1/8 LUXURY NITRO TRUGGY

4:7-1



INSTRUCTION MANUAL XRAY XT8.2 & XRAY XT8E.2

BEFORE YOU START

The GTX is a high-competition, high-quality, 1/8-scale GT 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 GTX, YOU MUST read through all of the operating instructions and instruction manual and fully understand them to get the maximum enjoyment and prevent unnecessary damage.

Read carefully and fully understand the instructions before beginning assembly.

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

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

CUSTOMER SUPPORT

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

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Phone: +421-32-7401100 Fax: +421-32-7401109

Email: info@teamxrav.com

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

Phone: (800) 519-7221 * (214) 744-2400

Fax: (214) 744-2401 Email: xray@rcamerica.com

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

SAFETY PRECAUTIONS

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

CAUTION: CANCER HAZARD

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

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

Take appropriate safety precautions prior to operating this model. You are responsible for this model's assembly and safe operation! Please read the instruction manual before building and operating this model and follow all safety precautions. Always keep the instruction manual at hand for auick 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 quaranty 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
- Follow the operating instructions for the radio equipment at all times.
- . Do not put fingers or any objects inside rotating and moving parts, as this may cause damage or serious injury as your finger, hair, clothes, etc. may get caught.
- Be sure that your operating frequency is clear before turning on or running your model, and never share the same frequency with somebody else at the same time. Ensure that others are aware of the operating frequency you are using and when you are using it.
- Use a transmitter designed for ground use with RC cars. Make sure that no one else is using the same frequency as yours in your operating area. Using the same frequency at the same time, whether it is driving, flying or sailing, can cause loss of control of the RC model, resulting in a serious accident.
- · Always turn on your transmitter before you turn on the receiver in the car. Always turn off the receiver before turning your transmitter off.

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

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



IMPORTANT NOTES – NITRO ENGINES

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





IMPORTANT NOTES — ELECTRICAL

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

- correctly. Over-charging, incorrect charging, or using inferior chargers can cause the batteries to become dangerously hot. Recharge battery when necessary. Continual recharging may damage battery and, in the worst case, could build up heat leading to fire. If battery becomes extremely hot during recharging, please ask your local hobby shop for check and/or repair and/or replacement.
- Regularly check the charger for potential hazards such as damage to the cable, plug, casing or other
 defects. Ensure that any damage is rectified before using the charger again. Modifying the charger may
 cause short-circuit or overcharging leading to a serious accident. Therefore do not modify the charger.
- Always unplug charger when recharging is finished.
- Do not recharge battery while battery is still warm. After use, battery retains heat. Wait until it cools
 down before charging.
- Do not allow any metal part to short circuit the receiver batteries or other electrical/electronic device on the model.
- Immediately stop running if your RC model gets wet as may cause short circuit.
- Please dispose of batteries responsibly. Never put batteries into fire.



IMPORTANT NOTES - NITRO FUEL

- Handle fuel only outdoors. Never handle nitro fuel indoors, or mix nitro fuel in a place where ventilation is had
- 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 inflammable, 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,
- 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 excess the monetary value of this product.

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

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

All rights reserved.

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

000





Assemble left and



Assemble front Pay attention and rear the same way



here

Assemble as many times as specified (here twice)

2x





Apply oil



Follow tip here





Cut off shaded portion



Use special tool







 (\mathcal{I})





Tighten screw gently



Ensure smooth non-binding movement





OIL





Follow Set-up Book



TOOLS REQUIRED

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)

Pinion Tool Set (XRAY #349901)



17mm Wheel Nut Tool (HUDY #107570)



Flywheel Tool (HUDY #182015)



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



Turnbuckle Wrench (HUDY #181040 4mm) (HUDY #181050 5mm)



Side Cutters (HUDY #189010)



Pocket Hobby Knife (HUDY #188981)



Needle Nose Pliers (HUDY #189020)



Professional Multi Tool (HUDY #183011)



Scissors (HUDY #188990)



Body Reamer (HUDY #107600)



TOOLS & EQUIPMENT INCLUDED

Silicone Shock Oil (HUDY #106336 350cSt 100ml) (HUDY #106341 400cSt 100ml)



Silicone Diff Oil (HUDY #106451 5000cSt 100ml) (HUDY #106511 10000cSt 100ml) (HUDY #106516 15000cSt 100ml)



Air Filter Oil (HUDY #106240)



■ Nitro

Graphite Grease (HUDY #106210)



NOT INCLUDED

To ensure that you always have access to the most up-todate 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





Flectric Motor

Electric









Steering and Throttle Servos



Receiver



Speed Controller



LiPo Battery Pack



Double-sided Tape (HUDY #107875)



