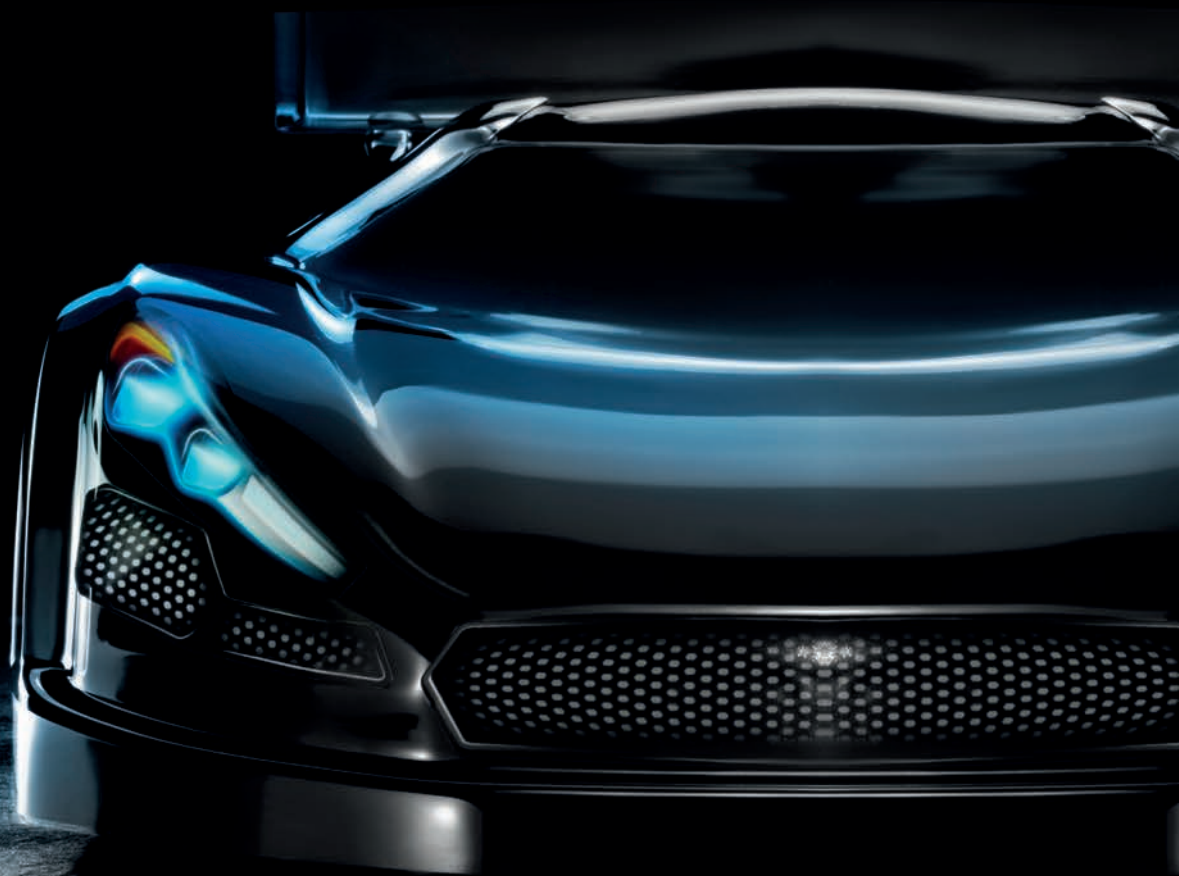


1 / 8 N I T R O G T

XRAY GTX8



INSTRUCTION MANUAL

GTX8'27

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. Also, please visit our Web site at www.teamxray.com to find the latest updates, set-up information, option parts, and many other goodies. We pride ourselves on taking excellent care of our customers.

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

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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Fax: +421-32-7401109
Email: 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

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 guaranty immediately.

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



IMPORTANT NOTES – GENERAL

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

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

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



IMPORTANT NOTES – 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 gases. 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.

WARRANTY

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

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

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

Limitations of Liability

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

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

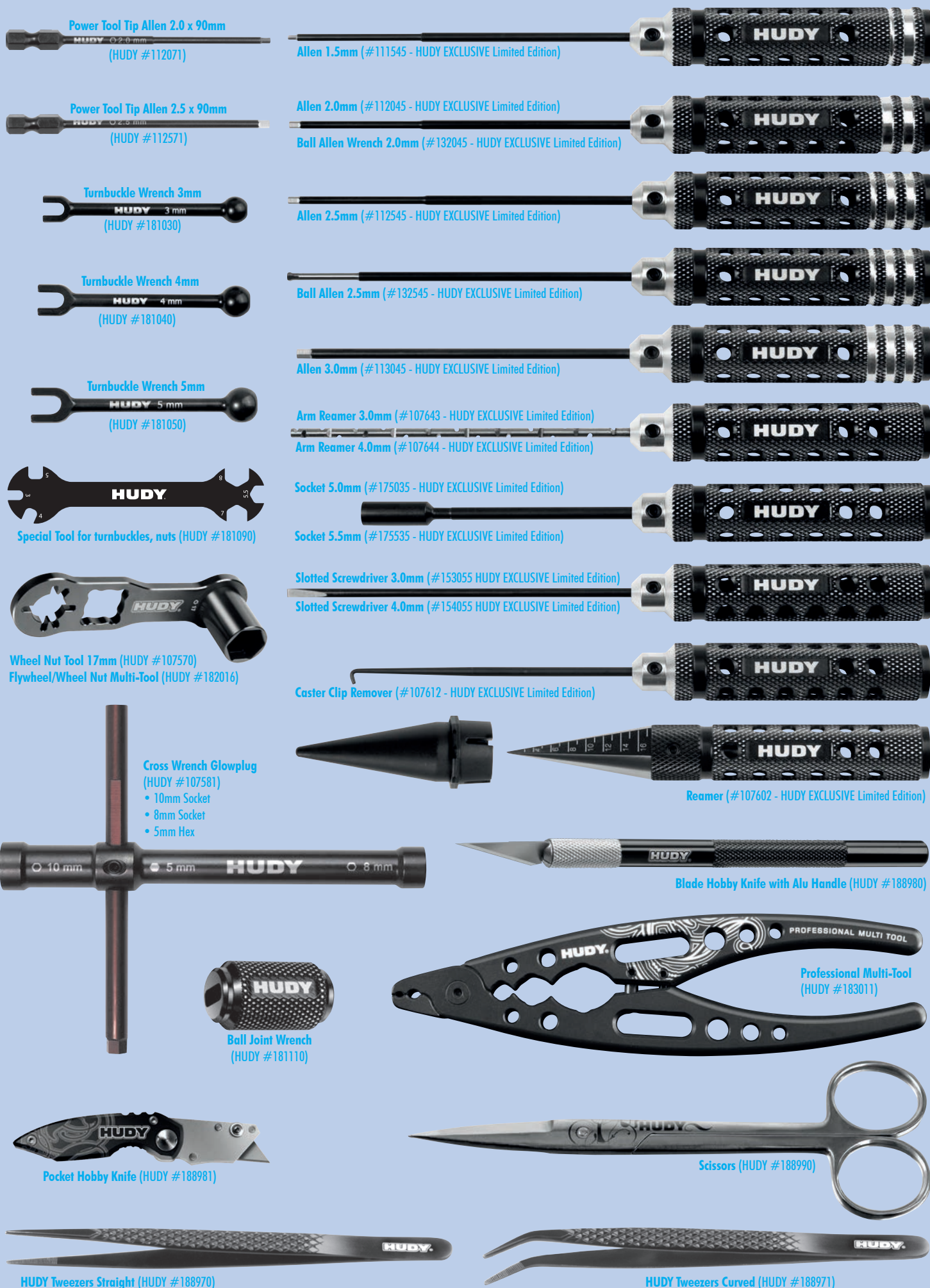
Disregard of the any of the above cautions may lead to accidents, personal injury, or property damage. XRAY MODEL RACING CARS assumes no responsibility for any injury, damage, or misuse of this product during assembly or operation, nor any additions that may arise from the use of this product. All rights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

XRAY MODEL RACING CARS uses only the highest quality materials, the best compounds for molded parts and the most sophisticated manufacturing processes of TQM (Total Quality Management). We guarantee that all parts of a newly-purchased kit are manufactured with the highest regard to quality. However, due to the many factors inherent in model racecar competition, we cannot guarantee any parts once you start racing the car. Products which have

been worn out, abused, neglected or improperly operated will not be covered under warranty. We wish you enjoyment of this high-quality and high-performance RC car and wish you best success on the track!

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

TOOLS REQUIRED



EQUIPMENT INCLUDED

800cSt (#106381)
HUDY Premium Silicone Oils



50.000cSt (#106551)
HUDY Premium Silicone Oils



500.000cSt (#106650)
HUDY Premium Silicone Oils



(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:

- 351200

351190

355000

350910
- STYLE A - indicates parts that are included in the bag marked for the section.

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

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

STYLE D - indicates parts that are optional.

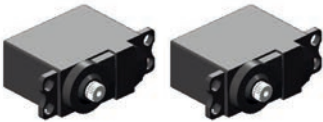
EQUIPMENT REQUIRED

Transmitter

Receiver



Steering and Throttle Servos



Receiver Battery Pack



Battery Charger



Engine
 OPTION
(FX G501 #670103)



Manifold & Exhaust
 OPTION
(FX #679550)



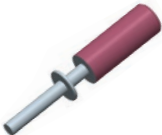
GT BODY
 OPTION
(XRAY #359731)



Lexan™ Paint



Glow Plug Igniter



Fuel + Fuel Bottle
 OPTION
(HUDY #104200)



Tires & Wheels



CA glue
 CA GLUE



Battery Pack for starter box

Starter Box
 OPTION
(HUDY #104500)



Bearing Oil
 OPTION
(HUDY #106230)



Threadlock
 TLD
THREAD LOCK



MAINTENANCE

SHOCK MAINTENANCE

Correct refilling and bleeding are critical for consistent shock performance. When built correctly, frequent rebuilding is NOT required. Regularly inspect and replace damaged rubber bladders, O-rings, bent shock shafts, and worn or loose ball joints.

- Before each race, check shocks for air inside. Remove the spring, compress the shock fully, and listen for any whistling or squishy sound. If air is present, refill and bleed the shock.
- For high-level competition, refill and bleed shocks before major events.
- When building or pairing shocks, ensure they are equal in length & adjust lower ball joints as required.
- Inspect shocks after each race and replace oil as needed.

SUSPENSION & DRIVETRAIN MAINTENANCE

Check suspension for free movement with the shocks removed during building and operation, especially after running or crashes. The suspension must move freely under its own weight. If it DOES NOT move freely, use the appropriate HUDY Arm Reamer to clean and resize the suspension arm holes, or replace any bent components.

Check suspension free movement with the car ready to run. Always verify ride height. Press the car down and release it, then lift it up and release it. If the suspension is stuck up or down, common causes include dirty or bent suspension pivot pins, bent shock shafts, pivot balls set too tight in the steering blocks, or dirty/worn pivot balls. Clean out or replace damaged/worn parts as necessary.

Check the drivetrain for free movement. There must be no locking, binding, or blocking during

rotation. With the motor/engine dismounted to eliminate drag, spin the wheels by hand and ensure smooth, free rolling. If the drivetrain does not roll freely, inspect all bearings and gears and replace worn or damaged parts as necessary.

Regularly inspect and replace the pins connecting the center driveshafts to the pinion gears, as well as the pins connecting 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.

DRIVE SHAFT PIN SERVICING

Regularly check the drive shaft pins (both suspensions and center) and if they show any wear they must be immediately replaced by new pins. Inspect the pins after every 3 hours of runtime. If the car is run with worn out pins, excessive wear on the diff outrives will result. The 10600 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 X-Hard replacement drive shaft pins 3x14 (#106074).



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 #106001 HUDY Drive Pin Replacement Tool.



To replace the worn pins use only X-Hard HUDY drive pins #106074.

BEARING MAINTENANCE

Ball bearings must be properly maintained to ensure smooth drivetrain operation and long service life. New bearings are factory-greased for durability and may initially feel less free; this is normal.

- Clean and service bearings every 3–4 weeks or before major races.
- Check bearings for smooth operation. Replace any bearing with noise, vibration, or drag.
- Use only motor cleaners that leave no residue.
- Lightly oil bearings after cleaning. Short spin time when hand-tested is normal.
- When running in dirty conditions, it is recommended to use bearing grease after cleaning.

CLUTCH BEARINGS

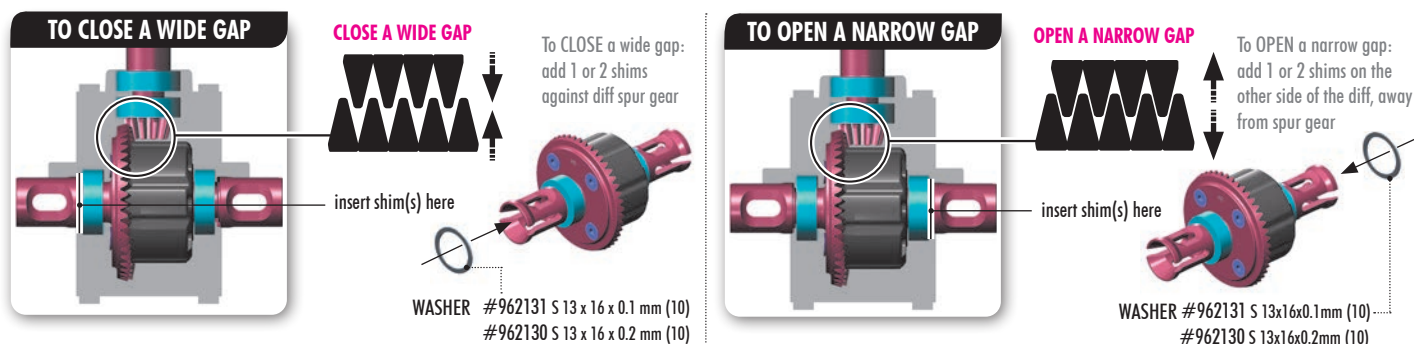
Regularly check the clutch bearings for smooth operation. Replace the bearings immediately if any wear, noise, or drag is detected.

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:



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.

HUDY PREMIUM SILICONE OILS



HUDY PREMIUM SILICONE OILS

FOR GEAR DIFFERENTIAL

#106411	1.000cSt - 100ml	OPTION	#106518	17.000cSt - 100ml	OPTION
#106421	2.000cSt - 100ml	OPTION	#106521	20.000cSt - 100ml	OPTION
#106431	3.000cSt - 100ml	OPTION	#106531	30.000cSt - 100ml	OPTION
#106441	4.000cSt - 100ml	OPTION	#106541	40.000cSt - 100ml	OPTION
#106451	5.000cSt - 100ml	OPTION	#106551	50.000cSt - 100ml	INCLUDED
#106461	6.000cSt - 100ml	OPTION	#106561	60.000cSt - 100ml	OPTION
#106471	7.000cSt - 100ml	OPTION	#106587	80.000cSt - 100ml	OPTION
#106481	8.000cSt - 100ml	OPTION	#106611	100.000cSt - 100ml	OPTION
#106491	9.000cSt - 100ml	OPTION	#106616	150.000cSt - 100ml	OPTION
#106511	10.000cSt - 100ml	OPTION	#106621	200.000cSt - 100ml	OPTION
#106493	11.000cSt - 100ml	OPTION	#106631	300.000cSt - 100ml	OPTION
#106513	12.000cSt - 100ml	OPTION	#106650	500.000cSt - 50ml	INCLUDED
#106516	15.000cSt - 100ml	OPTION	#106692	1.000.000cSt - 50ml	OPTION

HUDY PREMIUM SILICONE OILS

FOR SHOCK ABSORBERS

#106326	250cSt - 100ml	OPTION	#106356	550cSt - 100ml	OPTION
#106331	300cSt - 100ml	OPTION	#106358	575cSt - 100ml	OPTION
#106336	350cSt - 100ml	OPTION	#106361	600cSt - 100ml	OPTION
#106338	375cSt - 100ml	OPTION	#106363	625cSt - 100ml	OPTION
#106341	400cSt - 100ml	OPTION	#106366	650cSt - 100ml	OPTION
#106343	425cSt - 100ml	OPTION	#106368	675cSt - 100ml	OPTION
#106346	450cSt - 100ml	OPTION	#106371	700cSt - 100ml	OPTION
#106348	475cSt - 100ml	OPTION	#106376	750cSt - 100ml	OPTION
#106351	500cSt - 100ml	OPTION	#106381	800cSt - 100ml	INCLUDED
#106353	525cSt - 100ml	OPTION	#106391	900cSt - 100ml	OPTION



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.

1. DIFFERENTIALS

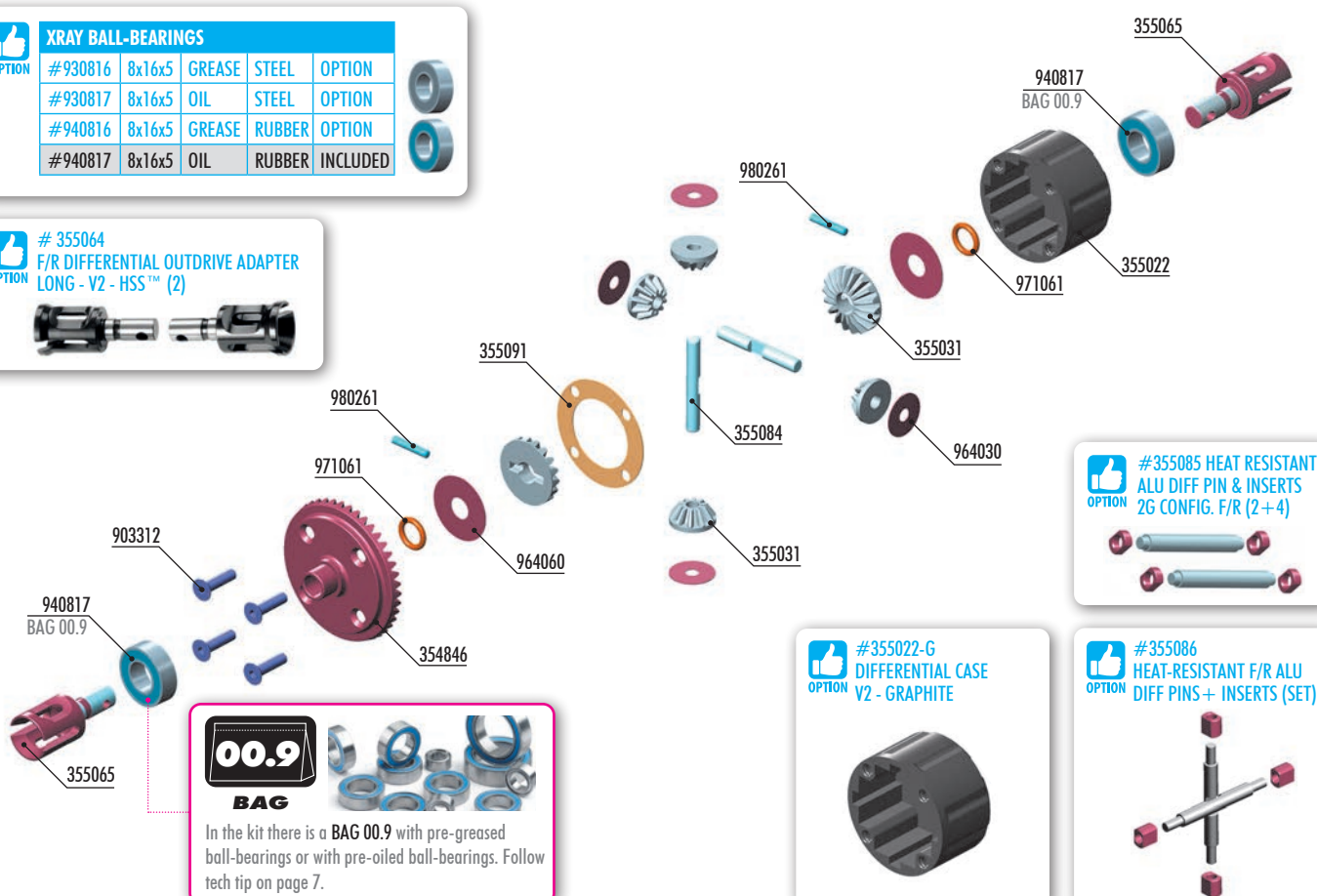


XRAY BALL-BEARINGS

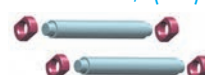
#930816	8x16x5	GREASE	STEEL	OPTION
#930817	8x16x5	OIL	STEEL	OPTION
#940816	8x16x5	GREASE	RUBBER	OPTION
#940817	8x16x5	OIL	RUBBER	INCLUDED



355064
F/R DIFFERENTIAL OUTDRIVE ADAPTER
LONG - V2 - HSS™ (2)



#355085 HEAT RESISTANT
ALU DIFF PIN & INSERTS
2G CONFIG. F/R (2+4)



#355022-G
DIFFERENTIAL CASE
V2 - GRAPHITE



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



In the kit there is a BAG 00.9 with pre-greased ball-bearings or with pre-oiled ball-bearings. Follow tech tip on page 7.

BAG

01.1

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

- 903312 HEX SCREW SFH M3x12 (10)
- 940817 BALL-BEARING 8x16x5 RUBBER SEALED - OIL (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)

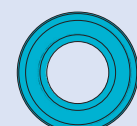
Numbers in parentheses () refer to quantities when purchased separately.

2x



IMPORTANT!

Use matching outdrives on left and right sides of a diff.



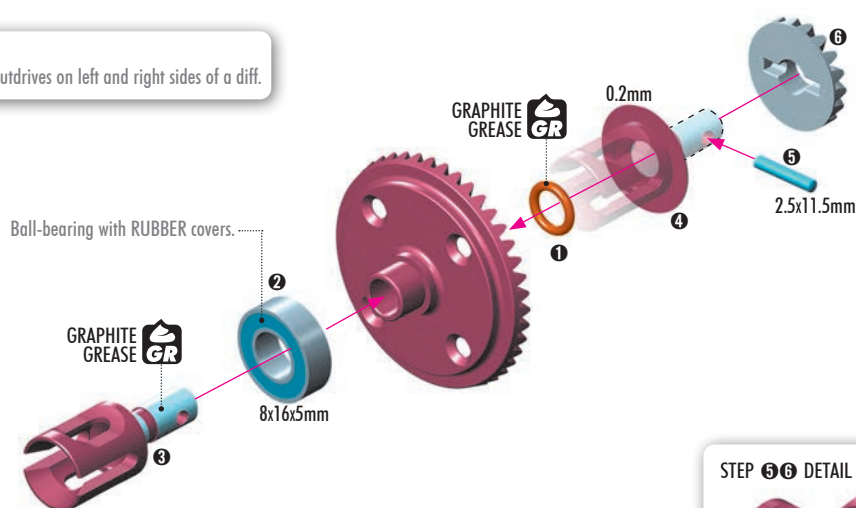
2x 940817
BB 8x16x5



2x 964060
S 6x18x0.2



971061 0 6x1.55
2x
980261 P 2.5x11.5
2x

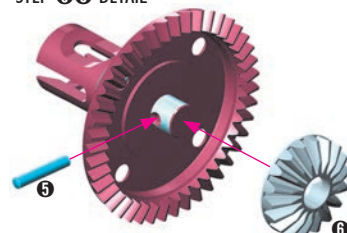


XRAY BALL-BEARINGS

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



STEP 5 & 6 DETAIL



SET-UP
BOOK
DIFFERENTIAL
GEARS



2x 940817
BB 8x16x5



2x 964060
S 6x18x0.2



2x 971061
O 6x1.55

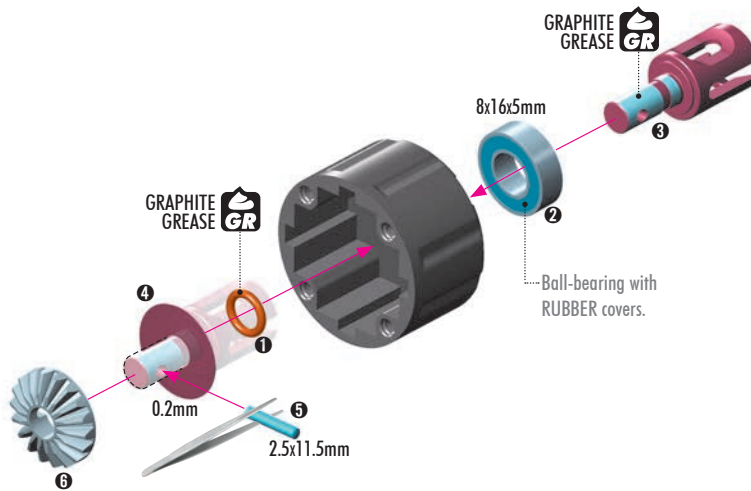


2x 980261
P 2.5x11.5

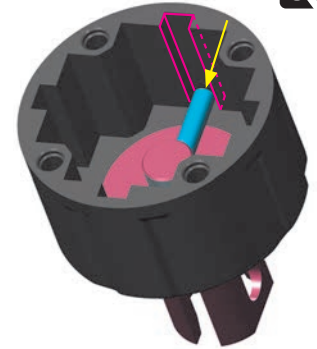
2x

TIP IMPORTANT!

Use matching outdrives on left and right sides of a diff.



STEP 4 DETAIL



8x 903312
SFH M3x12

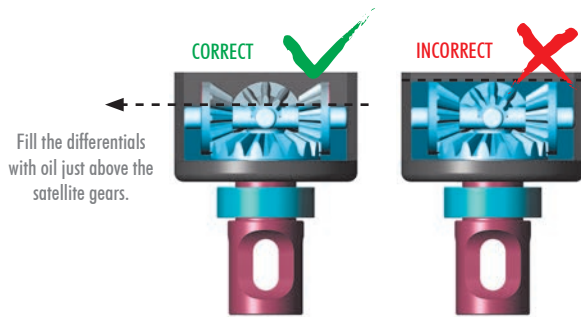


8x 964030
S 3.5x12x0.2

VERY IMPORTANT!

Use the following silicone oils included in the kit for initial settings:

FRONT diff: 500.000cSt / REAR diff: 50.000cSt



! 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 HUDY Ultimate Digital Pocket Scale 300g±0.01g
#107866 HUDY Professional Digital Pocket Scale 3000g/0.1g



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

- FRONT DIFF approx. 39.10g

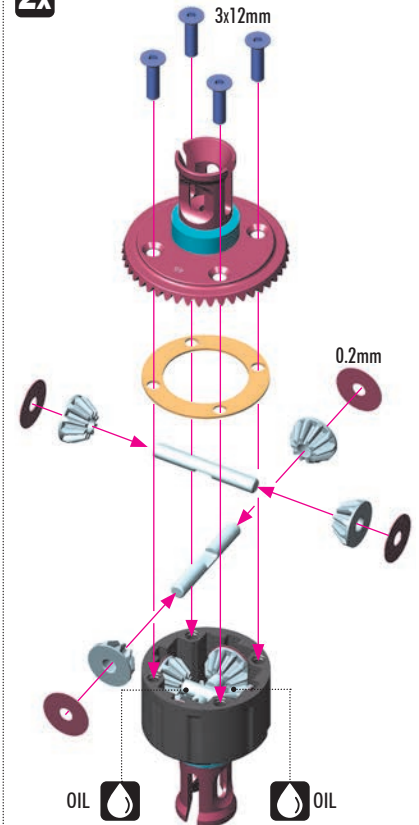
- REAR DIFF approx. 39.10g



2. Slowly pour oil into the diff and watch the weight. The approximate weight of the diff+oil is REAR DIFF approx. 41.10g and FRONT DIFF approx. 41.10g

REAR DIFF	39.10g	+	2.0g	=	41.10g
FRONT DIFF	39.10g	+	2.0g	=	41.10g

2x



Front diff:

Silicone oil 500.000cSt
Fill just above the satellite gears.

Rear diff:

Silicone oil 50.000cSt
Fill just above the satellite gears.

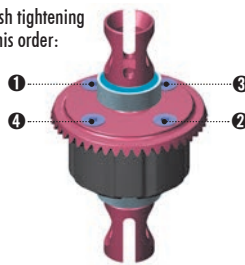
SET-UP BOOK

DIFFERENTIAL OIL

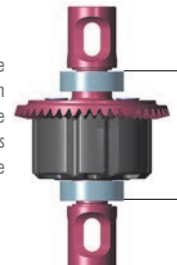
Tighten the screws equally.



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.

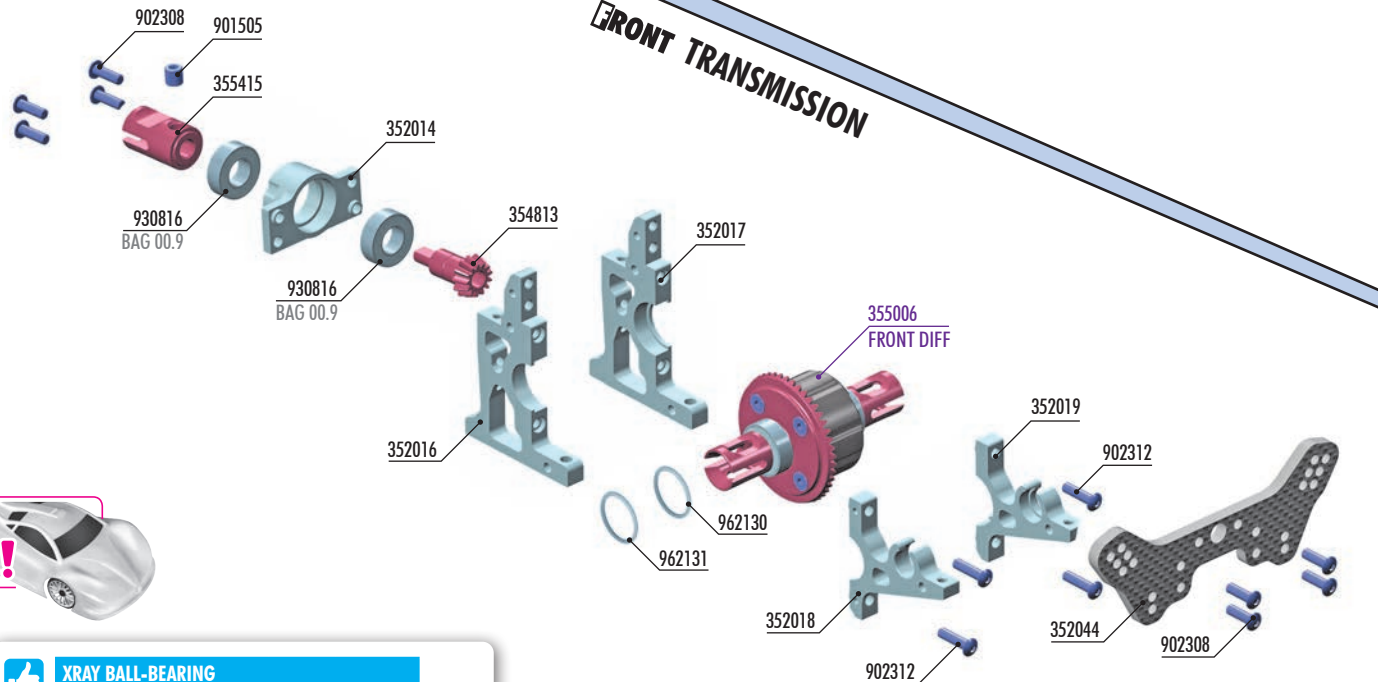
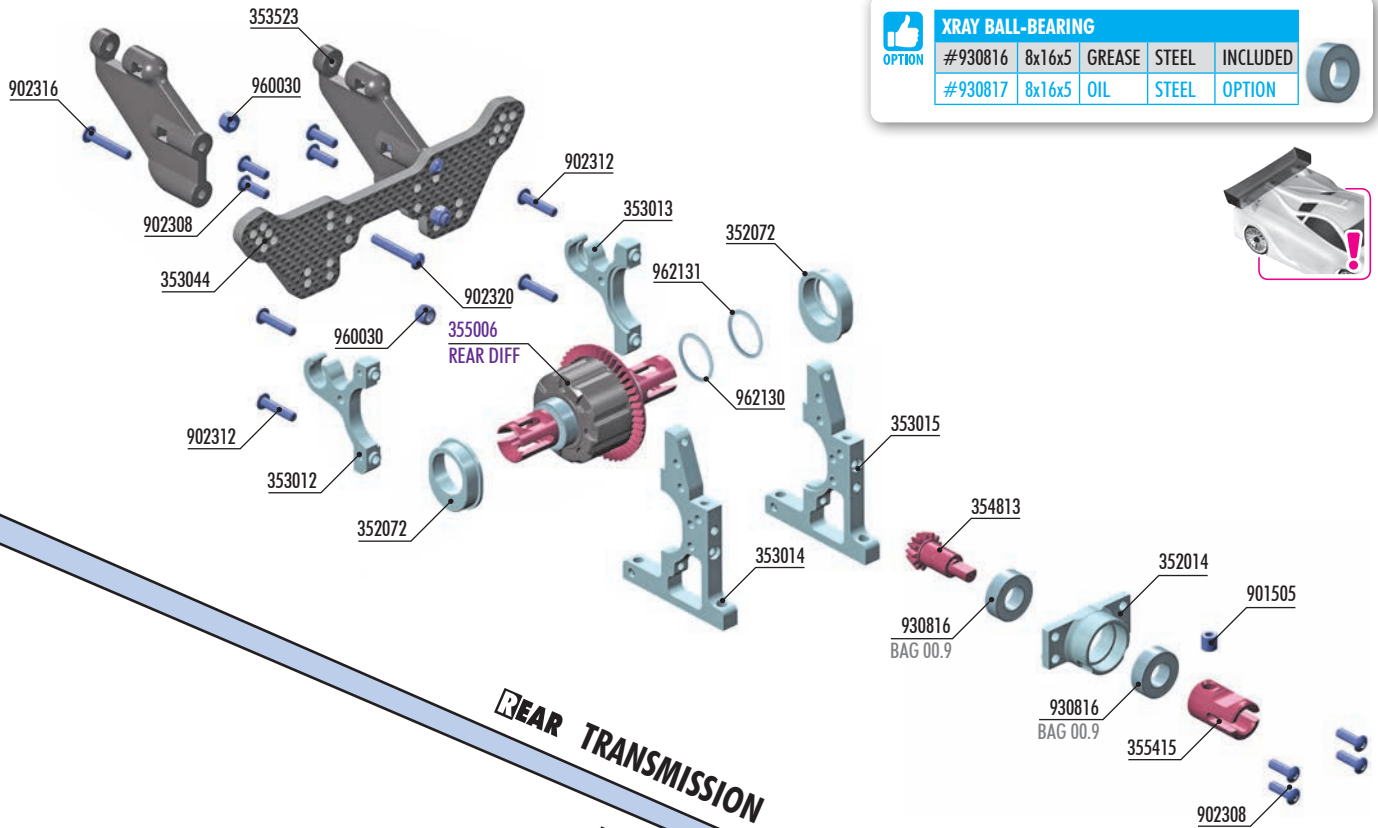


2. FRONT & REAR TRANSMISSION



XRAY BALL-BEARING

OPTION	#930816	8x16x5	GREASE	STEEL	INCLUDED
OPTION	#930817	8x16x5	OIL	STEEL	OPTION



XRAY BALL-BEARING

OPTION	#930816	8x16x5	GREASE	STEEL	INCLUDED
OPTION	#930817	8x16x5	OIL	STEEL	OPTION



BAG

02

- 352014 ALU ADAPTER FOR CENTER JOINT - SWISS 7075 T6
- 352016 ALU FRONT BULKHEAD - RIGHT - SWISS 7075 T6
- 352017 ALU FRONT BULKHEAD - LEFT - SWISS 7075 T6
- 352018 ALU FRONT ANTI-ROLL BAR BULKHEAD - RIGHT - SWISS 7075 T6
- 352019 ALU FRONT ANTI-ROLL BAR BULKHEAD - LEFT - SWISS 7075 T6
- 352044 CARBON FRONT SHOCK TOWER 4mm
- 352072 ALU ADJUSTMENT BALL-BEARING HUB - SWISS 7075 T6 (2)
- 353012 ALU REAR ANTI-ROLL BAR BULKHEAD - RIGHT - SWISS 7075 T6
- 353013 ALU REAR ANTI-ROLL BAR BULKHEAD - LEFT - SWISS 7075 T6
- 353014 ALU REAR BULKHEAD - RIGHT - SWISS 7075 T6
- 353015 ALU REAR BULKHEAD - LEFT - SWISS 7075 T6
- 353044 CARBON REAR SHOCK TOWER 4mm
- 353523 GT COMPOSITE REAR HOLDER POST (2)
- 354813 BEVEL DRIVE PINION GEAR 13T - MATCHED FOR 46T LARGE BEVEL GEAR

- 355415 CENTRAL DOGBONE SHAFT UNIVERSAL JOINT - HUDY SPRING STEEL™ (2)
- 901505 HEX SCREW SB M5x5 (10)
- 902308 HEX SCREW SH M3x8 (10)
- 902312 HEX SCREW SH M3x12 (10)
- 902316 HEX SCREW SH M3x16 (10)
- 902320 HEX SCREW SH M3x20 (10)
- 930816 BALL-BEARING 8x16x5 STEEL SEALED - GREASE (2)
- 960030 NUT M3 (10)
- 962130 WASHER S 13x16x0.2 (10)
- 962131 WASHER S 13x16x0.1 (10)
- 355006 DIFFERENTIAL 46T - MATCHED FOR 13T PINION GEAR - SET

Numbers in parentheses () refer to quantities when purchased separately.

