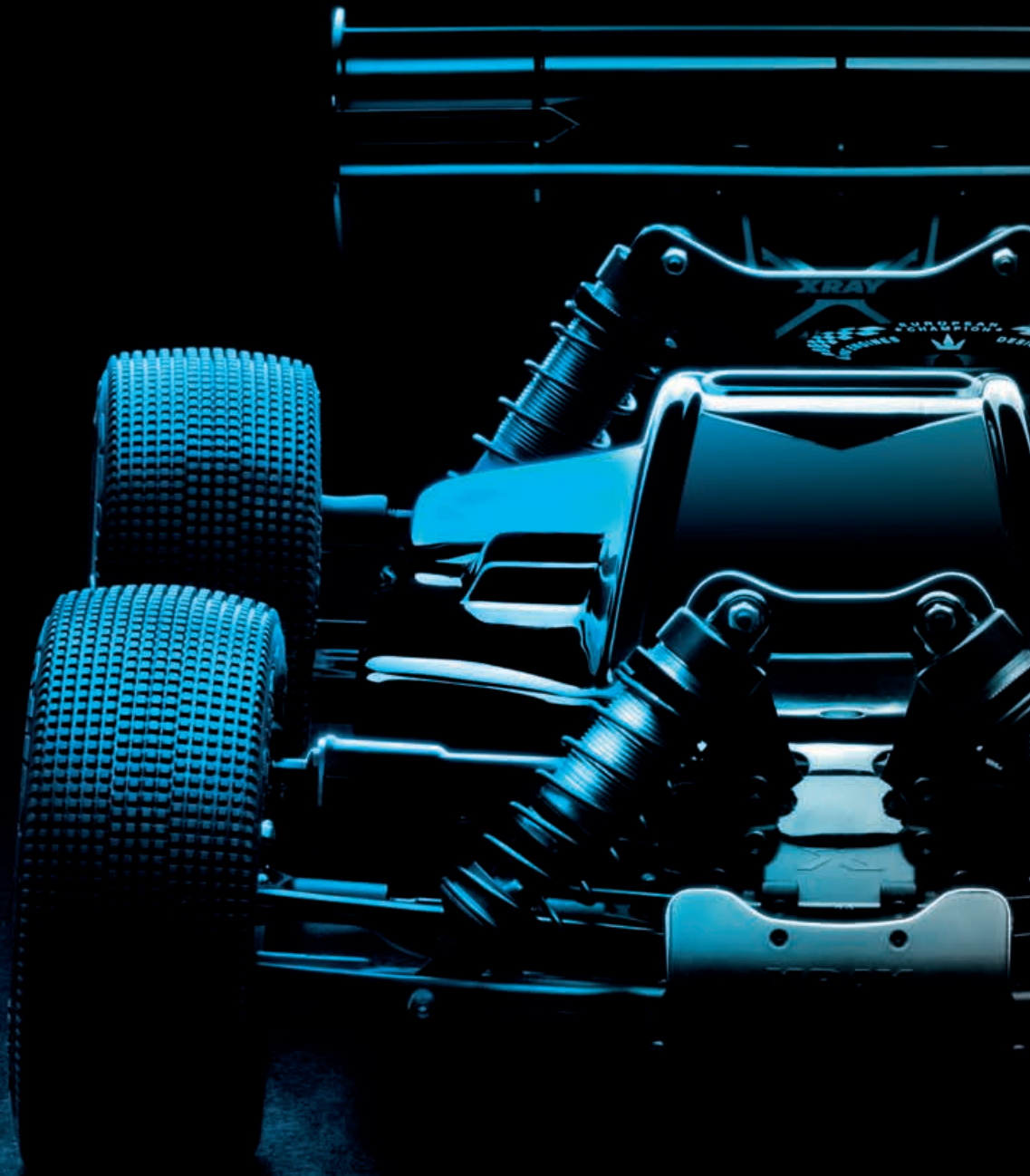


1/8 LUXURY OFF-ROAD BUGGY

# XRAY XB8



**INSTRUCTION MANUAL**

**XRAY XB8'25**

## BEFORE YOU START

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

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

## CUSTOMER SUPPORT

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

You can join thousands of XRAY fans and enthusiasts in our online community at: [www.teamxray.com](http://www.teamxray.com)

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

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

### XRAY Europe

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91101 Trenčín  
Slovakia, EUROPE  
Phone: +421-32-7401100  
Fax: +421-32-7401109  
Email: [info@teamxray.com](mailto:info@teamxray.com)

### XRAY USA

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

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

## SAFETY PRECAUTIONS

**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**

Wash thoroughly after using. DO NOT use product while eating, drinking or using tobacco products. May cause chronic effects to gastrointestinal tract, CNS, kidneys, and blood. MAY CAUSE BIRTH DEFECTS.

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

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

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

## IMPORTANT NOTES - GENERAL

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

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

## IMPORTANT NOTES - NITRO ENGINES

- Always test the brakes and the throttle before starting your engine to avoid losing control of the model.
- Make sure the air filter is clean and oiled.
- Never run your engine without an air filter. Your engine can be seriously damaged if dirt and debris get inside the engine.
- For proper engine break-in, please refer to the manual that came with the engine.
- DO NOT run near open flames or smoke while running your model or while handling fuel.
- Some parts will be hot after operation. DO NOT touch the exhaust or the engine until they have cooled. These parts may reach 275°F during operation!



## 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.



## IMPORTANT NOTES – NITRO FUEL

- Handle fuel only outdoors. Never handle nitro fuel indoors, or mix nitro fuel in a place where ventilation is bad.
- Only use nitro fuel for R/C models. DO NOT use gasoline or kerosene in R/C models as it may cause a fire or explosion, and ruin your engine.
- Nitro fuel is highly flammable, explosive, and poisonous. Never use fuel indoors or in places with open fires and sources of heat.
- Always keep the fuel container cap tightly shut.
- Always read the warning label on the fuel container for safety information.
- Nitro-powered model engines emit poisonous vapors and gasses. These vapors irritate eyes and can be highly dangerous to your health. We recommend wearing rubber or vinyl gloves to avoid direct contact with nitro fuel.
- Nitro fuel for RC model cars is made of the combination of the methyl alcohol, castor oil

synthetic oil, nitro methane etc. The flammability and volatility of these elements is very high, so be very careful during handling and storage of nitro fuel.

- Keep nitro fuel away from open flame, sources of heat, direct sunlight, high temperatures, or near batteries.
- Store fuel in a cool, dry, dark, well-ventilated place, away from heating devices, open flames, direct sunlight, or batteries. Keep nitro fuel away from children.
- DO NOT leave the fuel in the carburetor or fuel tank when the model is not in use. There is danger that the fuel may leak out.
- Wipe up any spilled fuel with a cloth.
- Be aware of spilled or leaking fuel. Fuel leaks can cause fires or explosions.
- DO NOT dispose of fuel or empty fuel containers in a fire. There is danger of explosion.

## R/C & BUILDING TIPS

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

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

## WARRANTY

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

warranty. XRAY reserves the right to make the final determination of the warranty status of any component or part.

### Limitations of Liability

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

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

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

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

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!

## 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,

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



# TOOLS REQUIRED



**Combination Pliers**  
(HUDY #189020)

**Side Cutters**  
(HUDY #189010)

**Pocket Hobby Knife** (HUDY #188981)

**Cross Wrench 3mm** (HUDY #107581)

**Turnbuckle Wrench 3mm**  
(HUDY #181030)

**Turnbuckle Wrench 4mm**  
(HUDY #181040)

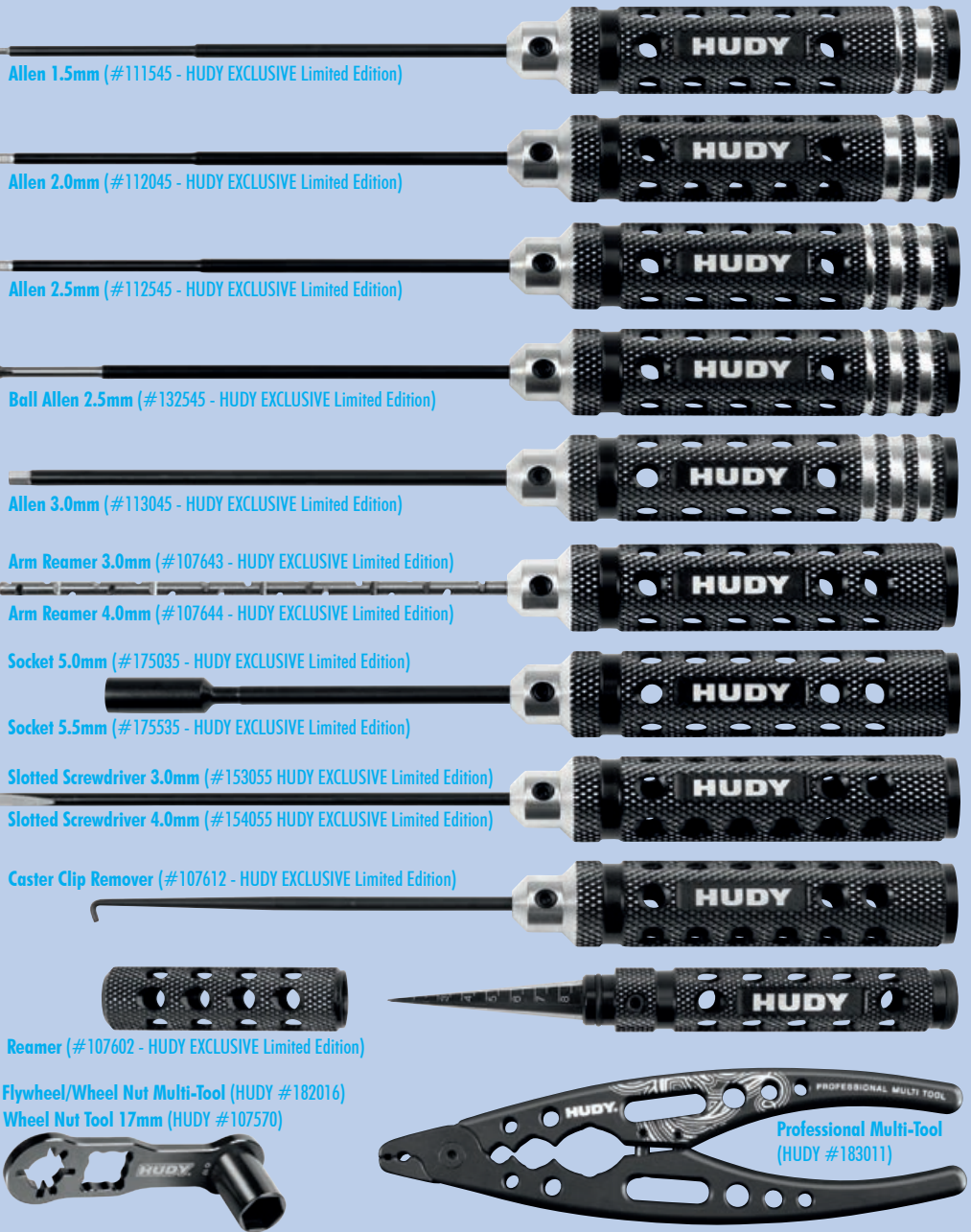
**Turnbuckle Wrench 5mm**  
(HUDY #181050)

**Special Tool for turnbuckles, nuts** (HUDY #181090)

**HUDY Tweezers Straight** (HUDY #188970)

**HUDY Tweezers Curved** (HUDY #188971)

**Scissors** (HUDY #188990)



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

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

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

**Ball Allen 2.5mm** (#132545 - HUDY EXCLUSIVE Limited Edition)

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

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

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

**Socket 5.0mm** (#175035 - HUDY EXCLUSIVE Limited Edition)

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

**Slotted Screwdriver 3.0mm** (#153055 HUDY EXCLUSIVE Limited Edition)

**Slotted Screwdriver 4.0mm** (#154055 HUDY EXCLUSIVE Limited Edition)

**Caster Clip Remover** (#107612 - HUDY EXCLUSIVE Limited Edition)

**Reamer** (#107602 - HUDY EXCLUSIVE Limited Edition)

**Flywheel/Wheel Nut Multi-Tool** (HUDY #182016)

**Wheel Nut Tool 17mm** (HUDY #107570)








**Professional Multi-Tool**  
(HUDY #183011)

# EQUIPMENT REQUIRED

<p><b>Transmitter</b></p>	<p><b>Receiver</b></p>	<p><b>OPTION</b> Engine .21ci (3.5cc) (FX K303 #650105) (FX K303L #650106) (FX K502 #650304)</p>	<p><b>OPTION</b> Manifold &amp; Exhaust (FX #659505) (FX #659558) (FX #659506)</p>	<p>Steering and Throttle Servos</p>
<p><b>Glow Plug Igniter</b></p>	<p><b>OPTION</b> Fuel + Fuel Bottle (HUDY #104200)</p>	<p><b>Lexan™ Paint</b></p>	<p><b>Receiver Battery Pack</b></p>	<p><b>OPTION</b> Starter Box &amp; Battery Pack (HUDY #104500)</p>
<p><b>Battery Charger</b></p>	<p><b>Tires &amp; Wheels</b></p>	<p><b>OPTION</b> Bearing Oil (HUDY #106230)</p>	<p><b>Threadlock</b></p>	<p><b>CA glue</b></p>



# EQUIPMENT INCLUDED

550cSt (#106356) HUDY Premium Silicone Oils	600cSt (#106361) HUDY Premium Silicone Oils	3.000cSt (#106431) HUDY Premium Silicone Oils	7.000cSt (#106471) HUDY Premium Silicone Oils	10.000cSt (#106511) HUDY Premium Silicone Oils	(HUDY #106240) Air Filter Oil	(HUDY #106210) Premium Graphite Grease
						

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:

- 351203 **STYLE A** - indicates parts that are included in the bag marked for the section.
- 351192 **STYLE B** - indicates parts that are included in the box.
- 355006 **STYLE C** - indicates parts that are already assembled from previous steps.
- 350912 **STYLE D** - indicates parts that are optional.

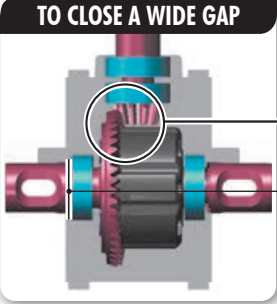
## XB8 TECH TIPS

### TIP FRONT & REAR DIFF GEAR MESH ADJUSTMENT


If there is too much or too little diff side play, this may create non-optimal gear mesh between the diff gear and the pinion drive gear. This is easily resolved by inserting 1 or 2 of the included thin shims behind a diff outdrive ball-bearing, depending on how much play there is.

THE LOCATION OF THE SHIM(S) DEPENDS ON WHETHER YOU ARE TRYING TO CLOSE OR OPEN THE GAP:

#### TO CLOSE A WIDE GAP

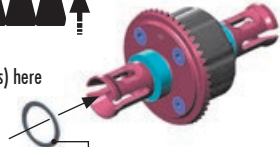


**CLOSE A WIDE GAP**



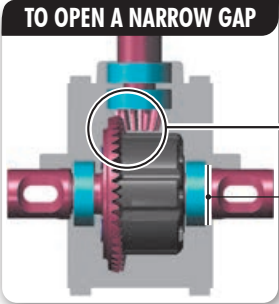
To CLOSE a wide gap: add 1 or 2 shims against diff spur gear.

insert shim(s) here




WASHER #962131 S 13 x 16 x 0.1 mm (10)  
#962130 S 13 x 16 x 0.2 mm (10)

#### TO OPEN A NARROW GAP




**OPEN A NARROW GAP**



To OPEN a narrow gap: add 1 or 2 shims on the other side of the diff, away from spur gear.

insert shim(s) here



WASHER #962131 S 13x16x0.1mm (10)  
#962130 S 13x16x0.2mm (10)

**CHECK GEAR MESH AND DIFF PLAY ONLY AFTER THE ENTIRE GEARBOX IS MOUNTED TOGETHER WITH THE SUSPENSION HOLDERS ON THE CHASSIS. ALL PARTS ARE DESIGNED TO HAVE CERTAIN PLAY AND IT IS ALL DESIGNED BY PURPOSE.**

### SUSPENSION & DRIVETRAIN MAINTENANCE

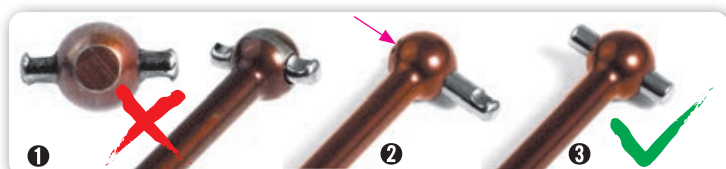
- Check suspension for free movement during building and operation, and especially after running and if you have crashed the car. If the suspension DOES NOT move freely, use the appropriate HUDY Arm Reamer to clean and resize the holes of the suspension arms.
- Regularly check the drive shaft pins (both side and center) and if they show any wear they 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 3x14 \(#106050\)](#).
- Regularly inspect and replace the pins that connect the center driveshafts with the pinion gear and the pins connecting the wheel drive shafts to the wheel axles.
- Pivot balls and ball joints will wear naturally and over time will develop minor play. If there is excess play, the pivot balls and ball joints should 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.
- Clean and re-grease after every 2 hours of driving.

### 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 may fade over time, but this will not affect the strength of the material. The brown color is only a surface treatment, and any color fade will not impact the durability of the part.

### 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 easy drive pin replacements use [#106000 HUDY Drive Pin Replacement Tool](#).



To replace the worn pins use only premium [HUDY drive pins #106050](#).

# 1. FRONT & REAR DIFFERENTIALS

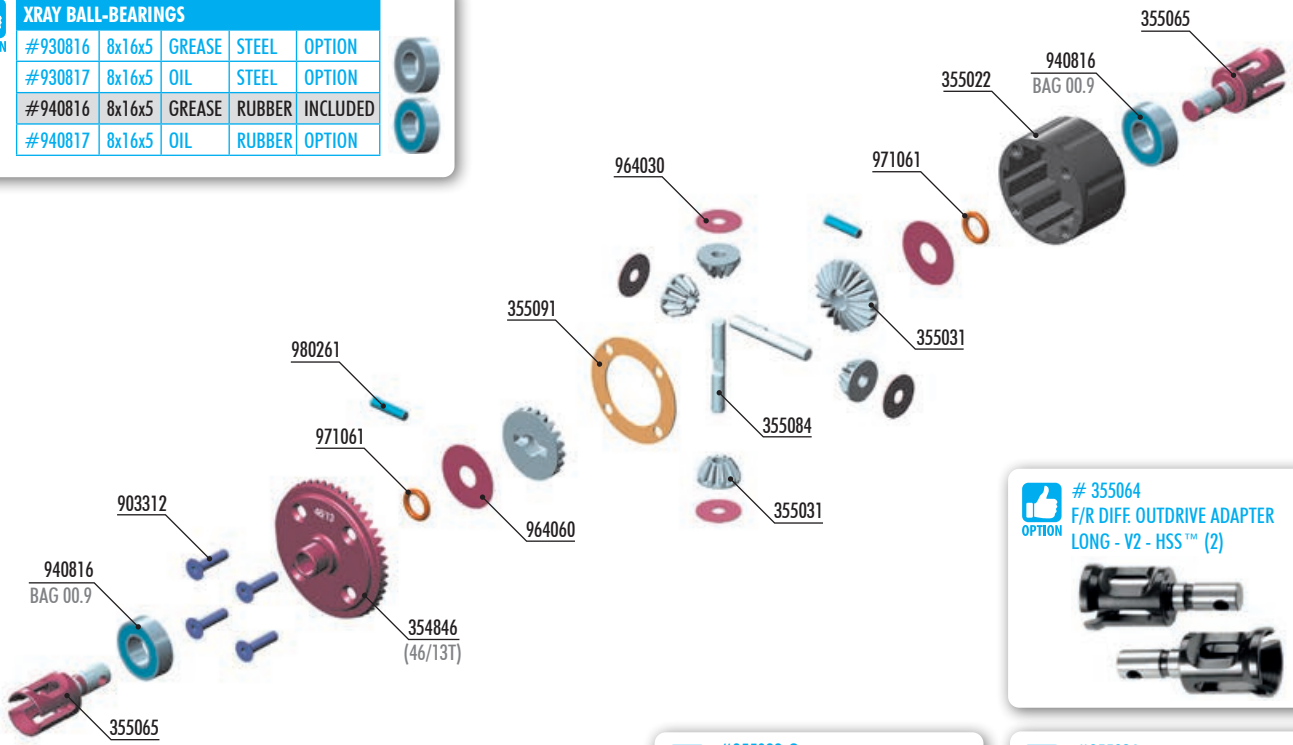


## XRAY BALL-BEARINGS

#930816	8x16x5	GREASE	STEEL	OPTION
#930817	8x16x5	OIL	STEEL	OPTION
#940816	8x16x5	GREASE	RUBBER	INCLUDED
#940817	8x16x5	OIL	RUBBER	OPTION



2x



# 355064  
F/R DIFE. OUTDRIVE ADAPTER  
LONG - V2 - HSS™ (2)



#355022-G  
DIFFERENTIAL CASE - V2 - GRAPHITE



#355086  
HEAT-RESISTANT F/R ALU DIFE  
PINS+ INSERTS (SET)



## BAGS

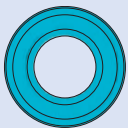
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2x

354846 F/R DIFE LARGE BEVEL GEAR 46T - MATCHED FOR 13T PINION GEAR  
355006 DIFFERENTIAL 46T - MATCHED FOR 13T PINION GEAR - SET  
355022 DIFFERENTIAL CASE - V2  
355031 STEEL DIFE BEVEL & SATELLITE GEARS - V2 (2+4)  
355065 DIFE OUTDRIVE ADAPTER - V2 - HUDY SPRING STEEL™ (2)  
355084 F/R DIFE PIN (2)  
355091 F/R DIFE GASKET (4)

903312 HEX SCREW SFH M3x12 (10)  
940816 BALL-BEARING 8x16x5 RUBBER SEALED - GREASE (2)  
964030 WASHER S 3.5x12x0.2 (10)  
964060 WASHER S 6x18x0.2 (10)  
971061 SILICONE O-RING 6x1.55 (10)  
980261 PIN 2.5x11.5 (10)

2x



2x 940816  
BB 8x16x5



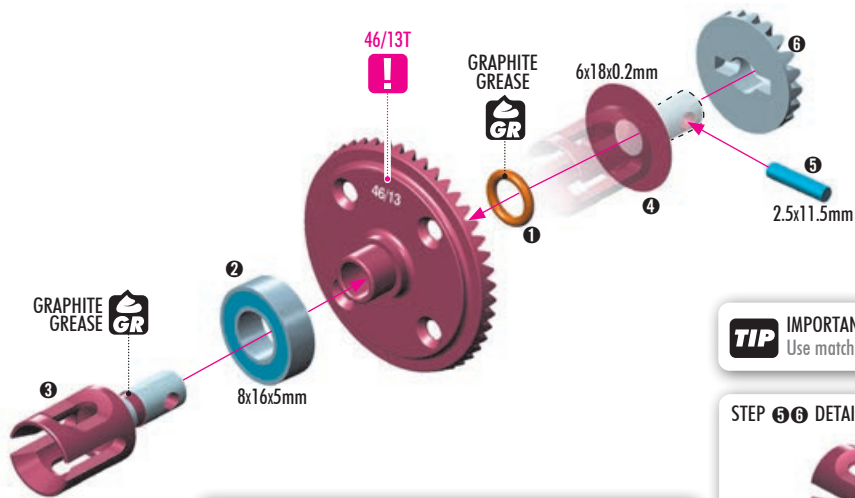
2x 964060  
S 6x18x0.2



2x 971061  
O 6x1.55



2x 980261  
P 2.5x11.5



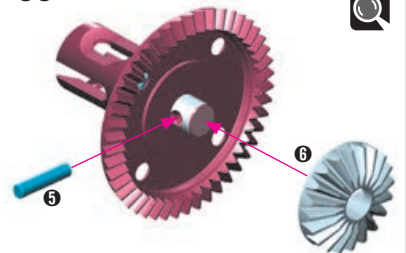
## XRAY BALL-BEARINGS

#930816	8x16x5	GREASE	STEEL	OPTION
#930817	8x16x5	OIL	STEEL	OPTION
#940816	8x16x5	GREASE	RUBBER	INCLUDED
#940817	8x16x5	OIL	RUBBER	OPTION



**TIP** IMPORTANT!  
Use matching outdrives on left and right sides of a diff.

STEP 5 6 DETAIL



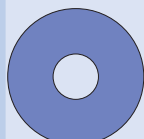
SET-UP  
BOOK

DIFFERENTIAL GEARS

# 1. FRONT & REAR DIFFERENTIALS



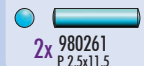
2x 940816  
BB 8x16x5



2x 964060  
S 6x18x0.2



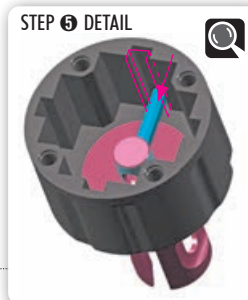
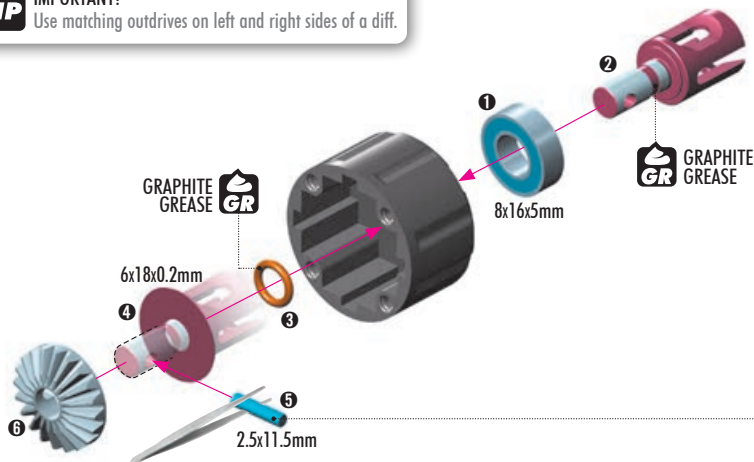
2x 971061  
O 6x1.55



2x 980261  
P 2.5x11.5

2x

**TIP** IMPORTANT!  
Use matching outdrives on left and right sides of a diff.



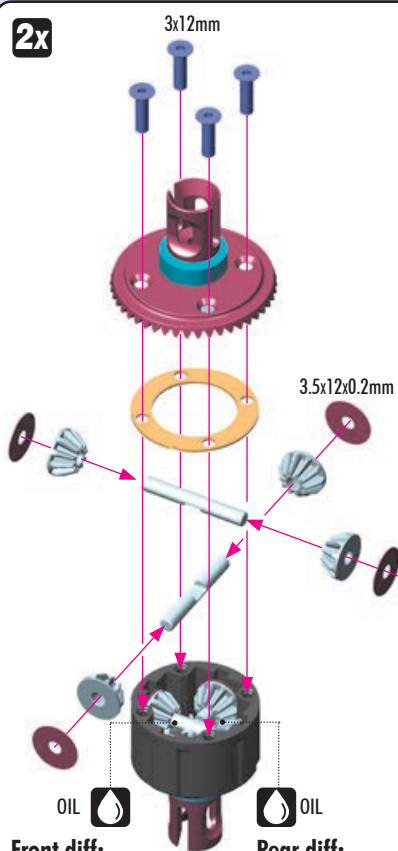
2x



4x 903312  
SFH M3x12

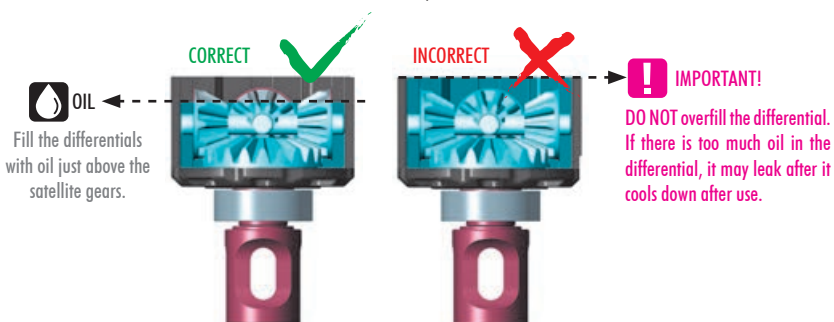


4x 964030  
S 3.5x12x0.2



## VERY IMPORTANT!

Use the following silicone oils included in the kit for initial settings:  
FRONT diff: 10.000cSt / REAR diff: 3.000cSt

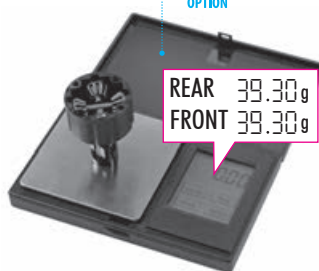


Fill the differentials with oil just above the satellite gears.

**IMPORTANT!**  
DO NOT overfill the differential. If there is too much oil in the differential, it may leak after it cools down after use.

To ensure you have the same amount of oil from rebuild to rebuild, do the following:

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



**Front diff:**  
Silicone oil 10.000cSt  
Fill just above the satellite gears.

**Rear diff:**  
Silicone oil 3.000cSt  
Fill just above the satellite gears.

1. Put the diff (without oil) on the scale and check the weight:

- REAR DIFF approx. 39.30g
- FRONT DIFF approx. 39.30g

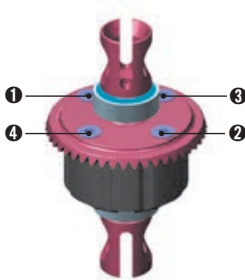
2. Slowly pour oil into the diff and watch the weight. Add 2.60g of oil into the diff. The approximate weight of the diff + oil is approx. 41.90g

REAR DIFF	39.30g	+	2.60g	=	41.90g
FRONT DIFF	39.30g	+	2.60g	=	41.90g

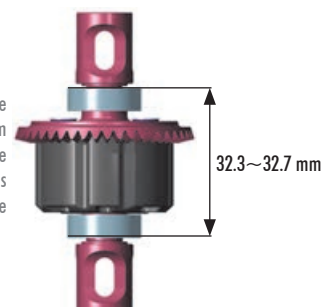
Tighten the screws equally.



Finish tightening in this order:



After assembly the differentials should have a length of 32.3~32.7 mm measured from the ends of the installed ball-bearings. If the differentials are longer, check that the gear is properly seated on the case and retighten the 4 screws while holding the crown gear.