Lexan™ Paint



Battery Charger



Receiver Pack



Threadlock & CA Glue



BODY





Fuel + Fuel Bottle (HUDY #104200)

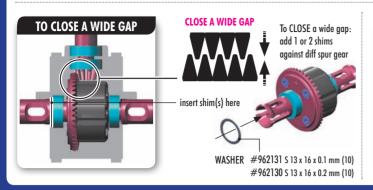


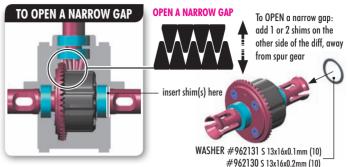
XT8 TECH TIPS

TIP FRONT & REAR DIFF GEAR MESH ADJUSTMENT

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

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





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.



Do not use drive shafts when the pins are worn.

Press out the worn pins.

Press in new pins and regularly inspect for wear.

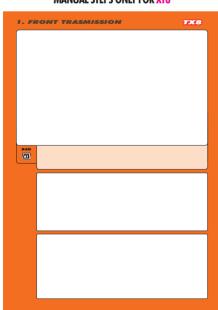


For easy drive pin replacements use #106000 HUDY Drive Pin Replacement Tool.



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

MANUAL STEPS ONLY FOR XT8



MANUAL STEPS ONLY FOR XT8E



MANUAL DUAL STEPS FOR XT8E AND XT8

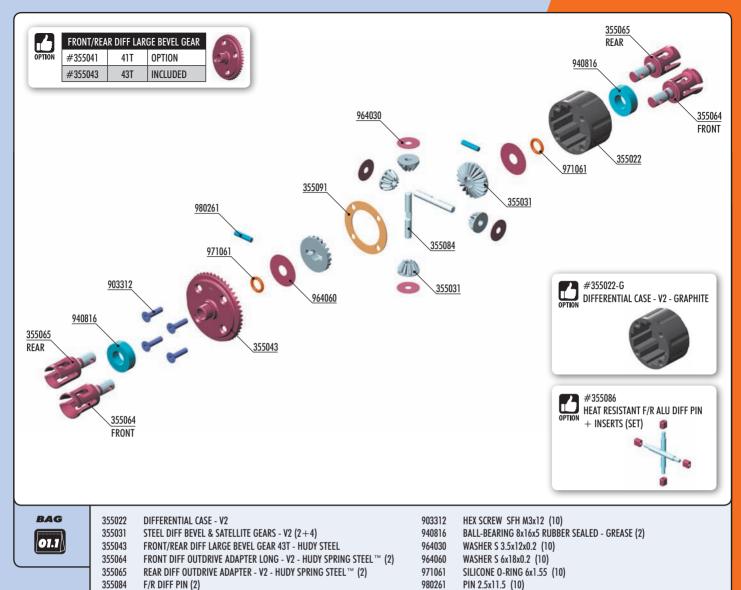
3. REAR DRIVETRAIN TEXBE TX8

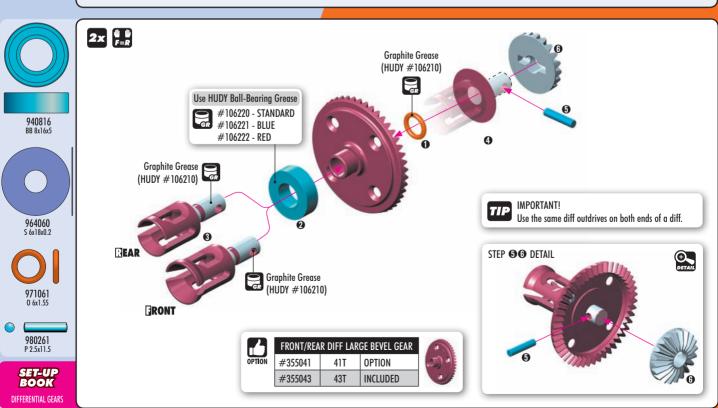
1. DIFFERENTIALS

F/R DIFF GASKET (4)

355091







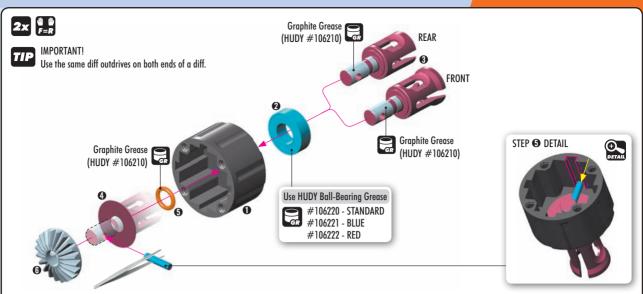
ESTE















VERY IMPORTANT!