XRAY

2. FRONT & REAR TRANSMISSION

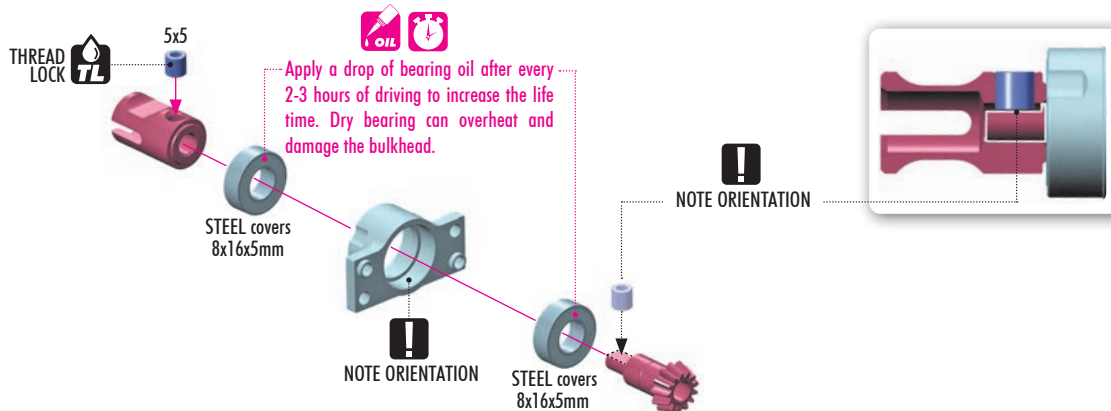
2x FRONT & REAR TRANSMISSION



4x 930816
BB 8x16x5



2x 901505
SB M5x5



NOTE ORIENTATION

NOTE ORIENTATION

STEEL covers
8x16x5mm

TIP

Use HUDY Ball-Bearing Grease or Oil for servicing:



- #106220 - Standard
- #106221 - Extra
- #106222 - Premium
- #106230 - Bearing Oil



XRAY BALL-BEARING

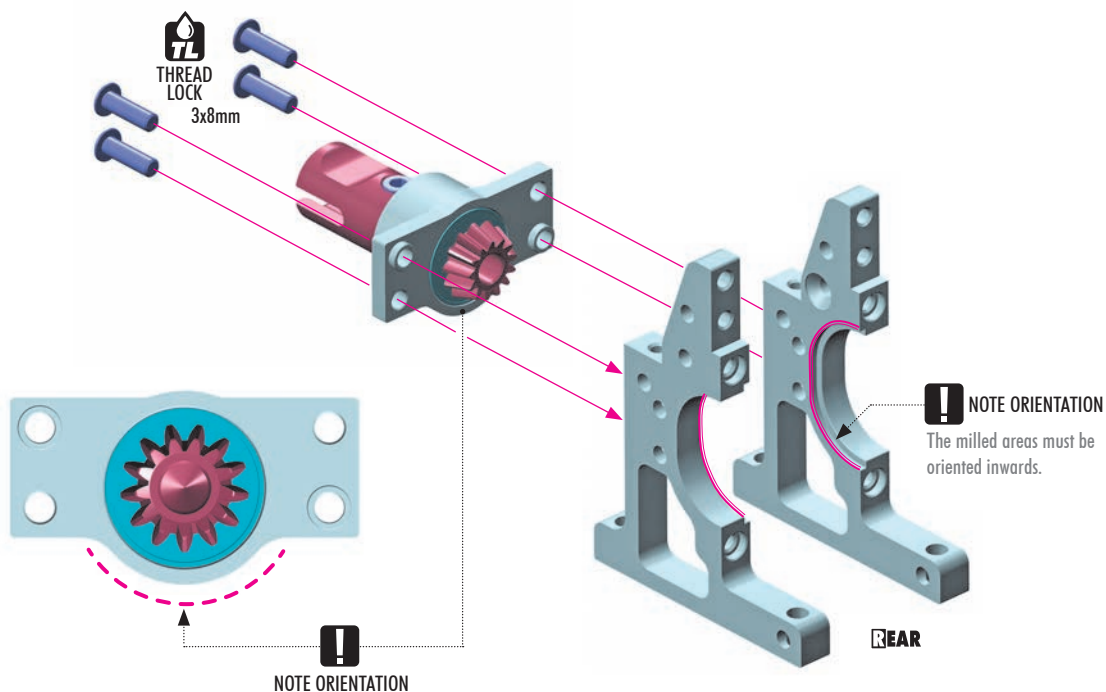
#930816	8x16x5	GREASE	STEEL	INCLUDED
#930817	8x16x5	OIL	STEEL	OPTION



REAR & TRANSMISSION



4x 902308
SH M3x8



NOTE ORIENTATION
The milled areas must be oriented inwards.

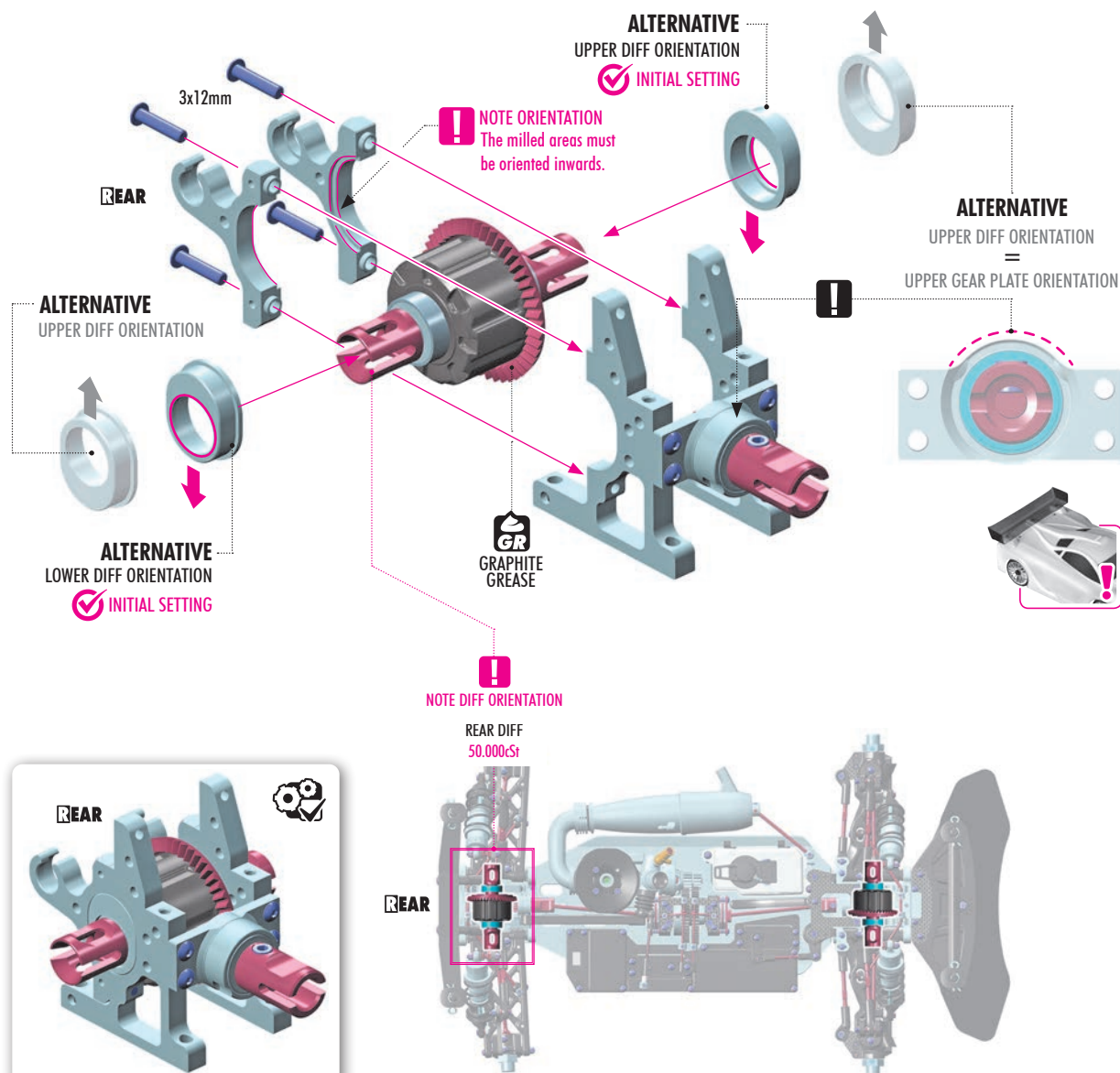
NOTE ORIENTATION



2. FRONT & REAR TRANSMISSION



REAR TRANSMISSION



REAR DIFF GEAR MESH ADJUSTMENT



Follow TECH TIP on
page 6.



INITIAL SETTING



NO SHIMS



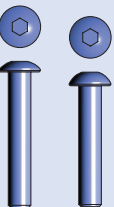
962130
S 13x16x0.2



962131
S 13x16x0.1



4x 902308
SH M3x8

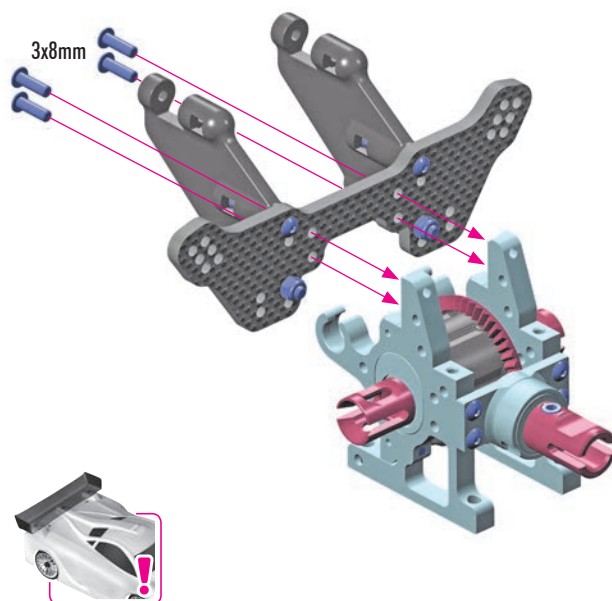
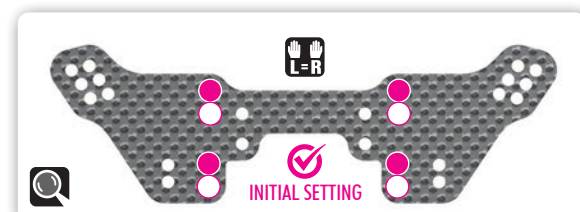
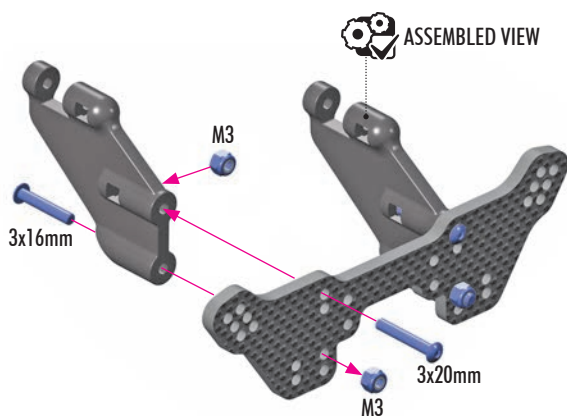


902320 SH M3x20 2x

902316
SH M3x16
2x



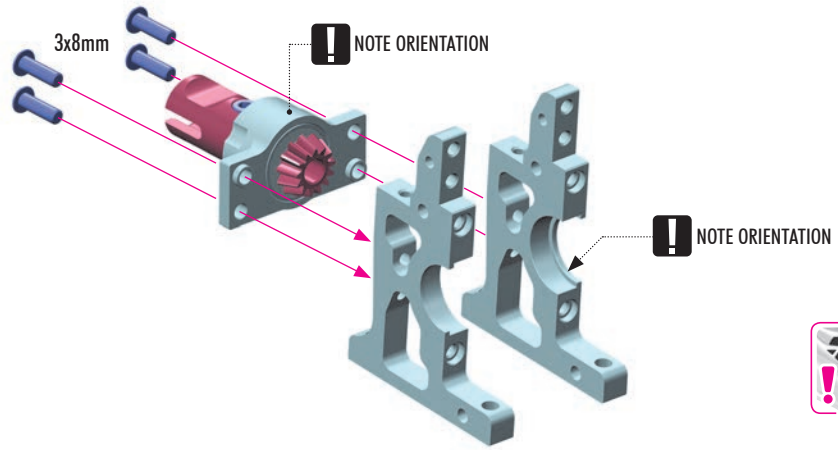
4x 960030
N M3



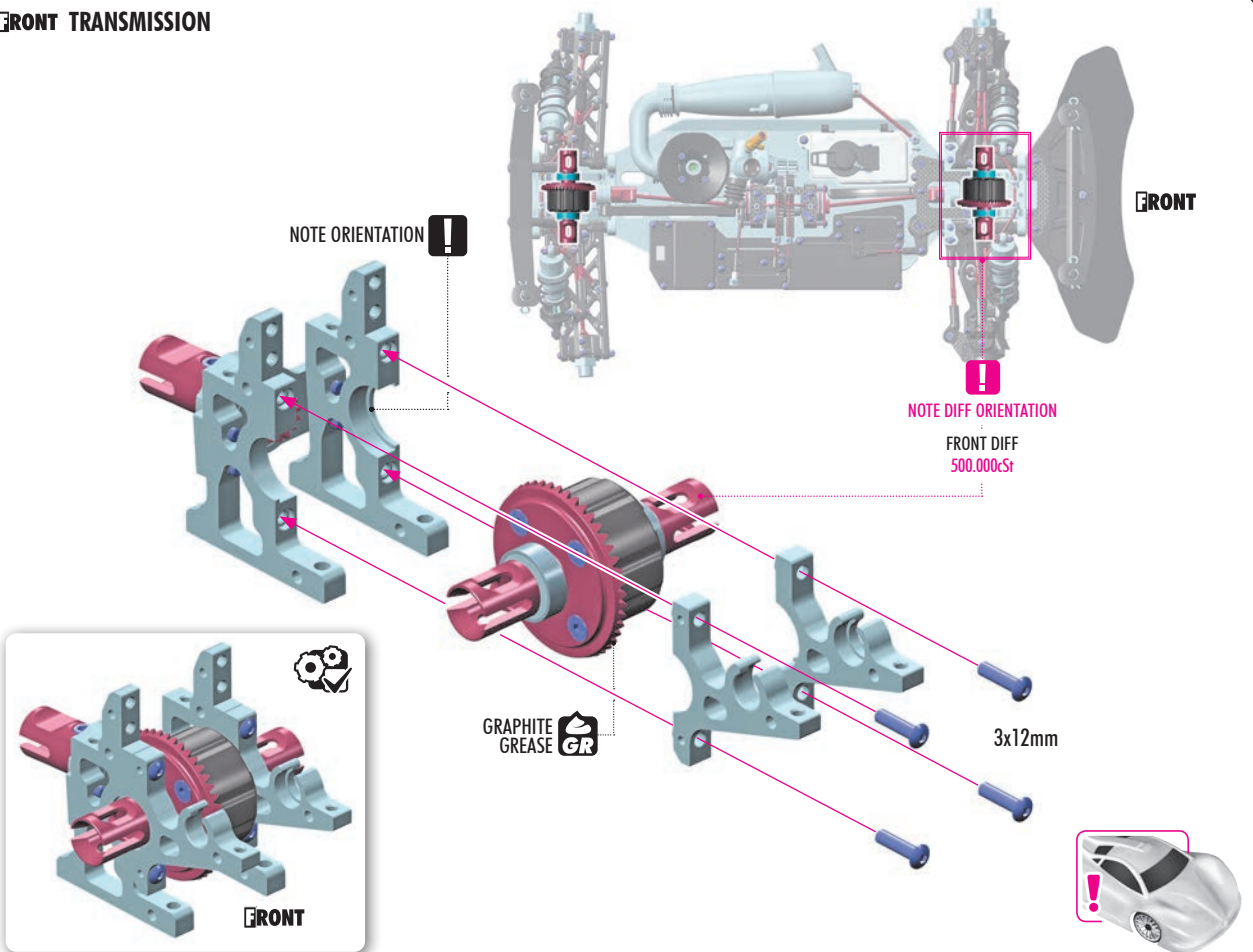
2. FRONT & REAR TRANSMISSION



FRONT TRANSMISSION



FRONT TRANSMISSION

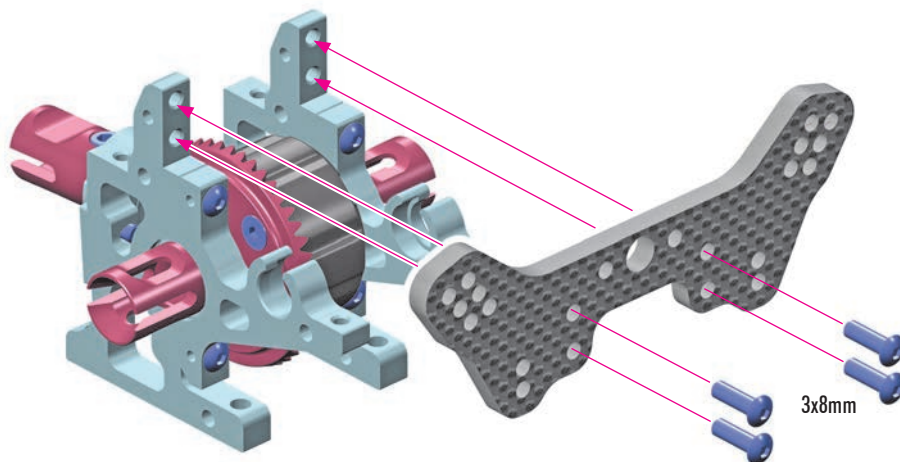
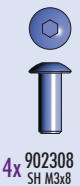


REAR DIFF GEAR MESH ADJUSTMENT



Follow TECH TIP on page 6.

INITIAL SETTING
NO SHIMS



3. REAR SUSPENSION



REAR ANTI-ROLL BARS

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

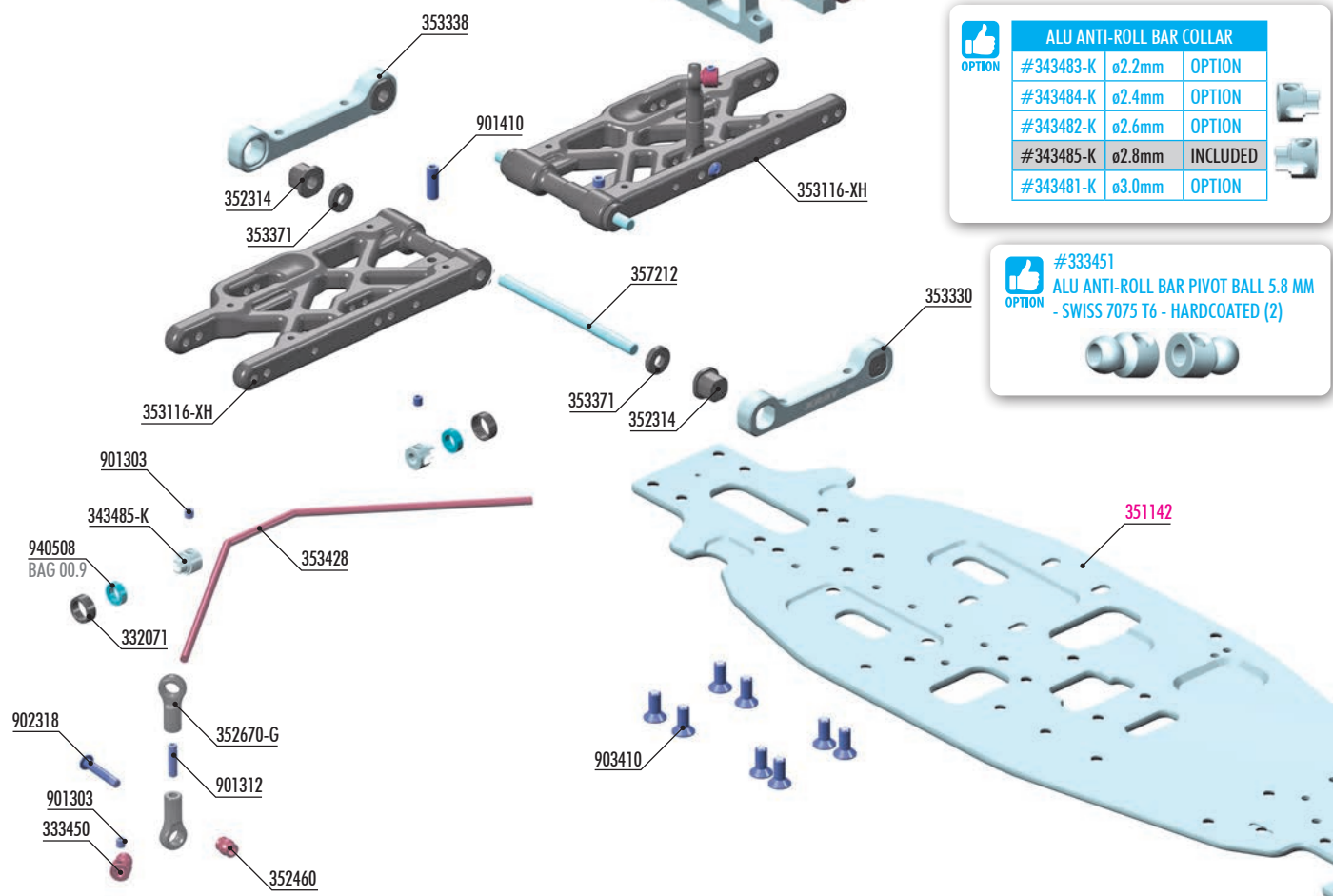


ALU ANTI-ROLL BAR COLLAR

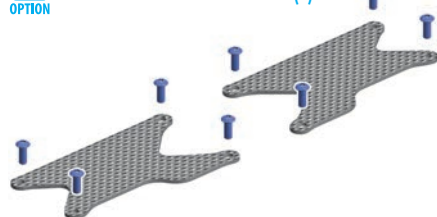
#343483-K	ø2.2mm	OPTION
#343484-K	ø2.4mm	OPTION
#343482-K	ø2.6mm	OPTION
#343485-K	ø2.8mm	INCLUDED
#343481-K	ø3.0mm	OPTION



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



#353191
CARBON REAR LOWER ARM PLATE (2)



REAR SUSPENSION ARMS

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



BAG

03

332071	COMPOSITE BALL-BEARING HUB (4)
333450	ANTI-ROLL BAR BALL JOINT 5.8mm (2)
343485-K	ALU CUTTED ANTI-ROLL BAR COLLAR ø2.8 - BLACK (2)
352314	COMPOSITE ECCENTRIC BUSHINGS - V2 (2)
352460	PIVOT BALL 5.8 (10)
352670-G	COMPOSITE BALL JOINT 5.8 - GRAPHITE (8)
353116-XH	COMPOSITE REAR LOWER SUSPENSION ARM - X-HARD
353330	ALU REAR LOWER SUSP. HOLDER - FRONT - SQUARE ADJ. ROLL-C.
353338	ALU REAR LOWER SUSP. HOLDER - REAR - SQUARE ADJ. ROLL-C.
353371	SET OF COMPOSITE LOWER ARM SHIMS
353428	REAR ANTI-ROLL BAR 2.8mm
357212	LOWER INNER PIVOT PIN F+R (2)

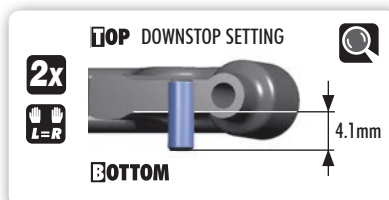
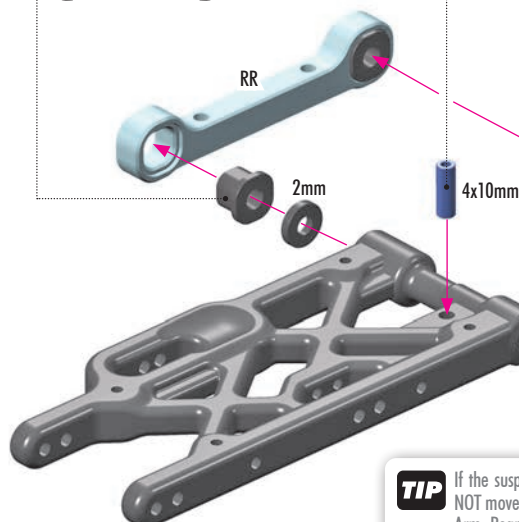
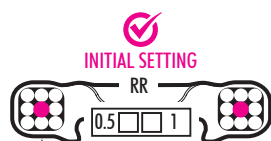
901303	HEX SCREW SB M3x3 (10)
901312	HEX SCREW SB M3x12 (10)
901410	HEX SCREW SB M4x10 (10)
902318	HEX SCREW SH M3x18 (10)
903410	HEX SCREW SFH M4x10 (10)
940508	BALL-BEARING 5x8x2.5 RUBBER SEALED - OIL (2)

351142 GTX'27 ALU CHASSIS - SWISS 7075 T6 (3mm)

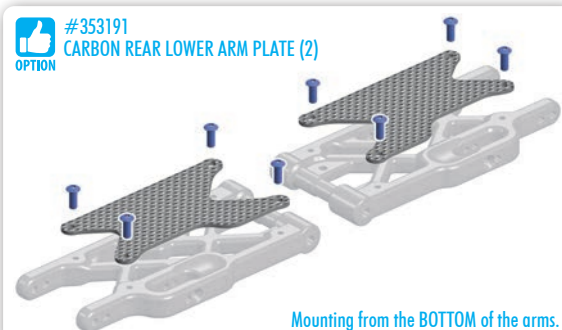
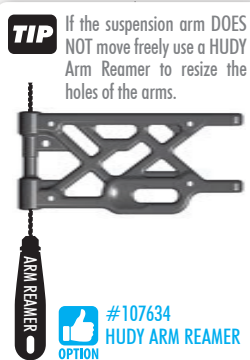
Numbers in parentheses () refer to quantities when purchased separately.

10 353371
4x SHIM 4x10x2

2x 901410
SB M4x10



NOTE ARMS ORIENTATION



Mounting from the BOTTOM of the arms.

REAR SUSPENSION ARMS			
 OPTION	#353115	MEDIUM	OPTION
	#353116	HARD	OPTION
	#353116-KH	X-HARD	INCLUDED
	#353116-G	GRAPHITE	OPTION



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

The new 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).

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

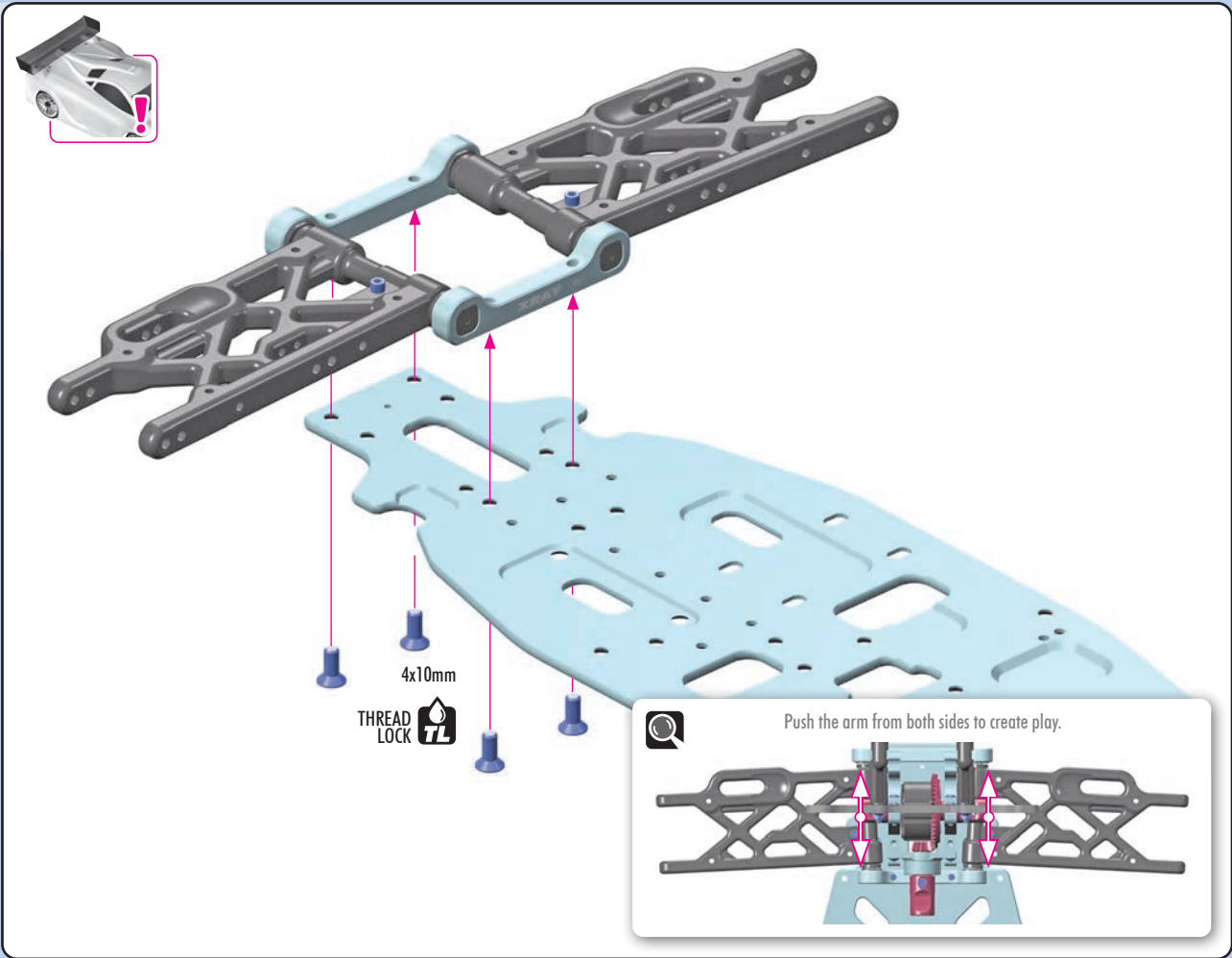
TRACK-WIDTH		
RR	RF	(mm)
		=30
		=30
		=31

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

3. REAR SUSPENSION

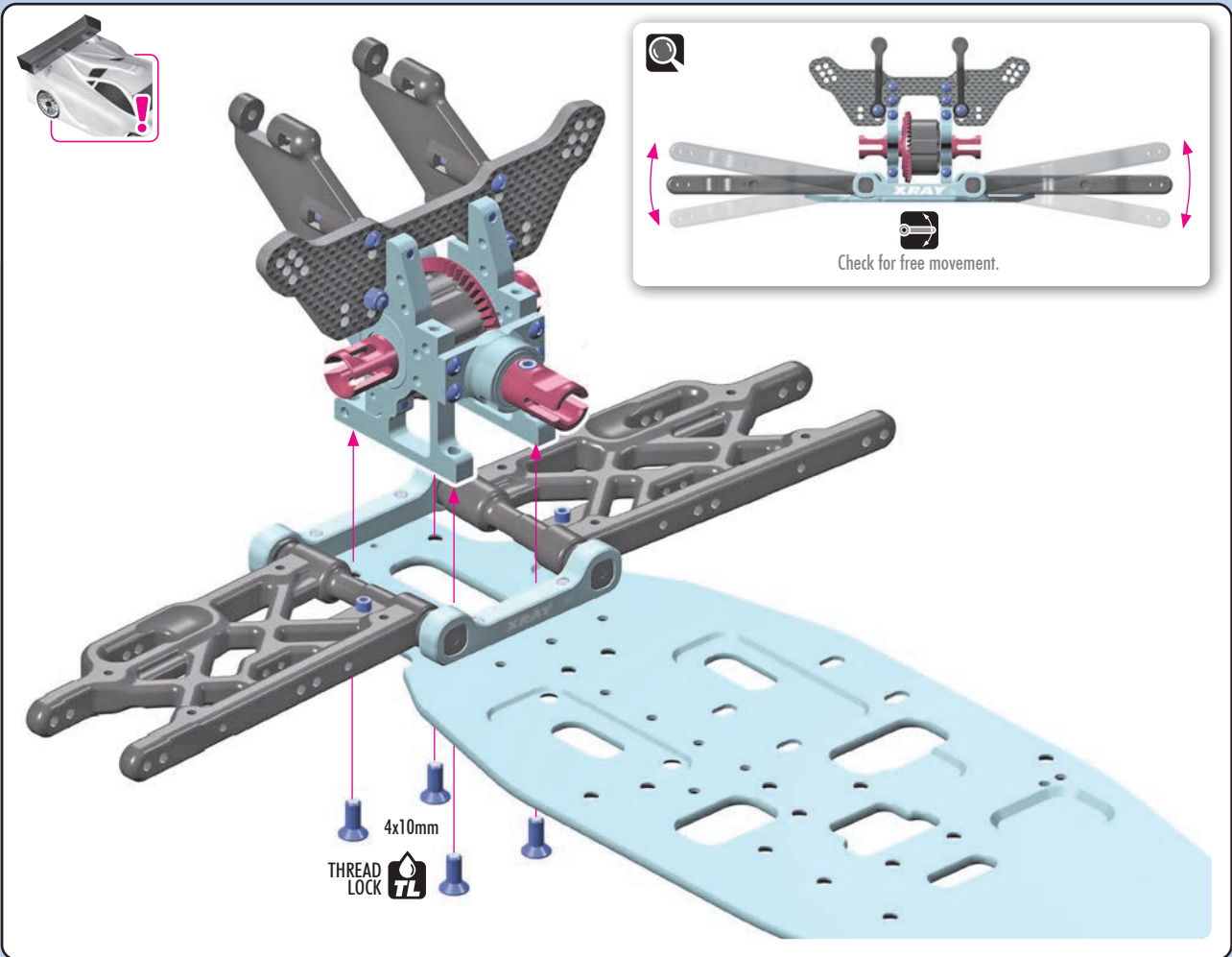


4x 903410
SFH M4x10





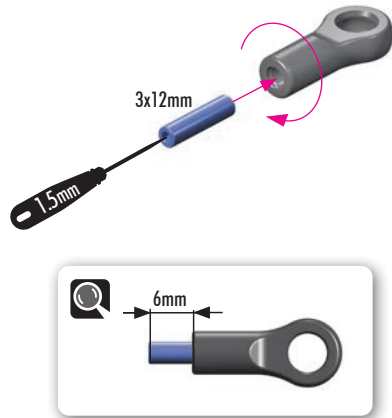
4x 903410
SFH M4x10



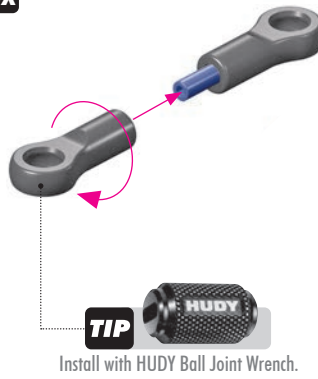
3. REAR SUSPENSION

2x 901312
SB M3x12

2x



2x



2x

TIP Install with HUDY Multi Tool.

