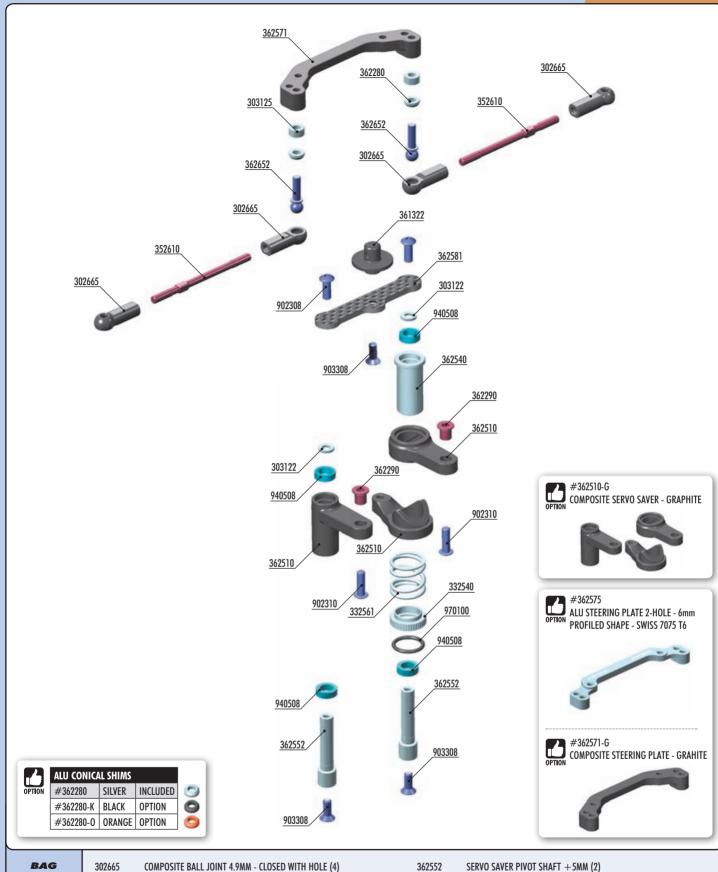
#### 4. FRONT & REAR ASSEMBLY







X 3 4 2 3



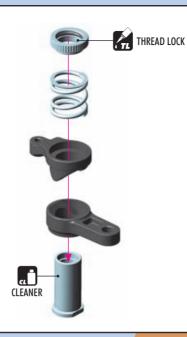


303122	ALU SHIM 3x6x1.0MM (10)	362571	COMPOSITE STEERING PLATE
303125	ALU SHIM 3x6x3.0MM (10)	362581	STEERING BRACE 2.0MM GRAPHITE
332540	ALU SERVO SAVER ADJUSTABLE NUT	362652	BALL END 4.9MM WITH THREAD 10MM (2)
332561	SERVO SAVER SPRING C=14		
352610	ADJ. TURNBUCKLE M3 L/R 45MM - SPRING STEEL (2)	902308	HEX SCREW SH M3x8 (10)
361322	BODY MOUNT - EXTRA-SHORT	902310	HEX SCREW SH M3x10 (10)
362280	ALU CONICAL SHIM 3x6x2.0MM (10)	903308	HEX SCREW SFH M3x8 (10)
362290	STEEL STEERING BUSHING - SHORT (2)	940508	BALL-BEARING 5x8x2.5 RUBBER SEALED - OIL (2)
362510	COMPOSITE SERVO SAVER	970100	O-RING 10 x 1.5 (10)
362540	ALU SERVO SAVER MAIN SHAFT		