Use the following silicone oils included in the kit for initial settings: FRONT diff: 10 000cSt / REAR diff: 5 000cSt



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



SET-UP BOOK

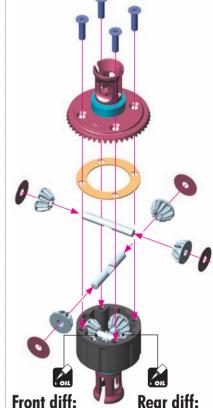
DIFFERENTIAL OIL

- 1. Put the diff (without oil) on the scale and check the weight:
- REAR DIFF approx. 39.30g
- FRONT DIFF approx. 40.10g



2. Slowly pour oil into the diff and watch the weight. Add 2.70g of oil into the diff. The approximate weight of the diff+oil is REAR DIFF approx. 42.00g and FRONT DIFF approx. 42.80g





Silicone oil 10 000cSt Fill just above the satellite gears.

Silicone oil 5 000cSt Fill just above the satellite gears.





Finish tightening in this order

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



1. CENTER DIFFERENTIAL



WASHER S 3.5x12x0.2 (10) WASHER S 6x18x0.2 (10)

PIN 2.5x11.5 (10)

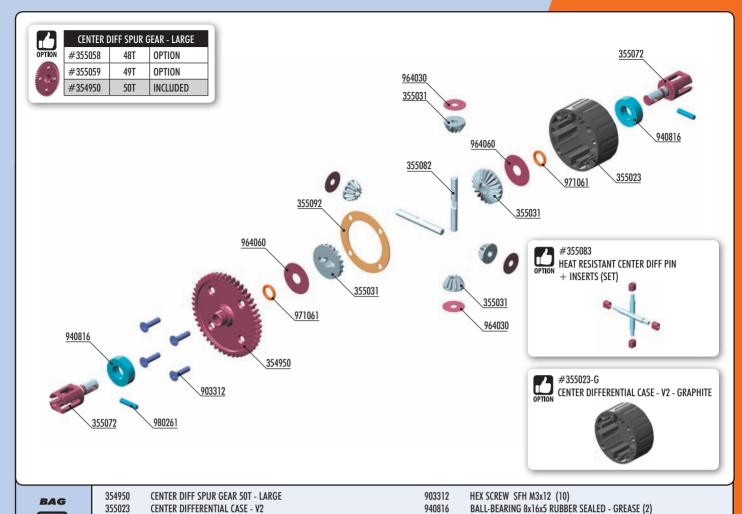
SILICONE O-RING 6x1.55 (10)

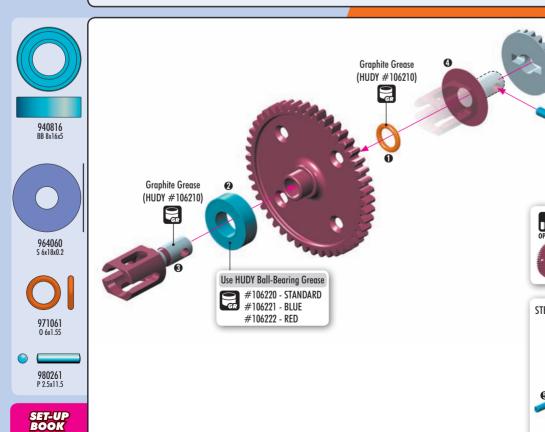
964030

964060

971061

980261





STEEL DIFF BEVEL & SATELLITE GEARS - V2 (2+4)

CENTER DIFF PIN (2)

CENTER DIFF GASKET (2)

LARGE CENTER DIFF OUTDRIVE ADAPTER - HUDY STEEL (2)

355031

355072

355082

355092

01.3

CENTER DIFF SPUR GEAR - LARGE
#355058 48T OPTION
#355059 49T OPTION
#354950 50T INCLUDED

STEP ® DETAIL

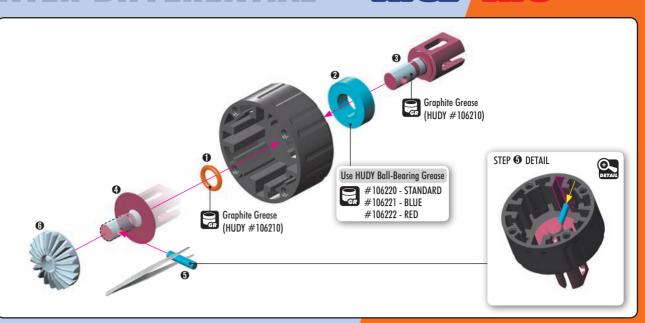
DIFFERENTIAL GEARS



964060 5 6/18/0.2

> 971061 0 6x1.55

980261 P 2.5x11.5



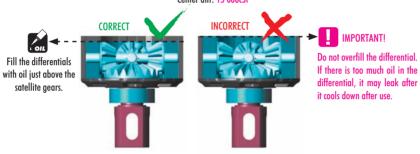




VERY IMPORTANT!