NOTE ORIENTATION



2x 940508
BB 5x8x2.5

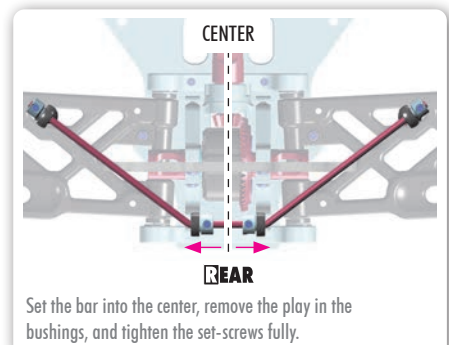
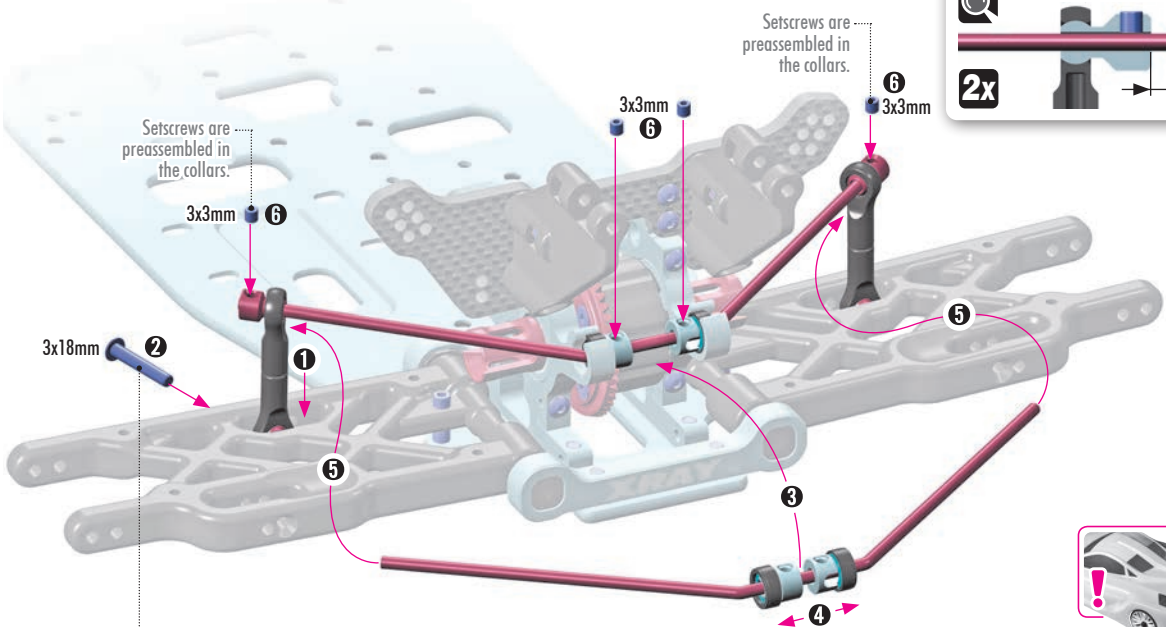
REAR ANTI-ROLL BARS



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

4x 901303
SB M3x3

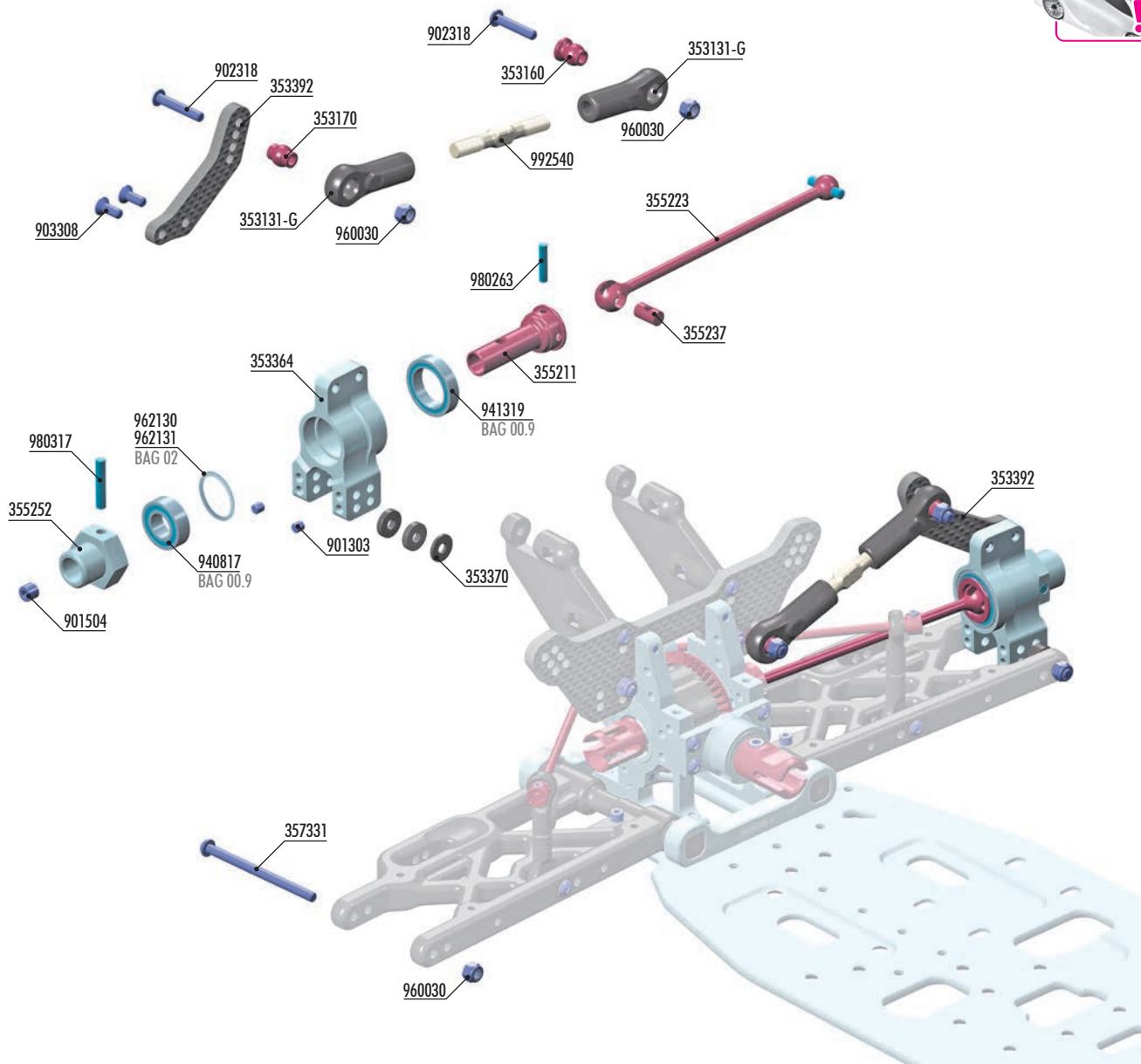
2x 902318
SH M3x18



SET-UP BOOK
ANTI-ROLL BAR

4. REAR SUSPENSION

2x



OFFSET WHEEL AXLES

#	Offset	Status
#355250	0mm	OPTION
#355251	+1mm	OPTION
#355252	+2mm	INCLUDED



XRAY BALL-BEARING

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



BAG

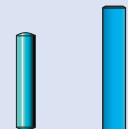
04

- 353131-G REAR UPPER INNER CAMBER LINK BALL JOINT - GRAPHITE (2)
- 353160 MOUNTING BALL 6.8 (4)
- 353170 PIVOT BALL 6.8 (4)
- 353364 GT ALU REAR UPRIGHT - SWISS 7075 T6
- 353370 SET OF COMPOSITE REAR HUB CARRIER SHIMS
- 353392 GT CARBON EXTENSION FOR ALU REAR UPRIGHT (1 + 1)
- 355211 CVD DRIVE AXLE - HUDY SPRING STEEL™
- 355223 CVD UNIVERSAL DRIVE SHAFT 93mm - HUDY SPRING STEEL™
- 355237 CVD DRIVE SHAFT COUPLING - HUDY SPRING STEEL™
- 355252 ALU WHEEL AXLE OFFSET +2mm - BLACK COATED (2)
- 357331 REAR LOWER OUTER PIVOT PIN SCREW 3mm (2)
- 992540 HUDY TITAN ADJ. TURNBUCKLE M5 L/R 40mm (2)

- 901303 HEX SCREW SB M3x3 (10)
- 901504 HEX SCREW SB M5x4 (10)
- 902318 HEX SCREW SH M3x18 (10)
- 903308 HEX SCREW SFH M3x8 (10)
- 940817 BALL-BEARING 8x16x5 RUBBER SEALED - OIL (2)
- 941319 BALL-BEARING 13x19x4 RUBBER SEALED - OIL (2)
- 960030 NUT M3 (10)
- 980263 PIN 2.5x13 (10)
- 980317 PIN 3x17 (10)

Numbers in parentheses () refer to quantities when purchased separately.

4. REAR SUSPENSION



2x L=R

TIP

BAG

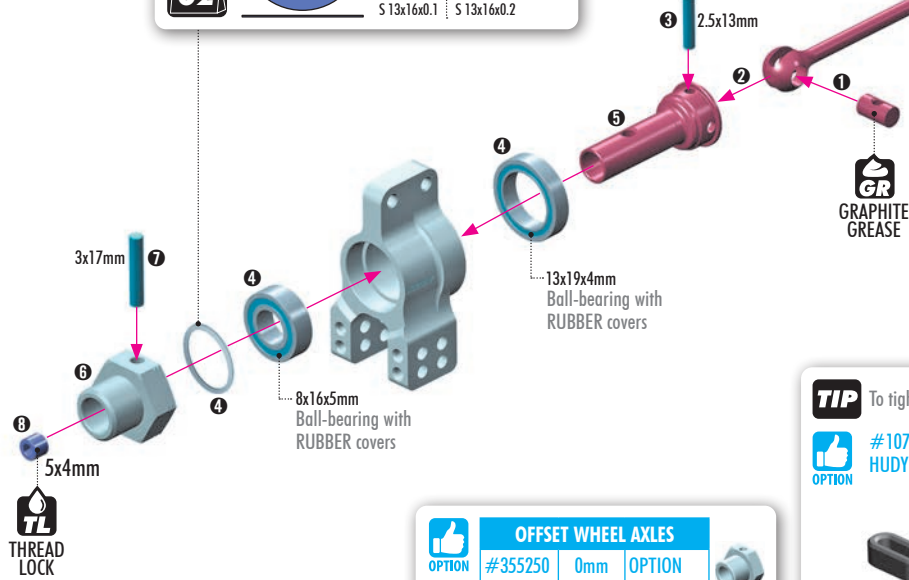
02



Use a shim
0.1~0.2mm to remove play.

INITIAL SETTING

962131 S 13x16x0.1 962130 S 13x16x0.2



TIP

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

TIP

To tighten the setscrew you can also use:



#107570

HUDY 17mm Wheel Nut Tool.

OPTION



OFFSET WHEEL AXLES

#355250	0mm	OPTION
#355251	+1mm	OPTION
#355252	+2mm	INCLUDED



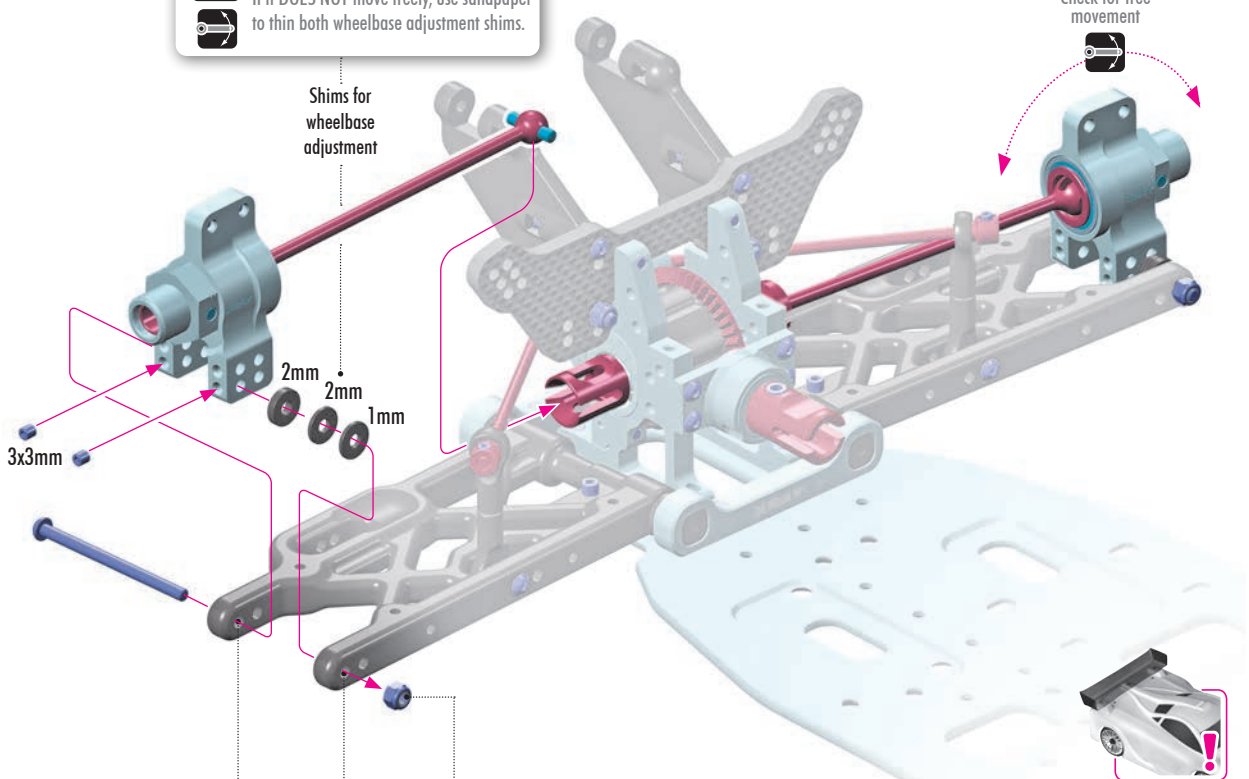
2x L=R

TIP

Ensure that the rear upright moves freely.
If it DOES NOT move freely, use sandpaper
to thin both wheelbase adjustment shims.



Shims for
wheelbase
adjustment



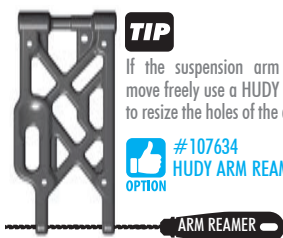
TIP

If the suspension arm DOES NOT
move freely use a HUDY Arm Reamer
to resize the holes of the arms.



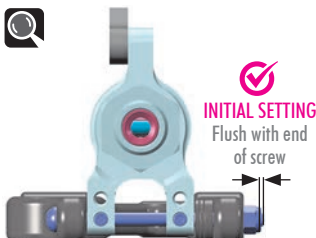
#107634
HUDY ARM REAMER

OPTION

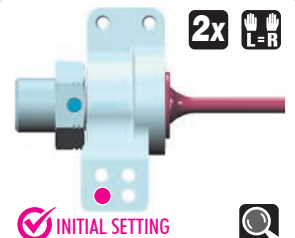


INITIAL SETTING

Flush with end
of screw



2x L=R



INITIAL SETTING



4. REAR SUSPENSION

2x

← **RIGHT THREAD SIDE** **LEFT THREAD SIDE** →

SLOT ORIENTATION !

GRAPHITE GREASE

RIGHT THREAD **LEFT THREAD**

GRAPHITE GREASE

NOTE SHINY SIDE ORIENTATION !

TIP Install with HUDY Multi Tool.

TIP Use tools to tighten as shown:

#181090 Special Tool for turnbuckles & nuts
#181050 Turnbuckle Wrench 5mm

TIP Use a tool to create a leading edge for the ball joint.

OPTION Reamer (#107602 - HUDY EXCLUSIVE Limited Edition)

2x

INITIAL SETTING

2x

INITIAL SETTING

SET-UP BOOK
CAMBER

- 4x** 902318 SH M3x18
- 4x** 903308 SFH M3x8
- 4x** 960030 N M3

2x

ASSEMBLED VIEW

NOTE ORIENTATION !

3x18mm

3x8mm

M3

M3

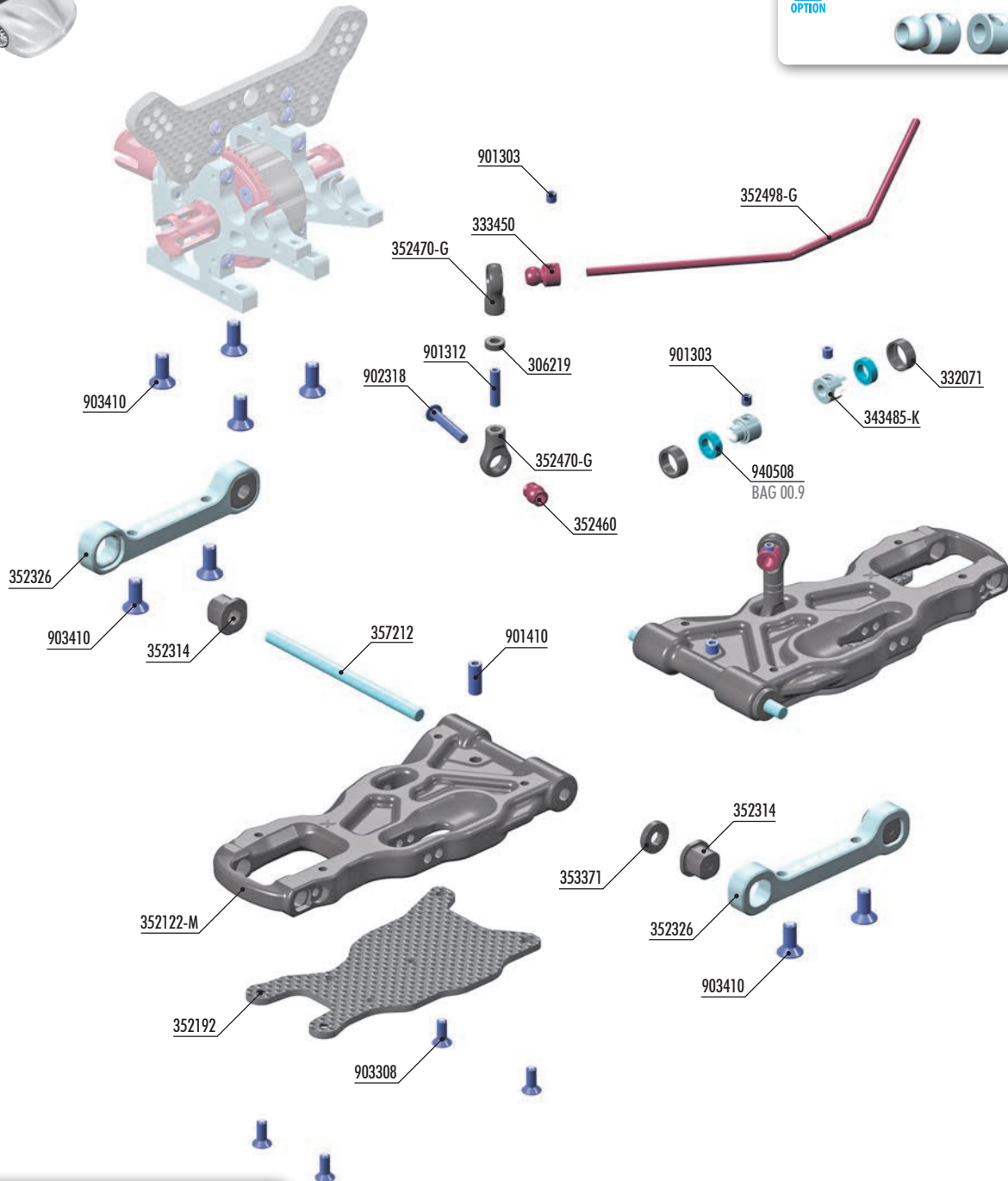
INITIAL SETTING

INITIAL SETTING

5. FRONT SUSPENSION



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



ALU ANTI-ROLL BAR COLLAR

#343483-K	ø2.2mm	OPTION
#343484-K	ø2.4mm	OPTION
#343482-K	ø2.6mm	OPTION
#343485-K	ø2.8mm	INCLUDED
#343481-K	ø3.0mm	OPTION



FRONT LOWER SUSP. ARMS

#352122-M	MEDIUM	INCLUDED
#352122-G	GRAPHITE	OPTION



FRONT ANTI-ROLL BARS

#352496-G	2.6mm	OPTION
#352498-G	2.8mm	INCLUDED
#352499-G	3.0mm	OPTION

BAG

05

306219	COMPOSITE SET OF SHIMS (4)
332071	COMPOSITE BALL-BEARING HUB (4)
333450	ANTI-ROLL BAR BALL JOINT 5.8mm (2)
343485-K	ALU CUTTED ANTI-ROLL BAR COLLAR ø2.8 - BLACK (2)
352122-M	C-HUB COMPOSITE FRONT LOWER SUSPENSION ARM - MEDIUM
352192	CARBON FRONT LOWER C-HUB ARM PLATE 2.2mm (2)
352314	COMPOSITE SQUARE ADJ. ROLL CENTER BUSHINGS - V2 (2)
352326	ALU FRONT LOWER SUSP. HOLDER - SQUARE ADJ. ROLL-CENTER
352460	PIVOT BALL 5.8 (10)
352470-G	COMPOSITE BALL JOINT 5.8 - GRAPHITE (8)
352498-G	GT FRONT ANTI-ROLL BAR 2.8mm

353371	SET OF COMPOSITE LOWER ARM SHIMS
357212	LOWER INNER PIVOT PIN F+R (2)
901303	HEX SCREW SB M3x3 (10)
901312	HEX SCREW SB M3x12 (10)
901410	HEX SCREW SB M4x10 (10)
902318	HEX SCREW SH M3x18 (10)
903308	HEX SCREW SFH M3x8 (10))
903410	HEX SCREW SFH M4x10 (10))
940508	BALL-BEARING 5x8x2.5 RUBBER SEALED - OIL (2)

Numbers in parentheses () refer to quantities when purchased separately.

5. FRONT SUSPENSION

8x 903308 SFH M3x8

2x L=R

3x8mm

DO NOT fully tighten the screws during assembly.

1 2

Finish tightening in this order.

FRONT LOWER SUSP. ARMS

OPTION	#352122-M	MEDIUM	INCLUDED
	#352122-G	GRAPHITE	OPTION

2x 353371 SHIM 4x10x2

2x 901410 SB M4x10

TOP DOWNSTOP SETTING

4.6mm

BOTTOM

FRONT

2mm

FF FR

INITIAL SETTING

ALTERNATIVE SETTING

RIGHT

4x10mm

2mm

INITIAL SETTING

LEFT

4x10mm

2mm

INITIAL SETTING

TIP L=R

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

(HUDY #107634)

ARM REAMER

Push the arm from both sides to create play.

Check for free movement.

Eccentric bushings have two different offsets from the center.

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

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).

TRACK-WIDTH			
FF	FR	(mm)	
0	0	=308	
0.5	0	=306	
1	0	=310	

ROLL CENTER			
FF	FR	(mm)	
0	0	=1	
0.5	0	=0	
1	0	=-1	

The tables below describe the amounts of kick-up, front 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.

SET-UP BOOK

KICK UP

ROLL CENTER DOWNSTOP

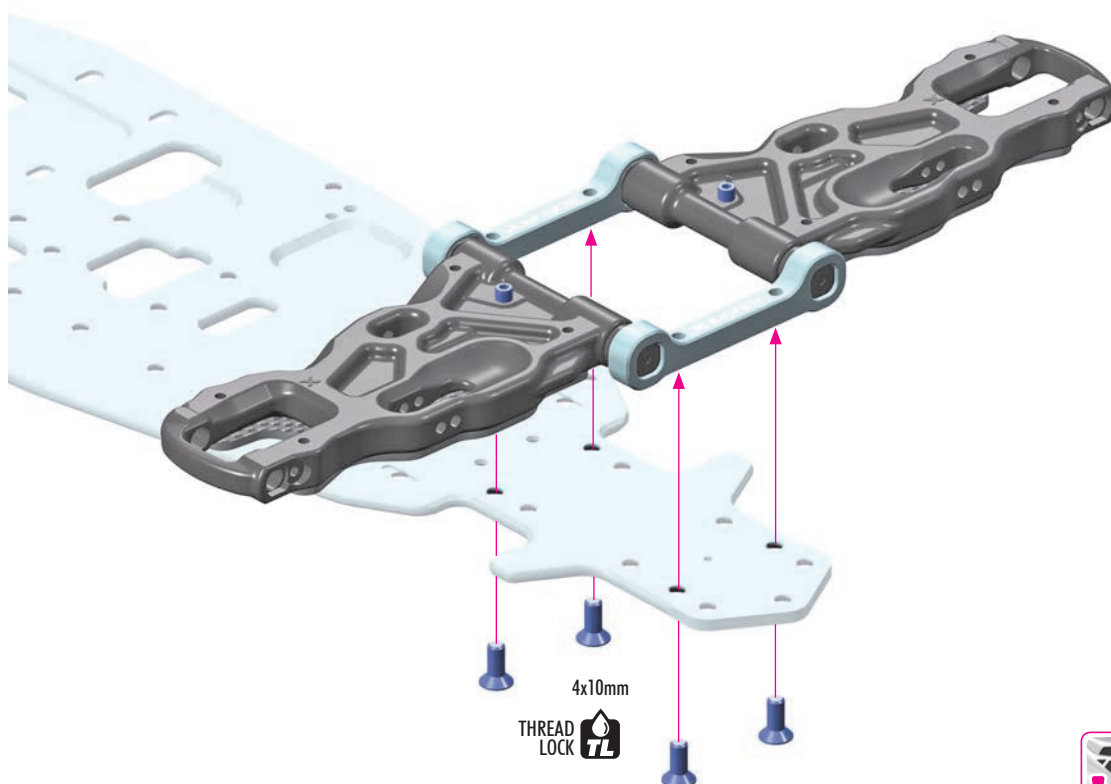
WHEELBASE

TRACK WIDTH

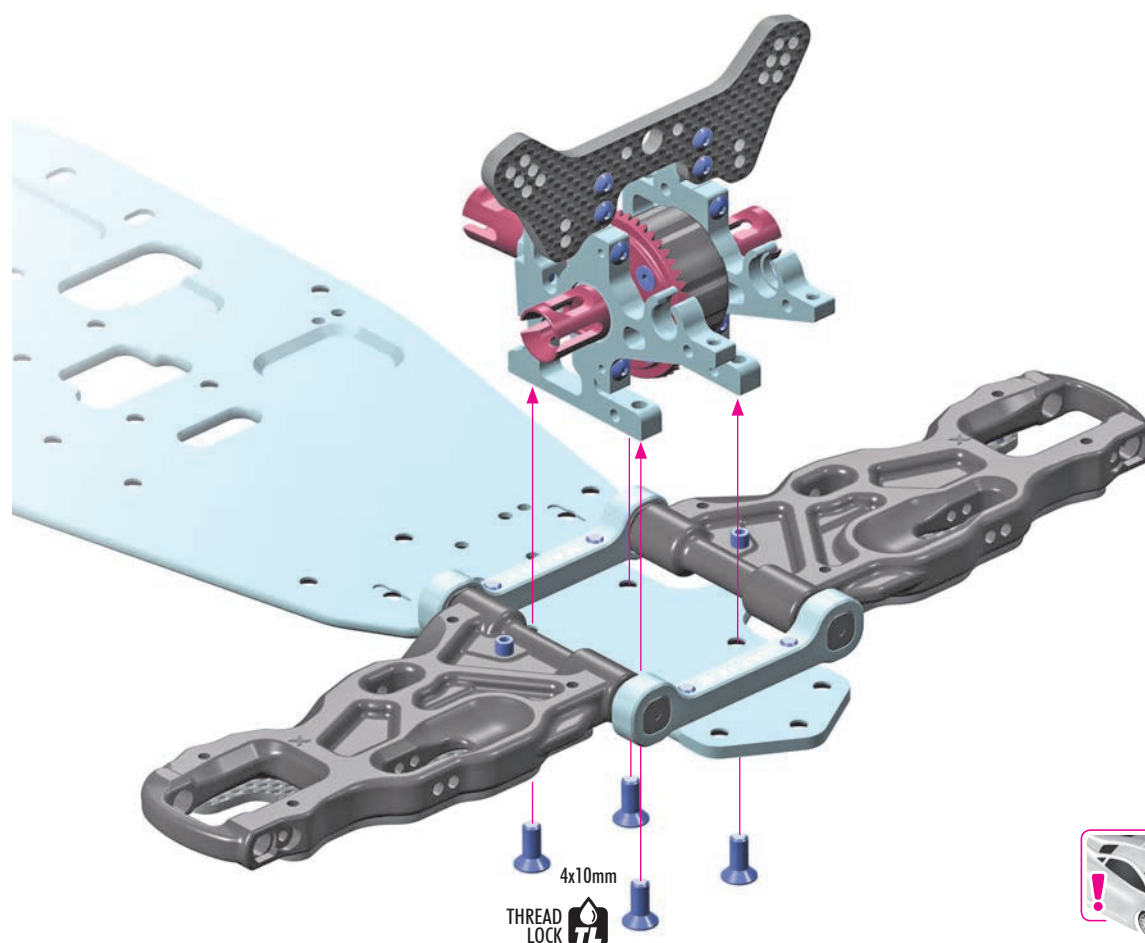
5. FRONT SUSPENSION



4x 903410
SFH M4x10



4x 903410
SFH M4x10



5. FRONT SUSPENSION

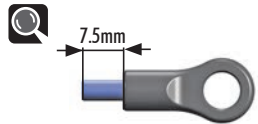
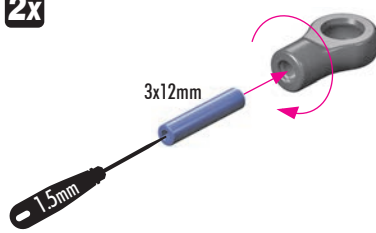
10

2x 306219
SHIM 3x6x3

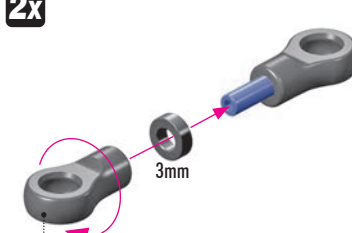


2x 901312
SB M3x12

2x



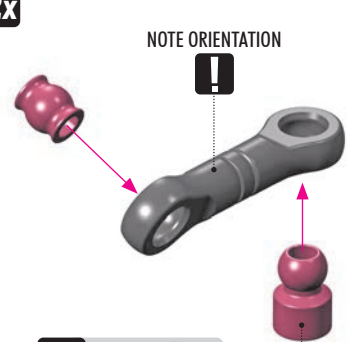
2x



TIP

Install with HUDY Ball Joint Wrench.

2x



NOTE ORIENTATION

TIP

Install with HUDY Multi Tool.



940508
BB 5x8x2.5

FRONT ANTI-ROLL BARS



ASSEMBLED VIEW



ALU ANTI-ROLL BAR COLLAR			
#343483-K	ø2.2mm	OPTION	
#343484-K	ø2.4mm	OPTION	
#343482-K	ø2.6mm	OPTION	
#343485-K	ø2.8mm	INCLUDED	
#343481-K	ø3.0mm	OPTION	

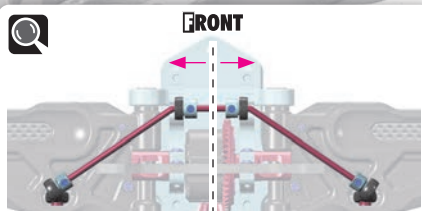
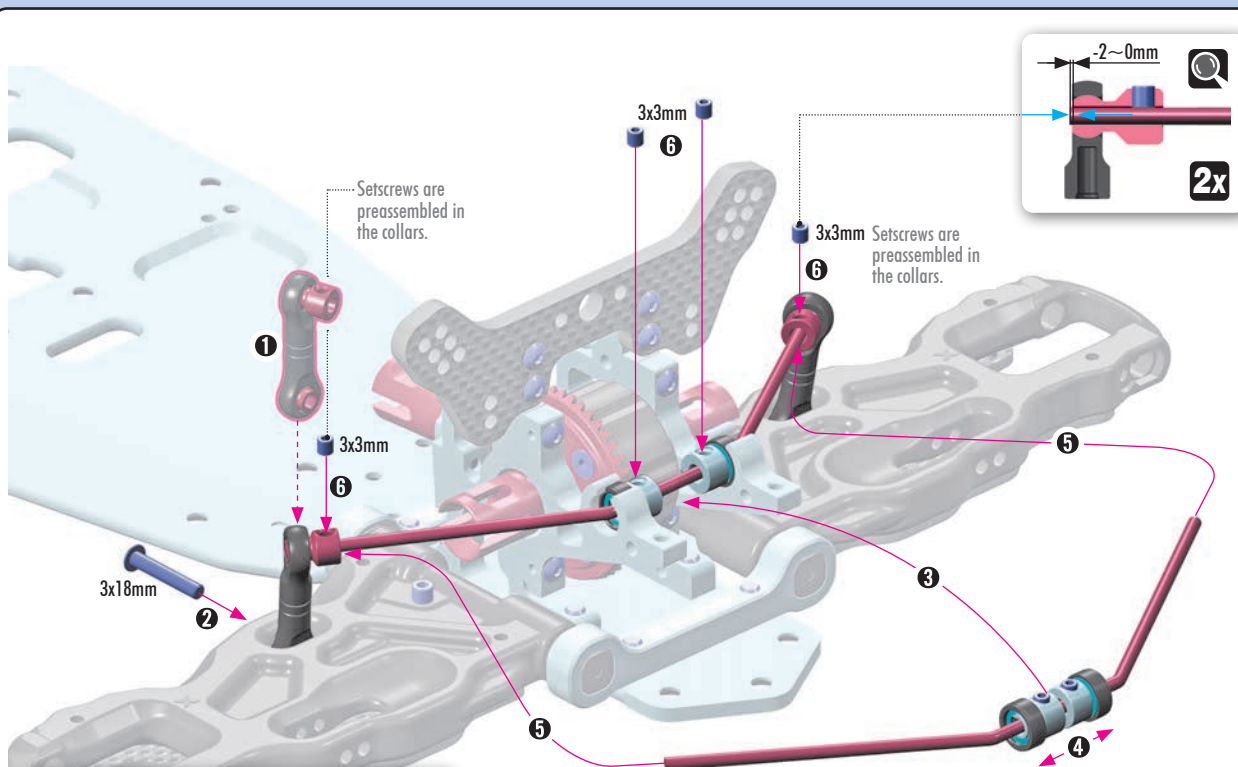


FRONT ANTI-ROLL BARS			
#352496-G	2.6mm	OPTION	
#352498-G	2.8mm	INCLUDED	
#352499-G	3.0mm	OPTION	

4x 901303
SB M3x3

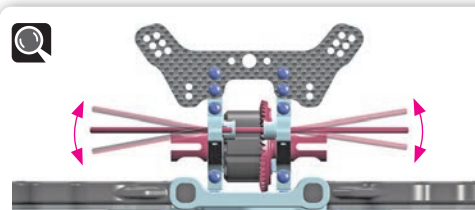


2x 902318
SH M3x18



TIP

Set the bar into the center, remove the play in the bushings, and tighten the set-screws fully.

