



XRAY
1/8 LUXURY NITRO GT

GT-M8
2017

**INSTRUCTION
MANUAL**

BEFORE YOU START

The GTX8 is a high-competition, high-quality, 1/10-scale nitro 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 GTX8, YOU MUST read through all of the operating instructions and instruction manual and fully understand them to get the maximum enjoyment and prevent unnecessary damage.

CUSTOMER SUPPORT

We have made every effort to make these instructions as easy to understand as possible. However, if you have any difficulties, problems, or questions, please do not hesitate to contact the XRAY support team at info@teamxray.com. 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

Read carefully and fully understand the instructions before beginning assembly.

Make sure you review this entire manual, the included set-up book, and examine all details carefully. If for some reason you decide the GTX8 is not what you wanted or expected, do not continue any further. Your hobby dealer cannot accept your GTX8 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.

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

SAFETY PRECAUTIONS

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

CAUTION: CANCER HAZARD

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

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

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

Using any third party parts on this model will void warranty immediately.

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

IMPORTANT NOTES – GENERAL

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

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

IMPORTANT NOTES – NITRO ENGINES

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

IMPORTANT NOTES – ELECTRICAL

- Insulate any exposed electrical wiring (using heat shrink tubing or electrical tape) to prevent dangerous short circuits. Take maximum care in wiring, connecting and insulating cables. Make sure cables are always connected securely. Check connectors for if they become loose. And if so, reconnect them securely. Never use R/C models with damaged wires. A damaged wire is extremely dangerous, and can cause short-circuits resulting in fire. Please have wires repaired at your local hobby shop.
- Low battery power will result in loss of control. Loss of control can occur due to a weak battery in either the transmitter or the receiver. Weak running battery may also result in an out of control car if your car's receiver power is supplied by the running battery. Stop operation immediately if the car starts to slow down.
- When not using RC model, always disconnect and remove battery.
- Do not disassemble battery or cut battery cables. If the running battery short-circuits, approximately 300W of electricity can be discharged, leading to fire or burns. Never disassemble battery or cut battery cables.
- Use a recommended charger for the receiver and transmitter batteries and follow the instructions

IMPORTANT NOTES – NITRO FUEL

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

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.

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

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

R/C & BUILDING TIPS

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

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

WARRANTY

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

Due to the high performance level of this model car you will need to periodically maintain and replace consumable components. Any and all warranty coverage will not cover replacement of any part or component damaged by neglect, abuse, or improper or unreasonable use. This includes but is not limited to damage from crashing, chemical and/or water damage, excessive moisture, improper or no maintenance,

or user modifications which compromise the integrity of components. Warranty will not cover components that are considered consumable on RC vehicles. XRAY does not pay nor refund shipping on any component sent to XRAY or its distributors for warranty. XRAY reserves the right to make the final determination of the warranty status of any component or part.

Limitations of Liability

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

QUALITY CERTIFICATE

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

Please note that raw materials such as aluminum, steel, brass, fibreglass, or carbon fibre may have small scratches on the surface which is a standard characteristic of any raw material. Scratches on the surface of any materials are NOT considered to be material defects.

Products may potentially have small amounts of corrosion on them. This may be caused by variances in weather during different times of the year, humidity in the shop or during shipping, and other contributing factors. Even though we have taken all precautions and protection methods to prevent corrosion, these small amounts of corrosion (if present) are unavoidable and considered to be acceptable.

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

SYMBOLS USED

Part bags used 	Assemble in the specified order 	Assemble left and right sides the same way 	Assemble front and rear the same way 	Pay attention here 	Assemble as many times as specified (here twice) 	Apply instant glue 	Apply oil 	Apply grease 	Apply threadlock
Cut off shaded portion 	Use special tool 	Cut off remaining material 	Time 	Use cleaner or WD-40® 	Tighten screw gently 	Ensure smooth non-binding movement 	Use pliers 	Follow tip here 	Follow Set-up Book

TOOLS REQUIRED

<ul style="list-style-type: none"> Phillips 5.0mm (HUDY TOOLS) Allen 1.5/2.0/2.5/3.0mm (HUDY TOOLS) Ball Allen 2.5mm (HUDY TOOLS) Arm Reamer 3mm/4mm (HUDY TOOLS) Socket 5.0/5.5mm (HUDY TOOLS) 	<p>Pinion Tool Set (XRAY #349901)</p>	<p>17mm Wheel Nut Tool (HUDY #107570)</p>	<p>Flywheel Tool (HUDY #182015)</p>	<p>Special Tool for all turnbuckles, nuts (HUDY #181090)</p> <p>Turnbuckle Wrench (HUDY #181040 4mm) (HUDY #181050 5mm)</p>	<p>Cross Wrench (HUDY #107581)</p>
<p>Side Cutters (HUDY #189010)</p>	<p>Pocket Hobby Knife (HUDY #188981)</p>	<p>Needle Nose Pliers (HUDY #189020)</p>	<p>Snap Ring Pliers (HUDY #189040)</p>	<p>Scissors (HUDY #188990)</p>	<p>Body Reamer (HUDY #107600) or (HUDY #107601)</p>

TOOLS & EQUIPMENT INCLUDED

<p>Silicone Shock Oil (HUDY #106411 1000cSt 100ml)</p>	<p>Silicone Diff Oil (HUDY #106561 60.000cSt 100ml) (HUDY #106631 300.000cSt 100ml)</p>	<p>Air Filter Oil (HUDY #106240)</p>	<p>Graphite Grease (HUDY #106210)</p>
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NOT INCLUDED

SET-UP BOOK

To ensure that you always have access to the most up-to-date version of the XRAY Set-up Book, XRAY will now be offering only the digital online version at our website at www.teamxray.com. By offering this online version instead of including a hardcopy printed version in kits, you will always be assured of having the most current updated version.

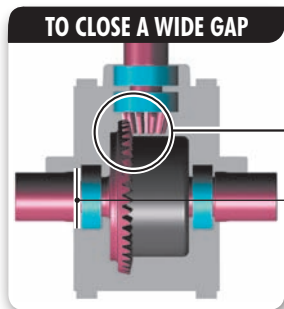
EQUIPMENT REQUIRED

<p>Transmitter Receiver</p> <p>Steering and Throttle Servos</p>	<p>Engine</p>	<p>Manifold & Exhaust</p>	<p>Starter Box & Battery Pack (HUDY #104500)</p>	<p>Glow Plug Igniter</p>	<p>Battery Charger</p>
<p>Receiver Pack</p>	<p>Threadlock & CA Glue</p>	<p>GT BODY (XRAY #359730)</p>	<p>Wheels & Tires</p>	<p>Fuel + Fuel Bottle (HUDY #104200)</p>	<p>Lexan™ Paint</p>

TIP FRONT & REAR DIFF GEAR MESH ADJUSTMENT

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

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

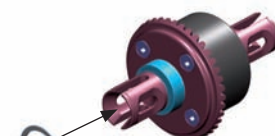


TO CLOSE A WIDE GAP

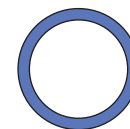


CLOSE A WIDE GAP

insert shim(s) here

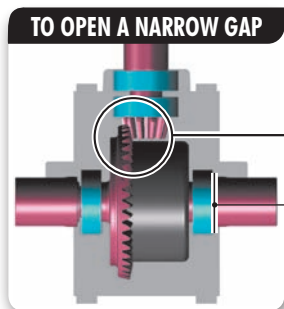


To CLOSE a wide gap:
add 1 or 2 shims against diff spur gear



WASHER

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

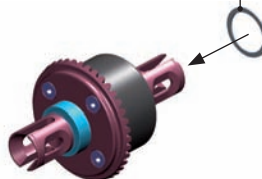


TO OPEN A NARROW GAP



OPEN A NARROW GAP

insert shim(s) here



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

SUSPENSION & DRIVETRAIN MAINTENANCE

- Check suspension for free movement during building and operation, and especially after running and if you have crashed the car. If the suspension does not move freely, use the appropriate HUDY Arm Reamer to clean and resize the holes of the suspension arms.
- Regularly check the drive shaft pins (both side and center) and if they show any wear must be immediately replaced by new pins. If the car is run with worn pins, excessive wear on the diff outdrives will result. The 106000 HUDY Drive Pin Replacement Tool (for 3mm Pins) is a compact, rugged multi-use tool set for replacing 3mm drive pins in drive shafts. Use the HUDY replacement drive shaft pins 3x14 (#106050).
- Regularly inspect and replace the connecting pins which connect the center drive shafts with the pinion gear, and also the pins that connect the wheel drive shafts with wheel axles. Use HUDY Graphite Grease to lubricate the drive shaft connecting joints and the diff gears.
- Pivot balls and ball-joints will naturally wear for some time and will generate play. If there is too much play the pivot balls and ball joints need to be replaced.
- If the car is run in wet conditions, apply WD-40® on all drivetrain parts before the run. After the run, clean and dry the parts again.

HUDY SPRING STEEL™

The HUDY Spring Steel™ used in the car is the strongest and most durable steel material on the RC market. While items made from HUDY Spring Steel™ are still subject to wear, the lifespan is considerably longer than any other material. As parts made from HUDY Spring Steel™ wear, the brown color will after some time "go down" but it will not affect the strength of the material. The brown color is only a surface treatment and if the brown color will wear the durability of the part will be still strong.

TIP DRIVE SHAFT PIN SERVICING

To enjoy the longest possible lifespan of the drive shafts and diff outdrives, it is extremely important to properly service the drive shaft pins. Inspect the pins after every 3 hours of runtime. If the pins show any wear, replace them with new pins.



1 Do not use drive shafts when the pins are worn.

2 Press out the worn pins.

3 Press in new pins and regularly inspect for wear.



For easy drive pin replacements use #106000 HUDY Drive Pin Replacement Tool.



To replace the worn pins use only premium HUDY drive pins #106050.

TIP INSTALLING PIVOT BALLS INTO COMPOSITE BALL-JOINTS



1 Place the pivot ball on the ball joint and use a screw to tighten it to an engine mount or some other part.



2 Tighten screw until pivot ball is tight against block.



3 Lift ball joint until it snaps into place over pivot ball. Ball joint should move freely.



4 The finished joint.



5 Loosen and remove screw.

1. FRONT & REAR DIFFERENTIALS

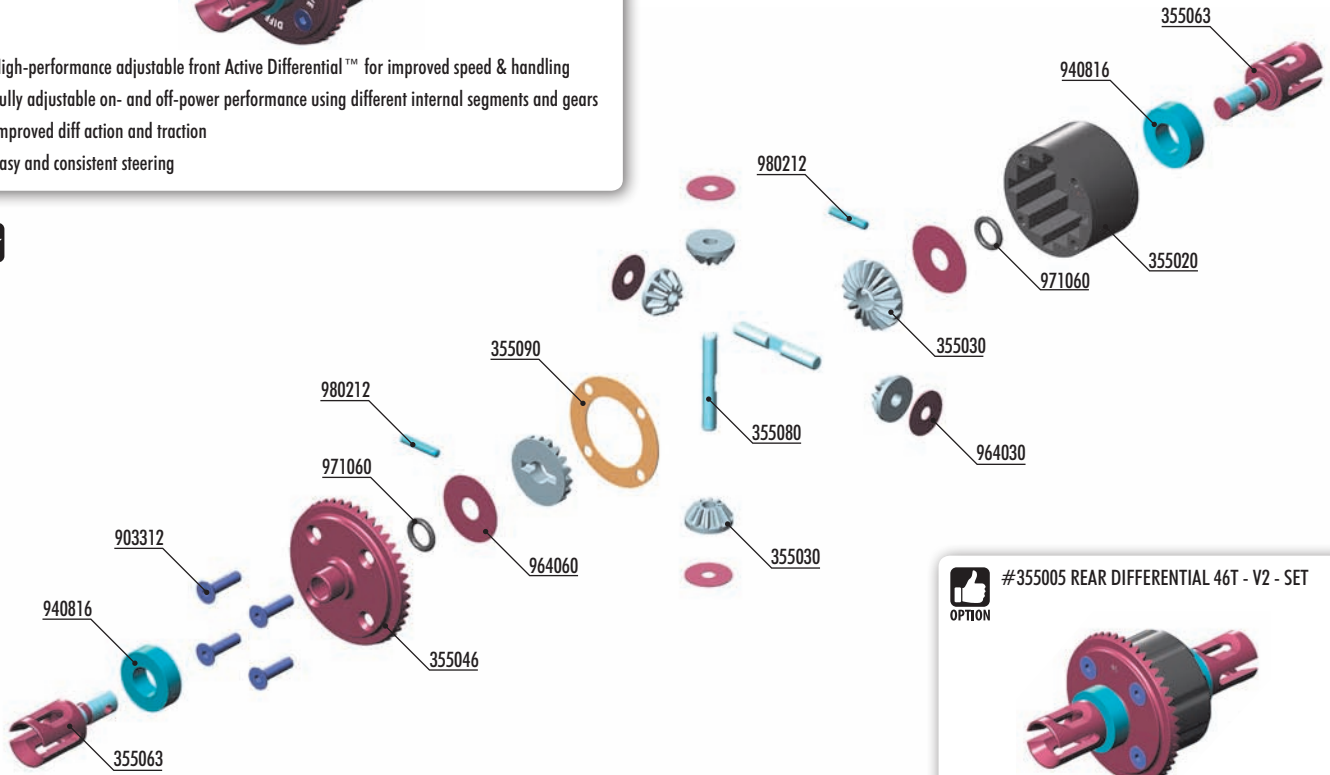


#355105
ACTIVE FRONT DIFF

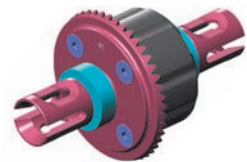


- High-performance adjustable front Active Differential™ for improved speed & handling
- Fully adjustable on- and off-power performance using different internal segments and gears
- Improved diff action and traction
- Easy and consistent steering

2x



#355005 REAR DIFFERENTIAL 46T - V2 - SET

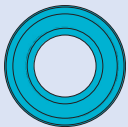


BAG

01

- 35 5003 FRONT/REAR DIFFERENTIAL 46T - SET
- 35 5020 COMPOSITE DIFFERENTIAL CASE
- 35 5030 STEEL DIFF BEVEL & SATELLITE GEARS (2+4)
- 35 5046 FRONT/REAR DIFF LARGE BEVEL GEAR 46T - HUDY STEEL
- 35 5063 F/R DIFF OUTDRIVE ADAPTER - LIGHTW. - HUDY SPRING STEEL™ (2)
- 35 5080 DIFF PIN (2)
- 35 5090 DIFF GASKET (4)

- 90 3312 HEX SCREW SFH M3x12 (10)
- 94 0816 HIGH-SPEED BALL-BEARING 8x16x5 BLUE COVERED (2)
- 96 4030 WASHER S 3.5x12x0.2 (10)
- 96 4060 WASHER S 6x18x0.2 (10)
- 97 1060 SILICONE O-RING 6x1.5 (10)
- 98 0212 PIN 2x11.6 (10)



940816
BB 8x16x5



964060
S 6x18x0.2

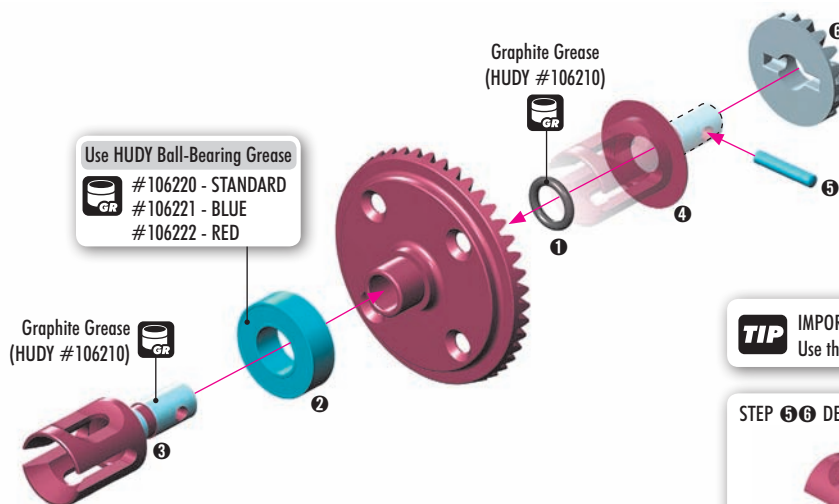


971060
O 6x1.5



980212
P 2x11.6

2x F=R



Use HUDY Ball-Bearing Grease

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

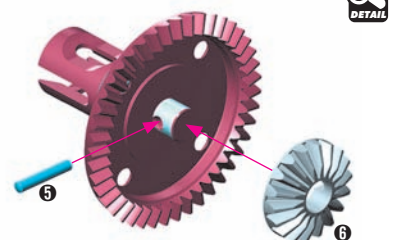
Graphite Grease
(HUDY #106210)

Graphite Grease
(HUDY #106210)

TIP IMPORTANT!

Use the same diff outrives on both ends of a diff.

STEP 5 6 DETAIL



SET-UP
BOOK

DIFFERENTIAL GEARS

1. FRONT & REAR DIFFERENTIALS



940816
BB 8x16x5



964060
S 6x18x0.2

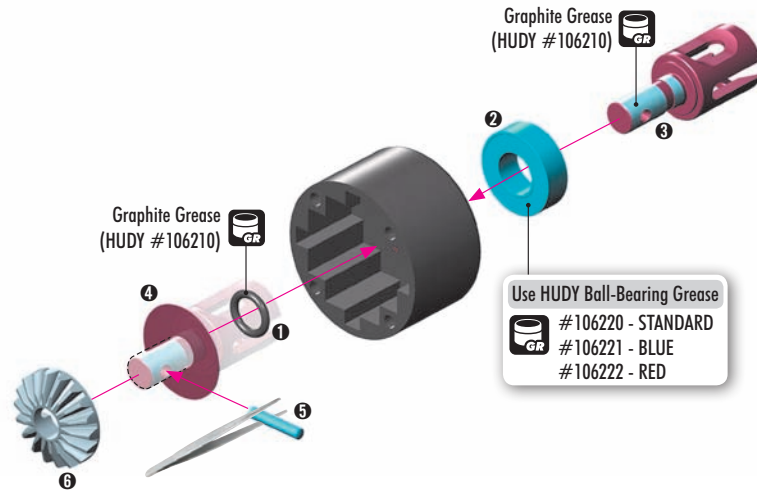


971060
O 6x1.5



980212
P 2x11.6

2x F=R



Graphite Grease
(HUDY #106210)

Graphite Grease
(HUDY #106210)

Use HUDY Ball-Bearing Grease
#106220 - STANDARD
#106221 - BLUE
#106222 - RED

STEP 5 DETAIL



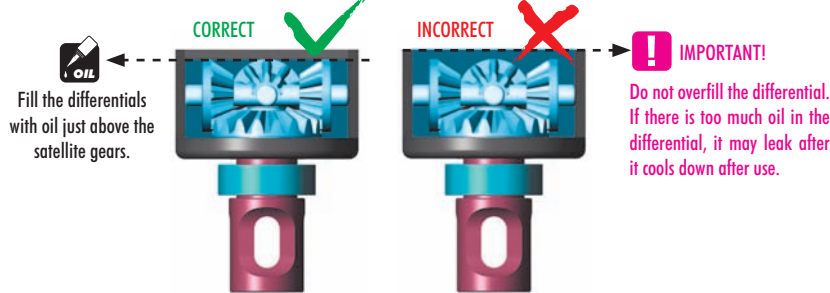
903312
SFH M3x12



964030
S 3.5x12x0.2

VERY IMPORTANT!

Use the following silicone oils included in the kit for initial settings:
FRONT diff: 300.000cSt / REAR diff: 60.000cSt



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

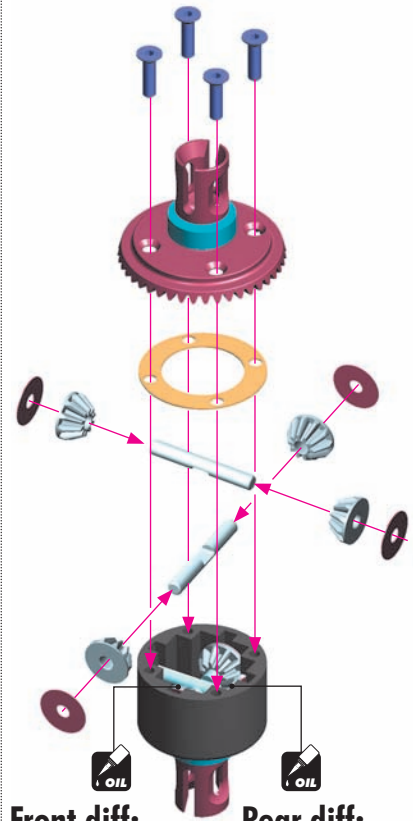
#107865 HUDY Ultimate Digital Pocket Scale 300g ± 0.01g



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

- FRONT DIFF approx. 39.94g
- REAR DIFF approx. 39.94g

2. Slowly pour oil into the diff and watch the weight. The approximate weight of the diff+oil is REAR DIFF approx. 42.30g and FRONT DIFF approx. 42.52g



Front diff:

Silicone oil 300.000cSt
Fill just above the satellite gears.

Rear diff:

Silicone oil 60.000cSt
Fill just above the satellite gears.

SET-UP BOOK

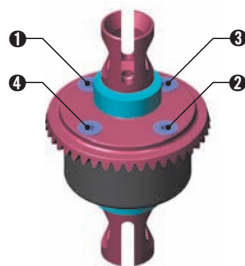
DIFFERENTIAL OIL

REAR DIFF	39.94g + 2.36g	= 42.30g
FRONT DIFF	39.94g + 2.58g	= 42.52g

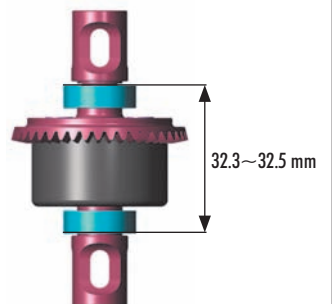
Tighten the screws equally



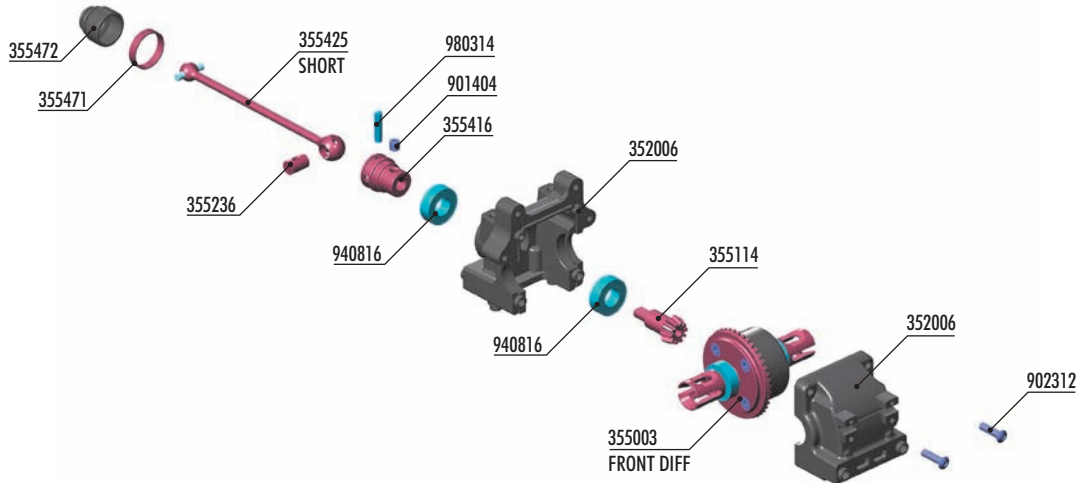
Finish tightening in this order



After assembly the differentials should have a length of 32.3~32.5 mm measured from the ends of the installed ball-bearings. If differentials are longer, retighten the 4 screws holding the crown gears.



2. FRONT TRANSMISSION



BAG

02

35 2006	DIFF BULKHEAD BLOCK SET FRONT/REAR	35 5472	DRIVE SHAFT BOOT (2)
35 5003	FRONT/REAR DIFFERENTIAL 46T - SET	90 1404	HEX SCREW SB M4x4 (10)
35 5114	BEVEL DRIVE GEAR 14T	90 2312	HEX SCREW SH M3x12 (10)
35 5236	CVD DRIVE SHAFT COUPLING - HUDY SPRING STEEL™	94 0816	HIGH-SPEED BALL-BEARING 8x16x5 RUBBER SEALED (2)
35 5416	CENTRAL CVD SHAFT UNIVERSAL JOINT - HUDY SPRING STEEL™	98 0314	PIN 3x14 (10)
35 5425	FRONT CENTRAL CVD DRIVE SHAFT - HUDY SPRING STEEL™		
35 5471	DRIVE SHAFT LOCKING RING (2)		



901404
SB M4x4



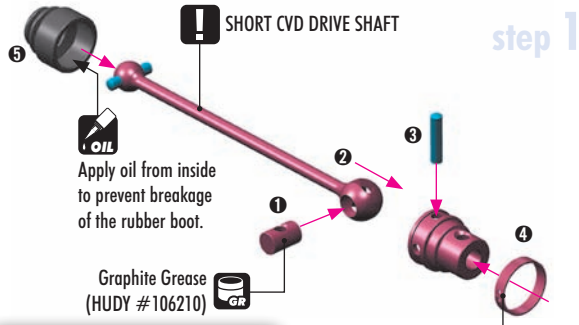
902312
SH M3x12



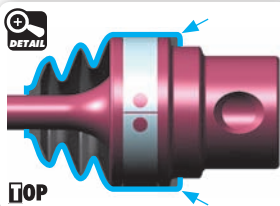
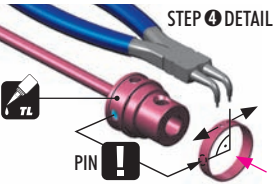
940816
BB 8x16x5



980314
P 3x14



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



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

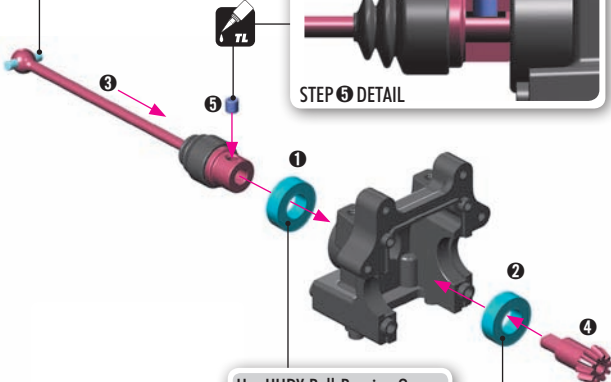
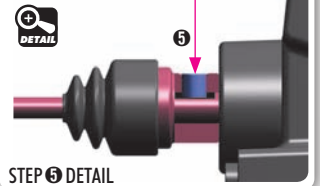
AFTER inserting the clip on the central CVD shaft joint, turn the clip so that the slot is 90° from the pin. This will prevent the pin from opening the clip.

step 1

step 2

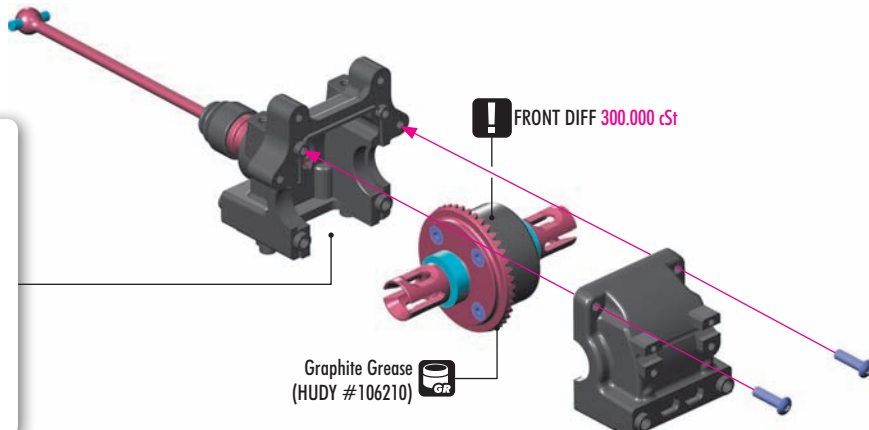
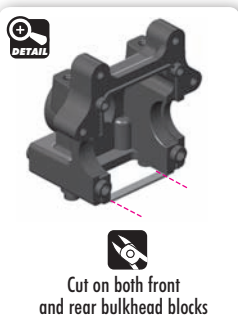
TIP Follow the TECH TIP on page 5 for drive shaft pin servicing