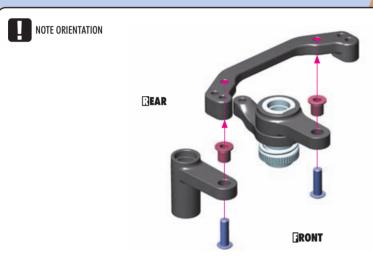


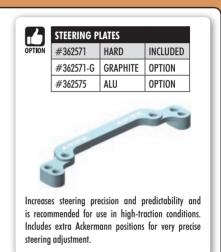




SET-UP BOOK SERVO SAVER

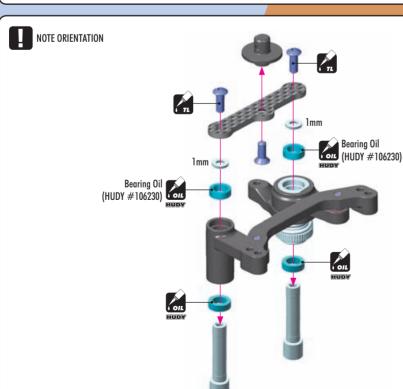








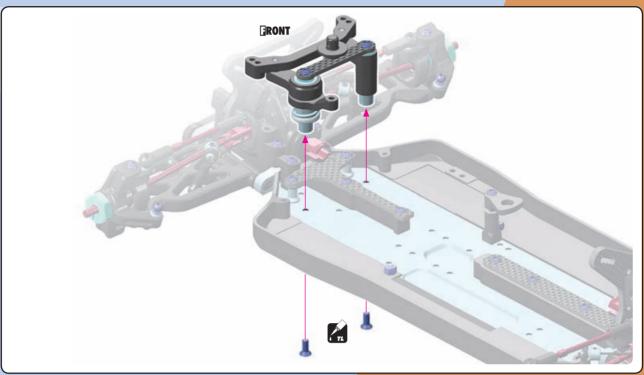
940508 BB 5x8x2.5





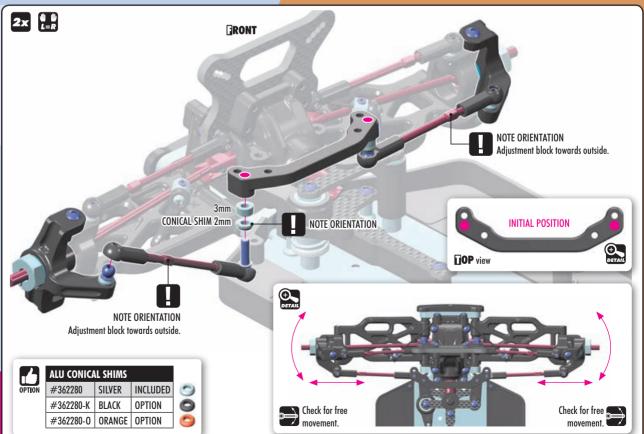






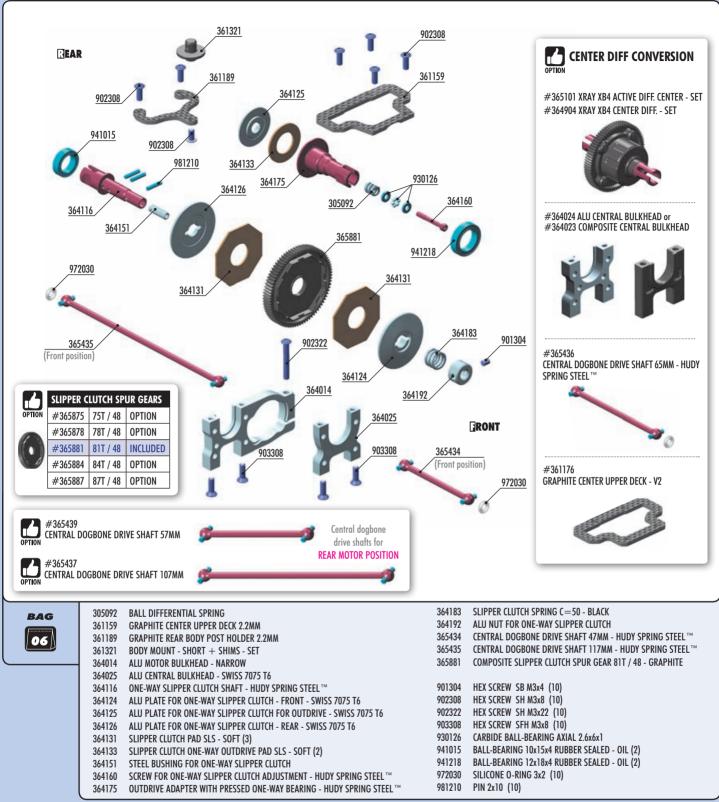




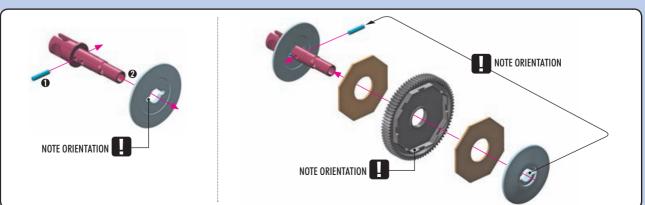


SET-UP BOOK ACKERMANN BUMP STEER TOE-IN



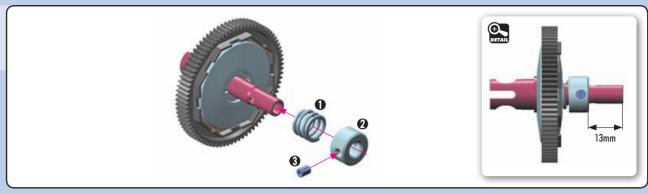




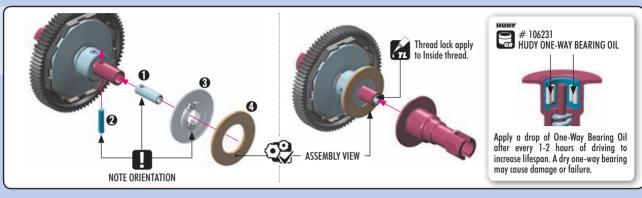




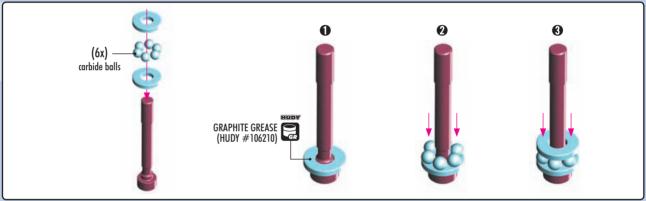