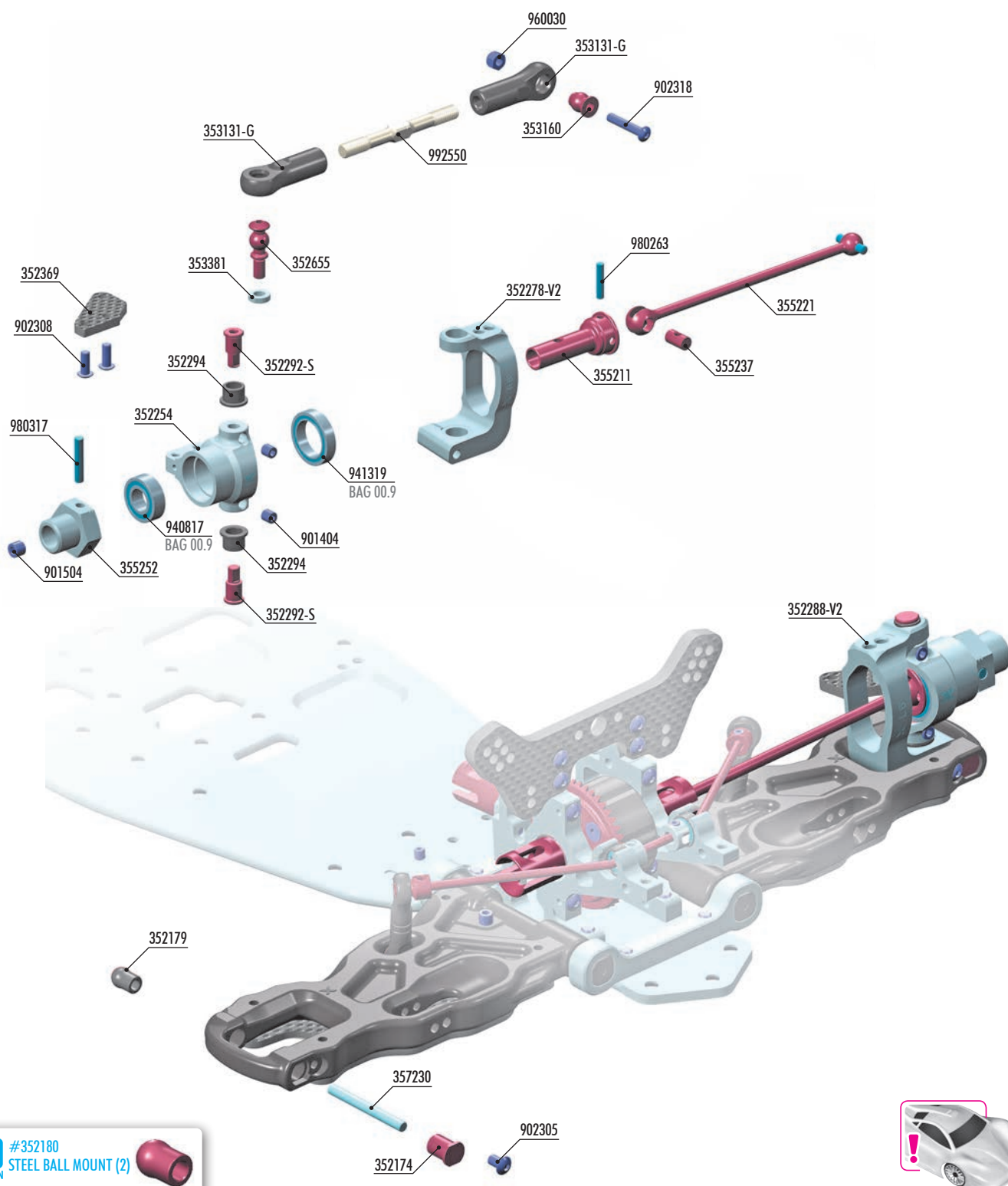


Step 4 check for free movement.



SET-UP BOOK
ANTI-ROLL BAR

6. FRONT SUSPENSION



#352180

OPTION STEEL BALL MOUNT (2)

BAG

06

352174 STEEL ECCENTRIC BUSHING 1° - V2 (2)
 352179 COMPOSITE BUSHING & BALL MOUNT SET (2+2)
 352254 ALU STEERING BLOCK - SWISS 7075 T6
 352278-V2 ALU CASTER BLOCK 6° RIGHT - SWISS 7075 T6
 352288-V2 ALU CASTER BLOCK 6° LEFT - SWISS 7075 T6
 352292-S STEEL STEERING BLOCK PIVOT PIN WITH SET SCREW (2)
 352294 COMPOSITE BUSHING FOR ALU CASTER BLOCK (2)
 352369 CARBON STEERING PLATE (2)
 352655 BALL STUD 6.8mm WITH BACKSTOP L=6mm - M4 (2)
 353131-G REAR UPPER INNER CAMBER LINK BALL JOINT - GRAPHITE (2)
 353160 MOUNTING BALL 6.8 (4)
 353381 ALU SHIM 4x7.5x2 (4)
 355211 CVD DRIVE AXLE - HUDY SPRING STEEL™
 355221 CVD UNIVERSAL DRIVE SHAFT 94mm - HUDY SPRING STEEL™
 355237 CVD DRIVE SHAFT COUPLING - HUDY SPRING STEEL™
 355252 ALU WHEEL AXLE OFFSET "+2mm" - HARD COATED (2)
 357230 FRONT LOWER OUTER PIVOT PIN (2)

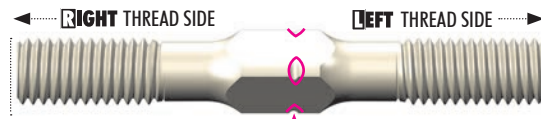
992550 HUDY TITAN ADJ. TURNBUCKLE M5 L/R 50mm (2)
 901404 HEX SCREW SB M4x4 (10)
 901504 HEX SCREW SB M5x4 (10)
 902305 HEX SCREW SH M3x5 (10)
 902308 HEX SCREW SH M3x8 (10)
 902318 HEX SCREW SH M3x18 (10)
 940817 BALL-BEARING 8x16x5 RUBBER SEALED - OIL (2)
 941319 BALL-BEARING 13x19x4 RUBBER SEALED - OIL (2)
 960030 NUT M3 (10)
 980263 PIN 2.5x13 (10)
 980317 PIN 3x17 (10)



Numbers in parentheses () refer to quantities when purchased separately.

6. FRONT SUSPENSION

2x 



TIP  Install with HUDY Multi Tool.

SLOT ORIENTATION 

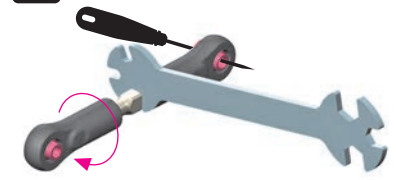
NOTE SHINY SIDE ORIENTATION 

GRAPHITE GREASE  **RIGHT THREAD**

LEFT THREAD
GRAPHITE GREASE 

NOTE SHINY SIDE ORIENTATION 

TIP Use tools to tighten as shown:



 #181090 Special Tool for turnbuckles & nuts
#181050 Turnbuckle Wrench 5mm
OPTION

TIP Use a tool to create a leading edge for the ball joint.

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

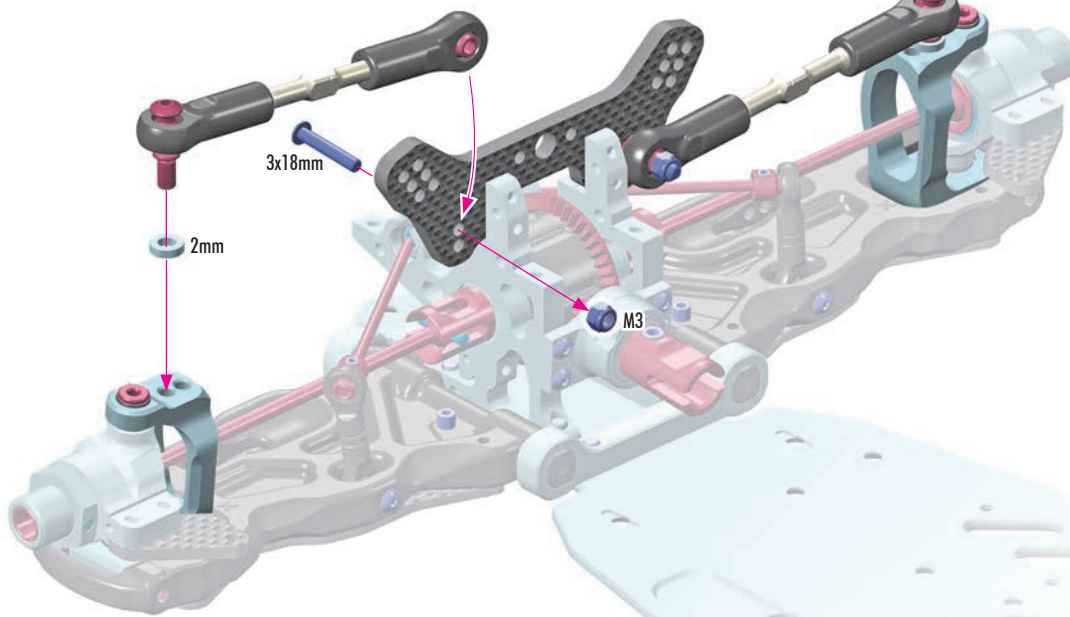


2x  353381
SHIM 4x7.5x2

2x  902318
SH M3x18

2x 

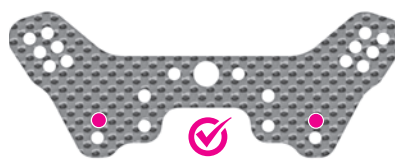
ASSEMBLED VIEW 



3x18mm

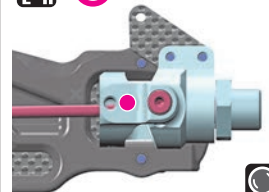
2mm

M3



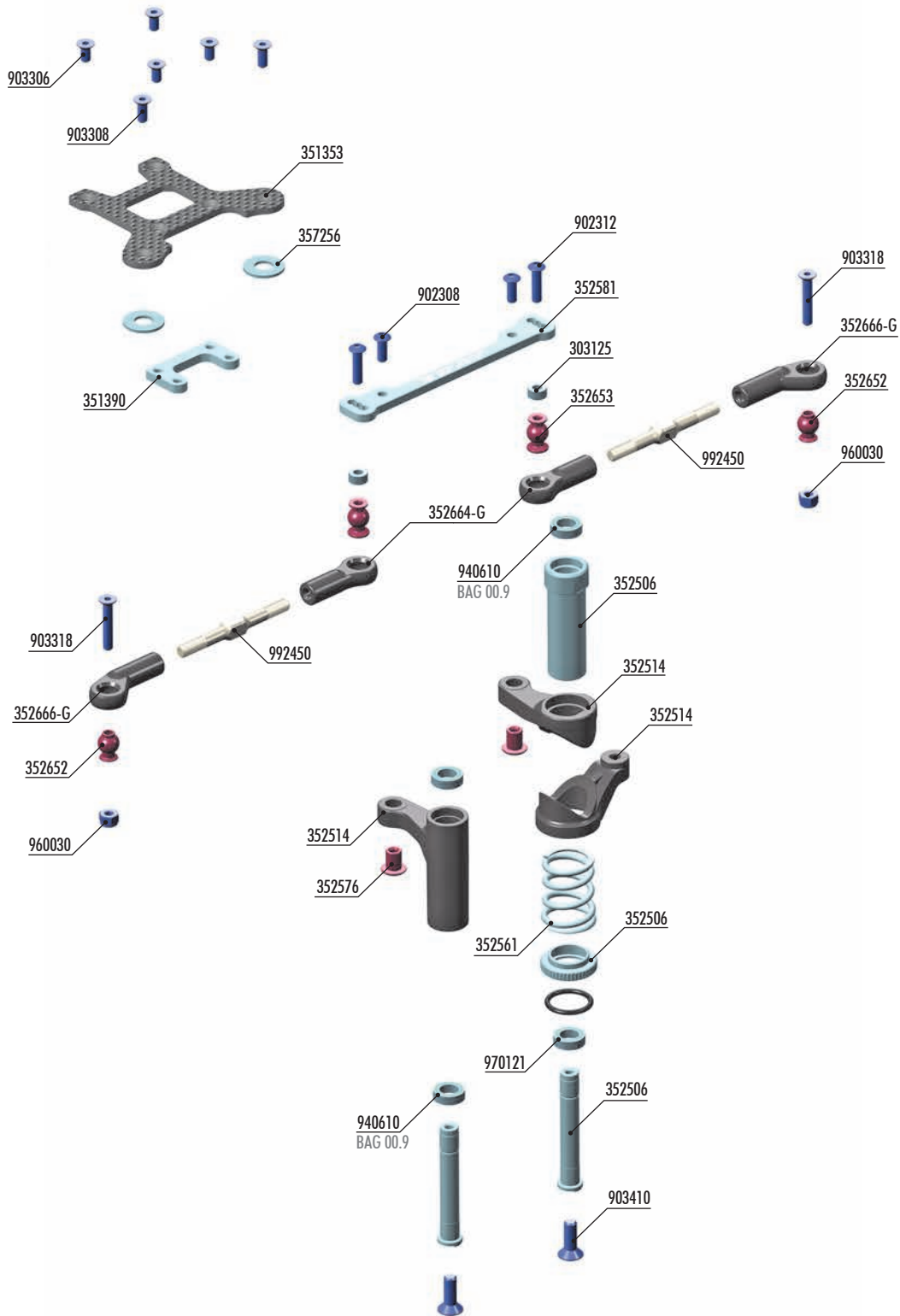
INITIAL SETTING

 **INITIAL SETTING**



SET-UP BOOK
ROLL CENTER

7. STEERING

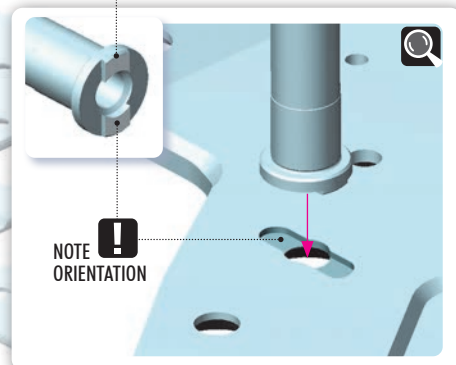
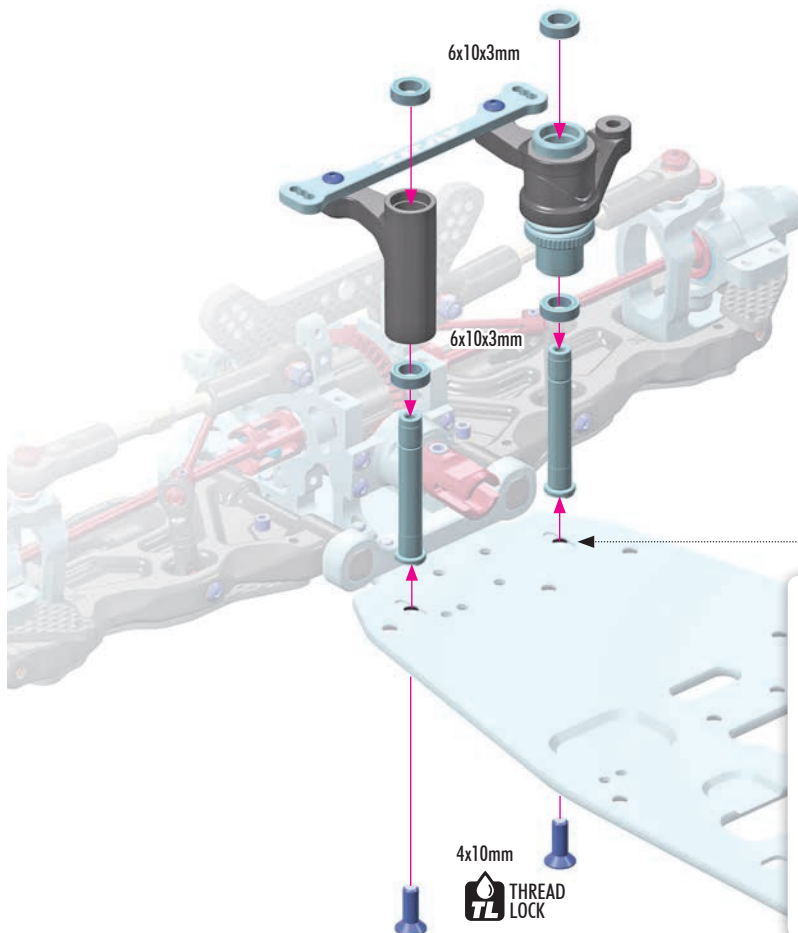
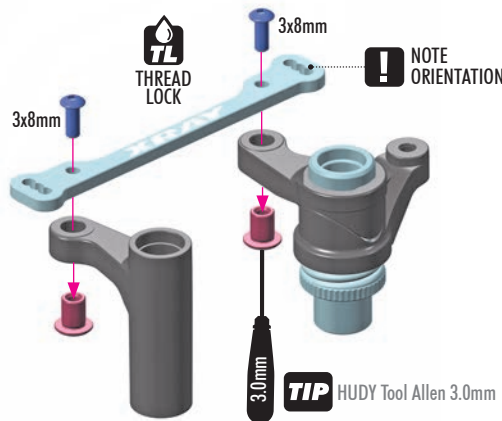
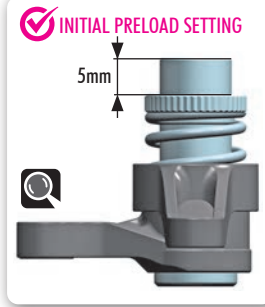
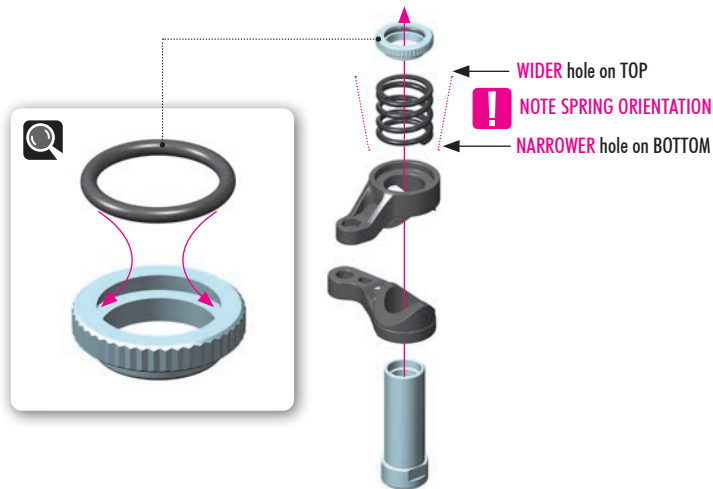


303125	ALU SHIM 3x6x3.0mm (10)	902308	HEX SCREW SH M3x8 (10)
351353	CARBON UPPER PLATE	902312	HEX SCREW SH M3x12 (10)
351390	ALU UPPER PLATE HOLDER - SWISS 7075 T6	903306	HEX SCREW SFH M3x6 (10)
352506	SERVO SAVER WITH CHASSIS LOCK & HARD SPRING - G - SET	903308	HEX SCREW SFH M3x8 (10)
352514	COMPOSITE SERVO SAVER - GRAPHITE	903318	HEX SCREW SFH M3x18 (10)
352561	SERVO SAVER SPRING PROGRESSIVE	903410	HEX SCREW SFH M4x10 (10)
352576	STEERING PLATE BUSHING (2)	940610	BALL-BEARING 6x10x3 RUBBER SEALED - OIL (2)
352581	ALU STEERING PLATE - SWISS 7075 T6	960030	NUT M3 (10)
352652	BALL STUD 6.8mm (4)	970121	O-RING 12.1 x 1.6 (10)
352653	BALL STUD 6.8mm WITH BACKSTOP - M3 (2)		
352664-G	COMPOSITE STEERING BALL JOINT 6.8mm - GRAPHITE (2)		
352666-G	COMPOSITE RELIEF STEERING BALL JOINT 6.8mm - GRAPHITE (2)		
357256	ALU SHIM 6x13x1mm (2)		
992450	HUDY TITAN ADJ. TURNBUCKLE M4 L/R 50mm (2)		

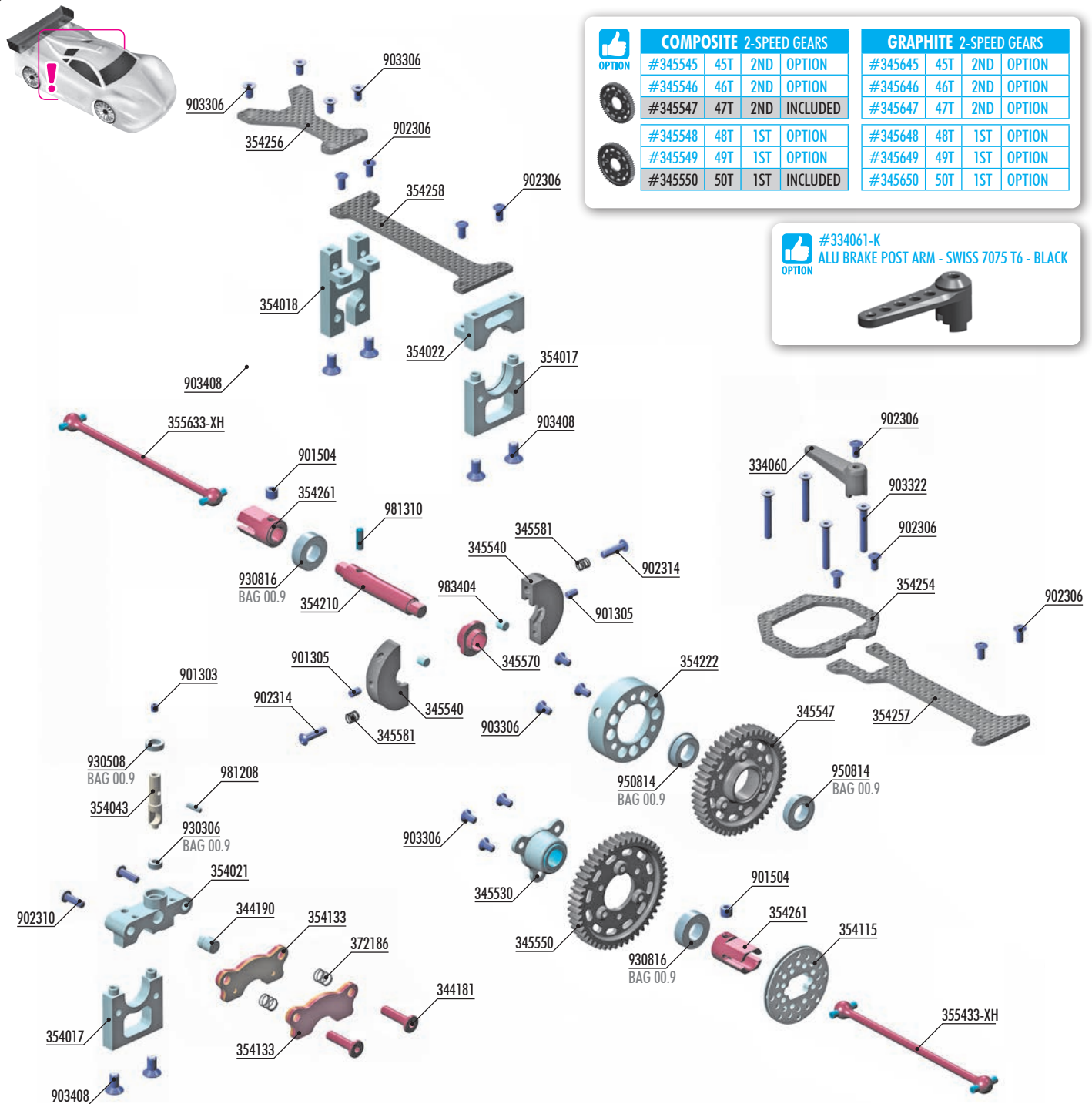
Numbers in parentheses () refer to quantities when purchased separately.



**SET-UP
BOOK**
SERVO SAVER



8. CENTRAL TRANSMISSION



COMPOSITE 2-SPEED GEARS

#345545	45T	2ND	OPTION
#345546	46T	2ND	OPTION
#345547	47T	2ND	INCLUDED
#345548	48T	1ST	OPTION
#345549	49T	1ST	OPTION
#345550	50T	1ST	INCLUDED

GRAPHITE 2-SPEED GEARS

#345645	45T	2ND	OPTION
#345646	46T	2ND	OPTION
#345647	47T	2ND	OPTION
#345648	48T	1ST	OPTION
#345649	49T	1ST	OPTION
#345650	50T	1ST	OPTION



#334061-K

ALU BRAKE POST ARM - SWISS 7075 T6 - BLACK



BAG

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334060 COMPOSITE BRAKE POST ARM
344181 BRAKE GUIDE PIN 4x16mm M3 - HUDY SPRING STEEL™ (2)
344190 ALU BRAKE ROLLER - BLACK - SWISS 7075 T6 (2)
345530 ALU DRIVE FLANGE WITH ONE-WAY BEARING - SWISS 7075 T6
345540 COMPOSITE 2-SPEED GEAR BOX SHOE - SET
345547 COMPOSITE 2-SPEED GEAR 47T (2nd) - H
345550 COMPOSITE 2-SPEED GEAR 50T (1st)
345570 ADAPTER 2-SPEED
345581 GEAR BOX SPRING C=13.0 (2)
354017 ALU CENTER 2-SPEED LOWER MOUNTING STAND - FRONT
354018 ALU CENTER 2-SPEED LOWER MOUNTING STAND - REAR
354021 ALU CENTER 2-SPEED UPPER MOUNTING PLATE - FRONT
354022 ALU CENTER 2-SPEED UPPER MOUNTING PLATE - REAR
354043 TITANIUM BRAKE CAM POST
354115 VENTILATED BRAKE DISK - LASER CUT - PRECISION-GROUND
354133 GLUED BRAKE PADS SET - ULTRA EFFICIENT (2)
354210 2-SPEED SHAFT - HUDY SPRING STEEL™
354222 CARRIER FOR 2-SPEED GEAR (2nd) - TIGHTER - SWISS 7075 T6
354254 GT CARBON CENTER MOUNTING PLATE
354258 GT CARBON CENTER MOUNTING REAR BRACE - SHORT
354256 GT CARBON CENTER MOUNTING REAR UPPER BRACE
354257 GT CARBON CENTER MOUNTING FRONT BRACE

354261 CENTRAL TRANSM. OUTDRIVE ADAPTER - HUDY SPRING STEEL™ (2)
355433-XH FRONT CENTRAL DOGBONE DRIVE SHAFT 88mm - HUDY SPRING STEEL™
355633-XH REAR CENTRAL DOGBONE DRIVE SHAFT 98mm - HUDY SPRING STEEL™
372186 FRONT COIL SPRING FOR 4mm PIN C=1.5-1.7 - GOLD (2)

901303 HEX SCREW SB M3x3 (10)
901305 HEX SCREW SB M3x5 (10)
901504 HEX SCREW SB M5x4 (10)
902306 HEX SCREW SH M3x6 (10)
902310 HEX SCREW SH M3x10 (10)
902314 HEX SCREW SH M3x14 (10)
903306 HEX SCREW SFH M3x6 (10)
903322 HEX SCREW SFH M3x22 (10)
903408 HEX SCREW SFH M4x8 (10)
903036 BALL-BEARING 3x6x2.5 STEEL SEALED - OIL (2)
930508 BALL-BEARING 5x8x2.5 STEEL SEALED - OIL (2)
930816 BALL-BEARING 8x16x5 RUBBER SEALED - OIL (2)
950814 BALL-BEARING 8x14x4 FLANGED - STEEL SEALED - OIL (2)
981208 PIN 2x6 (10)
981310 PIN 3x10 (10)
983404 ROLLER PIN 4x4mm (2)

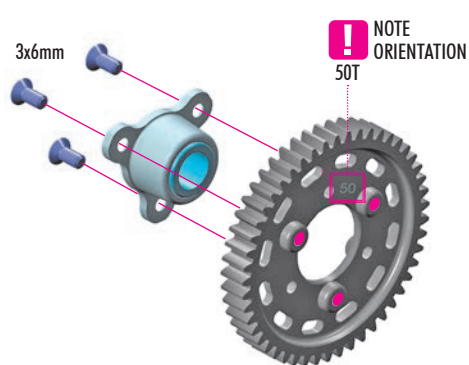
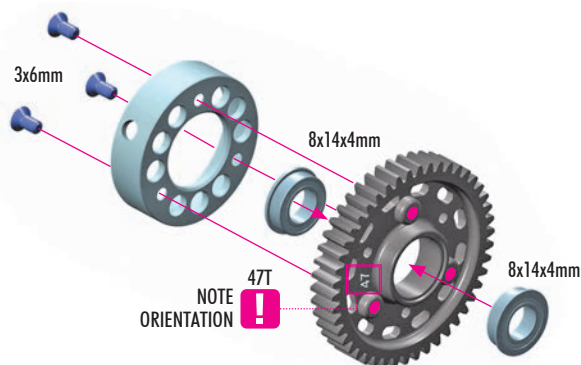
8. CENTRAL TRANSMISSION



6x 903306
SFH M3x6



2x 950814
BB 8x14x4



2x 901305
SB M3x5



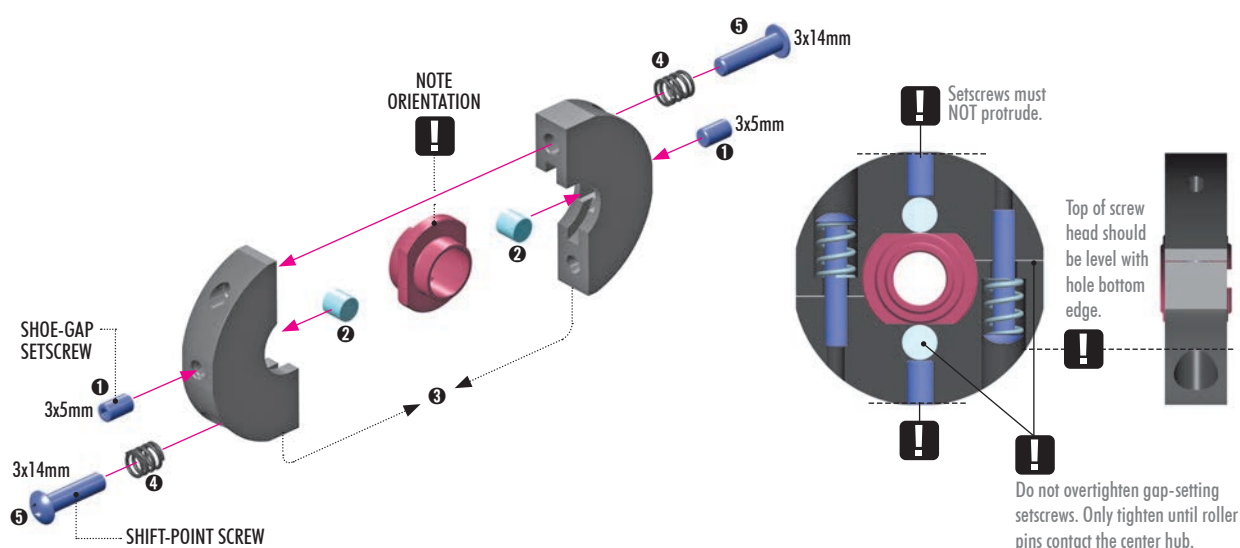
2x 902314
SH M3x14



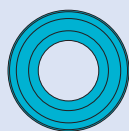
2x 983404
RP 4x4



2-SPEED
TRANSMISSION



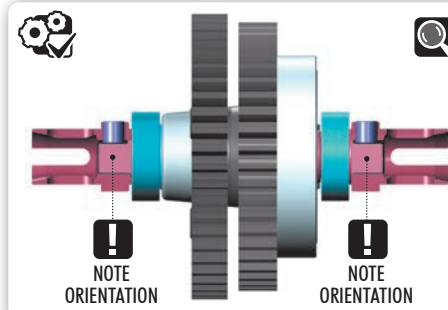
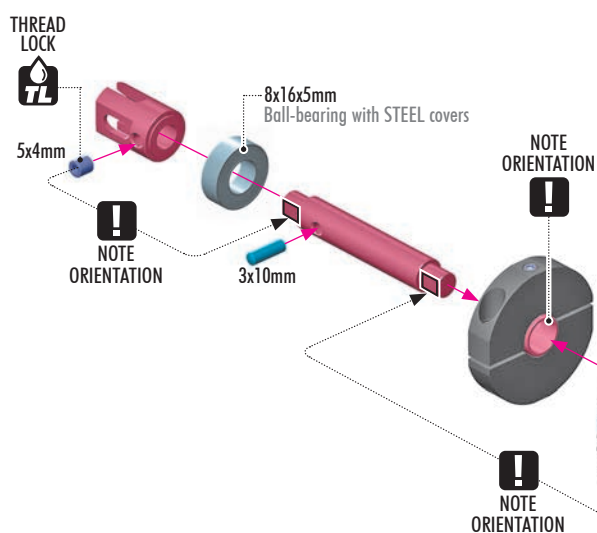
2x 901504
SB M5x4



2x 930816
BB 8x16x5



1x 981310
P 3x10



OIL For servicing use
ONE-WAY LUBE (HUYD #106231)
OPTION

OPTION	COMPOSITE 2-SPEED GEARS				GRAPHITE 2-SPEED GEARS			
	#	TEETH	GEAR	STATUS	#	TEETH	GEAR	STATUS
	#345545	45T	2ND	OPTION	#345645	45T	2ND	OPTION
	#345546	46T	2ND	OPTION	#345646	46T	2ND	OPTION
	#345547	47T	2ND	INCLUDED	#345647	47T	2ND	OPTION
	#345548	48T	1ST	OPTION	#345648	48T	1ST	OPTION
	#345549	49T	1ST	OPTION	#345649	49T	1ST	OPTION
	#345550	50T	1ST	INCLUDED	#345650	50T	1ST	OPTION