# 1. CENTER DIFFERENTIAL



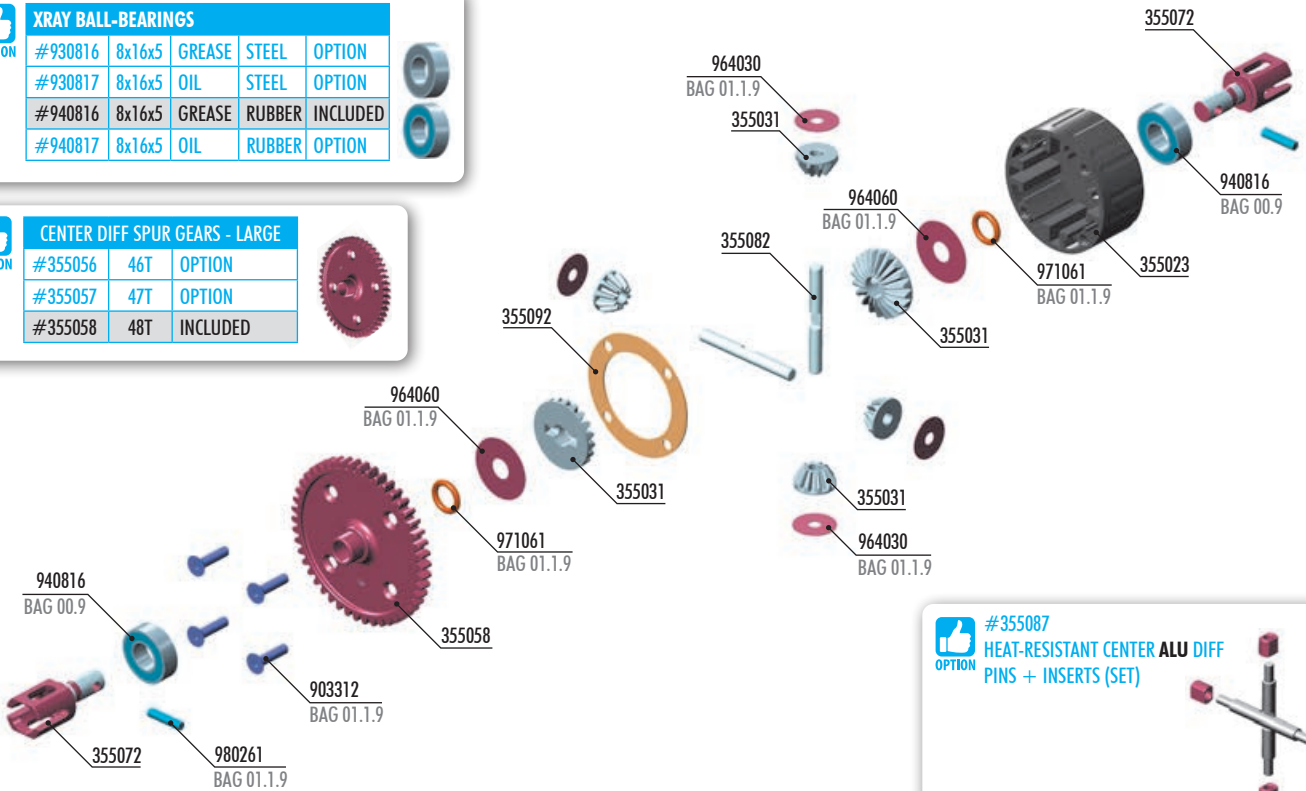
## XRAY BALL-BEARINGS

#930816	8x16x5	GREASE	STEEL	OPTION
#930817	8x16x5	OIL	STEEL	OPTION
#940816	8x16x5	GREASE	RUBBER	INCLUDED
#940817	8x16x5	OIL	RUBBER	OPTION

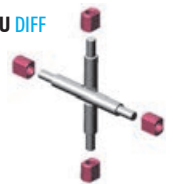


## CENTER DIFF SPUR GEARS - LARGE

#355056	46T	OPTION
#355057	47T	OPTION
#355058	48T	INCLUDED



#355087  
HEAT-RESISTANT CENTER ALU DIFF  
PINS + INSERTS (SET)



#355083  
HEAT-RESISTANT CENTER STEEL DIFF  
PINS + INSERTS (SET)



#355023-G  
CENTER DIFFERENTIAL CASE - V2 - GRAPHITE

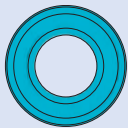


### BAG

01.3

- 355013 CENTER DIFFERENTIAL - LARGE - SET - V2
- 355023 CENTER DIFFERENTIAL CASE - V2
- 355031 STEEL DIFF BEVEL & SATELLITE GEARS - V2 (2+4)
- 355058 CENTER DIFF SPUR GEAR 48T - LARGE
- 355072 LARGE CENTER DIFF OUTDRIVE ADAPTER - HUDY STEEL (2)
- 355082 CENTER DIFF PIN (2)
- 355092 CENTER DIFF GASKET (2)

- 903312 HEX SCREW SFH M3x12 (10)
- 940816 BALL-BEARING 8x16x5 RUBBER SEALED - GREASE (2)
- 964030 WASHER S 3.5x12x0.2 (10)
- 964060 WASHER S 6x18x0.2 (10)
- 971061 SILICONE O-RING 6x1.55 (10)
- 980261 PIN 2.5x11.5 (10)



1x 940816  
BB 8x16x5



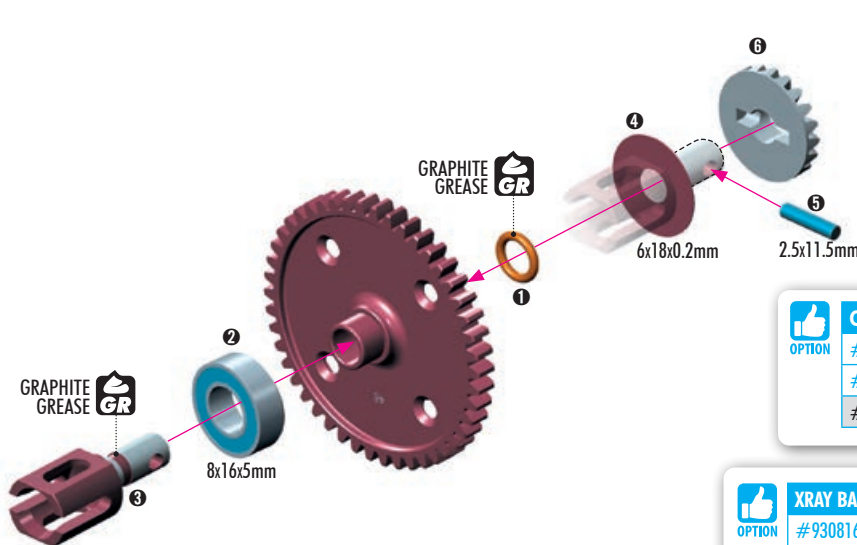
1x 964060  
S 6x18x0.2



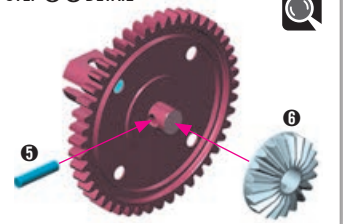
1x 971061  
O 6x1.55



1x 980261  
P 2.5x11.5



### STEP 5 6 DETAIL



## CENTER DIFF SPUR GEARS - LARGE

#355056	46T	OPTION
#355057	47T	OPTION
#355058	48T	INCLUDED



## XRAY BALL-BEARINGS

#930816	8x16x5	GREASE	STEEL	OPTION
#930817	8x16x5	OIL	STEEL	OPTION
#940816	8x16x5	GREASE	RUBBER	INCLUDED
#940817	8x16x5	OIL	RUBBER	OPTION



# 1. CENTER DIFFERENTIAL



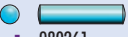
1x 940816  
BB 8x16x5



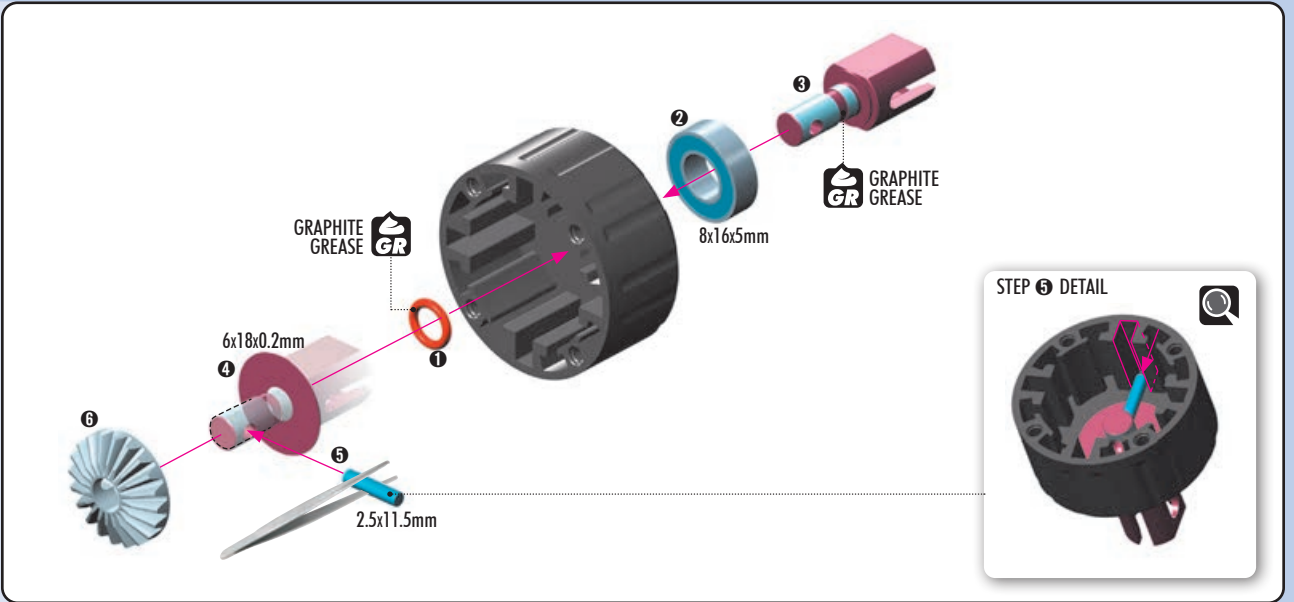
1x 964060  
S 6x18x0.2



1x 971061  
O 6x1.55



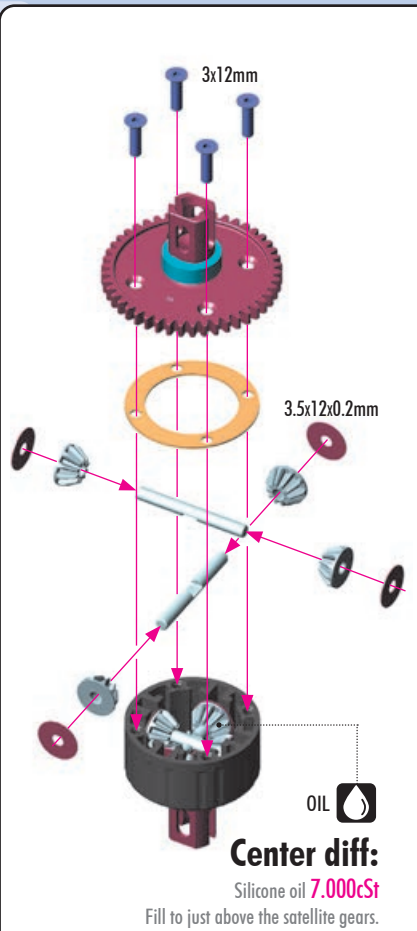
1x 980261  
P 2.5x11.5



4x 903312  
SFH M3x12

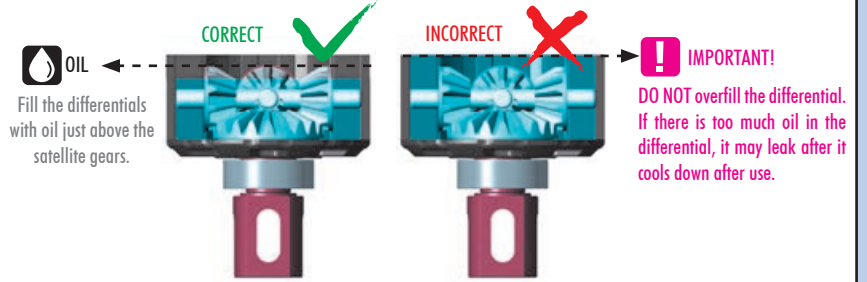


4x 964030  
S 3.5x12x0.2



## VERY IMPORTANT!

Use the following silicone oil included in the kit for initial setting:  
Center diff: 7.000cSt



To ensure you have the same amount of oil from rebuild to rebuild, do the following:

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



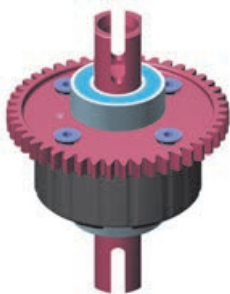
1. Put the diff (without oil) on the scale and check the weight (approximately 42.97g).

2. Slowly pour oil into the diff and watch the weight. Add 5.20g of oil into the diff. The approximate weight of the diff + oil is 48.17g.

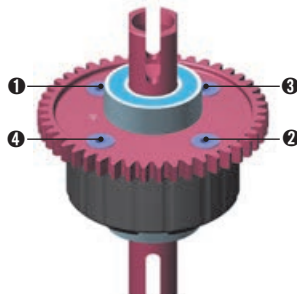
$$\text{CENTER DIFF } 42.97\text{g} + 5.20\text{g} = 48.17\text{g}$$

**SET-UP BOOK**  
DIFFERENTIAL OIL

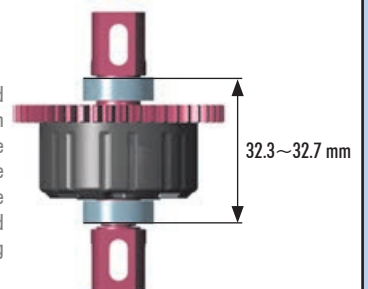
Tighten the screws equally.



Finish tightening in this order:

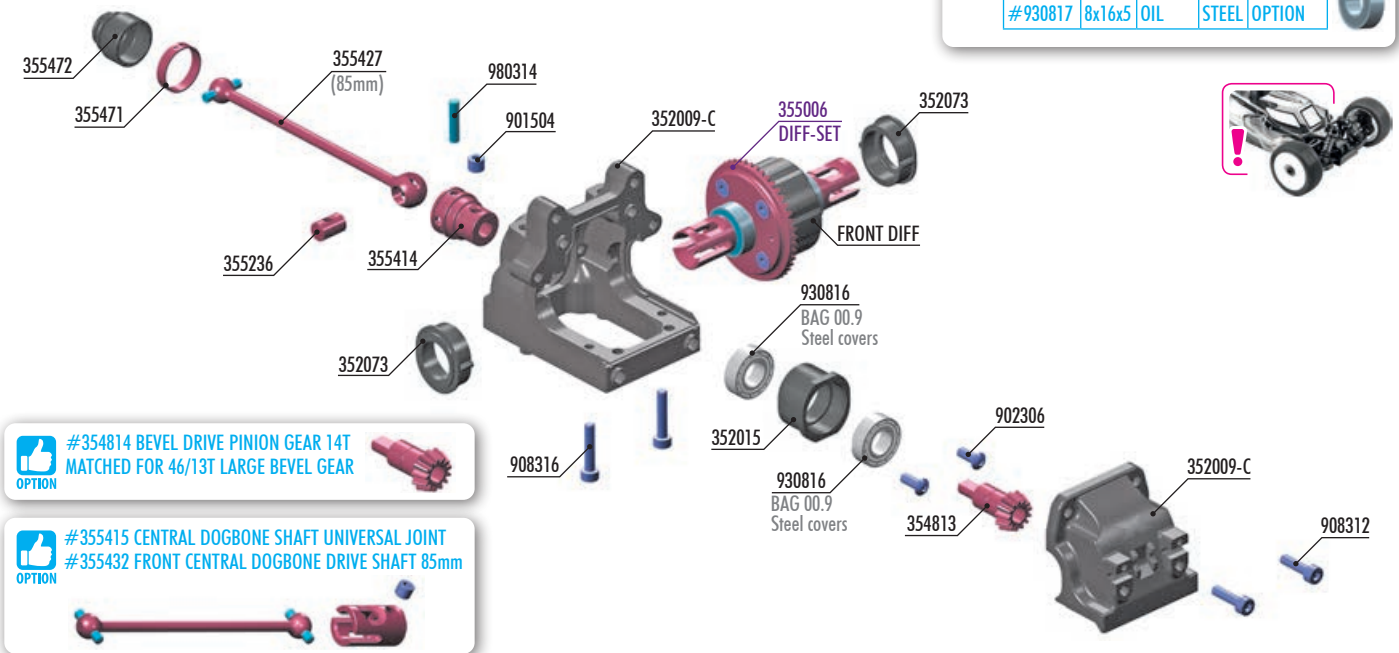


After assembly the differential should have a length of 32.3~32.7mm measured from the ends of the installed ball-bearings. If the differential is longer, check that the gear is properly seated on the case and retighten the 4 screws while holding the spur gear.



# 2. FRONT TRANSMISSION

OPTION	THUMBS UP	XRAY BALL-BEARINGS				
#930816	8x16x5	GREASE	STEEL	INCLUDED		
#930817	8x16x5	OIL	STEEL	OPTION		



**OPTION** #354814 BEVEL DRIVE PINION GEAR 14T  
MATCHED FOR 46/13T LARGE BEVEL GEAR

**OPTION** #355415 CENTRAL DOGBONE SHAFT UNIVERSAL JOINT  
#355432 FRONT CENTRAL DOGBONE DRIVE SHAFT 85mm

**BAG**  
**02**

- 352009-C SEMI-SPLIT DIFF BULKHEAD BLOCK SET FRONT/REAR FOR COLLAR
- 352015 GEARBOX PINION HEIGHT INSERT (1+1)
- 352073 GEARBOX DIFF HEIGHT INSERT (2+2)
- 354813 BEVEL DRIVE PINION GEAR 13T - MATCHED FOR 46T LARGE BEVEL GEAR
- 355236 CVD DRIVE SHAFT COUPLING - HUDY SPRING STEEL™
- 355414 CENTRAL CVD SHAFT UNIVERSAL JOINT - HUDY SPRING STEEL™
- 355427 FRONT CENTRAL CVD DRIVE SHAFT 85mm - HUDY SPRING STEEL™
- 355471 DRIVE SHAFT LOCKING RING (2)
- 355472 DRIVE SHAFT BOOT (2)
- 901504 HEX SCREW SB M5x4 (10)
- 902306 HEX SCREW SH M3x6 (10)
- 908312 HEX SCREW SOCKET HEAD CAP SCH M3x12 (10)
- 908316 HEX SCREW SOCKET HEAD CAP SCH M3x16 (10)
- 930816 BALL-BEARING 8x16x5 STEEL SEALED - GREASE (2)
- 980314 PIN 3x14 (10)
- 355006 DIFFERENTIAL 46T - MATCHED FOR 13T PINION GEAR - SET

**i**  
1x 980314  
P 3x14

**TOP VIEW**

Apply oil from inside to prevent breakage of the rubber boot.

85mm - SHORT CVD DRIVE SHAFT

3x14mm

GRAPHITE GREASE

NOTE ORIENTATION

**STEP 1 DETAIL**  
The ring can be assembled by hand, but for easy disassembly we recommend using snap ring pliers (HUDY #189040).

THREAD LOCK

PIN

**BEFORE** inserting the clip on the central CVD shaft joint, apply a small amount of threadlock on the area where the clip goes.

**AFTER** inserting the clip on the central CVD shaft joint, turn the clip so that the slot is 90° from the pin. This will prevent the pin from opening the clip.

2x 902306  
SH M3x6

2x 930816  
BB 8x16x5  
(Steel covers)

Inline hub for bevel drive gear positions.

LOWER CENTER UPPER

Steel covers 8x16x5mm

8x16x5mm

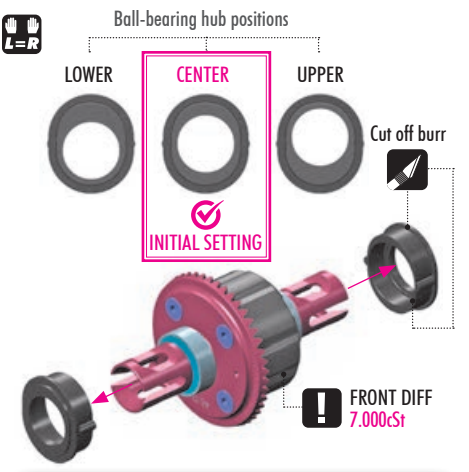
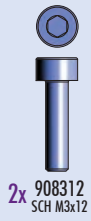
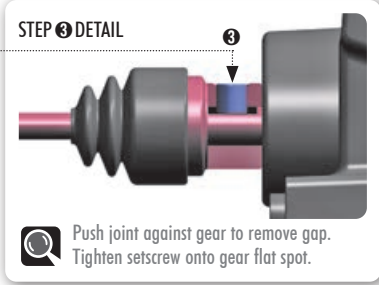
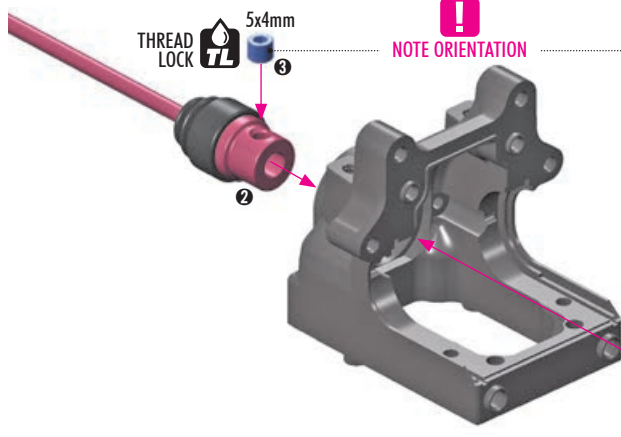
3x6mm

INITIAL SETTING

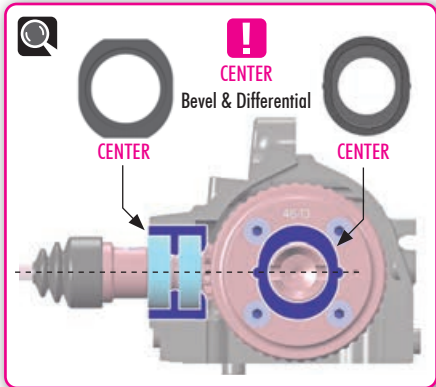
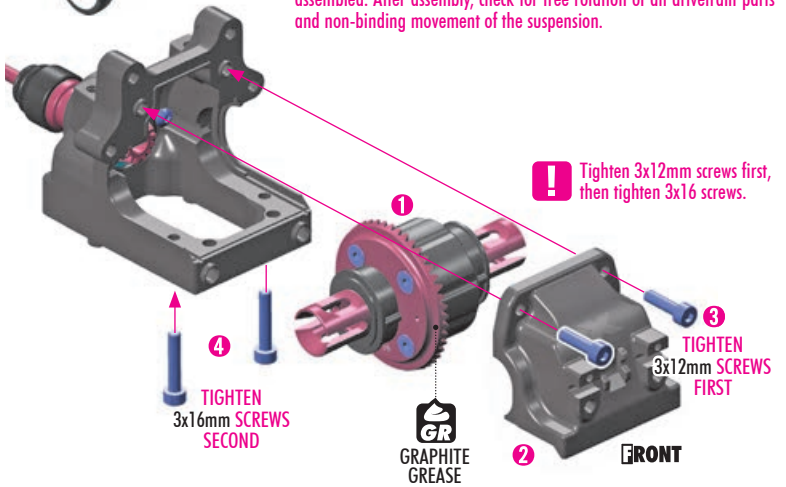
INITIAL SETTING



## 2. FRONT TRANSMISSION

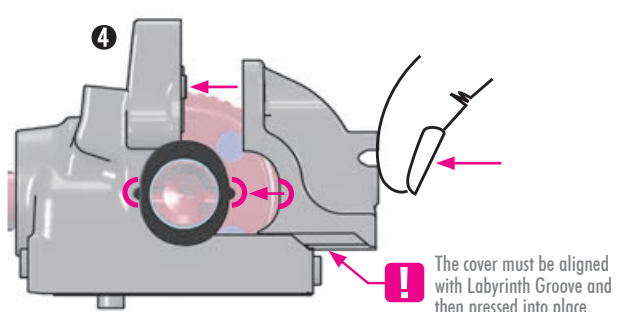
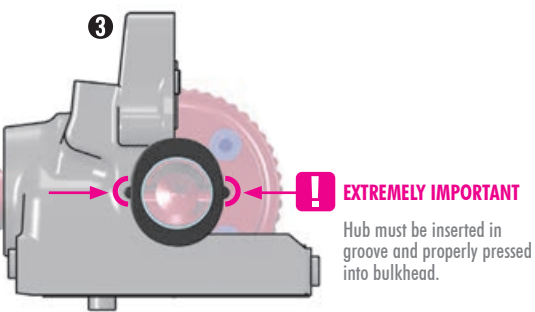
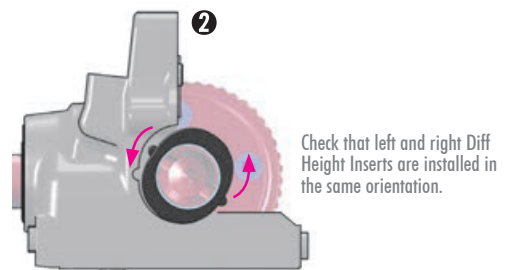
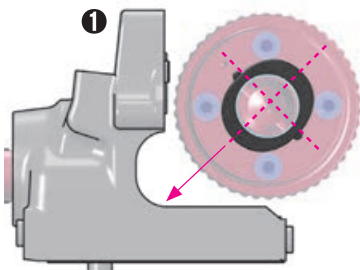


**!** During initial assembly, there is no need to check gear mesh or diff play. Fitment should not be checked until suspension holders are installed on the bulkheads and the complete assembly is mounted to the chassis. All parts have specifically designed tolerances for proper operation once fully assembled. After assembly, check for free rotation of all drivetrain parts and non-binding movement of the suspension.

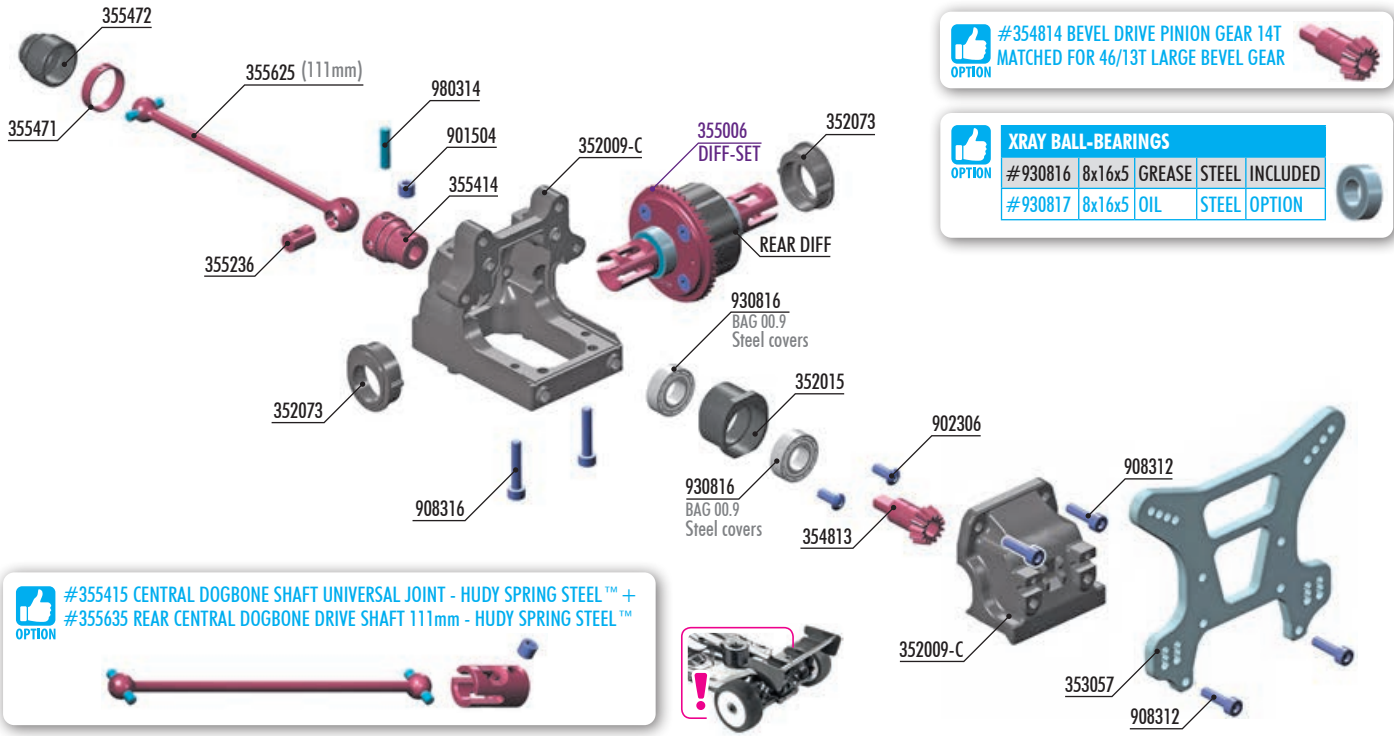


**GEAR RATIO** Internal Gear Ratio =  $3.54$   $46 : 13 = 3.54$   
(Bevel) (Pinion) (IGR)

### INSTALLING THE DIFFERENTIAL WHILE FIRST TIME BUILDING THE CAR



# 2. REAR TRANSMISSION



**#354814 BEVEL DRIVE PINION GEAR 14T**  
 MATCHED FOR 46/13T LARGE BEVEL GEAR

XRAY BALL-BEARINGS				
#930816	8x16x5	GREASE	STEEL	INCLUDED
#930817	8x16x5	OIL	STEEL	OPTION

**#355415 CENTRAL DOGBONE SHAFT UNIVERSAL JOINT - HUDY SPRING STEEL™ + #355635 REAR CENTRAL DOGBONE DRIVE SHAFT 111mm - HUDY SPRING STEEL™**

**BAG**  
**02**

- 352009-C SEMI-SPLIT DIFF BULKHEAD BLOCK SET FRONT/REAR FOR COLLAR
- 352015 GEARBOX PINION HEIGHT INSERT (1+1)
- 352073 GEARBOX DIFF HEIGHT INSERT (2+2)
- 353057 ALU REAR SHOCK TOWER FOR SEMI-SPLIT BULKHEAD - LOWER
- 354813 BEVEL DRIVE PINION GEAR 13T - MATCHED FOR 46T LARGE BEVEL GEAR
- 355236 CVD DRIVE SHAFT COUPLING - HUDY SPRING STEEL™
- 355414 CENTRAL CVD SHAFT UNIVERSAL JOINT - HUDY SPRING STEEL™
- 355471 DRIVE SHAFT LOCKING RING (2)
- 355472 DRIVE SHAFT BOOT (2)
- 355625 REAR CENTRAL CVD DRIVE SHAFT 111mm - HUDY SPRING STEEL™
- 901504 HEX SCREW SB M5x4 (10)
- 902306 HEX SCREW SH M3x6 (10)
- 908312 HEX SCREW SOCKET HEAD CAP SCH M3x12 (10)
- 908316 HEX SCREW SOCKET HEAD CAP SCH M3x16 (10)
- 930816 BALL-BEARING 8x16x5 STEEL SEALED - GREASE (2)
- 980314 PIN 3x14 (10)
- 355006 DIFFERENTIAL 46T - MATCHED FOR 13T PINION GEAR - SET

**i**  
 1x 980314 P 3x14

**TOP VIEW**

Apply oil from inside to prevent breakage of the rubber boot.

111mm - LONG CVD DRIVE SHAFT

3x14mm

GRAPHITE GREASE

NOTE ORIENTATION

**STEP 1 DETAIL**  
 The ring can be assembled by hand, but for easy disassembly we recommend using snap ring pliers (HUDY #189040).

THREAD LOCK

PIN

**BEFORE** inserting the clip on the central CVD shaft joint, apply a small amount of threadlock on the area where the clip goes.

**AFTER** inserting the clip on the central CVD shaft joint, turn the clip so that the slot is 90° from the pin. This will prevent the pin from opening the clip.

2x 902306 SH M3x6

2x 930816 BB 8x16x5 (Steel covers)

Inline hub for bevel drive gear positions.

LOWER CENTER UPPER

INITIAL SETTING

Steel covers 8x16x5mm

Steel covers 8x16x5mm

3x6mm

INITIAL SETTING

## 2. REAR TRANSMISSION

1x 901504  
SB M5x4

THREAD LOCK TL 5x4mm

NOTE ORIENTATION

STEP 3 DETAIL

Push joint against gear to remove gap. Tighten setscrew onto gear flat spot.

2x 908312  
SCH M3x12

2x 908316  
SCH M3x16

! During assembly, there is no need to check gear mesh or diff play. In particular, **DO NOT** check gear mesh and diff play when the differential is installed only in the gear box without the suspension holders and without being mounted to the chassis. All parts have specifically designed play, and only when the car is fully assembled will it have the proper amount of play where necessary. Only once you build the entire car, then you can check for free movement of all rotational parts and drivetrain as well as a free non-binding operation of suspension parts.

**GEAR RATIO**

Internal Gear Ratio = **3.54**

46 : 13 = 3.54  
(Bevel) (Pinion) (IGR)

LOWER Bevel & Differential

LOWER

LOWER

! Tighten 3x12mm screws first, then tighten 3x16 screws.

4 TIGHTEN 3x16mm SCREWS SECOND

GRAPHITE GREASE GR

Ball-bearing hub positions

LOWER CENTER UPPER

INITIAL SETTING

REAR DIFF 3.000cSt

Cut off burr

3 TIGHTEN 3x12mm SCREWS FIRST

2x 908312  
SCH M3x12

3x12mm

### INSTALLING THE DIFFERENTIAL WHILE FIRST TIME BUILDING THE CAR

1

2 Check that left and right Diff Height Inserts are installed in the same orientation.

3

4

! EXTREMELY IMPORTANT Hub must be inserted in groove and properly pressed into bulkhead.

The cover must be aligned with Labyrinth Groove and then pressed into place. !



# 3. REAR SUSPENSION



OPTION

## FLAT - REAR SUSPENSION ARMS

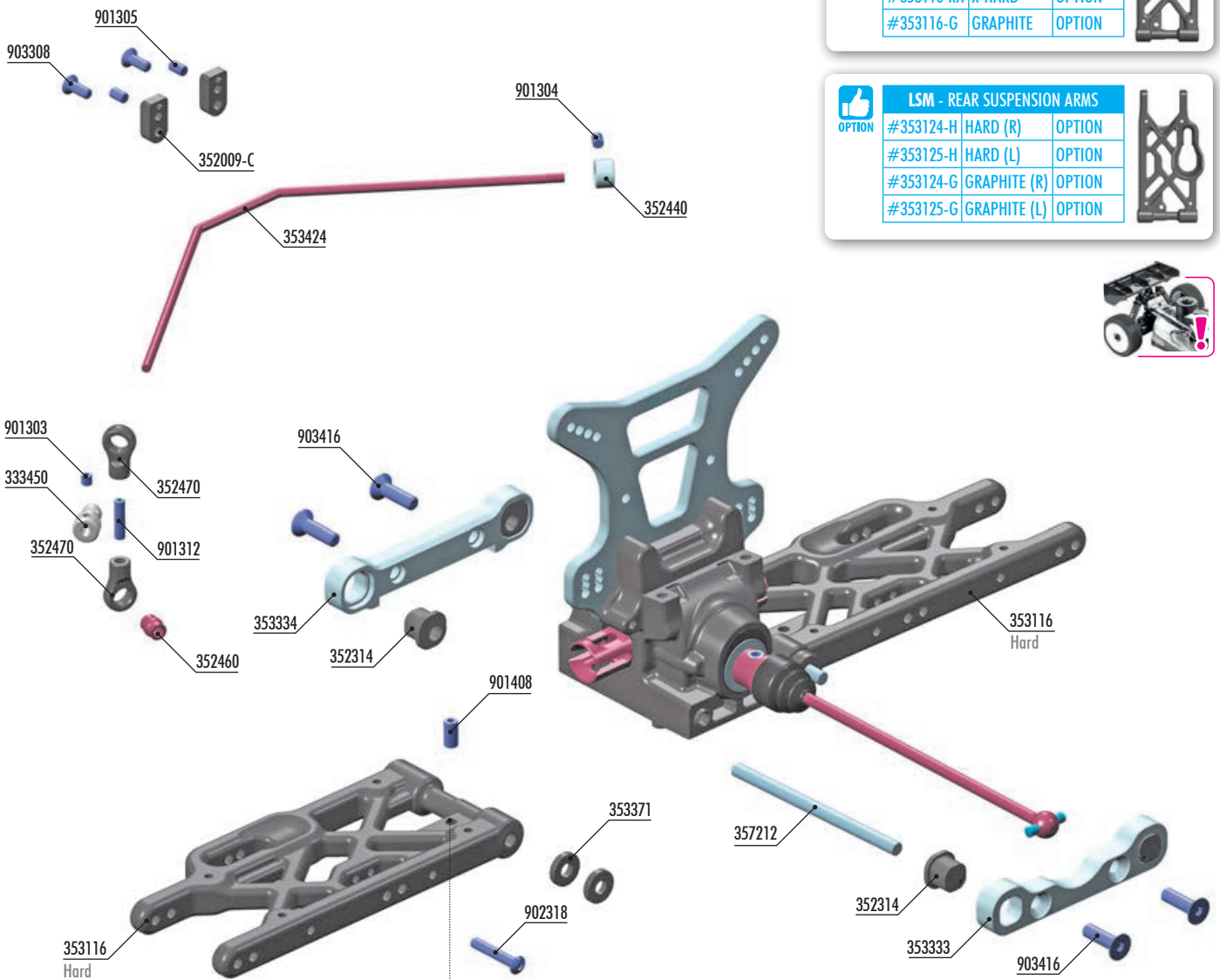
#353115	MEDIUM	OPTION
#353116	HARD	INCLUDED
#353116-XH	X-HARD	OPTION
#353116-G	GRAPHITE	OPTION



OPTION

## LSM - REAR SUSPENSION ARMS

#353124-H	HARD (R)	OPTION
#353125-H	HARD (L)	OPTION
#353124-G	GRAPHITE (R)	OPTION
#353125-G	GRAPHITE (L)	OPTION



**#902407**  
HEX SCREW SH M4x7 WITH HEX FROM BOTTOM (4)

**#902409**  
HEX SCREW SH M4x10 WITH HEX FROM BOTTOM (4)



**#333451**  
ALU ANTI-ROLL BAR PIVOT BALL 5.8mm - SWISS 7075 T6 - HARDCOATED (2)



OPTION

## REAR ANTI-ROLL BARS

#353420	ø2.0mm	OPTION
#353422	ø2.2mm	OPTION
#353424	ø2.4mm	INCLUDED
#353425	ø2.5mm	OPTION
#353426	ø2.6mm	OPTION
#353428	ø2.8mm	OPTION
#353430	ø3.0mm	OPTION
#353432	ø3.2mm	OPTION



- 333450 ANTI-ROLL BAR BALL JOINT 5.8mm (2)
- 352009-C SEMI-SPLIT DIFF BULKHEAD BLOCK SET FRONT/REAR FOR COLLAR
- 352314 COMPOSITE ECCENTRIC BUSHINGS - V2 (2)
- 352440 ALU ANTI-ROLL BAR COLLAR 3.5x7.8x4.9mm (2)
- 352460 PIVOT BALL 5.8 (10)
- 352470 BALL JOINT 5.8 (8)
- 353116 COMPOSITE REAR LOWER SUSPENSION ARM - HARD
- 353333 ALU REAR LOWER SUSP. HOLDER FOR SEMI-SPLIT BULKHEAD - FRONT
- 353334 ALU REAR LOWER SUSP. HOLDER FOR SEMI-SPLIT BULKHEAD - REAR
- 353371 SET OF COMPOSITE LOWER ARM SHIMS
- 353424 REAR ANTI-ROLL BAR 2.4mm
- 357212 LOWER INNER PIVOT PIN F+R (2)

- 901303 HEX SCREW SB M3x3 (10)
- 901304 HEX SCREW SB M3x4 (10)
- 901305 HEX SCREW SB M3x5 (10)
- 901312 HEX SCREW SB M3x12 (10)
- 901408 HEX SCREW SB M4x8 (10)
- 902318 HEX SCREW SH M3x18 (10)
- 903308 HEX SCREW SFH M3x8 (10)
- 903416 HEX SCREW SFH M4x16 (10)

# 3. REAR SUSPENSION



4x 353371 SHIM 4x10x2



2x 901408 SB M4x8



4x 903416 SFH M4x16



**MEDIUM SUSPENSION ARMS**

RR  
RF

DO NOT use INNER positions.