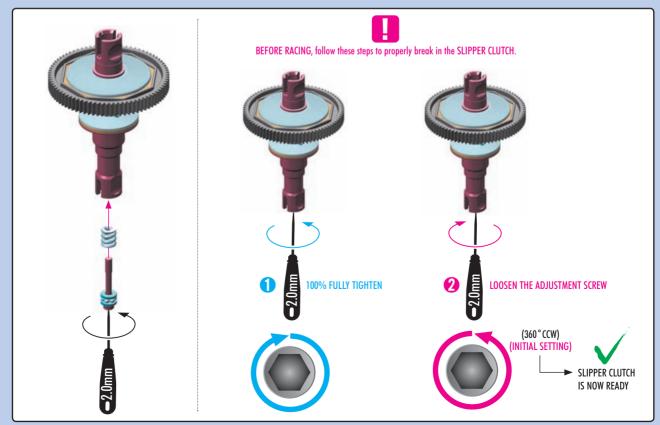






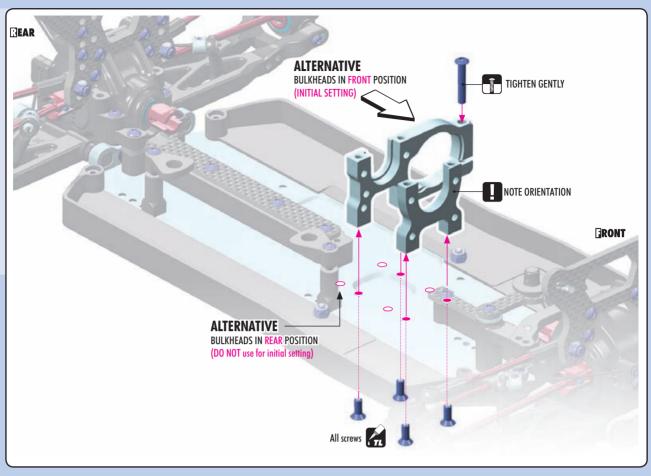




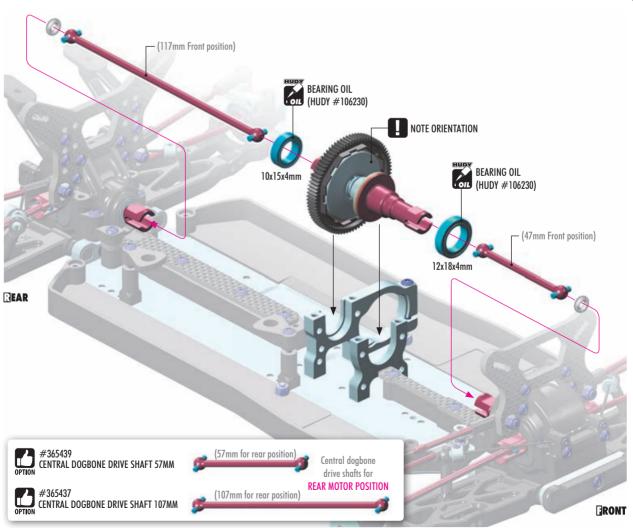




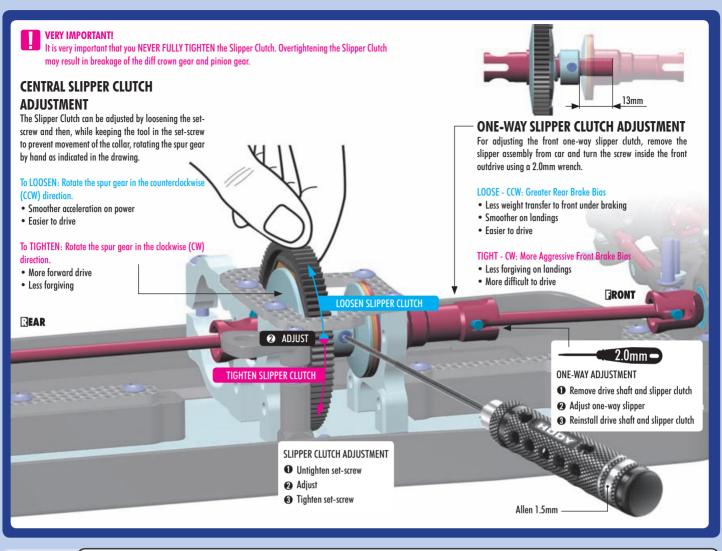


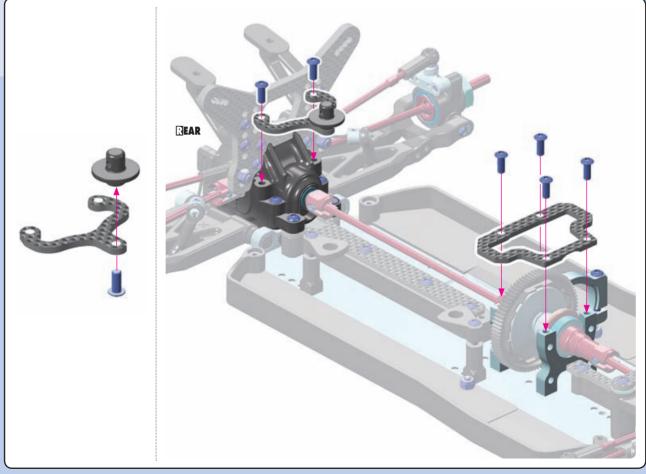






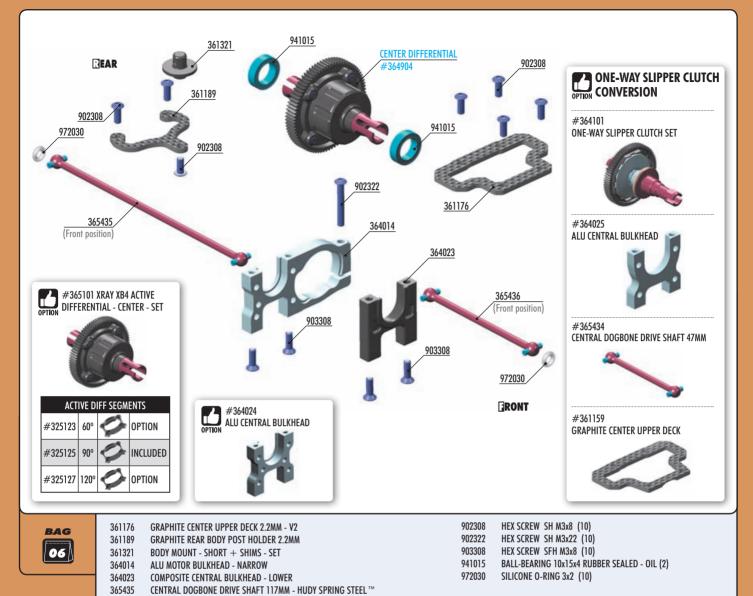


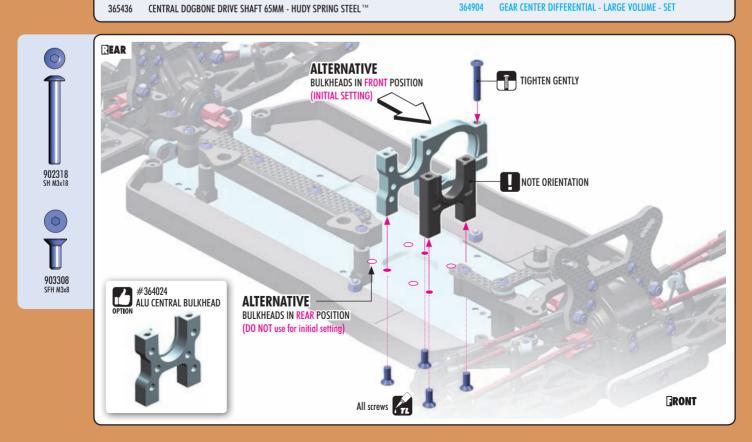




902308 SH M3x8

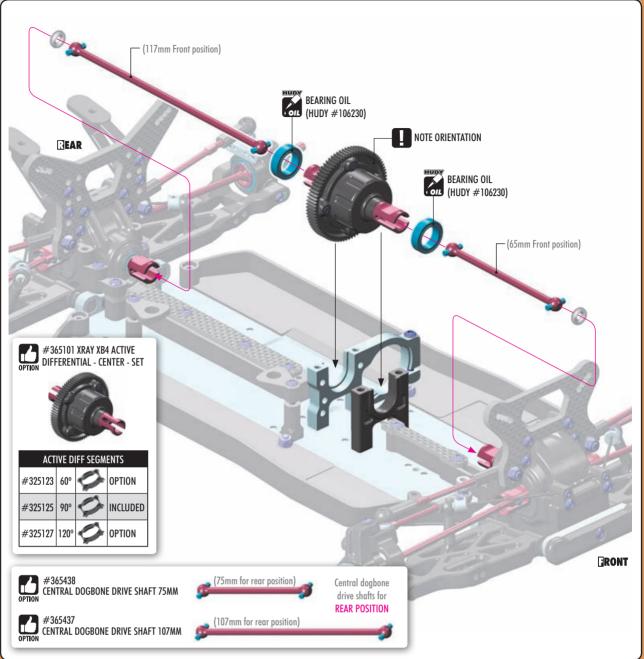




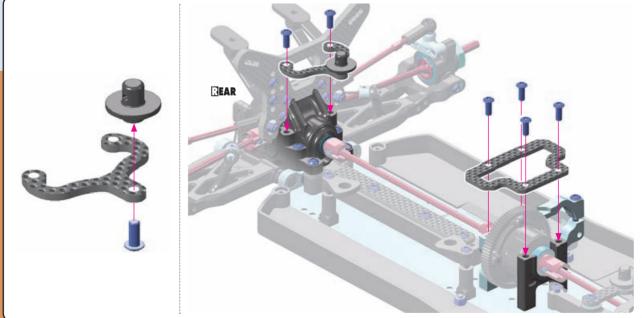










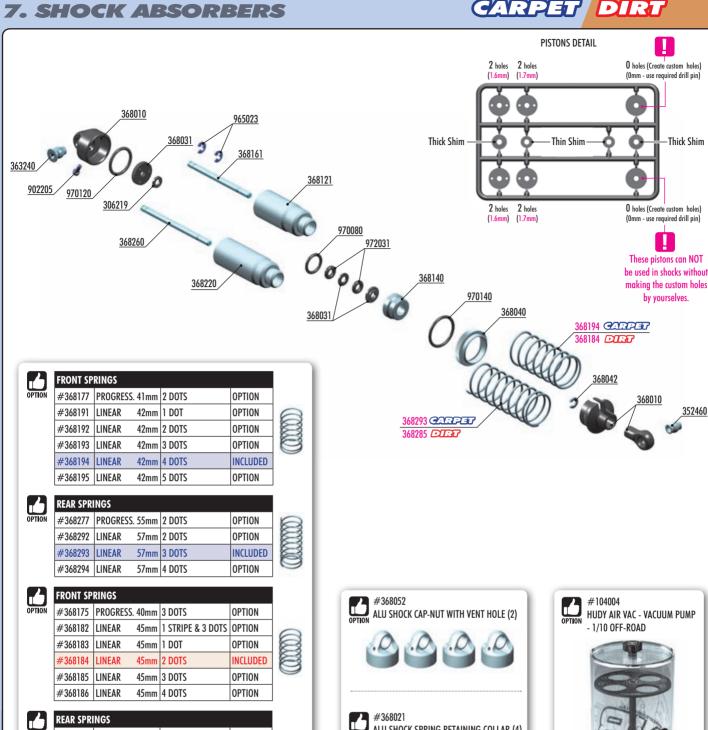


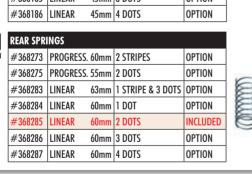


-Thick Shim

by yourselves.