Use the following silicone oil included in the kit for initial setting:

Center diff: 15 000cSt

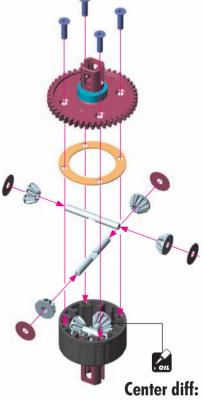


To ensure you have the same amount of oil from rebuild to rebuild, do the following:



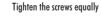
SET-UP check the weight (approximately 42.97g).

CENTER DIFF 42.97g + 5.33g = 48.30g



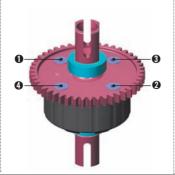
Silicone oil 15 000cSt Fill to just above the satellite gears.







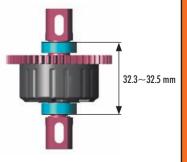
Finish tightening in this order



After assembly the differential should have a length of 32.3~32.5 mm measured from the ends of the installed ball-bearings. If differential is longer, retighten the 4 screws holding the spur gear.

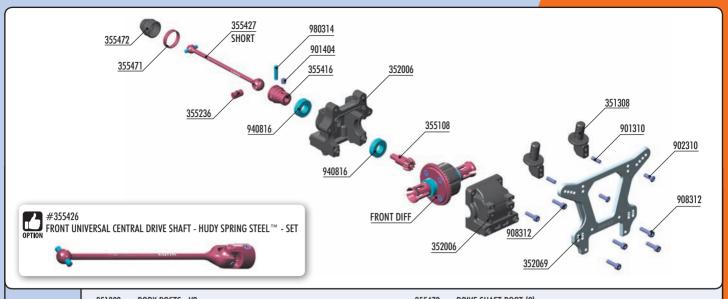
weight. Add 5.33g of oil into the diff. The

approximate weight of the diff+oil is 48.30g.



2. FRONT TRANSMISSION







901404 SB M4x4

901310 SB M3x10

902310 SH M3x10

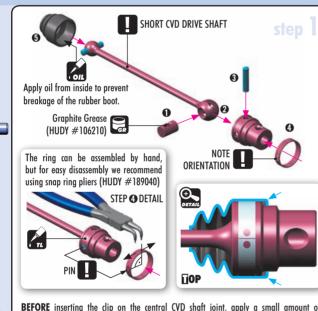
351308 **BODY POSTS - V2** DIFF BULKHEAD BLOCK SET FRONT/REAR 352006 352069 XT8 ALU FRONT SHOCK TOWER - CNC MACHINED 7075 T6 (4MM) 355108 **BEVEL DRIVE GEAR 10T** 355236 CVD DRIVE SHAFT COUPLING - HUDY SPRING STEEL™ CENTRAL CVD SHAFT UNIVERSAL JOINT - HUDY SPRING STEEL™ 355416 FRONT CENTRAL CVD DRIVE SHAFT - HUDY SPRING STEEL TO 355427 DRIVE SHAFT LOCKING RING (2)

DRIVE SHAFT BOOT (2) 355472 901310 HEX SCREW SB M3x10 (10) 901404 HEX SCREW SB M4x4 (10) HEX SCREW SH M3x10 (10) 902310 HEX SCREW SOCKET HEAD CAP M3x12 (10) 908312 BALL-BEARING 8x16x5 RUBBER SEALED - GREASE (2) 940816

PIN 3x14 (10)

980314

355471

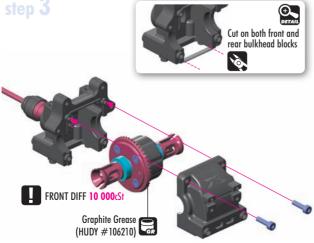


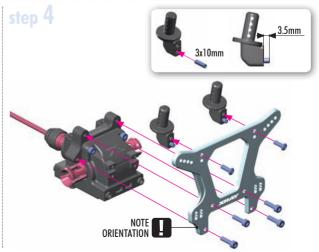
STEP 6 DETAIL 4x4mm Use HUDY Ball-Bearing Grease #106220 - STANDARD #106221 - BLUE #106222 - RED

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

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.