**HARD SUSPENSION ARMS**

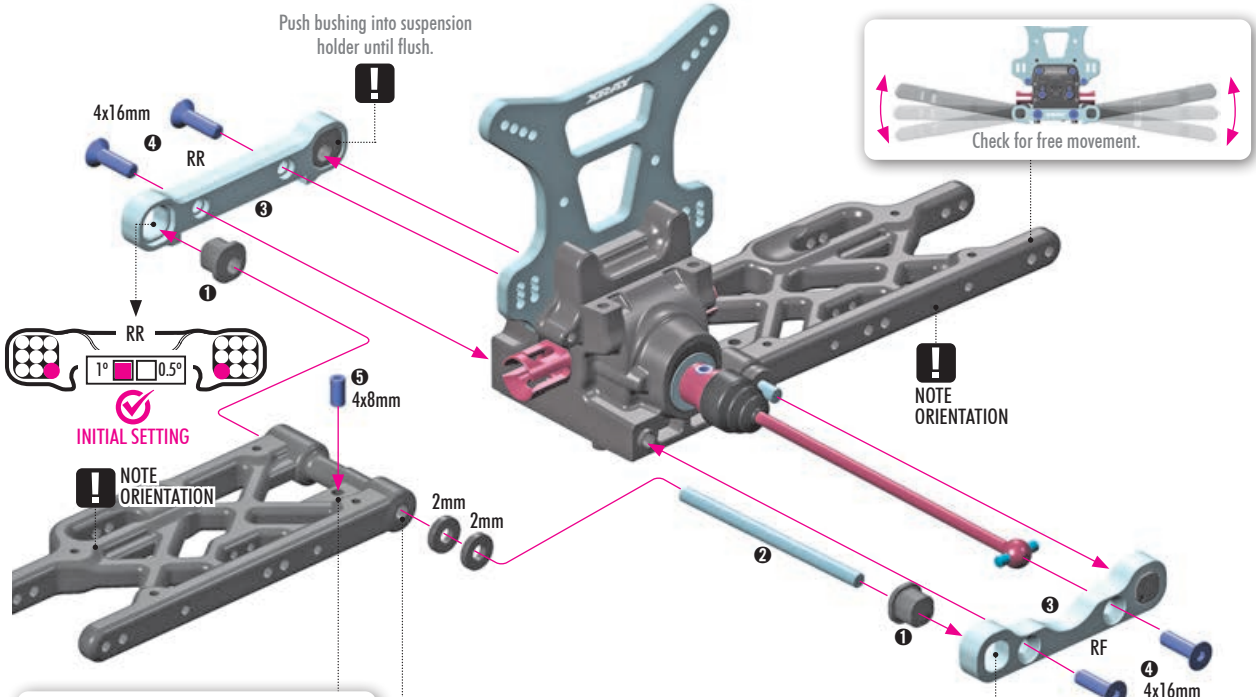
RR  
RF

All positions are available.

**X-HARD / GRAPHITE SUSPENSION ARMS**

RR  
RF

DO NOT use OUTER positions.



**TOP DOWNSTOP SETTING**

2.0mm

**NOTE ORIENTATION**

**OPTION**

#902407 HEX SCREW SH M4x7 WITH HEX FROM BOTTOM (4)

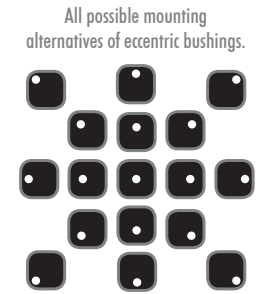
Downstop screw for fine tuning.

#902409 HEX SCREW SH M4x10 WITH HEX FROM BOTTOM (4)

**TIP**

If the suspension arms DO NOT move freely, use a HUDY Arm Reamer to resize the holes.

(HUDY #107644)



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

● Middle position = 0.5 mm or 0.5° from center.    ● Outer position = 1 mm or 1° from center.

**SET-UP BOOK**

TOE-IN  
ANTI-SQUAT  
ROLL CENTER  
DOWNSTOP  
WHEELBASE  
TRACK WIDTH

The XRAY rear alu lower suspension holders provide even greater 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 Off-Road Set-up Book (#209099).

ANTI-SQUAT		
RR	RF	(°)
0	0	=3°
0	0.5	=4°
0	1	=2°
0.5	0	=4°
0.5	0.5	=3°
0.5	1	=5°
1	0	=2°
1	0.5	=3°
1	1	=1°

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

TRACK-WIDTH		
RR	RF	(mm)
0	0	=308
0	0.5	=306
0	1	=310

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

The tables describe the amounts of rear anti-squat, rear toe-in, rear track-width change depending on the combinations of eccentric bushings used with 0 and 1mm, 1° offset. The 0.5mm, 0.5° represents the half change.

**Anti-Squat Example:**

0(RR) - 0 (RF) = 3°    = 3°

0(RR) - 0.5 (RF) = 3.5°    = 3.5°

0(RR) - 1 (RF) = 4°    = 4°

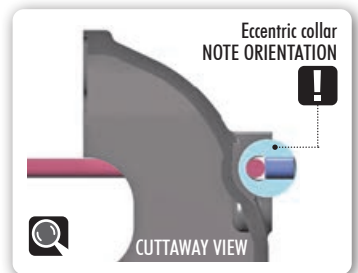
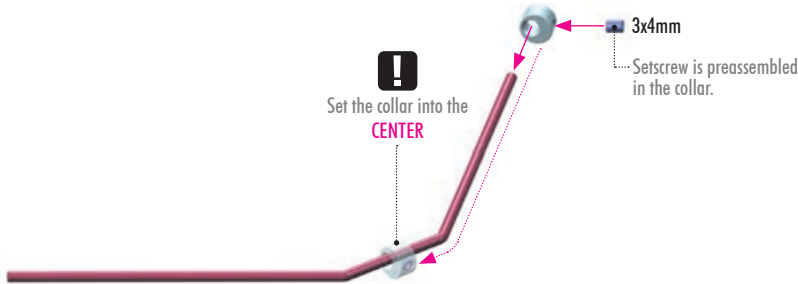
# 3. REAR SUSPENSION

2x 901312  
SB M3x12

2x L=R



1x 901304  
SB M3x4

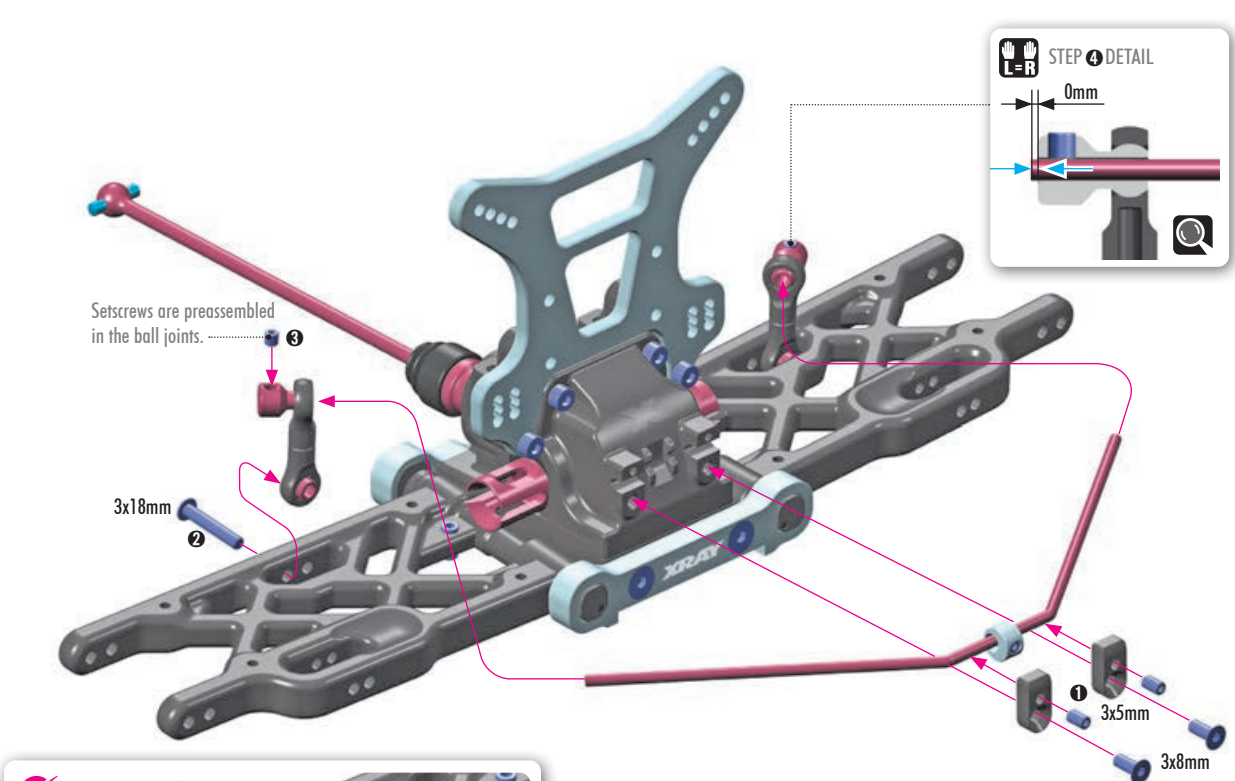


2x 901303  
SB M3x3

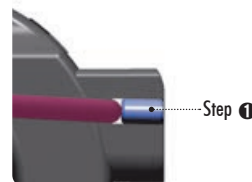
2x 901305  
SB M3x5

2x 902318  
SH M3x18

2x 903308  
SFH M3x8



Loosen the 3x5mm setscrew if the anti-roll bar DOES NOT turn freely.

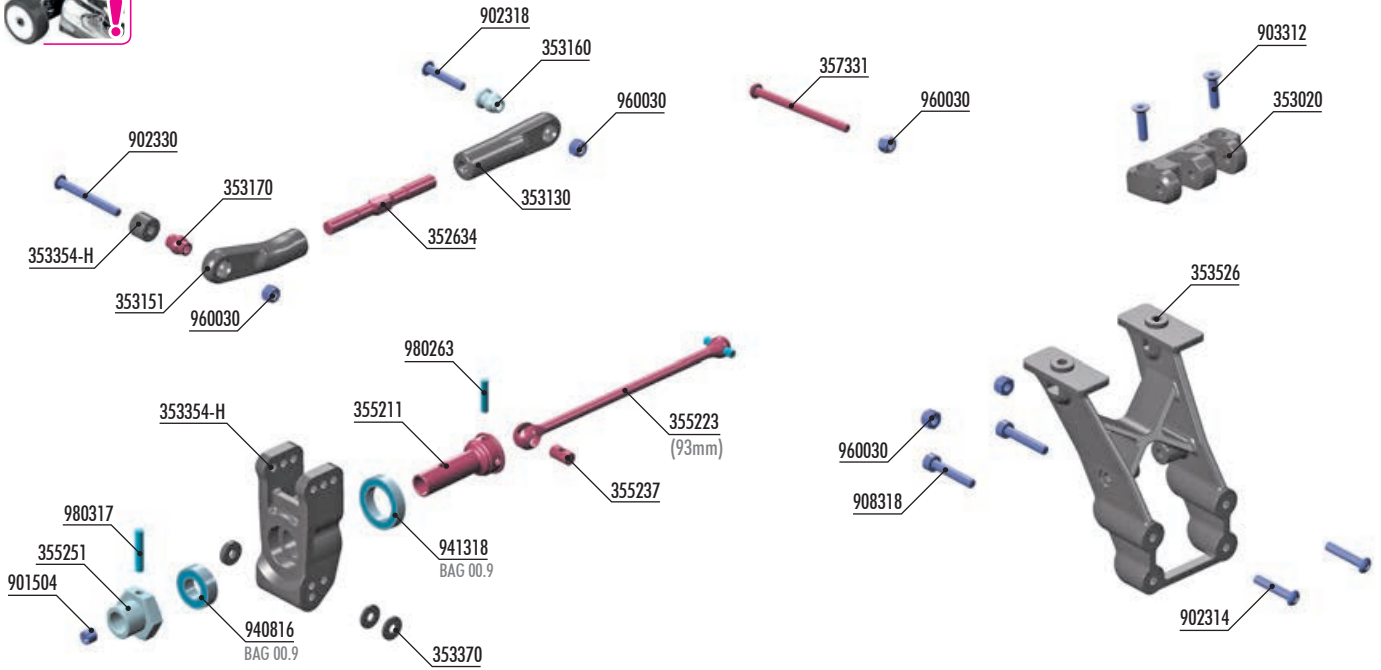


REAR ANTI-ROLL BARS			
OPTION	#353420	ø2.0mm	OPTION
	#353422	ø2.2mm	OPTION
	#353424	ø2.4mm	INCLUDED
	#353425	ø2.5mm	OPTION
	#353426	ø2.6mm	OPTION
	#353428	ø2.8mm	OPTION
	#353430	ø3.0mm	OPTION
	#353432	ø3.2mm	OPTION

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



# 4. REAR SUSPENSION



**OPTION**

OFFSET WHEEL AXLES			
#355250	0mm	OPTION	
#355251	+1mm	INCLUDED	
#355252	+2mm	OPTION	
#355253	+3mm	OPTION	
#355254	+4mm	OPTION	

**OPTION**

REAR UPRIGHTS		
#353354	MEDIUM	OPTION
#353354-H	HARD	INCLUDED
#353354-G	GRAPHITE	OPTION
#350912	ALU-SET	OPTION

**OPTION**

XRAY BALL-BEARINGS				
#930816	8x16x5	GREASE	STEEL	OPTION
#940816	8x16x5	GREASE	RUBBER	INCLUDED
#931318	13x19x4	GREASE	STEEL	OPTION
#941318	13x19x4	GREASE	RUBBER	INCLUDED
#930817	8x16x5	OIL	STEEL	OPTION
#940817	8x16x5	OIL	RUBBER	OPTION
#931319	13x19x4	OIL	STEEL	OPTION
#941319	13x19x4	OIL	RUBBER	OPTION

**OPTION**

- #353130-G REAR UPPER INNER CAMBER LINK BALL JOINT - GRAPHITE (2)
- #353151-G RELIEF REAR UPPER OUTER CAMBER LINK BALL JOINT - GRAPHITE (2)
- #355215 CVD ADJUSTABLE DRIVE AXLE - HUDY SPRING STEEL™

**OPTION**


#350912 XB8 ALU REAR UPRIGHTS - MULTI-ADJUSTABLE - SET INCLUDING #353394 CARBON EXTENSION



- |          |  |        |   |
|----------|--|--------|---|
| 352634   | ADJ. TURNBUCKLE M5 L/R 50mm - HUDY SPRING STEEL™ (2) | 357331 | REAR LOWER OUTER PIVOT PIN SCREW 3mm (2)        |
| 353020   | COMPOSITE REAR BRACE HOLDER                          | 901504 | HEX SCREW SB M5x4 (10)                          |
| 353130   | REAR UPPER INNER CAMBER LINK BALL JOINT (2)          | 902314 | HEX SCREW SH M3x14 (10)                         |
| 353151   | RELIEF REAR UPPER OUTER CAMBER LINK BALL JOINT (2)   | 902318 | HEX SCREW SH M3x18 (10)                         |
| 353160   | MOUNTING BALL 6.8 (4)                                | 902330 | HEX SCREW SH M3x30 (10)                         |
| 353170   | PIVOT BALL 6.8 (4)                                   | 903312 | HEX SCREW SFH M3x12 (10)                        |
| 353354-H | COMPOSITE REAR UPRIGHT - HARD                        | 908318 | HEX SCREW SOCKET HEAD CAP SCH M3x18 (10)        |
| 353370   | SET OF COMPOSITE REAR HUB CARRIER SHIMS              | 940816 | BALL-BEARING 8x16x5 RUBBER SEALED - GREASE (2)  |
| 353526   | COMPOSITE REAR WING HOLDER FOR SEMI-SPLIT BULKHEAD   | 941318 | BALL-BEARING 13x19x4 RUBBER SEALED - GREASE (2) |
| 355211   | CVD DRIVE AXLE - HUDY SPRING STEEL™                  | 960030 | NUT M3 (10)                                     |
| 355223   | CVD UNIVERSAL DRIVE SHAFT 93mm - HUDY SPRING STEEL™  | 980263 | PIN 2.5x13 (10)                                 |
| 355237   | CVD DRIVE SHAFT COUPLING - HUDY SPRING STEEL™        | 980317 | PIN 3x17 (10)                                   |
| 355251   | ALU WHEEL AXLE OFFSET "+1mm" - BLACK COATED (2)      |        |   |

# 4. REAR SUSPENSION

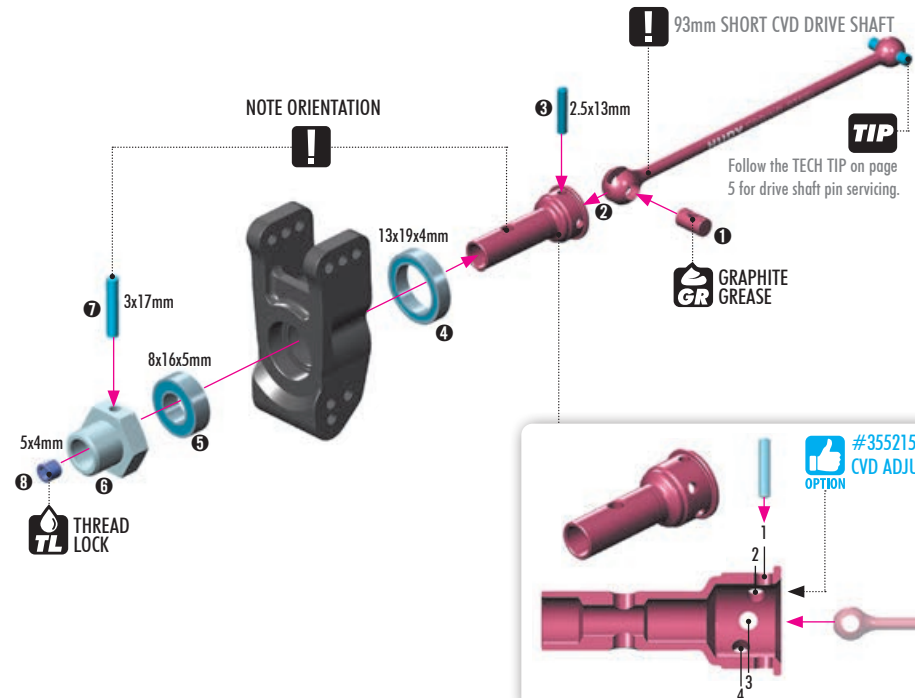
-  2x 901504 SB M5x4
-  2x 940816 BB 8x16x5
-  2x 941318 BB 13x19x4
-  2x 980263 P 2.5x13
-  2x 980317 P 3x17

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

**NOTE ORIENTATION**

**!**

**TL** THREAD LOCK



93mm SHORT CVD DRIVE SHAFT

2.5x13mm

3x17mm

8x16x5mm

5x4mm

13x19x4mm

1

2

3

4

5

6

7

8

**GR** GRAPHITE GREASE

**TIP** Follow the TECH TIP on page 5 for drive shaft pin servicing.

**TIP** To tighten the setscrew, you can use the HUDY 17mm Wheel Nut Tool #107570.




**!** Be careful NOT to overtighten the setscrew, as excessive tension in the drive axle may cause it to break. Instead, use thread lock to secure the setscrew.

**#355215** CVD ADJUSTABLE DRIVE AXLE - HUDY SPRING STEEL™


**OPTION**

Drive shaft position

4 | 3 | 2 | 1

-  4x 353370 SHIM 3x9x1
-  2x 353370 SHIM 3x9x2
-  2x 960030 N M3

**TIP** Before tightening the pivot pin locknut, ensure the rear upright moves freely. If it DOES NOT move freely, lightly sand both wheelbase shims and recheck for binding.


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

2mm

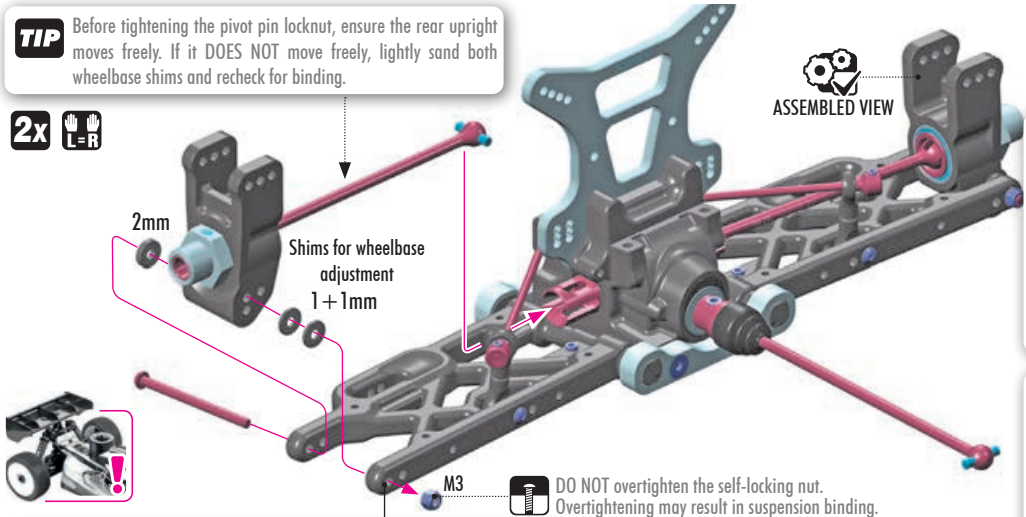
Shims for wheelbase adjustment 1 + 1mm

**M3**

**!** DO NOT overtighten the self-locking nut. Overtightening may result in suspension binding.

**TIP**  **L=R** **ARM REAMER** (HUDY #107643)

If the rear upright DOES NOT move freely, use a HUDY Arm Reamer to resize the hole.




**ASSEMBLED VIEW**

**INITIAL SETTING**

**Check for free movement.**

- 1 Install pivot balls with HUDY Multi Tool.
- 2 Install ball joints on turnbuckle.

**TIP**  Install with HUDY Multi Tool.

**GR** GRAPHITE GREASE

**!** NOTE ORIENTATION

**GR** GRAPHITE GREASE

LEFT THREAD

RIGHT THREAD

LEFT THREAD

RIGHT THREAD

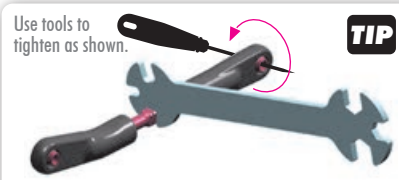
26.5mm

**RIGHT**

**LEFT**

Use tools to tighten as shown.

**TIP**



Special Tool for all turnbuckles & nuts (HUDY #181090) or Turnbuckle Wrench 5mm (HUDY #181050).

**SET-UP BOOK**

CAMBER

# 4. REAR SUSPENSION

**2x** 353354-H  
SHIM 3x9x7

**2x** 902318  
SH M3x18

**2x** 902330  
SH M3x30

**4x** 960030  
N M3

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

**NOTE ORIENTATION**

7mm

3x18mm

3x30mm

M3

M3

ASSEMBLED VIEW

**INITIAL SETTING**

**INITIAL SETTING**

**2x** 903312  
SFH M3x12

3x12mm

**2x** 902314  
SH M3x14

**2x** 908318  
SCH M3x18

**2x** 960030  
N M3

3x14mm


M3


M3

3x18mm



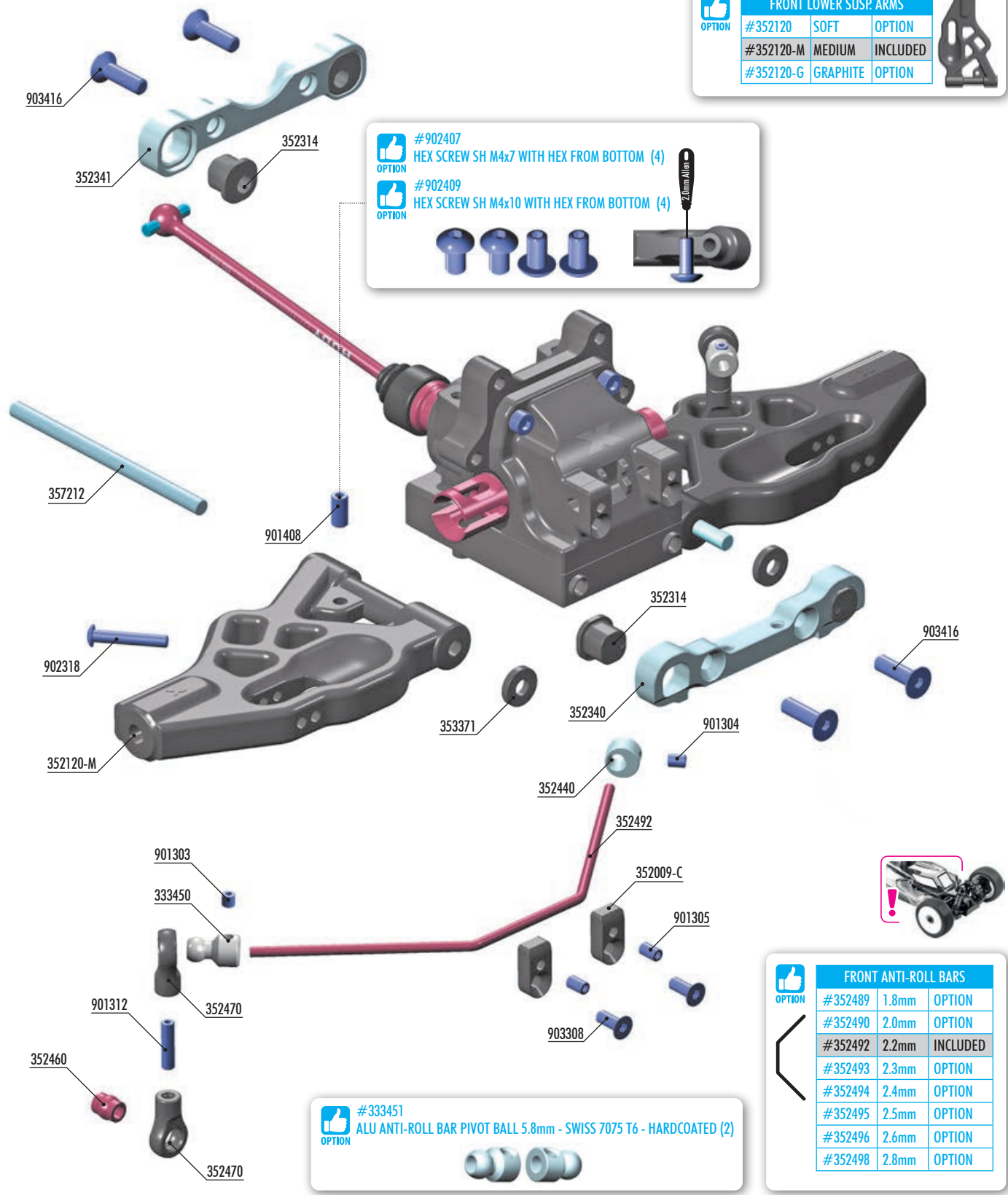
# 5. FRONT SUSPENSION

FRONT LOWER SUSP. ARMS			
 OPTION	#352120	SOFT	OPTION
	#352120-M	MEDIUM	INCLUDED
	#352120-G	GRAPHITE	OPTION




 #902407  
OPTION  
HEX SCREW SH M4x7 WITH HEX FROM BOTTOM (4)

 #902409  
OPTION  
HEX SCREW SH M4x10 WITH HEX FROM BOTTOM (4)

 #333451  
OPTION  
ALU ANTI-ROLL BAR PIVOT BALL 5.8mm - SWISS 7075 T6 - HARDCOATED (2)



FRONT ANTI-ROLL BARS			
 OPTION	#352489	1.8mm	OPTION
	#352490	2.0mm	OPTION
	#352492	2.2mm	INCLUDED
	#352493	2.3mm	OPTION
	#352494	2.4mm	OPTION
	#352495	2.5mm	OPTION
	#352496	2.6mm	OPTION
	#352498	2.8mm	OPTION

**BAG**  
**05**

333450	ANTI-ROLL BAR BALL JOINT 5.8mm (2)	357212	LOWER INNER PIVOT PIN F+R (2)
352009-C	SEMI-SPLIT DIFF BULKHEAD BLOCK SET FRONT/REAR FOR COLLAR	901303	HEX SCREW SB M3x3 (10)
352120-M	COMPOSITE FRONT LOWER SUSPENSION ARM - MEDIUM	901304	HEX SCREW SB M3x4 (10)
352314	COMPOSITE SQUARE ADJ. ROLL CENTER BUSHINGS - V2 (2)	901305	HEX SCREW SB M3x5 (10)
352340	ALU FRONT LOWER SUSP. HOLDER FOR SEMI-SPLIT BULKHEAD - FRONT	901312	HEX SCREW SB M3x12 (10)
352341	ALU FRONT LOWER SUSP. HOLDER FOR SEMI-SPLIT BULKHEAD - REAR	901408	HEX SCREW SB M4x8 (10)
352440	ALU ANTI-ROLL BAR COLLAR 3.5x7.8x4.9mm (2)	902318	HEX SCREW SH M3x18 (10)
352460	PIVOT BALL 5.8 (10)	903308	HEX SCREW SFH M3x8 (10)
352470	BALL JOINT 5.8 (8)	903416	HEX SCREW SFH M4x16 (10)
352492	FRONT ANTI-ROLL BAR 2.4mm		
353371	SET OF COMPOSITE LOWER ARM SHIMS		

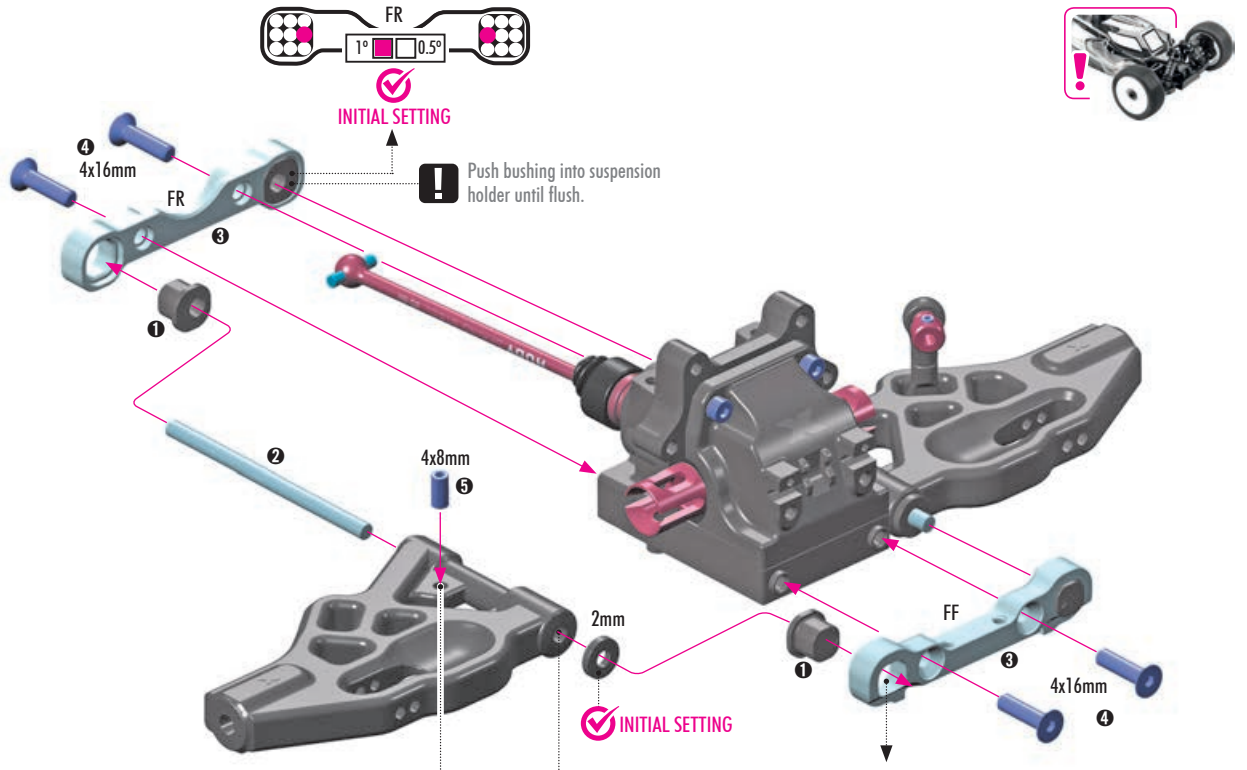
# 5. FRONT SUSPENSION

10

2x 353371 SHIM 4x10x2

2x 901408 SB M4x8

4x 903416 SFH M4x16



**TOP** DOWNSTOP SETTING

**OPTION** #902407 HEX SCREW SH M4x7 WITH HEX FROM BOTTOM (4)

Downstop screw for fine tuning.

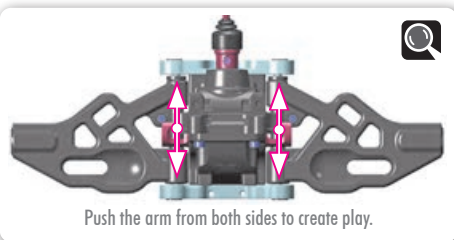
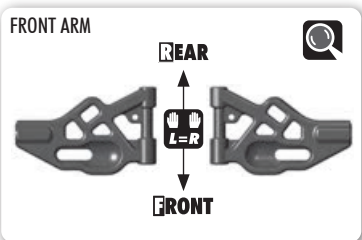
**OPTION** #902409 HEX SCREW SH M4x10 WITH HEX FROM BOTTOM (4)

**TIP** If suspension arms do not pivot freely after checking eccentric bushings, a HUDY arm reamer can eliminate any remaining binding.

(HUDY #107644) ARM REAMER

**INITIAL SETTING**

All possible mounting alternatives of eccentric bushings.



Eccentric bushings have two different offsets from the center.

- Middle position = 0.5 mm or 0.5° from center
- Outer position = 1 mm or 1° from center

FF	FR	(mm)
		=308
		=306
		=310*

FF	FR	(mm)
		=1
		=0
		=-1

The XRAY alu front lower suspension holders provide even greater 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 Off-Road Set-up Book (#209099).

The tables above describe the changes to kick-up and front track width when using the 0 and 1mm/1deg offset bushings. The .5mm/.5deg bushings reduce setting changes by half.

\* NOT recommended to use this setting.