352460









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306219	COMPOSITE SET OF SERVO SHIMS (4)	902205	HEX SCREW SH M2x5 (10)
352460	PIVOT BALL 5.8 - V3 (10)	965023	E-CLIP 2.3 (10)
363240	BALL UNIVERSAL 5.8MM WITH BACKSTOP (2)	970080	O-RING 8x1 (10)
368010	COMPOSITE SHOCK PARTS	970120	O-RING 12 x 1.0 (10)
368031	SHOCK PISTONS - COMPLETE SET - DERLIN - V2	970140	O-RING 14 x 1.5 (10)
368040	ALU SHOCK ADJUSTABLE NUT (2)	972031	SILICONE O-RING 3x2.1 (10)
368042	COMPOSITE SHOCK BUSHING & SHIM FOR ALU CAP $(2+2)$		
368121	ALU FRONT SHOCK BODY 32MM - V2 (2)	368184	FRONT SPRING SET L=45MM - 2 DOTS (2)
368140	ALU LOWER SHOCK BODY CAP (2)	368194	FRONT SPRING SET $L=42MM - 4 DOTS (2)$
368161	FRONT HARDENED SHOCK SHAFT 42MM (2)	368285	REAR SPRING SET L= $60MM - 2 DOTS (2)$
368200	REAR SHOCK ABSORBERS COMPLETE SET (2)	368293	REAR SPRING SET L= $57MM - 3 DOTS (2)$
368220	ALU REAR SHOCK BODY (2)		
368260	REAR HARDENED SHOCK SHAFT (2)		

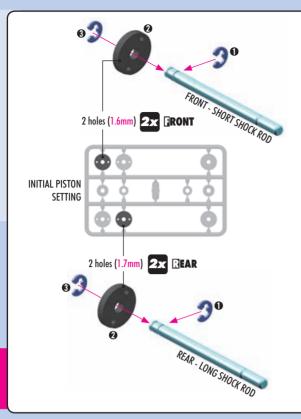
41

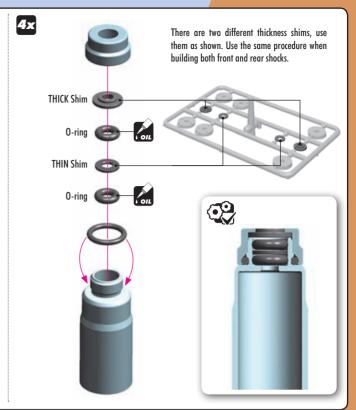
# 7. SHOCK ABSORBERS





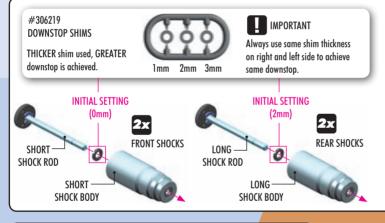






SET-UP BOOK SHOCK DAMPING SHOCK PISTONS







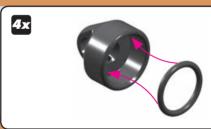
DO NOT push the shock rod straight Twist the shock rod through through the lower shock body assembly; O-ring damage may result.

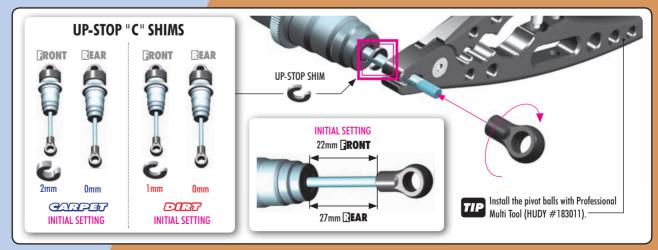
Twist the shock rod through the lower shock body assembly.















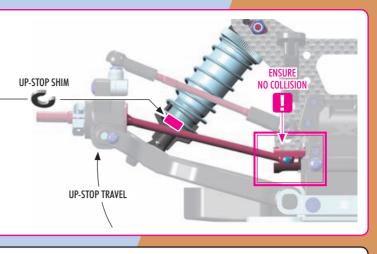
# **UP-STOP TRAVEL SETTINGS**

It is very important to have properly set the up-stop travel to avoid damage to the drive shaft and diff outdrives.

To avoid collision of the drive shaft with diff outdrives use the up-stop travel shims to set-up the up-stop travel.

All these settings have influence on the up-stop travel:

- Length of arms (long/short)
- Length of drive shafts
- Shock positions
- Eccentric bushings in suspension holders
- Eccentric bushings in rear uprights
- Camber





Extend the shock shaft completely. Fill the shock body with the shock oil. For the FRONT shocks use 700cSt or 600cSt oil. For the REAR shocks use 550cSt or 500cSt oil.

# DEFAULT SHOCK REBOUND SETTING 0% REBOUND



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



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



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



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



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



6x push the shaft up and down.



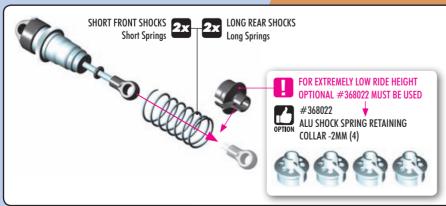
Untighten the screw.

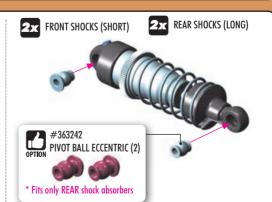


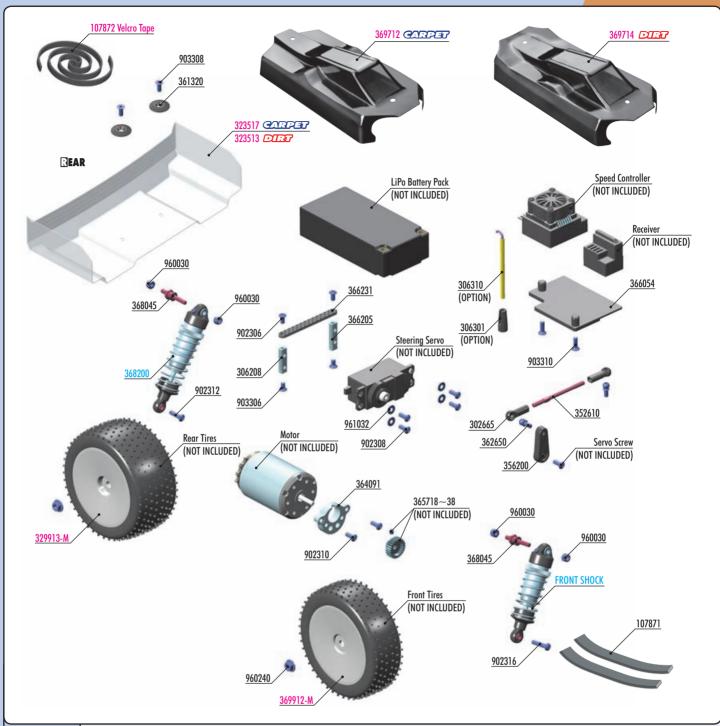
Gently push the shock shaft completely into the shock body. Excess oil will flow through the hole in the shock cap.