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

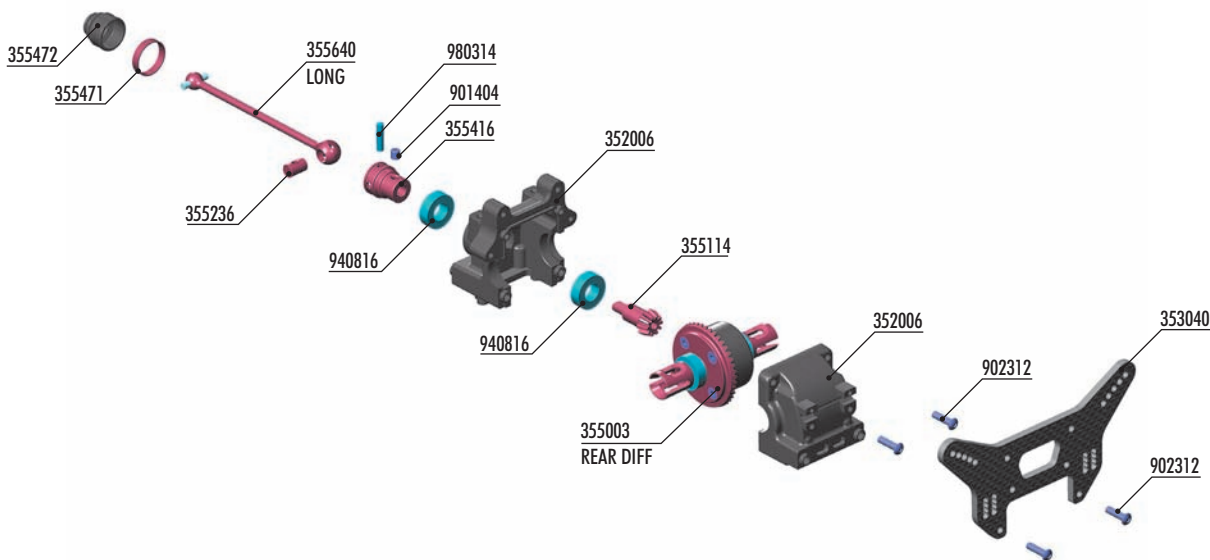


Use HUDY Ball-Bearing Grease
#106220 - STANDARD
#106221 - BLUE
#106222 - RED

step 3



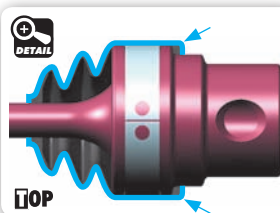
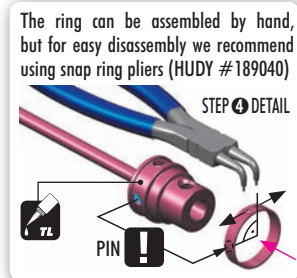
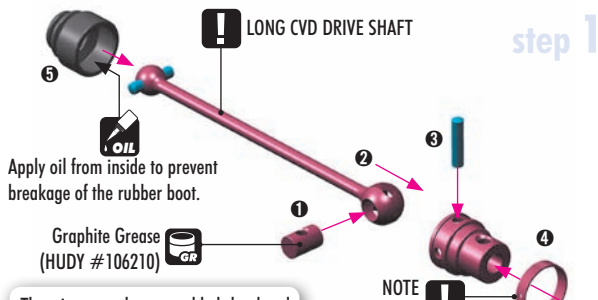
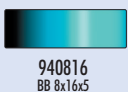
2. REAR TRANSMISSION



BAG

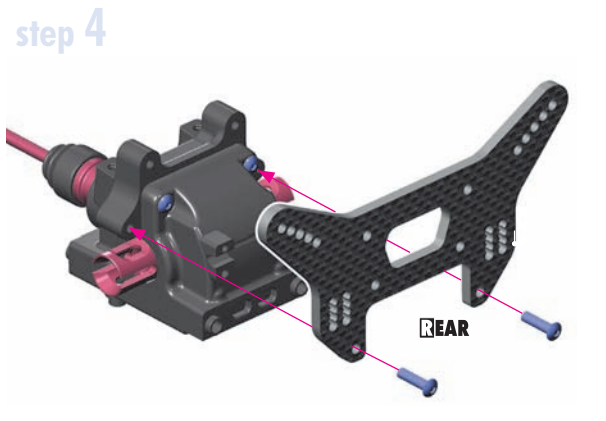
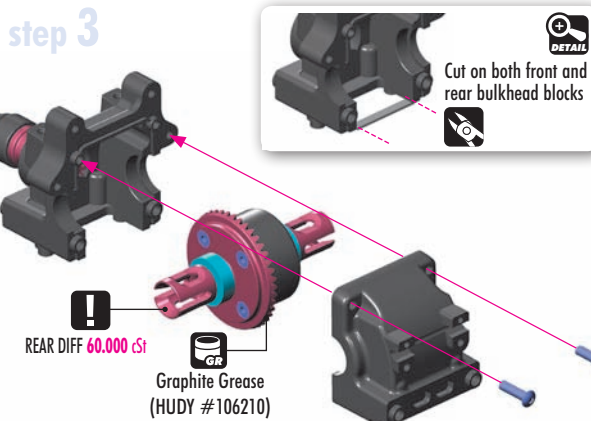
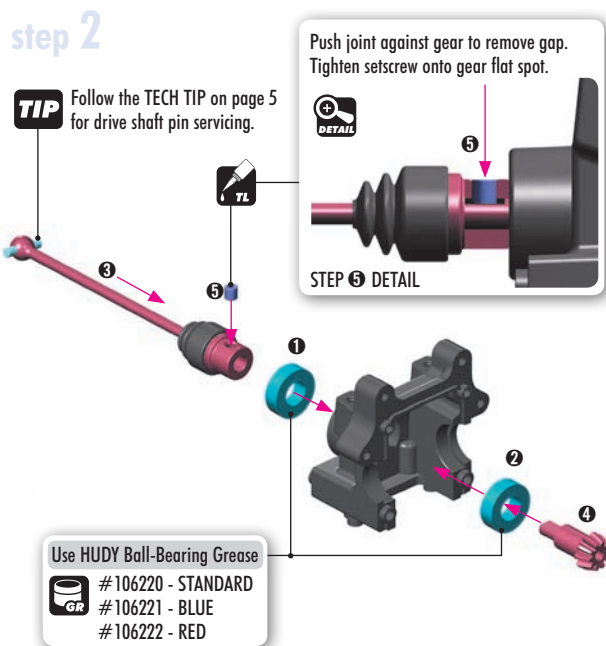
02

35 2006	DIFF BULKHEAD BLOCK SET FRONT/REAR	35 5471	DRIVE SHAFT LOCKING RING (2)
35 5003	FRONT/REAR DIFFERENTIAL 4GT - SET	35 5472	DRIVE SHAFT BOOT (2)
35 3040	GT GRAPHITE REAR SHOCK TOWER - CNC MACHINED 3.5 MM	90 1404	HEX SCREW SB M4x4 (10)
35 5114	BEVEL DRIVE GEAR 14T	90 2312	HEX SCREW SH M3x12 (10)
35 5236	CVD DRIVE SHAFT COUPLING - HUDY SPRING STEEL™	94 0816	HIGH-SPEED BALL-BEARING 8x16x5 RUBBER SEALED (2)
35 5416	CENTRAL CVD SHAFT UNIVERSAL JOINT - HUDY SPRING STEEL™	98 0314	PIN 3x14 (10)
35 5640	GT REAR CENTRAL CVD DRIVE SHAFT - HUDY SPRING STEEL™		






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







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

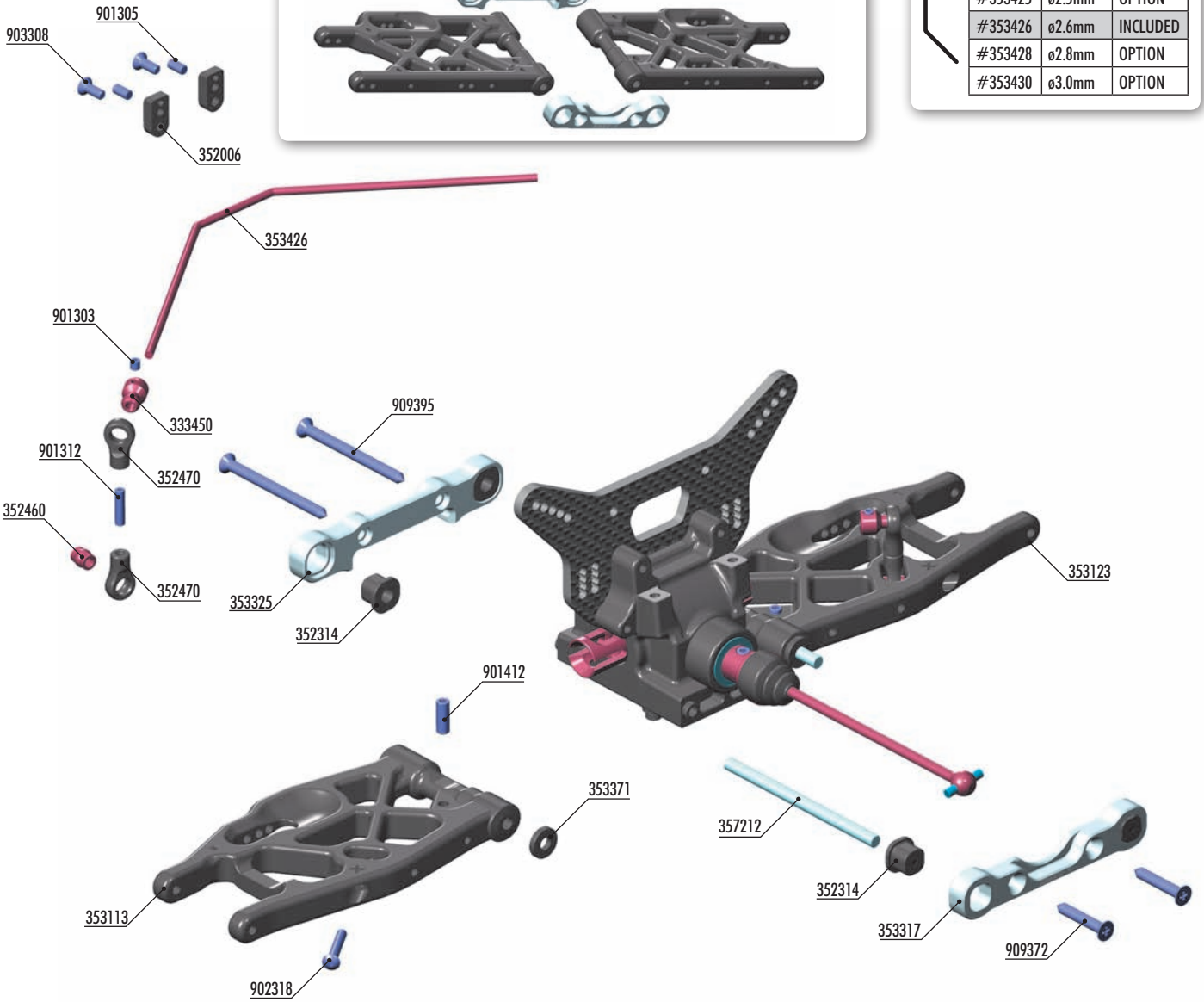



3. REAR SUSPENSION

-  #353115 COMPOSITE REAR LOWER SUSPENSION ARM
-  #353316 ALU REAR LOWER SUSP. HOLDER - FRONT - SQUARE ADJ. ROLL CENTER
-  #353327 ALU REAR LOWER SUSP. HOLDER - REAR - SQUARE ADJ. ROLL CENTER



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



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



BAG

03

- | | | | |
|---------|---|---------|-------------------------------|
| 33 3450 | ANTI-ROLL BAR BALL JOINT 5.8 MM (2) | 90 1303 | HEX SCREW SB M3x3 (10) |
| 35 2006 | DIFF BULKHEAD BLOCK SET FRONT/REAR | 90 1305 | HEX SCREW SB M3x5 (10) |
| 35 2314 | COMPOSITE ECCENTRIC BUSHINGS - V2 (2) | 90 1312 | HEX SCREW SB M3x12 (10) |
| 35 2460 | PIVOT BALL 5.8 (10) | 90 1412 | HEX SCREW SB M4x12 (10) |
| 35 2470 | BALL JOINT 5.8 (8) | 90 2318 | HEX SCREW SH M3x18 (10) |
| 35 3113 | COMPOSITE REAR LOWER SUSPENSION ARM - RIGHT | 90 3308 | HEX SCREW SFH M3x8 (10) |
| 35 3123 | COMPOSITE REAR LOWER SUSPENSION ARM - LEFT | 90 9372 | SCREW PHILLIPS SS 3.5x22 (10) |
| 35 3317 | ALU REAR LOWER SUSP. HOLDER - FRONT - SQUARE ADJ. ROLL CENTER | 90 9395 | SCREW PHILLIPS SS 3.5x45 (10) |
| 35 3325 | ALU REAR LOWER SUSP. HOLDER - REAR - SQUARE ADJ. ROLL CENTER | | |
| 35 3371 | SET OF COMPOSITE LOWER ARM SHIMS | | |
| 35 3426 | REAR ANTI-ROLL BAR 2.6MM | | |
| 35 7212 | LOWER INNER PIVOT PIN F+R (2) | | |

3. REAR SUSPENSION



353371
SHIM 4x10x2



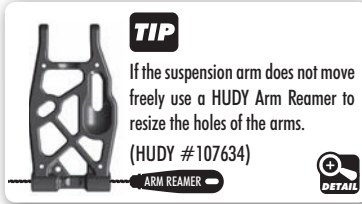
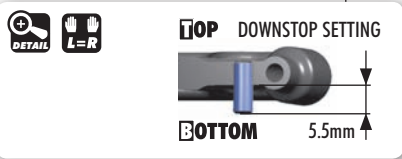
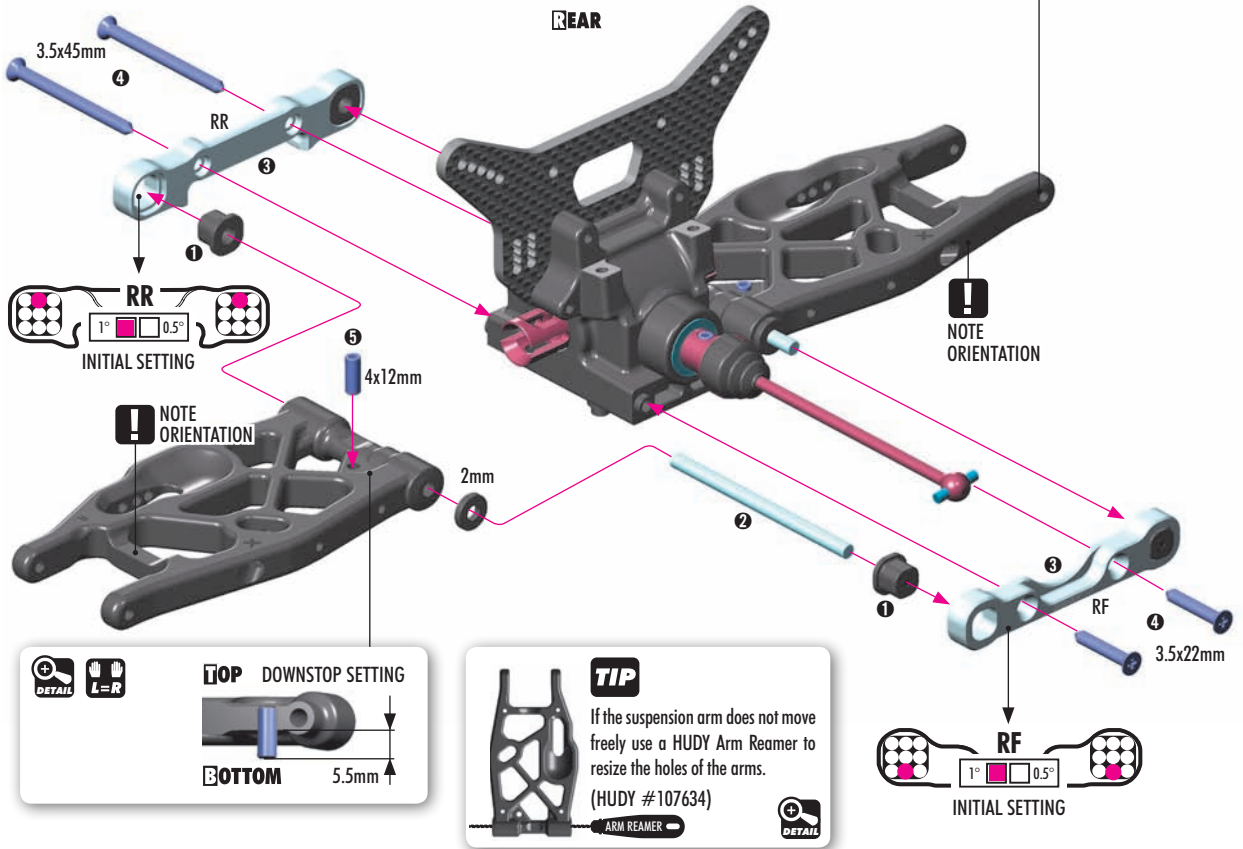
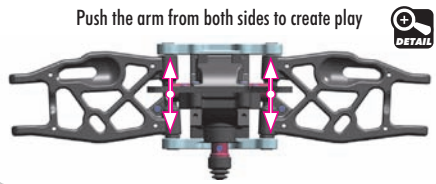
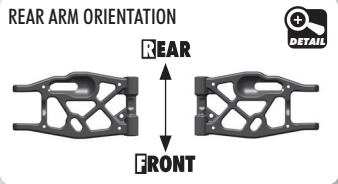
901412
SB M4x12



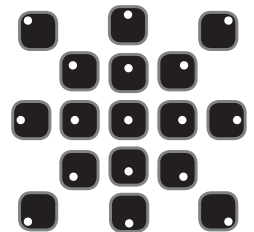
909372
SS 3.5x22



909395
SS 3.5x45



All possible mounting alternatives of eccentric bushings



ECCENTRIC BUSHINGS HAVE TWO DIFFERENT OFFSETS FROM THE CENTER.

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

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).

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

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

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

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

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

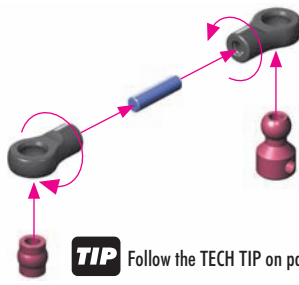
Example: 0(RR) - 0 (RF) = 3° = 3°
 0(RR) - 0.5 (RF) = 3.5° = 3.5°
 0(RR) - 1 (RF) = 4° = 4°

3. REAR SUSPENSION

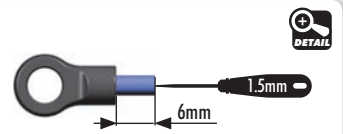


901312
SB M3x12

2x
L=R



TIP Follow the TECH TIP on page 5 to install the pivot balls



DETAIL



901303
SB M3x3



901305
SB M3x5

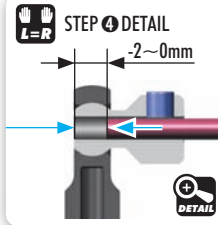


902318
SFH M3x18



903308
SFH M3x8

L=R

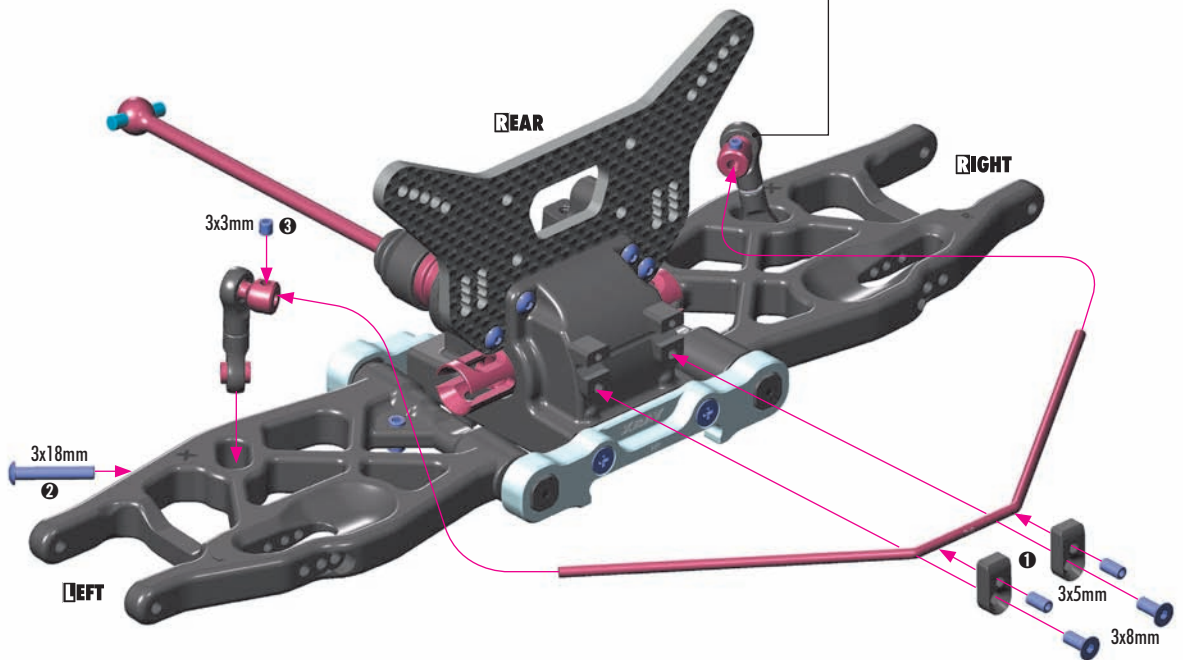


L=R

STEP 4 DETAIL

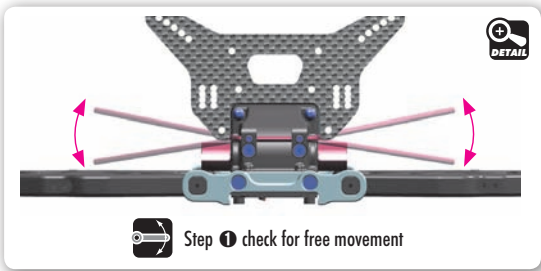
-2~0mm

DETAIL



SET-UP BOOK
ANTI-ROLL BAR

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

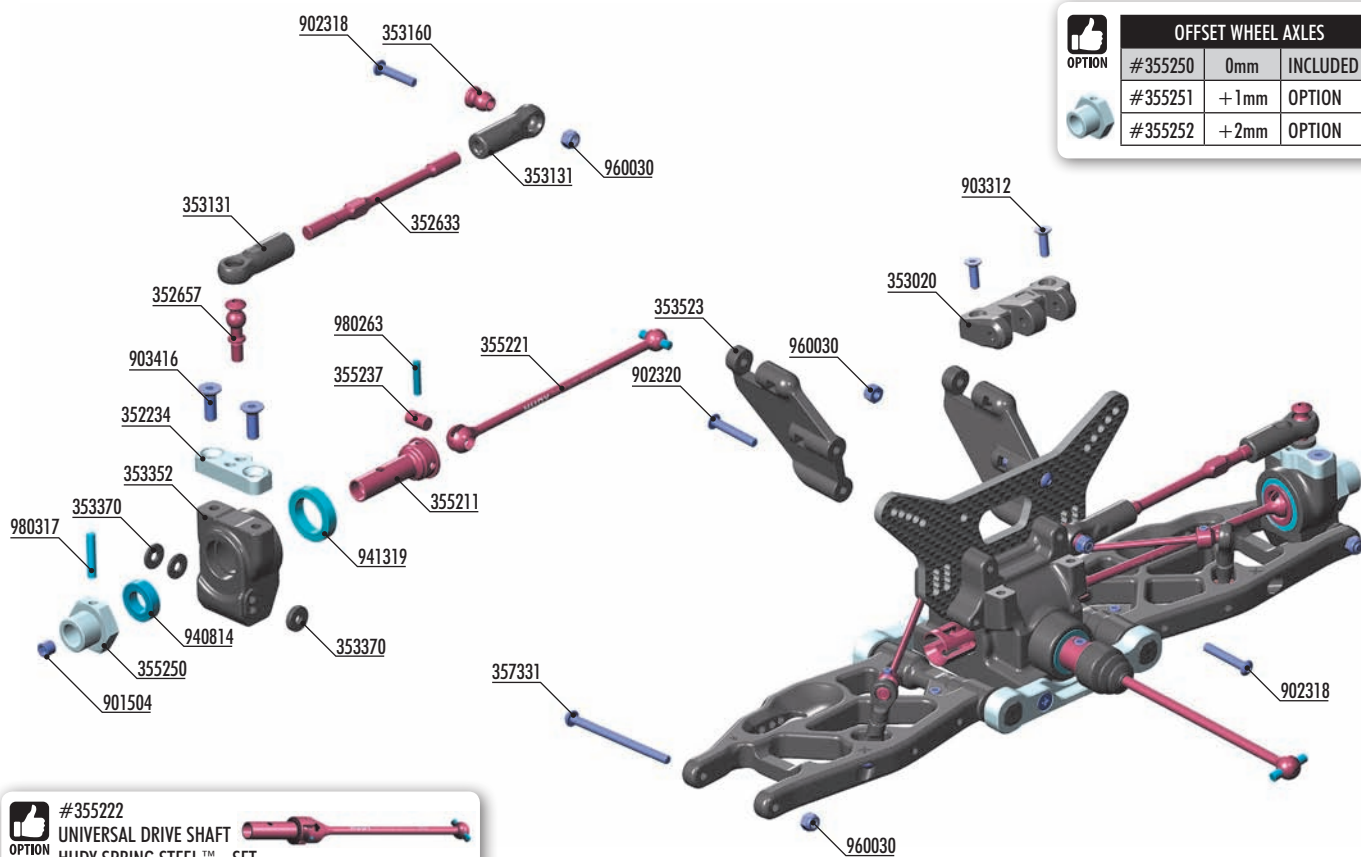


Step 1 check for free movement



Step 1 Loosen the 3x5 setscrew if the anti-roll bar does not turn freely

4. REAR SUSPENSION



OFFSET WHEEL AXLES			
	#355250	0mm	INCLUDED
	#355251	+1mm	OPTION
	#355252	+2mm	OPTION

#355222
OPTION UNIVERSAL DRIVE SHAFT
HUDY SPRING STEEL™ - SET

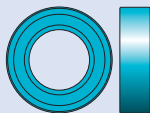
BAG

04

- | | | | |
|---------|---|---------|--|
| 35 2234 | ALU REAR HUB MOUNTING PLATE - SWISS 7075 T6 | 35 7331 | REAR LOWER OUTER PIVOT PIN SCREW 3MM (2) |
| 35 2633 | ADJ. TURNBUCKLE M5 L/R 72 MM - HUDY SPRING STEEL™ (2) | 90 1504 | HEX SCREW SB M5x4 (10) |
| 35 2657 | BALL STUD 6.8MM WITH BACKSTOP L=8MM - M4x6 (2) | 90 2318 | HEX SCREW SH M3x18 (10) |
| 35 3020 | COMPOSITE REAR BRACE HOLDER | 90 2320 | HEX SCREW SH M3x20 (10) |
| 35 3131 | REAR UPPER INNER CAMBER LINK BALL JOINT - V3 (2) | 90 3312 | HEX SCREW SH M3x12 (10) |
| 35 3160 | MOUNTING BALL 6.8 (4) | 90 3416 | HEX SCREW SH M4x16 (10) |
| 35 3352 | COMPOSITE REAR UPRIGHT | 94 0814 | HIGH-SPEED BALL-BEARING 8x14x4 BLUE COVERED (2) |
| 35 3370 | SET OF COMPOSITE REAR HUB CARRIER SHIMS | 94 1319 | HIGH-SPEED BALL-BEARING 13x19x4 BLUE COVERED (2) |
| 35 3523 | GT COMPOSITE REAR HOLDER POST (2) | 96 0030 | NUT M3 (10) |
| 35 5211 | CVD DRIVE AXLE - HUDY SPRING STEEL™ | 98 0263 | PIN 2.5x13 (10) |
| 35 5221 | CVD UNIVERSAL DRIVE SHAFT - HUDY SPRING STEEL™ | 98 0317 | PIN 3x17 (10) |
| 35 5237 | CVD DRIVE SHAFT COUPLING - HUDY SPRING STEEL™ | | |
| 35 5250 | ALU WHEEL AXLE - BLACK COATED (2) | | |



941319
BB 13x19x4



940814
BB 8x14x4



980317
P 3x17



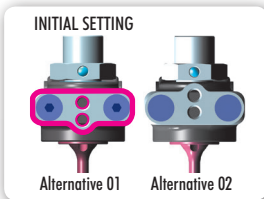
901504
SB M5x4

960030
N M3

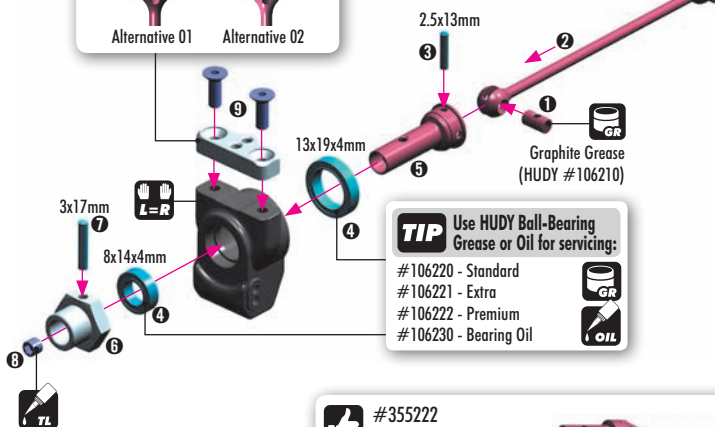
980263
P 2.5x13

903416
SFH M4x16

2x



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



#355222
OPTION UNIVERSAL DRIVE SHAFT
HUDY SPRING STEEL™ - SET



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

OFFSET WHEEL AXLES			
	#355250	0mm	INCLUDED
	#355251	+1mm	OPTION
	#355252	+2mm	OPTION

4. REAR SUSPENSION



353370
SHIM 3x9x1



353370
SHIM 3x9x2

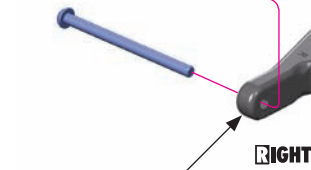
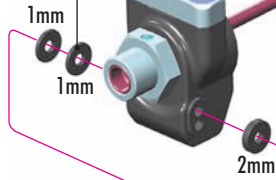


960030
N M3

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 for wheelbase adjustment



RIGHT

REAR

LEFT

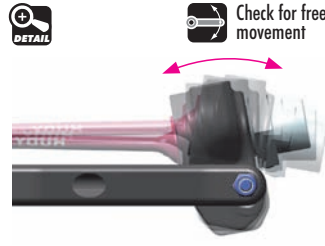
Do not overtighten the self-locking nut. Overtightening may result in suspension binding.