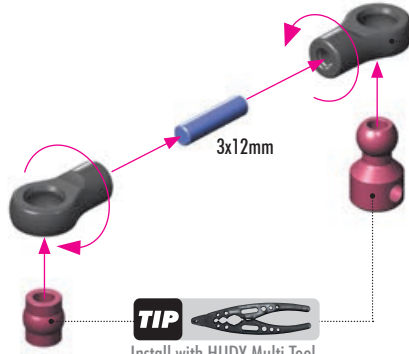
**SET-UP BOOK**

KICK UP  
ROLL CENTER  
DOWNSTOP  
WHEELBASE  
TRACK WIDTH

# 5. FRONT SUSPENSION

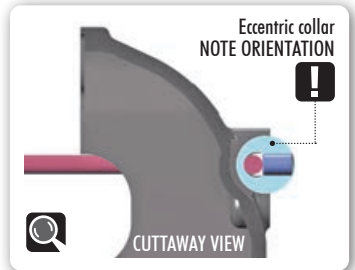
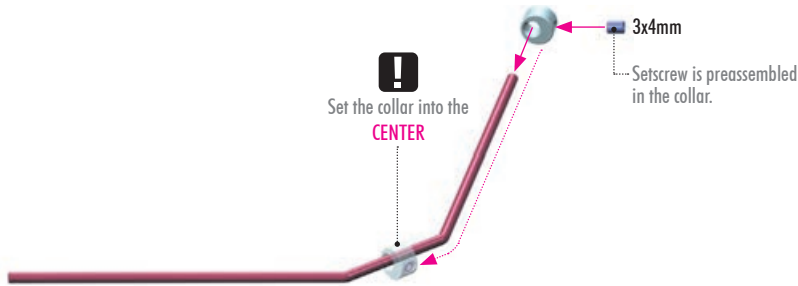
2x 901312  
SB M3x12

2x L=R



**TIP**  
Install with HUDY Multi Tool.

1x 901304  
SB M3x4

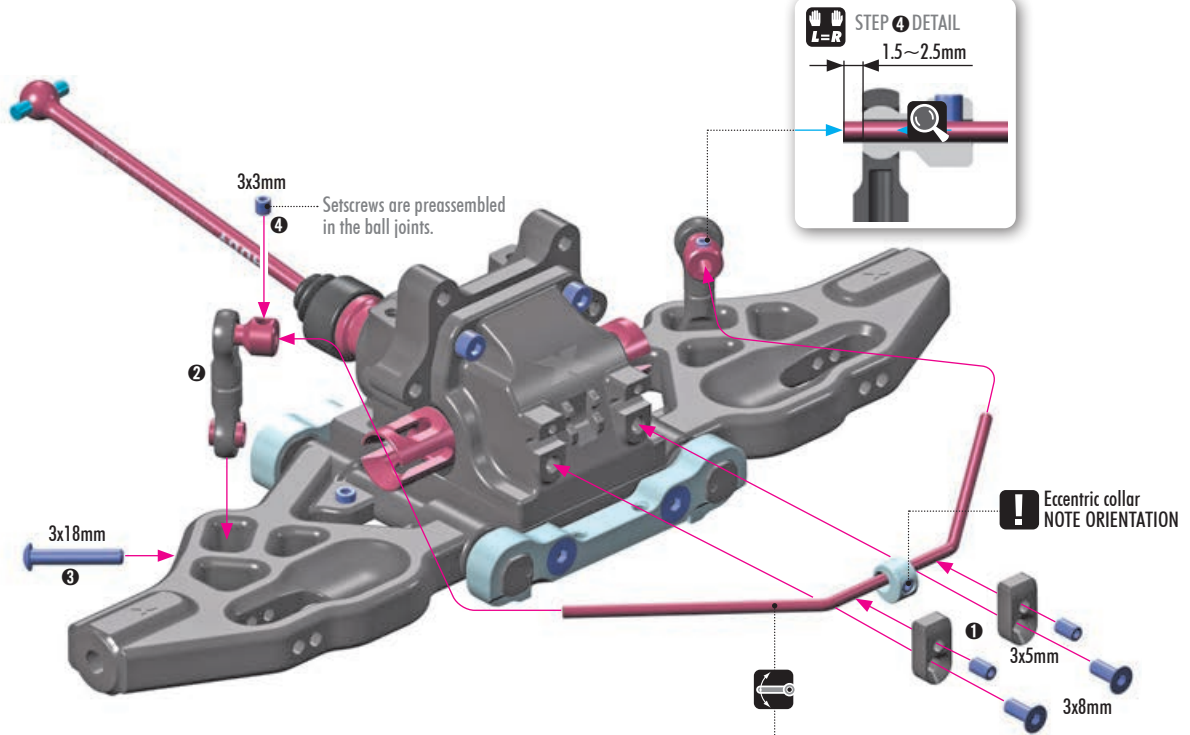


2x 901303  
SB M3x3

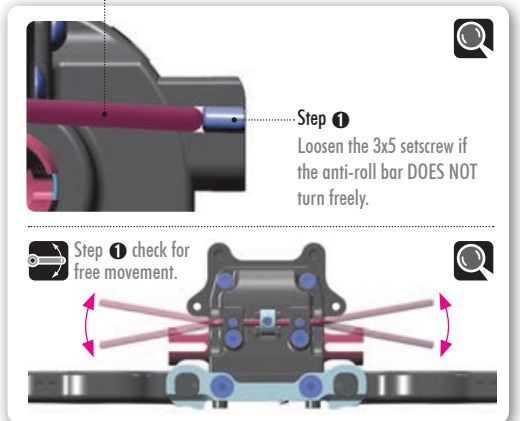
2x 901305  
SB M3x5

2x 902318  
SH M3x18

2x 903308  
SFH M3x8



FRONT ANTI-ROLL BARS			
OPTION	#352489	1.8mm	OPTION
	#352490	2.0mm	OPTION
	#352492	2.2mm	INCLUDED
	#352493	2.3mm	OPTION
	#352494	2.4mm	OPTION
	#352495	2.5mm	OPTION
	#352496	2.6mm	OPTION
	#352498	2.8mm	OPTION



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



# 6. FRONT SUSPENSION

**#357257 PIVOT BALL CAMBER**  
ALU SHIM 6X13X1.5mm (2)

**#352194 LEXAN® FRONT UPPER ARM WINGS IFMAR LEGAL - SET**

**#357253 BRASS ADJUSTING NUT M15x1**

**OFFSET WHEEL AXLES**

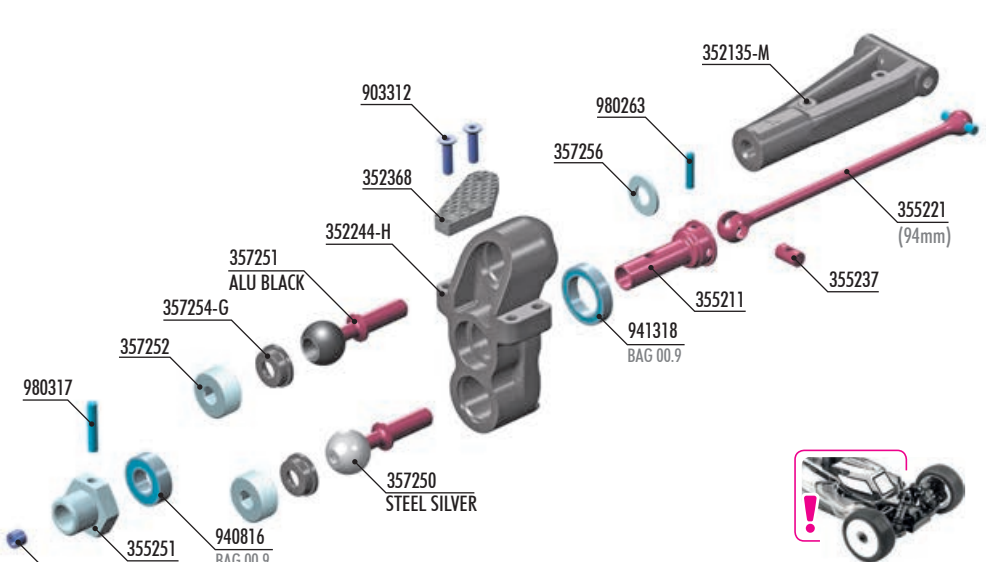
#	Offset	Status
#355250	0mm	OPTION
#355251	+1mm	INCLUDED
#355252	+2mm	OPTION
#355253	+3mm	OPTION
#355254	+4mm	OPTION

**FRONT UPPER SUSP. ARMS**

#	Material	Status
#352135	SOFT	OPTION
#352135-M	MEDIUM	INCLUDED
#352135-G	GRAPHITE	OPTION

**STEERING BLOCKS**

#	Material	Status
#352244	MEDIUM	OPTION
#352244-H	HARD	INCLUDED
#352244-G	GRAPHITE	OPTION



**STEERING PLATES**

#	Configuration	Material	Status
#352366	1 DOT	CARBON	OPTION
#352367	2 DOTS	CARBON	OPTION
#352368	3 DOTS	CARBON	INCLUDED
#352372	1 DOT	ALU	OPTION
#352370	2 DOTS	ALU	OPTION

**XRAY BALL-BEARINGS**

#	Size	Seal	Material	Status
#930816	8x16x5	GREASE	STEEL	OPTION
#940816	8x16x5	GREASE	RUBBER	INCLUDED
#931318	13x19x4	GREASE	STEEL	OPTION
#941318	13x19x4	GREASE	RUBBER	INCLUDED
#930817	8x16x5	OIL	STEEL	OPTION
#940817	8x16x5	OIL	RUBBER	OPTION
#931319	13x19x4	OIL	STEEL	OPTION
#941319	13x19x4	OIL	RUBBER	OPTION

**BAG**  
**06**

- |  |  |
|--|--|
| 352135-M FRONT UPPER ARM - MEDIUM                          | 357252 ALU ADJUSTING NUT M15x1 (2)                     |
| 352244-H PB STEERING BLOCK LB - HARD                       | 357254-G COMPOSITE BALL CUP 13.9mm - GRAPHITE (2)      |
| 352368 CARBON STEERING PLATE - 3 DOTS (1+1)                | 357256 ALU SHIM 6x13x1 (2)                             |
| 355211 CVD DRIVE AXLE - HUDY SPRING STEEL™                 | 901504 HEX SCREW SB M5x4 (10)                          |
| 355221 CVD UNIVERSAL DRIVE SHAFT 94mm - HUDY SPRING STEEL™ | 903312 HEX SCREW SFH M3x12 (10)                        |
| 355237 CVD DRIVE SHAFT COUPLING - HUDY SPRING STEEL™       | 940816 BALL-BEARING 8x16x5 RUBBER SEALED - GREASE (2)  |
| 355251 ALU WHEEL AXLE OFFSET "+1mm" - HARD COATED (2)      | 941318 BALL-BEARING 13x19x4 RUBBER SEALED - GREASE (2) |
| 357250 STEEL PIVOT BALL 13.7mm (2)                         | 980263 PIN 2.5x13 (10)                                 |
| 357251 ALU PIVOT BALL 13.7mm WITH STEEL SCREW (2)          | 980317 PIN 3x17 (10)                                   |

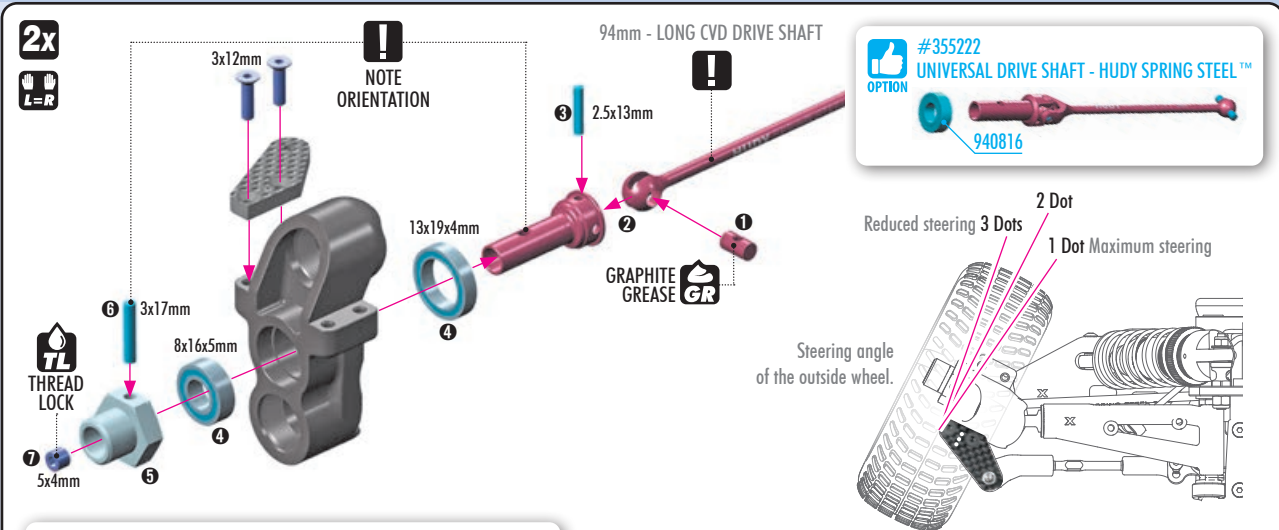
2x 901504 SB M5x4

2x 940816 BB 8x16x5

2x 941318 BB 13x19x4

2x 980263 P 2.5x13

2x 980317 P 3x17



**TIP**

To tighten the setscrew you can also use the (HUDY 17mm Wheel Nut Tool #107570).

**Be careful not to overtighten the setscrew, as excessive tension in the drive axle may cause it to break. Instead, use thread lock to secure the setscrew.**

**STEERING PLATES**

#	Configuration	Material	Status
#352366	1 DOT	CARBON	OPTION
#352367	2 DOTS	CARBON	OPTION
#352368	3 DOTS	CARBON	INCLUDED
#352372	1 DOT	ALU	OPTION
#352370	2 DOTS	ALU	OPTION

# 6. FRONT SUSPENSION

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

**!** ALU pivot ball  
BLACK color

**!** STEEL pivot ball  
SILVER color

**TIP** Tighten hex nuts using HUDY tool #107581.

**OPTION** #357253 BRASS ADJUSTING NUT M15x1

**PIVOT BALLS MUST MOVE FREELY**  
During initial assembly, tighten each hex nut until the pivot ball starts to bind, then loosen slightly. Verify that the pivot balls move freely.

**2x** #357256 SHIM 6x13x1

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

Lexan® Wings (NOT INCLUDED)

**OPTION** #352194 XB8 LEXAN® FRONT UPPER ARM WINGS IFMAR LEGAL - SET

3x6mm

1mm

**TIP** HUDY Tool Allen 2.5mm

**OPTION** #357257 PIVOT BALL CAMBER ALU SHIM 6X13X1.5mm (2)

FRONT UPPER SUSP. ARMS		
<b>OPTION</b> #352135	SOFT	OPTION
#352135-M	MEDIUM	INCLUDED
#352135-G	GRAPHITE	OPTION

**SET-UP BOOK**  
CAMBER  
TRACK-WIDTH

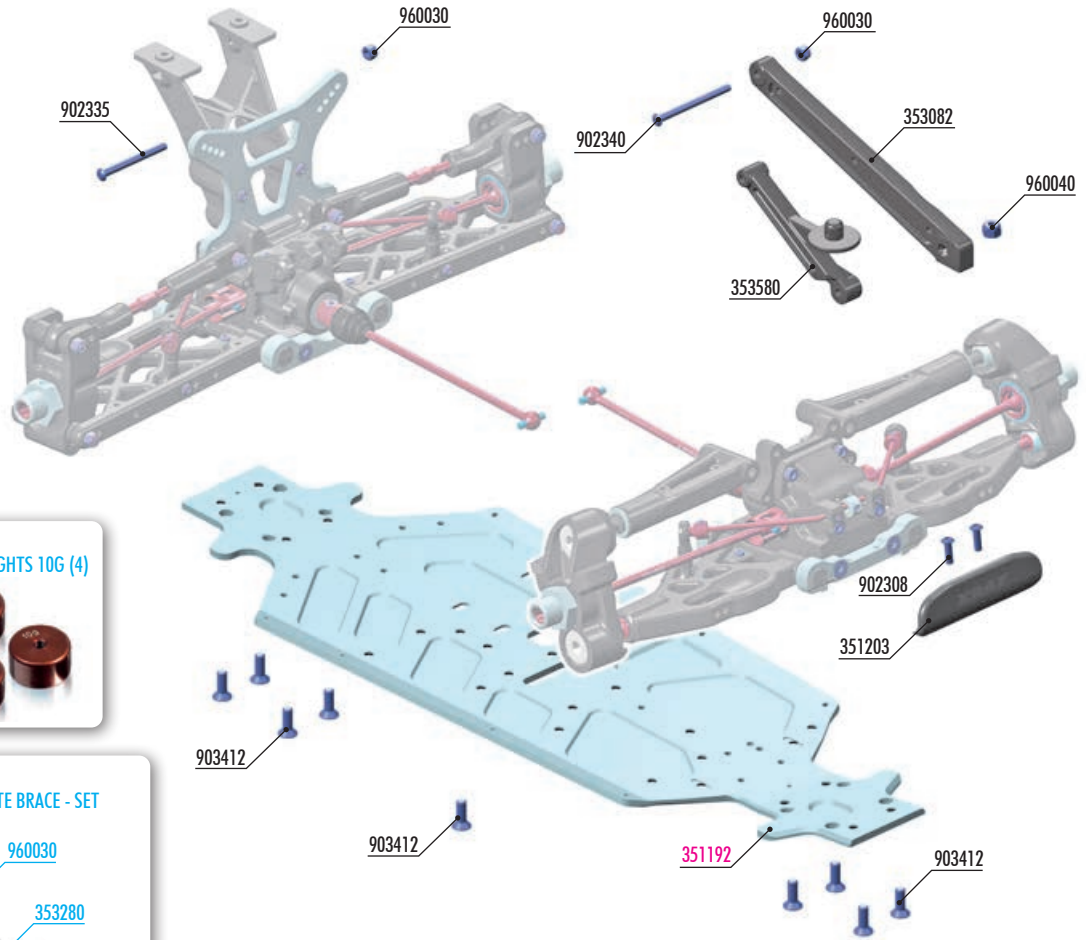
**2x** **L=R**

**ASSEMBLED VIEW**

**TIP** HUDY Tool Allen 2.5mm

**SET-UP BOOK**  
ROLL CENTER

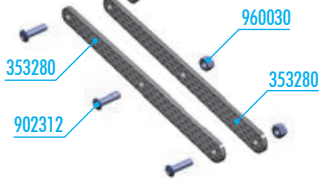
# 6. FRONT & REAR ASSEMBLY



**#293084**  
PRECISION BALANCING CHASSIS WEIGHTS 10G (4)  
OPTION



**#353280**  
CARBON BRACES FOR REAR COMPOSITE BRACE - SET  
OPTION



**BAG**

**06**

351203 COMPOSITE FRONT BUMPER FOR SEMI-SPLIT BULKHEAD  
353082 COMPOSITE REAR BRACE - MEDIUM - M  
353580 COMPOSITE WING HOLDER BRACE WITH REAR BODY POST

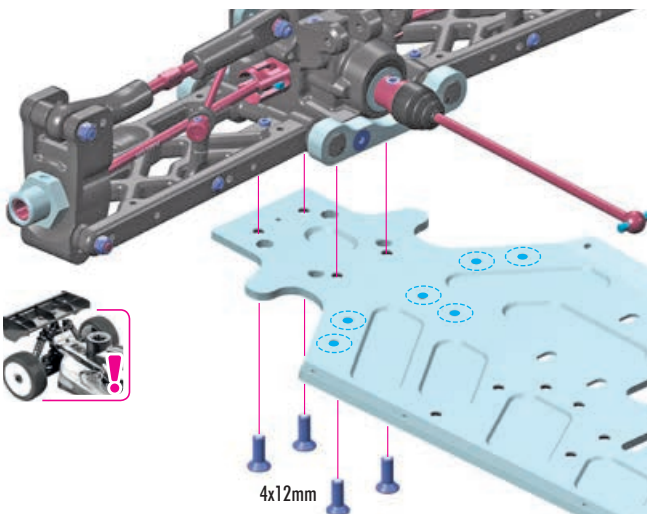
902308 HEX SCREW SH M3x8 (10)  
902335 HEX SCREW SH M3x35 (10)

902340 HEX SCREW SH M3x40 (10)  
903412 HEX SCREW SFH M4x12 (10)  
960030 NUT M3 (10)  
960040 NUT M4 (10)

351192 ALU CHASSIS - SWISS 7075 T6 (3MM)



4x 903412  
SFH M4x12



**#293084**  
PRECISION BALANCING CHASSIS WEIGHTS 10G (4)  
OPTION



Locations for weights



During initial assembly, there is NO need to check gear mesh or diff play. Fitment should NOT be checked until suspension holders are installed on the bulkheads and the complete assembly is mounted to the chassis. All parts have specifically designed tolerances for proper operation once fully assembled. After assembly, check for free rotation of all drivetrain parts and non-binding movement of the suspension.



# 6. FRONT & REAR ASSEMBLY

1x 960030 N M3

1x 902335 SH M3x35

Push the top of the holder together with fingers to insert the brace with body post. ①

NOTE Overtightening will deform the composite wing holder, and will NOT allow you to mount the wing as per the instructions on page 46 step 2.

903412 SFH M4x12 1x

902340 SH M3x40 1x

3x40mm

M3

M4

4x12mm

#353280 CARBON BRACE SET for extra stiffness adjustment. OPTION

960030 N M3 1x

960040 N M4 1x

ASSEMBLED VIEW

2x 902308 SH M3x8

4x 903412 SFH M4x12

FRONT BUMPER ASSEMBLY

3x8mm

PUSH

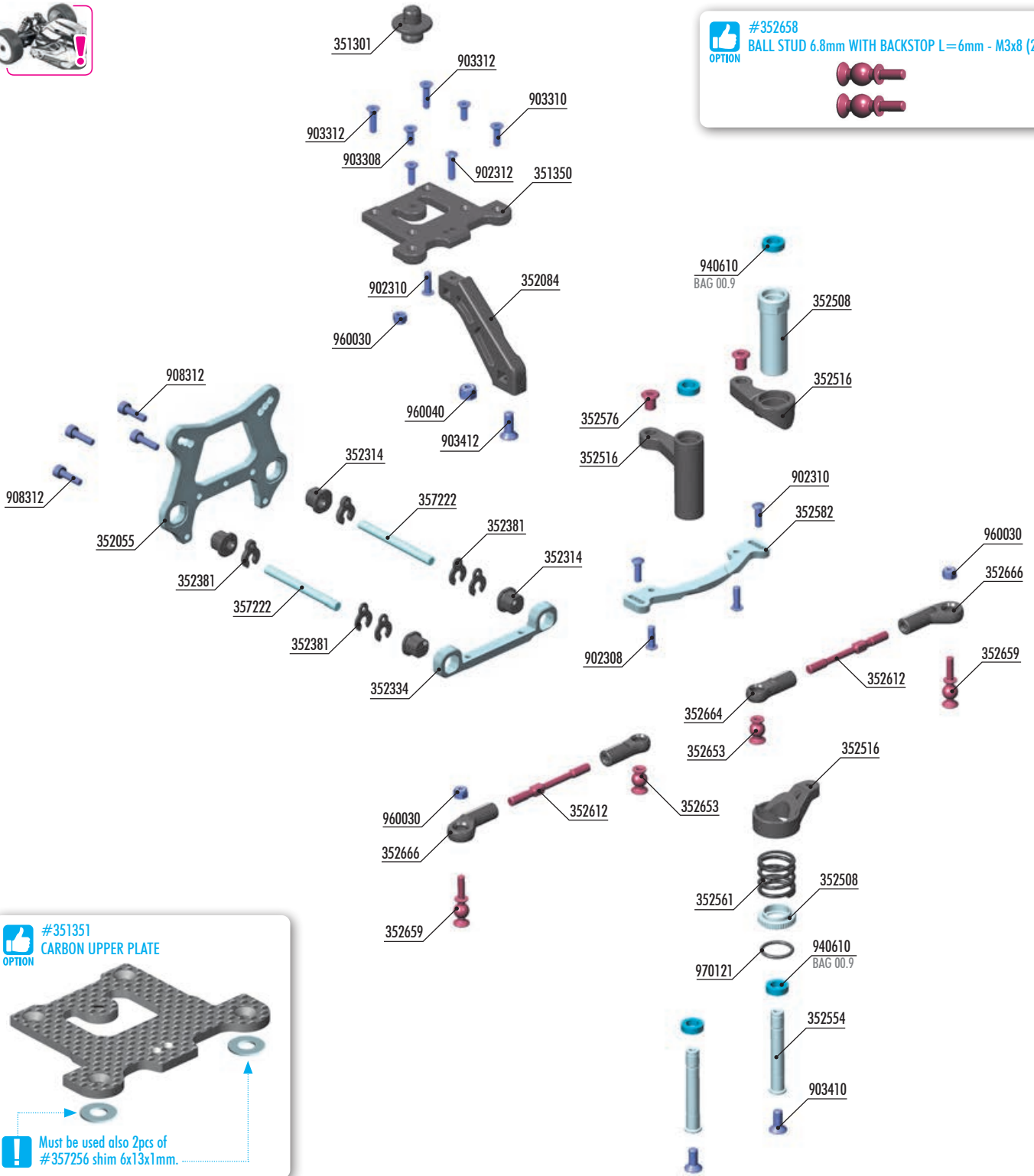
FRONT

During assembly, there is NO need to check gear mesh or diff play. In particular, DO NOT check gear mesh and diff play when the differential is installed only in the gear box without the suspension holders and without being mounted to the chassis. All parts have specifically designed play, and only when the car is fully assembled will it have the proper amount of play where necessary. Only once you build the entire car, then you can check for free movement of all rotational parts and drivetrain as well as a free non-binding operation of suspension parts.

# 7. STEERING



#352658  
OPTION  
BALL STUD 6.8mm WITH BACKSTOP L=6mm - M3x8 (2)



#351351  
OPTION  
CARBON UPPER PLATE



Must be used also 2pcs of  
#357256 shim 6x13x1mm.

BAG

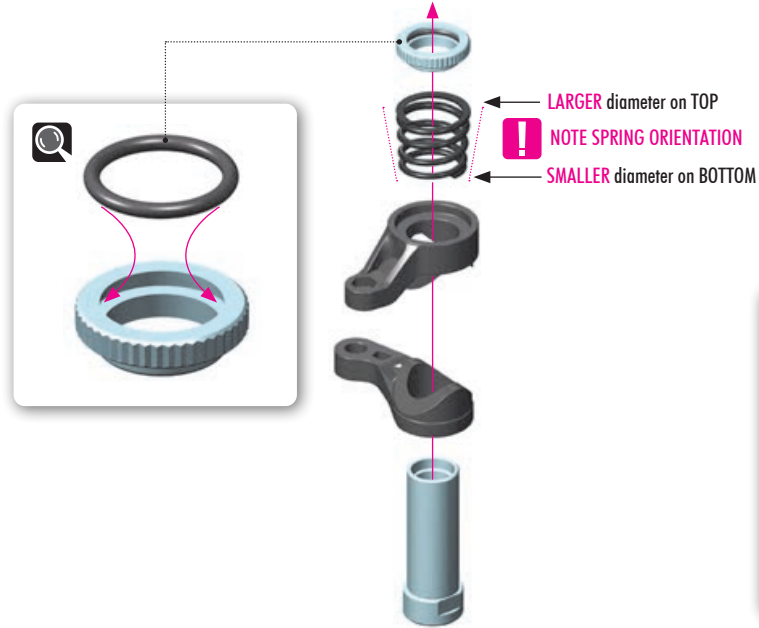
07

351301	BODY POSTS	352666	COMPOSITE RELIEF STEERING BALL JOINT 6.8mm (2)
351350	COMPOSITE UPPER PLATE WITH TWO BRACE POSITIONS	357222	FRONT UPPER PIVOT PIN 4x45 (2)
352055	ALU FRONT SHOCK TOWER FOR SEMI-SPLIT BULKHEAD - LOWER	902308	HEX SCREW SH M3x8 (10)
352084	COMPOSITE FRONT BRACE	902310	HEX SCREW SH M3x10 (10)
352314	COMPOSITE SQUARE ADJ. ROLL CENTER BUSHINGS - V2 (2)	902312	HEX SCREW SH M3x12 (10)
352334	ALU FRONT UPPER ARM HOLDER FOR SEMI-SPLIT BULKHEAD	903308	HEX SCREW SFH M3x8 (10)
352381	CASTER CLIPS (2)	903310	HEX SCREW SFH M3x10 (10)
352508	SERVO SAVER FOR SEMI-SPLIT BULKHEAD - GRAPHITE - SET	903312	HEX SCREW SFH M3x12 (10)
352516	COMPOSITE SERVO SAVER FOR SEMI-SPLIT BULKHEAD - GRAPHITE	903410	HEX SCREW SFH M4x10 (10)
352554	ALU SERVO SAVER PIVOT SHAFT WITH CHASSIS LOCK (2)	903412	HEX SCREW SFH M4x12 (10)
352561	SERVO SAVER SPRING PROGRESSIVE	908312	HEX SCREW SOCKET HEAD CAP SCH M3x12 (10)
352576	STEERING PLATE BUSHING (2)	940610	BALL-BEARING 6x10x3 RUBBER SEALED - OIL (2)
352582	ALU STEERING PLATE FOR SEMI-SPLIT BULKHEAD - SWISS 7075 T6	960030	NUT M3 (10)
352612	ADJ. TURNBUCKLE M4 L/R 45mm - HUDY SPRING STEEL™ (2)	960040	NUT M4 (10)
352653	BALL STUD 6.8mm WITH BACKSTOP - M3 (2)	970121	O-RING 12.1 x 1.6 (10)
352659	BALL STUD 6.8mm WITH BACKSTOP L=6mm - M3x11 (2)		
352664	COMPOSITE STEERING BALL JOINT 6.8mm - V3 (2)		

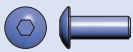
# 7. STEERING



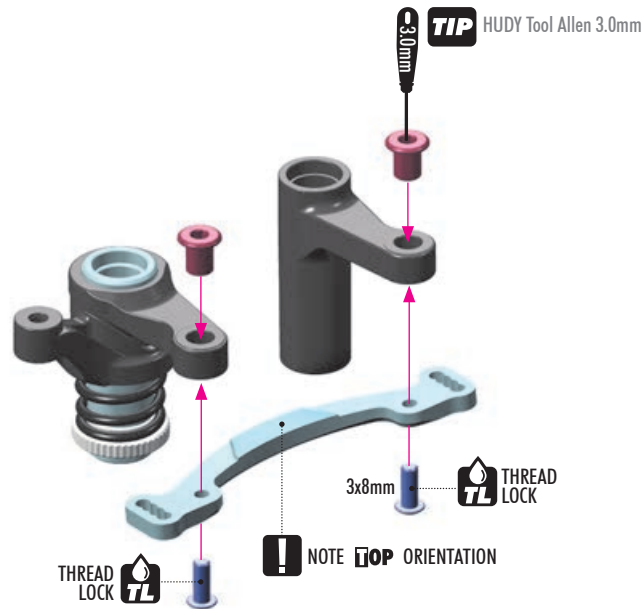
1x 970121  
O 12.1x1.6



**SET-UP BOOK**  
SERVO SAVER



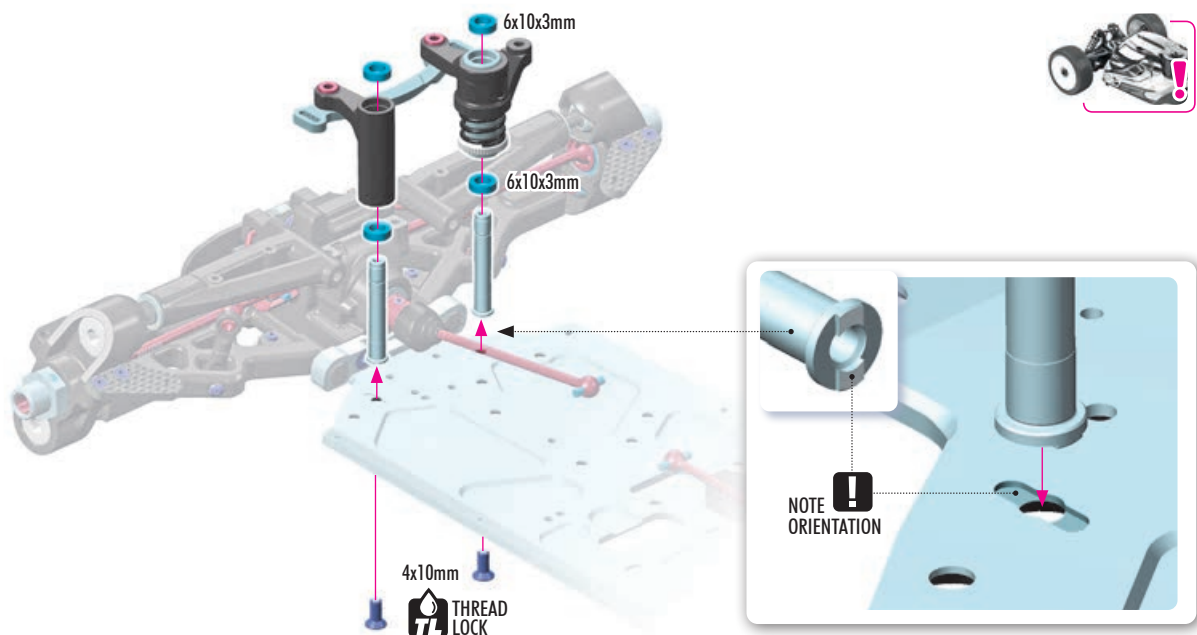
2x 902308  
SH M3x8



2x 903410  
SFH M4x10



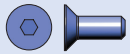
4x 940610  
BB 6x10x3





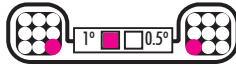
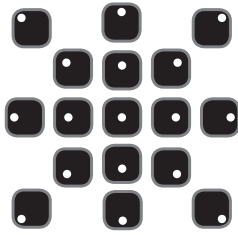


1x 902310  
SH M3x10

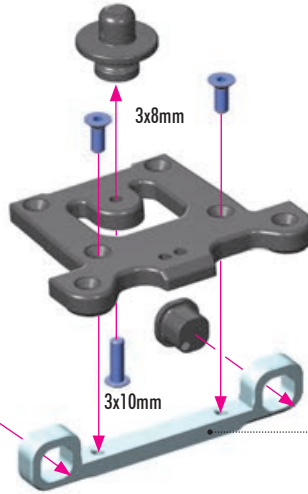


2x 903308  
SFH M3x8

All possible mounting alternatives of eccentric bushings.