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









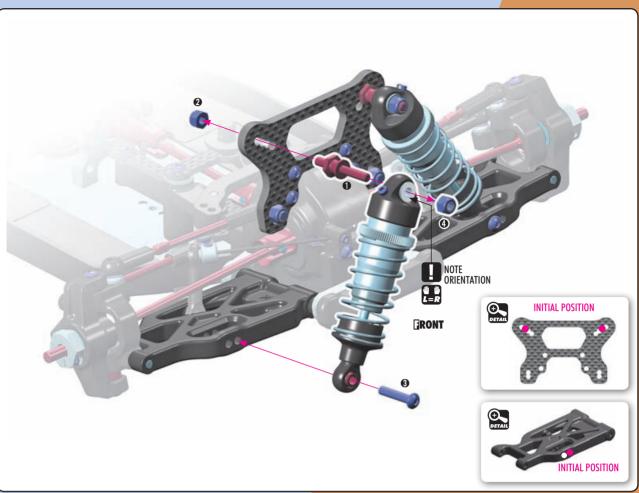
44

107871	HUDY SELF-ADHESIVE FOAM STRIP (2)	903306	HEX SCREW SFH M3x6 (10)
302665	COMPOSITE BALL JOINT 4.9MM - CLOSED WITH HOLE (4)	903308	HEX SCREW SFH M3x8 (10)
306208	ALU SERVO MOUNT 21MM - BOTH SIDES THREADED	903310	HEX SCREW SFH M3x10 (10)
306301	ANTENNA MOUNT - THIN (OPTION)	960030	NUT M3 (10)
306310	ANTENNA (2) (OPTION)	961032	WASHER S 3.2 (10)
352610	ADJ. TURNBUCKLE M3 L/R 45 MM - SPRING STEEL™ (2)	960240	NUT M4 WITH SERRATED FLANGE (10)
356200	BRAKE/THROTTLE ARMS & STEERING SERVO ARMS - SET		
361320	BODY MOUNT, BATTERY MOUNT - V2 & WING SHIM (2)	368200	REAR SHOCK ABSORBERS COMPLETE SET (2)
362650	BALL END 4.9MM WITH THREAD 6MM (2)		
364091	ALU ECCENTRIC INSERT FOR NARROW MOTOR BULKHEAD	107872	VELCRO TAPE WITH DOUBLE SIDED TAPE 8x500MM
365718~	38 ALU PINION GEAR HARD COATED 18~38T/48 (OPTION)	323513	LEXAN REAR WING - RANK
366054	COMPOSITE RADIO PLATE - SHORT	323517	LEXAN REAR WING - TEC
366205	ALU SERVO MOUNT 22MM - BOTH SIDES THREADED	329913-M	REAR WHEEL AERODISK WITH 12MM HEX IFMAR - WHITE (2)
366231	GRAPHITE SERVO HOLDER 2.2MM	369712	BODY FOR 1/10 4WD OFF-ROAD BUGGY - DELTA 4C
368045	STEEL SCREW SHOCK PIVOT BALL WITH HEX (2)	369714	BODY FOR 1/10 4WD OFF-ROAD BUGGY - DELTA 4D
		369912-M	FRONT WHEEL AERODISK WITH 12MM HEX IFMAR - WHITE (2)
902306	HEX SCREW SH M3x6 (10)		
902308	HEX SCREW SH M3x8 (10)		
902310	HEX SCREW SH M3x10 (10)		
902312	HEX SCREW SH M3x12 (10)		
902316	HEX SCREW SH M3x16 (10)		