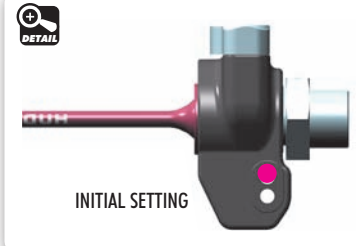
TIP If the suspension arm does not move freely use a HUDY Arm Reamer to resize the holes of the arms.

(HUDY #107633)

ARM REAMER



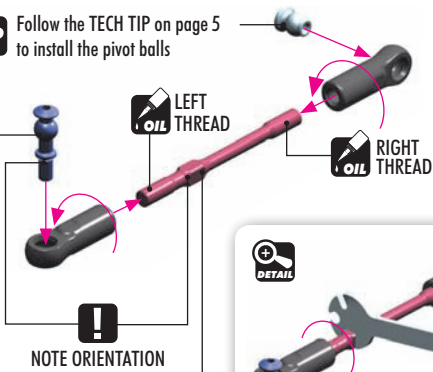
Check for free movement



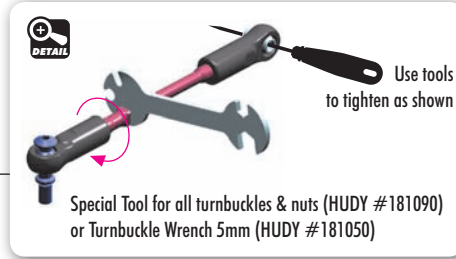
INITIAL SETTING

2x L=R

TIP Follow the TECH TIP on page 5 to install the pivot balls

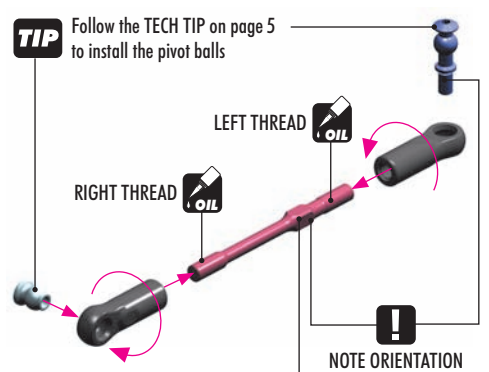


NOTE ORIENTATION



Use tools to tighten as shown
Special Tool for all turnbuckles & nuts (HUDY #181090) or Turnbuckle Wrench 5mm (HUDY #181050)

TIP Follow the TECH TIP on page 5 to install the pivot balls



NOTE ORIENTATION



Left thread

RIGHT

Right thread

Right thread

LEFT

Left thread

43.5 mm

43.5 mm

SET-UP BOOK

CAMBER

4. REAR SUSPENSION

902318
SH M3x18

960030
N M3

2x

OPTION Optional shims can be used for roll center adjustment.

#353380 - Alu shim 4x7.5x1mm

#353381 - Alu shim 4x7.5x2mm

DETAIL

INITIAL SETTING

353380
SHIM 4x7.5x1

353381
SHIM 4x7.5x2

RIGHT

INITIAL SETTING

903312
SFH M3x12

2x

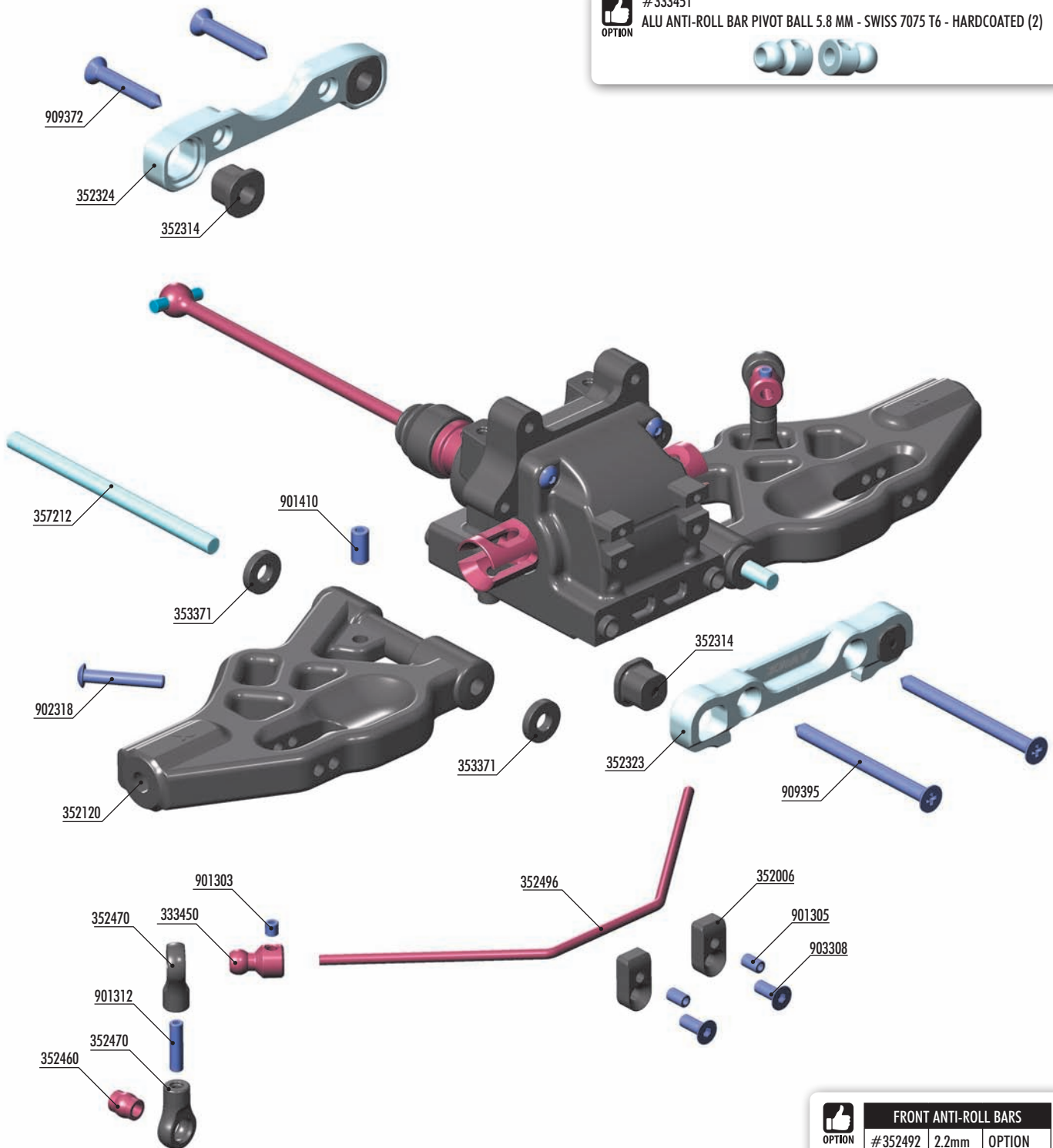
902318
SH M3x18


902320
SH M3x20

960030
N M3

5. FRONT SUSPENSION

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

FRONT ANTI-ROLL BARS			
	#352492	2.2mm	OPTION
	#352493	2.3mm	OPTION
	#352494	2.4mm	OPTION
	#352495	2.5mm	OPTION
	#352496	2.6mm	INCLUDED

BAG

OS

- | | | | |
|---------|---|---------|---------------------------------|
| 33 3450 | ANTI-ROLL BAR BALL JOINT 5.8 MM (2) | 35 7212 | LOWER INNER PIVOT PIN F + R (2) |
| 35 2006 | DIFF BULKHEAD BLOCK SET FRONT/REAR | 90 1303 | HEX SCREW SB M3x3 (10) |
| 35 2120 | COMPOSITE FRONT LOWER SUSPENSION ARM | 90 1305 | HEX SCREW SB M3x5 (10) |
| 35 2314 | COMPOSITE SQUARE ADJ. ROLL CENTER BUSHINGS - V2 (2) | 90 1312 | HEX SCREW SB M3x12 (10) |
| 35 2323 | ALU FRONT LOWER SUSP. HOLDER - FRONT - SQUARE ADJ. ROLL CENTER - V2 | 90 1410 | HEX SCREW SB M4x10 (10) |
| 35 2324 | ALU FRONT LOWER SUSP. HOLDER - REAR - SQUARE ADJ. ROLL CENTER - V2 | 90 2318 | HEX SCREW SH M3x18 (10) |
| 35 2460 | PIVOT BALL 5.8 (10) | 90 2318 | HEX SCREW SH M3x18 (10) |
| 35 2470 | BALL JOINT 5.8 (8) | 90 3308 | HEX SCREW SFH M3x8 (10) |
| 35 2470 | BALL JOINT 5.8 (8) | 90 9372 | SCREW PHILLIPS SS 3.5x22 (10) |
| 35 2496 | FRONT ANTI-ROLL BAR 2.6MM | 90 9395 | SCREW PHILLIPS SS 3.5x45 (10) |
| 35 3371 | SET OF COMPOSITE LOWER ARM SHIMS | | |

5. FRONT SUSPENSION



353371
SHIM 4x10x2



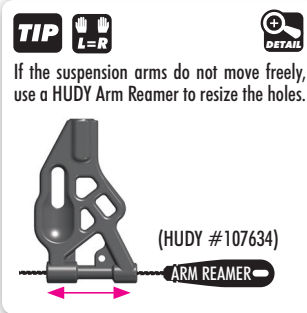
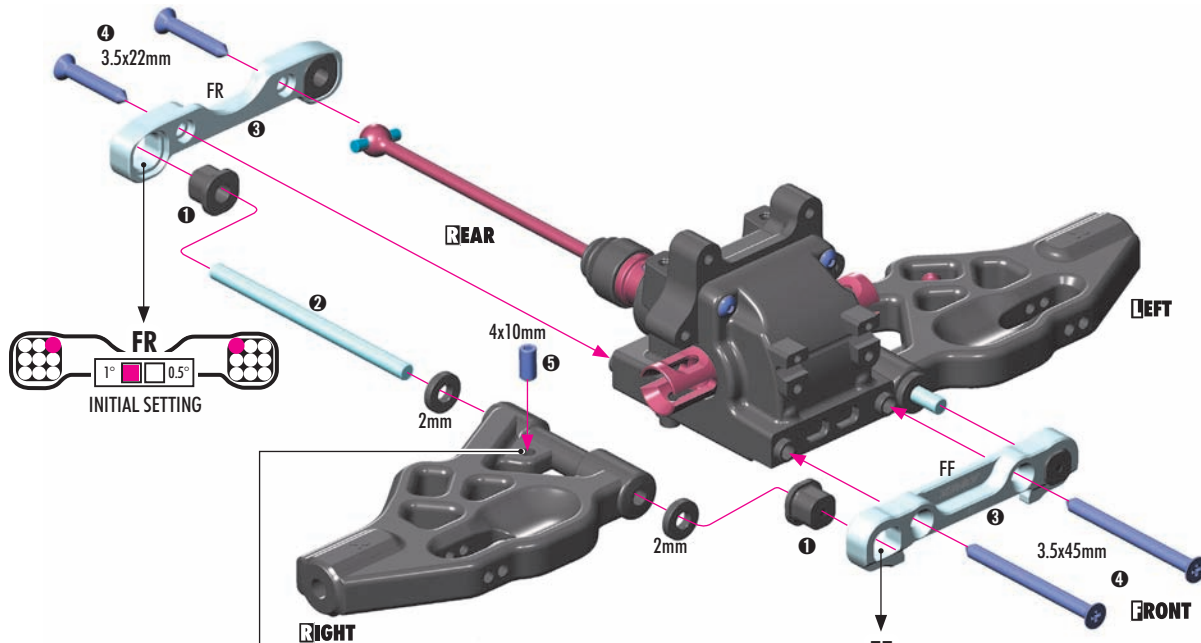
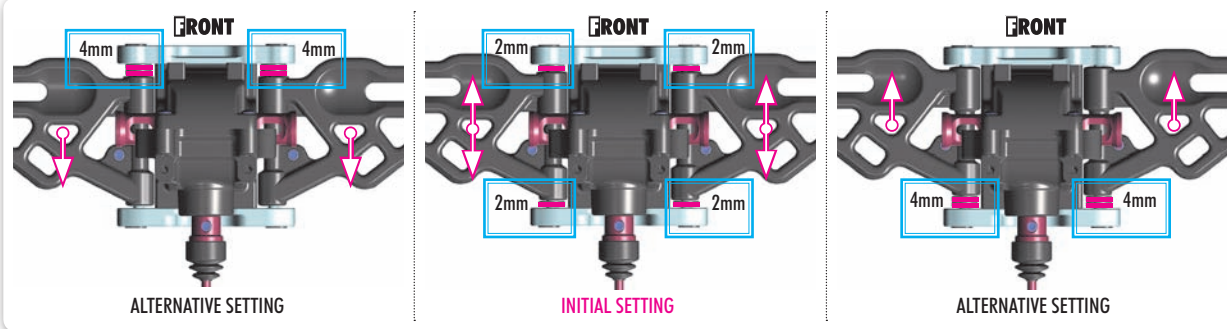
901410
SB M4x10



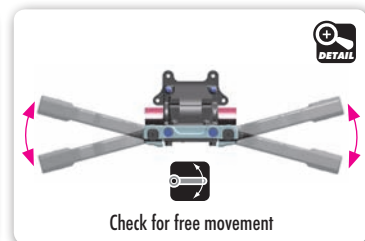
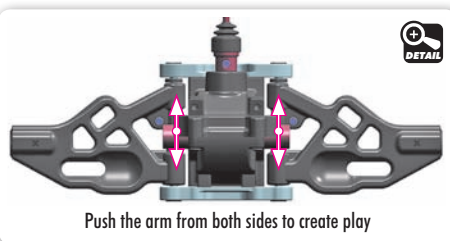
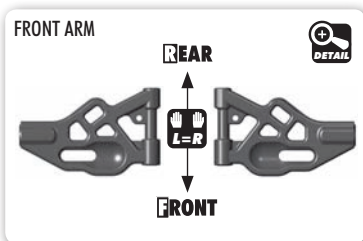
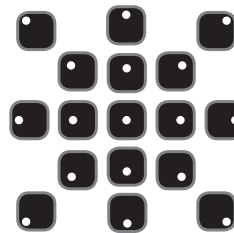
909372
SS 3.5x22



909395
SS 3.5x45



All possible mounting alternatives of eccentric bushings



Eccentric bushings have two different offsets from the center.

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

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)
[Diagram]	[Diagram]	=308
[Diagram]	[Diagram]	=306
[Diagram]	[Diagram]	=310

ROLL CENTER		
FF	FR	(mm)
[Diagram]	[Diagram]	=1
[Diagram]	[Diagram]	=0
[Diagram]	[Diagram]	=-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.

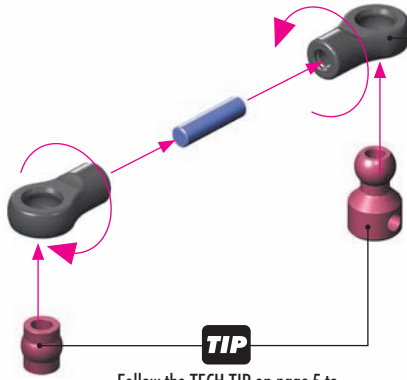
SET-UP BOOK
KICK UP
ROLL CENTER DOWNSTOP
WHEELBASE
TRACK WIDTH

5. FRONT SUSPENSION



901312
SB M3x12

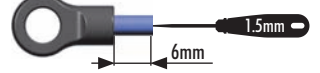
2x L=R



TIP

Follow the TECH TIP on page 5 to install the pivot balls

DETAIL



901303
SB M3x3



901305
SB M3x5

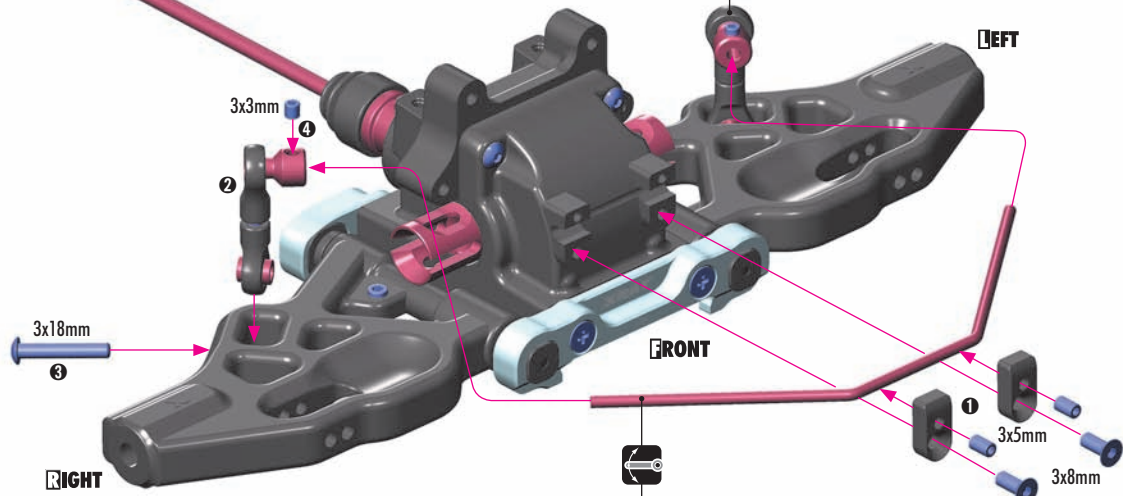


902318
SH M3x18



903308
SFH M3x8

REAR



STEP 4 DETAIL L=R

-2~0mm

DETAIL

DETAIL

Step 1
Loosen the 3x5 setscrew if the anti-roll bar does not turn freely

DETAIL

Step 1 check for free movement



OPTION

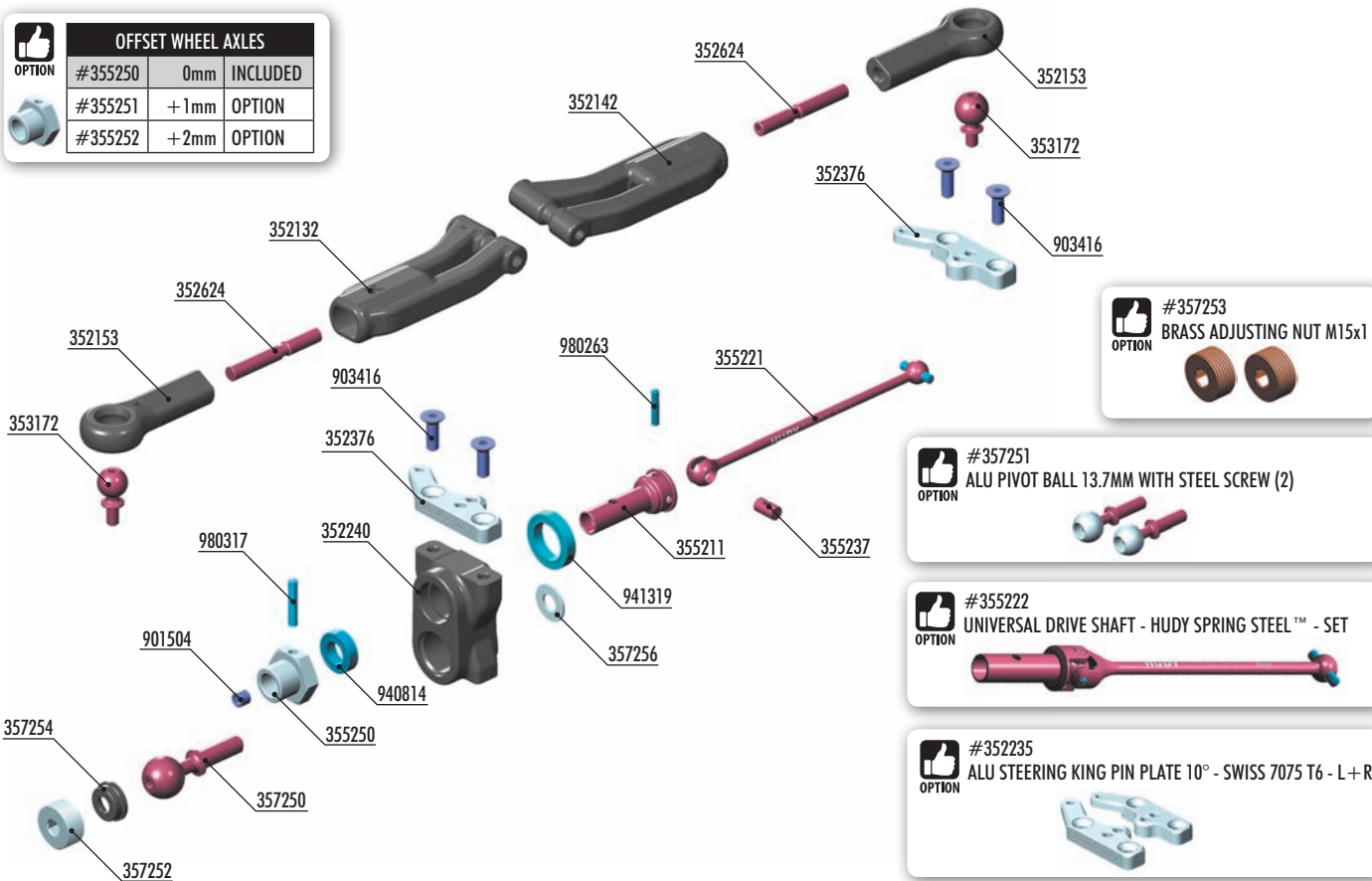
FRONT ANTI-ROLL BARS

#352492	2.2mm	OPTION
#352493	2.3mm	OPTION
#352494	2.4mm	OPTION
#352495	2.5mm	OPTION
#352496	2.6mm	INCLUDED

SET-UP BOOK
ANTI-ROLL BAR

6. FRONT SUSPENSION

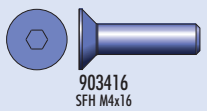
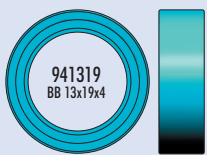
OPTION	#	Offset	Status
	#355250	0mm	INCLUDED
	#355251	+1mm	OPTION
	#355252	+2mm	OPTION



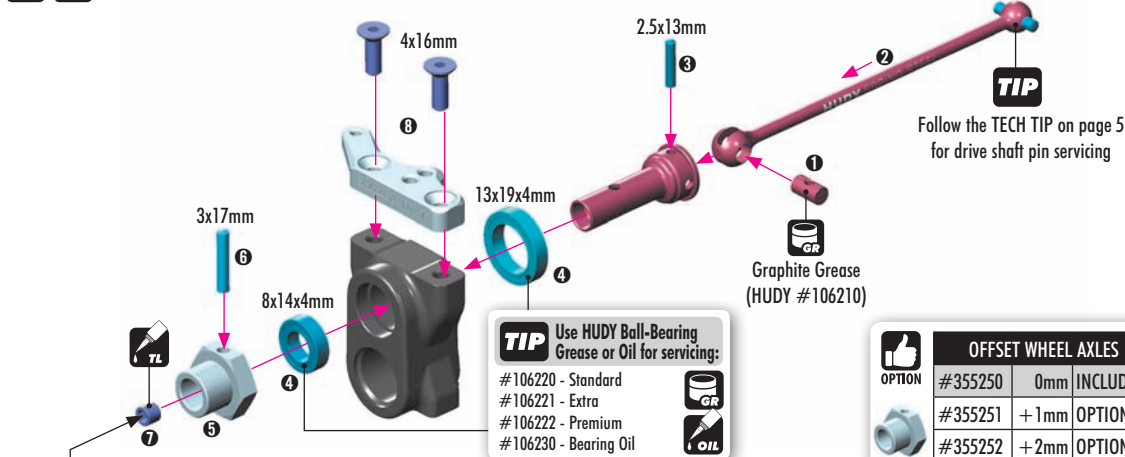
BAG

06

- | | | | |
|---------|--|---------|--|
| 35 2132 | FRONT UPPER ARM RIGHT | 35 7252 | ALU ADJUSTING NUT M15x1 (2) |
| 35 2142 | FRONT UPPER ARM LEFT | 35 7254 | COMPOSITE BALL CUP 13.9 MM (2) |
| 35 2153 | FRONT UPPER ARM BALL JOINT (L+R) | 35 7256 | ALU SHIM 6x13x1 (2) |
| 35 2240 | STEERING BLOCK | 90 1504 | HEX SCREW SB M5x4 (10) |
| 35 2376 | GT ALU STEERING KING PIN PLATE 0°-7° - SWISS 7075 T6 - L+R | 90 3416 | HEX SCREW SFH M4x16 (10) |
| 35 2624 | ADJ. TURNBUCKLE M5 L/R 38 MM - HUDY SPRING STEEL™ (2) | 94 0814 | HIGH-SPEED BALL-BEARING 8x14x4 BLUE COVERED (2) |
| 35 3172 | PIVOT BALL 11.0 (2) | 94 1319 | HIGH-SPEED BALL-BEARING 13x19x4 BLUE COVERED (2) |
| 35 5211 | CVD DRIVE AXLE - HUDY SPRING STEEL™ | 98 0263 | PIN 2.5x13 (10) |
| 35 5221 | CVD UNIVERSAL DRIVE SHAFT - HUDY SPRING STEEL™ | 98 0317 | PIN 3x17 (10) |
| 35 5237 | CVD DRIVE SHAFT COUPLING - HUDY SPRING STEEL™ | | |
| 35 5250 | ALU WHEEL AXLE - BLACK COATED (2) | | |
| 35 7250 | STEEL PIVOT BALL 13.7 MM (2) | | |