**INITIAL SETTING**



NOTE ORIENTATION

**SET-UP BOOK**  
ROLL CENTER

1x 902312  
SH M3x12

2x 903310  
SFH M3x10

903312 SFH M3x12  
2x

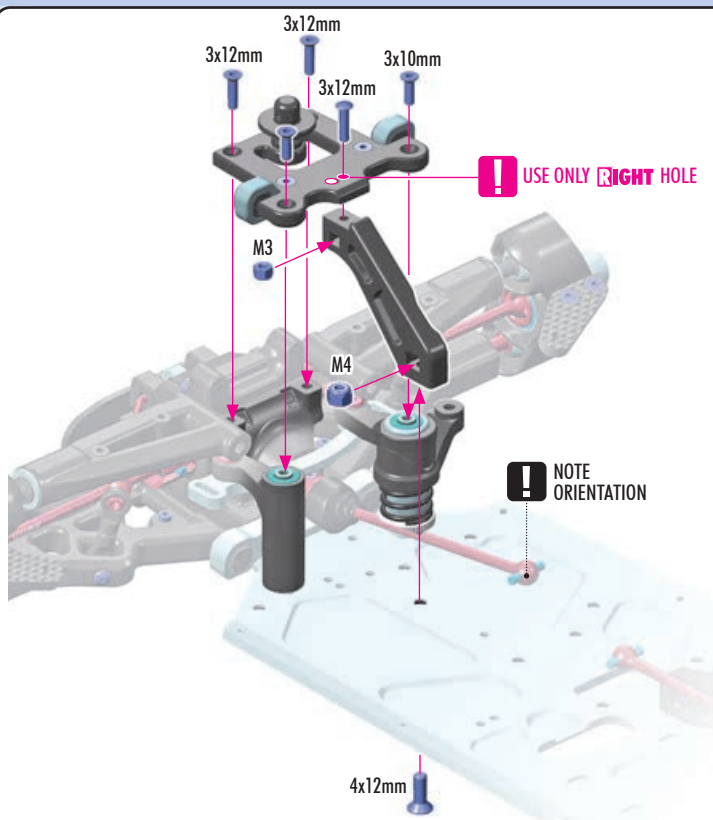
903412 SFH M4x12  
1x

903312 SFH M3x12  
2x

903412 SFH M4x12  
1x

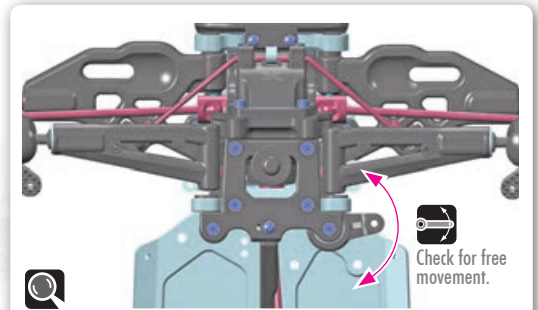
1x 960030  
N M3

1x 960040  
N M4

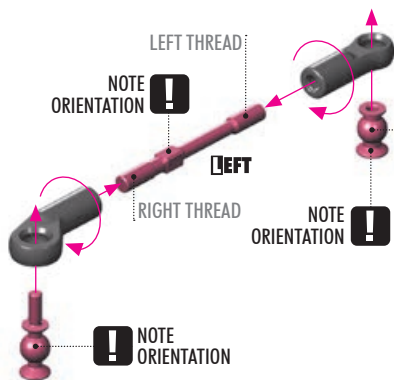


**USE ONLY RIGHT HOLE**

**NOTE ORIENTATION**



After the top deck assembly check for free movement of steering system.



**NOTE ORIENTATION**

LEFT THREAD

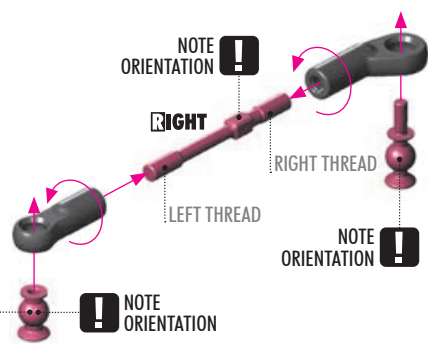
LEFT

RIGHT THREAD

**NOTE ORIENTATION**

**NOTE ORIENTATION**

**TIP**  
Install with HUDY Multi Tool.



**NOTE ORIENTATION**

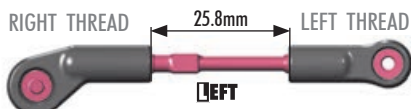
RIGHT

RIGHT THREAD

**NOTE ORIENTATION**

LEFT THREAD

**NOTE ORIENTATION**

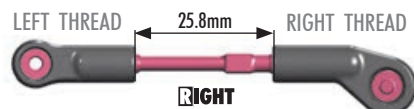


RIGHT THREAD

25.8mm

LEFT THREAD

LEFT



LEFT THREAD

25.8mm

RIGHT THREAD

RIGHT

# 7. STEERING

**4x** 908312  
SCH M3x12

**ASSEMBLED VIEW**

1+1mm 2mm

**!** XRAY logo towards the front.

1mm 1mm 2mm 3x12mm

**INITIAL SETTING**

1° 0.5°

All possible mounting alternatives of eccentric bushings.

CASTER	
UPPER CLIP (Behind arm)	LOWER SHIM (Behind arm)
4mm	2mm
3mm	21°
2mm	22.5°
1mm	24°
0	25.5°
	27°

**UPPER CLIP**  
Behind arm

**LOWER SHIM**  
Behind arm

**CASTER**

**SET-UP BOOK**  
ROLL CENTER  
CASTER

**2x** 902310  
SH M3x10

**2x** 960030  
N M3

**2x** L=R

**INITIAL SETTING**

**!** NOTE ORIENTATION  
Adjustment block towards outside.

3x10mm

**!** NOTE ORIENTATION  
Adjustment block towards outside.

Check for free movement.

Check for free movement.

**SET-UP BOOK**  
ACKERMANN  
BUMP STEER  
TOE-IN

# 8. CENTER DIFF & BRAKE

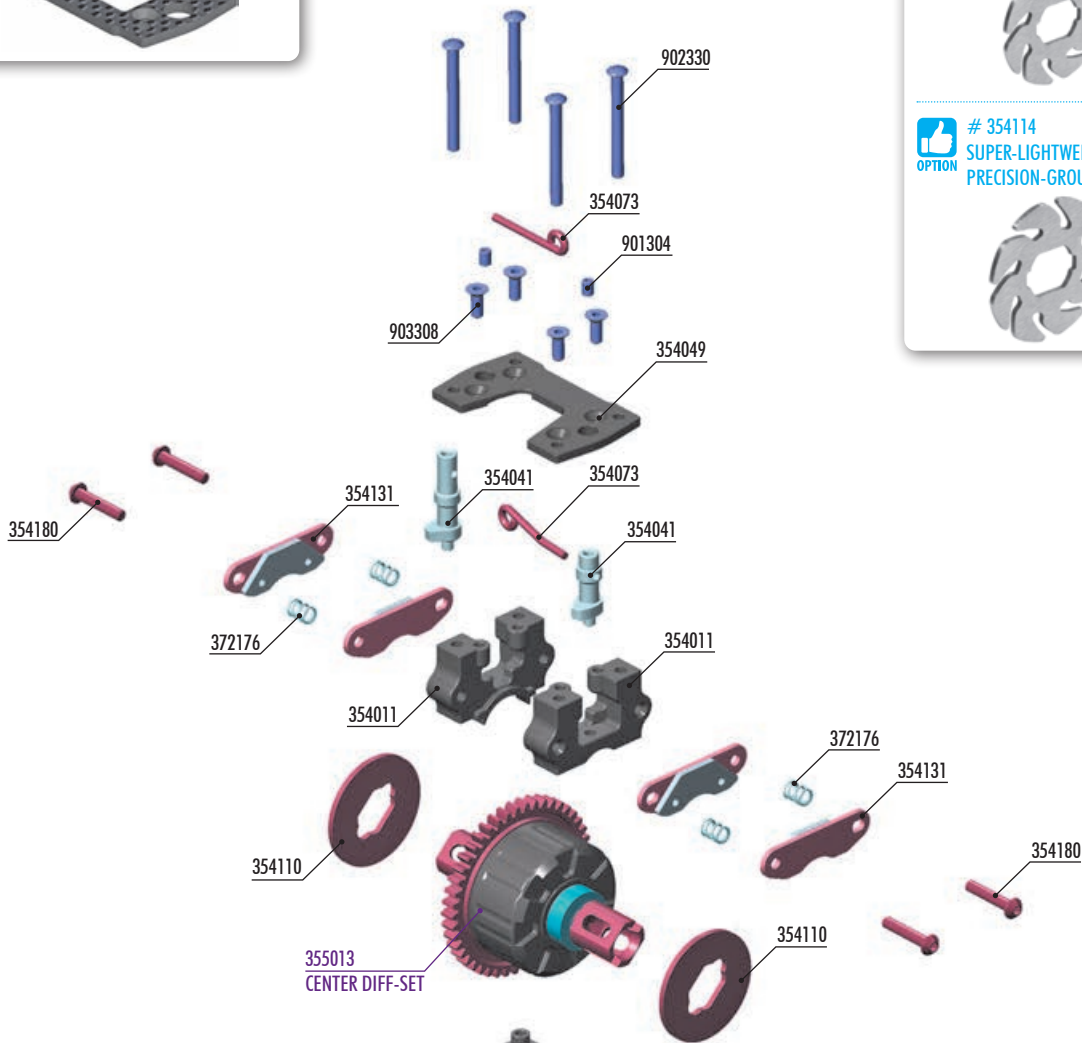
#354057  
CARBON CENTER DIFF MOUNTING PLATE  
OPTION



#354113  
SUPER-LIGHTWEIGHT VENTILATED BRAKE DISK  
PRECISION-GROUND (2)  
OPTION



# 354114  
SUPER-LIGHTWEIGHT VENTILATED BRAKE DISK  
PRECISION-GROUND - LARGE (2)  
OPTION



#354011-G  
CENTER DIFF MOUNTING PLATE SET  
HIGHER - GRAPHITE  
OPTION



#354121  
STEEL BRAKE PAD - LASER CUT (4)  
OPTION



#354130  
BRAKE PAD FIBER (4)  
OPTION



#354132  
BRAKE PAD "SLS" (4)  
OPTION



! CA It is necessary to glue the brake pad with strong CA glue suitable for steel.



BAG

08

- 354011 CENTER DIFF MOUNTING PLATE SET - HIGHER
- 354041 ALU BRAKE CAM POST & ROD (2+2) HARD COATED
- 354049 COMPOSITE CENTER DIFF MOUNTING PLATE
- 354073 BRAKE CAME ROD (1+1)
- 354110 VENTILATED BRAKE DISK - LASER CUT - PRECISION-GROUND
- 354131 GLUED BRAKE PAD SET - ULTRA-EFFICIENT (4)
- 354180 STEEL BRAKE PAD GUIDE PIN SCREW (2)
- 372176 SPRING 4.25 COILS 3.6x6x0.4mm; C=1.5 - GOLD (SOFT) (2)

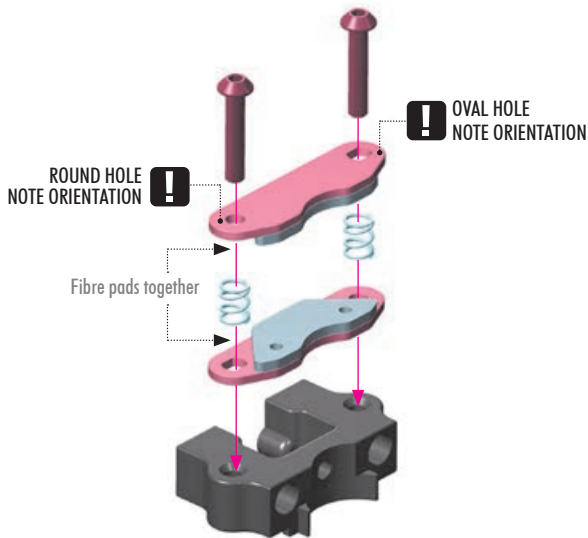
- 901304 HEX SCREW SB M3x4 (10)
- 902330 HEX SCREW SH M3x30 (10)
- 903308 HEX SCREW SFH M3x8 (10)
- 903412 HEX SCREW SFH M4x12 (10)

- 355013 CENTER DIFFERENTIAL - LARGE - SET

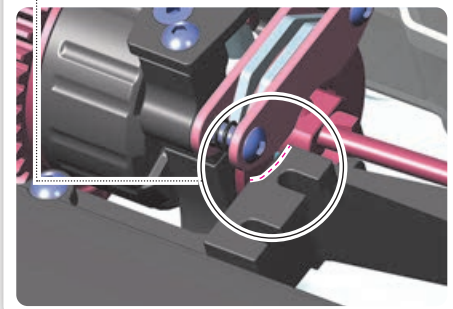


# 8. CENTER DIFF & BRAKE

2x L=R



When using ultra-efficient brake pads, carefully remove a small amount of material from radio tray as shown.



#354121  
STEEL BRAKE PAD - LASER CUT (4)  
OPTION



#354130  
BRAKE PAD FIBER (4)  
OPTION

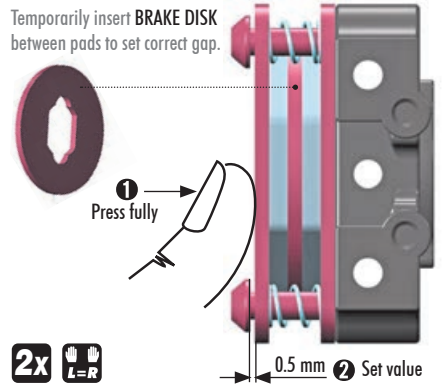


#354132  
BRAKE PAD "SLS" (4)  
OPTION



It is necessary to glue the brake pad with strong CA glue suitable for steel.

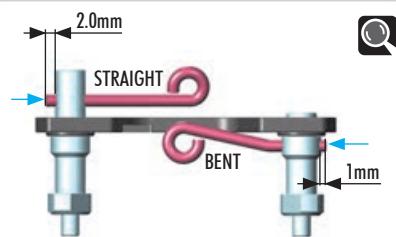
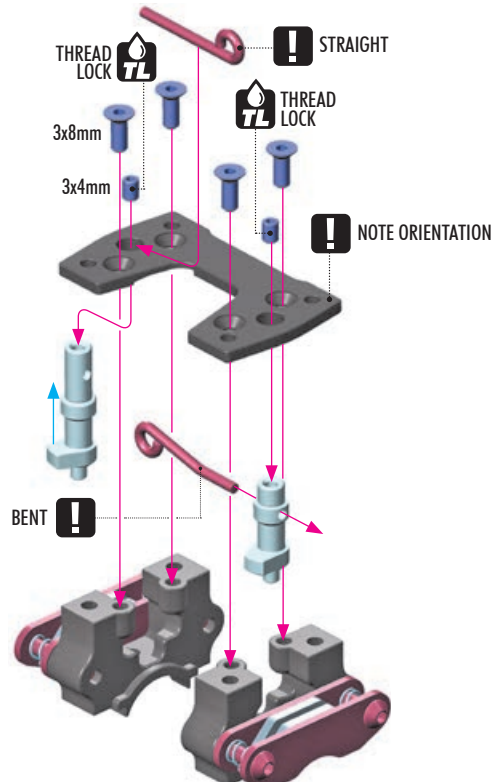
Temporarily insert **BRAKE DISK** between pads to set correct gap.



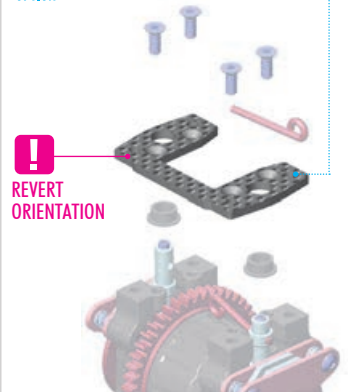
2x L=R

2x 901304  
SB M3x4

4x 903308  
SFH M3x8



#354057  
CARBON CENTER DIFF MOUNTING PLATE  
OPTION



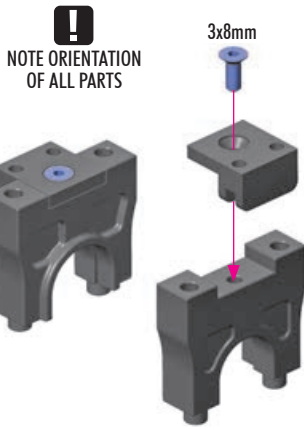
# 8. CENTER DIFF & BRAKE



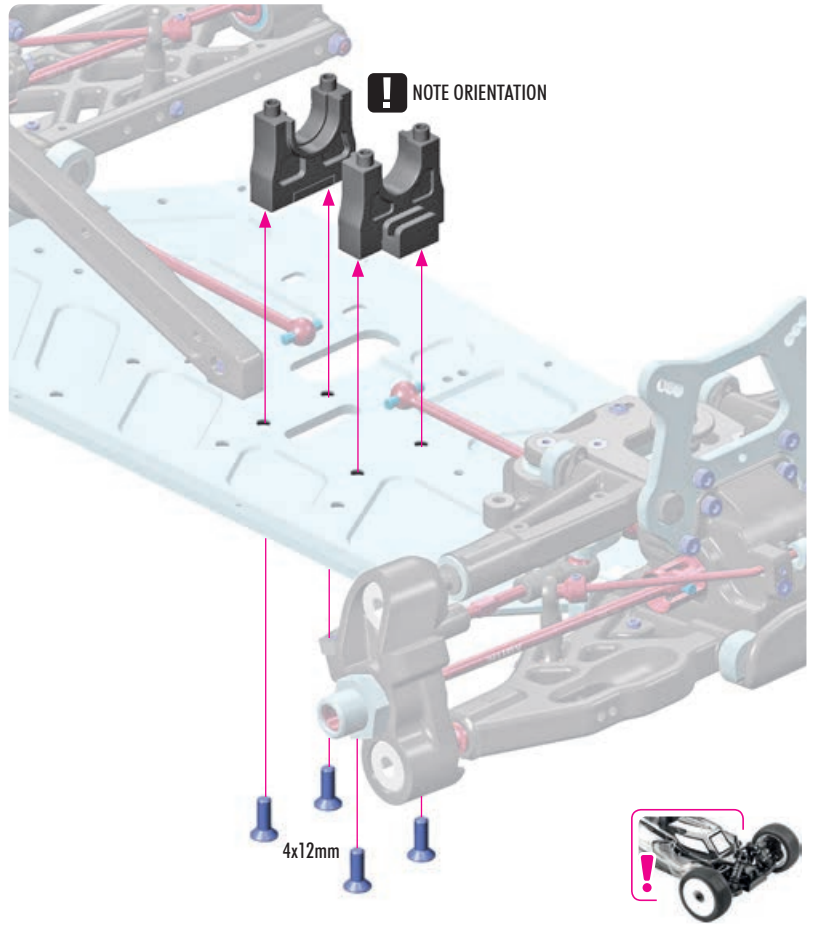
2x 903308  
SFH M3x8



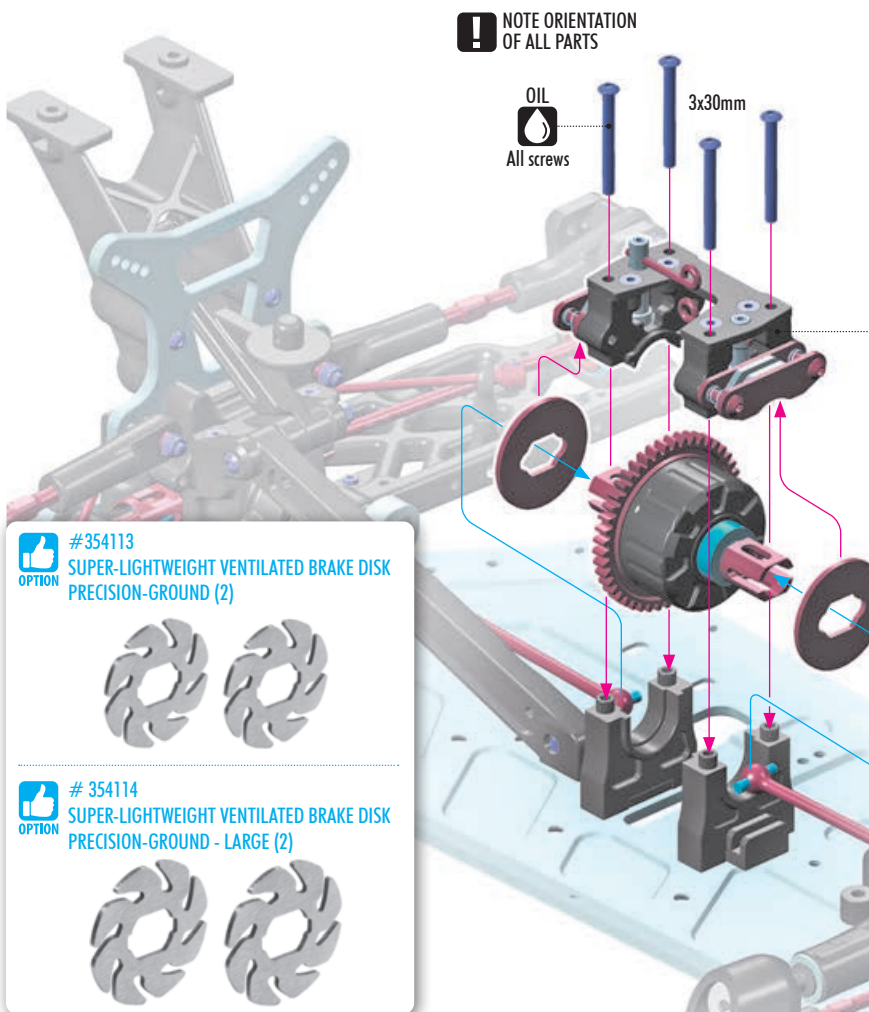
4x 903412  
SFH M4x12



**#354011-G**  
CENTER DIFF MOUNTING PLATE SET  
HIGHER - GRAPHITE



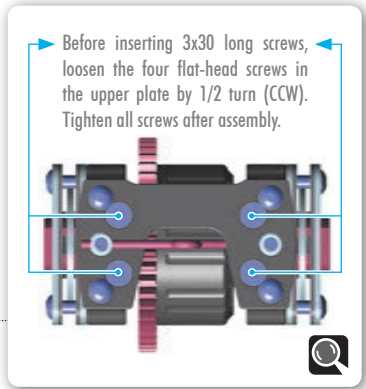
4x 902330  
SH M3x30



**#354113**  
SUPER-LIGHTWEIGHT VENTILATED BRAKE DISK  
PRECISION-GROUND (2)



**# 354114**  
SUPER-LIGHTWEIGHT VENTILATED BRAKE DISK  
PRECISION-GROUND - LARGE (2)



Insert brake disk  
between brake pads.

# 9. FUEL TANK & ENGINE



#358709  
ALU MONOBLOCK ENGINE MOUNT - SWISS 7075 T6



#358718  
ALU STAND (FX, NOVAROSS, MAX, SIRIO)



#358719  
ALU STAND (PICCO, REDS, ORION, LRP, OS, ULT. RACING)



#351159-S  
COMPOSITE CHASSIS SIDE GUARD L+R - SOFT



#358400  
XRAY COMPLETE 4-SHOE CLUTCH SET



### 4-SHOE CLUTCH SHOES

#	Material	Count	Weight	GRIP	OPTION
#358457	ALU HARD	(4)	1.00g	HIGH	OPTION
#358456	ALU MED	(4)	1.00g		OPTION
#358461	GRAPHITE	(4)	1.00g		OPTION
#358460	ALU HARD	(4)	1.15g		OPTION
#358459	ALU MEDIUM	(4)	1.15g	LOW	INCLUDED
#358458	ALU SOFT	(4)	1.15g		OPTION



### CLUTCH SPRINGS (4pcs)

#	Material	Color	RPM	OPTION
#358480	SOFT	GOLD	EARLY	INCLUDED
#358481	MEDIUM	GREY	LATE	OPTION
#358482	HARD	SILVER		OPTION



### CLUTCHBELL 4 SHOES CLUTCH

#358413	13T	OPTION
#358413-L	13T Lightweight	OPTION
#358414-L	14T Lightweight	OPTION



#650105  
FX K303



- 3 PORTS
- DLC
- CERAMIC BEARING
- BALANCED

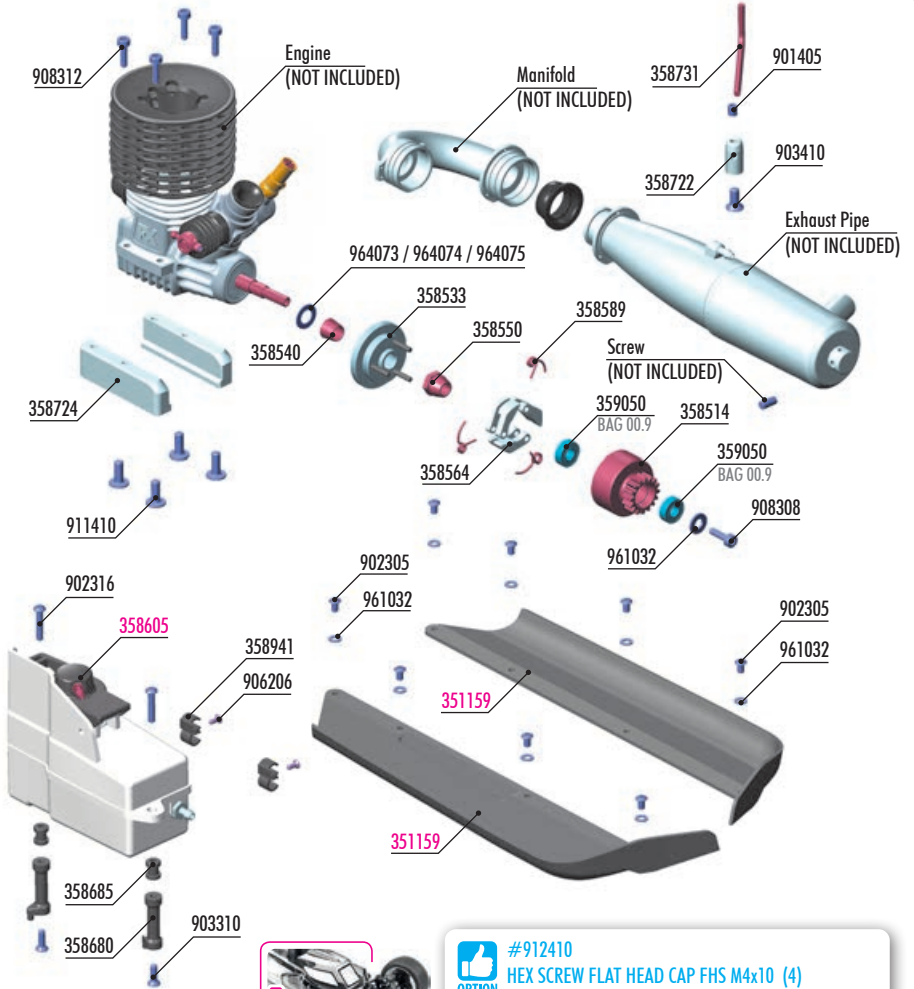
FX EUROPEAN CHAMPION



#659505 FX MUFFLER 3.5CC EFRA 2131 + MANIFOLD M - CHROME  
#659558 FX MUFFLER 3.5CC EFRA 2169 + MANIFOLD - MEDIUM



FX EUROPEAN CHAMPION



### CLUTCH SHOE

#358563	GRAPHITE (2)	OPTION
#358564	ALU - HARD (3)	INCLUDED



#353250  
CARBON BRACE FOR CHASSIS SIDE GUARDS - SET



#912410  
HEX SCREW FLAT HEAD CAP FHS M4x10 (4)



#358660  
CARBON 125CC FUEL TANK GUARD



### HIGH TORQUE CLUTCH SPRING

#358588	GRAY	MEDIUM	OPTION
#358589	SILVER	HARD	INCLUDED



### CLUTCHBELL 3 SHOES CLUTCH

#358512	12T	OPTION
#358513	13T	OPTION
#358514	14T	INCLUDED
#358525	15T	OPTION
#358517	13T Lightweight	OPTION
#358518	14T Lightweight	OPTION



358514	CLUTCH BELL 14T	902305	HEX SCREW SH M3x5 (10)
358533	FLYWHEEL - HIGH TORQUE - LIGHTWEIGHT	902316	HEX SCREW SH M3x16 (10)
358540	FLYWHEEL COLLAR	903310	HEX SCREW SFH M3x10 (10)
358550	FLYWHEEL NUT - HUDY SPRING STEEL™	903410	HEX SCREW SFH M4x10 (10)
358564	ALU CLUTCH SHOE - HARD (3)	906206	SCREW PHILLIPS FH 2.2x6 (10)
358589	HIGH TORQUE CLUTCH SPRINGS - HARD (3)	908308	HEX SCREW (CAP HEAD) 3x8 (10)
358680	FUEL TANK MOUNTING POST (2)	908312	HEX SCREW (CAP HEAD) 3x12 (10)
358685	FUEL TANK MOUNTING GROMMET (4)	911410	HEX SCREW FLANGED SH M4x10 (10)
358722	EXHAUST WIRE MOUNT SET	961032	WASHER S 3.2 (10)
358724	ALU ENGINE MOUNT - CNC MACHINED (L+R)	964073	WASHER S 7x10x0.2 (10)
358731	EXHAUST MOUNTING WIRE - LONG	964074	WASHER S 7x10x0.3 (10)
358941	COMPOSITE TUBING HOLDER FOR FUEL TANK (2)	964075	WASHER S 7x10x0.5 (10)
359050	BALL-BEARING 5x10x4 STEEL SEALED - GREASE - V2 (2)	351159	CHASSIS SIDE GUARDS L+R
901405	HEX SCREW SB M4x5 (10)	358605	FUEL TANK 125CC WITH FLOATING FILTER & TRANSIENT JET



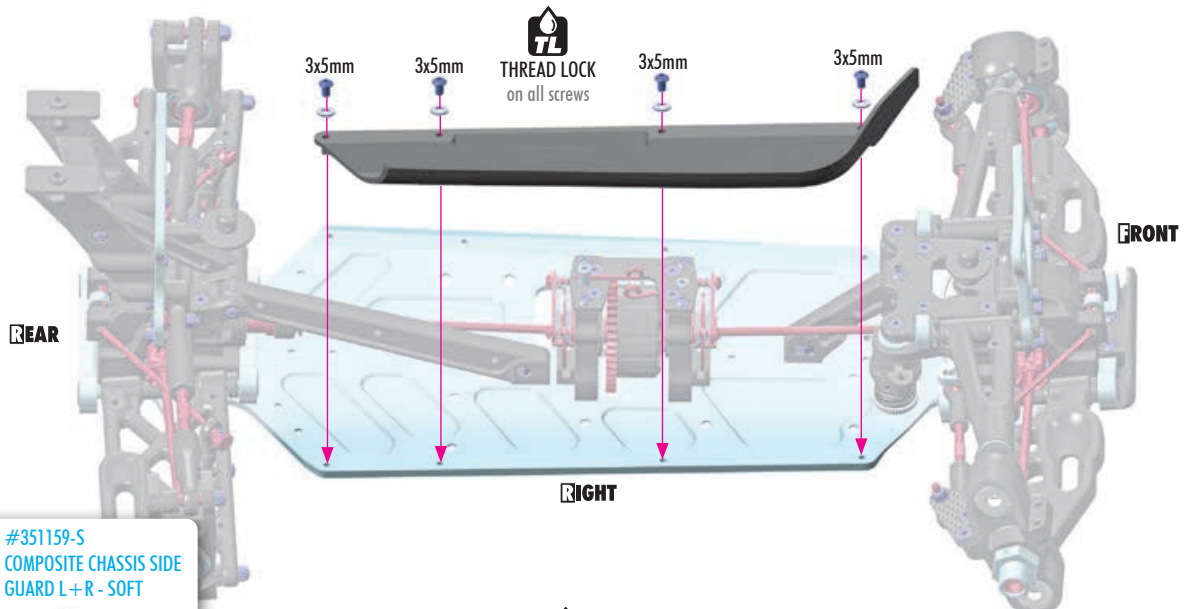
# 9. FUEL TANK & ENGINE



4x 902305  
SH M3x5



4x 961032  
S 3.2



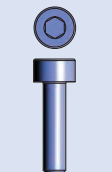
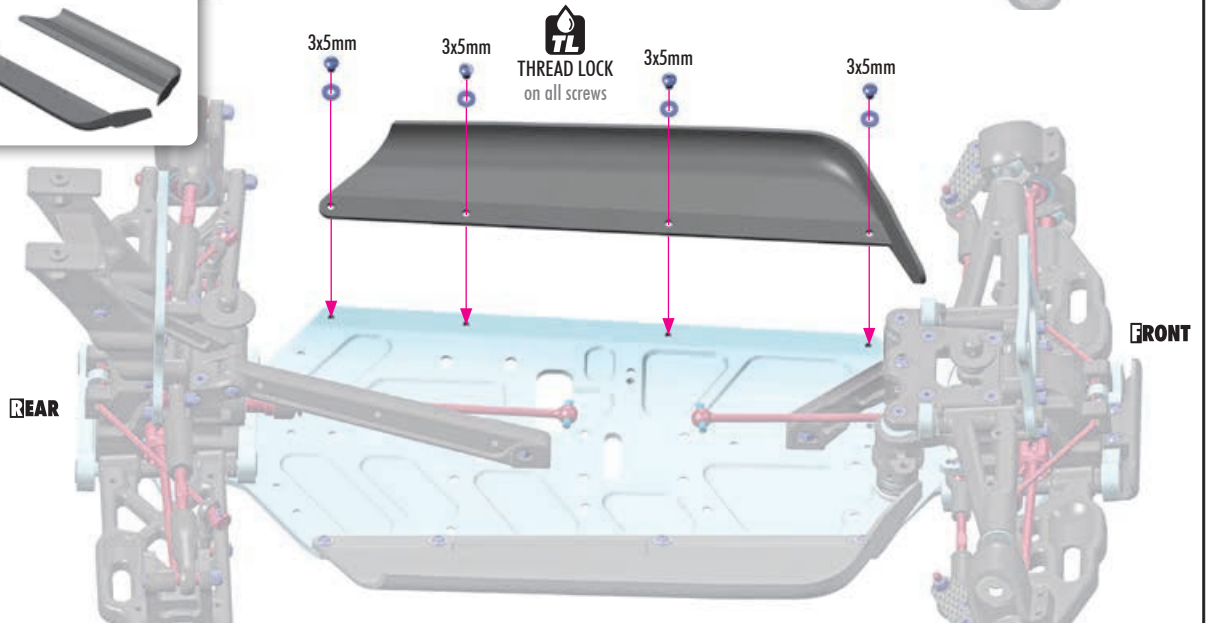
**#351159-S**  
COMPOSITE CHASSIS SIDE  
GUARD L+R - SOFT



4x 902305  
SH M3x5



4x 961032  
S 3.2



4x 908312  
SCH M3x12



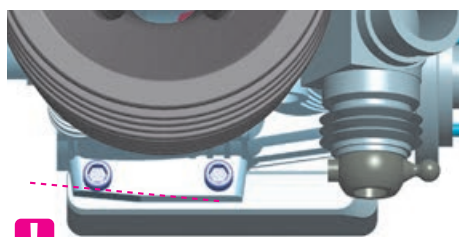
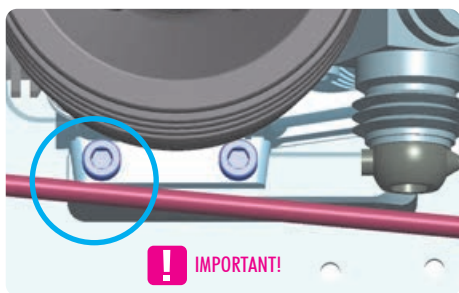
1x 964073  
S 7x10x0.2



1x 964074  
S 7x10x0.3

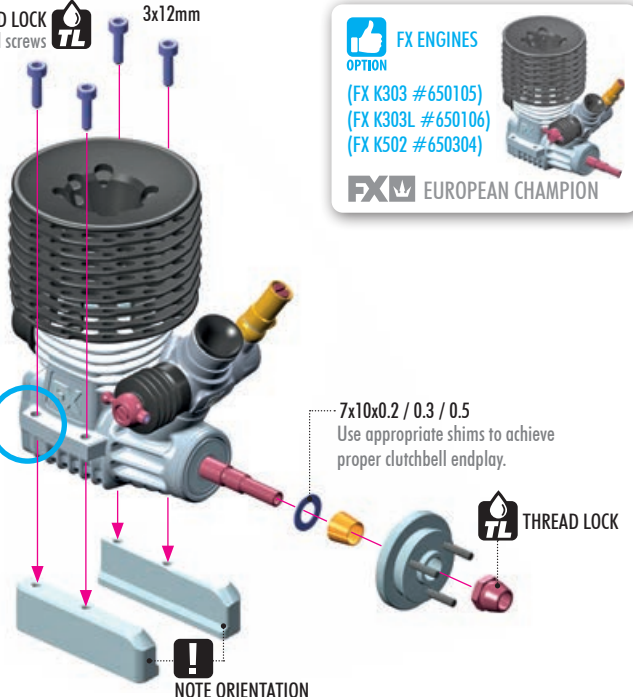


1x 964075  
S 7x10x0.5



When installing the engine, first check that the drive shaft DOES NOT touch the engine. If it does, remove material from the engine case as shown to create clearance between the engine and driveshaft.