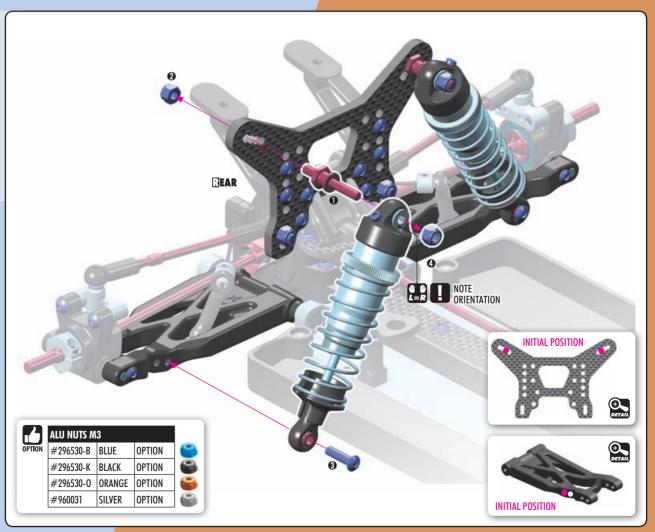








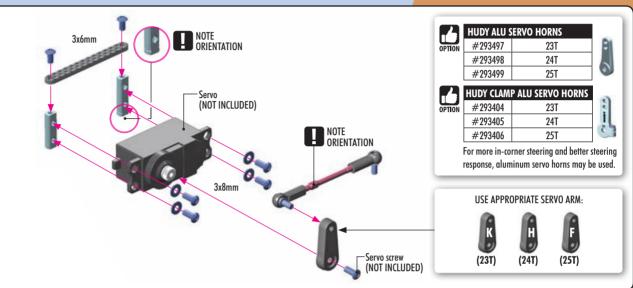




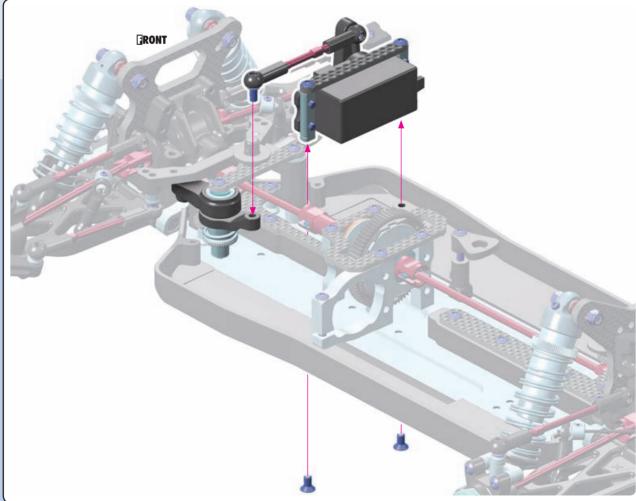






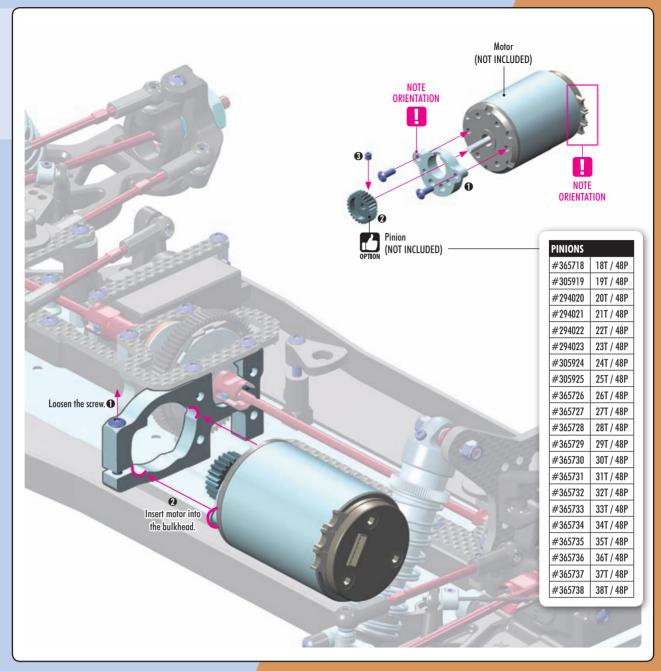


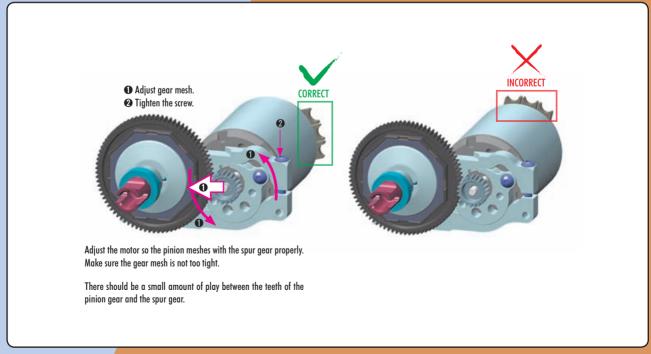








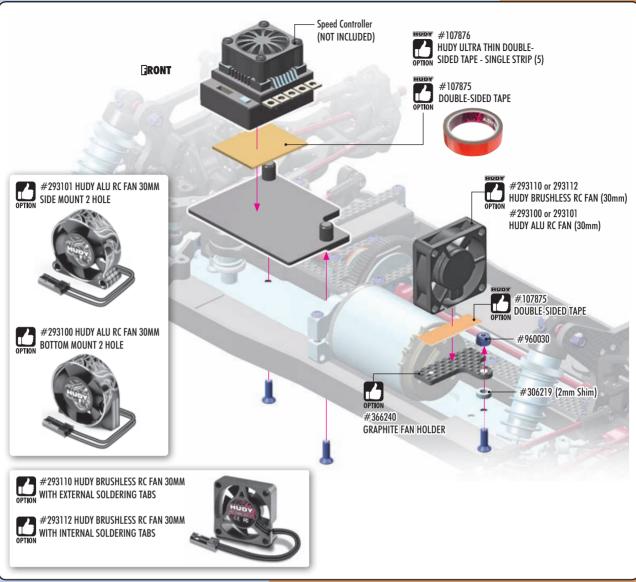


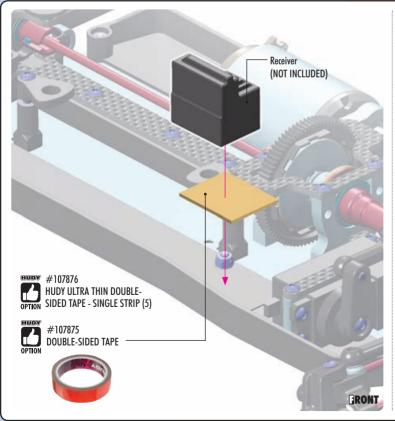


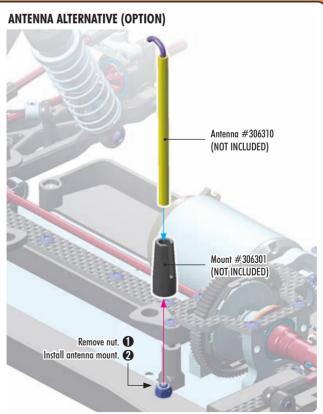
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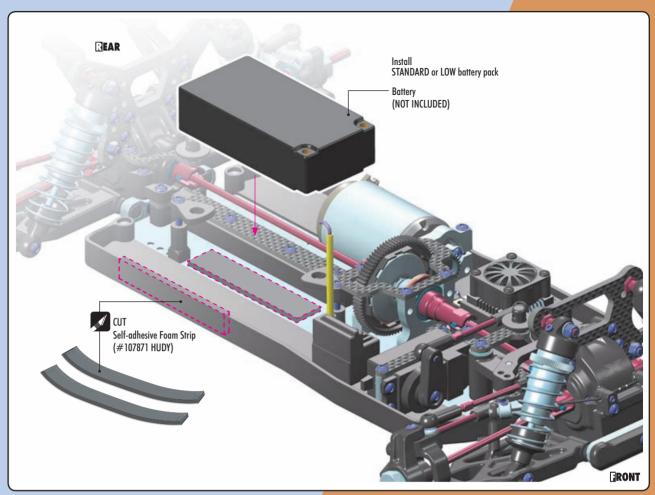




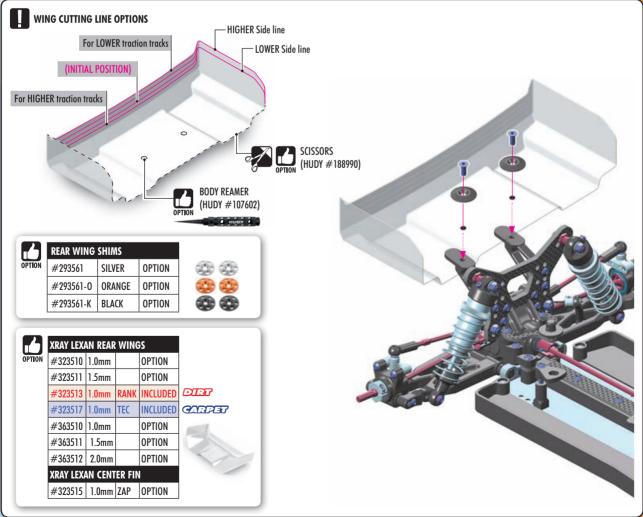








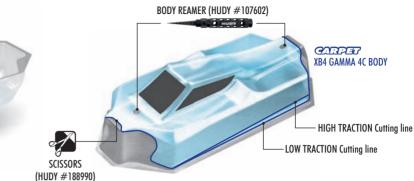


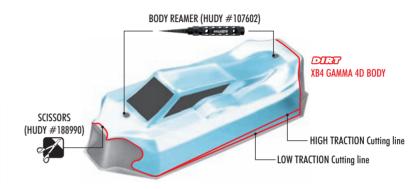


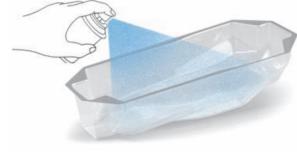


- Before cutting and making holes on the BODY, put the unpainted body on the chassis to confirm the mounting position and location for holes and cutouts. Before cutting and making holes on the WING, put the unpainted wing on the wing holders to confirm the mounting position and location for holes and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