2x **L=R**



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

Graphite Grease (HUDY #106210)

TIP Use HUDY Ball-Bearing Grease or Oil for servicing:
 #106220 - Standard
 #106221 - Extra
 #106222 - Premium
 #106230 - Bearing Oil

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

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



6. FRONT SUSPENSION

2x **TIP** Tighten composite hex nuts using HUDY tool #107581

Apply WD40 to protect against rust

OPTION #357251 ALU PIVOT BALL 13.7MM WITH STEEL SCREW (2)

OPTION #357253 BRASS ADJUSTING NUT M15x1

DETAIL

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

357256 SHIM 6x13x1

2x

TIP HUDY Tool Allen 2.5mm

1mm

FRONT

SET-UP BOOK
CAMBER

2x **TIP** HUDY Tool Allen Ball 2.5mm

DETAIL 30mm

DETAIL 106mm

LEFT Marked (L) = Marked (L) **RIGHT** Marked (R) = Marked (R)

353380 SHIM 4x7.5x1

353381 SHIM 4x7.5x2

2x

Apply WD40 to protect against rust

OPTION Optional shims can be used for Roll Center adjustment.
#353380 - Alu shim 4x7.5x1mm
#353381 - Alu shim 4x7.5x2mm

LEFT

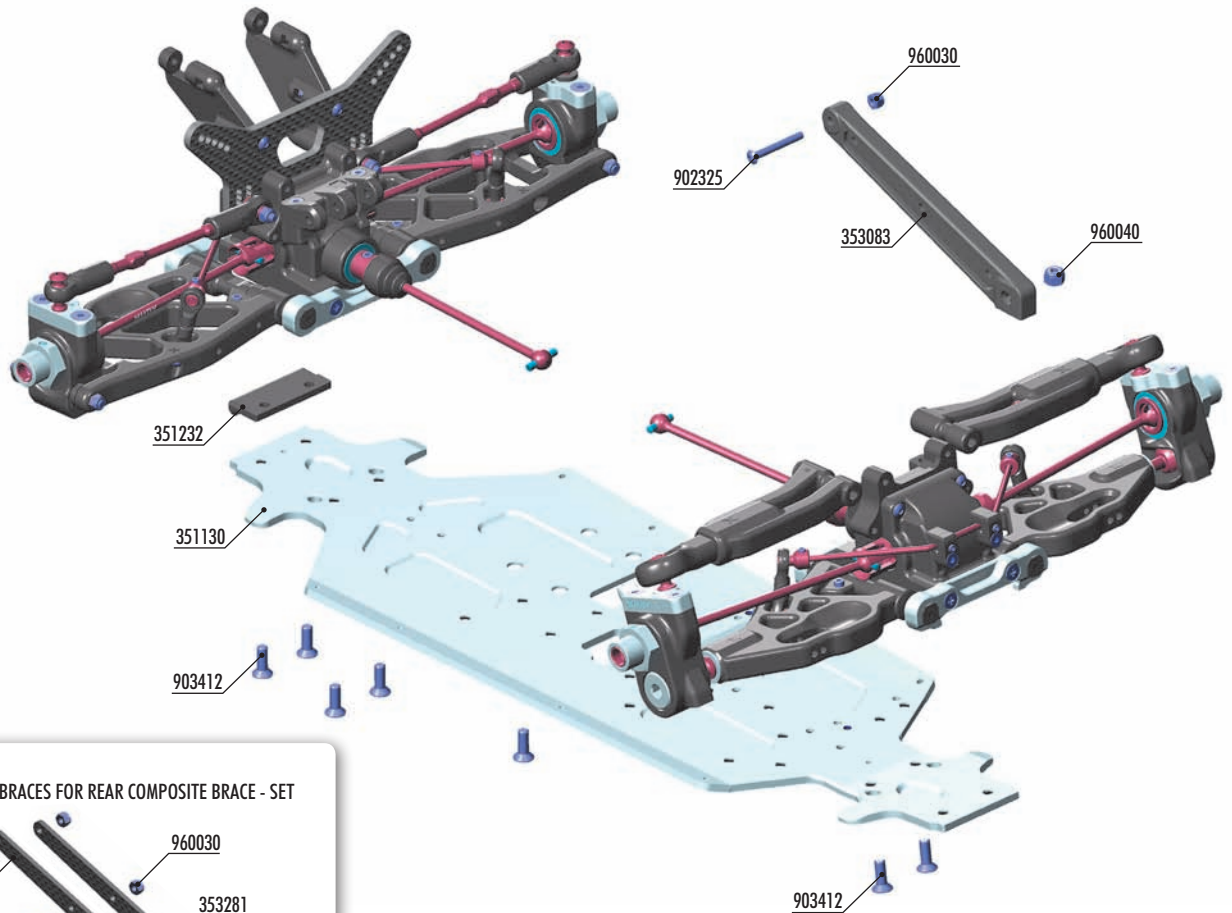
FRONT

RIGHT

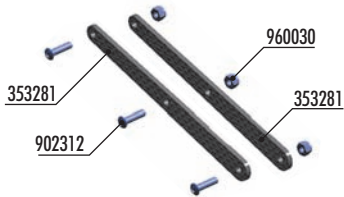
DETAIL **INITIAL SETTING**

SET-UP BOOK
ROLL CENTER

6. FRONT & REAR ASSEMBLY



#353281
GT GRAPHITE BRACES FOR REAR COMPOSITE BRACE - SET



BAG

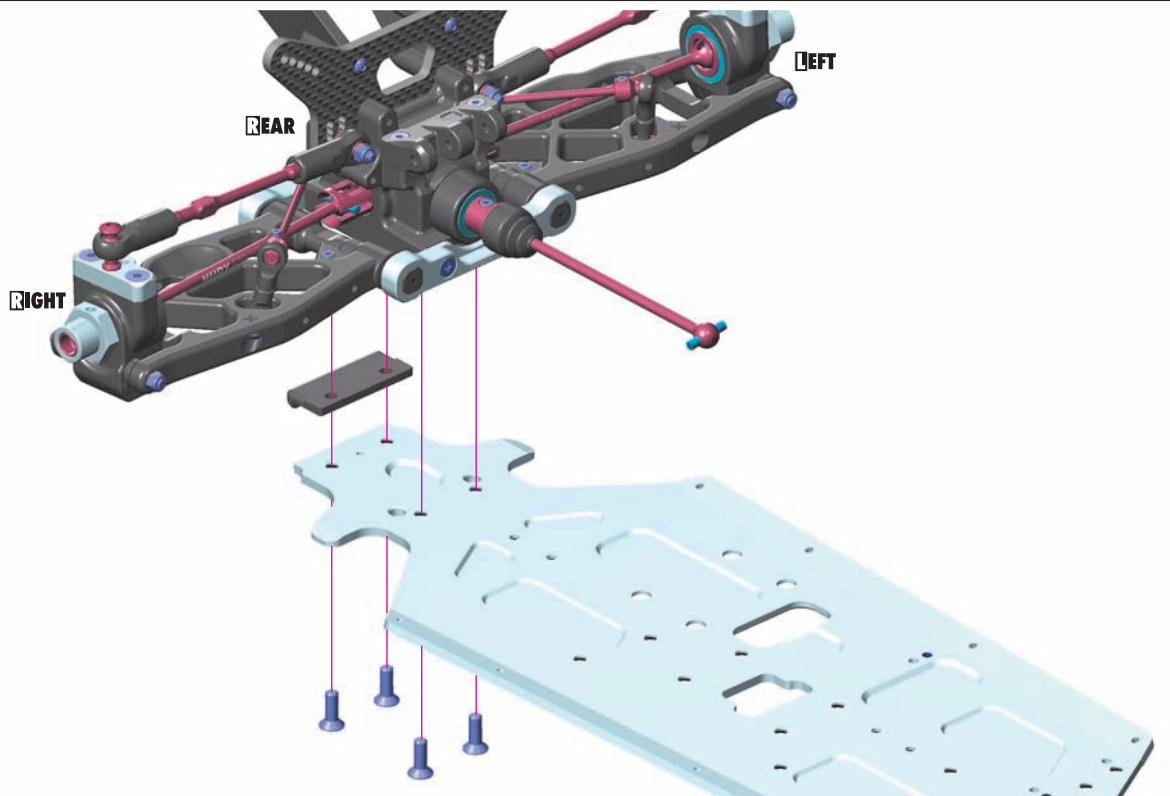
06

35 1130 GT ALU CHASSIS - SWISS 7075 T6 (3MM)
35 1232 GT COMPOSITE FRONT & REAR SUSPENSION HOLDER PLATE
35 3083 GT COMPOSITE REAR BRACE

90 2325 HEX SCREW SH M3x25 (10)
90 3412 HEX SCREW SFH M4x12 (10)
96 0030 NUT M3 (10)
96 0040 NUT M4 (10)



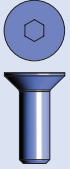
903412
SFH M4x12



6. FRONT & REAR ASSEMBLY



902325
SH M3x25



903412
SFH M4x12



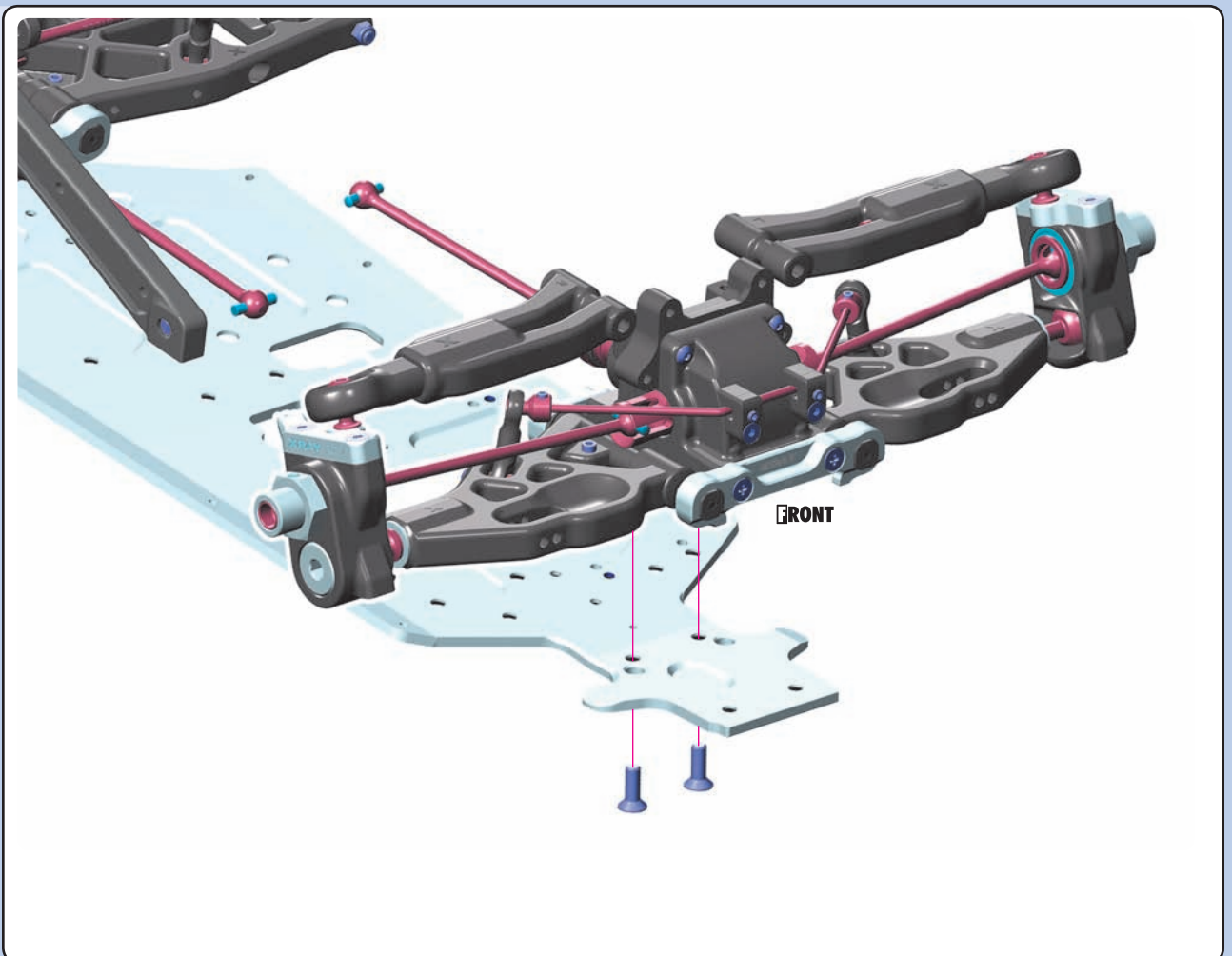
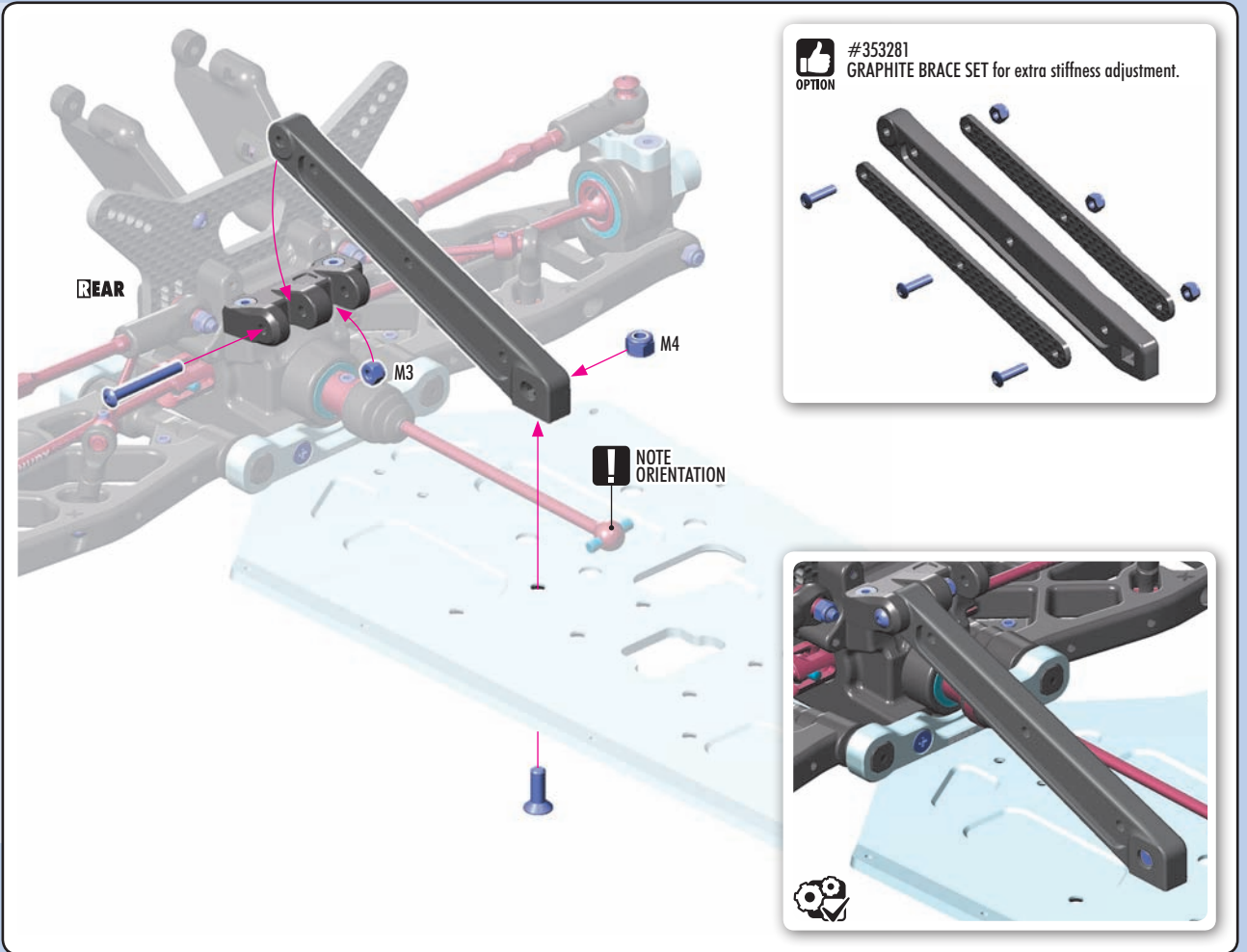
960030
N M3



960040
N M4



903412
SFH M4x12

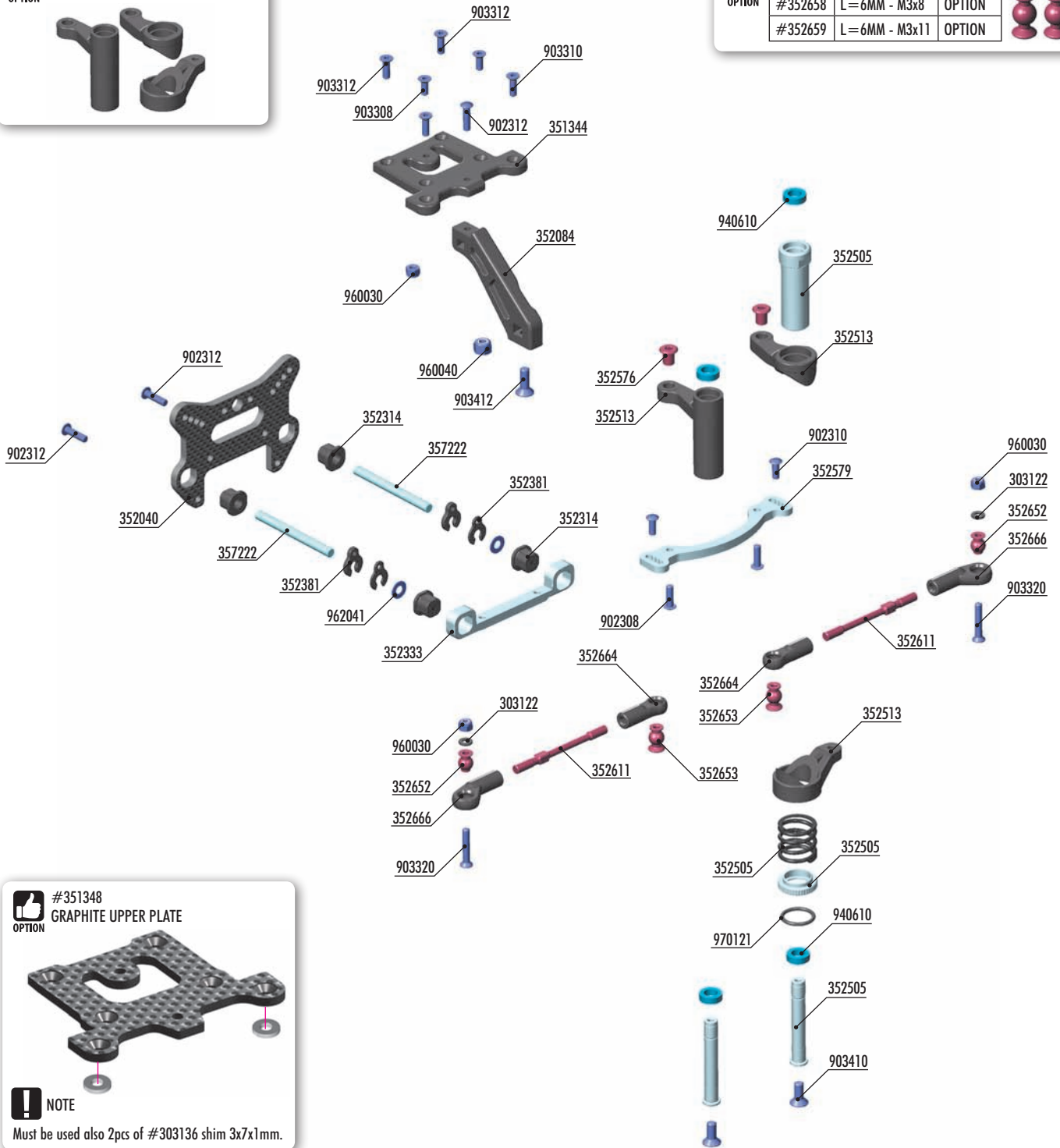


#352514
COMPOSITE SERVO SAVER - GRAPHITE

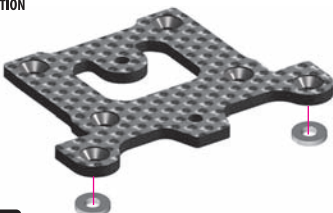


BALL STUD 6.8mm WITH BACKSTOP

#352658	L=6MM - M3x8	OPTION
#352659	L=6MM - M3x11	OPTION



#351348
GRAPHITE UPPER PLATE



NOTE
Must be used also 2pcs of #303136 shim 3x7x1mm.

BAG

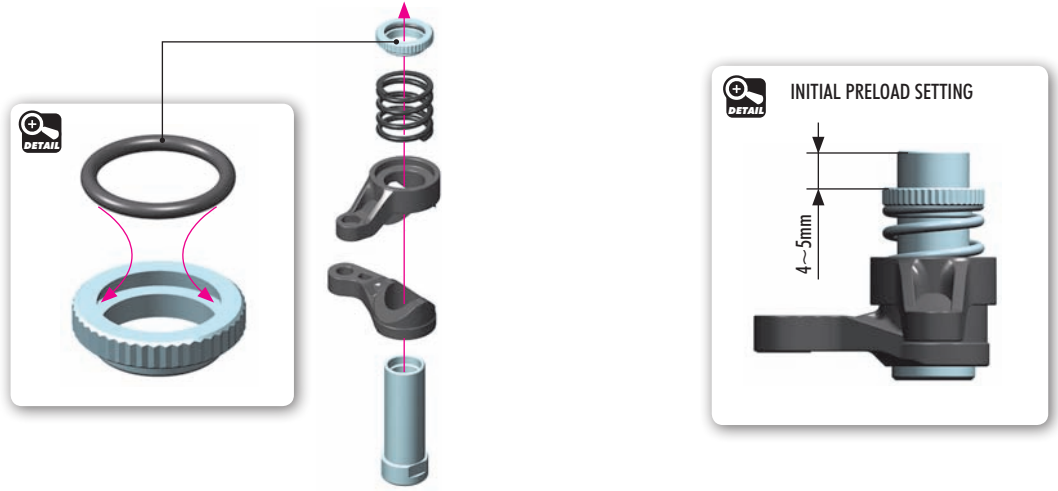
07

- | | | | |
|---------|---|---------|---|
| 30 3122 | ALU SHIM 3x6x1.0MM (10) | 90 2308 | HEX SCREW SH M3x8 (10) |
| 35 1344 | COMPOSITE UPPER PLATE | 90 2310 | HEX SCREW SH M3x10 (10) |
| 35 2040 | GT GRAPHITE FRONT SHOCK TOWER - CNC MACHINED 3.5 MM | 90 2312 | HEX SCREW SH M3x12 (10) |
| 35 2084 | COMPOSITE FRONT BRACE | 90 3308 | HEX SCREW SFH M3x8 (10) |
| 35 2314 | COMPOSITE SQUARE ADJ. ROLL CENTER BUSHINGS - V2 (2) | 90 3310 | HEX SCREW SFH M3x10 (10) |
| 35 2333 | ALU FRONT UPPER ARM HOLDER - SWISS 7075 T6 (6MM) | 90 3312 | HEX SCREW SFH M3x12 (10) |
| 35 2381 | CASTER CLIPS (2) | 90 3320 | HEX SCREW SFH M3x20 (10) |
| 35 2505 | SERVO SAVER COMPLETE SET | 90 3410 | HEX SCREW SFH M4x10 (10) |
| 35 2513 | COMPOSITE SERVO SAVER | 90 3412 | HEX SCREW SFH M4x12 (10) |
| 35 2576 | STEERING PLATE BUSHING (2) | 94 0610 | HIGH-SPEED BALL-BEARING 6x10x3 BLUE COVERED (2) |
| 35 2579 | ALU STEERING PLATE - SWISS 7075 T6 | 96 0030 | NUT M3 (10) |
| 35 2611 | ADJ. TURNBUCKLE M4 L/R 52.5 MM - HUDY SPRING STEEL™ (2) | 96 0040 | NUT M4 (10) |
| 35 2652 | BALL STUD 6.8MM (4) | 96 2041 | WASHER S 4x8x0.5 (10) |
| 35 2653 | BALL STUD 6.8MM WITH BACKSTOP - M3 (2) | 97 0121 | O-RING 12.1 x 1.6 (10) |
| 35 2664 | COMPOSITE STEERING BALL JOINT 6.8MM - V3 (2) | | |
| 35 2666 | COMPOSITE RELIEF STEERING BALL JOINT 6.8MM (2) | | |
| 35 7222 | FRONT UPPER PIVOT PIN 4x45 (2) | | |

7. STEERING



970121
O 12.1x1.6



SET-UP BOOK
SERVO SAVER

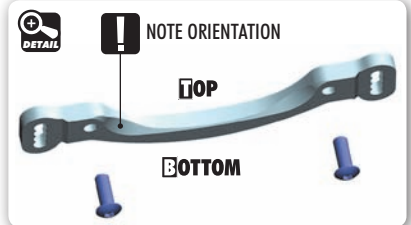
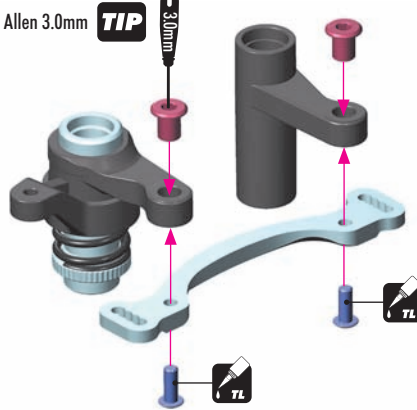