THREAD LOCK **TL** on all screws 3x12mm



# 9. FUEL TANK & ENGINE



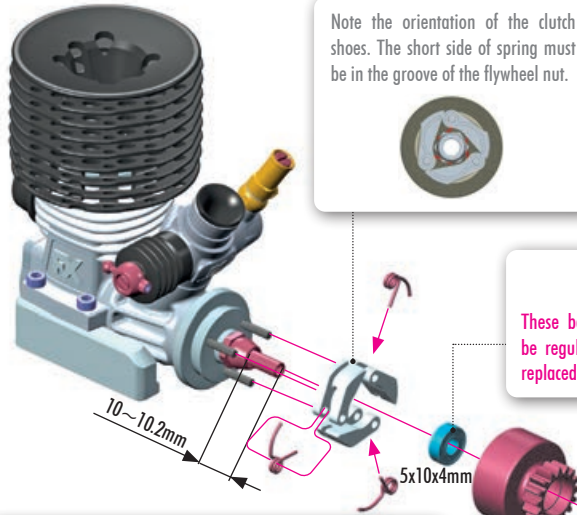
2x 359050  
BB 5x10x4



1x 908308  
SCH M3x8



1x 961032  
S 3.2



**GEAR RATIO** Final Drive Ratio

$$(48 : 14) \times 3.54 = 12.14$$

(Center Spur) (Clutchbell) (Internal ratio) (FDR)

CLUTCH SHOE		
#358563	GRAPHITE (2)	OPTION
#358564	ALU - HARD (3)	INCLUDED

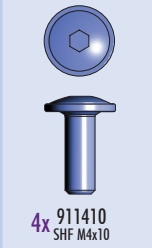
CLUTCHBELL 3 SHOE CLUTCH		
#358512	12T	OPTION
#358513	13T	OPTION
#358514	14T	INCLUDED
#358525	15T	OPTION
#358517	13T Lightweight	OPTION
#358518	14T Lightweight	OPTION

HIGH TORQUE CLUTCH SPRING		
#358588	GRAY	MEDIUM OPTION
#358589	SILVER	HARD INCLUDED

**TIP** Hold the flywheel using HUDY Flywheel Tool #182016.

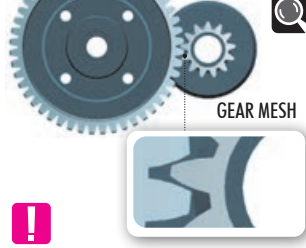
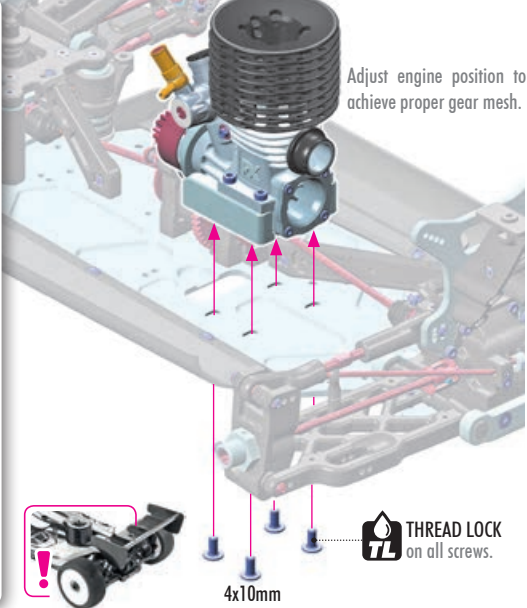
**TIP** Tighten the clutch nut using HUDY tool #107581.

**SET-UP BOOK**  
CLUTCH SPRINGS  
CLUTCH SHOE



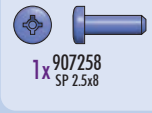
- #358709 ALU MONOBLOCK ENGINE MOUNT SWISS 7075 T6
- #358718 ALU STAND (FX, NOVAROSS, MAX, SIRIO)
- #358719 ALU STAND (PICCO, REDS, ORION, LRP, OS, ULT. RACING)
- #912410 HEX SCREW FLAT HEAD CAP FHS M4x10 (4)

**SET-UP BOOK**  
GEARING  
GEAR MESH ADJ.

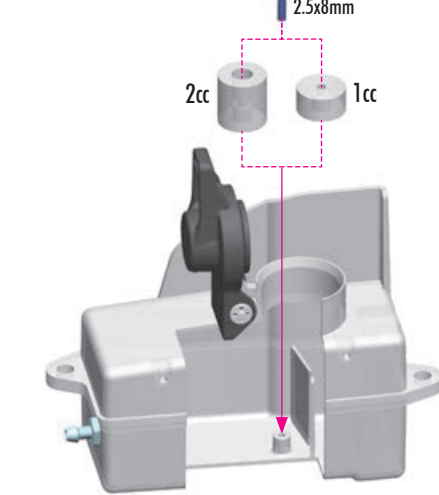


**EXTREMELY IMPORTANT**

It is very important that your XBB has properly-adjusted gear mesh. Adjust the gear mesh so there is adequate (or slightly larger) space between the spur gear and clutchbell teeth. Adjust the gear mesh by sliding the engine mounts in the slots of the chassis. You should be able to rock one gear back and forth slightly while holding the other one firmly. Be sure to check the gear mesh all the way around the spur gear. Tighten the screws once the engine alignment and gear mesh are correct, and then re-check the gear mesh to ensure the engine mounts did not move.



1x 907258  
SP 2.5x8



The fuel tank volume can be adjusted using the included inserts. The inserts reduce fuel capacity inside the tank to adjust for fuel filter and fuel line capacity and ensure a legal fuel volume for racing.

Tube holders are easily connected to the fuel tank by screws. Using screws is much more secure than using glue to attach the holders to the fuel tank.

**2CC FUEL TANK INSERT**

The larger insert decreases the fuel tank volume by 2cc, and is recommended for use when the fuel filter is used.

**1CC FUEL TANK INSERT**

The smaller insert decreases the fuel tank volume by 1cc.

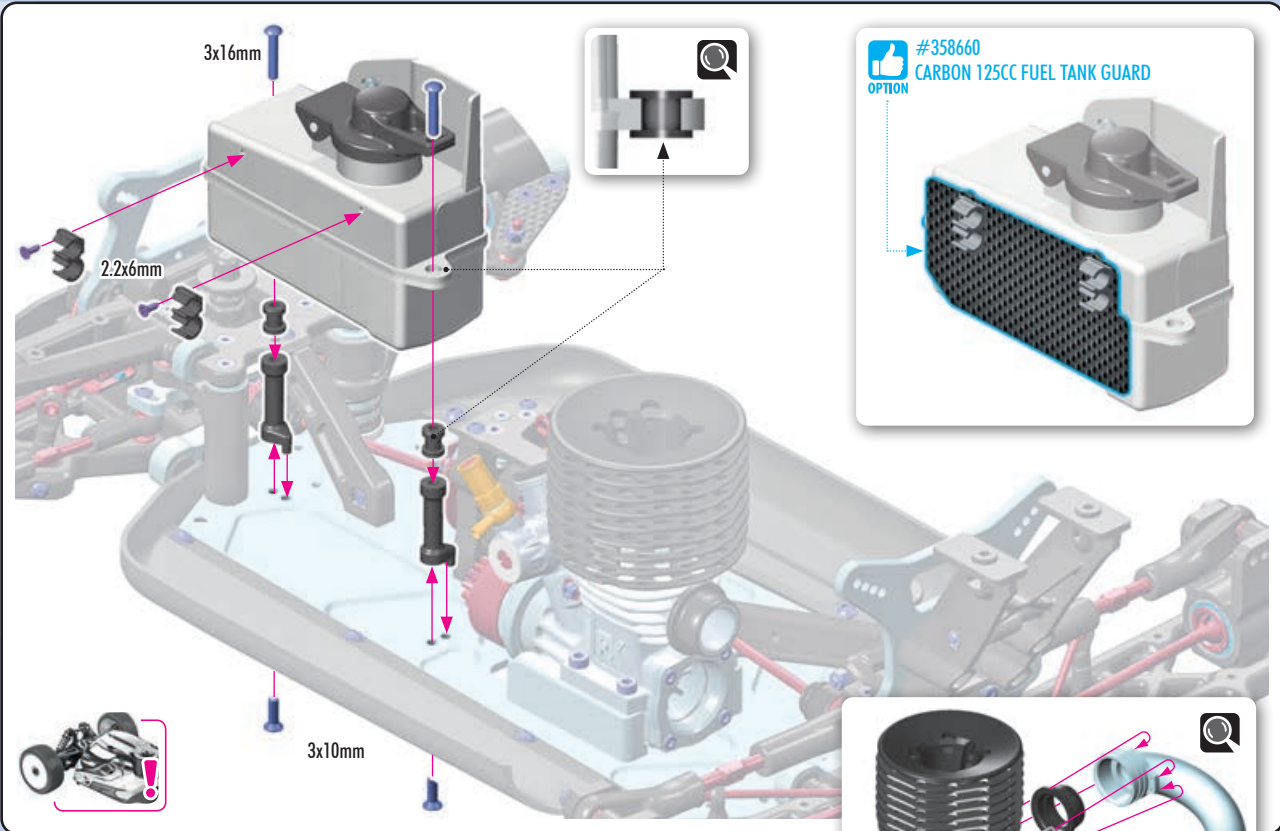
**NOTE ORIENTATION**



**NOTE:** The fuel tank insert can be easily mounted to the bottom of the fuel tank using the provided screw, when the fuel tank cap is opened fully.

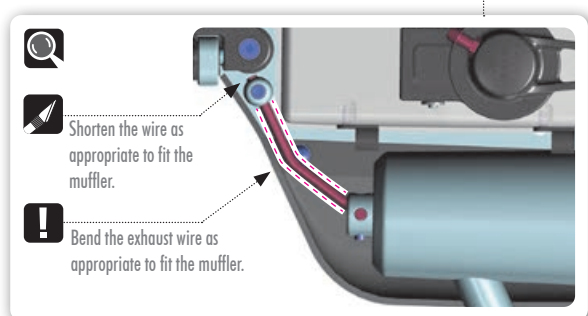
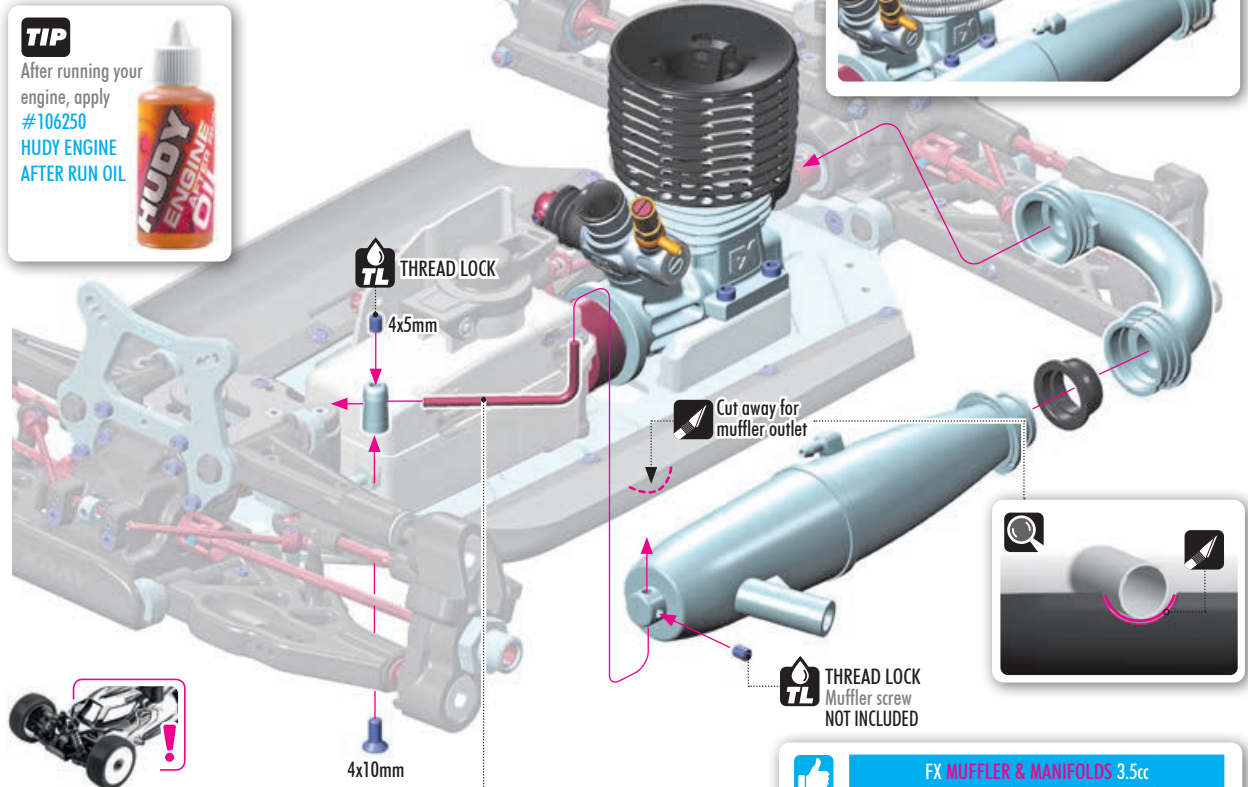


# 9. FUEL TANK & ENGINE

-  2x 902316 SH M3x16
-  2x 903310 SFH M3x10
-  2x 906206 SFP 2.2x6



-  1x 901405 SB M4x5
-  1x 903410 SFH M4x10



**OPTION**

FX MUFFLER & MANIFOLDS 3.5cc				
#659505	EFRA 2131	MEDIUM	CHROME	OPTION
#659506	EFRA 2131	MEDIUM	-	OPTION
#659558	EFRA 2169	MEDIUM	-	OPTION

FX MUFFLER 3.5cc		
#659503	EFRA 2131	OPTION
#659508	EFRA 2169	OPTION

FX MANIFOLDS 3.5cc		
#659704	MEDIUM	OPTION
#659706	SHORT-MEDIUM	OPTION





# 10. RADIO CASE

306310

902310

356006

902312

902306 (NOT INCLUDED)

Personal transponder (NOT INCLUDED)

Servo Screw (NOT INCLUDED)

356200

902314

352460

352460

352670

902312

302611

960030

Receiver (NOT INCLUDED)

356006

356006

902314

961032

961032

Receiver battery (NOT INCLUDED)

356006

Throttle Servo (NOT INCLUDED)

356140

356219

903412

902314

Steering Servo (NOT INCLUDED)

356140

356219

903412

#356005  
OPTION CARBON BATTERY & RECEIVER COVER PLATE FOR HARD RADIO CASE

#293407 23T OPTION  
#293408 24T OPTION  
#293409 25T OPTION

CLAMP ALU SERVO HORNS

#293501 23T OPTION  
#293502 24T OPTION  
#293503 25T OPTION

ALU SERVO HORNS

**BAG**

**10**

302611	ADJ. TURNBUCKLE L/R 35mm - HUDY SPRING STEEL™ (2)	902310	HEX SCREW SH M3x10 (10)
352460	PIVOT BALL 5.8 (10)	902312	HEX SCREW SH M3x12 (10)
352670	SERVO BALL JOINT 5.8mm (4)	902314	HEX SCREW SH M3x14 (10)
356006	COMPOSITE RADIO CASE SET - SPLIT	903412	HEX SCREW SFH M4x12 (10)
356050	BATTERY CABLE WITH SWITCH (OPTION)	960030	NUT M3 (10)
356140	COMPOSITE SERVO MOUNT - SMALL (2)	961032	WASHER S 3.2 (10)
356200	BRAKE/THROTTLE ARMS & STEERING SERVO ARMS - SET	306310	ANTENNA TUBE (2)
356219	COMPOSITE SERVO SHIMS 1.0, 1.5 & 2.5mm (2+2+2)		
902306	HEX SCREW SH M3x6 (10) (OPTION)		

1x 902312 SH M3x12

**TIP**  
Install with HUDY Multi Tool.

RIGHT THREAD

LEFT THREAD

approx. 19.5mm

The length of the linkages varies according to the type of servo.

NOTE ORIENTATION

Use appropriate servo arm:

Market servo horn

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

Tooth

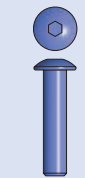
NOTE ORIENTATION

OPTION	#293407	23T	OPTION
OPTION	#293408	24T	OPTION
OPTION	#293409	25T	OPTION

CLAMP ALU SERVO HORNS

OPTION	#293501	23T	OPTION
OPTION	#293502	24T	OPTION
OPTION	#293503	25T	OPTION

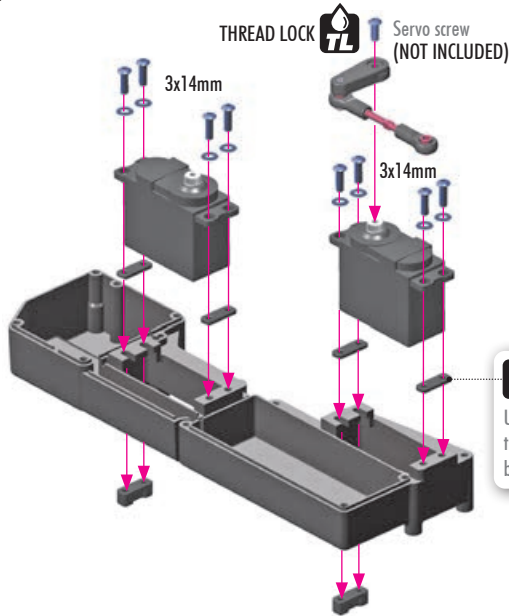
ALU SERVO HORNS



8x 902314  
SH M3x14

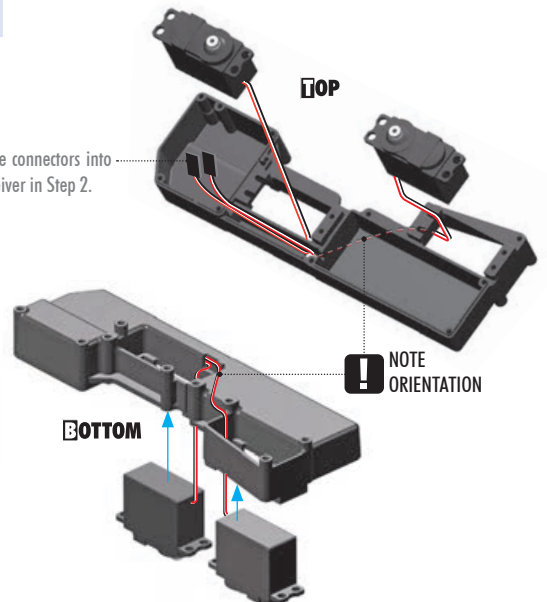


8x 961032  
S3.2



step 1

Plug the connectors into the receiver in Step 2.

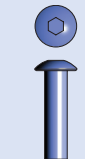


**NOTE**  
Use the shims only when the servo extends below the bottom of the radio case.

**NOTE**  
ORIENTATION

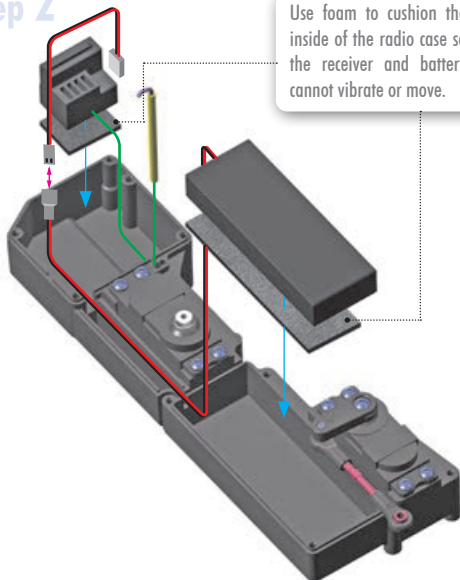


7x 902310  
SH M3x10

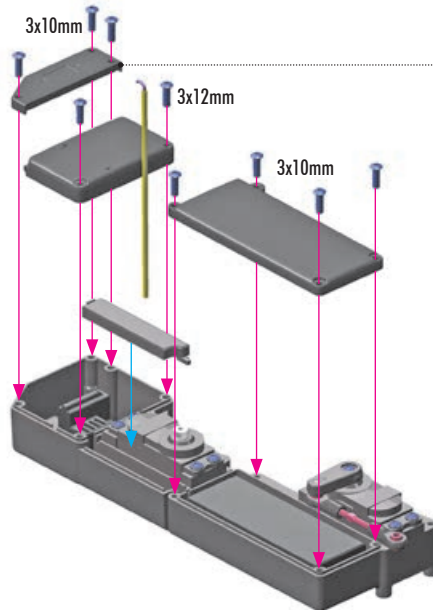


2x 902312  
SH M3x12

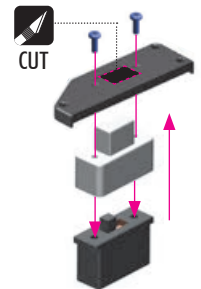
step 2



Use foam to cushion the inside of the radio case so the receiver and battery cannot vibrate or move.

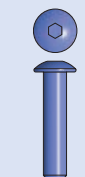


**TIP**  
2x 907206  
SP M2x6



**#356050 SWITCH OPTION**

When receiver switch is used, use hobby knife to CAREFULLY remove the material from the cover and mount the switch.



1x 902314  
SH M3x14



6x 903412  
SFH M4x12



1x 960030  
N M3

Personal transponder (NOT INCLUDED)  
#902306 Screws (NOT INCLUDED)

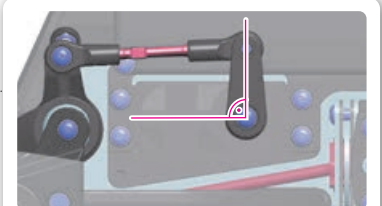
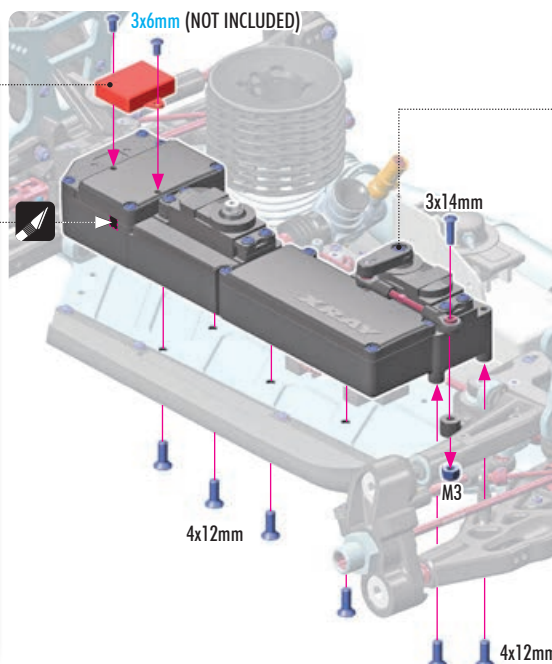
When the transponder is placed on top of the radio case cover, trim material from the case to allow the transponder wires to enter the case.

**ALTERNATIVE 1**

When the transponder is placed at the top of the radio box, cut out some material from the radio box in order to allow the transponder wire to come inside.

**ALTERNATIVE 2**

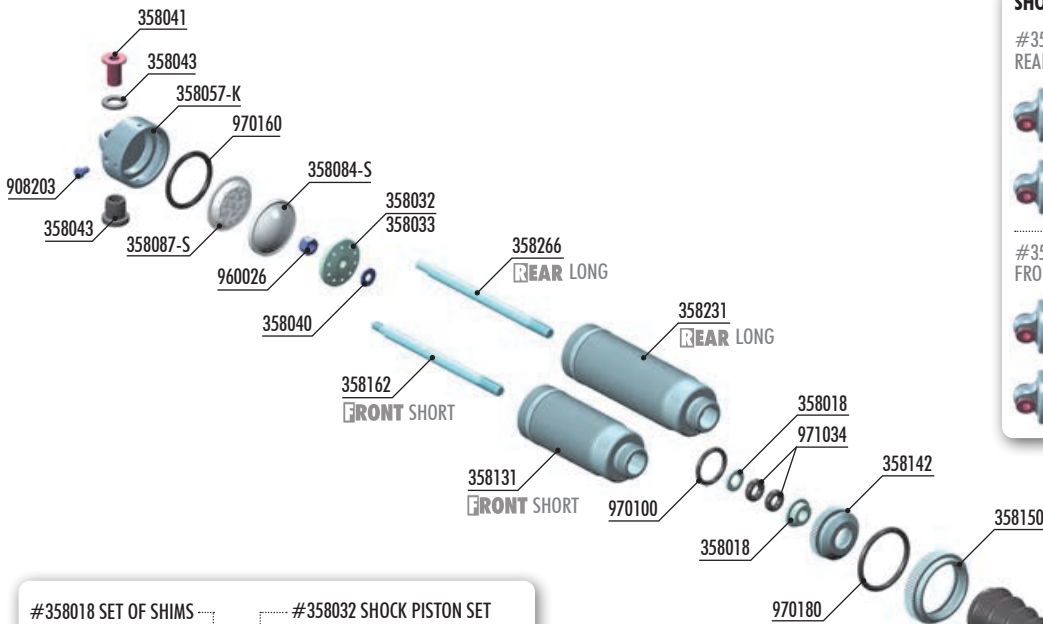
Place the transponder inside of the radio box by using double-sided tape.



**NOTE ORIENTATION**  
of servo arm when servo is at neutral.

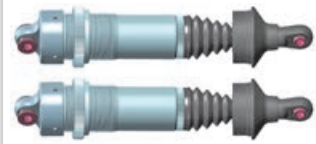


# 11. SHOCK ABSORBERS

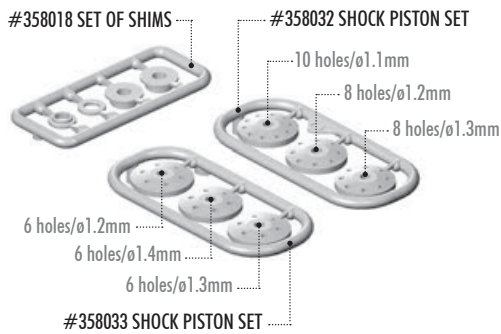
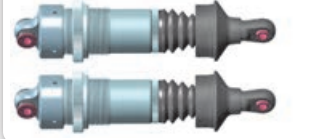


## SHOCKS SPARE PARTS

#358211  
REAR SHOCK ABSORBERS 55mm COMPLETE SET (2)



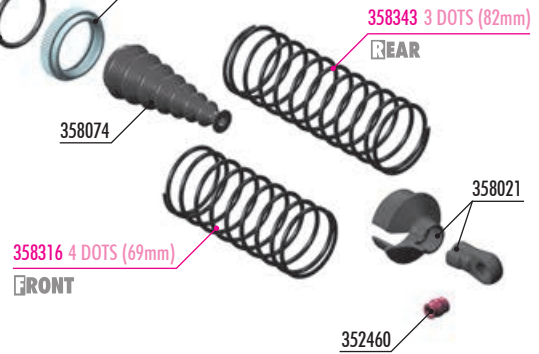
#358111  
FRONT SHOCK ABSORBERS 44.5mm COMPLETE SET (2)



SHOCK RUBBER MEMBRANE (4)			
#358084-S	RIBBED	SOFT	INCLUDED
#358087-S	CELL	SOFT	INCLUDED
#358087-M	CELL	MEDIUM	OPTION

SHOCK PISTONS			
#358027	PISTON 5-HOLE (1.5mm) & 2-HOLE (1.0mm)	(4)	OPTION
#358028	PISTON 6-HOLE (1.3mm) & 2-HOLE (1.1mm)	(4)	OPTION
#308029	PISTON 6-HOLE (1.4mm) & 2-HOLE (1.1mm)	(4)	OPTION
#358030	PISTON 8-HOLE (1.2mm) & 2-HOLE (1.2mm)	(4)	OPTION
#358031	PISTON 8-HOLE (1.3mm) & 2-HOLE (1.2mm)	(4)	OPTION

SHOCK SPRINGS					
#358315	C=0.77-0.80	3 DOTS	69mm	FRONT	OPTION
#358316	C=0.80-0.83	4 DOTS	69mm	FRONT	INCLUDED
#358317	C=0.83-0.86	5 DOTS	69mm	FRONT	OPTION
#358342	C=0.66-0.68	2 DOTS	82mm	REAR	OPTION
#358343	C=0.68-0.70	3 DOTS	82mm	REAR	INCLUDED
#358344	C=0.70-0.73	4 DOTS	82mm	REAR	OPTION
#358334	C=0.66-0.68	2 DOTS	85mm	REAR	OPTION
#358335	C=0.68-0.70	3 DOTS	85mm	REAR	OPTION



## BAGS

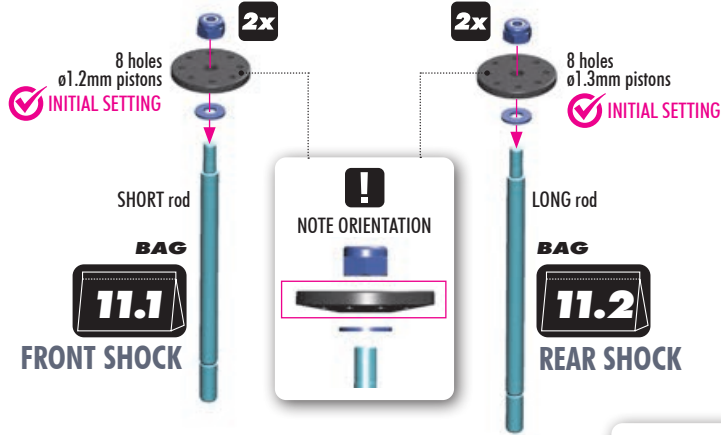
11.1

11.2

352460	PIVOT BALL 5.8 - V3 (10)	908203	HEX SCREW SOCKET HEAD CAP M2x3 (10)
358018	COMPOSITE SET OF SHIMS FOR SHOCKS - V2 (2)	960026	NUT M2.5 - SHORT (10)
358021	COMPOSITE SHOCK PARTS WITH KEYED BALL JOINTS	970100	O-RING 10 x 1.5 (10)
358032	SHOCK PISTON SET 8-HOLE (1.2; 1.3) 10-H. (1.1mm) - DELRIN - V3	970160	O-RING 16 x 2.0 (10)
358033	COMPOSITE SHOCK 6-HOLE PISTON SET (1.2; 1.3; 1.4mm) - DELRIN - V3	970180	O-RING 18 x 1.8 (10)
358040	HARDENED SHOCK SHIMS (4)	971034	SILICONE O-RING 3.5x2 (10)
358041	STEEL SHOCK BUSHING (2)	358316	XRAY FRONT SPRING 69mm - 4 DOTS (2)
358043	COMPOSITE SHOCK BUSHING & SHIM (2+2)	358343	XRAY REAR SPRING 82mm - 3 DOTS (2)
358057-K	MULTI ADJ. 3-IN-1 ALU SHOCK CAP - SWISS 7075 T6 (2)	358111	FRONT SHOCK ABSORBERS 44.5mm - COMPLETE SET (2)
358074	FOLDING SHOCK BOOT (4)	358211	REAR SHOCK ABSORBERS 55mm - COMPLETE SET (2)
358084-S	SHOCK RUBBER MEMBRANE BOTTOM RIBBED - SOFT (4)		
358087-S	SHOCK RUBBER MEMBRANE CELL - SOFT (4)		
358131	ALU FRONT SHOCK BODY 44.5mm - SWISS 7075 T6 (2)		
358142	ALU SHOCK BODY NUT FOR SHOCK BOOT (2)		
358150	ALU SHOCK BODY ADJ. NUT (2)		
358162	FRONT SHOCK SHAFT 56mm (2)		
358231	ALU REAR SHOCK BODY 55mm - SWISS 7075 T6 (2)		
358266	REAR SHOCK SHAFT 66.5mm (2)		



# 11. SHOCK ABSORBERS



- OPTION**
- #358027 PISTON 5-HOLE (1.5mm) & 2-HOLE (1.0mm) (4)
  - #358028 PISTON 6-HOLE (1.3mm) & 2-HOLE (1.1mm) (4)
  - #308029 PISTON 6-HOLE (1.4mm) & 2-HOLE (1.1mm) (4)
  - #358030 PISTON 8-HOLE (1.2mm) & 2-HOLE (1.2mm) (4)
  - #358031 PISTON 8-HOLE (1.3mm) & 2-HOLE (1.2mm) (4)

**SET-UP BOOK**  
SHOCK DAMPING  
SHOCK PISTONS



**DO NOT OVERTIGHTEN**  
The self-locking nut is overtightened, causing distortion of the piston. This will negatively affect the free movement of the piston in the shock body.

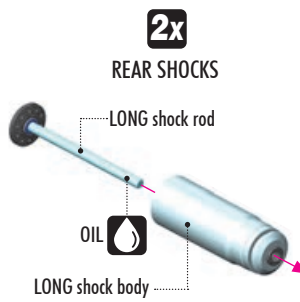
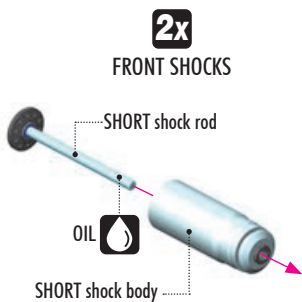
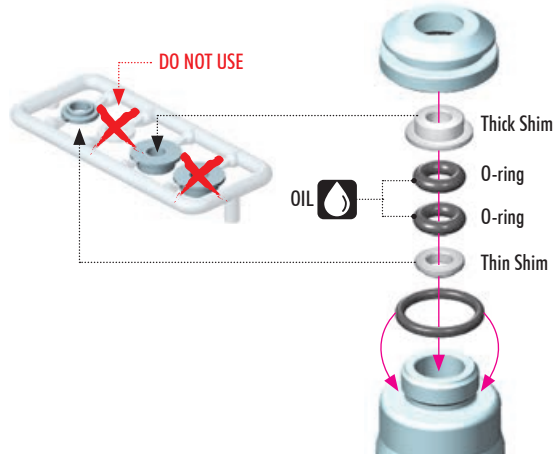


**TIGHTEN GENTLY**  
The self-locking nut is gently tightened. The piston remains undistorted and fits inside the shock body perfectly, ensuring smooth movement of the piston.