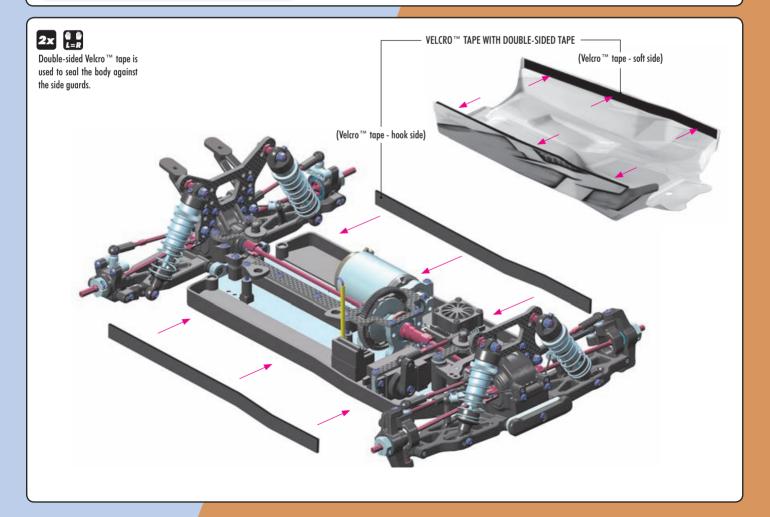
- Apply paint masks as appropriate.
- Paint the body using paints formulated for polycarbonate bodies.
- **6** When the paint is dry, remove the masking.
- Carefully cut out the body using appropriate scissors or cutting tools.
- When you have finished cutting, peel off the external protective films.



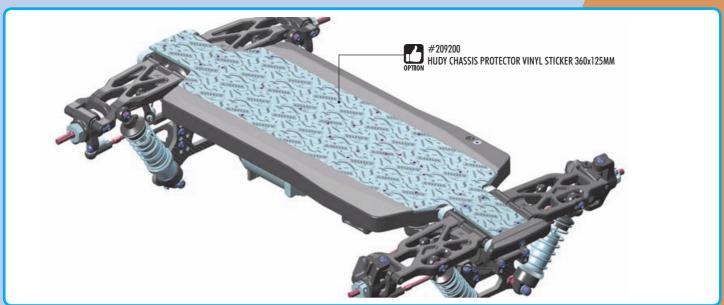




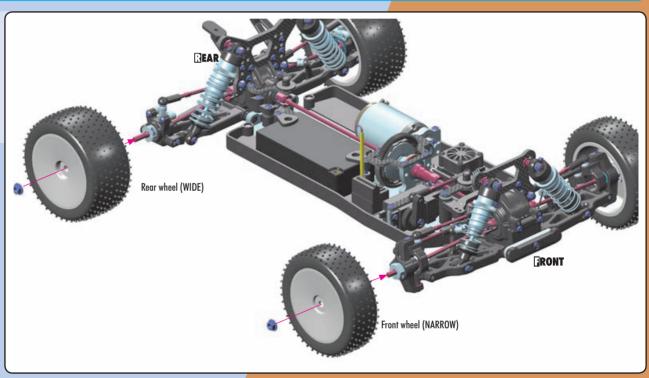


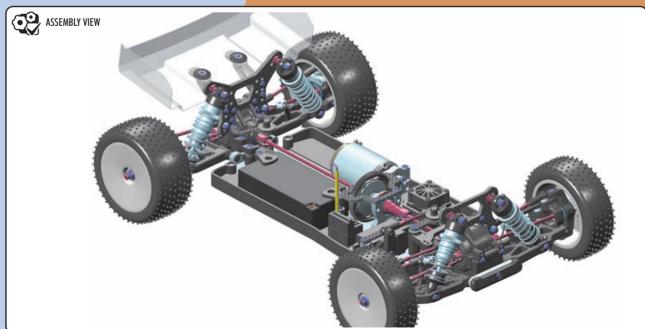












XB4'23

# **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 or HUDY Grease. The following procedures are recommended to clean all of the bearings in your off-road car. For high-competition racing, we recommended doing this every 3-4 weeks, or before a major race.

- 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.
- **3** Spin the bearing while it is still wet to dislodge any particles with the cleaner.
- Spray the bearing on both sides again.

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.

- 3 Blow both sides of the bearing dry with compressed air to make sure particles come out.
- 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.
- 3 Place one drop of bearing oil into each side of the bearing.
- 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.

# RECOMMENDED PRODUCTS

- Use correct oil or grease to lubricate the begrings:
- #106230 HUDY Bearing Oil
- #106220 HUDY Bearing Grease Standard
- #106221 HUDY Bearing Grease Blue
- #106222 HUDY Bearing Grease Red