902308
SH M3x8

HUDY Tool Allen 3.0mm

TIP

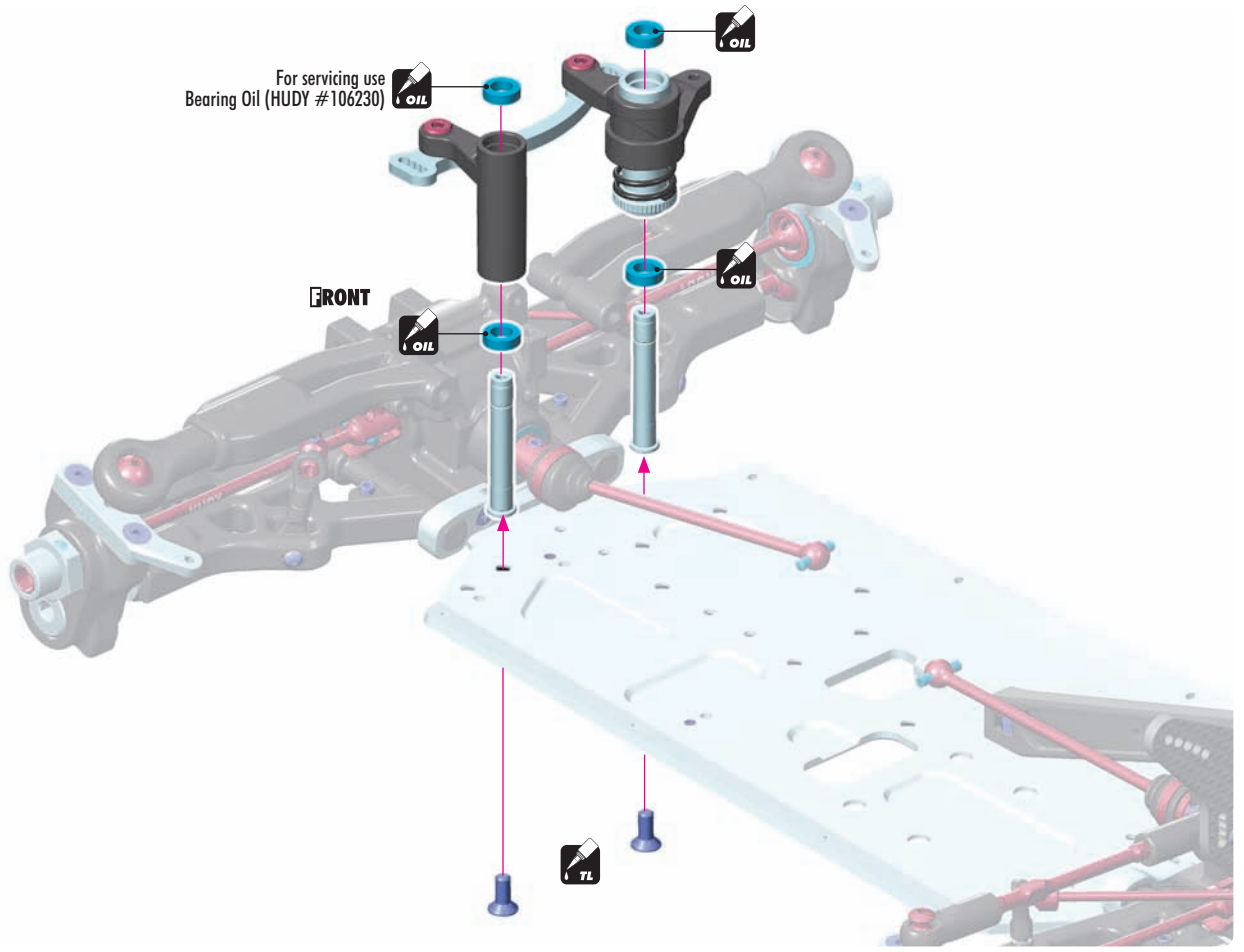
3.0mm



903410
SFH M4x10



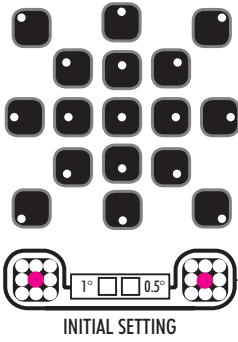
940610
BB 6x10x3



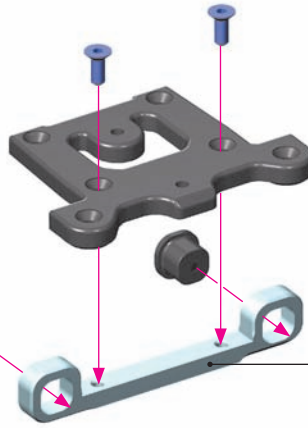


903308
SFH M3x8

All possible mounting
alternatives of eccentric bushings



INITIAL SETTING



**SET-UP
BOOK**
ROLL CENTER



902312
SH M3x12



903310
SFH M3x10



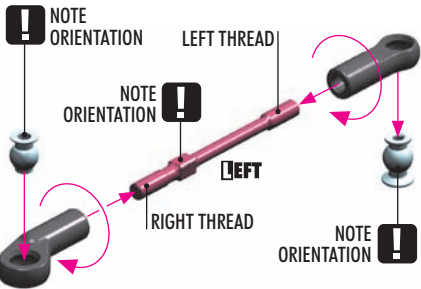
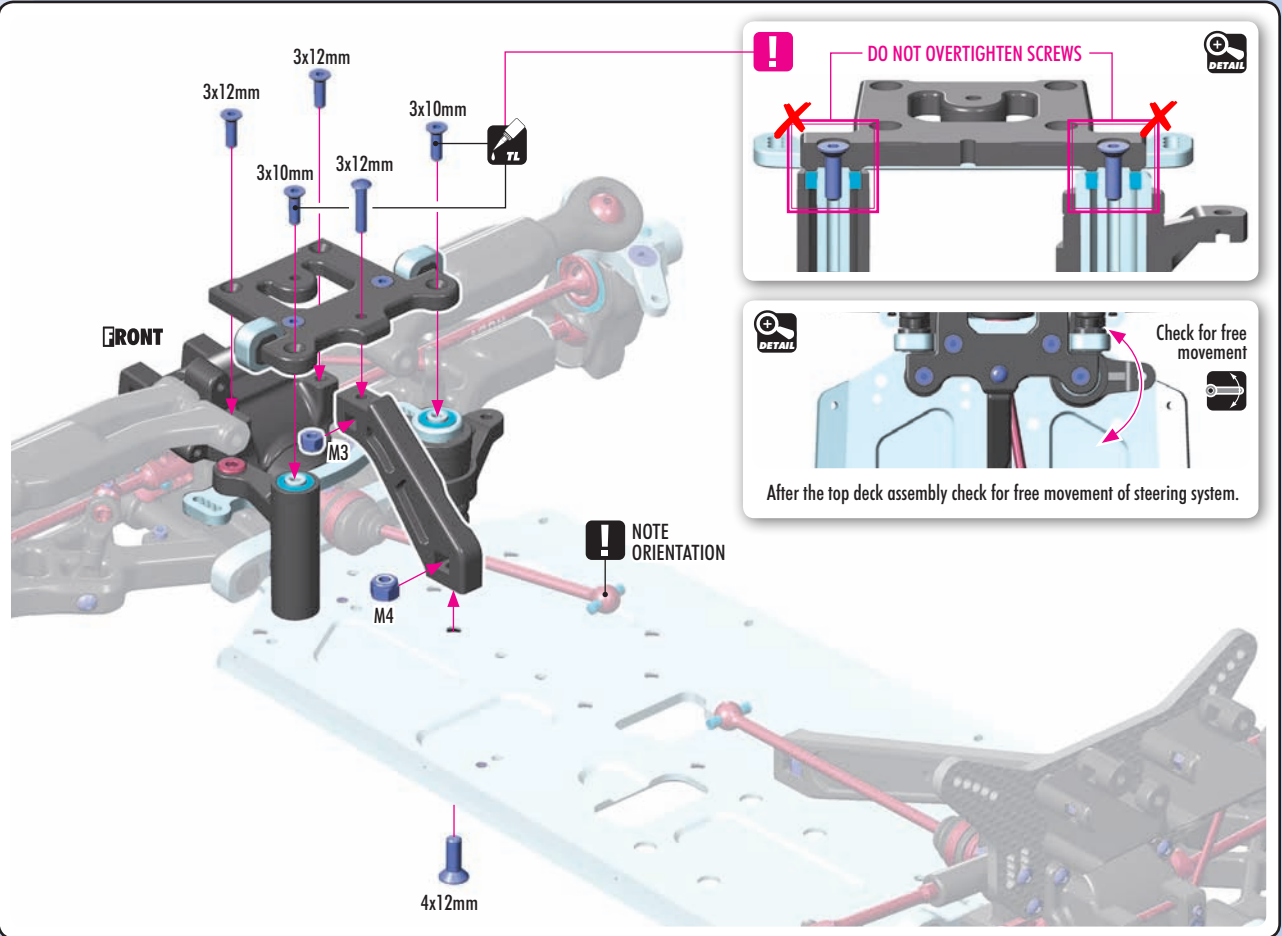
903312 SFH M3x12
903412 SFH M4x12



960030
N M3



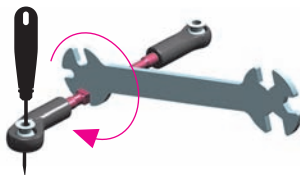
960040
N M4



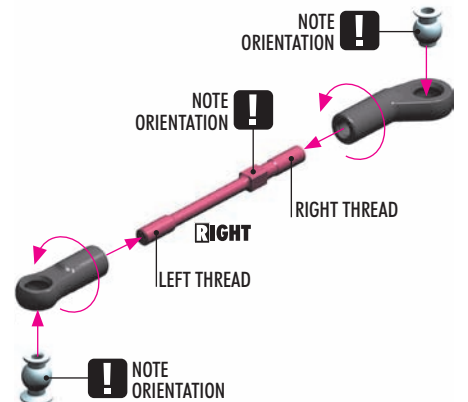
TIP Follow the TECH TIP on page 5 to install the pivot balls



TIP Use tools to tighten as shown



Special Tool for all turnbuckles & nuts:
(HUDY #181090)
or Turnbuckle Wrench 4mm:
(HUDY #181040)



7. STEERING



902312
SH M3x12



962041
SHIM 4x8x0.5

Caster shims
1.0mm + 2.0mm

LEFT

RIGHT

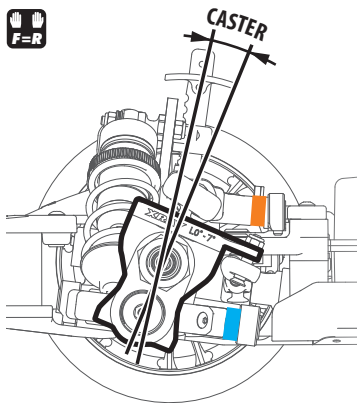
0.5mm
Clearance shim

INITIAL POSITION
1° 0.5°

All possible mounting alternatives of eccentric bushings

NOTE ORIENTATION

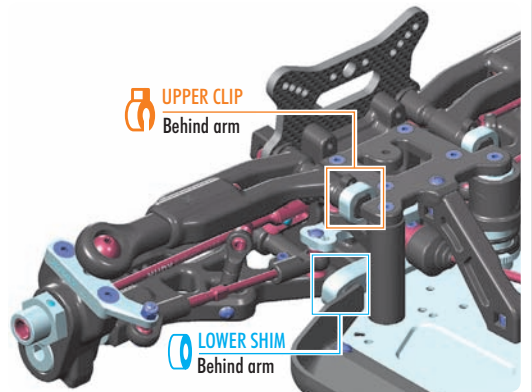
DETAIL
Cutaway view Shock Tower
NOTE ORIENTATION



UPPER CLIP (Behind arm)	CASTER		
	LOWER SHIM (Behind arm)		
	4mm	2mm	0
3mm	28°	25°	22°
2mm	29.5°	26.5°	23.5°
1mm	31°	28°	25°
0	32.5°	29.5°	26.5°

The clearance shim 0.5mm can be installed anywhere and will not affect caster.

UPPER CLIP
Behind arm



SET-UP BOOK

ROLL CENTER
CASTER



303122
SHIM 3x6x1



902310
SH M3x10



960030
N M3

2x L=R

FRONT

INITIAL POSITION

1.0mm

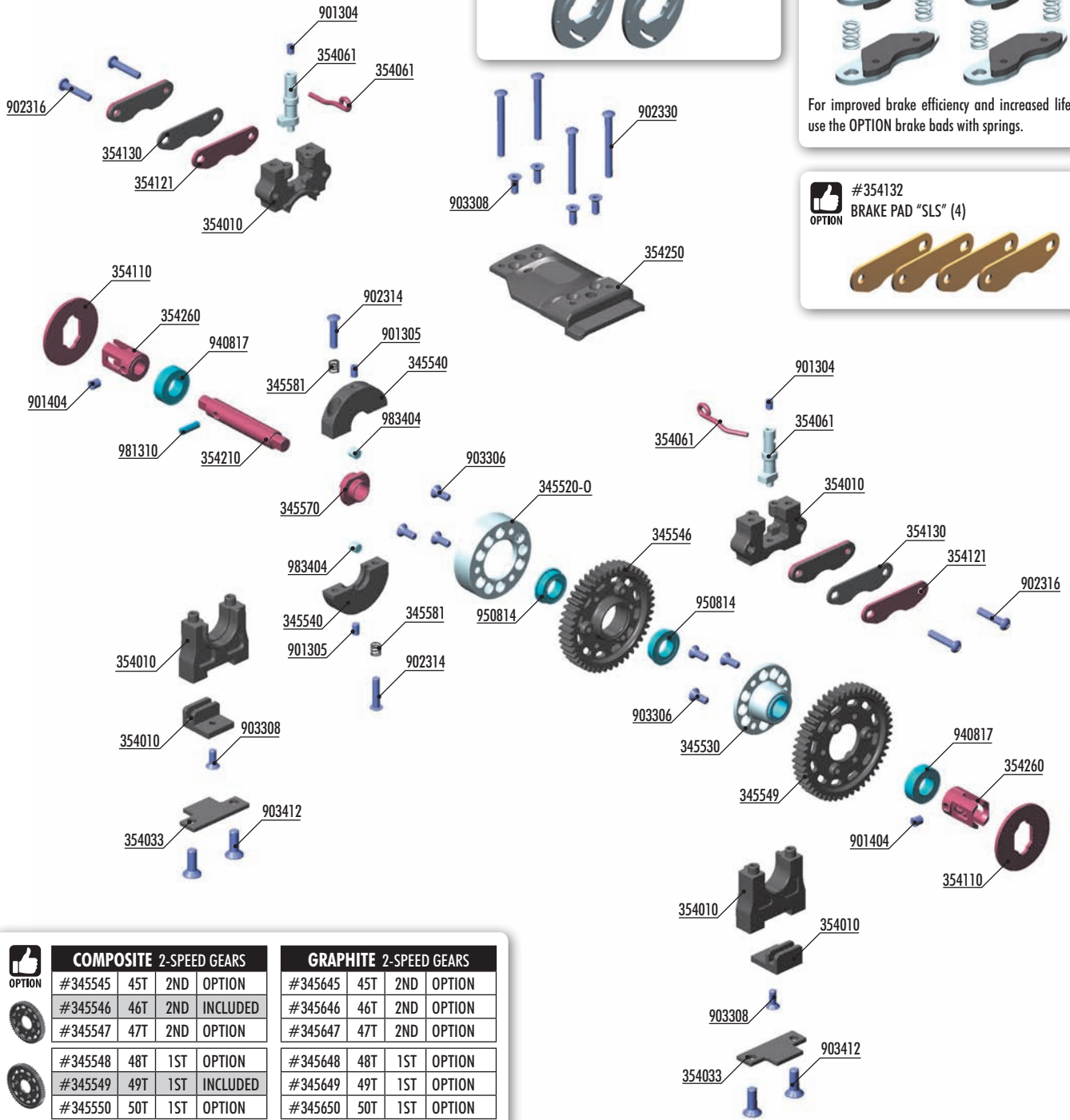
Check for free movement

Check for free movement

SET-UP BOOK

ACKERMANN
BUMP STEER
TOE-IN

8. CENTER DIFF & BRAKE



COMPOSITE 2-SPEED GEARS

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

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

BAG

08

- 34 5520-0 CARRIER FOR 2-SPEED GEAR (2nd) - SWISS 7075 T6 - ORANGE
- 34 5530 ALU DRIVE FLANGE WITH ONE-WAY BEARING - SWISS 7075 T6
- 34 5540 COMPOSITE 2-SPEED GEAR BOX SHOE - SET
- 34 5546 COMPOSITE 2-SPEED GEAR 46T (2nd) - H
- 34 5549 COMPOSITE 2-SPEED GEAR 49T (1st)
- 34 5570 ADAPTER 2-SPEED
- 34 5581 GEAR BOX SPRING C=13.0 (2)
- 35 4010 CENTER DIFF MOUNTING PLATE - SET
- 35 4033 GT COMPOSITE 2-SPEED HOLDER PLATE (2)
- 35 4061 ALU BRAKE CAM POST & ROD (2+2) HARD COATED
- 35 4110 VENTILATED BRAKE DISK - LASER CUT - PRECISION-GROUND
- 35 4121 STEEL BRAKE PAD - LASER CUT (4)
- 35 4130 BRAKE PAD FIBER (4)
- 35 4210 GT 2-SPEED SHAFT - HUDY SPRING STEEL™
- 35 4250 GT COMPOSITE 2-SPEED UPPER PLATE

- 35 4260 GT CENTRAL TRANSM. OUTDRIVE ADAPTER - HUDY SPRING STEEL™
- 90 1304 HEX SCREW SB M3x4 (10)
- 90 1305 HEX SCREW SB M3x5 (10)
- 90 1404 HEX SCREW SB M4x4 (10)
- 90 2314 HEX SCREW SH M3x14 (10)
- 90 2316 HEX SCREW SH M3x16 (10)
- 90 2330 HEX SCREW SH M3x30 (10)
- 90 3306 HEX SCREW SFH M3x6 (10)
- 90 3308 HEX SCREW SFH M3x8 (10)
- 90 3412 HEX SCREW SFH M4x12 (10)
- 94 0817 BALL-BEARING 8x14x4 FLANGED (2)
- 95 0814 BALL-BEARING 8x14x4 FLANGED (2)
- 98 1310 PIN 3x10 (10)
- 98 3404 ROLLER PIN 4x4 MM (2)

8. CENTER DIFF & BRAKE

STEEL **2x** FIBRE FIBRE **2x** STEEL

TIP

Roughen steel plates with sandpaper before gluing fibre pads

TOP OVAL HOLE
NOTE ORIENTATION
BOTTOM ROUND HOLE

902316
SH M3x16

2x **F=R**

ROUND HOLE
NOTE ORIENTATION

OVAL HOLE
NOTE ORIENTATION

Fibre pads together

Temporarily insert brake disk between pads to set correct gap

0.5 mm

#354132
OPTION BRAKE PAD "SLS" (4)

#354131
OPTION GLUED BRAKE PADS SET-ULTRA EFFICIENT (4)

For improved brake efficiency and increased lifespan use the OPTION brake pads with springs.

901304
SB M3x4

903308
SFH M3x8

NOTE ORIENTATION

NOTE ORIENTATION

TOP VIEW
NOTE ORIENTATION

SHORT LONG

1.0mm 2.0mm

TL TL

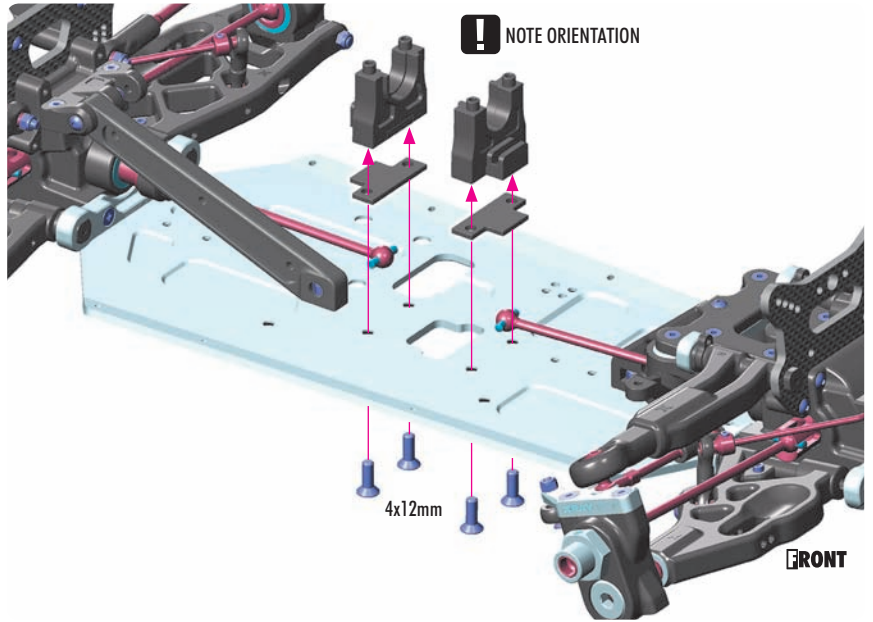
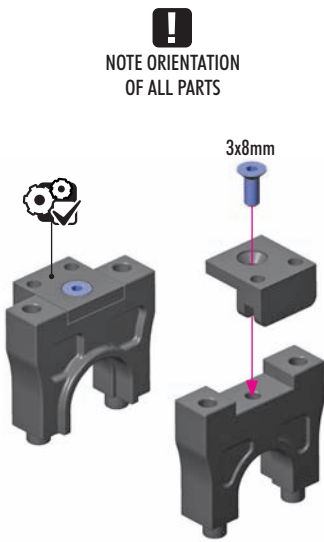
8. CENTER DIFF & BRAKE



903308
SFH M3x8



903412
SFH M4x12



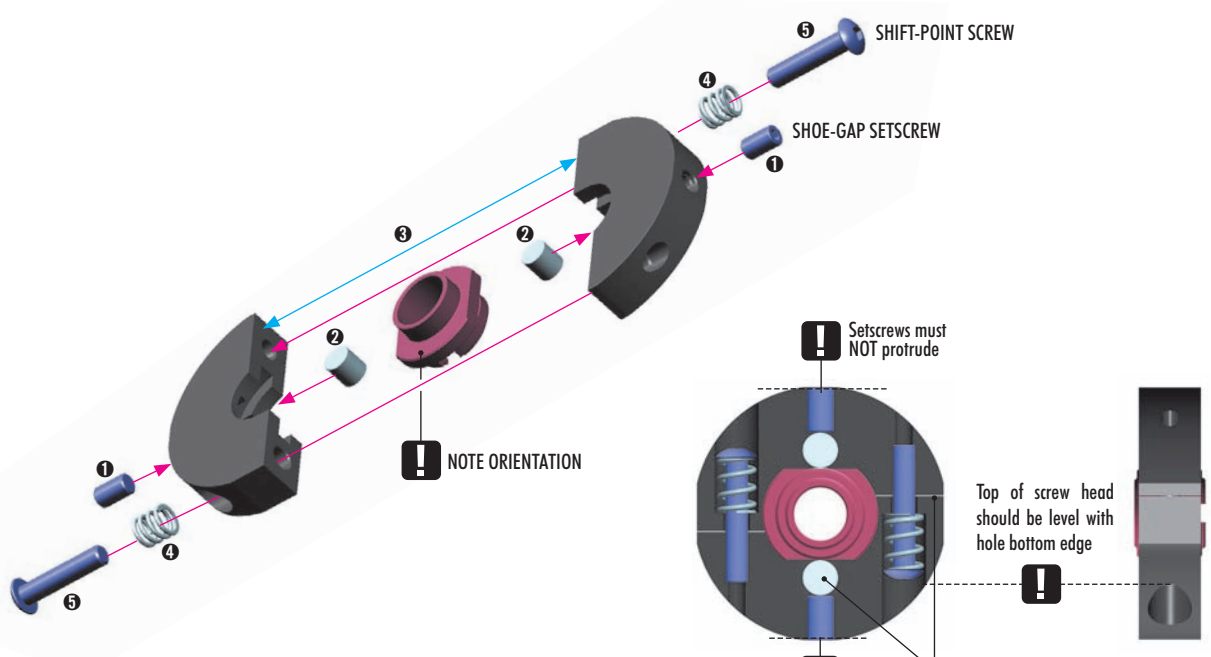
901305
SB M3x5



902314
SH M3x14



983404
RP 4x4



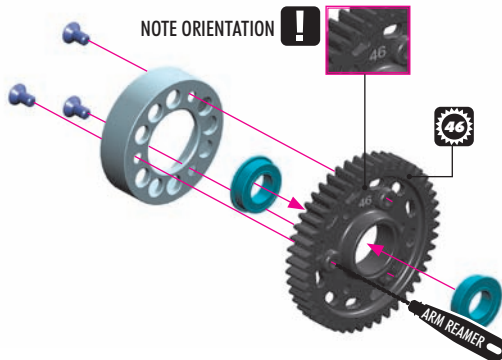
2-SPEED TRANSMISSION



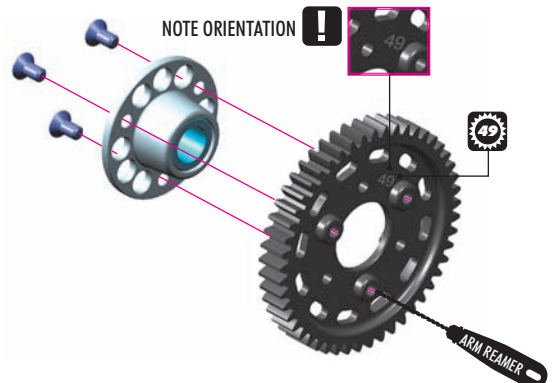
950814
BB 8x14x4



903306
SFH M3x6


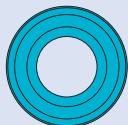



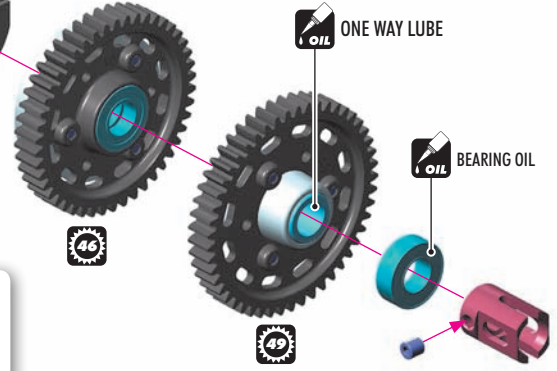
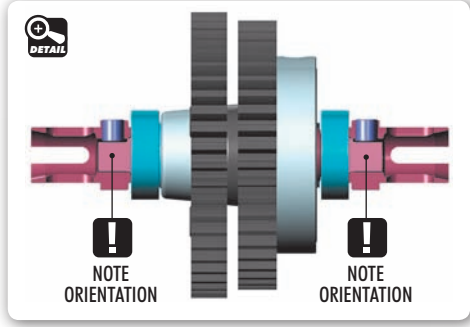
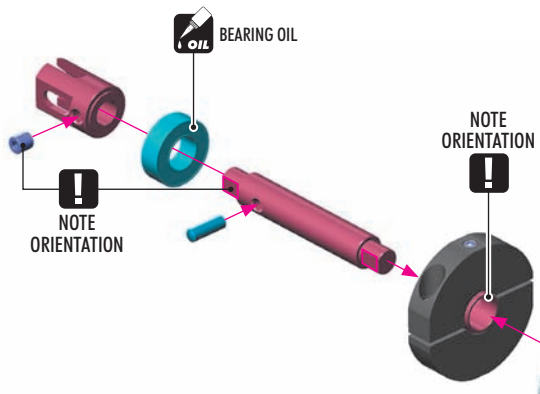
Use HUDY Reamer #107600 to slightly chamfer the edges on all 3 holes for screws from inside. **TIP**





Use HUDY Reamer #107600 to slightly chamfer the edges on all 3 holes for screws from inside. **TIP**

8. CENTER DIFF & BRAKE

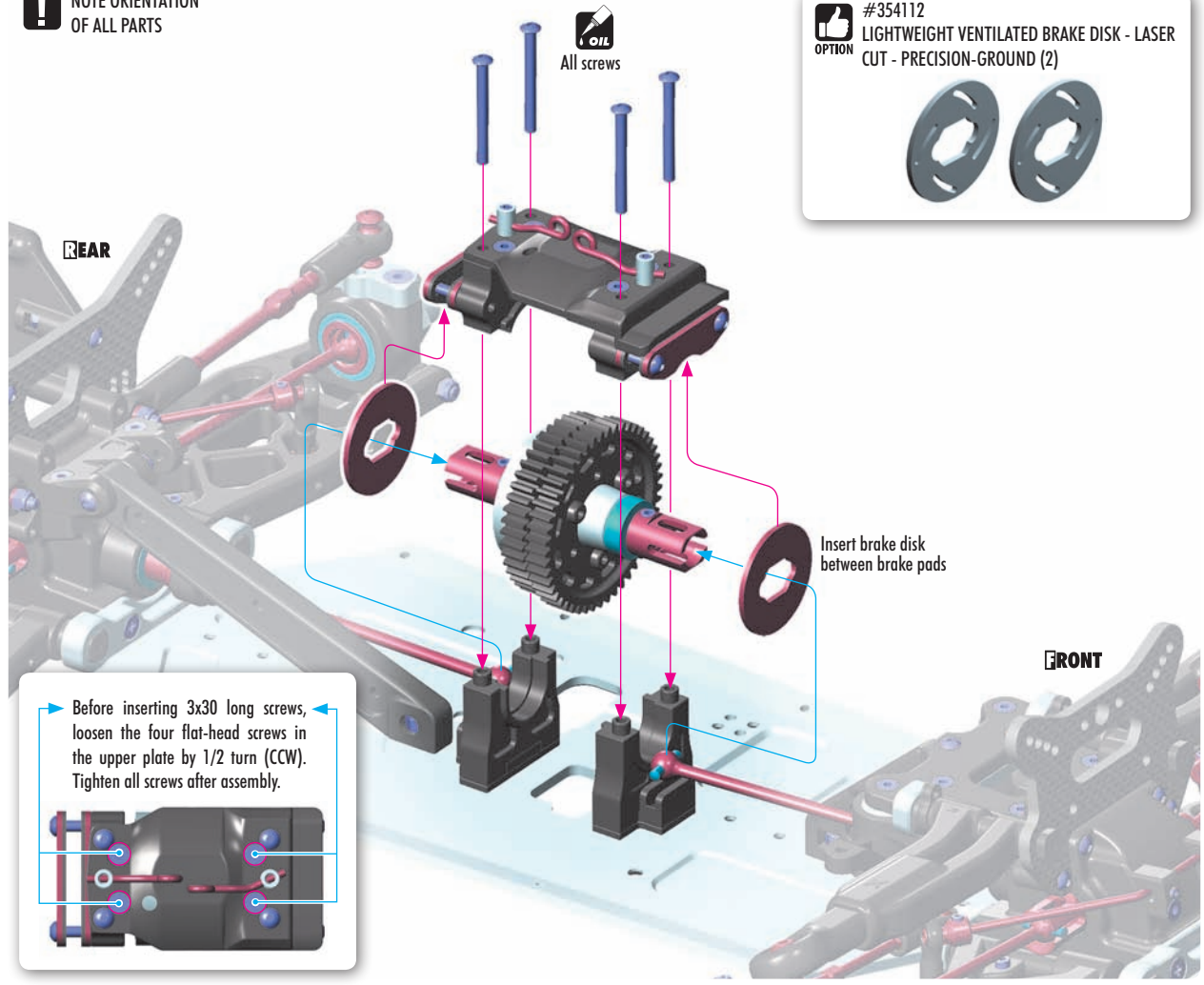
-  901404
SB M4x4
-  940817
BB 8x16x5
-  981310
P 3x10



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

-  902330
SH M3x30

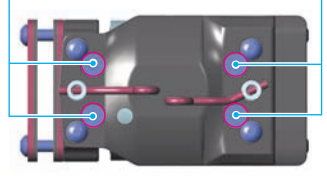
NOTE ORIENTATION OF ALL PARTS



OPTION #354112
LIGHTWEIGHT VENTILATED BRAKE DISK - LASER CUT - PRECISION-GROUND (2)



Before inserting 3x30 long screws, loosen the four flat-head screws in the upper plate by 1/2 turn (CCW). Tighten all screws after assembly.