8. CENTRAL TRANSMISSION

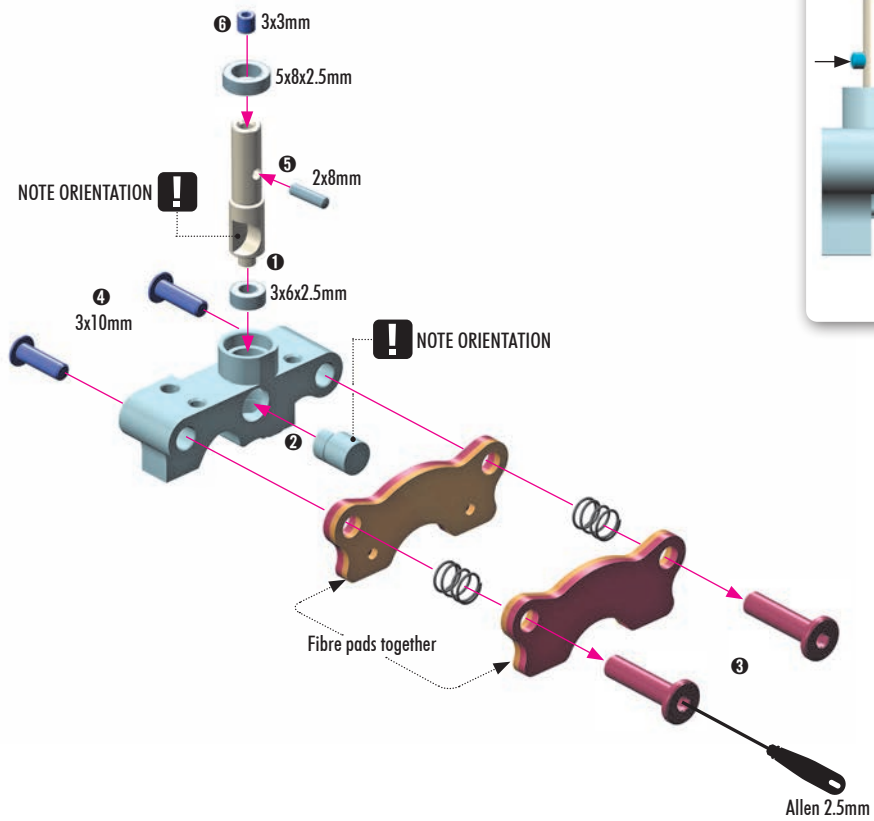
1x 901303
SB M3x3

2x 902310
SH M3x10

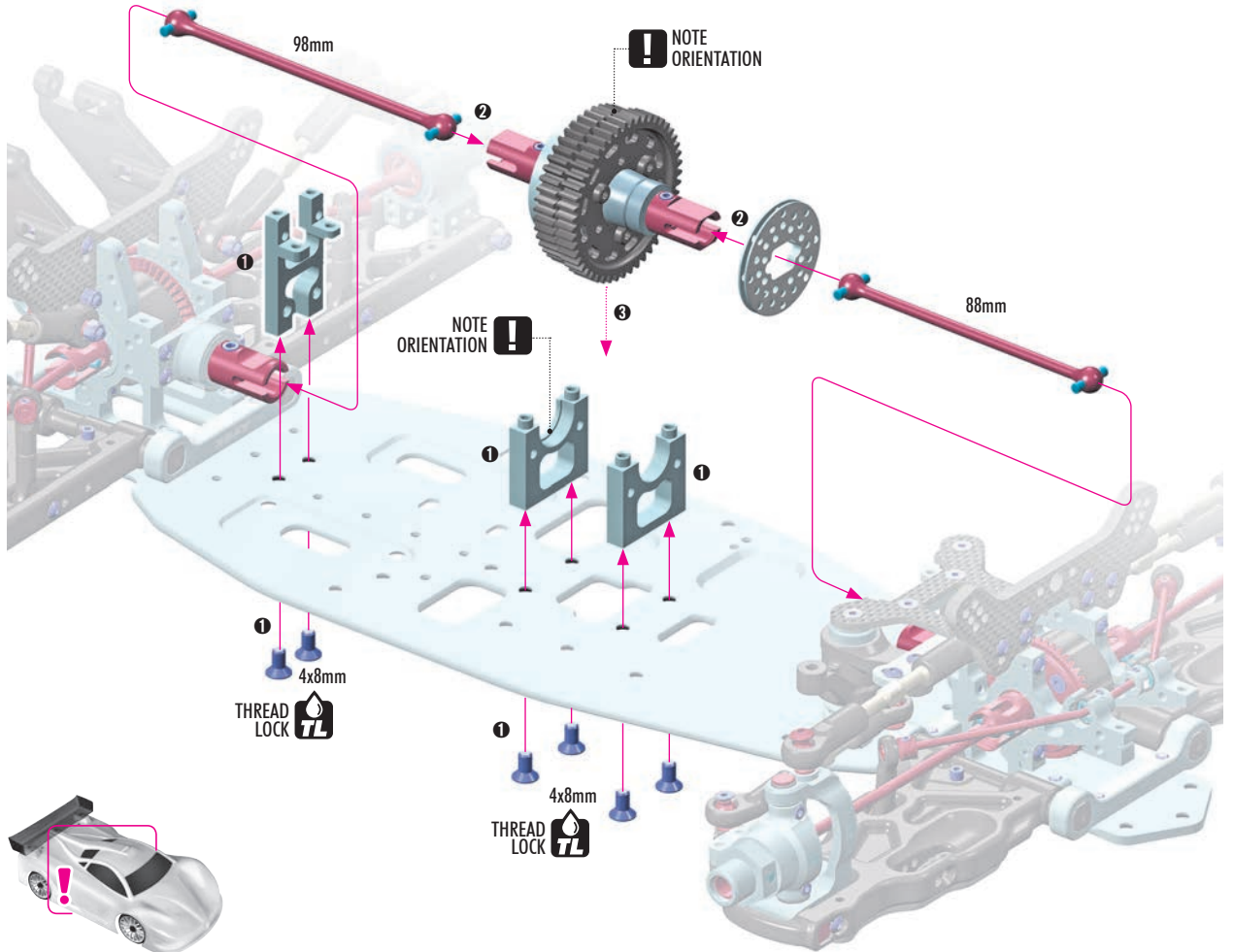
1x 930306
BB 3x6x2.5

1x 930508
BB 5x8x2.5

1x 981208
P 2x8



6x 903408
SFH M4x8



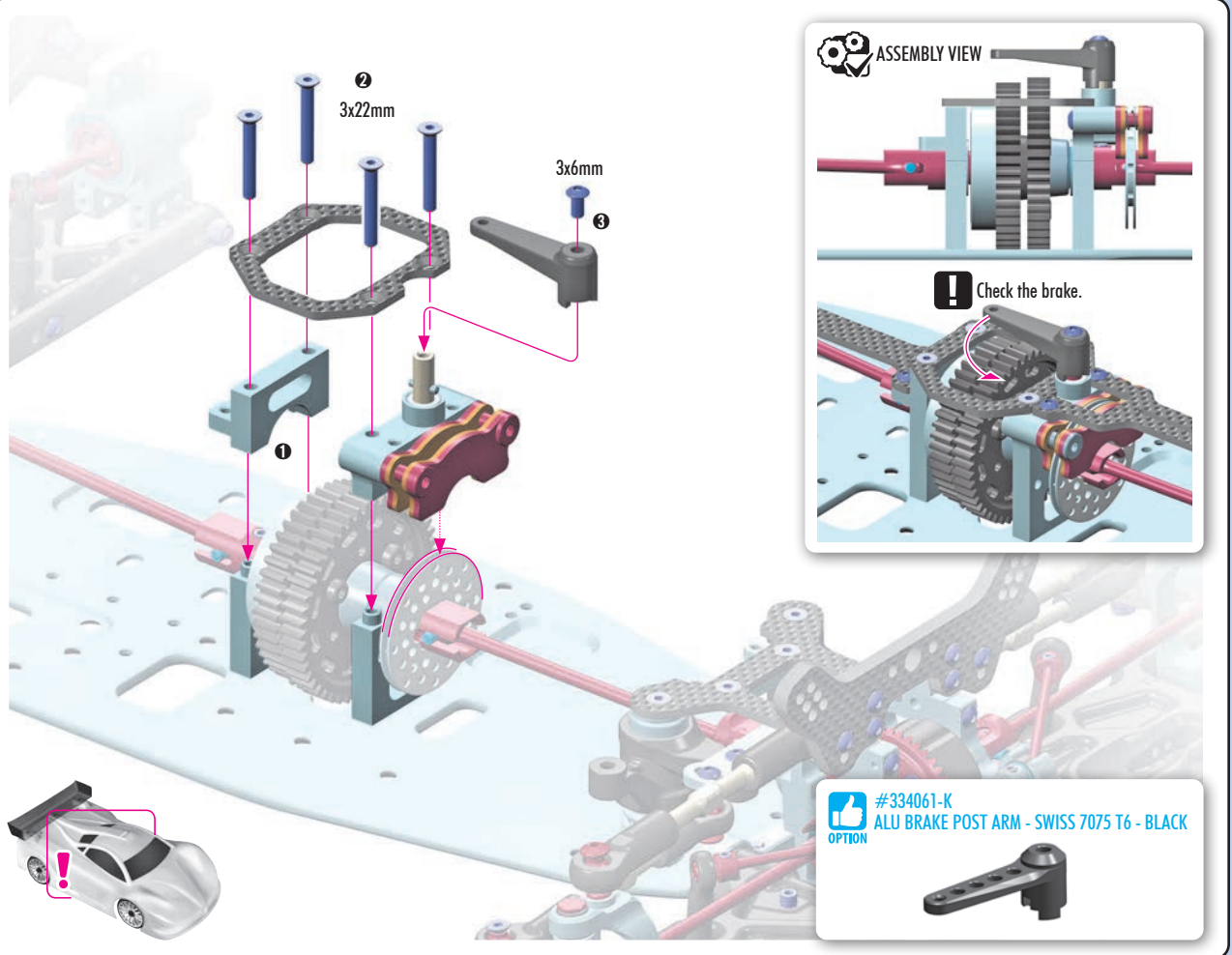
8. CENTRAL TRANSMISSION



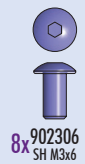
1x 902306
SH M3x6



4x 903322
SFH M3x22



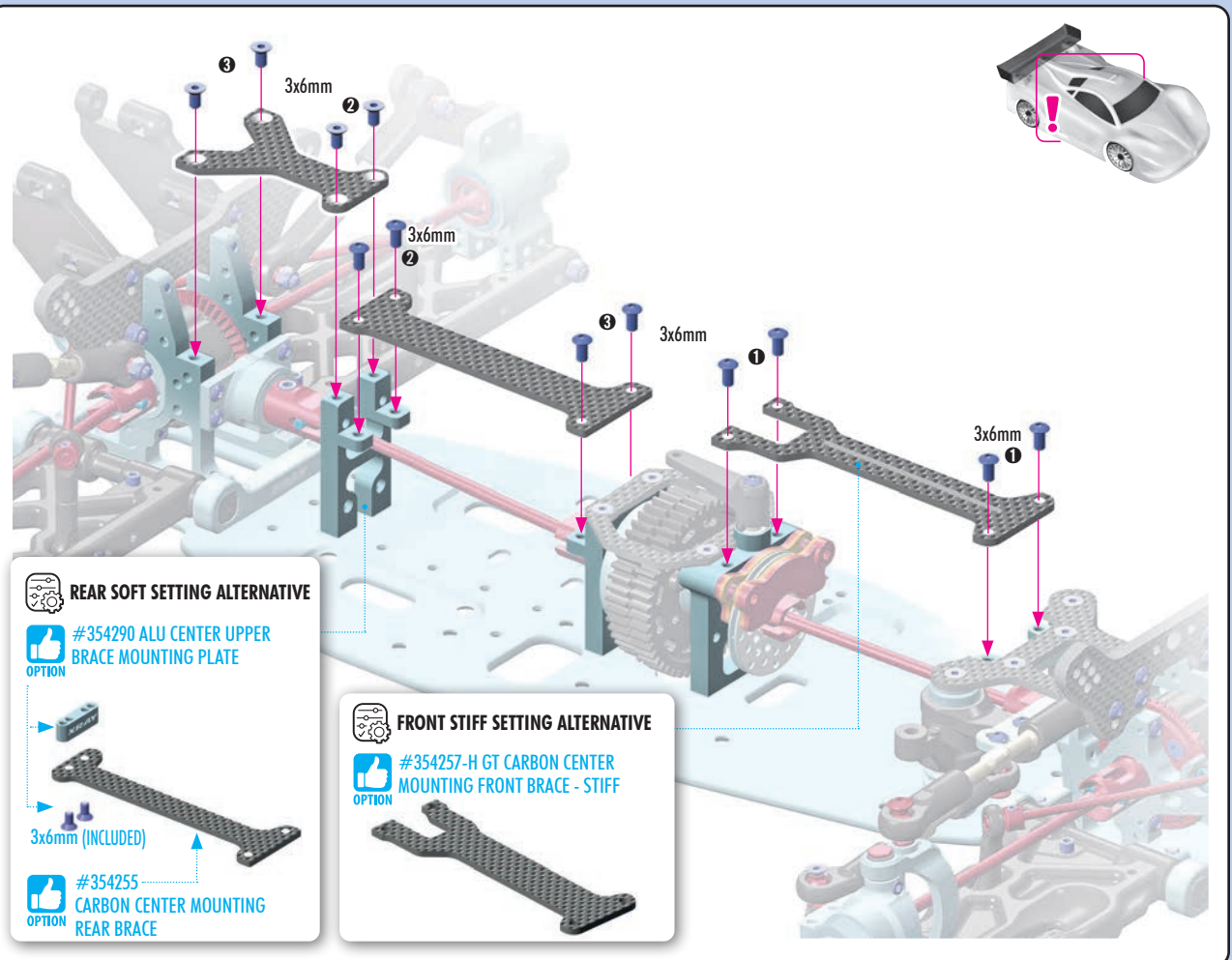
#334061-K
ALU BRAKE POST ARM - SWISS 7075 T6 - BLACK
OPTION



8x 902306
SH M3x6

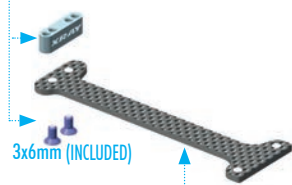


4x 903306
SH M3x6



REAR SOFT SETTING ALTERNATIVE

#354290 ALU CENTER UPPER
BRACE MOUNTING PLATE
OPTION



#354255 CARBON CENTER MOUNTING
REAR BRACE
OPTION

FRONT STIFF SETTING ALTERNATIVE

#354257-H GT CARBON CENTER
MOUNTING FRONT BRACE - STIFF
OPTION



9. FUEL TANK & ENGINE

ALU PINION GEARS			
#358423	14/19T	OPTION	
#358422	14/18T	INCLUDED	
#358421	13/18T	OPTION	
#358420	13/17T	OPTION	



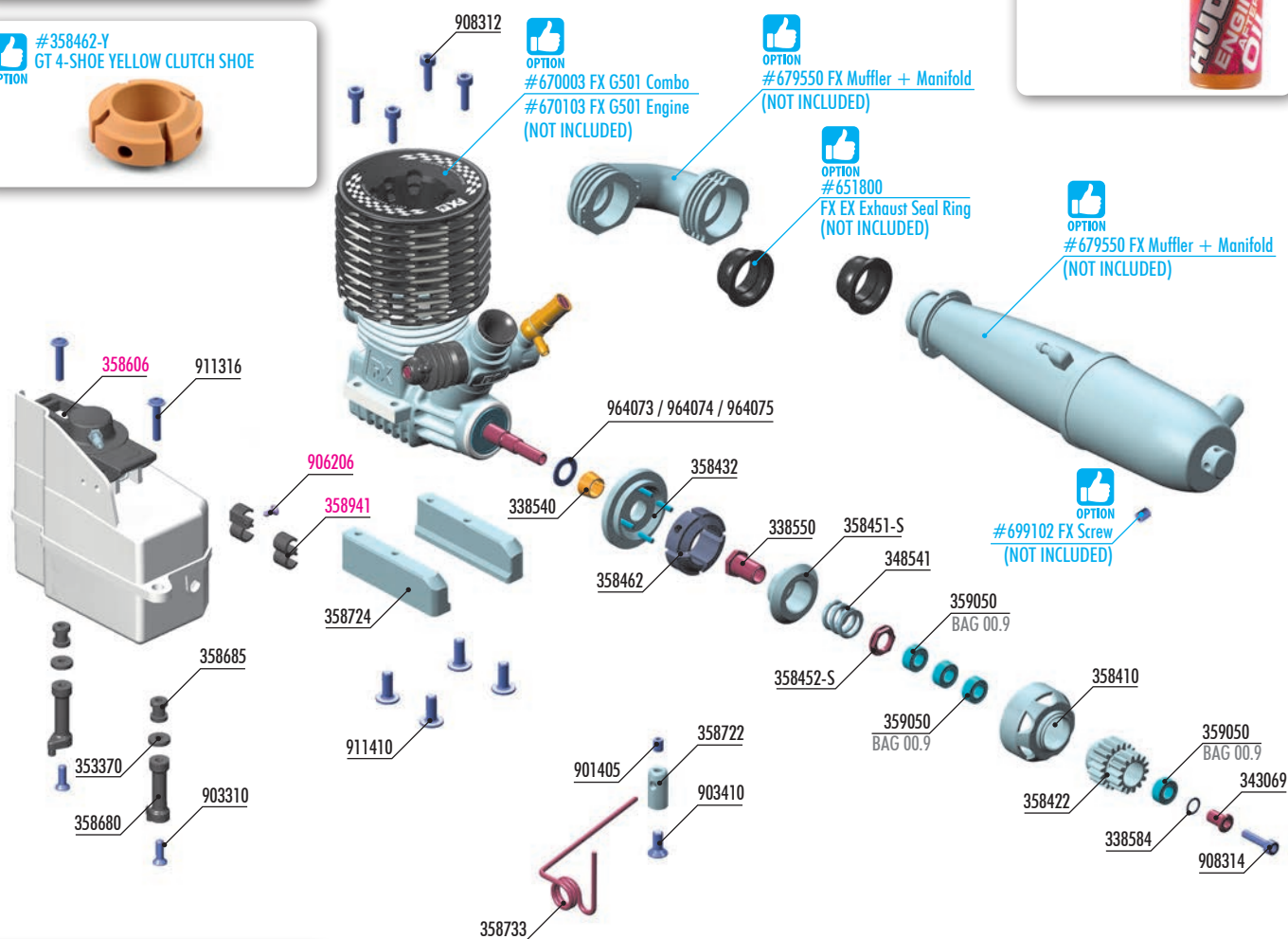
#358462-Y
GT 4-SHOE YELLOW CLUTCH SHOE



#106250
HUDY ENGINE AFTER RUN OIL

TIP

After running your engine, apply.



#358661
GRAPHITE 150CC FUEL TANK GUARD



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



#358709
ALU MONOBLOCK ENGINE MOUNT



ALU STAND FOR ENGINE MOUNT		
#358718	FX, NOVAROSS, MAX, SIRIO	OPTION
#358719	PICCO, REDS, ORION, LRP, OS, U. RACING	OPTION



BAG

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338540 FLYWHEEL COLLAR 7mm
338550 FLYWHEEL NUT - HUDY SPRING STEEL™
343069 STEEL BUSHING (2)
348541 CLUTCH SPRING - ULTRA-STABILE
353370 SET OF COMPOSITE REAR HUB CARRIER SHIMS
358403 GT 4-SHOE CLUTCH FOR ALU CLUTCH BELL - SET
358410 GT 2-SPEED ALU CLUTCH BELL - LIGHTWEIGHT
358422 ALU PINION GEAR 14/18T
358432 GT ALU 4-SHOE FLYWHEEL
358451-S GT ALU 4-SHOE CLUTCH PRESSURE SLEEVE
358452-S GT 4-SHOE FLYWHEEL NUT
358462 GT COMPOSITE CLUTCH 4-SHOE - GRAPHITE
358680 FUEL TANK MOUNTING POST (2)
358685 FUEL TANK MOUNTING GROMMET (4)
358722 EXHAUST WIRE MOUNT SET - LONG
358724 ALU ENGINE MOUNT - CNC MACHINED (L+R)
358733 EXHAUST MOUNTING WIRE 100mm - BENT

338584 SHIM 5x7x0.2 (10)
359050 BALL-BEARING 5x10x4 STEEL SEALED - GREASE (2)
901405 HEX SCREW SB M4x5 (10)
903310 HEX SCREW SFH M3x10 (10)
903410 HEX SCREW SFH M4x10 (10)
908312 HEX SCREW (CAP HEAD) 3x12 (10)
908314 HEX SCREW (CAP HEAD) 3x14 (10)
911316 HEX SCREW FLANGED SHF M3x16 (10)
911410 HEX SCREW FLANGED SHF M4x10 (10)
964073 WASHER S 7x10x0.2 (10)
964074 WASHER S 7x10x0.3 (10)
964075 WASHER S 7x10x0.5 (10)

358606 FUEL TANK 150CC WITH FLOATING FILTER & TRANSIENT JET
358941 COMPOSITE TUBING HOLDER FOR FUEL TANK (2)
906206 SCREW PHILLIPS FH 2.2x6 (10)

Numbers in parentheses () refer to quantities when purchased separately.

9. FUEL TANK & ENGINE



2x 353370
SHIM 3x9x2



2x 903310
SFH M3x10



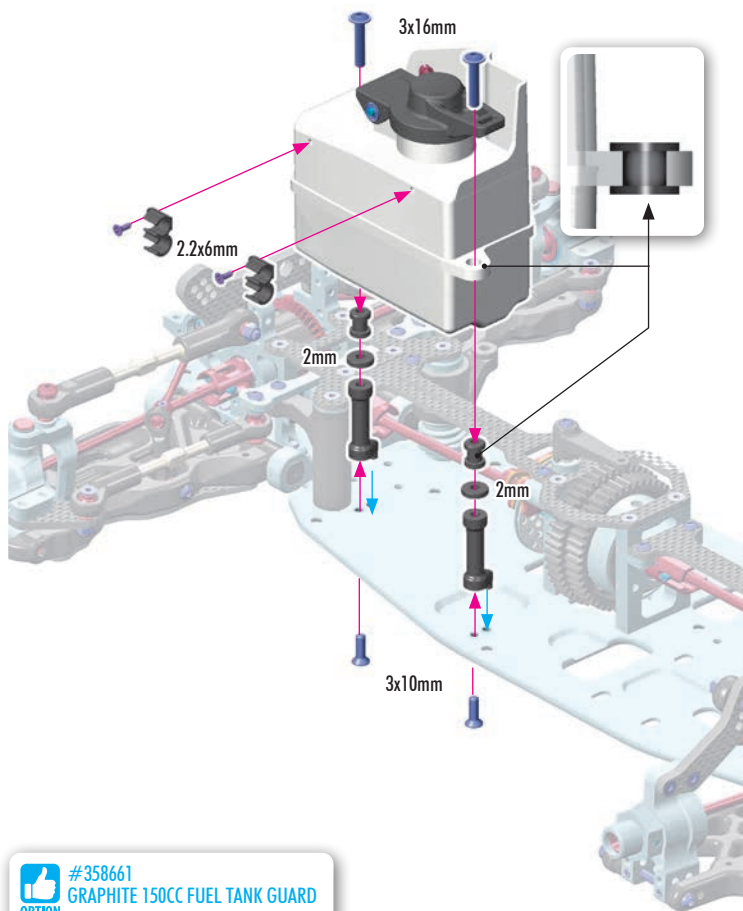
2x 906206
SFP 2.2x6



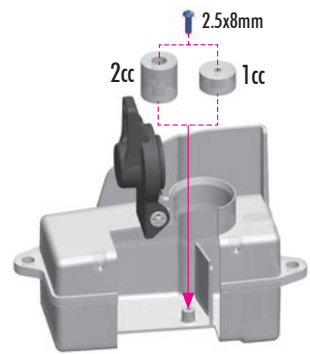
2x 911316
SHF M3x16



1x 907258
SP 2.5x8

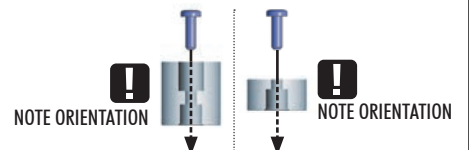


#358661
GRAPHITE 150CC FUEL TANK GUARD
OPTION



The fuel tank has the larger fuel volume and includes OPTIONAL tank inserts for decreasing the volume of the tank. Using the inserts allows you to adjust the volume of fuel inside the tank; this works in conjunction with variables such as fuel filter capacity and/or length of fuel line to ensure you have the legal fuel volume limit 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: 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.



4x 908312
SCH M3x12



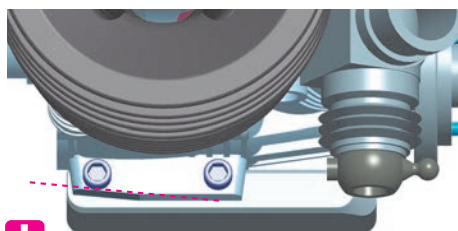
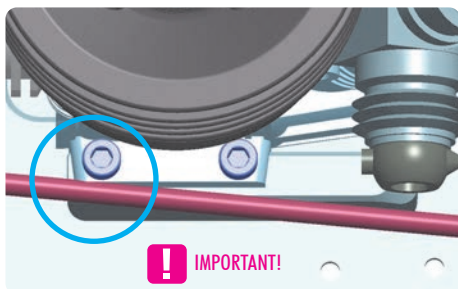
964073
S 7x10x0.2



964074
S 7x10x0.3



964075
S 7x10x0.5



When installing the engine, first check that the drive shaft does not touch the engine. If it does, remove some material from the engine mount as shown to make some room between engine and shaft.

THREAD LOCK
3x12mm



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



7x10x0.2 / 0.3 / 0.5
Use appropriate shims to achieve proper clutchbell endplay

THREAD LOCK

NOTE ORIENTATION

#358709
ALU MONOBLOCK ENGINE MOUNT
OPTION

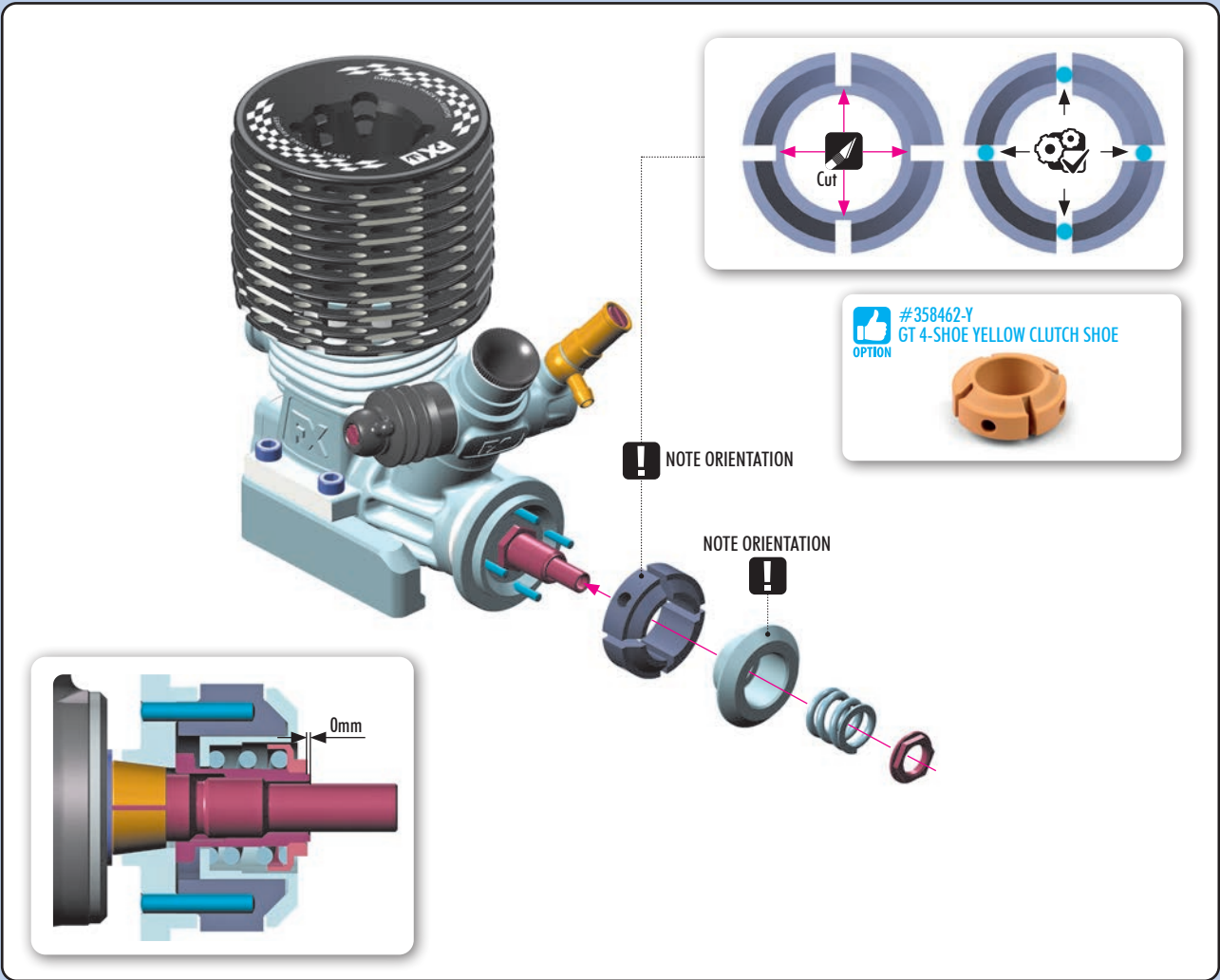


#358718
ALU STAND FOR ENGINE MOUNT
(FX, NOVAROSS, MAX, SIRIO)
OPTION

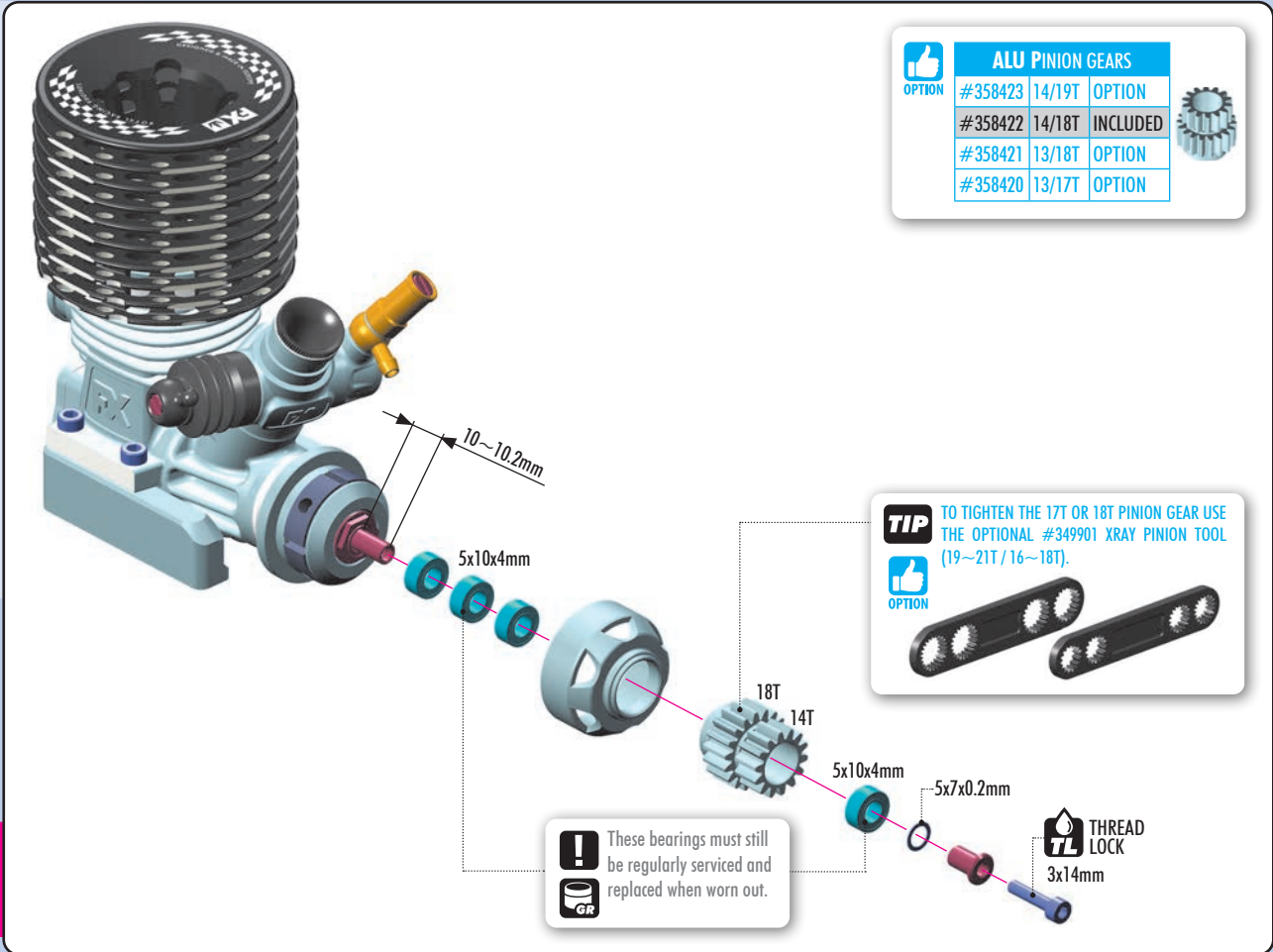


#358719
ALU STAND FOR ENGINE MOUNT
(PICCO, REDS, ORION, LRP, OS, U. RACING)
OPTION





- 1x 338584 S 5x7x0.2
- 4x 359050 BB 5x10x4
- 1x 908314 SCH M3x14



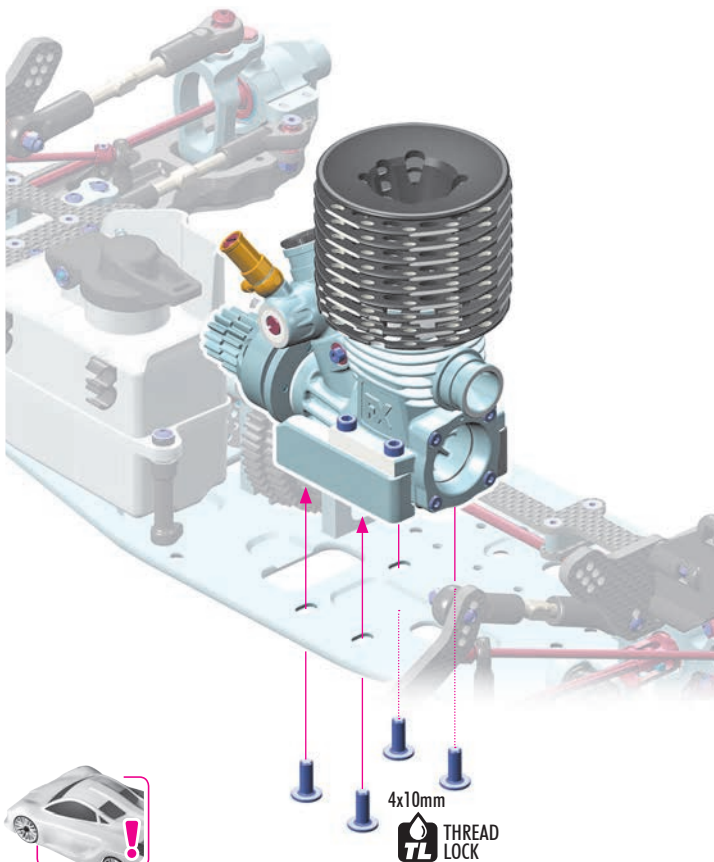
SET-UP BOOK
CLUTCH SPRINGS
CLUTCH SHOE

9. FUEL TANK & ENGINE



4x 911410
SHF M4x10

SET-UP BOOK
GEARING
GEAR MESH ADJ.