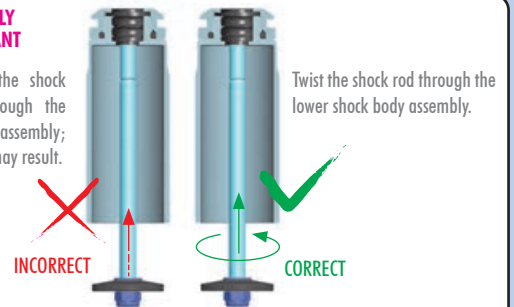
**2x** FRONT SHOCKS (SHORT)  
**2x** REAR SHOCKS (LONG)

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

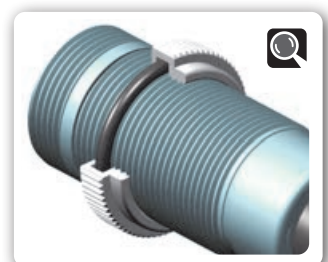
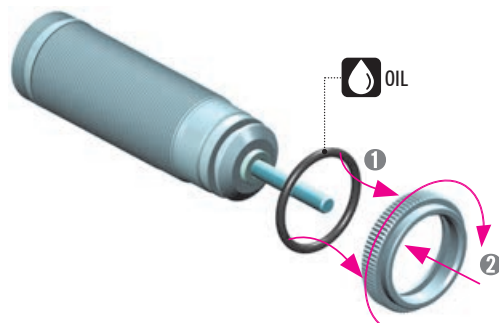


**! EXTREMELY IMPORTANT**

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



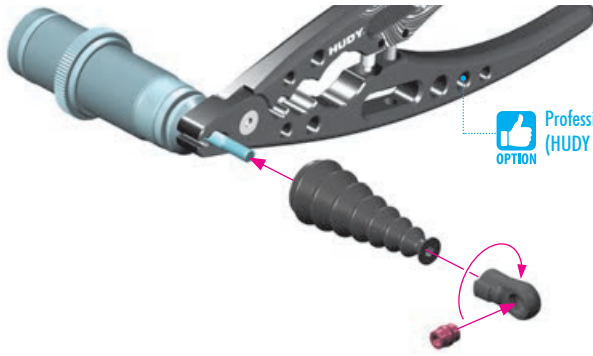
**2x** FRONT SHOCKS  
**2x** REAR SHOCKS



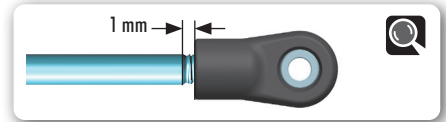
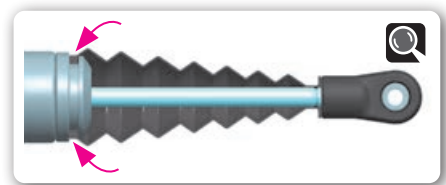
# 11. SHOCK ABSORBERS

**2x** FRONT SHOCKS

**2x** REAR SHOCKS



Professional Multi-Tool  
(HUDY #183011).  
OPTION



## SHOCK TYPE: CELL MEMBRANE

for LOW GRIP

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

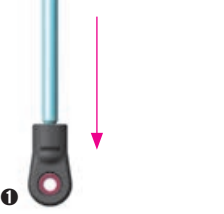
**Oil level after filling**

**CORRECT FILING**

**INCORRECT FILING**

**FRONT (SHORT)**  
Oil 600cSt

**REAR (LONG)**  
Oil 550cSt



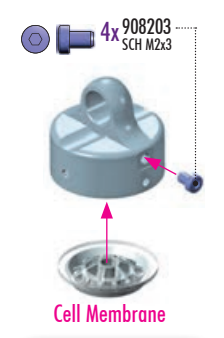
**1** Extend the shock shaft completely. Fill the shock body with the shock oil.



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



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



**4** Install the CELL shock membrane and screw into the groove in the upper shock cap.



**5** Gently place the shock cap assembly onto the filled shock body. **2** Slowly compress the shock shaft towards the top of the shock body and hold in this position. Excess oil will be expelled from the shock.



**6** While still holding the shock shaft in position, fully tighten the shock cap.

## SHOCK TYPE: RIBBED MEMBRANE

for BUMPY - HIGH GRIP

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

**Oil level after filling**

**CORRECT FILING**

**INCORRECT FILING**

**FRONT (SHORT)**  
Oil 600cSt

**REAR (LONG)**  
Oil 550cSt



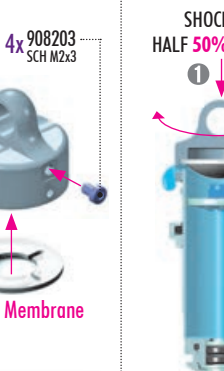
**1** Extend the shock shaft completely. Fill the shock body with the shock oil.



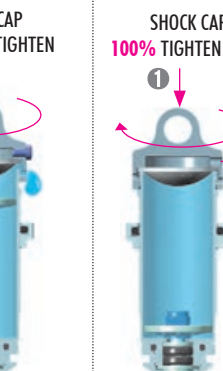
**2** Move the shock shaft up and down a few times to release the air bubbles trapped beneath the piston.



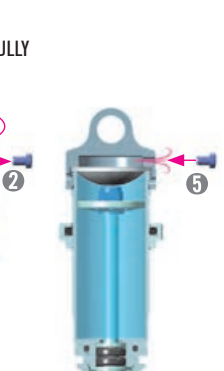
**3** Orient the filled shock vertically for several minutes with the shock shaft fully extended. The remaining air bubbles will release.



**4** Install the RIBBED shock membrane and screw into the groove in the upper shock cap.



**5** Gently place the shock cap assembly onto the filled shock body. **2** Slowly compress the shock shaft towards the top of the shock body and hold in this position. Excess oil will be expelled from the shock.



**6** Fully tighten the shock cap. **2** Loosen the cap screw. **3** Extend the shock shaft. **4** Slowly compress shock shaft completely into shock body, forcing air from the cap. **5** While still holding the shock shaft in compressed position, re-tighten screw to seal cap.

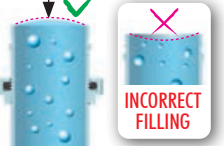
# 11. SHOCK ABSORBERS

SHOCK TYPE: **EMULSION**

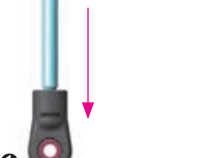
for DEFAULT STANDARD

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

**Oil level after filling**  
CORRECT FILLING



FRONT (SHORT)  
Oil 600cSt  
REAR (LONG)  
Oil 550cSt



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

**2**



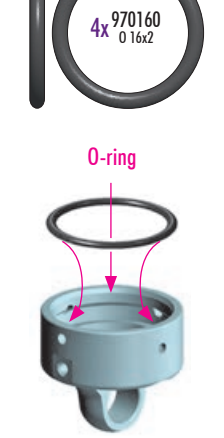
**2** Move the shock shaft up and down a few times to release the air bubbles trapped beneath the piston.

**3**



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

**4**



**4** Install o-ring in the cap.

**5**



**5** Fill the shock cap with oil up to the o-ring.

**2** SHOCK CAP  
100% TIGHTEN FULLY



**6** Carefully place the shock cap onto the oil filled shock body and tighten the cap. Some oil may spill from the shock during this process.

**7**

Slowly compress the shock shaft completely into the shock body. Excess oil will flow through the hole in the shock cap.



**7** GENTLY PUSH

**8**

With the shock shaft still compressed, tighten the screw.



**8**

**9**

6x push the shaft up and down.



**9** 20x UP & DOWN

**10**

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



**10**

**11**

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



**11** GENTLY PUSH

**12**

Tighten the screw.



**12**

**2x REAR SHOCKS**

LONG rear shock

**2x FRONT SHOCKS**

SHORT front shock

**REAR shock PRELOAD**

approx. 2mm

**FRONT shock PRELOAD**

approx. 2mm

**LONG spring**

**SHORT spring**

**SET-UP BOOK**

**IMPORTANT!** SPRING RATE SHOCK PRELOAD RIDE HEIGHT

**IMPORTANT!** Both rear shocks must be the same overall length.

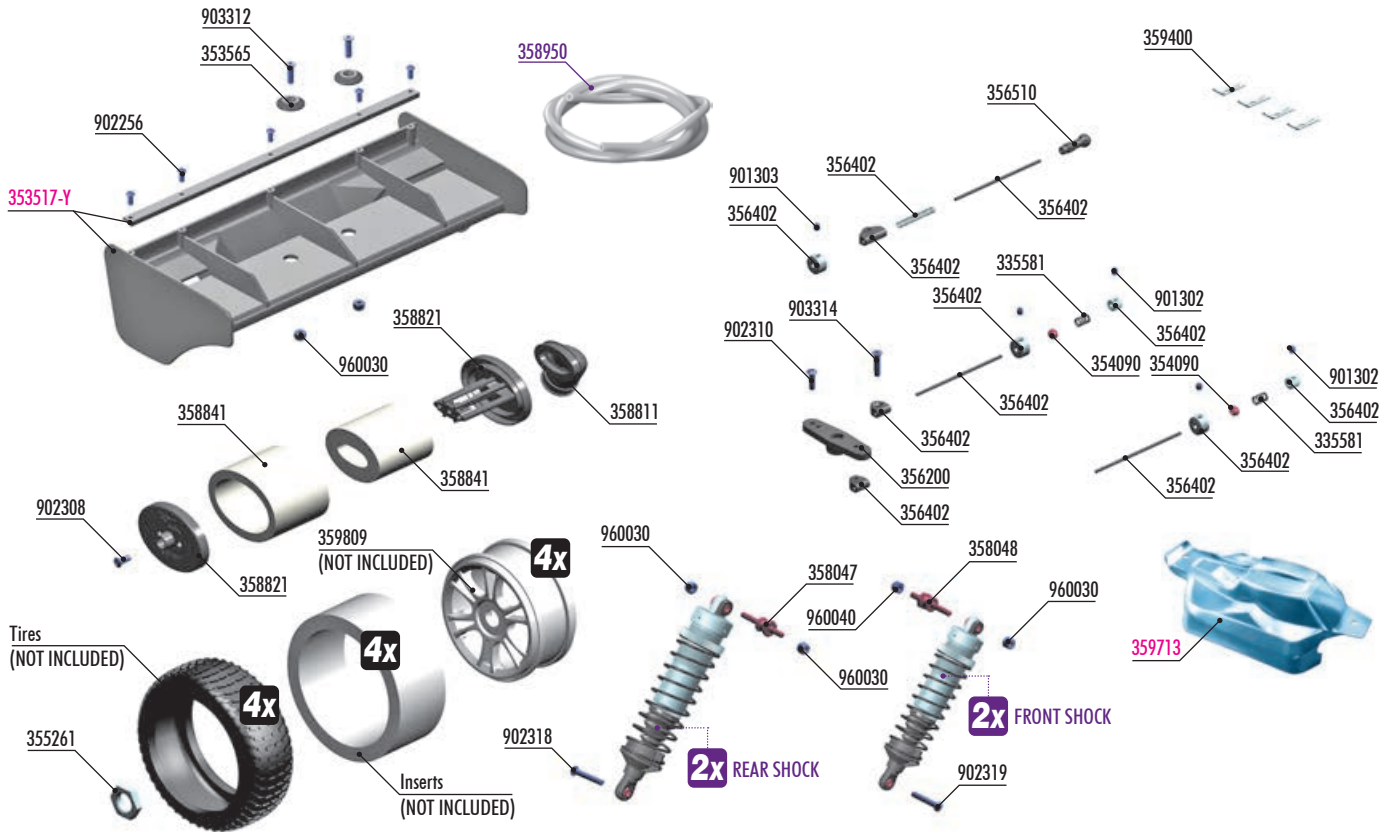
**IMPORTANT!** Both front shocks must be the same overall length.

**IMPORTANT!**

**FRONT & REAR SHOCKS**



# 12. FINAL ASSEMBLY



Tires (NOT INCLUDED)

Inserts (NOT INCLUDED)

2x FRONT SHOCK

2x REAR SHOCK

4x

4x

**WHEEL NUTS**

#355261	OPEN RIBBED	INCLUDED
#293560	COVERED RIBBED	OPTION
#355265	COVERED RIBBED	OPTION

**#358832 AIR FILTER RAIN COVER**

**SERVO BRACE LINK**

**XRAY XB8 BODIES**

#359712	HIGH-SPEED LIGHTWEIGHT	OPTION
#359713	"EAZY"	INCLUDED
#359714	"EAZY" LIGHTWEIGHT	OPTION

**HUDY CLAMP ALU SERVO HORNS**

#293444	23T	OPTION
#293445	24T	OPTION
#293446	25T	OPTION
#293447	23T	OPTION
#293448	24T	OPTION
#293449	25T	OPTION

**WINGS**

#353517-K	BLACK	OPTION
#353517	WHITE	OPTION
#353517-Y	YELLOW	INCLUDED
#353512	LEXAN®	OPTION

**HUDY REAR WING SHIM**

#293561	SILVER	OPTION
#293561-0	ORANGE	OPTION
#293561-K	BLACK	OPTION
#353561	SILVER	OPTION

**HUDY ALU SERVO HORNS**

#293504	23T	OPTION
#293505	24T	OPTION
#293506	25T	OPTION
#293507	23T	OPTION
#293508	24T	OPTION
#293509	25T	OPTION

**BAG**  
**12**

- 302630 ADJ. TURNBUCKLE L/R 20mm - HUDY SPRING STEEL™ (2) (OPTION)
- 302663 COMPOSITE BALL JOINT 4.9mm - OPEN - V2 (8) (OPTION)
- 303125 ALU SHIM 3x6x3.0mm (10) (OPTION)
- 335581 SPRING C=7.8 - MEDIUM - SILVER (2)
- 353565 COMPOSITE REAR WING SHIM - BLACK (2)
- 354090 BALL-SHAPED BRAKE SHIM (2)
- 355261 WHEEL NUT - RIBBED - HARD COATED (2)
- 356200 BRAKE/THROTTLE ARMS & SERVO ARMS - SET
- 356402 XB8 BRAKE/THROTTLE SYSTEM - SET - V2
- 356510 CLOSED BALL JOINT 3.9 (4)
- 358047 STEEL M3/M3 UPPER SHOCK MOUNT STAND OFF WITH HEX (2)
- 358048 STEEL M4/M3 UPPER SHOCK MOUNT STAND OFF WITH HEX (2)
- 358811 AIR FILTER ELBOW - LOW PROFILE
- 358821 AIR FILTER BODY & CAP - LOW PROFILE
- 358841 AIR FILTER FOAM & OIL - LOW PROFILE
- 358950 SILICONE TUBING 1m (2.4 x 5.5mm)
- 359400 BODY CLIP (10)
- 362280 ALU CONICAL SHIM 3x6x2.0mm (10) (OPTION)
- 362651 BALL END 4.9mm WITH THREAD 8mm (2) (OPTION)
- 362652 BALL END 4.9mm WITH THREAD 10mm (2) (OPTION)
- 901302 HEX SCREW SB M3x2.5 (10)
- 901303 HEX SCREW SB M3x3 (10)
- 902256 HEX SCREW SH M2.5x6 (10)
- 902308 HEX SCREW SH M3x8 (10)
- 902310 HEX SCREW SH M3x10 (10)
- 902318 HEX SCREW SH M3x18 (10)
- 902319 HEX SCREW SH M3x18 - LEFT THREAD (10)
- 903312 HEX SCREW SFH M3x12 (10)
- 903314 HEX SCREW SFH M3x14 (10)
- 960030 NUT M3 (10)
- 960040 NUT M4 (10)
- 358111 FRONT SHOCK ABSORBERS 44.5mm - COMPLETE SET (2)
- 358211 REAR SHOCK ABSORBERS 55mm - COMPLETE SET (2)
- 353517-Y WICKERBILL REAR WING - YELLOW
- 359713 XRAY XB8 / XB8E "EAZY" BODY

# 12. FINAL ASSEMBLY

**902318**  
SH M3x18  
1x

**902319**  
SH M3x18  
LEFT thread  
1x

**2x 960030**  
N M3

**2x 960040**  
N M4

**FRONT SHOCKS (SHORT)**

**2x**

**L=R**

SHORTER M4 → LONGER M3

**NOTE ORIENTATION**

**NUT M4**

**NUT M3**

Use **STANDARD** M3x18 screw

3x18mm

On the front right arm use the **SILVER** M3x18 screw - this screw has **LEFT THREAD**.

**INITIAL SETTING**

**INITIAL SETTING**

**Spring retainer**  
**NOTE ORIENTATION**

**REAR** → **FRONT**

**902318**  
SH M3x18  
1x

**902319**  
SH M3x18  
LEFT thread  
1x

**4x 960030**  
N M3

**REAR SHOCKS (LONG)**

**2x**

**L=R**

**NOTE ORIENTATION**

SHORTER → LONGER

M3

Use **STANDARD** M3x18 screw

3x18mm

On the rear left arm use the **SILVER** M3x18 screw - this screw has **LEFT THREAD**.

**INITIAL SETTING**

**INITIAL SETTING**

**Spring retainer**  
**NOTE ORIENTATION**

**FRONT** → **REAR**

**3x 901303**  
SB M3x3

**1x 902310**  
SH M3x10

**1x 903314**  
SFH M3x14

Setscrews are preassembled in the collars.

Thread brake rods into plastic pivots until flush with outer end.

3x3mm

3x3mm

3x14mm

3x10mm

3x3mm

Throttle rod

Brake rod

Brake rod

Use servo horn to match your servo.

Market servo horn

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

Cut off remaining material

OPTION	ALU SERVO HORNS	OPTION	CLAMP ALU SERVO HORNS
	#293504 23T		#293444 23T
	#293505 24T		#293445 24T
	#293506 25T		#293446 25T
	#293507 23T		#293447 23T
	#293508 24T		#293448 24T
	#293509 25T		#293449 25T

Small gap

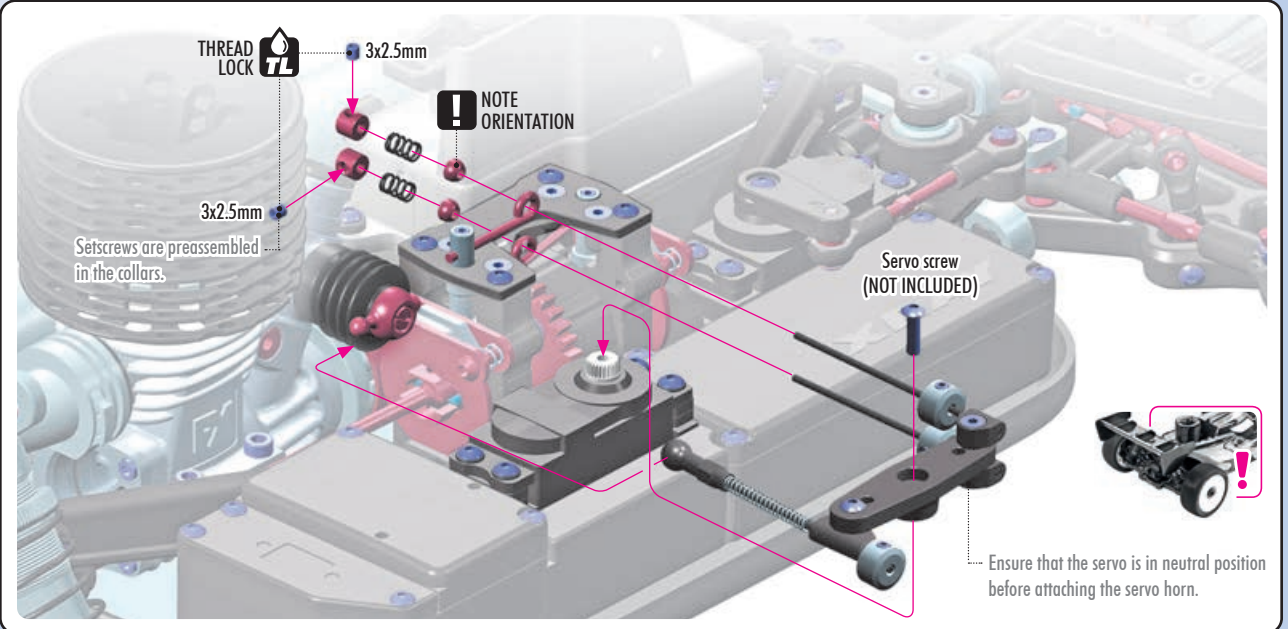
Small gap

Tighten screw until snug. Pivots should move freely.



# 12. FINAL ASSEMBLY

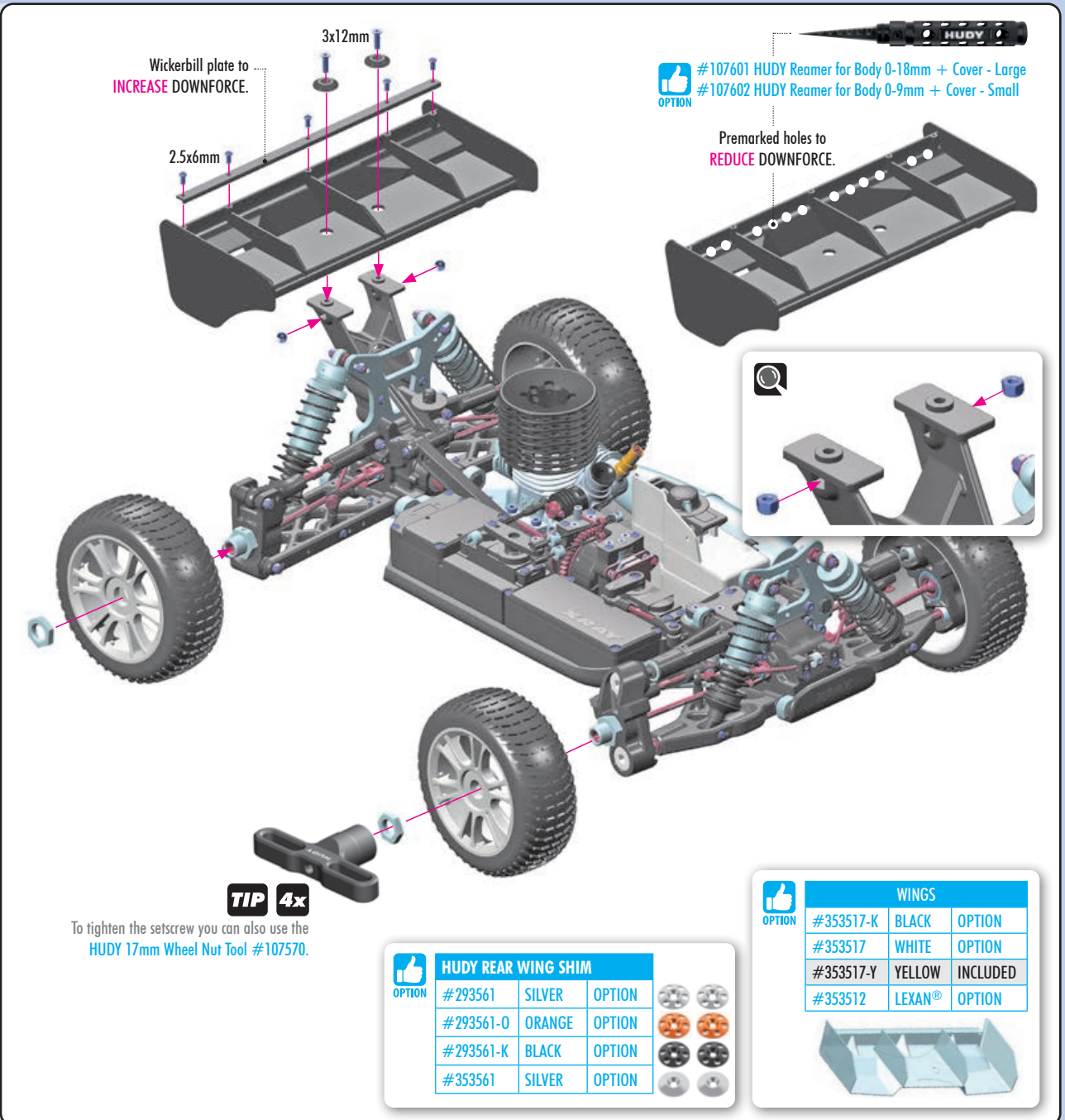
2x 901302  
SB M3x2.5



5x 902256  
SH M2.5x6

2x 903312  
SFH M3x12

2x 960030  
N M3





# 12. FINAL ASSEMBLY



**#358832**  
AIR FILTER RAIN COVER



**#106245**  
HUDY AIR FILTER SEALANT



Apply **#106240 HUDY air filter oil** and follow the engine instructions to service the air filter.



3x8mm

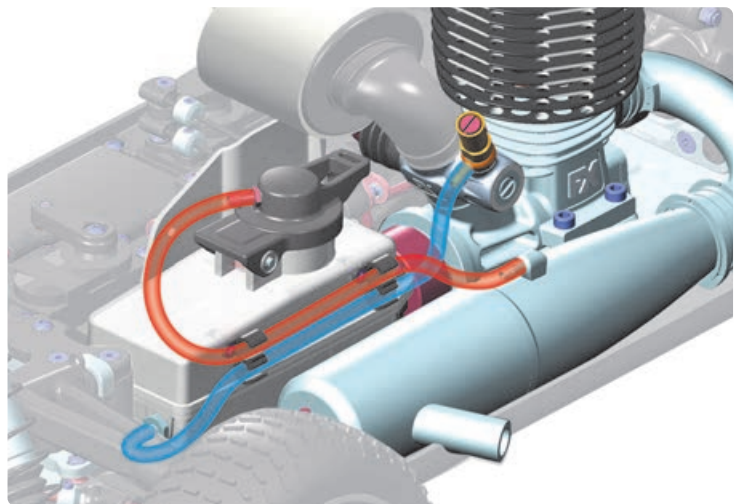
Cut the silicone tube depending on engine and muffler. Use the plastic clips to hold the tubes together.

**SILICONE TUBE MARKED AS BLUE** = FROM FUEL TANK TO CARBURETOR

**SILICONE TUBE MARKED AS RED** = FROM MUFFLER TO FUEL TANK (TOP)

**!** Keep fuel line away from clutchbell and flywheel.

**#358951**  
SILICONE TUBING 2.4x5.5x1000mm  
FLUORESCENT YELLOW



- 1 Before cutting and making holes on the body, put the unpainted body on the chassis to confirm the mounting position and location for holes and cutouts.
- 2 Before painting, wash the inside of the body with mild detergent, and then rinse and dry thoroughly.
- 3 Mask all windows.
- 4 Apply paint masks as appropriate.



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



Body Reamer (HUDY #107602)



Be sure to make this rear body mount hole oval so in the case of chassis flex after a big jump the body mount will not tear up the hole.

**TIP** To reinforce the body or to fix broken body use **#106281 HUDY BODY FIX**.



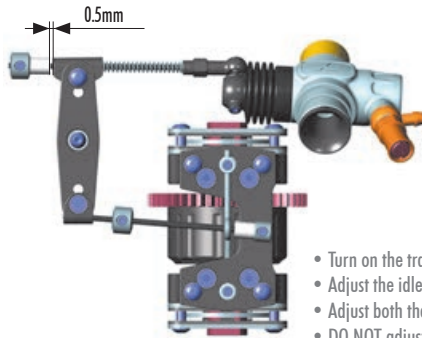
XRAY XB8 BODIES		
#359712	HIGH-SPEED LIGHT.	OPTION
#359713	"EAZY"	INCLUDED
#359714	"EAZY" LIGHT.	OPTION



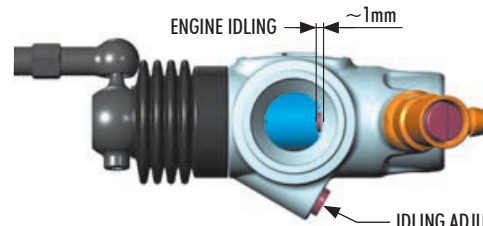
# THROTTLE LINKAGE ADJUSTMENT

## NEUTRAL (IDLE)

ADJUST INDIVIDUAL LINKAGES SEPARATELY TO AVOID INTERFERING WITH THE OPERATION OF THE OTHERS

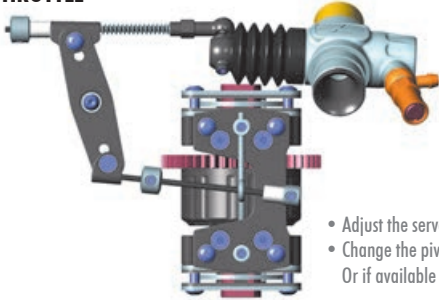


- Turn on the transmitter and receiver and set the engine control servo trim to the neutral position.
- Adjust the idle adjustment screw on the carburetor to open approx. 1mm.
- Adjust both the throttle linkage and brake linkages accordingly.
- DO NOT adjust the linkage with the engine running.

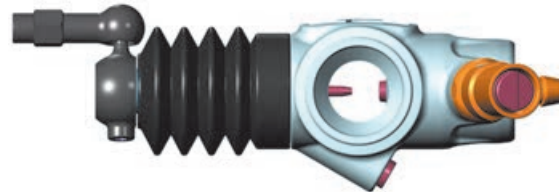


**IDLING ADJUSTMENT SCREW.**  
Use to adjust the idle setting of the carburetor. DO NOT allow carburetor to close to less than 1mm.

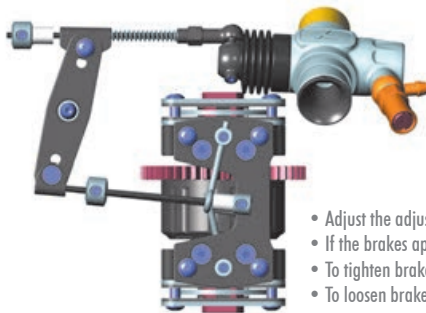
## FULL THROTTLE



- Adjust the servo-horn mounting position for the carburetor to open fully.
- Change the pivot mounting position on the servo horn in case the carburetor is not opening fully or if it is opening excessively. Or if available on the transmitter, adjust the throttle high end point.



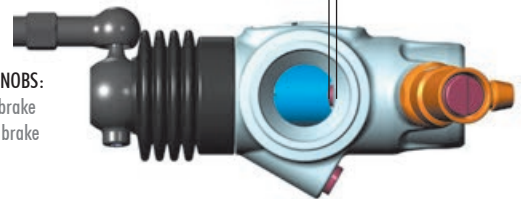
## BRAKE



- Adjust the adjustable collars so the brakes work smoothly.
- If the brakes apply too much or not enough, adjust the adjustable collars accordingly. Or if available on the transmitter, adjust the brake endpoint.
- To tighten brakes, turn collar to thread brake rod INTO pivot.
- To loosen brakes, turn collar to thread brake rod OUT of pivot.