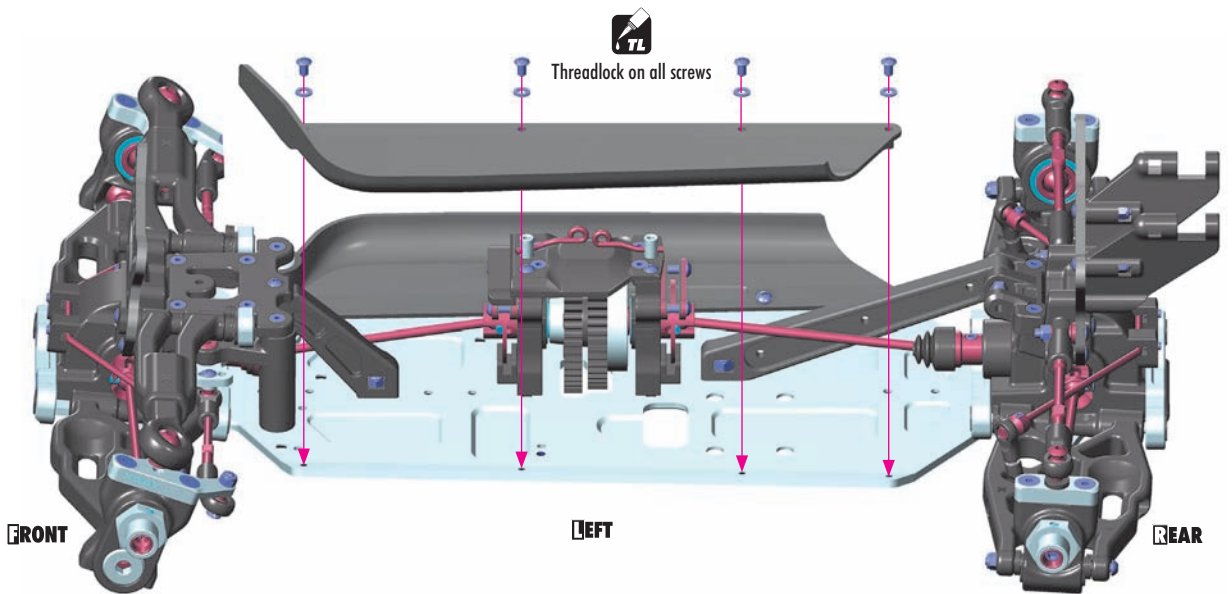
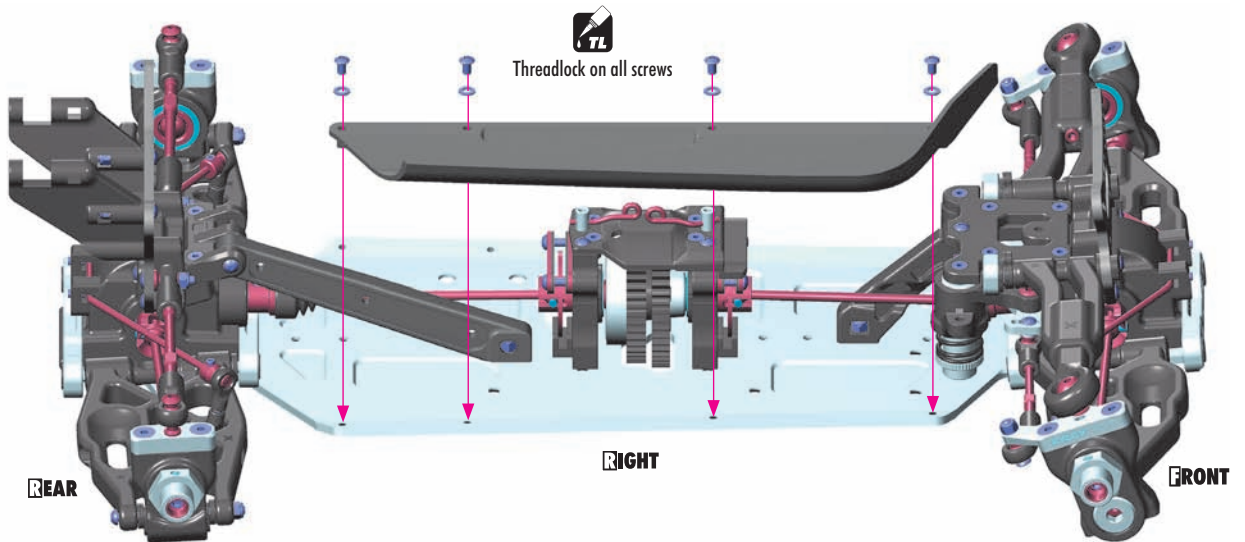
9. FUEL TANK & ENGINE



902305
SH M3x5



961032
S 3.2



908312
SCH M3x12



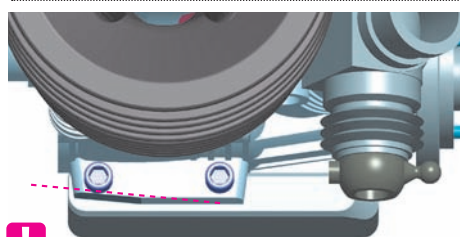
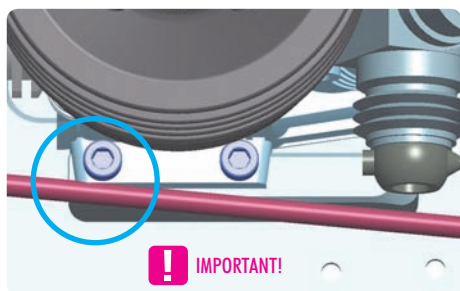
964073
S 7x10x0.2



964074
S 7x10x0.3

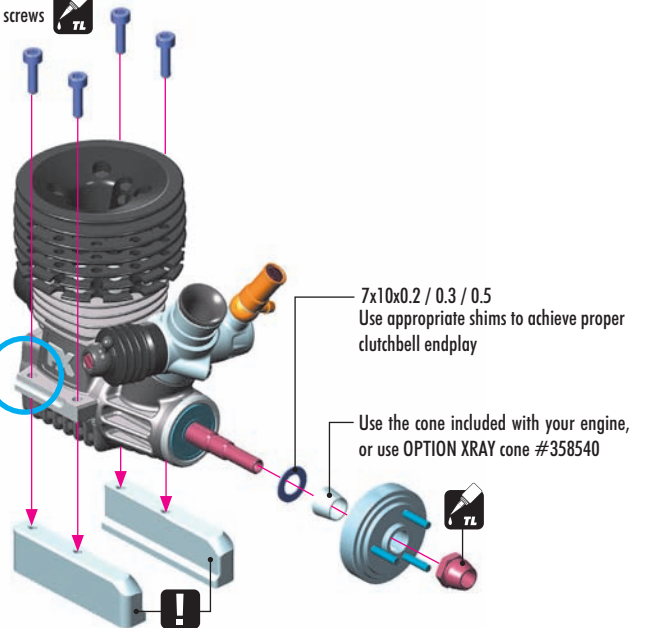


964075
S 7x10x0.5



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.

All screws TL



9. FUEL TANK & ENGINE



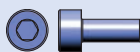
338584
S 5x7x0.2



359050
BB 5x10x4



359051
BB 5x12x4



908314
SCH M3x14

DETAIL

Note the orientation of the clutch shoes. The short side of spring must be in the groove of the flywheel nut.

1ST PINION GEAR XCA HARD COATED

#348515	15T	OPTION
#348516	16T	INCLUDED
#348517	17T	OPTION
#348518	18T	OPTION

2ST PINION GEAR XCA HARD COATED

#348519	19T	INCLUDED
#348520	20T	OPTION
#348521	21T	OPTION

CLUTCH SPRING

#358584	MEDIUM (3)	OPTION
#358585	HARD (3)	OPTION

CLUTCH SHOE

#358561	ALU - LIGHT (3)	OPTION
---------	-----------------	--------

HIGH TORQUE CLUTCH SPRING

#358587	GOLD	SOFT	OPTION
#358588	GRAY	MEDIUM	INCLUDED
#358589	SILVER	HARD	OPTION

HIGH TORQUE CLUTCH SHOE

#358562	ALU - H-TORQUE (3)	OPTION
#358563	GRAPHITE (2)	OPTION
#358564	ALU - HARD (3)	INCLUDED

TIP TO TIGHTEN THE 16T OR 19T PINION GEAR USE THE OPTIONAL #349901 XRAY PINION TOOL (19-21T / 16-18T).

TIP Hold the flywheel using HUDY Flywheel Tool #182015

TIP Tighten the clutch nut using HUDY tool #107581

These bearings must still be regularly serviced and replaced when worn out.

SET-UP BOOK
CLUTCH SPRINGS
CLUTCH SHOE



911410
SHF M4x10

DETAIL

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.

THREAD LOCK
all screws

SET-UP BOOK
GEARING
GEAR MESH ADJ.



907258
SP 2.5x8

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 1cc

2CC FUEL TANK INSERT

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

1CC FUEL TANK INSERT

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

NOTE ORIENTATION

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

9. FUEL TANK & ENGINE

10

353370
SHIM 3x9x2



902316
SH M3x16



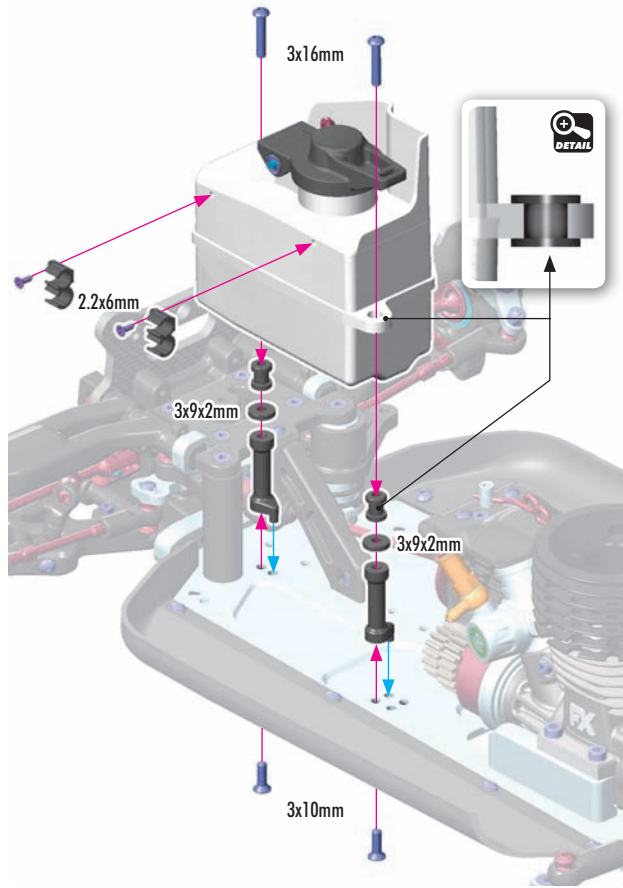
903310
SFH M3x10



906206
SFP 2.2x6

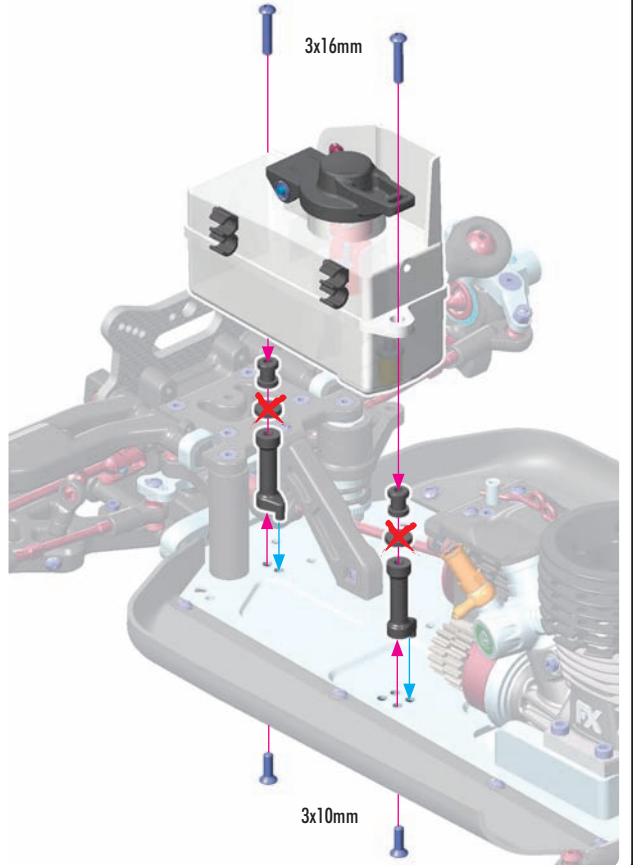
ALTERNATIVE 150CC FUEL TANK

INITIAL SETTING



ALTERNATIVE 125CC FUEL TANK

#358605
OPTION FUEL TANK 125CC WITH FLOATING FILTER

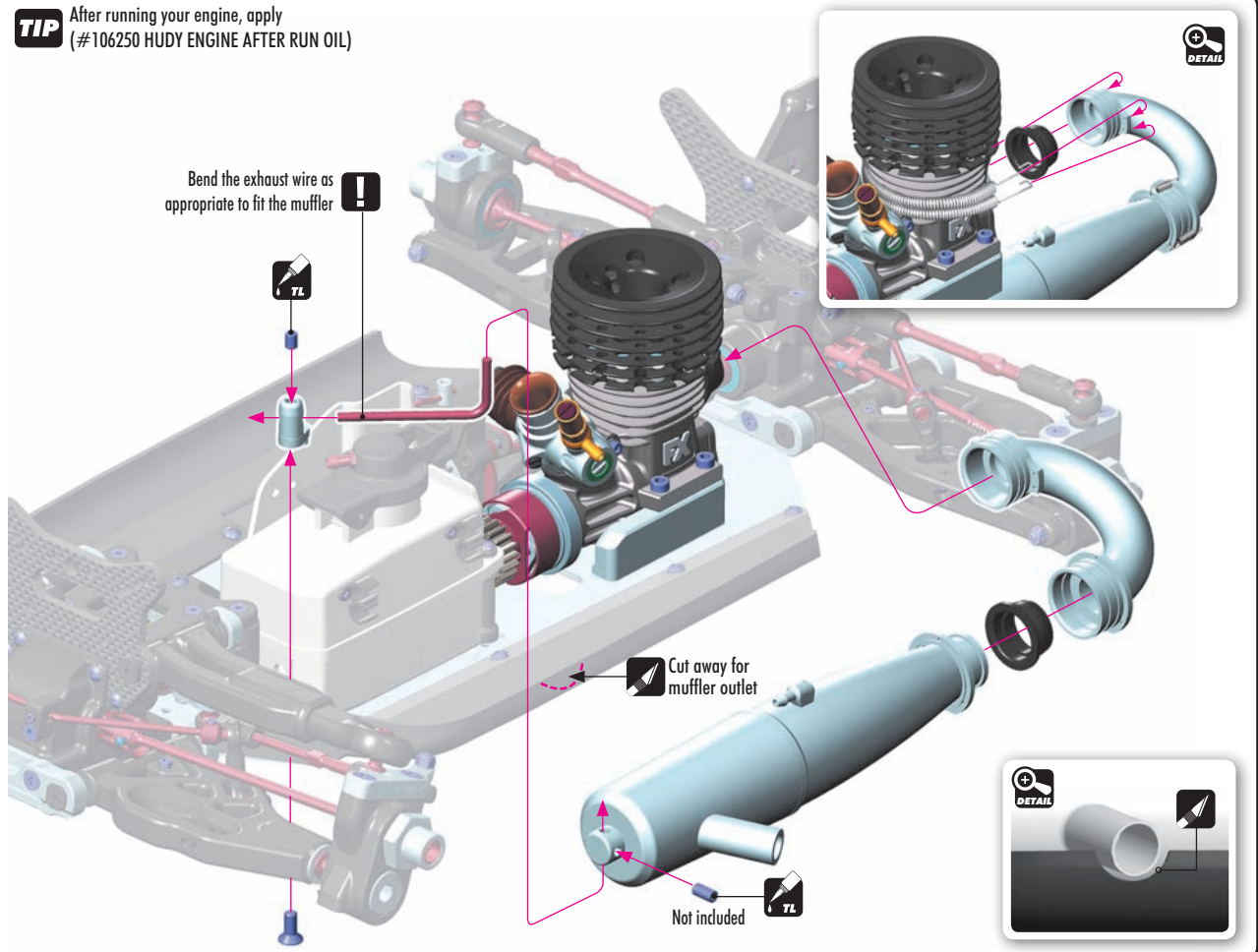


901405
SB M4x5

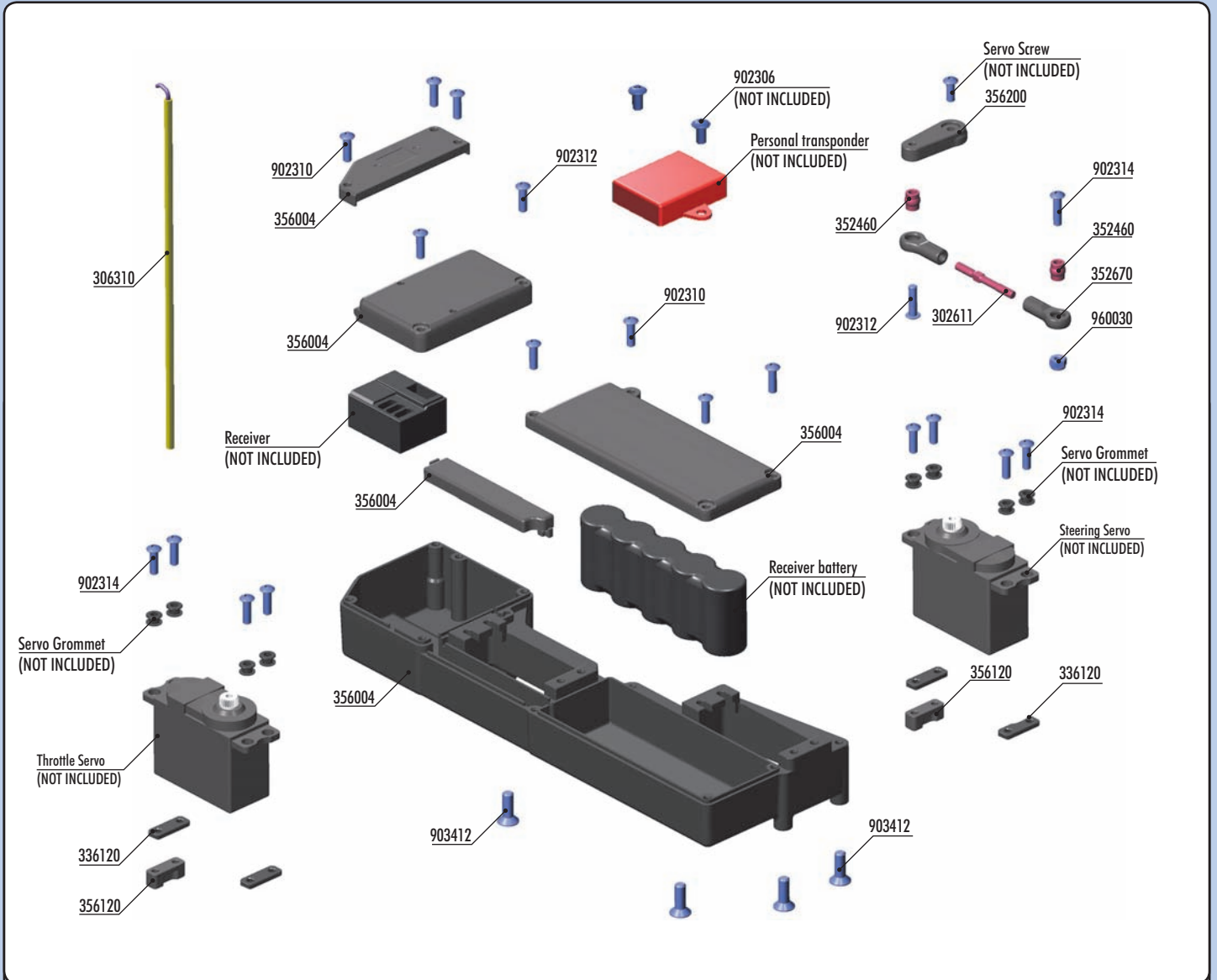


903410
SFH M4x10

TIP After running your engine, apply (#106250 HUDY ENGINE AFTER RUN OIL)



10. RADIO CASE



BAG

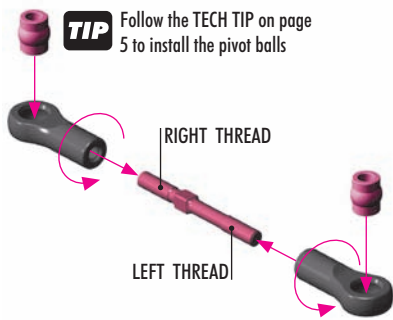
10

- 30 2611 ADJ. TURNBUCKLE L/R 35 MM - HUDY SPRING STEEL™ (2)
- 30 6310 ANTENNA TUBE (2)
- 33 6120 COMPOSITE STEERING SERVO HOLDER - SET - V2
- 35 2460 PIVOT BALL 5.8 (10)
- 35 2670 SERVO BALL JOINT 5.8MM (4)
- 35 6004 COMPOSITE RADIO CASE SET - SOFT
- 35 6050 BATTERY CABLE WITH SWITCH (OPTION)
- 35 6120 STEERING SERVO MOUNT - SET

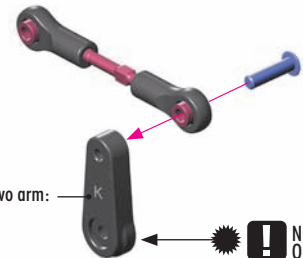
- 35 6200 BRAKE/THROTTLE ARMS & STEERING SERVO ARMS - SET
- 38 9135 CONNECTING CABLE RECEIVER/BATT. PACK (OPTION)
- 90 2306 HEX SCREW SH M3x6 (10) (OPTION)
- 90 2310 HEX SCREW SH M3x10 (10)
- 90 2312 HEX SCREW SH M3x12 (10)
- 90 2314 HEX SCREW SH M3x14 (10)
- 90 3412 HEX SCREW SFH M4x12 (10)
- 96 0030 NUT M3 (10)



902312
SH M3x12



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



HUDY ALU SERVO HORNS		
#293501	23T KO Propo, Airtronics, Sanwa	OPTION
#293502	24T Hitec	OPTION
#293503	25T Futaba	OPTION



10. RADIO CASE



902314
SH M3x14

step 1

Servo screw (NOT INCLUDED)

TOP

Plug the connectors into the receiver in Step 2

NOTE

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

NOTE ORIENTATION

BOTTOM



902310
SH M3x10



902312
SH M3x12



907206
SP M2x6

step 2

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

3x10mm

3x12mm

3x10mm

TIP CUT

2x6

SWITCH #356050
OPTION

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



902314
SH M3x14



903412
SFH M4x12



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

ALTERNATIVE 1
When the transponder is placed at the top of the radio box, cut out some material from the radio box in order to allow the transponder wire to come inside.

ALTERNATIVE 2
Place the transponder inside of the radio box by using double-sided tape.