4x10mm
TL THREAD LOCK

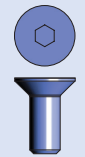


! GEAR MESH

Adjust gear mesh so there is minimal play between the gears.

Too tight gear mesh will put excessive strain on all parts and damage the parts. Too loose gear mesh may result in stripped gears.

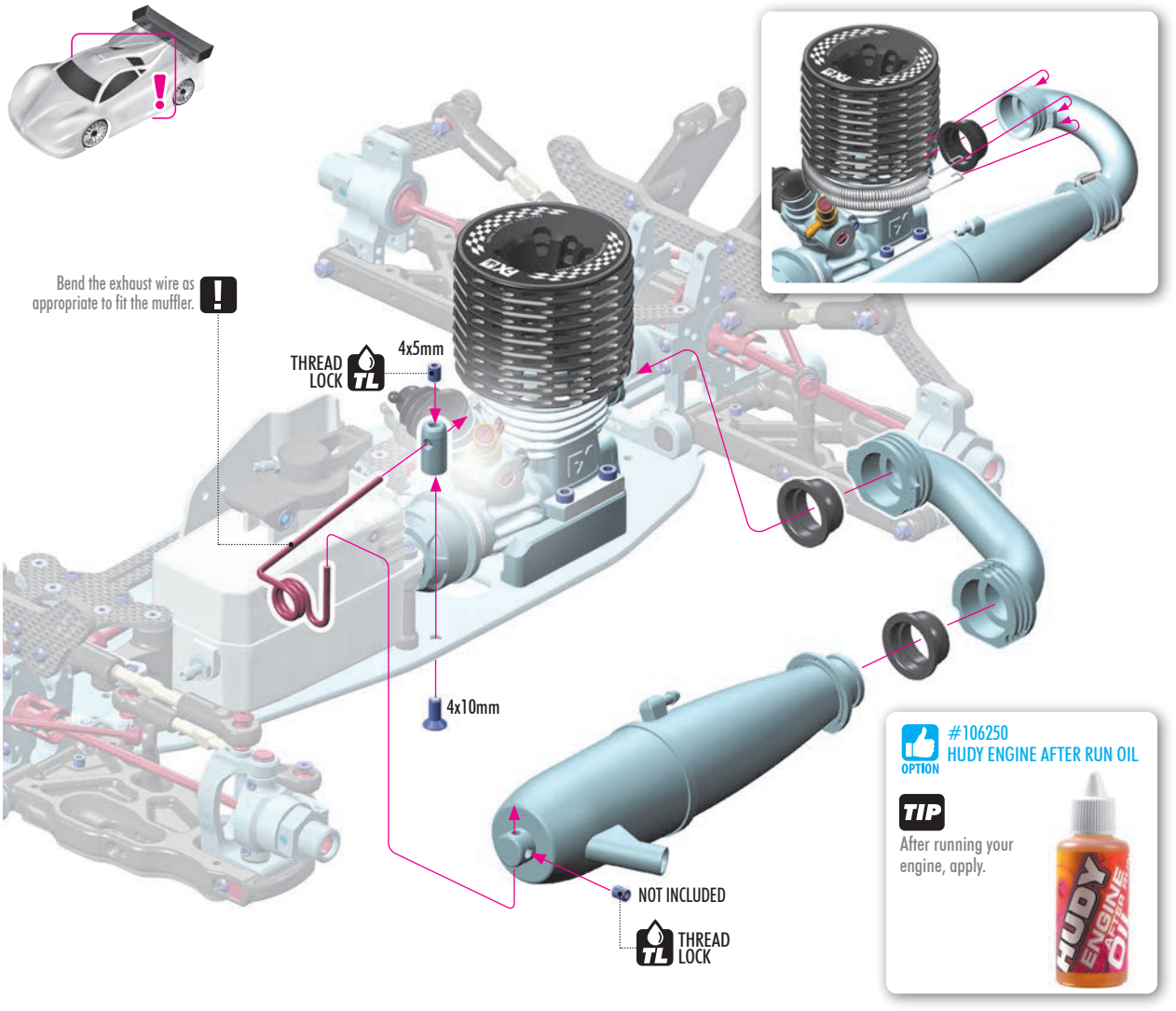
1x 901405
SB M4x5



1x 903410
SFH M4x10



Bend the exhaust wire as appropriate to fit the muffler. **!**



4x5mm
TL THREAD LOCK

4x10mm

NOT INCLUDED
TL THREAD LOCK

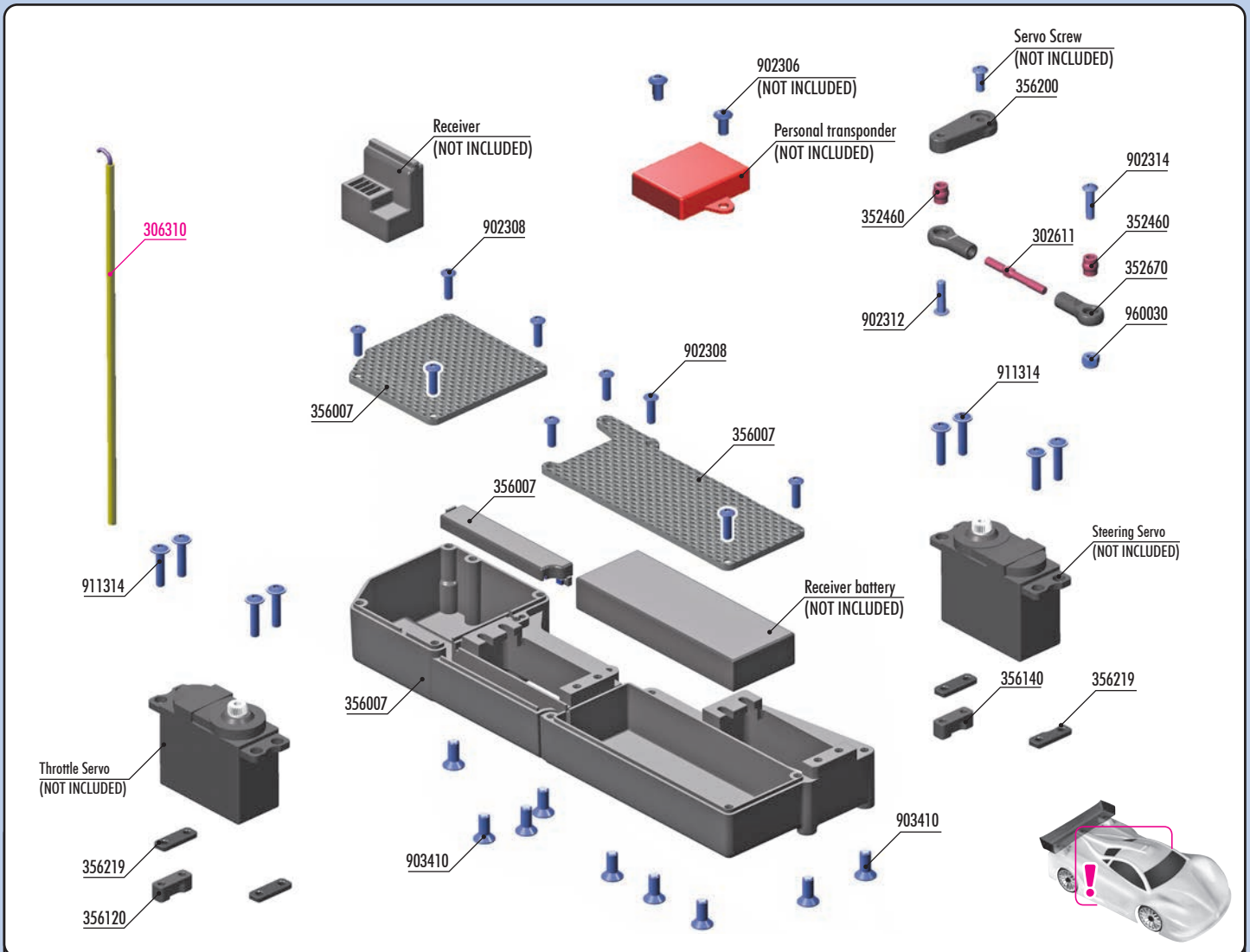
#106250
OPTION
HUDY ENGINE AFTER RUN OIL

TIP

After running your engine, apply.



10. RADIO CASE



BAG

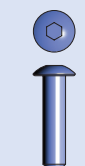
10

- 302611 ADJ. TURNBUCKLE M3 L/R 35mm - HUDY SPRING STEEL™ (2)
- 352460 PIVOT BALL 5.8 (10)
- 352670 SERVO BALL JOINT 5.8mm (4)
- 356007 GT RADIO CASE SET
- 356050 BATTERY CABLE WITH SWITCH (OPTION)
- 356140 COMPOSITE SERVO MOUNT - SMALL (2)
- 356200 BRAKE/THROTTLE ARMS & STEERING SERVO ARMS - SET
- 356219 COMPOSITE SERVO SHIMS 1.0, 1.5 & 2.5mm (2+2+2)
- 389135 CONNECTING CABLE RECEIVER/BATT. PACK (OPTION)

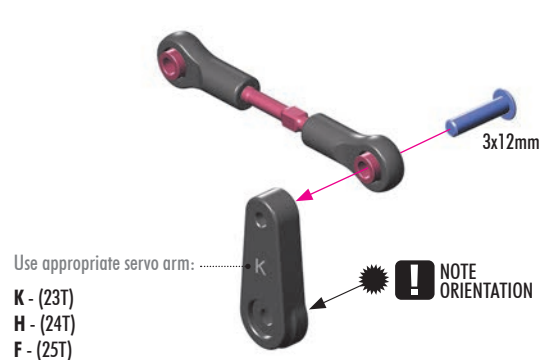
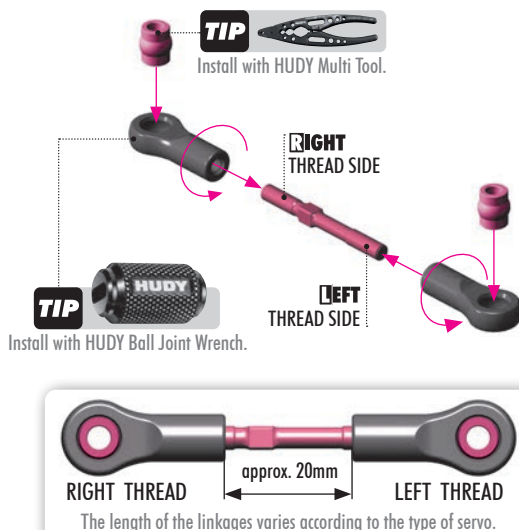
- 902306 HEX SCREW SH M3x6 (10) (OPTION)
- 902308 HEX SCREW SH M3x08 (10)
- 902312 HEX SCREW SH M3x12 (10)
- 902314 HEX SCREW SH M3x14 (10)
- 903410 HEX SCREW SFH M4x10 (10)
- 911314 HEX SCREW FLANGED SHF M3x14 (10)
- 960030 NUT M3 (10)

- 306310 ANTENNA TUBE (2)

Numbers in parentheses () refer to quantities when purchased separately.



1x 902312 SH M3x12



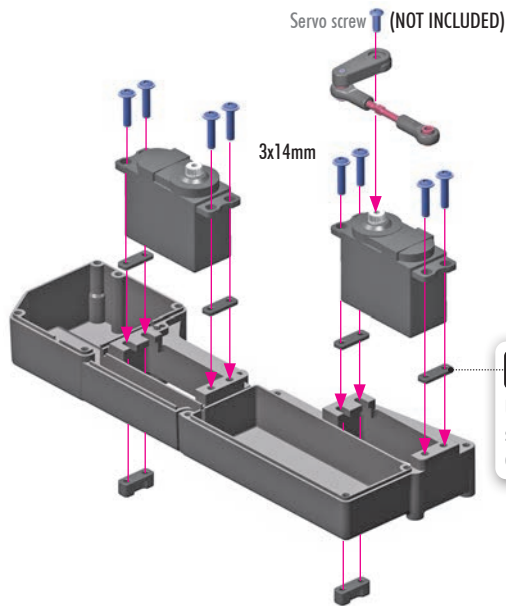
CLAMP ALU SERVO HORNS			
#293407	23T	OPTION	
#293408	24T	OPTION	
#293409	25T	OPTION	

ALU SERVO HORNS			
#293501	23T	OPTION	
#293502	24T	OPTION	
#293503	25T	OPTION	

10. RADIO CASE



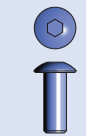
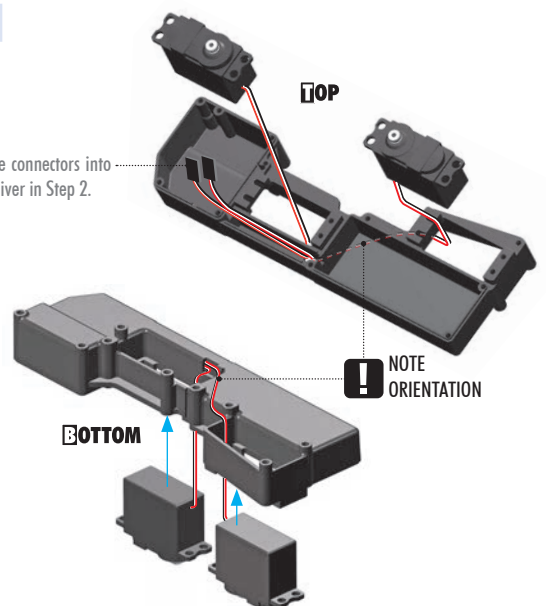
8x 911314
SHF M3x14



NOTE
Use the shims only if the servo is too high and extends from the case.

step 1

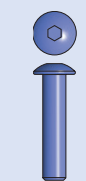
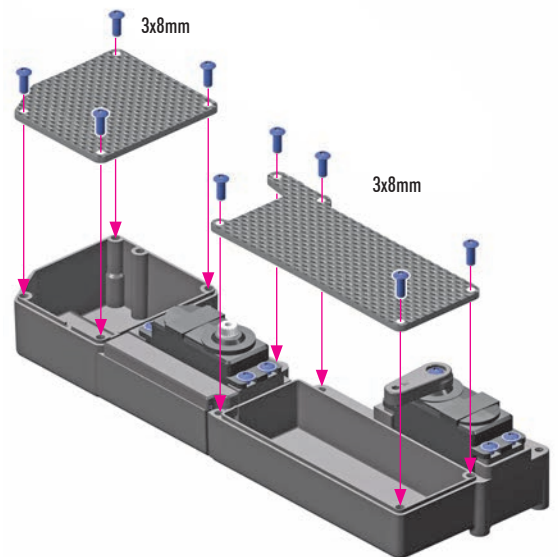
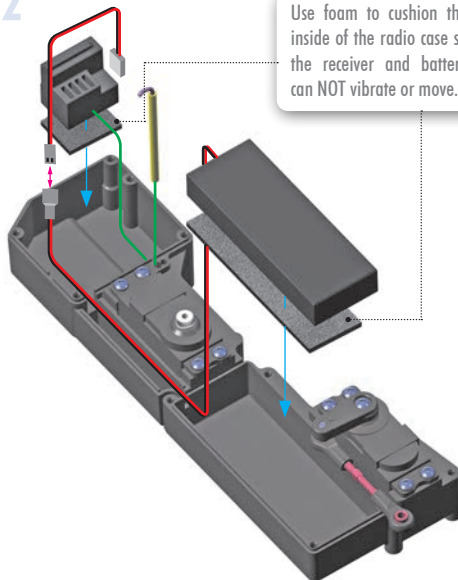
Plug the connectors into the receiver in Step 2.



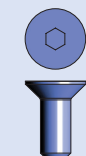
9x 902308
SH M3x08

step 2

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



1x 902314
SH M3x14



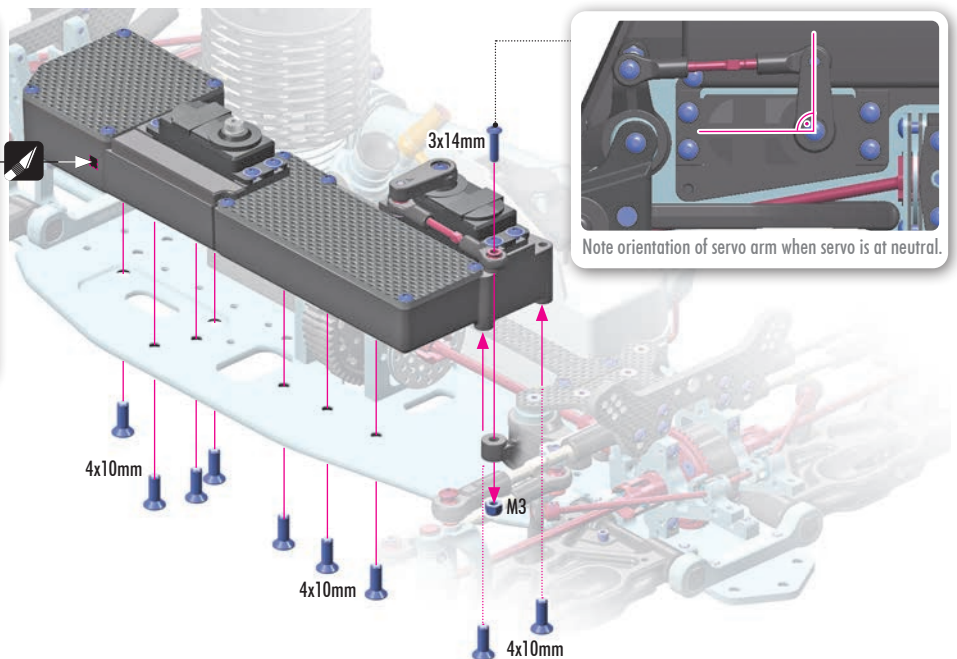
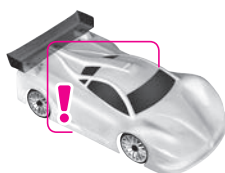
9x 903410
SFH M4x10



1x 960030
N M3

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

Personal transponder can be placed on the top of the radio box or inside of the radio box by using double-sided tape.



11. SHOCK ABSORBERS

#358195
XRAY GT PROGRESSIVE SPRING SET
C=5.2-5.8, 3-DOT & 1-STRIPE (2)



#358196
XRAY GT SPRING SET C=6.0, 3 DOT (2)



#358018 SET OF SHIMS



#358032 SHOCK PISTON SET



6 holes/ø1.2mm

6 holes/ø1.4mm

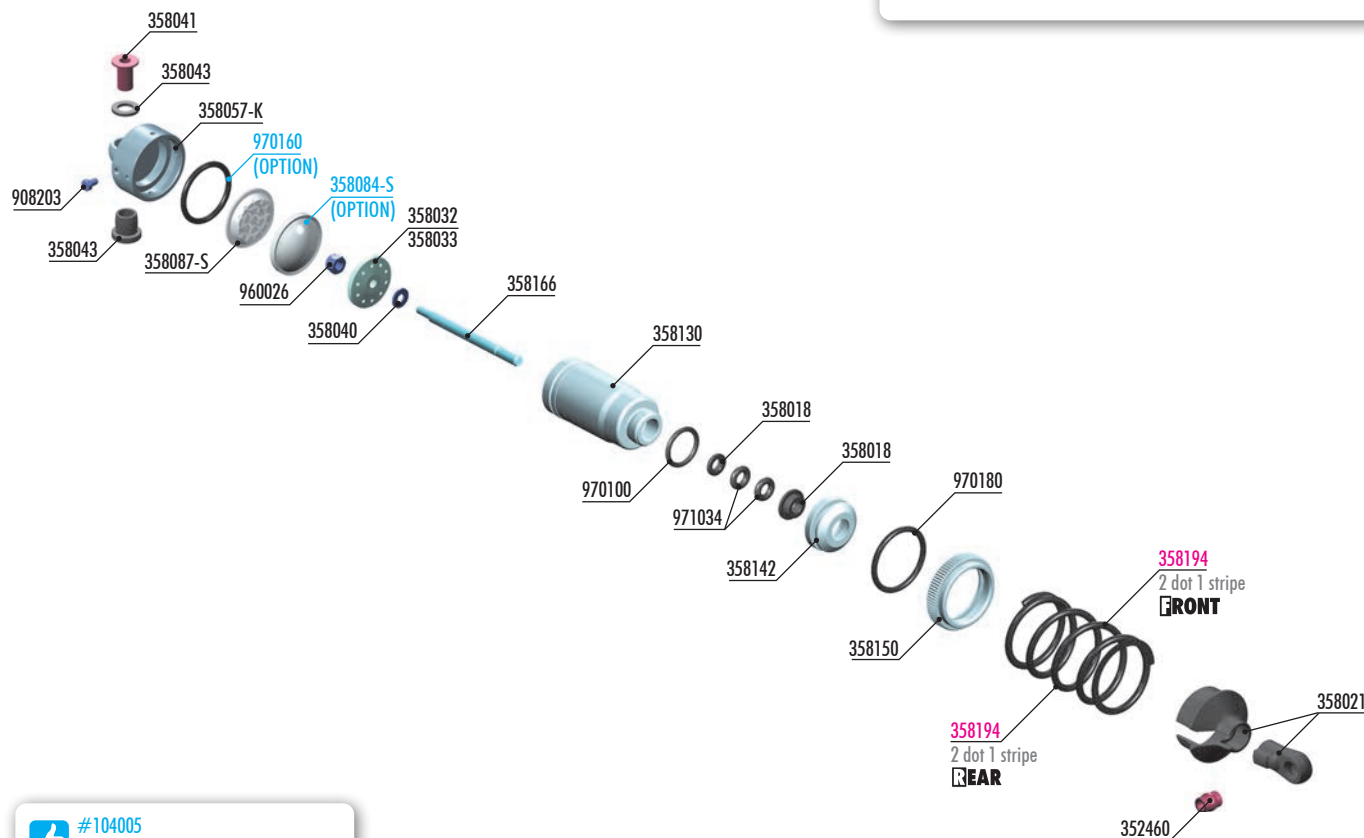
6 holes/ø1.3mm

#358033 SHOCK PISTON SET

10 holes/ø1.1mm

8 holes/ø1.2mm

8 holes/ø1.3mm



#104005
HUDY AIR VAC - VACUUM PUMP
- 1/8 OFF-ROAD



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



BAG

11

352460 PIVOT BALL 5.8 - V3 (10)
 358018 COMPOSITE SET OF SHIMS FOR SHOCKS - V2 (2)
 358021 COMPOSITE SHOCK PARTS WITH KEYED BALL JOINTS
 358032 SHOCK PISTON SET 8-HOLE (1.2; 1.3) 10-H. (1.1mm) - DELRIN - V3
 358033 COMPOSITE SHOCK 6-HOLE PISTON SET (1.2; 1.3; 1.4mm) - DELRIN - V3
 358041 STEEL SHOCK BUSHING (2)
 358043 COMPOSITE SHOCK BUSHING & SHIM (2+2)
 358057-K MULTI ADJ. 3-IN-1 ALU SHOCK CAP - SWISS 7075 T6 (2)
 358087-S SHOCK RUBBER MEMBRANE CELL - SOFT (4)
 358130 GT ALU SHOCK BODY - V2 (2)
 358142 ALU SHOCK BODY NUT FOR SHOCK BOOT (2)
 358150 ALU SHOCK BODY ADJ. NUT (2)
 358166 GT SHOCK SHAFT 46mm (2)

908203 HEX SCREW SOCKET HEAD CAP M2x3 (10)
 358040 HARDENED SHOCK SHIMS 2.6x6x0.5 (4)
 960026 NUT M2.5 - SHORT (10)
 970100 O-RING 10 x 1.5 (10)
 970180 O-RING 18 x 1.8 (10)
 971034 SILICON O-RING 3.5x2 (10)

358194 XRAY GT PROGRESSIVE SPRING SET C=4.1-4.7, 2-DOTS WITH STRIPE (2)

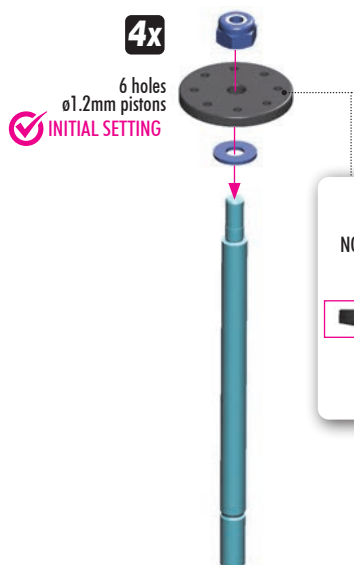
358084-S SHOCK RUBBER MEMBRANE BOTTOM RIBBED - SOFT (4)
970160 O-RING 16 x 2.0 (10)

Numbers in parentheses () refer to quantities when purchased separately.

11. SHOCK ABSORBERS

4x 358040
S 2.6x6x0.5

4x 960026
N M2.5



NOTE ORIENTATION

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



#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)



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.

SET-UP BOOK

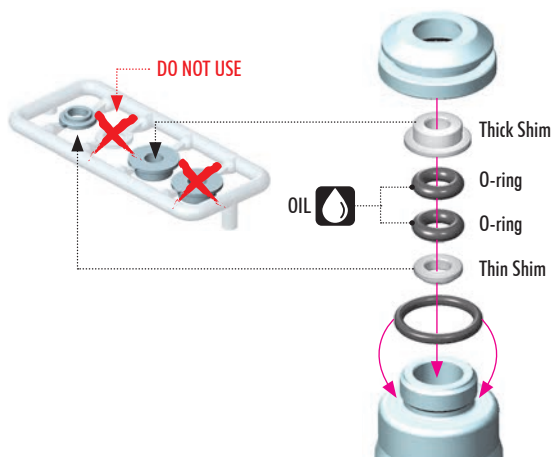
SHOCK DAMPING
SHOCK PISTONS

4x 970100
O 10x1.5

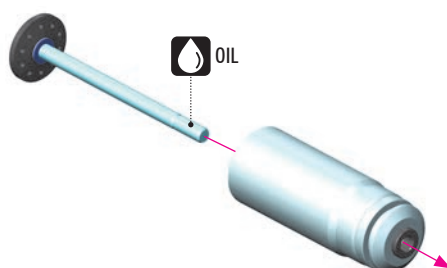
8x 971034
O 3.4x2

4x FRONT & REAR SHOCKS

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

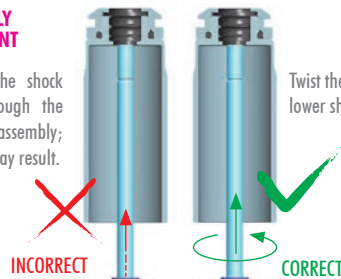


4x FRONT & REAR SHOCKS



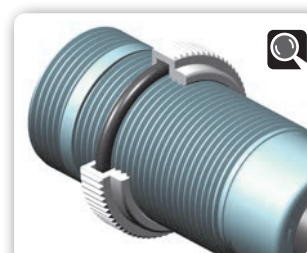
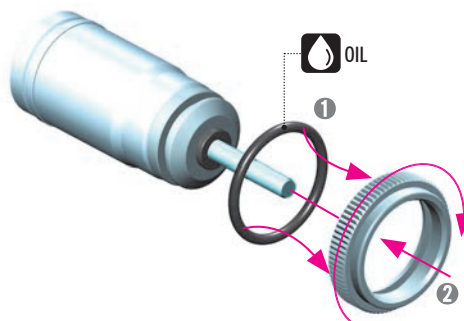
EXTREMELY IMPORTANT

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



Twist the shock rod through the lower shock body assembly.

4x FRONT & REAR SHOCKS

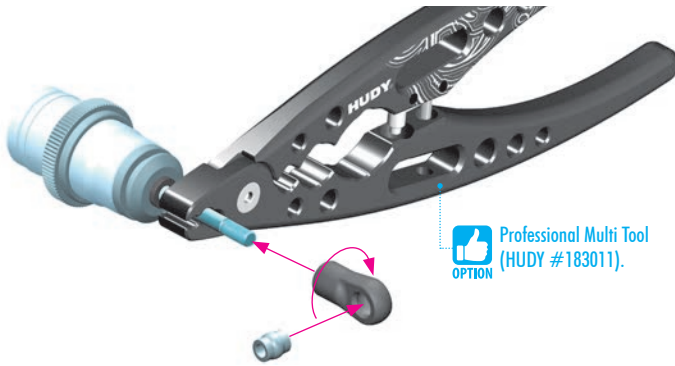


4x 970180
O 18x1.8

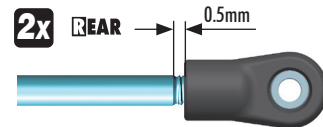
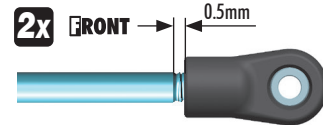
11. SHOCK ABSORBERS

2x FRONT SHOCKS

2x REAR SHOCKS

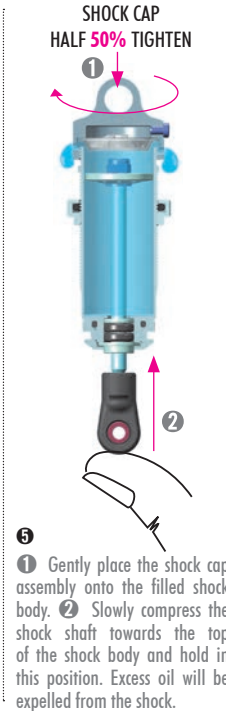


Professional Multi Tool
(HUDY #183011).
OPTION



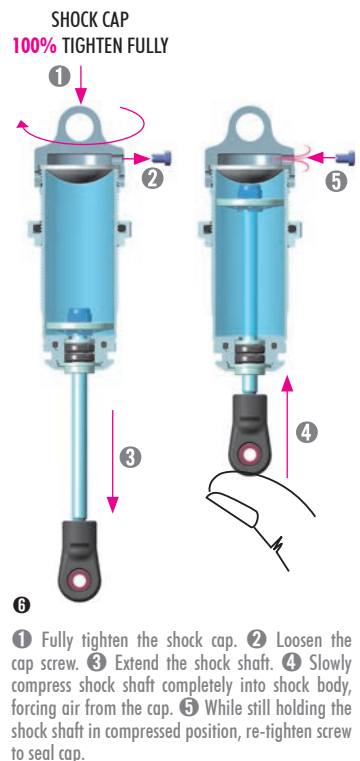
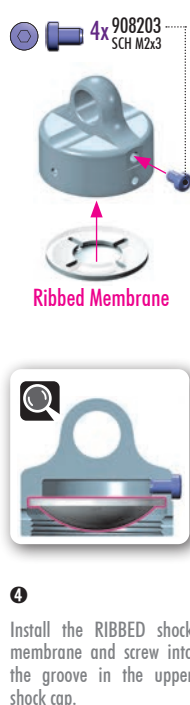
SHOCK TYPE: **CELL MEMBRANE** **INITIAL SETTING**

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



SHOCK TYPE: **RIBBED MEMBRANE** **OPTION**

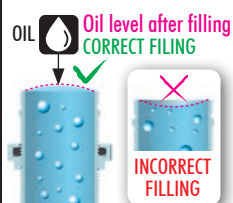
Follow the steps below to set the shock rebound to the default setting of 0%.



11. SHOCK ABSORBERS

SHOCK TYPE: **EMULSION** OPTION

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



FRONT
Oil 800cSt
REAR
Oil 800cSt

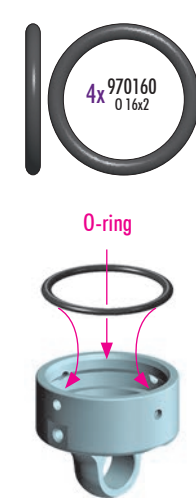
1 Extend the shock shaft completely. Fill the shock body with the shock oil.



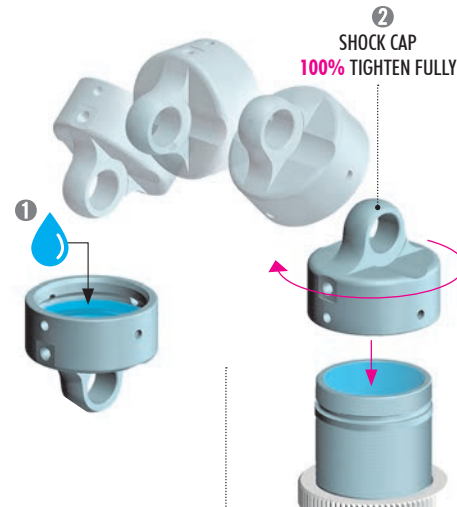
2 Move the shock shaft up and down a few times to release the air bubbles trapped beneath the piston.



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



4 Install o-ring in the cap.



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

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.



GENTLY PUSH

8 With the shock shaft still compressed, tighten the screw.



9 6x push the shaft up and down.