ENGINE IDLING → cca 1mm

**BRAKE ADJUSTING KNOBS:**  
Upper linkage - rear brake  
Lower linkage - front brake



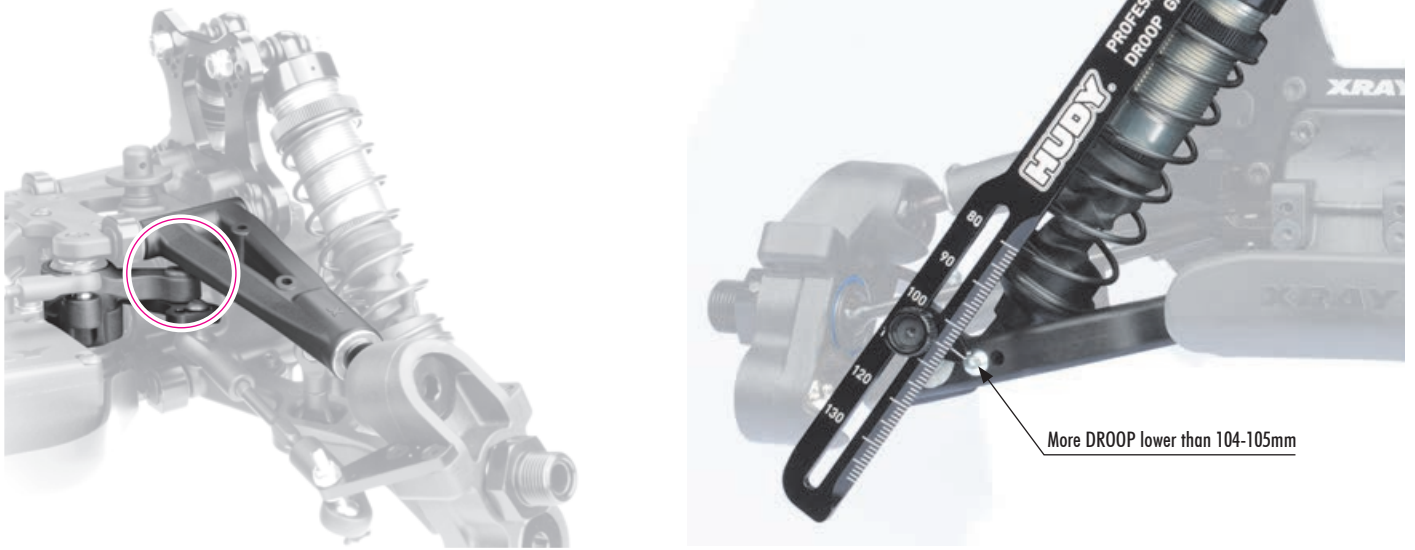
# TROUBLESHOOTING GUIDE

PROBLEM	CAUSE	SOLUTION
ENGINE DOES NOT START	<ul style="list-style-type: none"> <li>• Fuel tank is empty or carburetor is not primed</li> <li>• Bad glowplug or dead glowdriver battery</li> <li>• Fuel lines, fuel filter, air cleaner, or muffler is clogged</li> <li>• Engine is flooded due to over-priming</li> <li>• Carburetor is not adjusted properly</li> <li>• Throttle servo linkage not adjusted properly</li> </ul>	<ul style="list-style-type: none"> <li>• Fill fuel tank with fuel and prime</li> <li>• Replace glowplug or recharge/replace glowdriver battery</li> <li>• Clean or replace clogged part(s)</li> <li>• Remove glowplug, turn car over to discharge fuel from cylinder. Test glowplug and replace if defective</li> <li>• Set idle and main/slow needle adjusting screw to standard starting position</li> <li>• Move throttle servo to neutral position and re-adjust linkage(s)</li> </ul>
ENGINE STARTS BUT THEN STALLS	<ul style="list-style-type: none"> <li>• Fuel tank is empty</li> <li>• Fuel lines, fuel filter, air cleaner, or muffler is clogged</li> <li>• Carburetor is not adjusted properly</li> <li>• Engine has overheated</li> </ul>	<ul style="list-style-type: none"> <li>• Fill fuel tank with fuel</li> <li>• Clean or replace clogged part(s)</li> <li>• Re-adjust idle and main/slow needle adjusting screw</li> <li>• Allow engine to thoroughly cool down and open main needle adjusting screw 30° turn richer (CCW)</li> </ul>
BAD REACTION AND RESPONSE FROM ENGINE	<ul style="list-style-type: none"> <li>• Carburetor is not adjusted properly</li> <li>• Fuel lines, fuel filter, air cleaner, or muffler is clogged</li> <li>• Low fuel pressure from muffler</li> </ul>	<ul style="list-style-type: none"> <li>• Re-adjust main/slow needle adjusting screw</li> <li>• Clean or replace clogged part(s)</li> <li>• Properly install pressure line between muffler and fuel tank</li> </ul>
CAR IS HARD TO CONTROL	<ul style="list-style-type: none"> <li>• Weak transmitter and/or receiver batteries</li> <li>• Low reception from radio antennas</li> <li>• Servo linkages not adjusted properly</li> </ul>	<ul style="list-style-type: none"> <li>• Recharge or replace batteries</li> <li>• Fully extend transmitter and receiver antennas</li> <li>• Move servo to neutral then re-adjust linkage(s)</li> </ul>
STEERING DOES NOT WORK PROPERLY	<ul style="list-style-type: none"> <li>• Weak transmitter and/or receiver batteries</li> <li>• Bent linkages or driveshafts</li> <li>• Loose steering components</li> <li>• Drivetrain damage</li> </ul>	<ul style="list-style-type: none"> <li>• Recharge or replace batteries</li> <li>• Check tightness of steering components and tighten if necessary</li> <li>• Replace damaged parts</li> </ul>
HANDLING PROBLEMS	<ul style="list-style-type: none"> <li>• Shocks are not working properly</li> <li>• Suspension is binding</li> <li>• Improper tires</li> </ul>	<ul style="list-style-type: none"> <li>• Rebuild the shocks and replace worn or broken parts</li> <li>• Make sure suspension moves freely. Replace worn or broken parts</li> <li>• Use different tires</li> </ul>
STEERING FEELS SLUGGISH OR VAGUE	<ul style="list-style-type: none"> <li>• Suspension is binding</li> <li>• Damaged steering servo</li> </ul>	<ul style="list-style-type: none"> <li>• Make sure suspension moves freely, and replace worn or broken parts</li> <li>• Check the steering servo for damage and wear, and replace/repair if necessary</li> </ul>
THE CAR DOES NOT DRIVE STRAIGHT	<ul style="list-style-type: none"> <li>• Suspension is binding</li> <li>• Steering trim is off-center</li> <li>• Wheels are loose</li> <li>• Damaged steering servo</li> </ul>	<ul style="list-style-type: none"> <li>• Make sure suspension moves freely, and replace worn or broken parts</li> <li>• Adjust steering trim until car drives straight</li> <li>• Check to make sure the wheel nuts are properly tightened</li> <li>• Check the steering servo for damage and wear, and replace/repair if necessary</li> </ul>



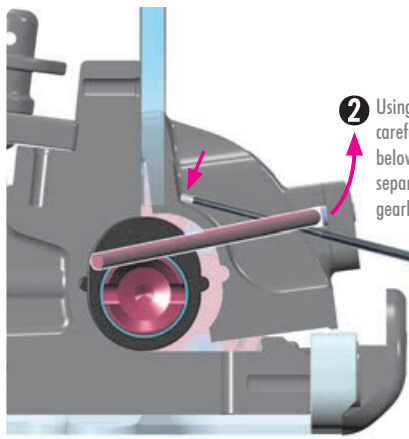
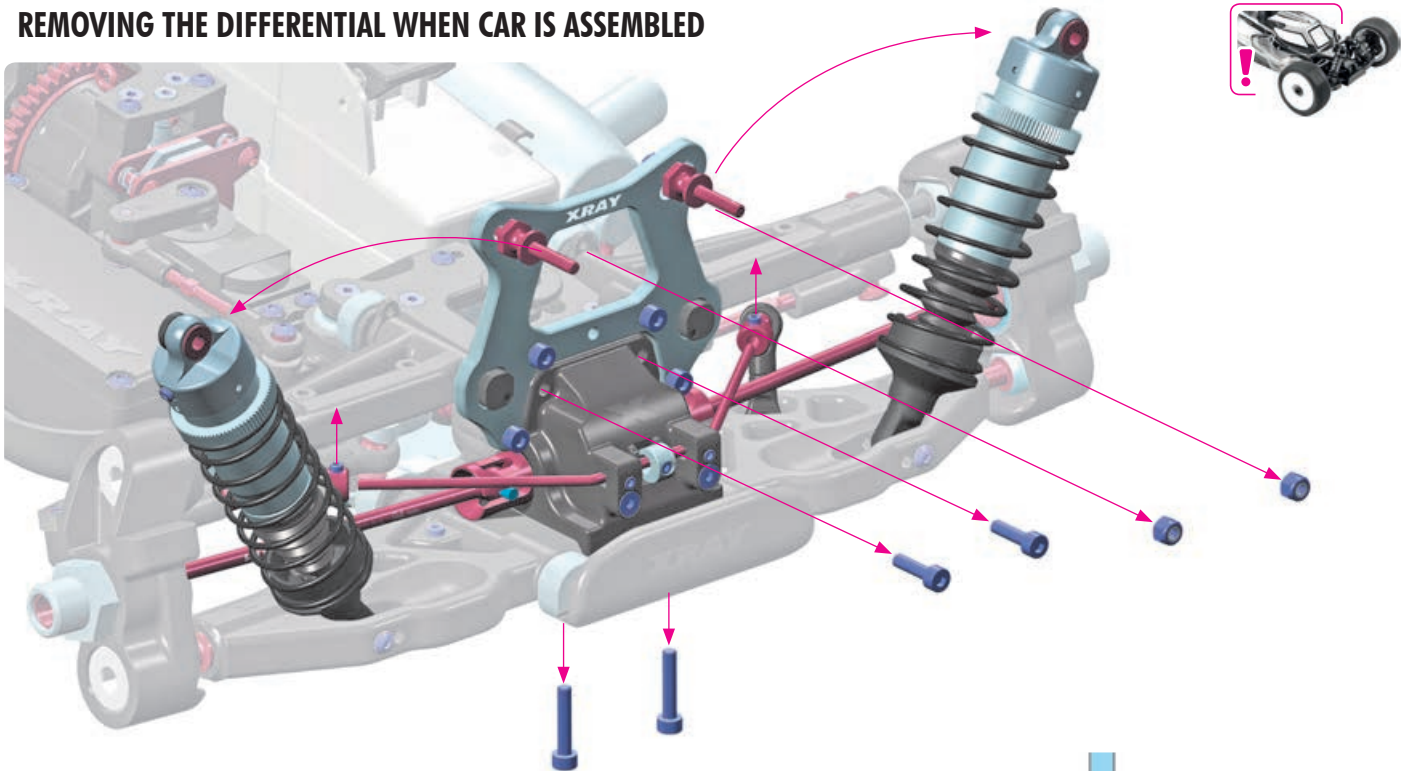
If more than 104-105mm front droop is used, certain set-up configurations may result in the upper arm contacting the steering bellcranks.

This will have limited impact on handling, but material can be removed from the bottom of the upper arm to avoid contact with the steering assembly if using additional droop.



## DIFF MAINTENANCE

### REMOVING THE DIFFERENTIAL WHEN CAR IS ASSEMBLED

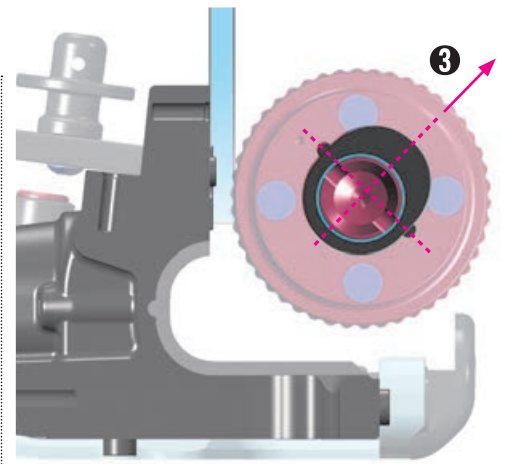


**2** Using a strong tool, carefully pry up from below anti-roll bar to separate cover from gearbox.

**!**  
Strong Tool

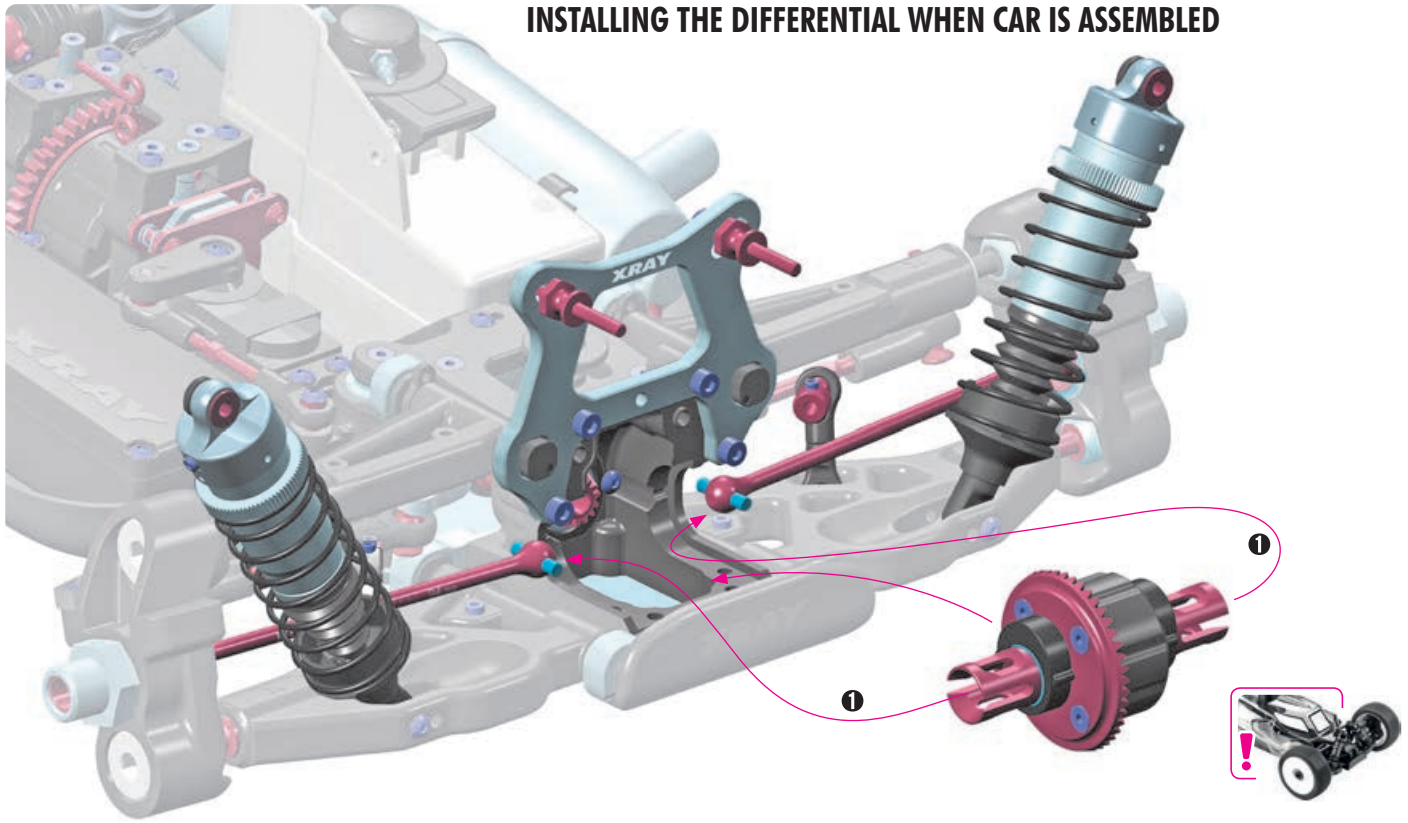
#### FRONT & REAR

- 1 REMOVE HARDWARE**
- Gearbox Cover Upper Screws (2)
  - Gearbox Cover Lower Screws (2)
  - Shock Absorber Locknuts (2)
  - Disconnect Anti-Roll Bar Linkage

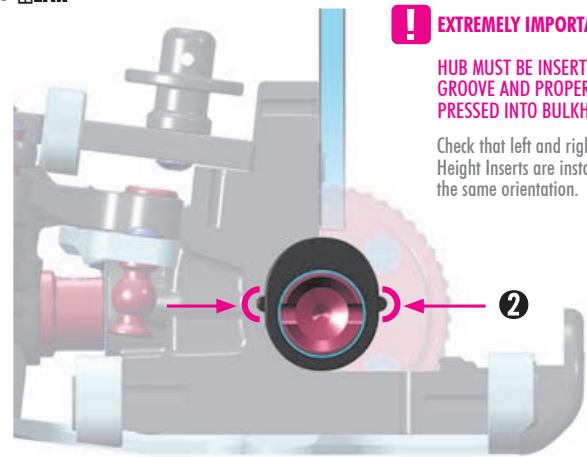
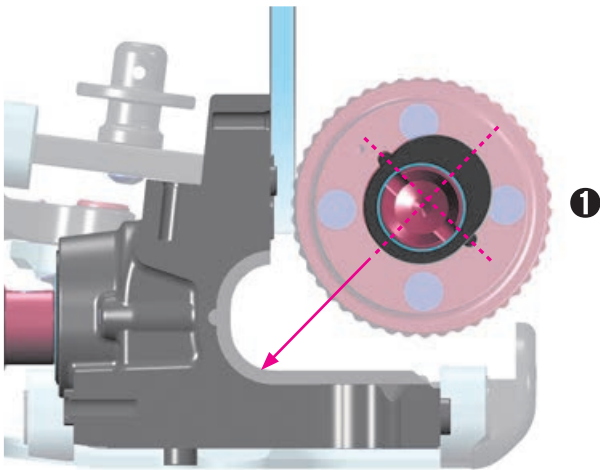




## INSTALLING THE DIFFERENTIAL WHEN CAR IS ASSEMBLED



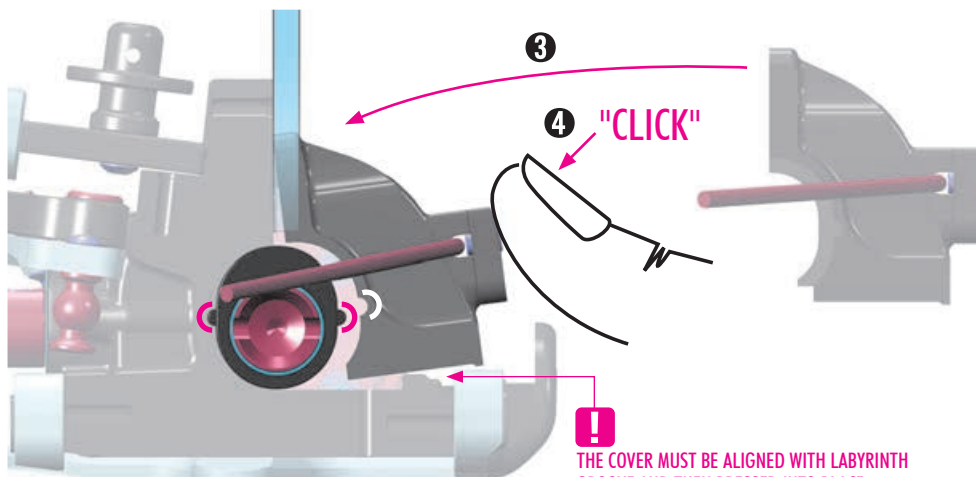
### FRONT & REAR



### ! EXTREMELY IMPORTANT

HUB MUST BE INSERTED IN GROOVE AND PROPERLY PRESSED INTO BULKHEAD.

Check that left and right Diff Height Inserts are installed in the same orientation.



### 5 RE-INSTALL HARDWARE

- Gearbox Cover Upper Screws (2)
- Gearbox Cover Lower Screws (2)
- Shock Absorber Locknuts (2)
- Reconnect Anti-Roll Bar Linkage

! THE COVER MUST BE ALIGNED WITH LABYRINTH GROOVE AND THEN PRESSED INTO PLACE

## ENGINE OPERATION

### PREPARING TO OPERATE THE ENGINE

- Never modify the engine or muffler.
- Confirm the position of needle and idling before running. Be sure to run a new engine smoothly.
- Make sure the air filter is clean and oiled.
- Never run your engine without an air filter. Your engine can be seriously damaged if dirt and debris get inside the engine.
- For proper engine break-in, please refer to the manual that came with the engine.
- The engine may not start or run properly if the air filter is dirty, or choked with sand and dust.
- If the fuel pipe is choked or deteriorates, the engine may not start, and there is danger that fuel will leak out.

### STARTING AND RUNNING THE ENGINE

Be sure to observe the following starting process. Failure to do so may cause the model car to start suddenly, which may lead to damage or unexpected accidents.

1. Make sure the transmitter and receiver batteries are fully charged.
2. Make sure that your transmitter and receiver are both on the same frequency. If you have a transmitter with multiple model memory, make sure you have selected the proper profile for your car.
3. Put the car on the starter box and keep the tires from touching the ground.
4. Turn on the transmitter.
5. Turn on the receiver in the car.
6. Make sure the steering servo and engine servos work normally and adjust them correctly.
7. Put fuel in the fuel tank, and close the cap securely.
8. Apply the glow igniter to the engine glowplug.
9. Push the model car onto the starter box to start the engine. (If the engine is new, follow the instruction manual and be sure to break in the new engine properly).
10. When the engine has started, remove the glow igniter.
11. Follow your engine break-in procedure and tune the engine as appropriate.

### STOPPING THE ENGINE

Before you stop the engine, try to make sure the engine is at idle first. There are several ways to stop the engine:

- Use a rag to cover the exhaust tip. Be careful! The exhaust is extremely hot so use a thick rag and gloves.
- Pinch the fuel tubing to stop the flow of fuel to the carb. Be careful, this can make the motor run lean which can damage the motor.
- Put your hand over the air filter, or squeeze the air filter element to block the airflow.
- Press an object (such as a screwdriver handle or shoe) against the rotating flywheel to stop its rotation. Be very careful, and DO NOT stick your hand or fingers near the rotating flywheel.

### FINISHING OPERATIONS

1. Stop the engine.
2. Turn off the receiver in the car
3. Turn off the transmitter.

### MAINTENANCE AFTER RUNNING

Take proper care of your car after running to keep it performing well, and take notice of any damage and wear.

1. DO NOT leave fuel in the tank.
2. Go outside to drain any residual fuel from the exhaust pipe.
3. Clean the car and remove all sand, mud, and other debris.
4. Use after-run oil in your engine after you have finished running for the day.

## 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 rubber bladders and 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.
- If installing new rubber bladders, carefully trim the thin excess rubber from the edges of their lips. Curved body scissors work the best.
- Regularly inspect the amount of dirt on the felt protector in the shocks (if present) and regularly replace with a new one.
- 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 or truggy must be properly maintained for smooth operation and long lifespan.

Typically, the ball-bearings included in new cars are greased for highest lifespan and as such the drivetrain may not seem to be as free as with lightly-oiled ball-bearings. However, when the car is run the ball-bearings will become more free and the drivetrain will become very efficient.

There are several types of bearings discussed here: bearings which already come greased from the factory, bearings which must be lubricated using the HUDY Bearing Grease, and then there are also bearings in the steering system which need to be lubricated with HUDY Bearing Oil.

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

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

If you spin test the bearing after you have re-oiled and sealed it, it will not spin freely for an extended period of time. The lightest of oils may allow it to spin for 1-2 seconds. This is normal and once you have mounted the bearings in the car again, the drive train will spin freely.

Make sure you use a motor cleaner that DOES NOT leave a residue after it dries as this may cause drag and wear in the bearings.

### CLUTCH BEARINGS

To prolong the lifespan of the clutch bearings, they must be regularly cleaned and lubricated (preferably after each run) using a high-quality grease such as HUDY Bearing Grease. However, after some time the clutch bearings must be replaced with new ones.

### RECOMMENDED PRODUCTS

- Use HUDY Bearing Grease to regularly lubricate grease-bearing ball-bearings.
- Use HUDY Bearing Oil to lubricate the bearings of the steering system.
- Use HUDY Bearing Grease to regularly lubricate the clutch bearings.

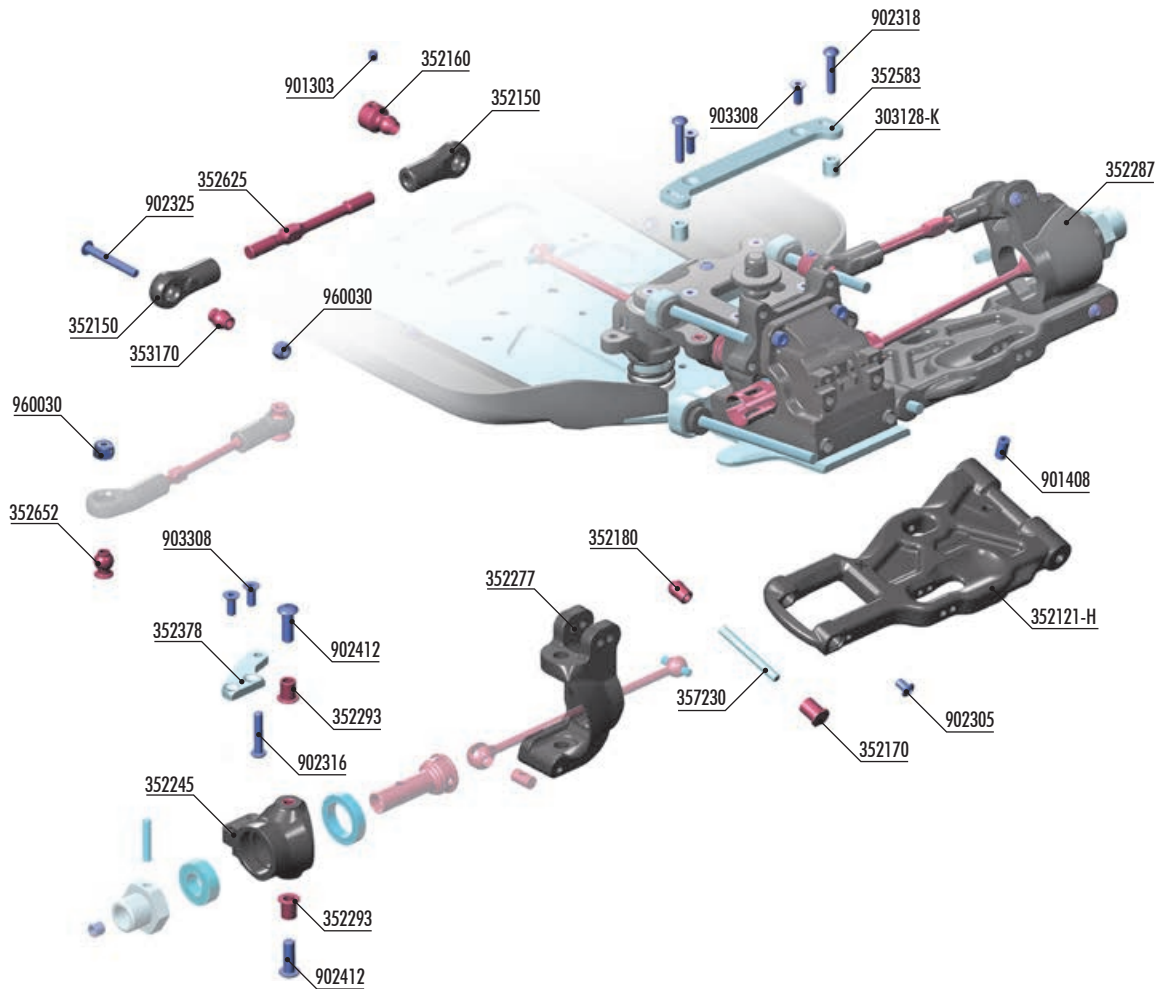


# FRONT C-HUB SUSPENSION



## #350910 FRONT C-HUB SUSPENSION - SET

For instructions on how to mount the optional #350910 C-hub suspension conversion set, please download the instructions from the Downloads section at [www.teamxray.com/XB8](http://www.teamxray.com/XB8)



ECCENTRIC BUSHINGS			
OPTION	#352170	0° - STEEL	INCLUDED
	#352174	1° - STEEL	OPTION
	#352175	2° - STEEL	OPTION

- 303128-K ALU SHIM 3x6x6mm (10)
- 352121-H COMPOSITE FRONT LOWER SUSPENSION ARM - HARD
- 352150 FRONT UPPER ARM BALL JOINT (2)
- 352160 STEEL MOUNTING BALL 6.8mm (2)
- 352170 STEEL ECCENTRIC BUSHING 0° (2)
- 352180 BALL MOUNT (2)
- 352245 STEERING BLOCK
- 352277 COMPOSITE CASTER BLOCK 16° RIGHT
- 352287 COMPOSITE CASTER BLOCK 16° LEFT
- 352293 STEEL BUSHING FOR CASTER BLOCK (2)

- 352378 ALU STEERING PLATE - SWISS 7075 T6 (L+R)
- 352583 ALU STEERING PLATE - SWISS 7075 T6
- 352625 ADJ. TURNBUCKLE M5 L/R 46mm (2)
- 352652 BALL STUD 6.8mm (4)
- 353170 PIVOT BALL 6.8 (4)
- 357230 FRONT LOWER OUTER PIVOT PIN (2)
- 901303 HEX SCREW SB M3x3 (10)
- 901408 HEX SCREW SB M4x8 (10)
- 902305 HEX SCREW SH M3x5 (10)

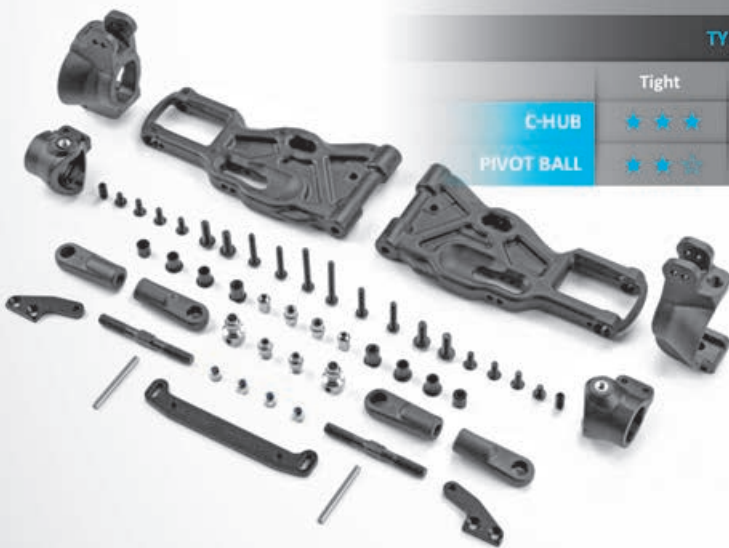
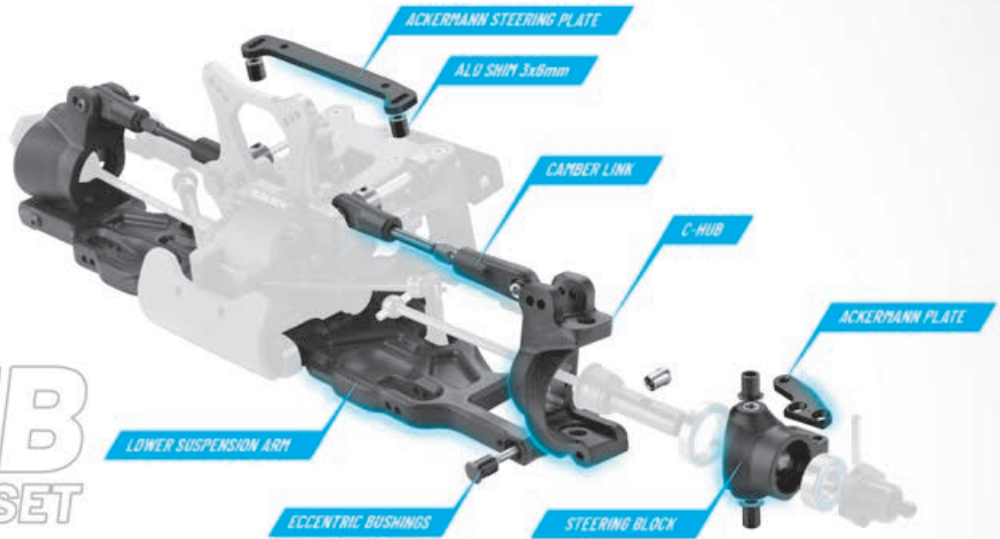
- 902316 HEX SCREW SH M3x16 (10)
- 902318 HEX SCREW SH M3x18 (10)
- 902325 HEX SCREW SH M3x25 (10)
- 902412 HEX SCREW SH M4x12 (10)
- 903308 HEX SCREW SFH M3x8 (10)
- 960030 NUT M3 (10)



**C-HUB FRONT SUSPENSION CONVERSION SET**

**#350910**

**C-HUB  
CONVERSION SET**



**TRACK**

	TYPE		CONDITIONS		
	Tight	Open	Smooth	Rough	
<b>C-HUB</b>	★ ★ ★	★ ★ ☆	★ ★ ★	★ ★ ☆	<b>C-HUB</b>
<b>PIVOT BALL</b>	★ ★ ☆	★ ★ ★	★ ★ ☆	★ ★ ★	<b>PIVOT BALL</b>

**SUITED FOR SMOOTH & SHORT TECHNICAL TRACKS**  
**PERFECT FOR SMOOTH SURFACE CONDITIONS**  
**WHERE IT GENERATES INCREASED TRACTION & ENHANCED STEERING**  
**COMPLETE SET INCLUDES ALL PARTS FOR CONVERSION**



**TIP**

All ball-bearings are factory pre-oiled or pre-greased. The bearings are all packaged in BAG 00.9.

For pre-oiled ball-bearings, use:  
 #106230 HUDY Bearing Oil.

For pre-greased ball-bearings, use one of these bearing greases:  
 #106220 - HUDY Bearing Grease - suggested for extremely dusty track conditions.  
 #106221 - HUDY Bearing Grease "Blue" - suggested for medium dusty track conditions.  
 #106222 - HUDY Bearing Grease "Red" - suggested for low dusty track conditions.

Replace any bearings that develop a "gritty" feeling to prevent inefficiency and avoid failures.

Make sure to use only original XRAY ball-bearings, which all have specific tolerances, axial and radial play, and are all individually selected. Using 3rd party ball-bearings may result in bearing failures and damage to other parts.

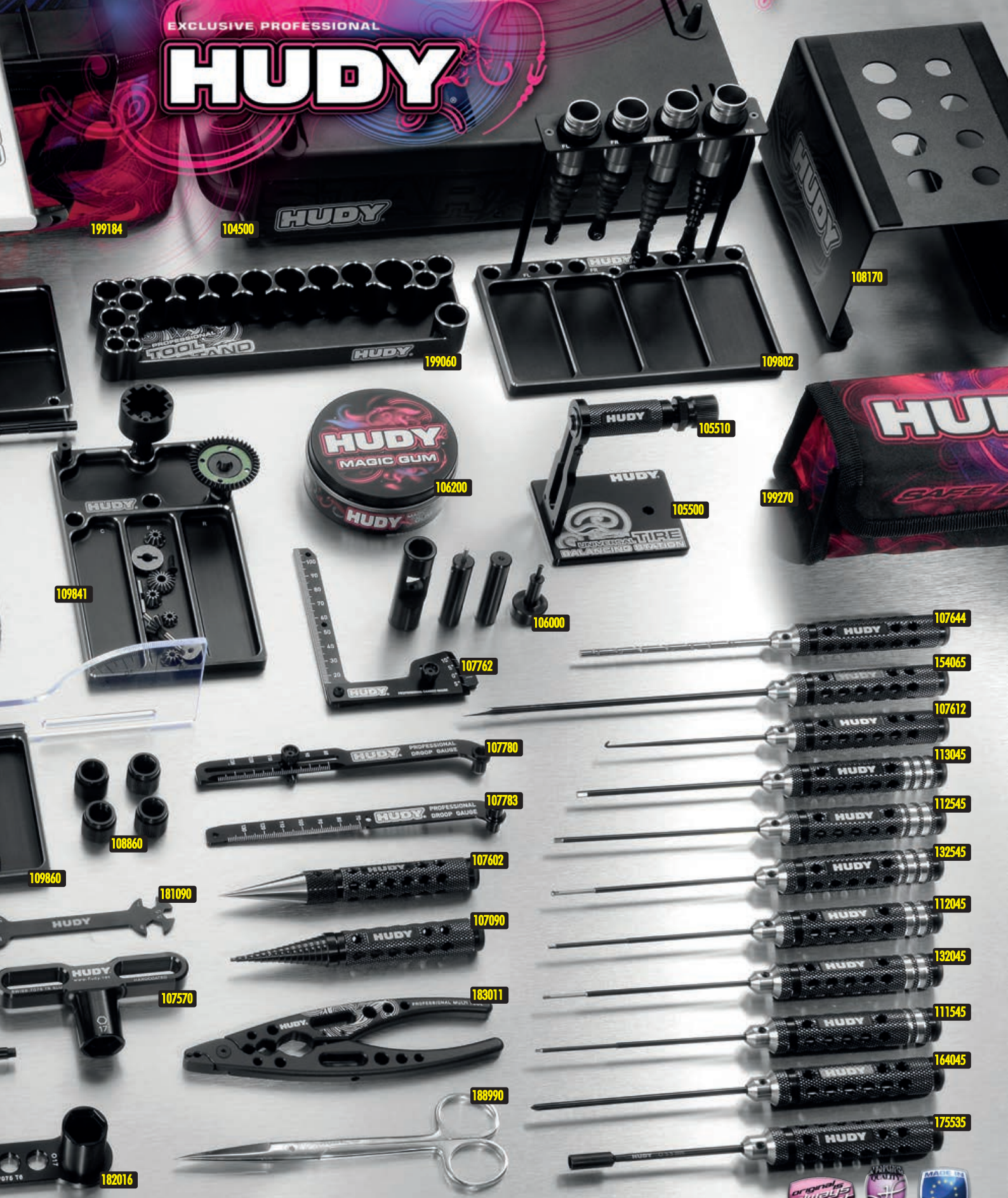






EXCLUSIVE PROFESSIONAL

# HUDY



- #109860 HUDY Alu Tray for Set-Up System
- #109880 HUDY Alu Tray for Accessories & Pit LED
- #111545 Limited Edition - Allen Wrench # 1.5mm
- #112045 Limited Edition - Allen Wrench # 2.0mm
- #112071 Power Tool Tip Allen 2.0 x 90 mm
- #112545 Limited Edition - Allen Wrench # 2.5mm
- #112571 Power Tool Tip Allen 2.5 x 90 mm
- #113045 Limited Edition - Allen Wrench # 3.0mm
- #132045 Limited Edition - Allen Wrench + Ball Repl. Tip # 2.0mm
- #132545 Limited Edition - Allen Wrench + Ball Repl. Tip # 2.5mm
- #154065 Limited Edition -Sl. Screwdriver for Engine #4.0mm - Long
- #164045 Limited Edition - Phillips Screwdriver # 4.0mm
- #164071 Power Tool Tip Phillips 4.0 x 90 mm
- #175535 Limited Edition - Socket Driver # 5.5mm

- #181030 HUDY Spring Steel Turnbuckle Wrench 3 mm
- #181034 HUDY Spring Steel Turnbuckle Wrench 3 & 4mm
- #181040 HUDY Spring Steel Turnbuckle Wrench 4 mm
- #181050 HUDY Spring Steel Turnbuckle Wrench 5 mm
- #181090 HUDY Special Tool For Turnbuckles & Nuts
- #181110 HUDY Ball Joint Wrench
- #182016 HUDY Wheel Nut & 3/4 Shoe Flywheel MultiTool 1/8 Buggy
- #183011 HUDY Professional Multi Tool
- #188981 HUDY Pocket Hobby Knife
- #188990 HUDY Professional Body Scissors
- #199060 HUDY Alu Tool Stand
- #199184 HUDY Car Bag - 1/8 & 1/10 Off-Road
- #199270 HUDY LiPo Safety Bag
- #199310 HUDY Pit Bag - Compact

- #199911 HUDY Pit Mat Roll 750x1200mm with Printing
- #293111 HUDY Brushless RC Fan 40mm with External Soldering Tabs
- #293113 HUDY Brushless RC Fan 40mm with Internal Soldering Tabs
- #293540 Air Filter Foam & Oil (10) - XRAY X88 Low Profile Style
- #293560 HUDY Alu Wheel Nut with Cover - Ribbed (2)

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

[www.hudy.net](http://www.hudy.net)





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

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