3x6mm (NOT INCLUDED)

3x14mm

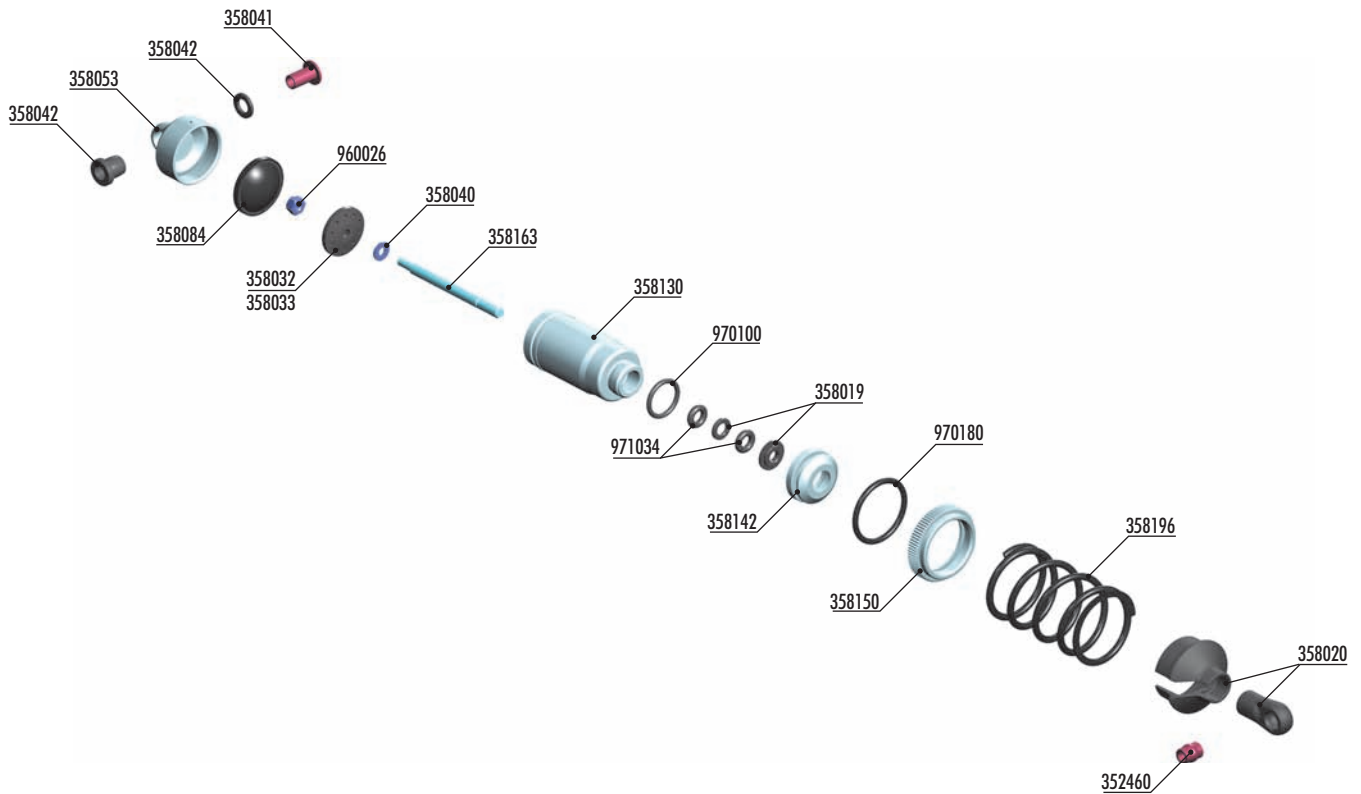
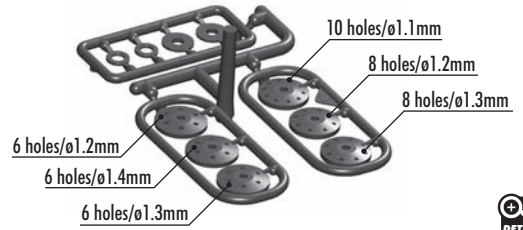
4x12mm

DETAIL

Note orientation of servo arm when servo is at neutral

11. SHOCK ABSORBERS

PISTONS



#358054
XB8 ALU SHOCK CAP NUT WITH
VENT HOLE - BLACK COATED (2)



BAG



- 35 2460 PIVOT BALL 5.8 - V3 (10)
- 35 8019 COMPOSITE SET OF SHIMS FOR SHOCKS - V2 (2)
- 35 8020 COMPOSITE SHOCK PARTS
- 35 8032 SHOCK PISTON SET 8-HOLE (1.2; 1.3) 10-H. (1.1MM) - DELRIN - V2
- 35 8033 COMPOSITE SHOCK 6-HOLE PISTON SET (1.2; 1.3; 1.4MM) - DELRIN - V2
- 35 8040 HARDENED SHOCK SHIMS (4)
- 35 8041 STEEL SHOCK BUSHING (2)
- 35 8042 COMPOSITE SHOCK BUSHING & SHIM - V2 (2+2)
- 35 8053 ALU SHOCK CAP NUT - BLACK COATED (2)
- 35 8084 SHOCK RUBBER MEMBRANE BOTTOM RIBBED (4)
- 35 8130 GT ALU SHOCK BODY - HARD COATED (2)
- 35 8142 ALU SHOCK BODY NUT FOR SHOCK BOOT (2)

- 35 8150 ALU SHOCK BODY ADJ. NUT (2)
- 35 8163 GT SHOCK SHAFT (2)
- 35 8196 XRAY GT SPRING - 3 DOTS (2)
- 96 0026 NUT M2.5 - SHORT (10)
- 97 0100 O-RING 10 x 1.5 (10)
- 97 0180 O-RING 18 x 1.8 (10)
- 97 1034 SILICONE O-RING 3.5x2 (10)

11. SHOCK ABSORBERS

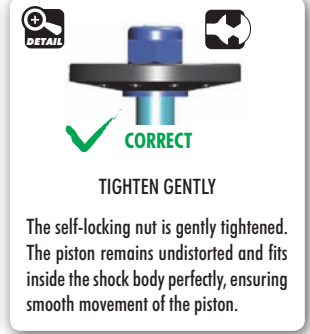
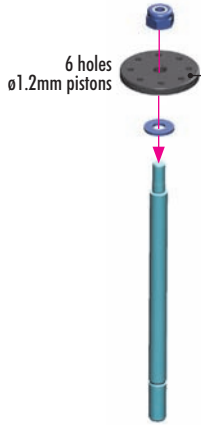


358040
5 2.5x6x0.5



960026
N M2.5

4x

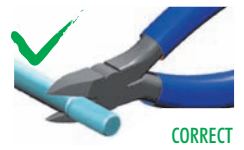
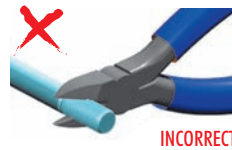


SET-UP BOOK
SHOCK DAMPING
SHOCK PISTONS

DETAIL



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



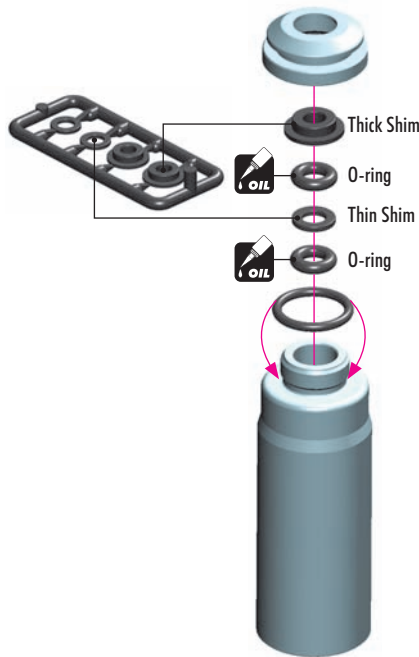
970100
0 10x1.5



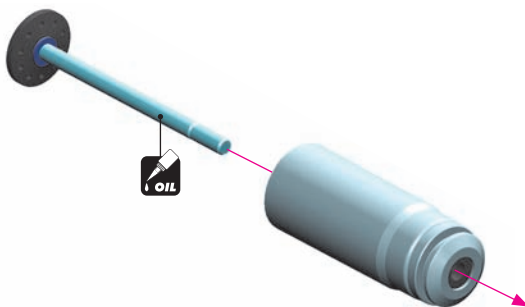
971034
0 3.4x2

4x

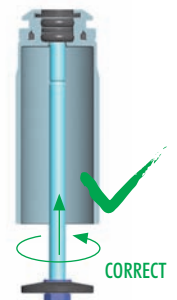
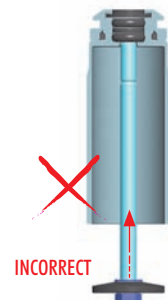
There are two different thickness shims, use them as shown. Use the same procedure when building both front and rear shocks.



4x



EXTREMELY IMPORTANT



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

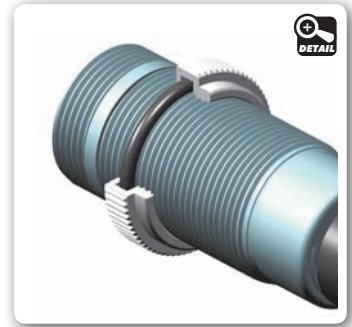
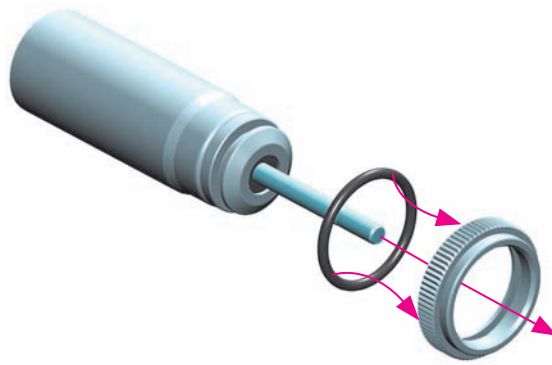
Twist the shock rod through the lower shock body assembly.

11. SHOCK ABSORBERS

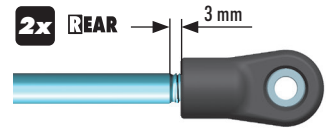
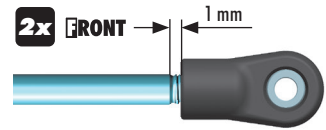
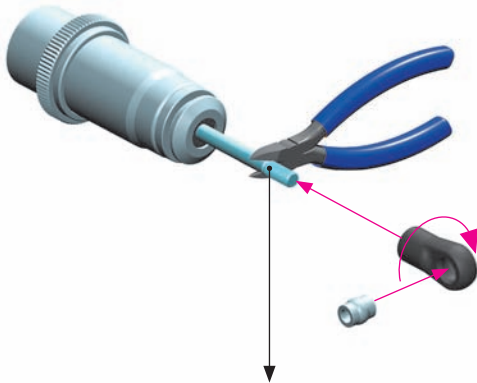


970180
Ø 18x1.8

4x



4x



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



INCORRECT



INCORRECT



CORRECT

DEFAULT SHOCK REBOUND SETTING 0% (LOW REBOUND)

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

4x SHOCK
Oil 1000cSt

SET-UP BOOK
SHOCK OIL



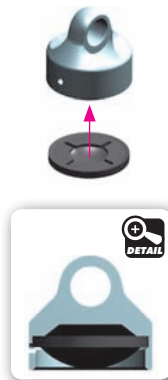
1 Extend the shock shaft completely. Fill the shock body with the shock oil. For the shocks use 1000cSt oil.



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



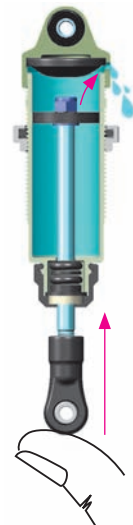
3 Orient the filled shock vertically for several minutes with the shock shaft fully extended. The remaining air bubbles will release.



4 Install the shock membrane into the groove in the upper shock cap.



5 Gently place the shock cap assembly onto the filled shock body. Excess oil will spill from the shock. Screw the shock cap onto the body by only a few turns.



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



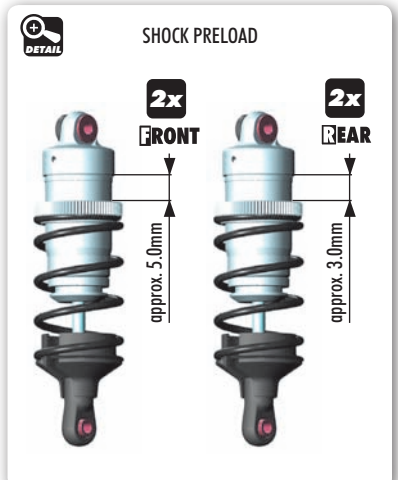
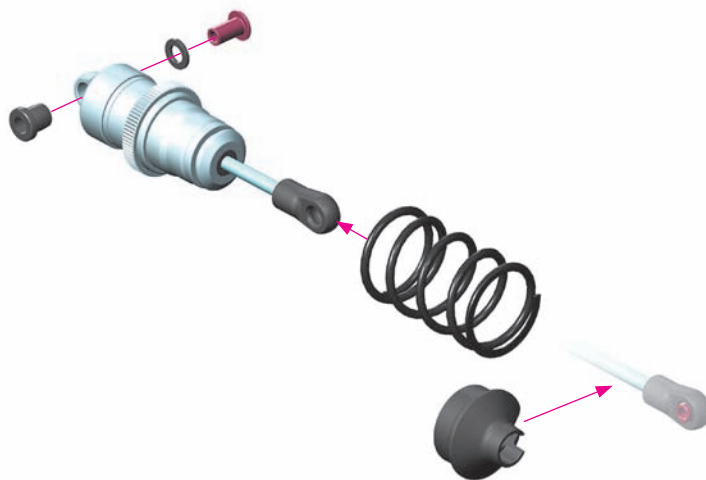
7 Keep the shock shaft pushed in the shock body and tighten the shock cap completely. The rebound will be at approximately 0%.

11. SHOCK ABSORBERS



971034
0 3.4x2

4x



SET-UP BOOK

SPRING RATE SHOCK
PRELOAD
RIDE HEIGHT

TIP ALTERNATE SHOCK REBOUND SETTING (50% AND 100%)

The default shock rebound setting is 0% (as described on page 40). Alternatively, you may set the shock rebound setting to 50% or 100% as described below. Remove the shock springs before performing shock rebound adjustment.

SETTING THE SHOCK REBOUND TO 50% (MEDIUM REBOUND)

REMOVE SHOCK CAP



1 Extend the shock shaft completely and remove the shock cap.



2 Fill the shock body with shock oil up to the top. Make sure to use same viscosity shock oil as is in the shock.

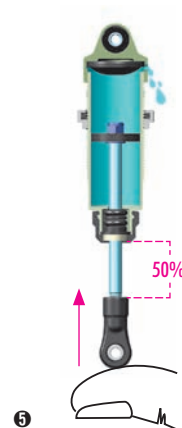


3 Orient the filled shock vertically for several minutes with the shock shaft fully extended. The remaining air bubbles will release.

HALF TIGHTEN



4 Gently place the shock cap assembly onto the filled shock body. Excess oil will spill from the shock.



5 Push the shock shaft 50% into the shock body. Excess oil will bleed through the hole in the shock cap.

TIGHTEN FULLY



6 Keep the shock shaft pushed 50% into the shock body and tighten the shock cap completely. The rebound will be at approximately 50%.

SETTING THE SHOCK REBOUND TO 100% (HIGH REBOUND)

REMOVE SHOCK CAP



1 Extend the shock shaft completely and remove the shock cap.



2 Fill the shock body with shock oil up to the top. Make sure to use same viscosity shock oil as is in the shock.



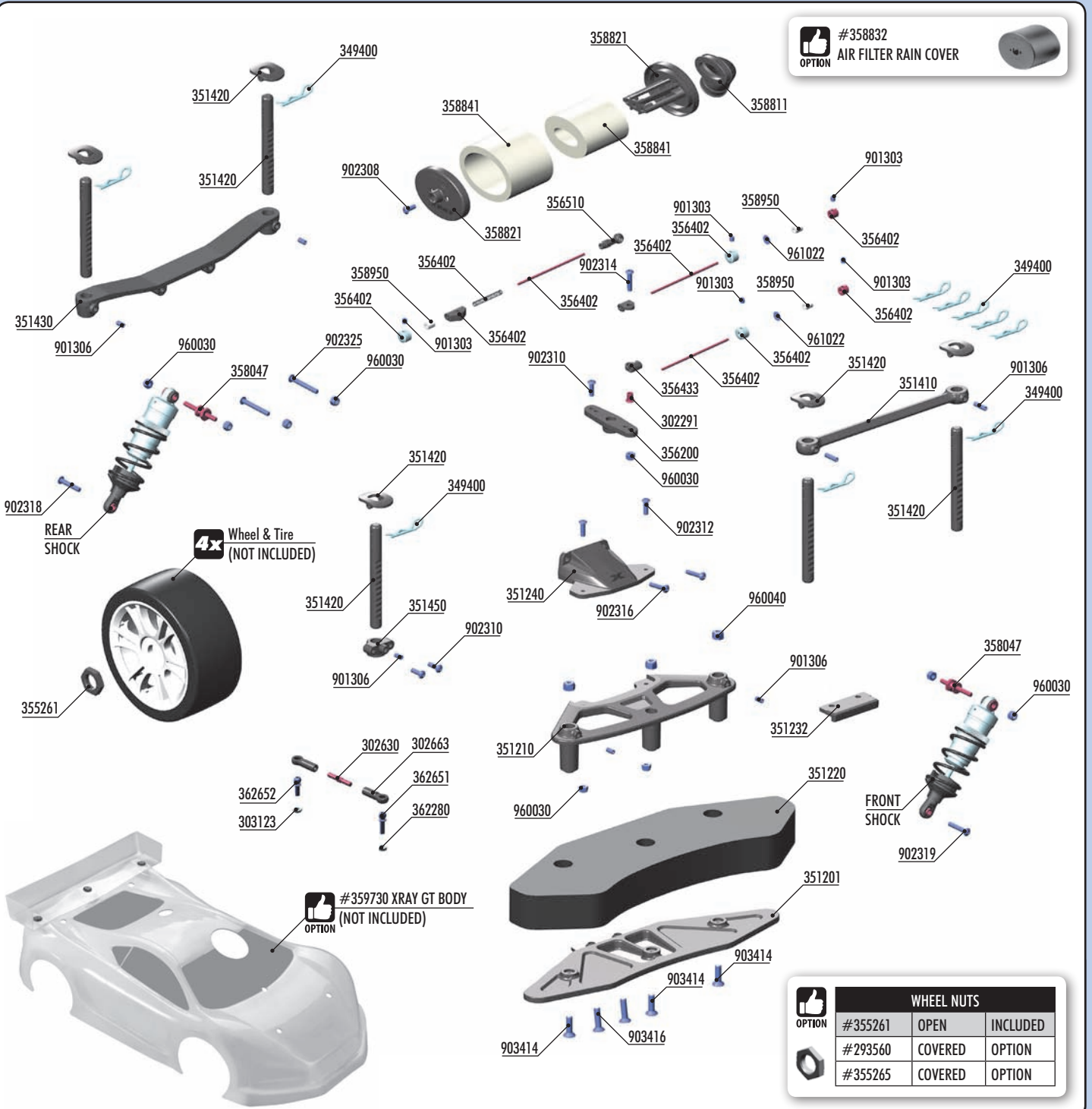
3 Orient the filled shock vertically for several minutes with the shock shaft fully extended. The remaining air bubbles will release.

TIGHTEN FULLY



4 Gently place the shock cap assembly onto the filled shock body. Keep the shock shaft extended 100% from the shock body and tighten the shock cap completely. The rebound will be at approximately 100%.

12. FINAL ASSEMBLY



#358832
AIR FILTER RAIN COVER
 OPTION



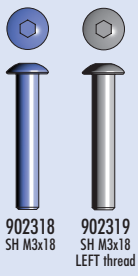
WHEEL NUTS		
#355261	OPEN	INCLUDED
#293560	COVERED	OPTION
#355265	COVERED	OPTION

BAG

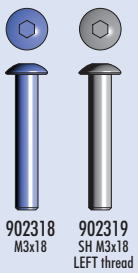
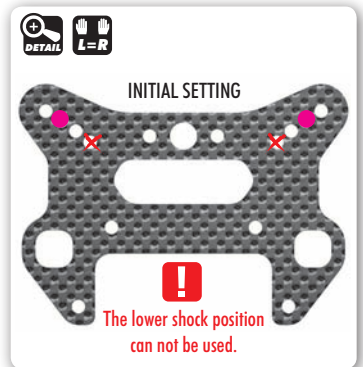
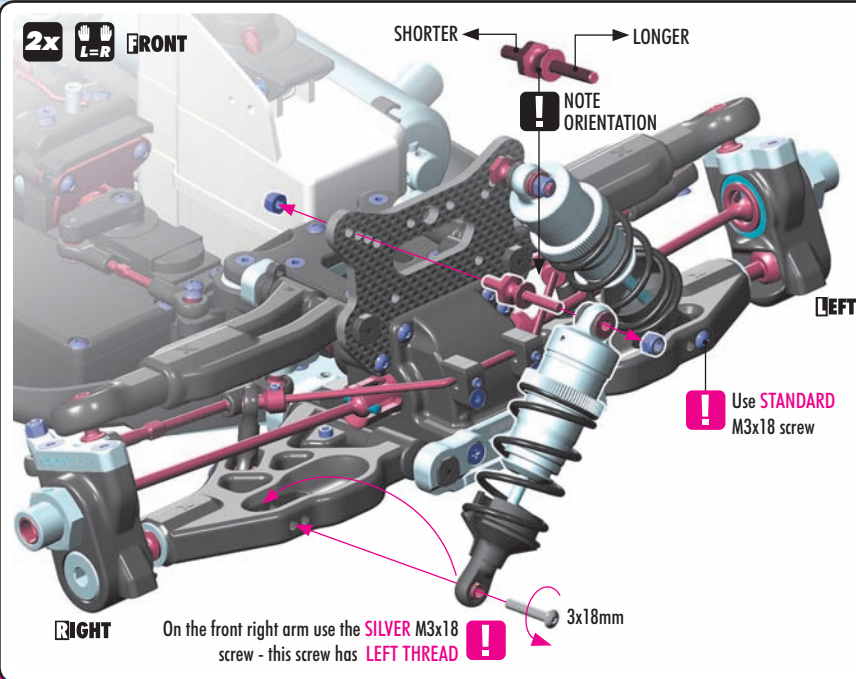
12

- | | | | |
|---------|--|---------|---------------------------------------|
| 30 2291 | STEEL STEERING BUSHING (2+2) | 35 8841 | AIR FILTER FOAM & OIL - LOW PROFILE |
| 30 2630 | ADJ. TURNBUCKLE L/R 20 MM - HUDY SPRING STEEL™ (2) | 35 8950 | SILICONE TUBING 1M (2.4 x 5.5MM) |
| 30 2663 | COMPOSITE BALL JOINT 4.9MM - OPEN - V2 (8) | 36 2280 | ALU CONICAL SHIM 3x6x2.0MM (10) |
| 30 3123 | ALU SHIM 3x6x2.0MM (10) | 36 2651 | BALL END 4.9MM WITH THREAD 8MM (2) |
| 34 9400 | BODY CLIP (10) | 36 2652 | BALL END 4.9MM WITH THREAD 10MM (2) |
| 35 1201 | GT COMPOSITE FRONT BUMPER | 90 1303 | HEX SCREW SB M3x3 (10) |
| 35 1210 | GT COMPOSITE FRONT UPPER BUMPER | 90 1306 | HEX SCREW SB M3x6 (10) |
| 35 1220 | GT FOAM BUMPER | 90 2308 | HEX SCREW SH M3x8 (10) |
| 35 1232 | GT COMPOSITE FRONT & REAR SUSPENSION HOLDER PLATE | 90 2310 | HEX SCREW SH M3x10 (10) |
| 35 1240 | GT COMPOSITE FRONT UPPER BUMPER BRACE | 90 2312 | HEX SCREW SH M3x12 (10) |
| 35 1410 | GT COMPOSITE FRONT HOLDER FOR BODY POSTS | 90 2314 | HEX SCREW SH M3x14 (10) |
| 35 1420 | GT COMPOSITE BODY POSTS (2) | 90 2316 | HEX SCREW SH M3x16 (10) |
| 35 1430 | GT COMPOSITE REAR HOLDER FOR BODY POSTS | 90 2318 | HEX SCREW SH M3x18 (10) |
| 35 1450 | GT COMPOSITE CENTER BODY POST HOLDER | 90 2319 | HEX SCREW SH M3x18 - LEFT THREAD (10) |
| 35 5261 | WHEEL NUT - RIBBED - HARD COATED (2) | 90 2325 | HEX SCREW SH M3x25 (10) |
| 35 6200 | BRAKE/THROTTLE ARMS & SERVO ARMS - SET | 90 3414 | HEX SCREW SFH M4x14 (10) |
| 35 6402 | XB8 BRAKE/THROTTLE SYSTEM - SET | 90 3416 | HEX SCREW SFH M4x16 (10) |
| 35 6433 | GT COMPOSITE BRAKE WIRE HOLDER (2) | 96 0030 | NUT M3 (10) |
| 35 6510 | CLOSED BALL JOINT 3.9 (4) | 96 0040 | NUT M4 (10) |
| 35 8047 | STEEL SCREW SHOCK PIVOT BALL WITH HEX (2) | 96 1022 | WASHER S 2.2 (10) |
| 35 8811 | AIR FILTER ELBOW - LOW PROFILE | | |
| 35 8821 | AIR FILTER BODY & CAP - LOW PROFILE | | |

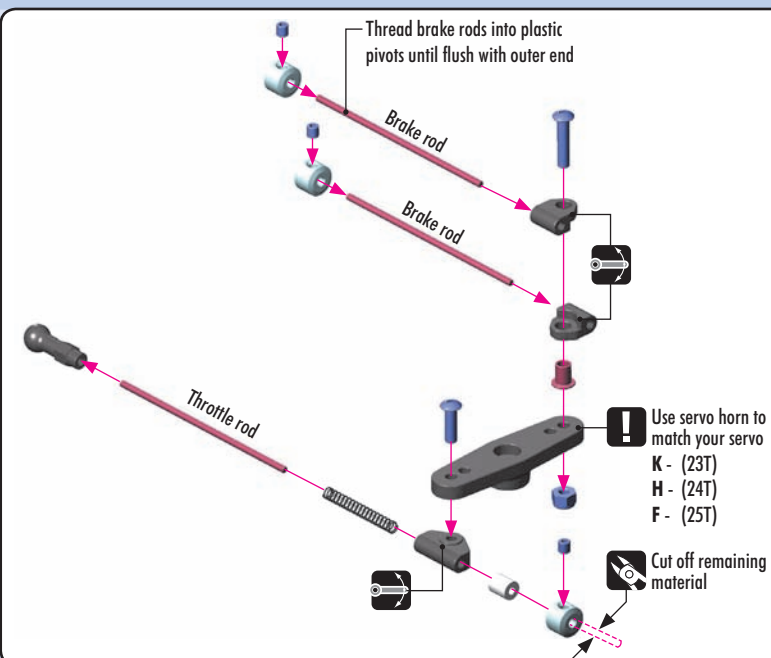
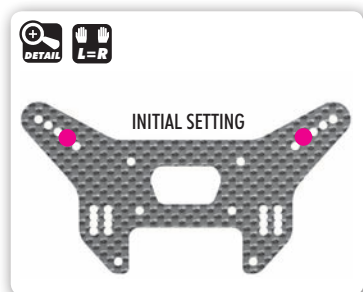
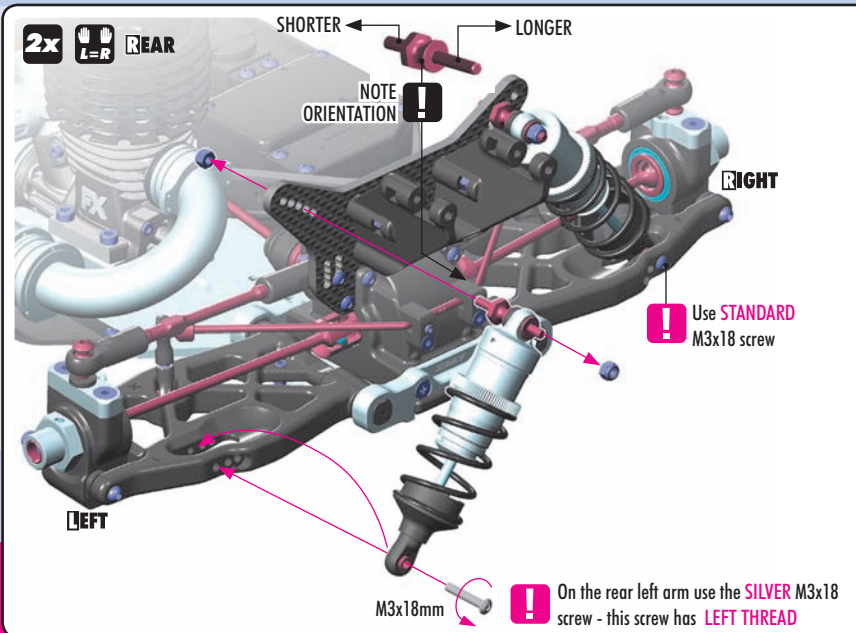
12. FINAL ASSEMBLY



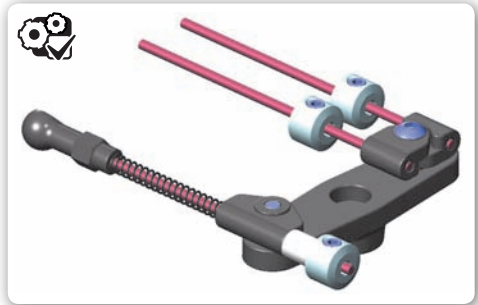
SET-UP BOOK
SHOCK ABSORBERS



SET-UP BOOK
SHOCK ABSORBERS



HUDY ALU SERVO HORNS		
OPTION #293504	23T KO Propo, Airtronics, Sanwa	OPTION
#293505	24T Hiitec	OPTION
#293506	25T Futaba	OPTION
#293507	23T KO Propo, Airtronics, JR	OPTION
#293508	24T Hiitec	OPTION
#293509	25T Futaba	OPTION