6x
UP & DOWN

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

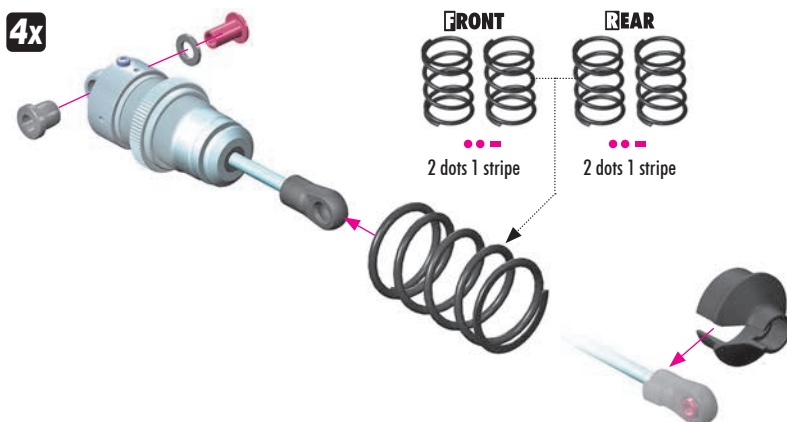


11 Gently push the shock shaft completely into the shock body. Excess oil will flow through the hole in the shock cap.

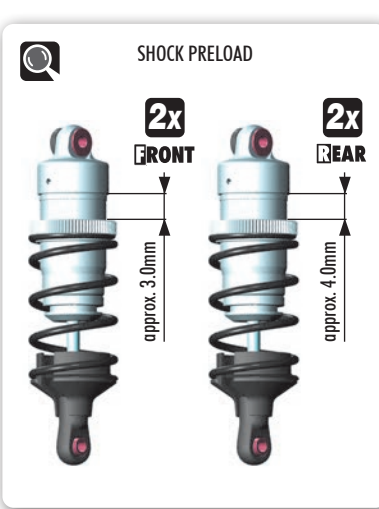


GENTLY PUSH

12 Tighten the screw.



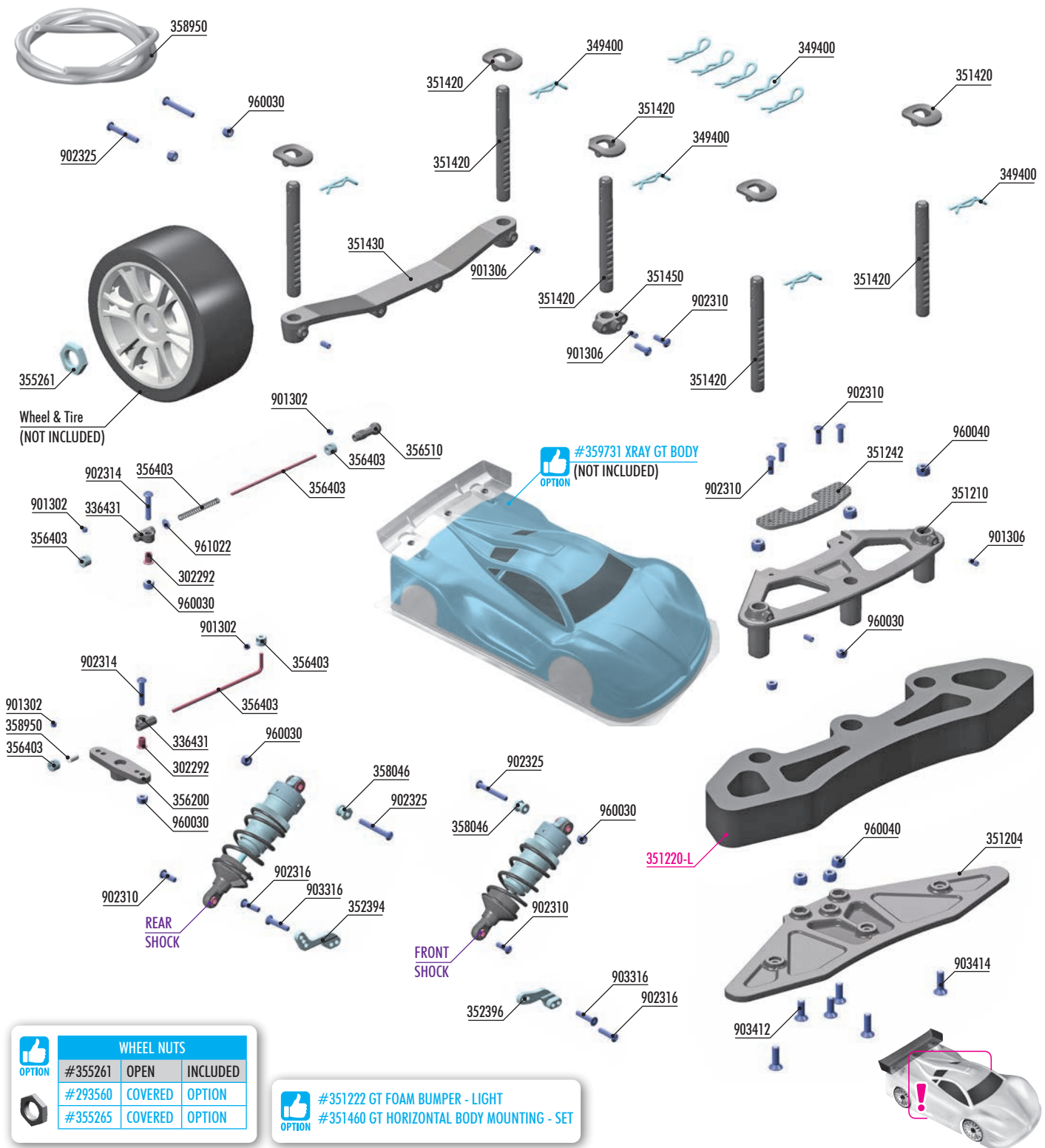
IMPORTANT!
Both front shocks and rear shocks must be the same overall length.



SET-UP BOOK

SPRING RATE SHOCK
PRELOAD
RIDE HEIGHT

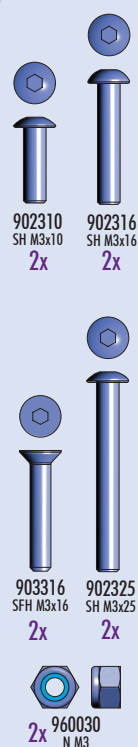
12. FINAL ASSEMBLY



351220-L GT FOAM BUMPER - LIGHTWEIGHT

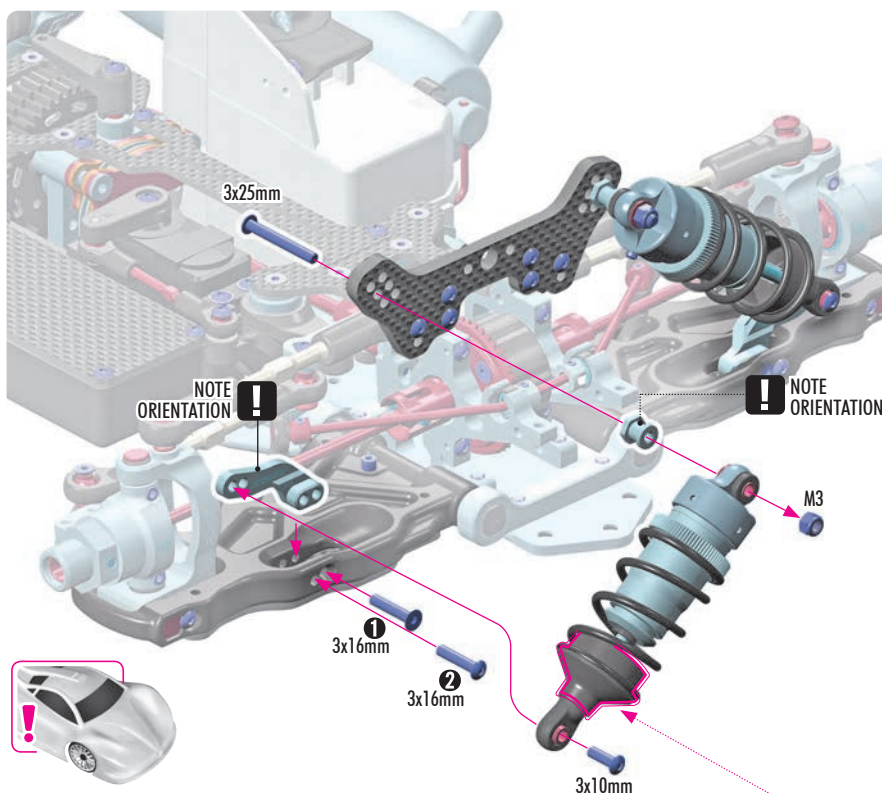
Numbers in parentheses () refer to quantities when purchased separately.

12. FINAL ASSEMBLY



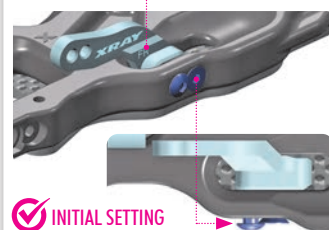
SET-UP BOOK
SHOCK ABSORBERS

2x **FRONT**



ALU SHOCK PLATE

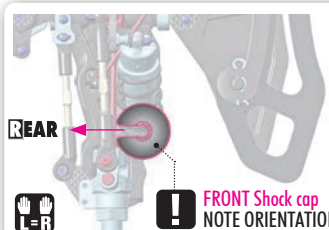
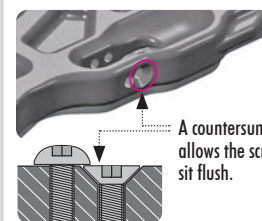
(Front Right) FR FL (Front Left)



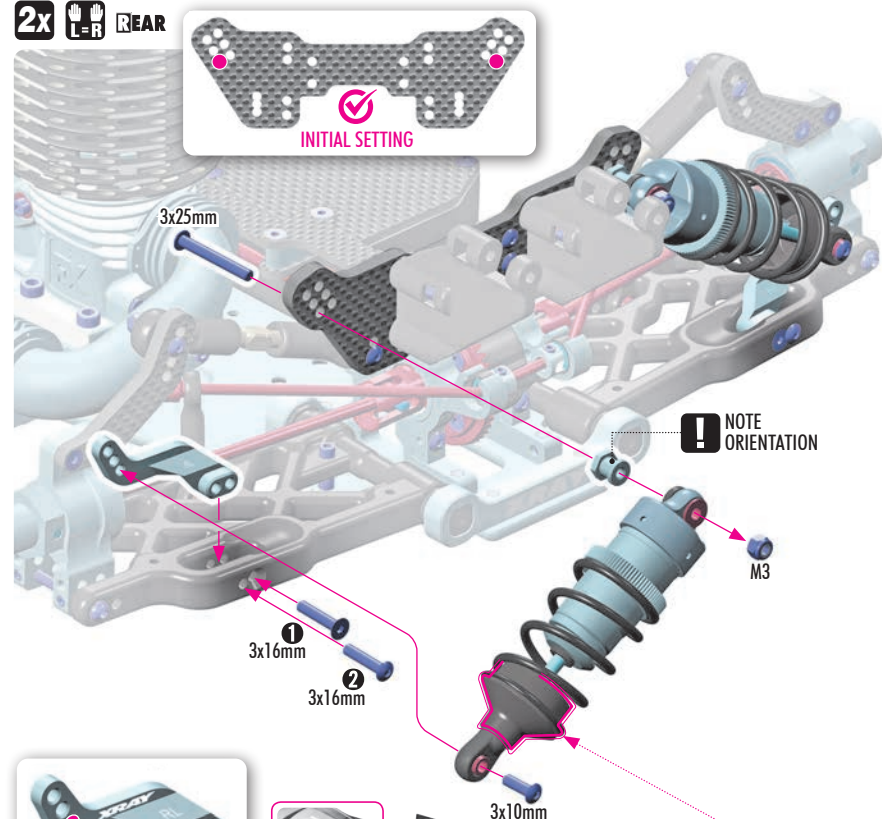
INITIAL SETTING

Mounting hole is NOT countersunk. This is normal and has no effect on performance or durability.

TIP The hole can be countersunk to allow a flush screw fit.

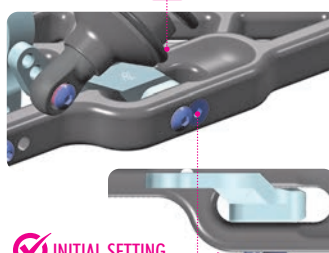


2x **REAR**



ALU SHOCK PLATE

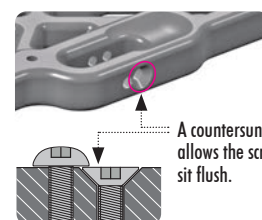
(Rear Left) RL RR (Rear Right)



INITIAL SETTING

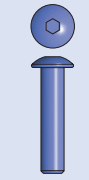
Mounting hole is NOT countersunk. This is normal and has no effect on performance or durability.

TIP The hole can be countersunk to allow a flush screw fit.



SET-UP BOOK
SHOCK ABSORBERS

3x 901302
SB M3x2.5

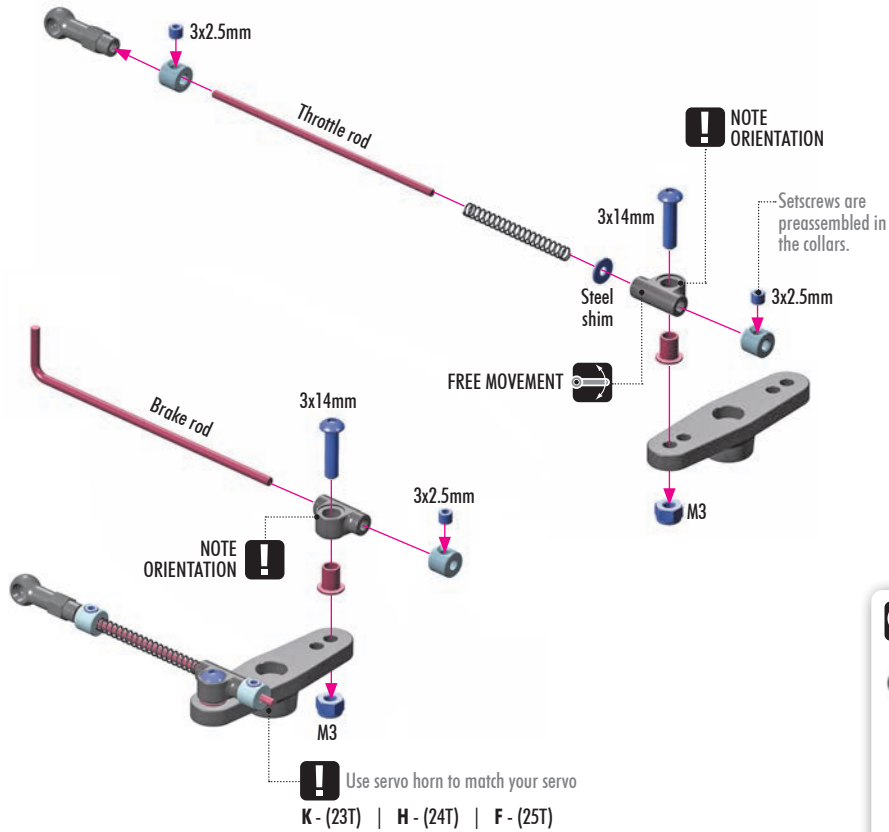


2x 902314
SH M3x14



2x 960030
N M3

1x 961022
S 2.2



CLAMP ALU SERVO HORNS

#293444	23T	M3	OPTION
#293445	24T	M3	OPTION
#293446	25T	M3	OPTION
#293447	23T	Ø3	OPTION
#293448	24T	Ø3	OPTION
#293449	25T	Ø3	OPTION



ALU SERVO HORNS

#293504	23T	Ø3	OPTION
#293505	24T	Ø3	OPTION
#293506	25T	Ø3	OPTION
#293507	23T	M3	OPTION
#293508	24T	M3	OPTION
#293509	25T	M3	OPTION



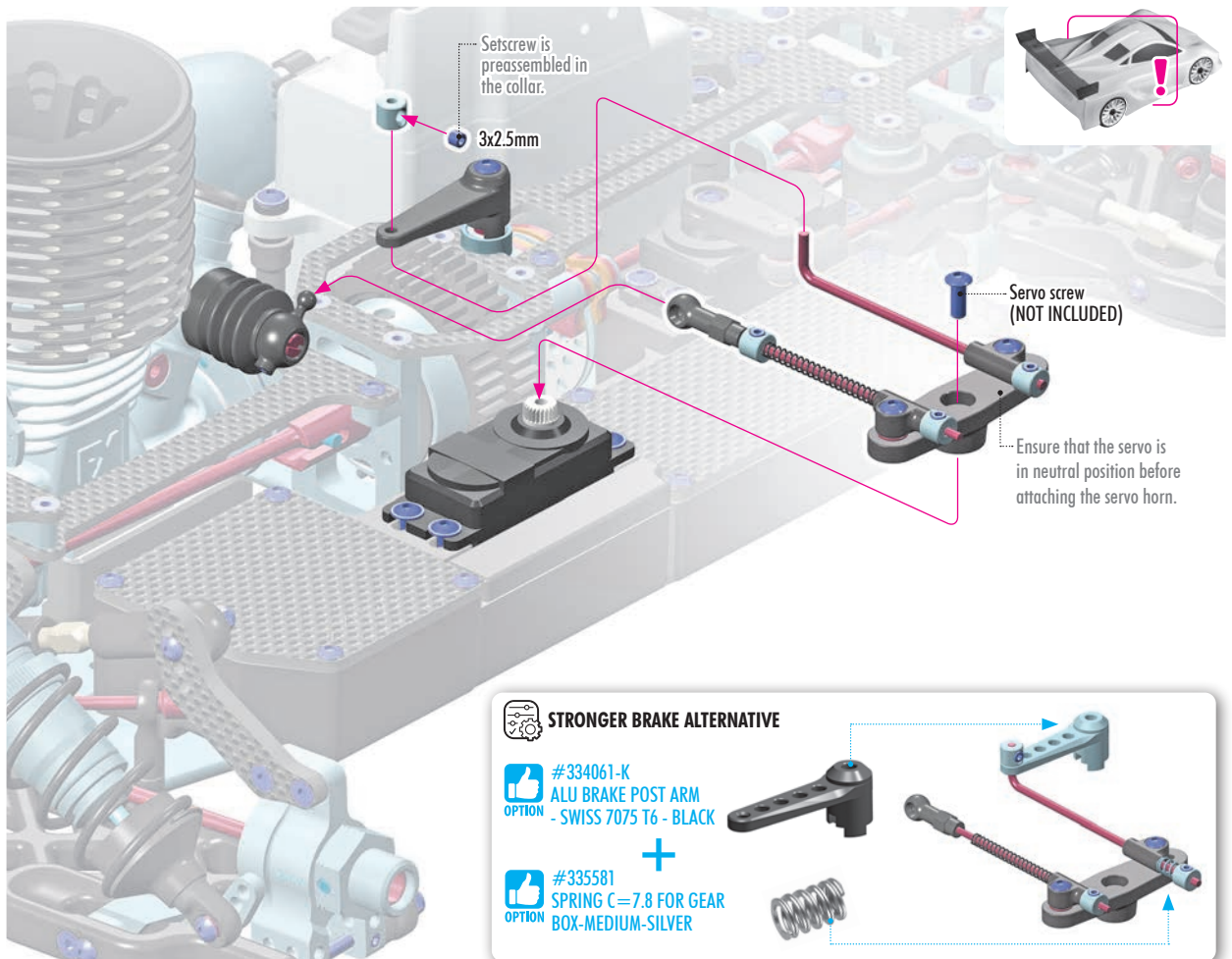
ASSEMBLED VIEW



Check for free movement.



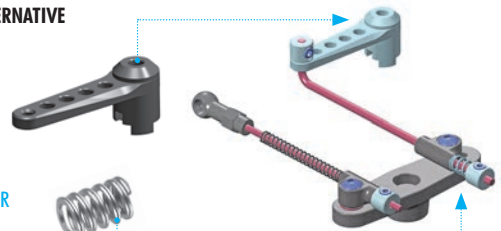
1x 901302
SB M3x2.5



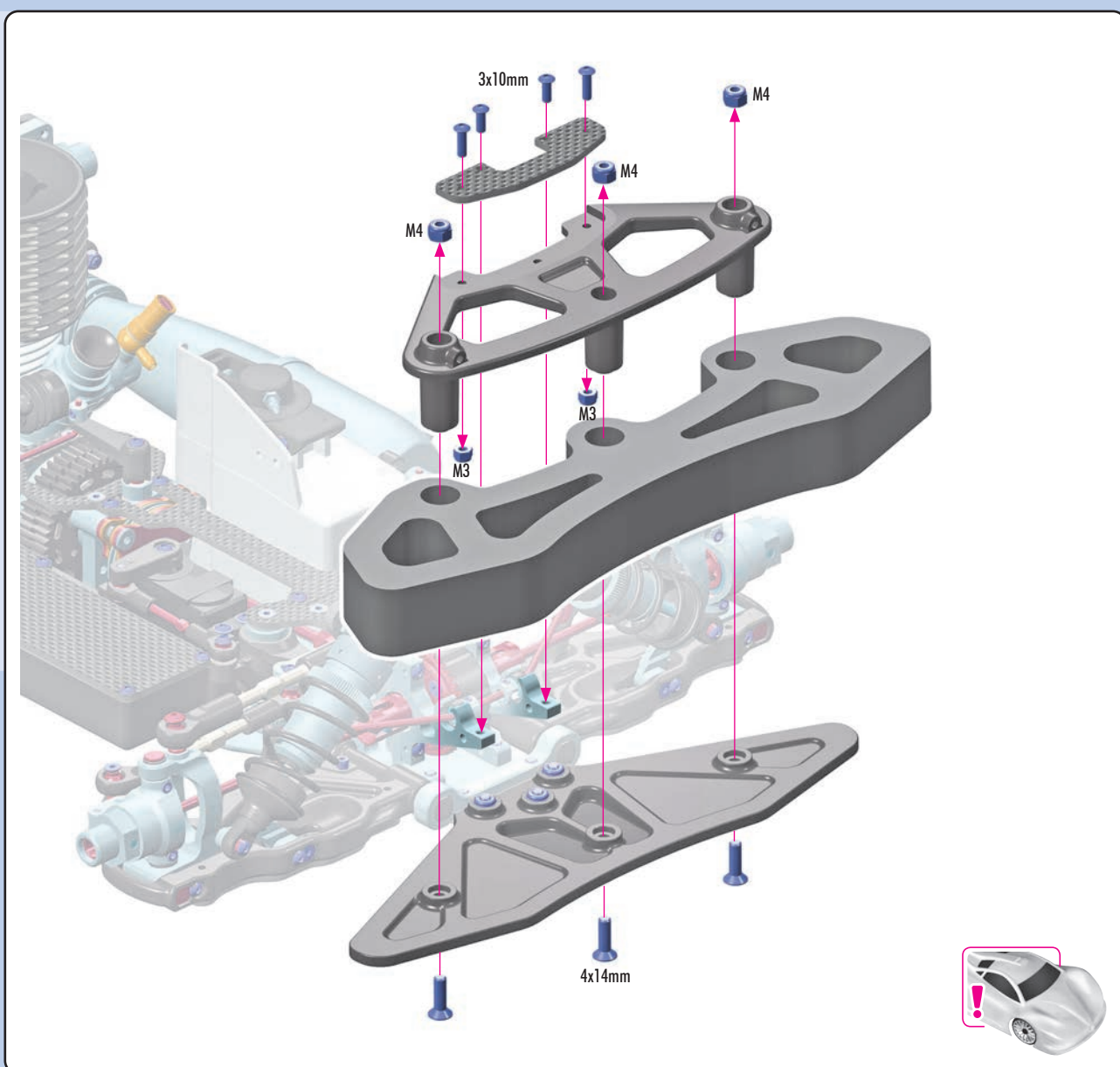
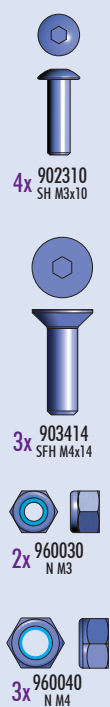
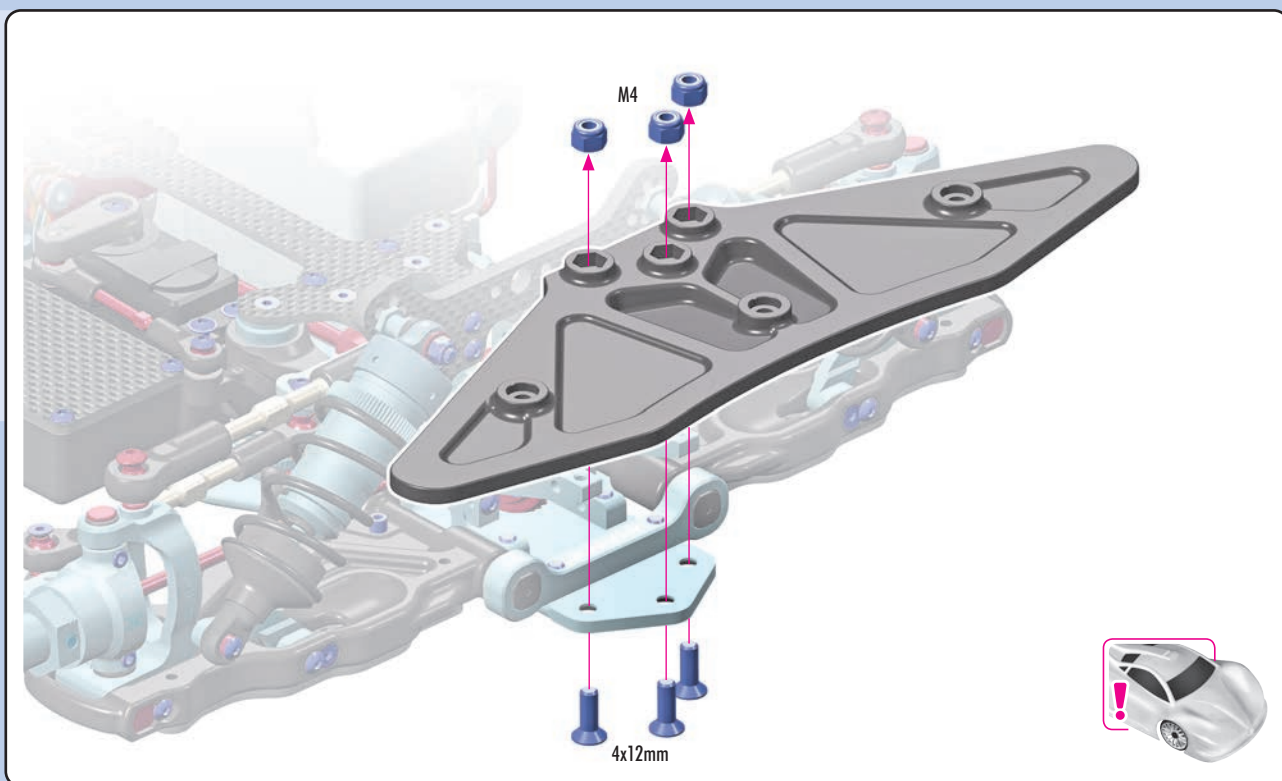
STRONGER BRAKE ALTERNATIVE

#334061-K
ALU BRAKE POST ARM
- SWISS 7075 T6 - BLACK

#335581
SPRING C=7.8 FOR GEAR
BOX-MEDIUM-SILVER

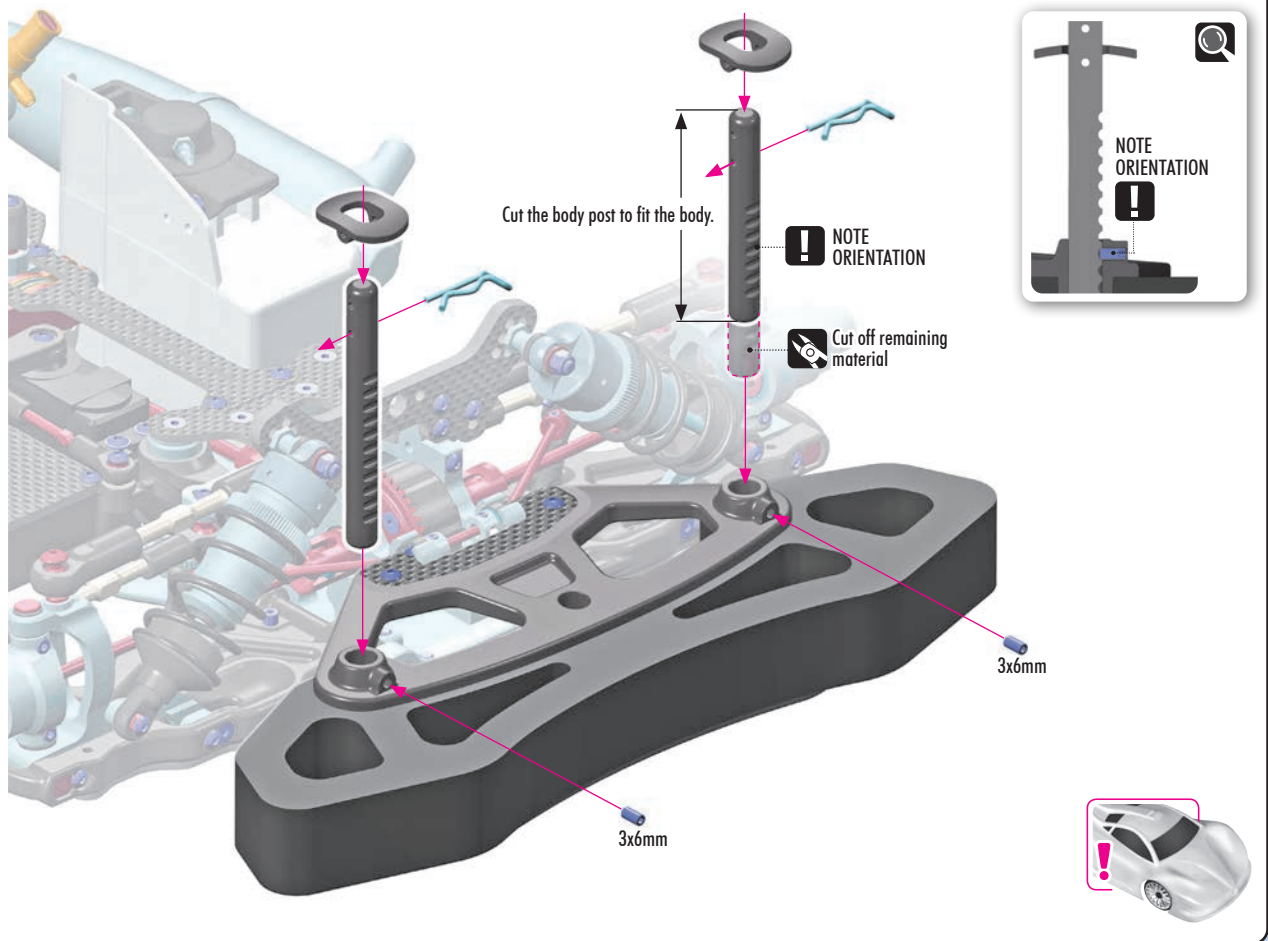


12. FINAL ASSEMBLY



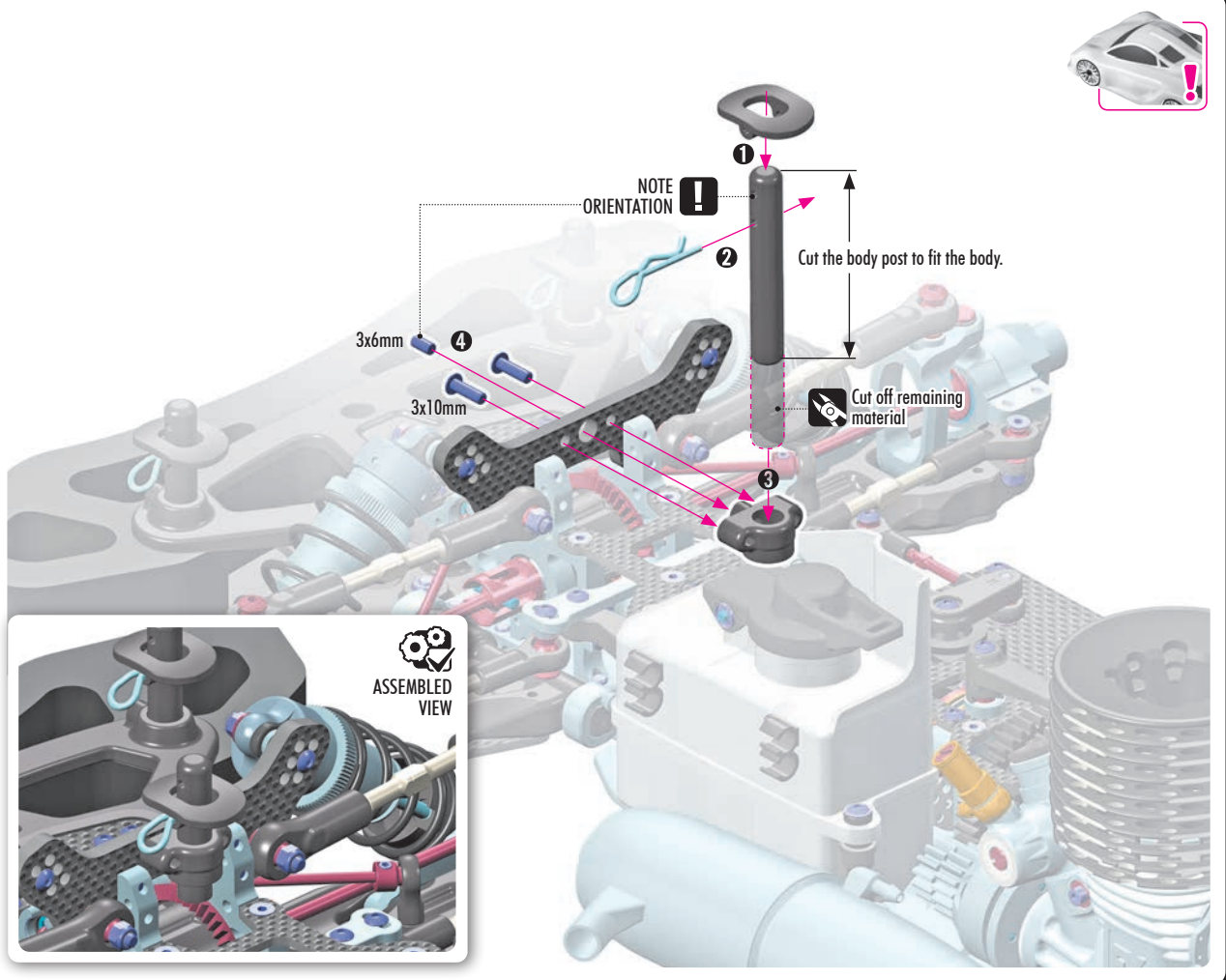
12. FINAL ASSEMBLY

2x 901306
SB M3x6



1x 901306
SB M3x6

2x 902310
SH M3x10



12. FINAL ASSEMBLY



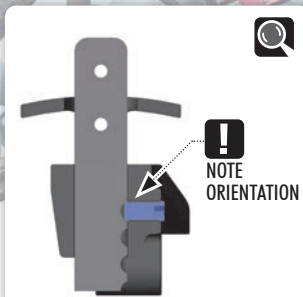
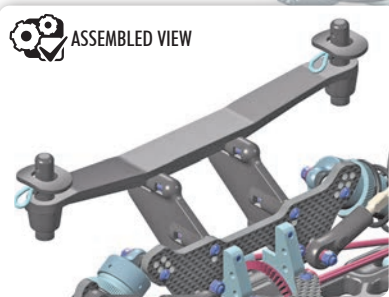
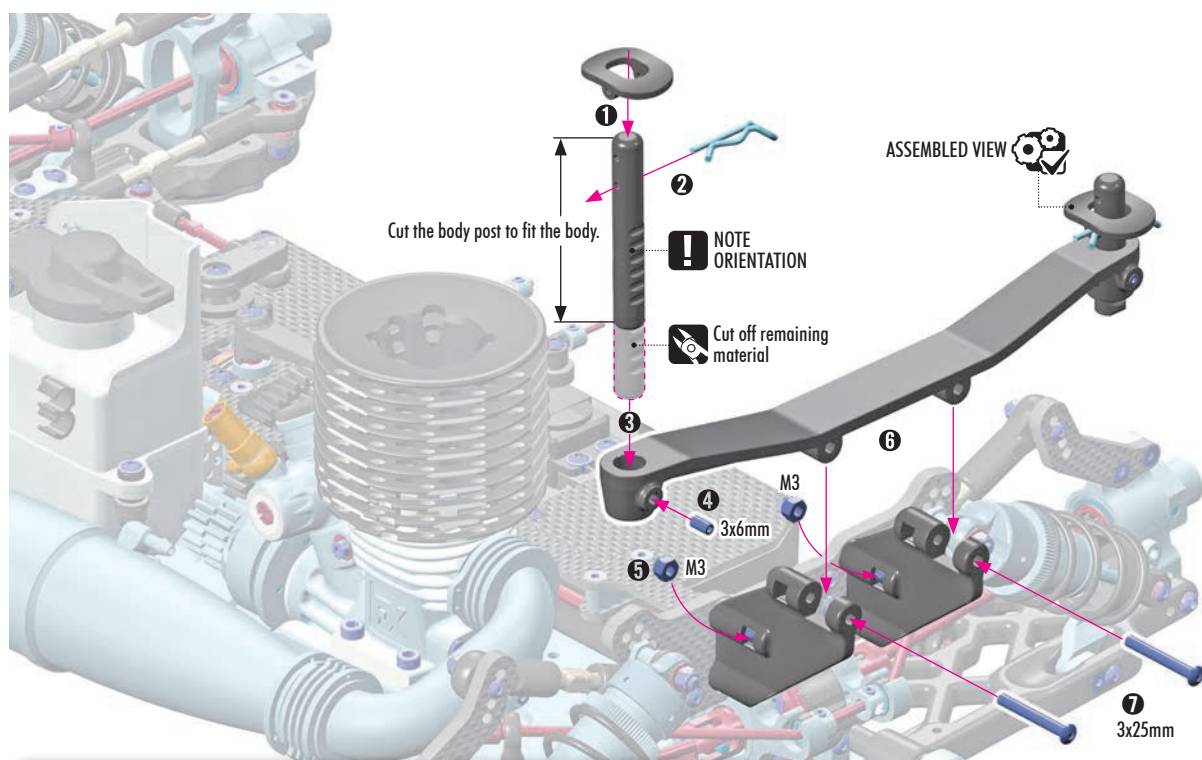
2x 901306
SB M3x6