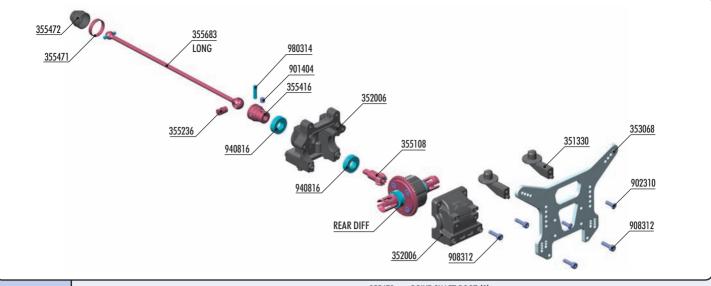






2. REAR TRANSMISSION

XTSE XTS



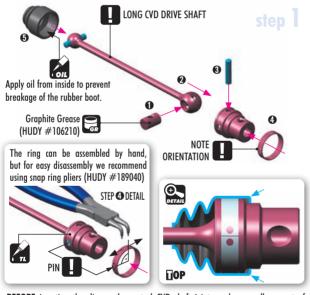
BAG 02 351330 COMPOSITE REAR BODY POST - LONG
352006 DIFF BULKHEAD BLOCK SET FRONT/REAR
353068 XT8 ALU REAR SHOCK TOWER - CNC MACHINED 7075 T6 (4MM)
355108 BEVEL DRIVE GEAR 10T
355236 CVD DRIVE SHAFT COUPLING - HUDY SPRING STEEL™
355416 CENTRAL CVD SHAFT UNIVERSAL JOINT - HUDY SPRING STEEL™
355683 XT8 CVD CENTRAL DRIVE SHAFT REAR - HUDY SPRING STEEL™
355471 DRIVE SHAFT LOCKING RING (2)

355472 DRIVE SHAFT BOOT (2)

901404 HEX SCREW SB M4x4 (10) 902310 HEX SCREW SH M3x10 (10) 908312 HEX SCREW SOCKET HEAD CAP M3x12 (10) 940816 BALL-BEARING 8x16x5 RUBBER SEALED - GREASE (2) 980314 PIN 3x14 (10)

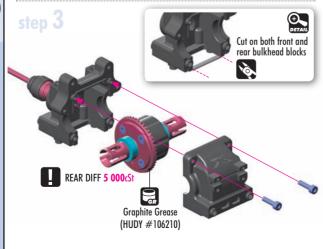


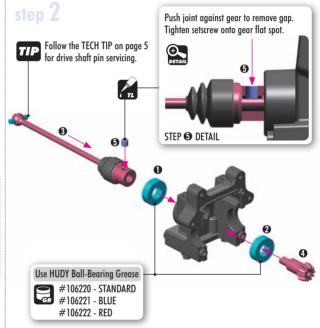
980314 P 3x14

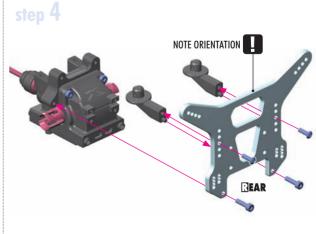


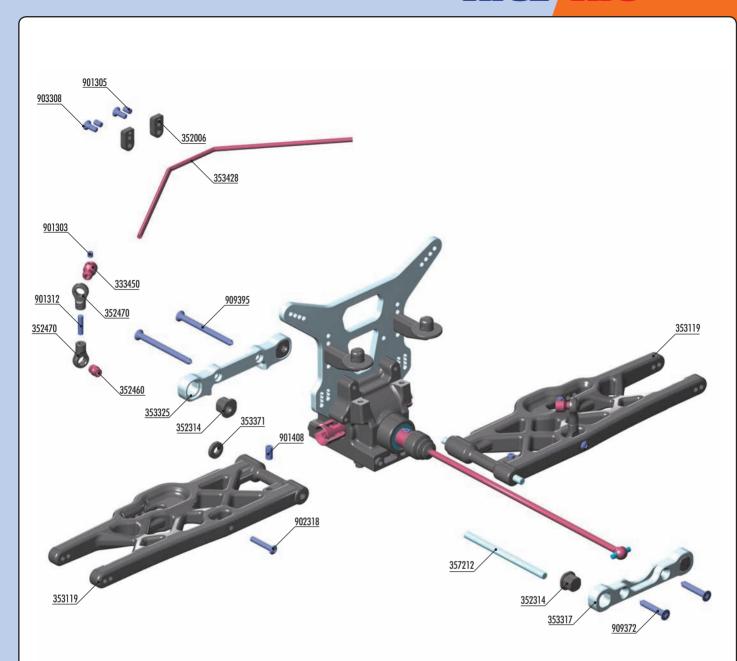
 $\mbox{\bf BEFORE}$ inserting the clip on the central CVD shaft joint, apply a small amount of threadlock on the area where the clip goes.

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.