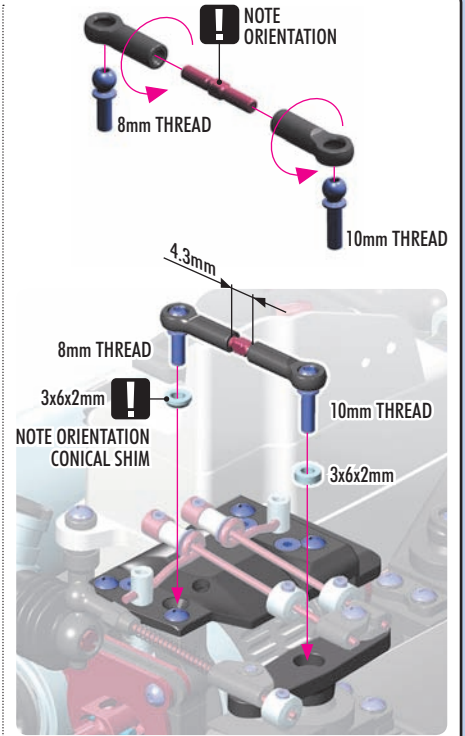
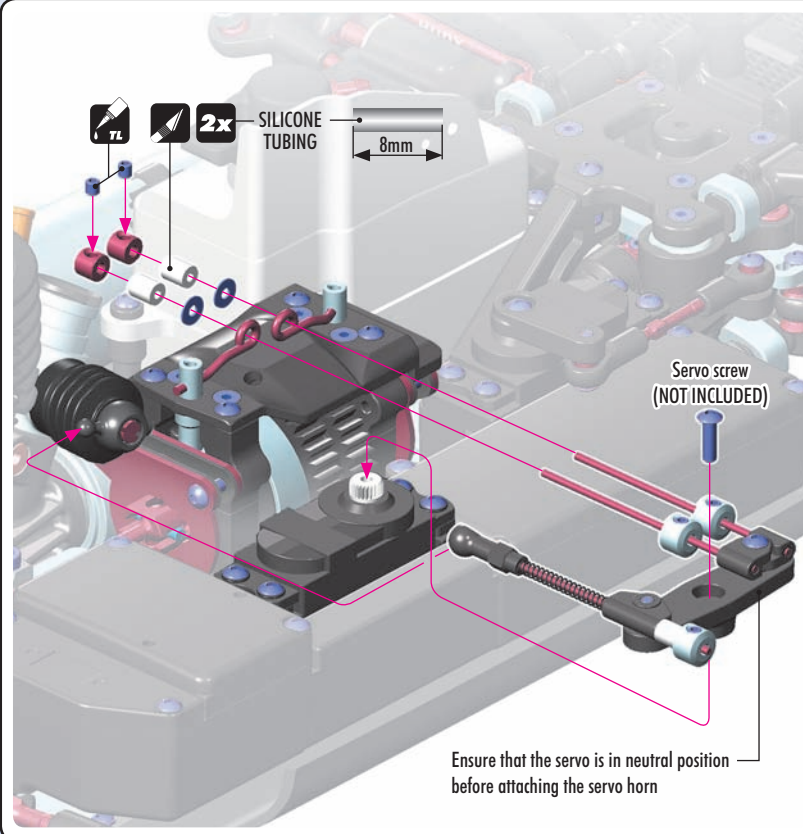
12. FINAL ASSEMBLY

901303
SB M3x3

961022
S 2.2

303123
SHIM 3x6x2

362280
CON. SHIM 3x6x2



- 1 Remove the screws from mounting plate and servo horn
- 2 Install the servo brace
- 3 Check free move

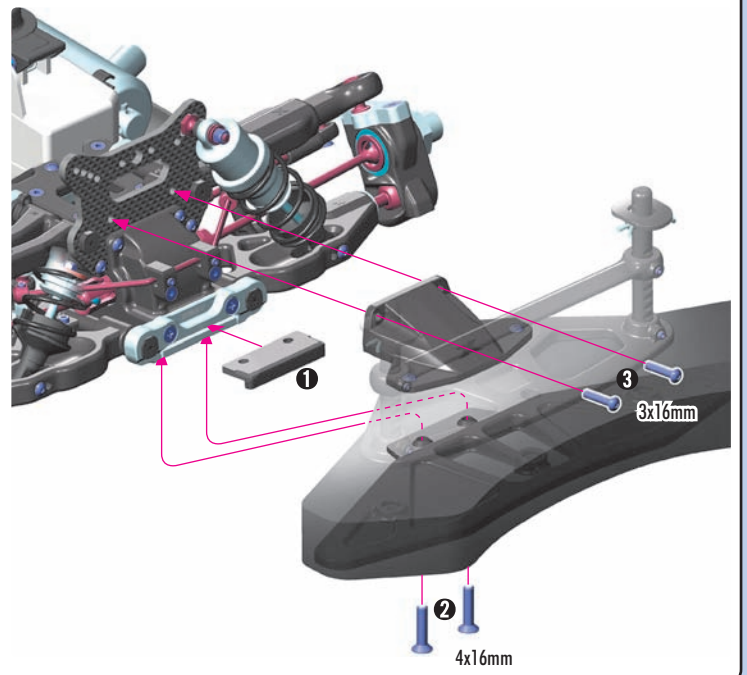
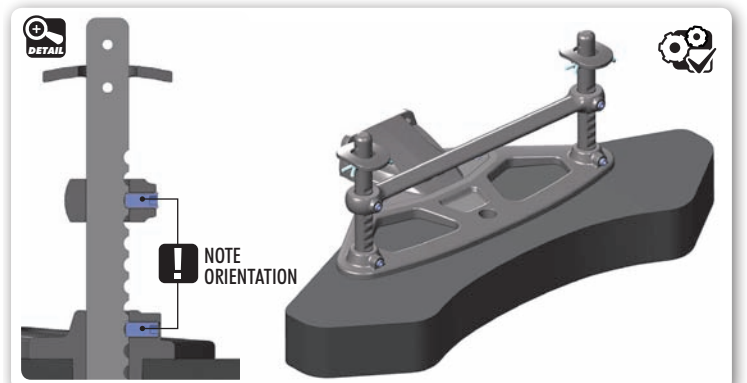
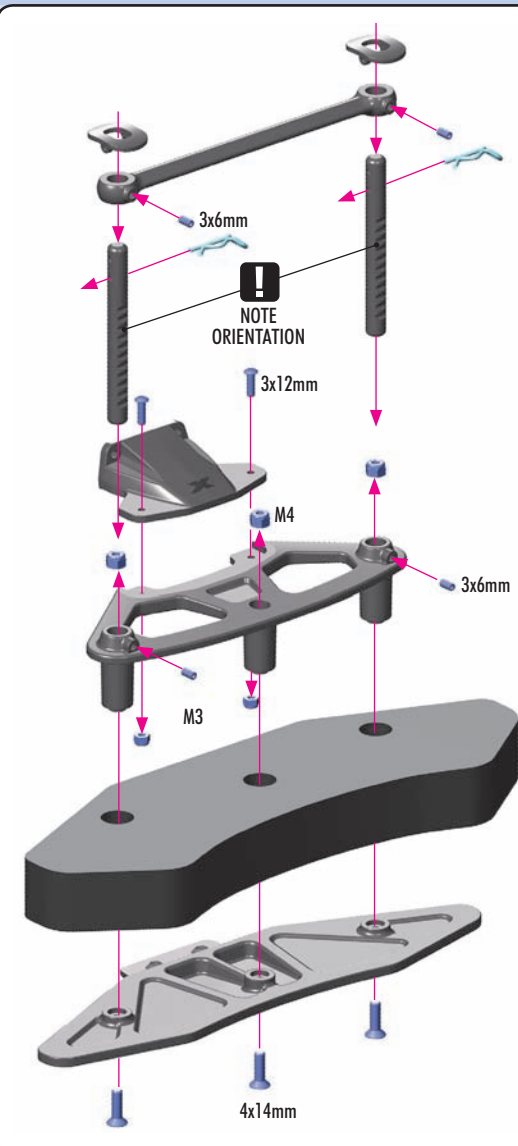
901306
SB M3x6

902312
SH M3x12

902316
SH M3x16

903414
SFH M4x14

903416
SFH M4x16



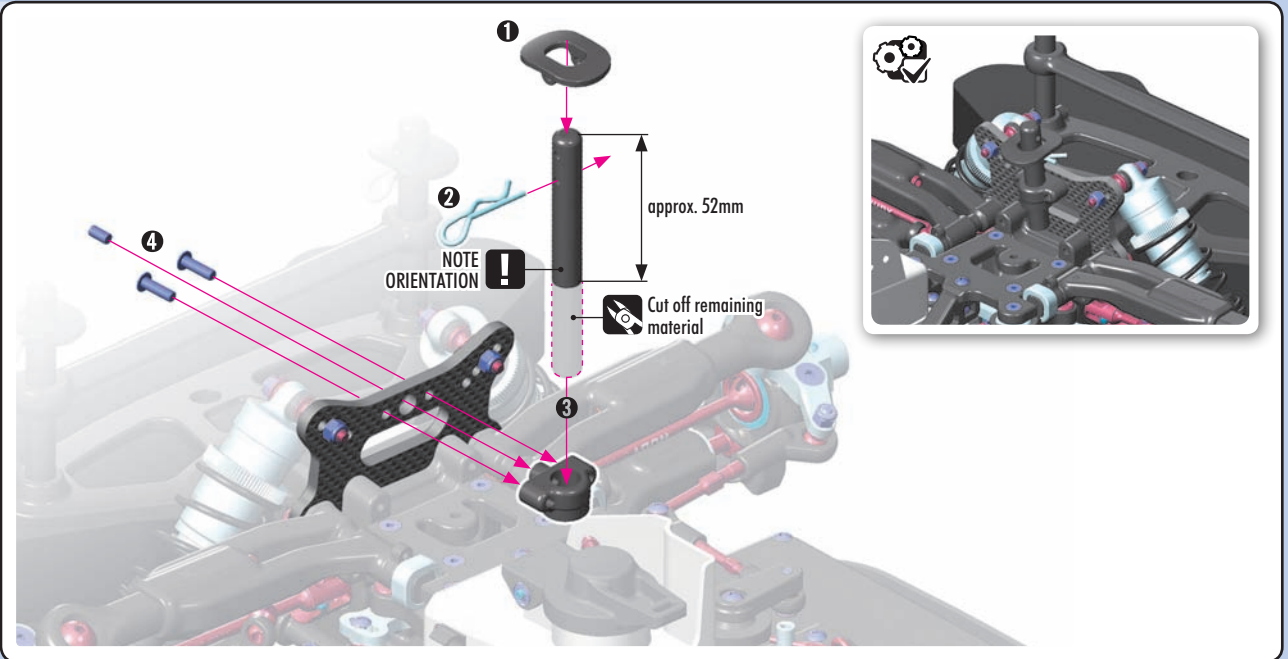
12. FINAL ASSEMBLY



901306
SB M3x6



902310
SH M3x10



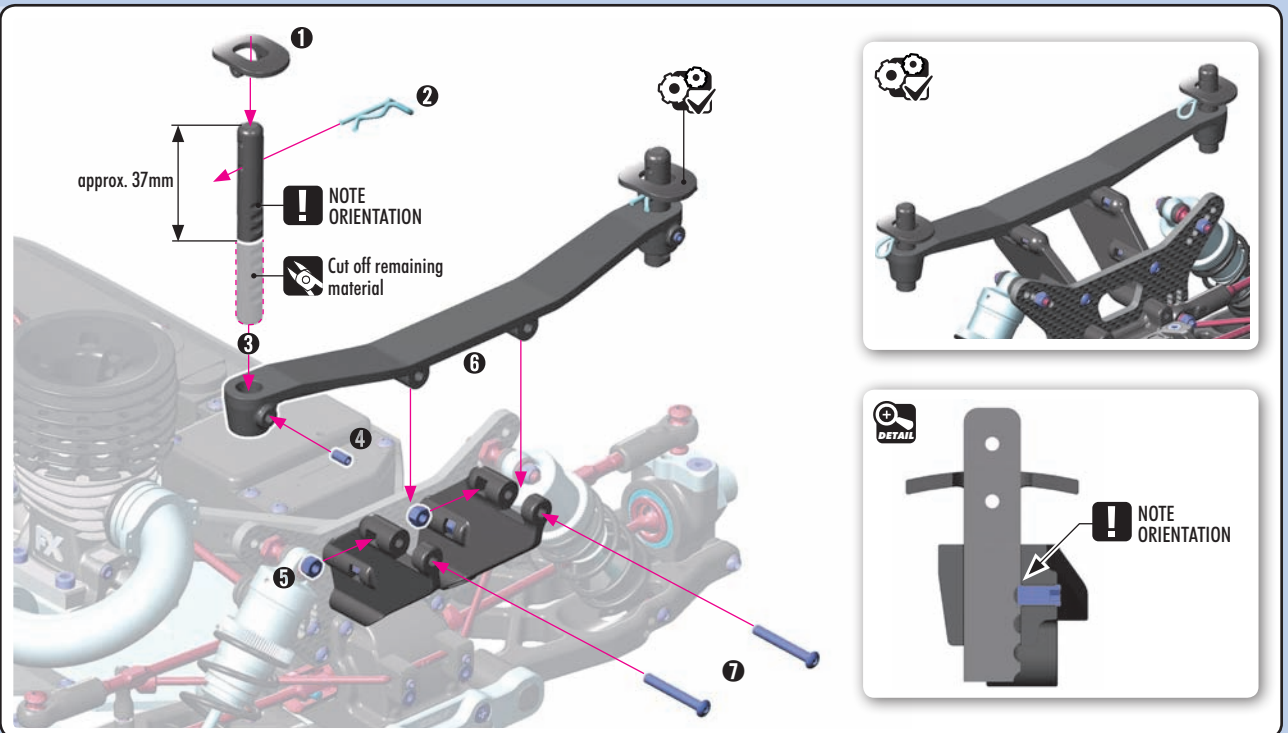
901306
SB M3x6



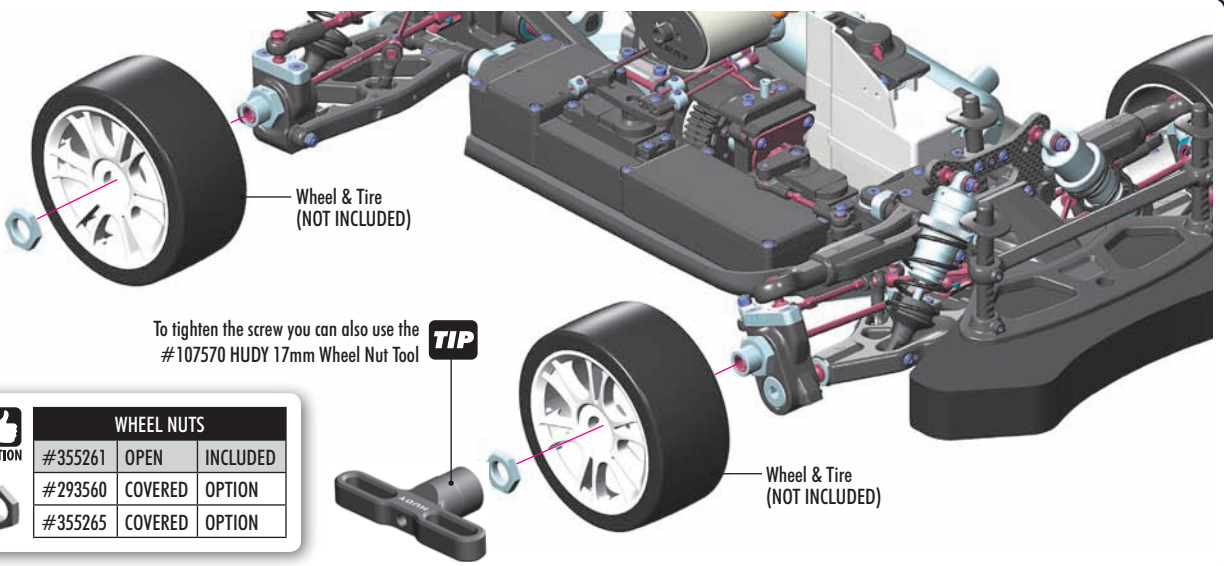
902325
SH M3x25



960030
N M3



4x



OPTION

WHEEL NUTS

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

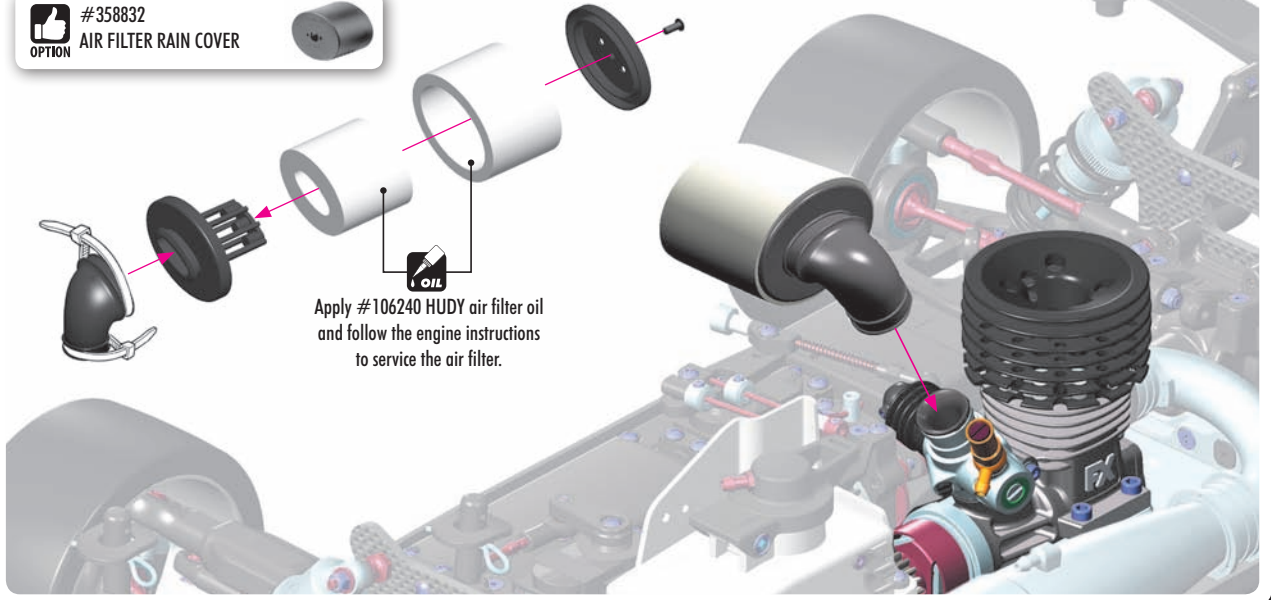


TIP

12. FINAL ASSEMBLY



#358832
OPTION
AIR FILTER RAIN COVER

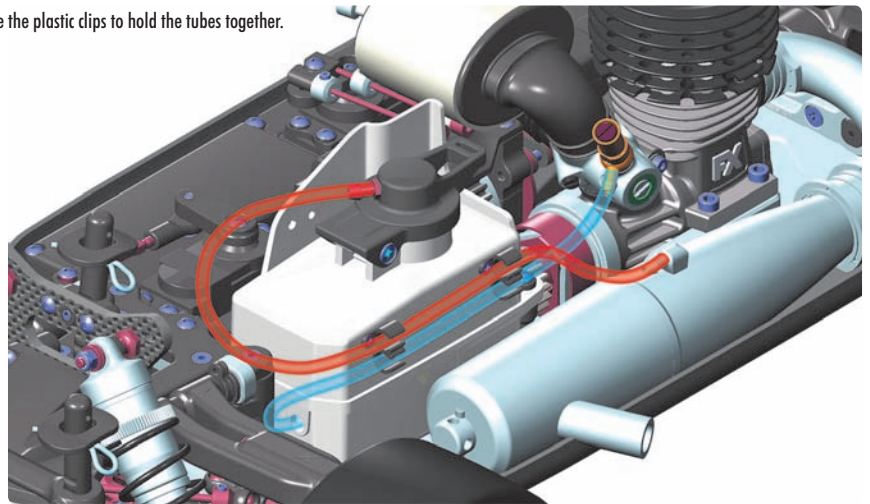


Cut the silicone tube depending on engine and muffler. Use the plastic clips to hold the tubes together.

SILICONE TUBE MARKED AS
BLUE = FROM FUEL TANK TO CARBURETOR

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

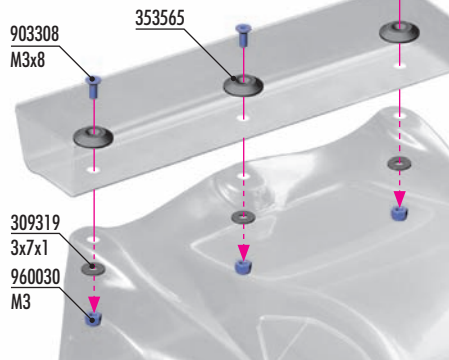
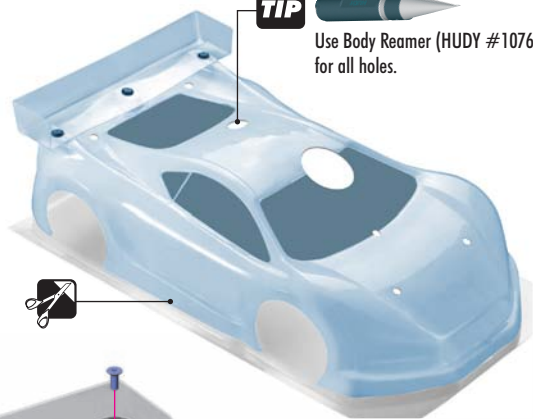
! Keep fuel line away from
dutchbell and flywheel.



#359730 GTX BODY (NOT INCLUDED)
OPTION

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

TIP Use Body Reamer (HUDY #107600)
for all holes.



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

WING SHIMS			
OPTION	#353565	COMPOSITE	INCLUDED
	#293561	ALU	OPTION
	#293561-0	ALU	OPTION
	#353561	ALU	OPTION

ENGINE OPERATION

PREPARING TO OPERATE THE ENGINE

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

STARTING AND RUNNING THE ENGINE

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

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

STOPPING THE ENGINE

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

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

FINISHING OPERATIONS

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

MAINTENANCE AFTER RUNNING

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

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

SHOCK MAINTENANCE

The most important maintenance task for keeping consistent shock performance is refilling and bleeding them correctly. If built correctly, it will not be necessary to re-build them often. Replacing warped/hard rubber bladders and o-rings, scarred piston rods, or shaved/split/loose composite upper and lower ball joints are also important.

- For club racing, it is recommended to check the shocks for air inside before each race and only re-fill and bleed them if necessary. Before each race day, make sure you take the spring off of each shock, hold it up to your ear, and quickly compress the shock rod fully into the body while listening for any air making a "whistling" or "squishy" sound as it passes through the piston holes. If you hear any air, refill and bleed your shocks. For high-competition racing, it is recommended that the shocks be re-filled and bled before a large event.
- If building or pairing new shocks, always make sure they are the same length using a shock length measuring tool and adjust the lower ball joints as needed.
- If installing new rubber bladders, carefully trim the thin excess rubber from the edges of their lips. Curved body scissors work the best.
- Regularly inspect the amount of dirt on the felt protector in the shocks (if present) and regularly replace with a new one.
- During regular shock operation, oil naturally gets on the shock shaft and drop-by-drop slightly gets out of the shock body. Shocks should be inspected regularly after each race, and oil replaced as required.

BEARING MAINTENANCE

Ball-bearings in an off-road car or truggy must be properly maintained for smooth operation and long lifespan.

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

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

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

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

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

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

CLUTCH BEARINGS

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

RECOMMENDED PRODUCTS

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

HUDY
#106213



HUDY
#106220



HUDY
#106222



HUDY
#106221



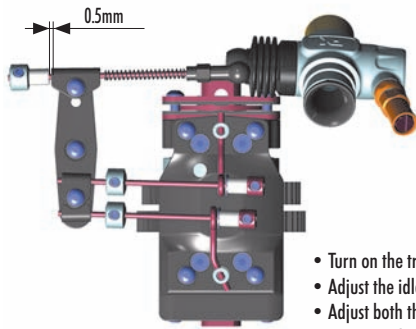
HUDY #106230
HUDY #106232



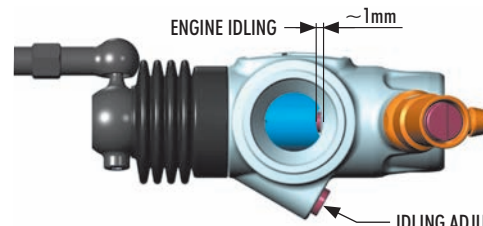
THROTTLE LINKAGE ADJUSTMENT

NEUTRAL (IDLE)

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

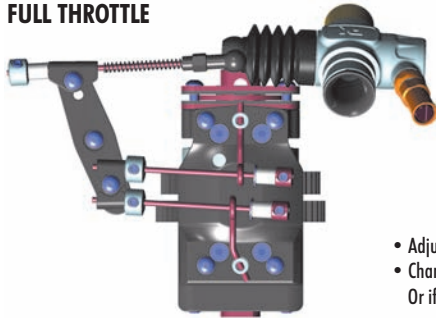


- Turn on the transmitter and receiver and set the engine control servo trim to the neutral position.
- Adjust the idle adjustment screw on the carburetor to open approx. 1mm.
- Adjust both the throttle linkage and brake linkages accordingly.
- DO NOT adjust the linkage with the engine running.

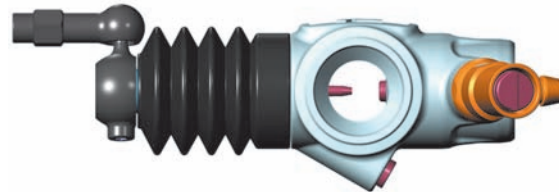


ENGINE IDLING ~1mm
IDLING ADJUSTMENT SCREW.
Use to adjust the idle setting of the carburetor. Do not allow carburetor to close to less than 1mm.

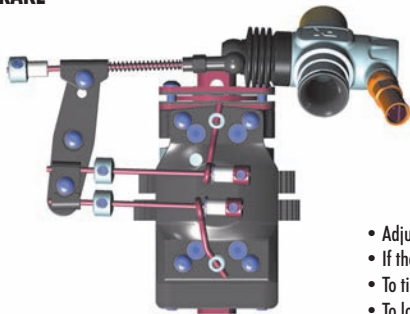
FULL THROTTLE



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



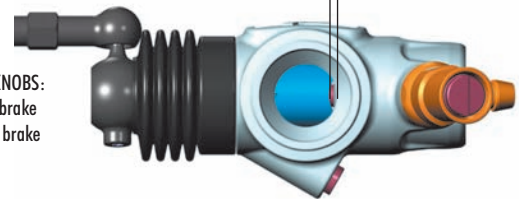
BRAKE



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

ENGINE IDLING cca 1mm

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



TROUBLESHOOTING GUIDE

PROBLEM	CAUSE	SOLUTION
ENGINE DOES NOT START	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Fuel tank is empty • Fuel lines, fuel filter, air cleaner, or muffler is clogged • Carburetor is not adjusted properly • Engine has overheated 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Carburetor is not adjusted properly • Fuel lines, fuel filter, air cleaner, or muffler is clogged • Low fuel pressure from muffler 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Weak transmitter and/or receiver batteries • Low reception from radio antennas • Servo linkages not adjusted properly 	<ul style="list-style-type: none"> • Recharge or replace batteries • Fully extend transmitter and receiver antennas • Move servo to neutral then re-adjust linkage(s)
STEERING DOES NOT WORK PROPERLY	<ul style="list-style-type: none"> • Weak transmitter and/or receiver batteries • Bent linkages or driveshafts • Loose steering components • Drivetrain damage 	<ul style="list-style-type: none"> • Recharge or replace batteries • Check tightness of steering components and tighten if necessary • Replace damaged parts
HANDLING PROBLEMS	<ul style="list-style-type: none"> • Shocks are not working properly • Suspension is binding • Improper tires 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Suspension is binding • Damaged steering servo 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Suspension is binding • Steering trim is off-center • Wheels are loose • Damaged steering servo 	<ul style="list-style-type: none"> • 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

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