HUDY #106230



HIIDY #106220



HUDY #106221



HIIDY #106222

# **SUSPENSION & DRIVETRAIN MAINTENANCE**

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



#106210 HUDY GRAPHITE GREASE



#106213 HUDY JOINT GREASE

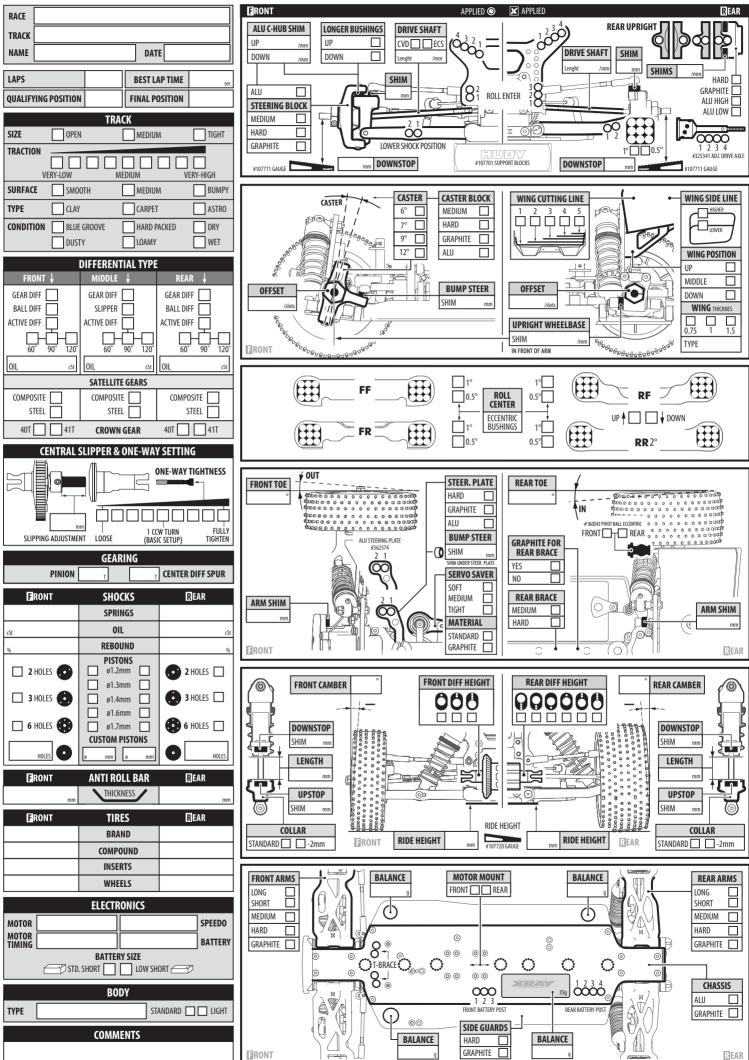
# **HUDY SPRING STEEL™**

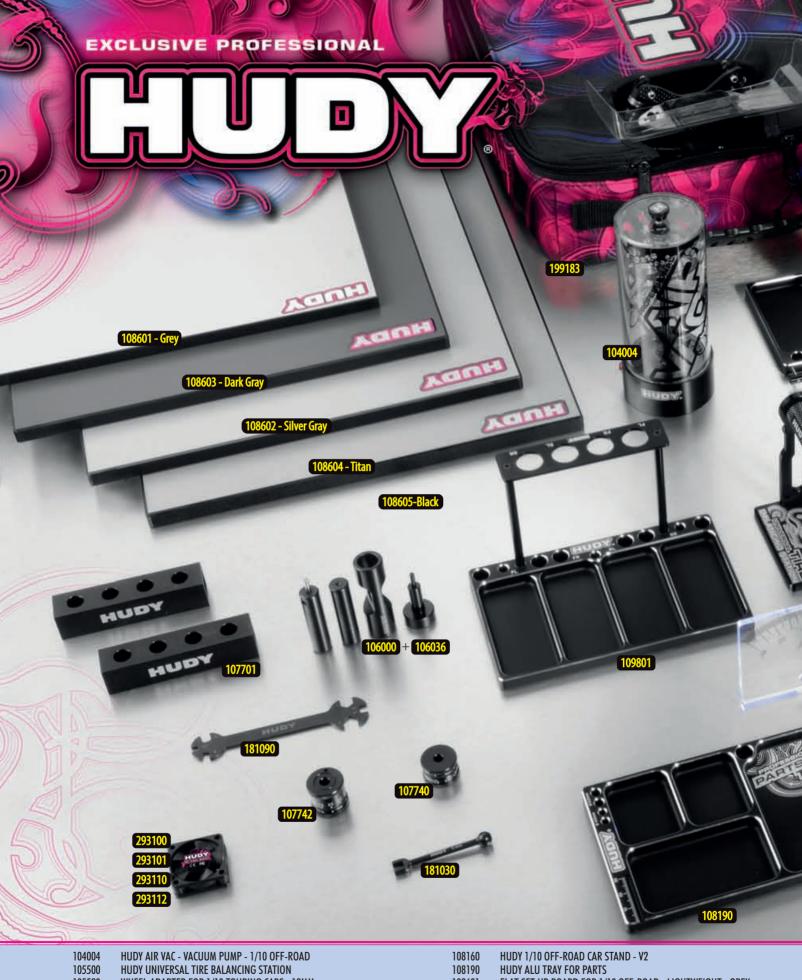
The HUDY Spring Steel™ used in the car is the strongest and most durable steel material on the RC market. While items made from HUDY Spring Steel™ are still subject to wear, the lifespan is considerably longer than any other material. As parts made from HUDY Spring Steel™ wear, the

brown color will fade (get lighter) but it will not affect the strength of the material. The brown color is only a surface treatment and if the brown color will wear the durability of the part will be still strong.

#### SET-UP SHEET

# XRAY XB4'23





	104004	HUDY AIR VAC - VACUUM PUMP - 1/10 UFF-RUAD	108160	HUDY I/IU OFF-ROAD CAR SIAND - VZ
	105500	HUDY UNIVERSAL TIRE BALANCING STATION	108190	HUDY ALU TRAY FOR PARTS
	105520	WHEEL ADAPTER FOR 1/10 TOURING CARS - 12MM	108601	FLAT SET-UP BOARD FOR 1/10 OFF-ROAD - LIGHTWEIGHT - GREY
	106000	HUDY DRIVE PIN REPLACEMENT TOOL (FOR 3MM PINS)	108602	FLAT SET-UP BOARD FOR 1/10 OFF-ROAD - LIGHTWEIGHT - SILVER GREY
	106036	EJECTOR PIVOT PIN & ALTERNATING PIVOT 2.5MM FOR #106000	108603	FLAT SET-UP BOARD FOR 1/10 OFF-ROAD - LIGHTWEIGHT - DARK GREY
	107090	HUDY BEARING CHECKING TOOL	108604	FLAT SET-UP BOARD FOR 1/10 OFF-ROAD - LIGHTWEIGHT - TITAN
	107601	LIMITED EDITION - REAMER FOR BODY 0-9MM $+$ COVER - SMALL	108605	FLAT SET-UP BOARD FOR 1/10 OFF-ROAD - LIGHTWEIGHT - BLACK
	107701	CHASSIS DROOP GAUGE SUPPORT BLOCKS 20MM FOR 1/8 - LW(2)	108901	HUDY SET-UP STATION FOR 1/10 OFF-ROAD CARS
	107740	HUDY ADJUSTABLE RIDE HEIGHT GAUGE 14-20MM	108960	ALU NUT FOR 1/10 OFF-ROAD SET-UP SYSTEM (4)
	107742	HUDY ADJUSTABLE RIDE HEIGHT GAUGE 20-30MM	109801	HUDY ALU TRAY FOR 1/10 OFF-ROAD DIFF & SHOCKS
54	107855	HUDY PIT LED	109840	HUDY ALU TRAY FOR 1/10 OFF-ROAD DIFF ASSEMBLY
•	107880	CHASSIS BALANCING TOOL (2)	109860	HUDY ALU TRAY FOR SET-UP SYSTEM



109880 **HUDY ALU TRAY FOR ACCESSORIES & PIT LED** 188990 **HUDY PROFESSIONAL BODY SCISSORS HUDY ALU TOOL STAND** 111545 LIMITED EDITION - ALLEN WRENCH # 1.5MM 199060 112045 LIMITED EDITION - ALLEN WRENCH # 2.0MM 199183 HUDY CAR BAG - 1/10 OFF-ROAD 132045 LIMITED EDITION - ALLEN WRENCH + BALL REPL. TIP # 2.0MM 199270 **HUDY LIPO SAFETY BAG** 153055 LIMITED EDITION - SLOTTED SCREWDRIVER # 3.0MM - LONG **HUDY TIN ROUND BOX 80X30MM** 298100 175535 LIMITED EDITION - SOCKET DRIVER # 5.5MM HUDY ALU RC FAN 30MM - BOTTOM MOUNT 2 HOLE 293100 LIMITED EDITION - SOCKET DRIVER # 7.0MM 177035 293101 HUDY ALU RC FAN 30MM - SIDE MOUNT 2 HOLE 181030 HUDY SPRING STEEL TURNBUCKLE WRENCH 3 MM 293110 HUDY BRUSHLESS RC FAN 30MM - WITH EXTERNAL SOLDERING TABS 181090 **HUDY SPECIAL TOOL FOR TURNBUCKLES & NUTS** HUDY BRUSHLESS RC FAN 30MM - WITH INTERNAL SOLDERING TABS 293112 183011 **HUDY PROFESSIONAL MULTI TOOL** 



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