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

357212



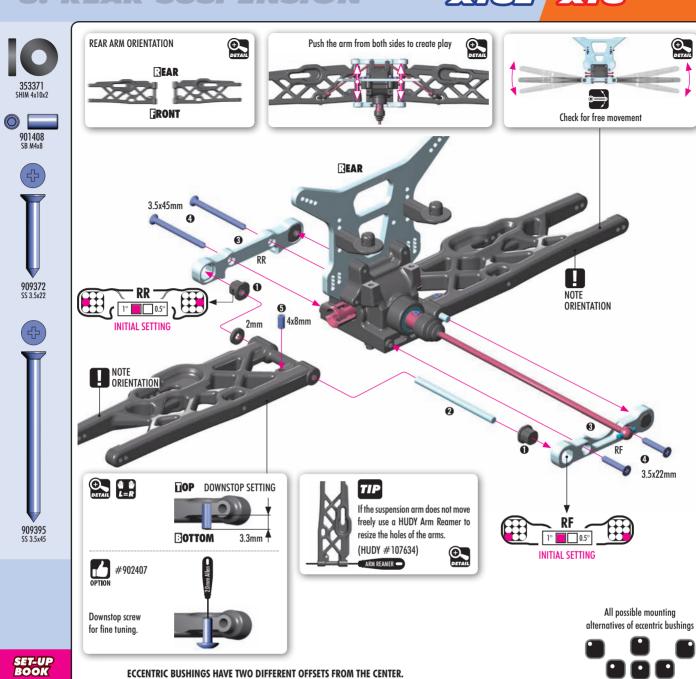
LOWER INNER PIVOT PIN F+R (2)

	REAR ANTI-ROLL BARS		
OPTION	#353418	ø1.8mm	OPTION
	#353420	ø2.0mm	OPTION
,	#353422	ø2.2mm	OPTION
	#353424	ø2.4mm	OPTION
	#353425	ø2.5mm	OPTION
	#353426	ø2.6mm	OPTION
	#353428	ø2.8mm	INCLUDED
	#353430	ø3.0mm	OPTION
	#353432	ø3.2mm	OPTION

BAG
03

333450 ANTI-ROLL BAR BALL JOINT 5.8 MM (2)	901303	HEX SCREW SB M3x3 (10)
352006 DIFF BULKHEAD BLOCK SET FRONT/REAR	901305	HEX SCREW SB M3x5 (10)
352314 COMPOSITE ECCENTRIC BUSHINGS - V2 (2)	901312	HEX SCREW SB M3x12 (10)
352460 PIVOT BALL 5.8 (10)	901408	HEX SCREW SB M4x8 (10)
352470 BALL JOINT 5.8 (8)	902318	HEX SCREW SH M3x18 (10)
353119 COMPOSITE REAR LOWER SUSPENSION ARM	903308	HEX SCREW SFH M3x8 (10))
353317 ALU REAR LOWER SUSP. HOLDER - FRONT - SQUARE ADJ. ROLL CENTER	909372	SCREW PHILLIPS SS 3.5x22 (10)
353325 ALU REAR LOWER SUSP. HOLDER - REAR - SQUARE ADJ. ROLL CENTER	909395	SCREW PHILLIPS SS 3.5x45 (10)
353371 SET OF COMPOSITE LOWER ARM SHIMS		
353428 REAR ANTI-ROLL BAR 2.8MM		



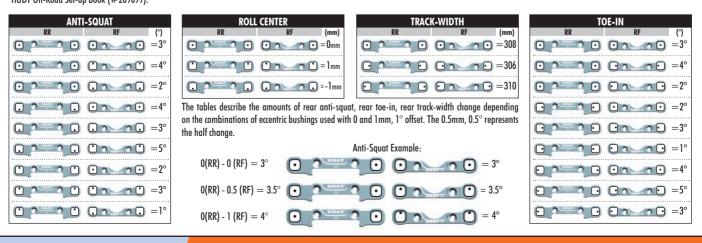


TOE-IN ANTI-SQUAT **ROLL CENTER DOWNSTO** WHEELBASI TRACK-WIDTH

> The XRAY rear alu lower suspension holders provide even greater range of adjustment for the rear suspension. Using different combinations of eccentric bushings, fine adjustment of rear anti-squat, rear toe-in, rear roll center, and rear track-width can be obtained. For more information about the influence of rear anti-squat, rear toe-in, rear roll center and rear track-width on car handling, please refer to HUDY Off-Road Set-up Book (#209099).