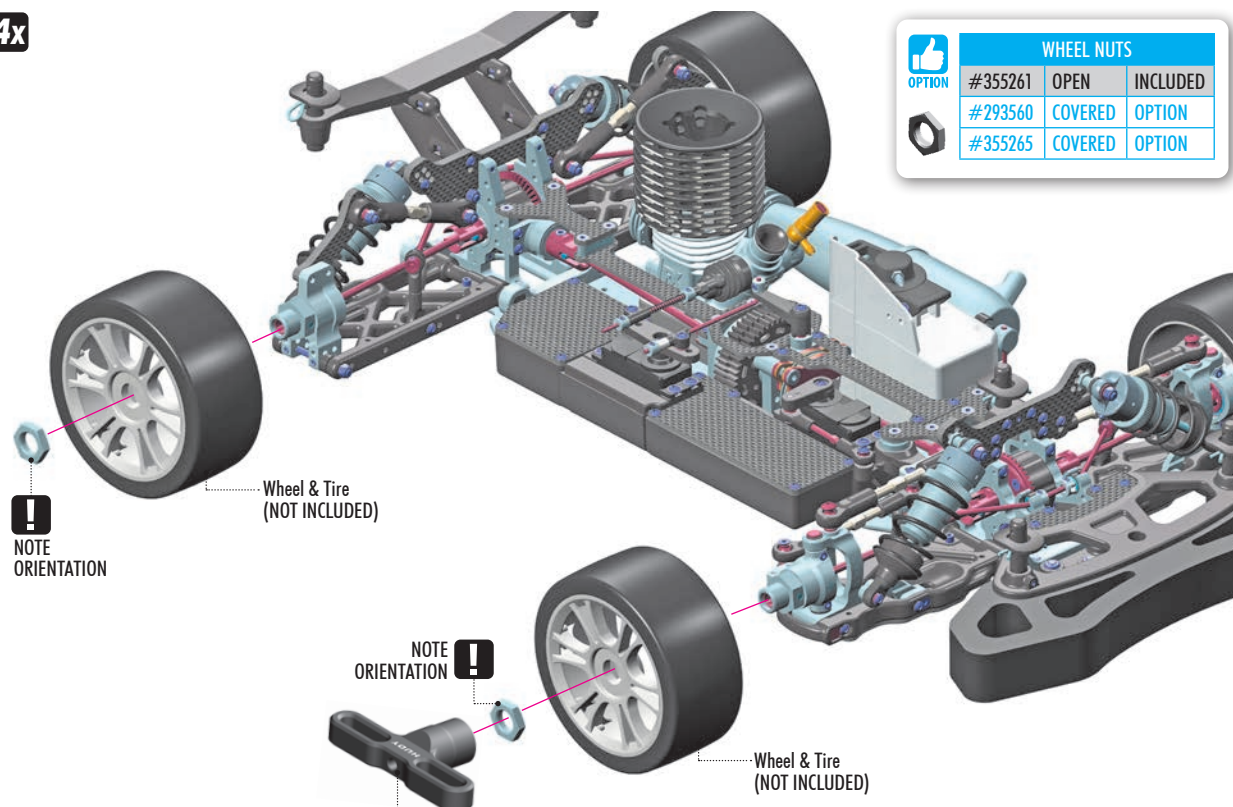
2x 902325
SH M3x25



2x 960030
N M3



4x



OPTION



WHEEL NUTS

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

12. FINAL ASSEMBLY



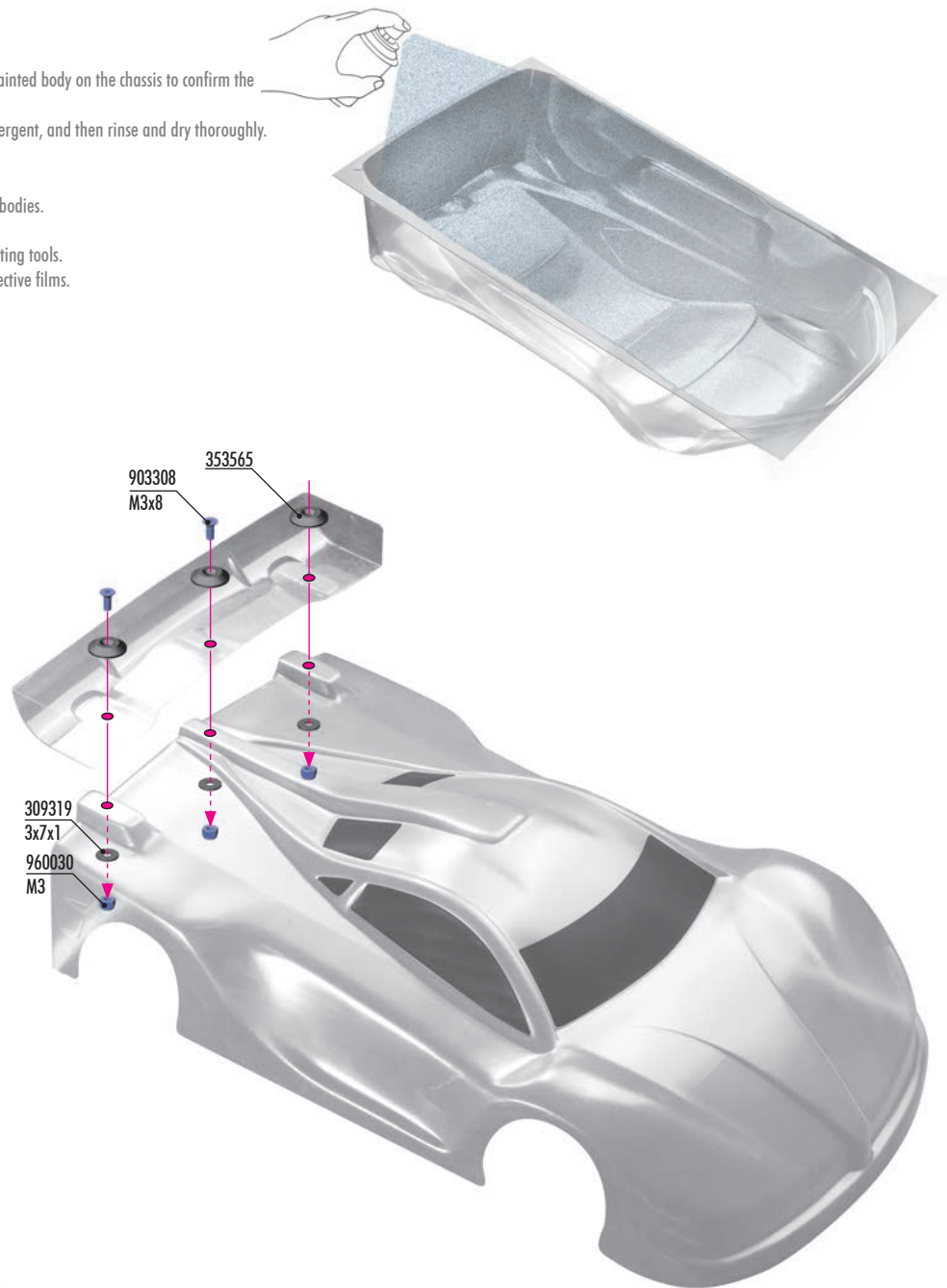
#359731 GTX BODY (NOT INCLUDED)

- ❶ Before cutting and making holes on the body, put the unpainted body on the chassis to confirm the mounting position and location for holes and cutouts.
- ❷ Before painting, wash the inside of the body with mild detergent, and then rinse and dry thoroughly.
- ❸ Mask all windows.
- ❹ Apply paint masks as appropriate.
- ❺ Paint the body using paints formulated for polycarbonate bodies.
- ❻ When the paint is dry, remove the masking.
- ❼ Carefully cut out the body using appropriate scissors or cutting tools.
- ❽ When you have finished cutting, peel off the external protective films.

TIP To reinforce the body or to fix broken body use #106280 HUDY BODY FIX.

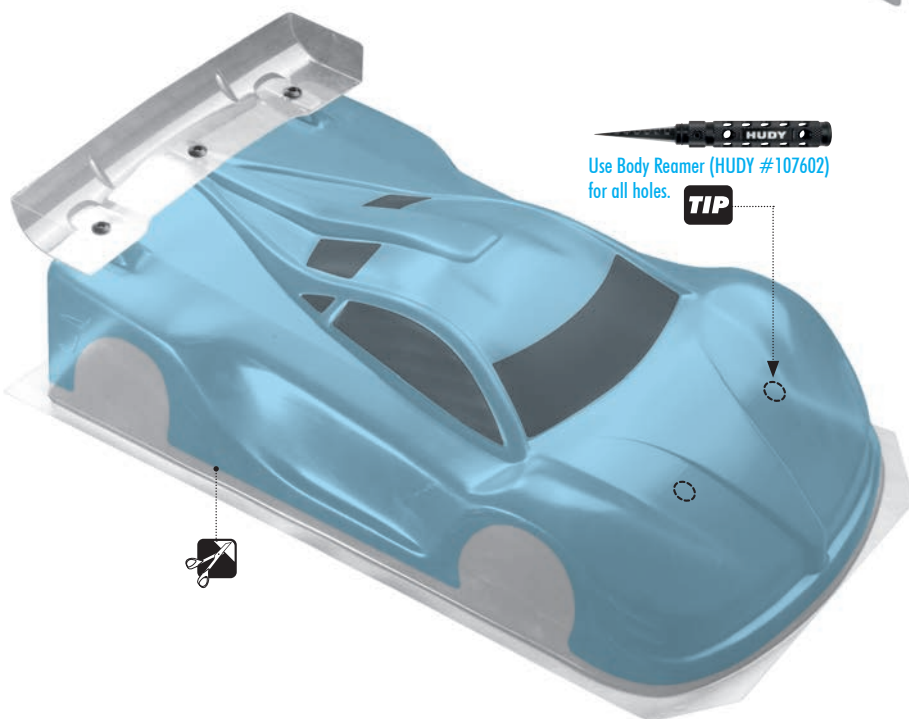


WING SHIMS			
#		COMPOSITE	INCLUDED
#353565			
#293561	ALU		OPTION
#293561-K	ALU		OPTION
#293561-O	ALU		OPTION
#353561	ALU		OPTION



Use Body Reamer (HUDY #107602) for all holes.

TIP



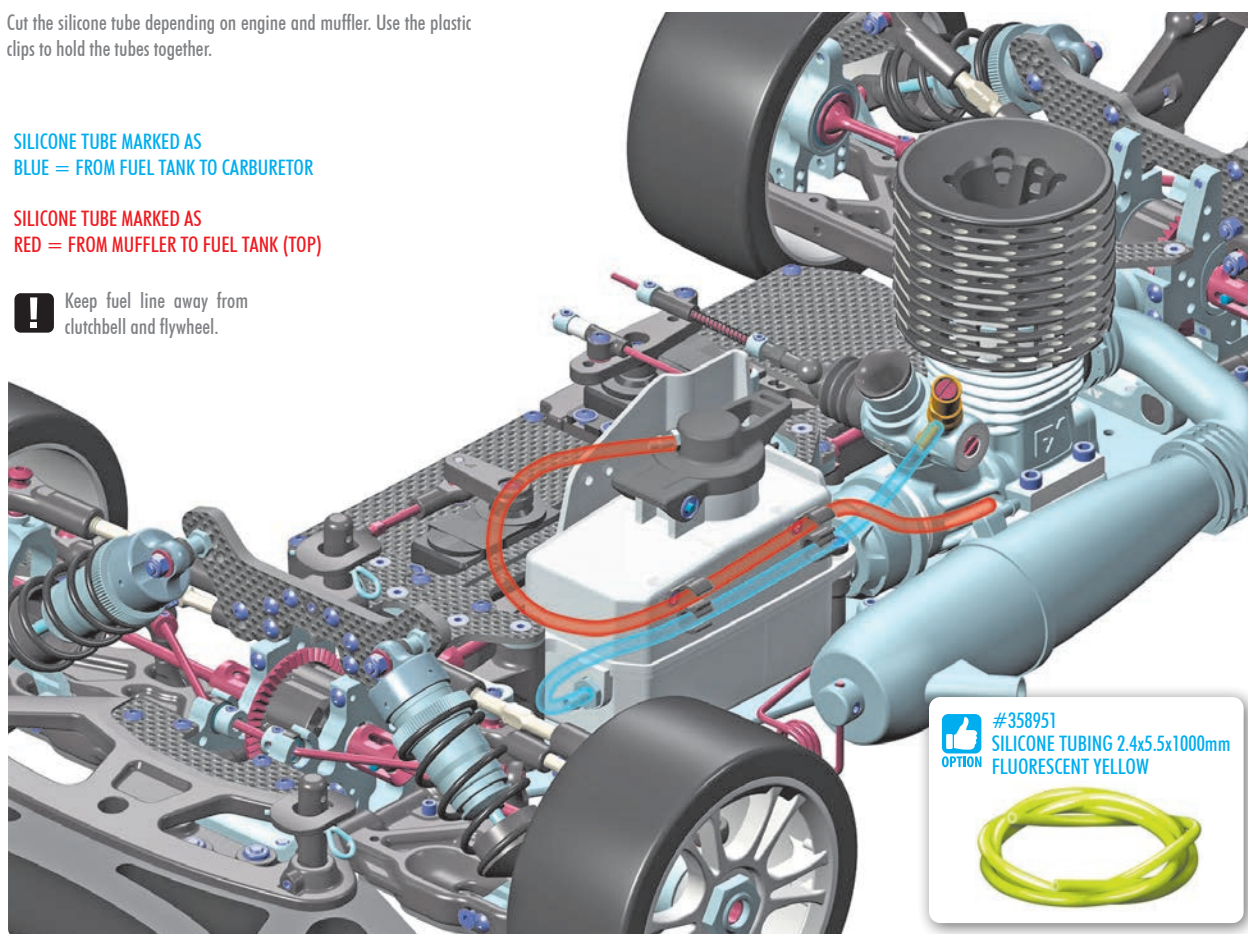
12. FINAL ASSEMBLY

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)

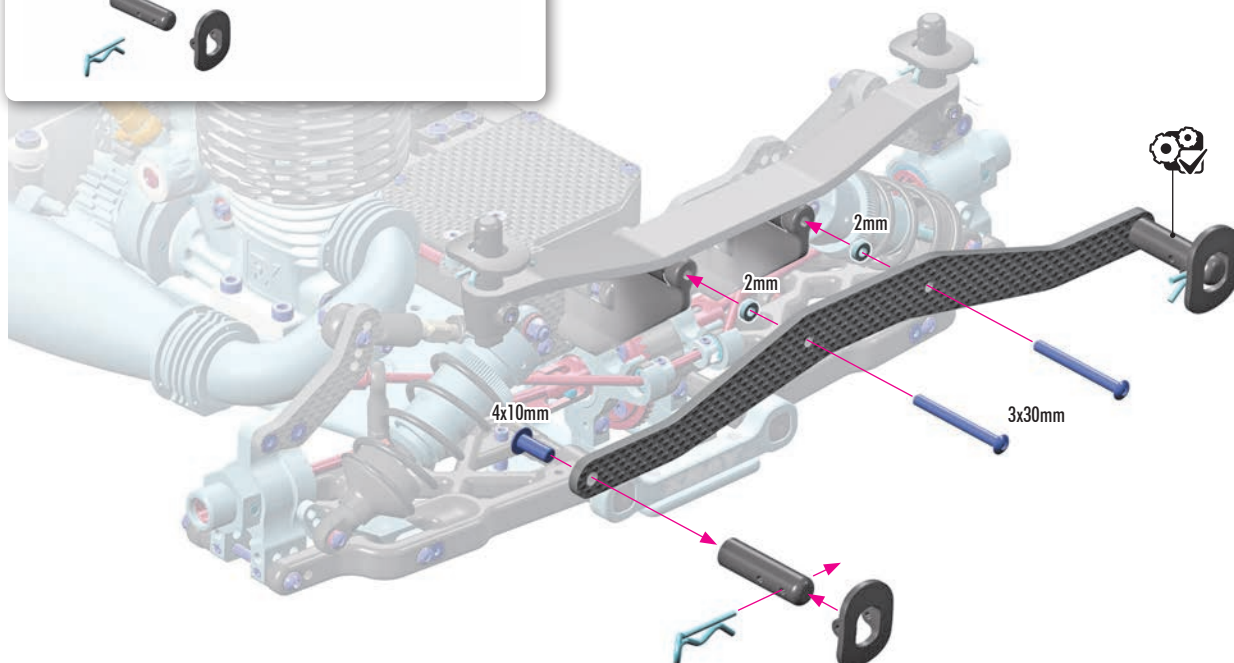
! Keep fuel line away from clutchbell and flywheel.



#358951
SILICONE TUBING 2.4x5.5x1000mm
FLUORESCENT YELLOW



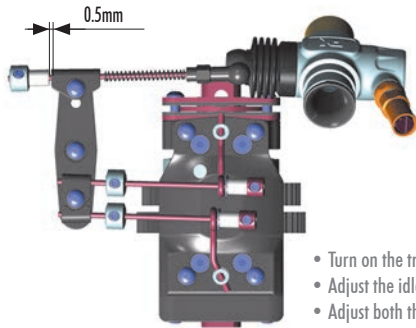
#351460
GT HORIZONTAL BODY MOUNTING - SET



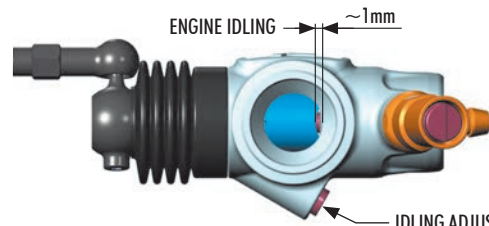
THROTTLE LINKAGE ADJUSTMENT

NEUTRAL (IDLE)

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



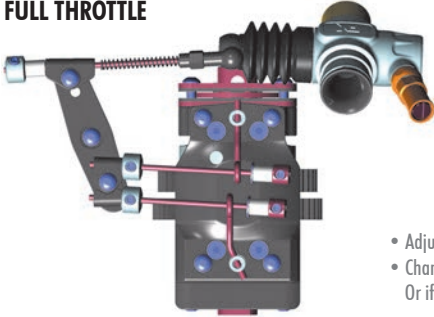
- Turn on the transmitter and receiver and set the engine control servo trim to the neutral position.
- Adjust the idle adjustment screw on the carburetor to open approx. 1mm.
- Adjust both the throttle linkage and brake linkages accordingly.
- DO NOT adjust the linkage with the engine running.



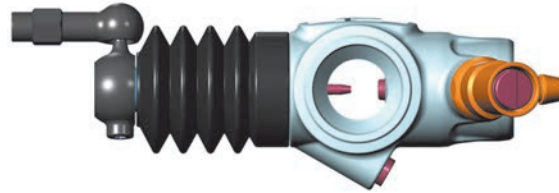
IDLING ADJUSTMENT SCREW.

Use to adjust the idle setting of the carburetor. Do not allow carburetor to close to less than 1mm.

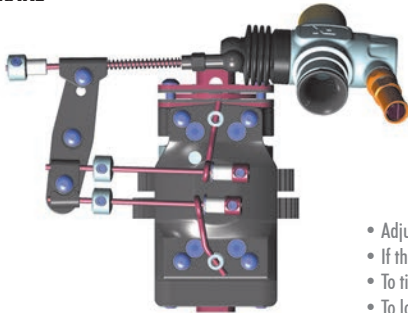
FULL THROTTLE



- 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.

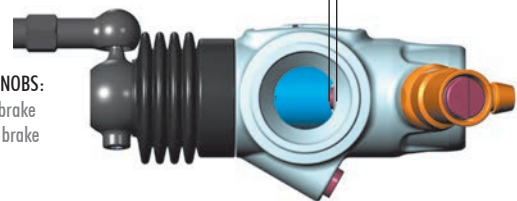


BRAKE



- 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:

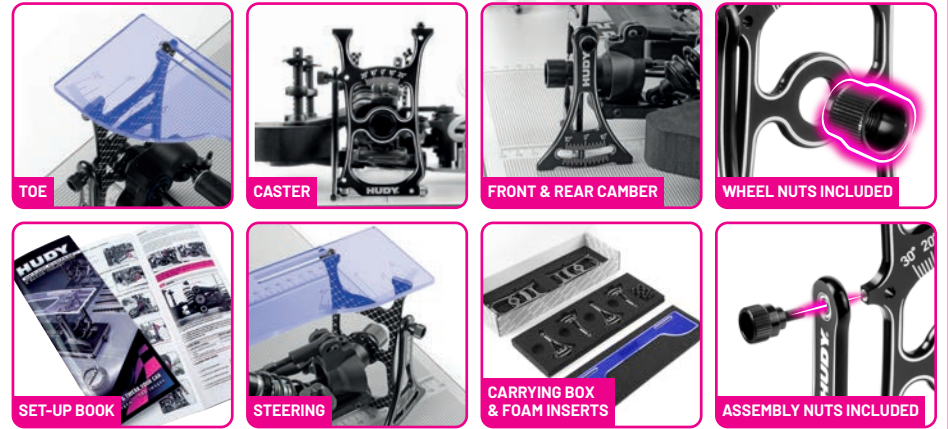
Upper linkage - rear brake
Lower linkage - front brake

TROUBLESHOOTING GUIDE

PROBLEM	CAUSE	SOLUTION
ENGINE DOES NOT START	• Fuel tank is empty or carburetor is not primed • Bad glowplug or dead glowdriver battery • Fuel lines, fuel filter, air cleaner, or muffler is clogged • Engine is flooded due to over-priming • Carburetor is not adjusted properly • Throttle servo linkage not adjusted properly	• Fill fuel tank with fuel and prime • Replace glowplug or recharge/replace glowdriver battery • Clean or replace clogged part(s) • Remove glowplug, turn car over to discharge fuel from cylinder. Test glowplug and replace if defective • Set idle and main/slow needle adjusting screw to standard starting position • Move throttle servo to neutral position and re-adjust linkage(s)
ENGINE STARTS BUT THEN STALLS	• Fuel tank is empty • Fuel lines, fuel filter, air cleaner, or muffler is clogged • Carburetor is not adjusted properly • Engine has overheated	• Fill fuel tank with fuel • Clean or replace clogged part(s) • Re-adjust idle and main/slow needle adjusting screw • Allow engine to thoroughly cool down and open main needle adjusting screw 30° turn richer (CCW)
BAD REACTION AND RESPONSE FROM ENGINE	• Carburetor is not adjusted properly • Fuel lines, fuel filter, air cleaner, or muffler is clogged • Low fuel pressure from muffler	• Re-adjust main/slow needle adjusting screw • Clean or replace clogged part(s) • Properly install pressure line between muffler and fuel tank
CAR IS HARD TO CONTROL	• Weak transmitter and/or receiver batteries • Low reception from radio antennas • Servo linkages not adjusted properly	• Recharge or replace batteries • Fully extend transmitter and receiver antennas • Move servo to neutral then re-adjust linkage(s)
STEERING DOES NOT WORK PROPERLY	• Weak transmitter and/or receiver batteries • Bent linkages or driveshafts • Loose steering components • Drivetrain damage	• Recharge or replace batteries • Check tightness of steering components and tighten if necessary • Replace damaged parts
HANDLING PROBLEMS	• Shocks are not working properly • Suspension is binding • Improper tires	• Rebuild the shocks and replace worn or broken parts • Make sure suspension moves freely. Replace worn or broken parts • Use different tires
STEERING FEELS SLUGGISH OR VAGUE	• Suspension is binding • Damaged steering servo	• Make sure suspension moves freely, and replace worn or broken parts • Check the steering servo for damage and wear, and replace/repair if necessary
THE CAR DOES NOT DRIVE STRAIGHT	• Suspension is binding • Steering trim is off-center • Wheels are loose • Damaged steering servo	• Make sure suspension moves freely, and replace worn or broken parts • Adjust steering trim until car drives straight • Check the make sure the wheel nuts are properly tightened • Check the steering servo for damage and wear, and replace/repair if necessary

HUDY SET-UP TOOLS & ACCESSORIES

(NOT INCLUDED)



#109601

HUDY Set-Up Station for 1/8 On-road GT

- Must-have set-up tool for a complete suspension geometry adjustment
 - Quick and straight-forward "one screw" assembly/disassembly
 - Backlash-free, wobble-free mounting
 - Fully ball-bearing equipped set-up stands (12 high-precision ball-bearings)
 - Ultra-smooth, ultra-precise movement and operation
 - CNC-machined from high-grade premium Swiss 7075 T6 aluminum
- CNC-machined upside measure plate from tough acrylic plastic
 - All components have prevision engraving for instant & reliable readings
 - Carrying box with foam inserts for safe storage & transportation
 - High-quality, super precision & long life
 - Industry standard for set-up tools since 1992



#109651

HUDY Set-Up Toolset 1/8 GT Cars

- Includes all tools for complete geometry adjustment
 - Highest precision & superior quality
 - Unmatched value
 - Must have for every racer
 - All components made by HUDY in Europe
 - All components are machined from lightweight aircraft aluminum
-



HUDY Titanium Super-Low Head Screw - Centering Diameter

- Titanium material
 - Super lightweight
 - Centering Diameter on Super-Low Head Screws
 - Ultra-precise
 - Long life
- High durability
 - Made by HUDY
 - Made in Europe

OTHER VARIANTS:

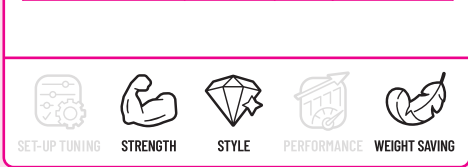
Part number	Length	Pcs	Image
#908305-T	5mm	10	
#908306-T	6mm	10	
#908308-T	8mm	10	
#908310-T	10mm	10	
#908312-T	12mm	10	
#908314-T	14mm	4	
#908316-T	16mm	4	
#908318-T	18mm	4	
#908325-T	25mm	4	



HUDY Titanium Flat Head Screw

OTHER VARIANTS:

Part number	Length	Pcs	Image
#903306-T	6mm	10	
#903308-T	8mm	10	
#903310-T	10mm	10	
#903312-T	12mm	10	
#903314-T	14mm	4	
#903320-T	20mm	4	
#903325-T	25mm	4	



HUDY SET-UP TOOLS & ACCESSORIES

(NOT INCLUDED)



#104005

HUDY Air Vac - Vacuum Pump
1/8 Off-Road

- Removes air from shock absorbers & diffs in seconds
- Ultra compact & handy design
- Machined from premium Swiss 7075 T6 aluminum
- Includes holders for shock absorbers & differential
- Included 600mm connecting cable with gold-plated banana plugs
- Premium hard case for safe storage & transport
- Individually assembled & tested
- Works with 12V power supply or 7.2V battery (not included)
- May be used also as a tire additive penetrator



Holders for shock absorbers



Holders for differential

SET-UP TUNING

STRENGTH

STYLE

PERFORMANCE

WEIGHT SAVING



#293407 (23T)
#293408 (24T)
#293409 (25T)

Alu Clamp Servo Horns

- Increase reliability & strength
- Clamp design
- Easy to access set screw from top
- Maximum steering control
- Drilled & tapped for 3mm linkage
- Zero flex
- Black coated
- Premium Swiss 7075 T6 aluminum

SET-UP TUNING

STRENGTH

STYLE

PERFORMANCE

WEIGHT SAVING



Clamp 2-hole design



Standard 2-hole design

Alu Throttle Servo Horns 2-Hole

- Increase reliability & strength
- Clamp & standard 2-hole design
- Easy to access set screw from top
- Maximum throttle control
- Drilled & tapped for 3mm linkage
- Zero flex
- Black coated
- Premium Swiss 7075 T6 aluminum

OTHER VARIANTS:



Clamp M3 Hole:

Part number	Teeth
#293444	23T
#293445	24T
#293446	25T



Clamp ø3 Hole:

Part number	Teeth
#293447	23T
#293448	24T
#293449	25T



Standard M3 Hole:

Part number	Teeth
#293507	23T
#293508	24T
#293509	25T



Standard ø3 Hole:

Part number	Teeth
#293504	23T
#293505	24T
#293506	25T

SET-UP TUNING

STRENGTH

STYLE

PERFORMANCE

WEIGHT SAVING



#107763

HUDY Adjustable Ride Height Gauge 5-40mm

- Easy & fast ride height adjustment
- Adjustable gauge in range 5-40mm
- Extremely durable and wear resistant
- 1mm increments
- Small & lightweight

SET-UP TUNING

STRENGTH

STYLE

PERFORMANCE

WEIGHT SAVING

XRAY TUNING PARTS

(NOT INCLUDED)



#358709

Alu Monoblock Engine Mount

- Eliminates need for gear mesh re-adjustment
- Increases stiffness
- Extra-long life
- Lightweight & durable
- Premium Swiss 7075 T6 aluminum
- Different stands available for different engine brands

OTHER VARIANTS:

Alu Stands For Engine Mounts

Part number	Type	Engine
#358718	Stands	FX, Max, Sirio, Novarossi,
#358719	Stands	Picco, Reds, Orion, LRP, OS, Ultimate Racing



#355222

Universal Drive Shaft - HUDY Spring Steel™

- Makes car more free
- Reduced resistance at full steering angle
- Increases corner speed
- For front & rear suspension
- HUDY Spring Steel™



Alu Wheel Axles

- Precision track-width change
- Marked for easy identification
- Lightweight
- Black coated
- Premium Swiss 7075 T6 aluminum



#355215

CVD Adjustable Drive Axle - HUDY Spring Steel™ (2)

- Unique length adjustment of driveshaft
- Precise fit
- Lightweight & durable
- Positions the driveshaft further outward
- Extra-long lifespan
- HUDY Spring Steel™



#334061-K

Alu Brake Post Arm Swiss 7075 T6 - Black

- More direct and precise braking
- Ultra-strong construction
- Long life
- Durable
- Premium Swiss 7075 T6 aluminum



#355022-G

Differential Case V2 - Graphite

- Durable graphite composite
- Lightweight
- Higher temperature resistance
- Higher wear resistance



#352526

Alu Servo Saver Lower Arm Swiss 7075 T6

- Servo saver lower arm
- Improves durability
- Reduces flex in steering assembly
- Improves performance in all conditions
- Hard coated for increased lifespan
- Premium Swiss 7075 T6 aluminum



#358462-Y

GT 4-Shoe Yellow Clutch Shoe

- Provides higher initial bite but also more slippage
- For medium & high-traction tracks
- Better feeling on higher traction
- CNC-machined yellow clutch shoe for GTX clutch





Composite Rear Lower Suspension Arm

Different hardness arms are available for additional turning options

OTHER VARIANTS:

Table with 2 columns: Part number, Hardness. Rows include #353115 (Medium), #353116-H (Hard), #353116-XH (X-Hard), #353116-G (Graphite).

MEDIUM: For low traction. Generates more traction on rear suspension.
HARD: Balanced flex. Most versatile for all conditions.
X-HARD: For medium-high traction. Improves stability.
GRAPHITE: For very high-traction. Improves stability and corner speed.

OTHER VARIANTS:

Table with 3 columns: Part number, Size, Hardness. Rows include #353127-H (Short, Hard), #353127-XH (Short, X-Hard), #353127-G (Short, Graphite).

increases rotation

HARD: Balanced flex. Most versatile for all conditions.
X-HARD: For medium-high traction. Improves stability.
GRAPHITE: For very high-traction. Improves stability and corner speed.



#353191

Carbon Rear Lower Arm Plate

- For stiffer the rear arms
Makes the car more stable
Easier to drive under high-traction conditions
The plate can be easily mounted/dismounted
CNC-machined
Strong carbon material



#358087-M

XB8 Shock Rubber Membrane Cell - Medium (4)

- More rebound than Soft membrane
Generates more traction
Improves landings
Equal damping characteristics

#358084-S Ribbed Membrane
Soft ribbed design with the slowest rebound, generating less traction. Ideal for high-traction or bumpy tracks where slower shock response increases stability.

#358087-S Soft Membrane
Soft cell membrane with faster rebound for more traction and a more responsive feel on low-traction conditions.

#358087-M Medium Membrane
Medium material creates the fastest rebound, generating maximum traction and sharper shock response, improving jumps and landings.



Extreme Heat Resistant F/R/C Alu & Steel Diff Pin with Inserts

#355085 For XB8 F/R differential
Designed for 2-gear differential configuration
Lightweight & durable
Smoother and more stable handling on high traction
No flat spot pin design for improved durability
Heat-resistant inserts for consistent performance

#355086 For XB8 F/R differential
For extreme heat conditions
Lightweight & durable
Increases lifetime
Smoother and more stable handling on high traction
Heat-resistant inserts for consistent performance

#355083 & #355087 For XB8 center differential
For extreme heat conditions
Lightweight & durable
Increases lifetime
Smoother and more stable handling on high traction
Heat-resistant inserts for consistent performance

OTHER VARIANTS:

Table with 4 columns: Part number, Diff, Config, Material. Rows include #355085 (Front/Rear, 2G, Alu), #355086 (Front/Rear, 4G, Alu), #355083 (Center, 4G, Steel), #355087 (Center, 4G, Alu).



#358661

Carbon 125CC Fuel Tank Guard

- Protects fuel tank from heat
Provides better fuel consistency
Helps to ensure better engine performance
CNC-machined
Strong carbon material



EXCLUSIVE PROFESSIONAL

HUDY

199186

104500

HUDY

108170

199060

109802

106200

105510

105500

199270

109841

106000

107762

107780

107783

108860

109860

181090

107570

107602

107090

183011

188990

182016

107644

154060

107612

113045

112545

132545

112045

132045

111545

164045

175535

170050

- #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
- #154060 Long Slotted Screwdriver 4.0 mm - for Engine Adjust. - SPC - V2
- #164045 Limited Edition - Phillips Screwdriver # 4.0mm
- #164071 Power Tool Tip Phillips 4.0 x 90 mm
- #170050 Socket Driver 5.0 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 Wheel Nut & 3/4 Shoe Flywheel Multi-Toll 1/8 GT
- #183011 HUDY Professional Multi Tool
- #188981 HUDY Pocket Hobby Knife
- #188990 HUDY Professional Body Scissors
- #199060 HUDY Alu Tool Stand
- #199186 HUDY Car Bag - 1/8 On-Road GT
- #199270 HUDY LiPo Safety Bag
- #199310 HUDY Pit Bag - Compact

- #199911 HUDY Pit Mat Roll 750x1200mm with Printing
- #293111 HUDY Brushless RC Fan 40mm
- #293540 Air Filter Foam & Oil (10) - XRAY XB8 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



www.teamxray.com

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