Outer position = 1mm or 1° from center

Middle position = 0.5 mm or 0.5° from center



3. REAR SUSPENSION





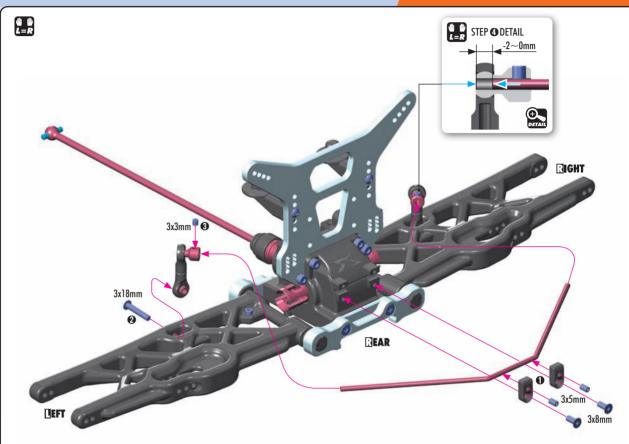


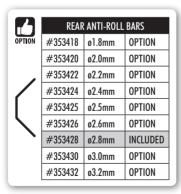










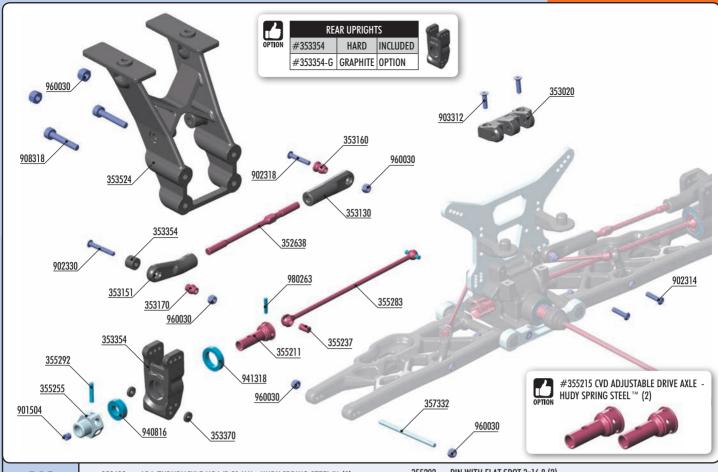






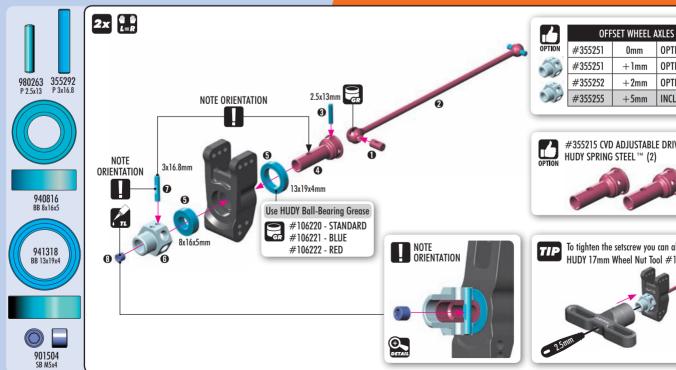
4. REAR SUSPENSION

SABE! **X178**



RAG 04

PIN WITH FLAT SPOT 3x16.8 (2) 355292 352638 ADJ. TURNBUCKLE M5 L/R 91 MM - HUDY SPRING STEEL™ (2) REAR LOWER OUTER PIVOT PIN (2) 357332 353020 **COMPOSITE REAR BRACE HOLDER** 353130 REAR UPPER INNER CAMBER LINK BALL JOINT (2) 901504 HEX SCREW SB M5x4 (10) RELIEF REAR UPPER OUTER CAMBER LINK BALL JOINT (2) 353151 HEX SCREW SH M3x14 (10) 902314 353160 MOUNTING BALL 6.8 (4) PIVOT BALL 6.8 (4) 902318 HEX SCREW SH M3x18 (10) 353170 902330 HEX SCREW SH M3x30 (10) SET OF COMPOSITE REAR HUB CARRIER SHIMS 353370 903312 HEX SCREW SH M3x12 (10) XB8 COMPOSITE REAR UPRIGHT LB 353354 908318 HEX SCREW SOCKET HEAD CAP M3x18 (10) 353524 COMPOSITE REAR WING HOLDER 940816 BALL-BEARING 8x16x5 RUBBER SEALED - GREASE (2) 355211 CVD DRIVE AXLE - HUDY SPRING STEEL™ BALL-BEARING 13x19x4 RUBBER SEALED - GREASE (2) 941318 CVD DRIVE SHAFT COUPLING - HUDY SPRING STEEL™ 355237 ALU WHEEL AXLE OFFSET "+5MM" - HARDCOATED (2) 960030 NUT M3 (10) 355255 XT8 CVD DRIVE SHAFT 138MM - HUDY SPRING STEEL 980263 PIN 2.5x13 (10) 355283



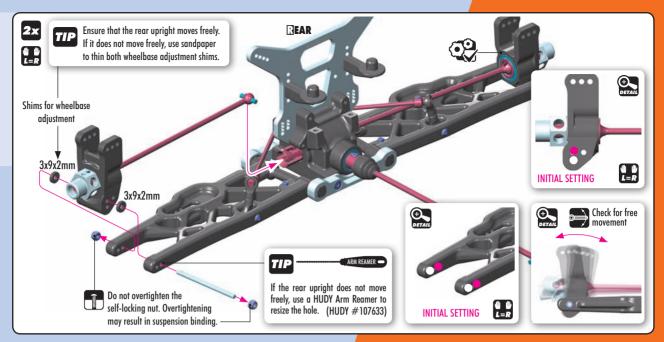


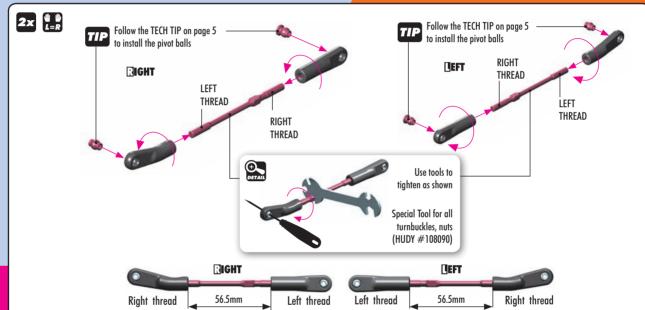






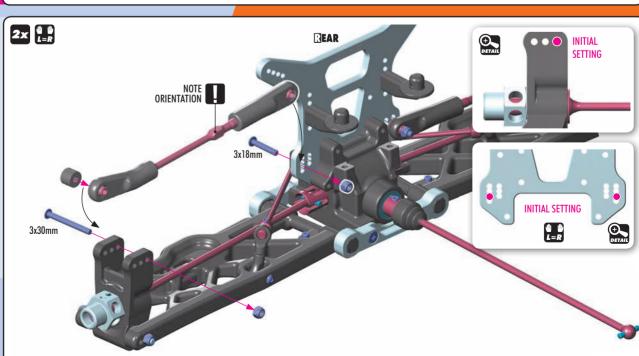








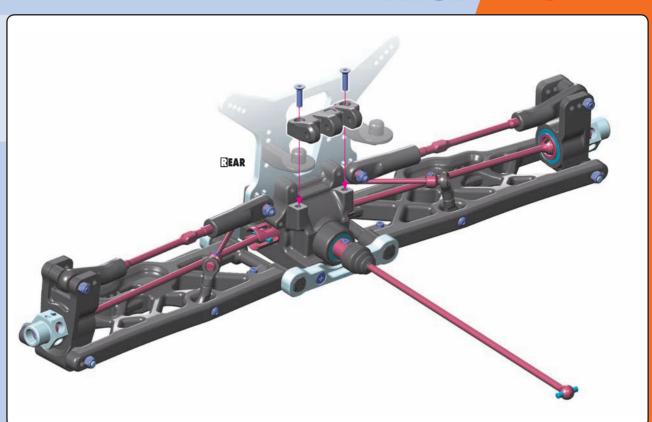




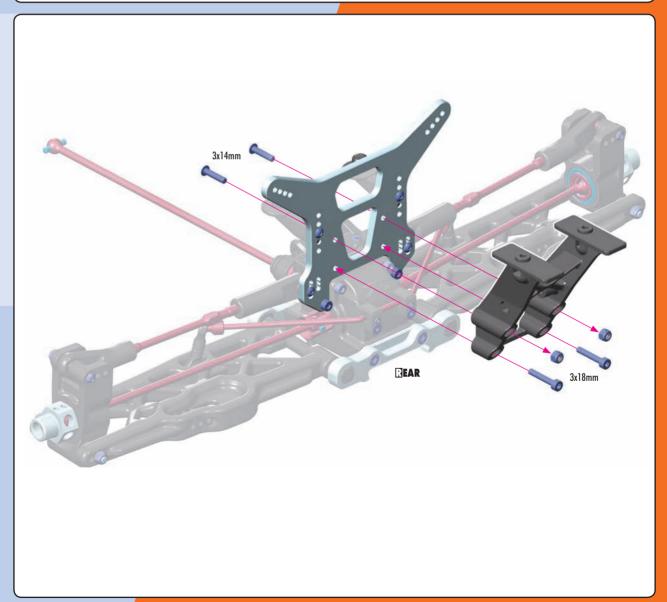


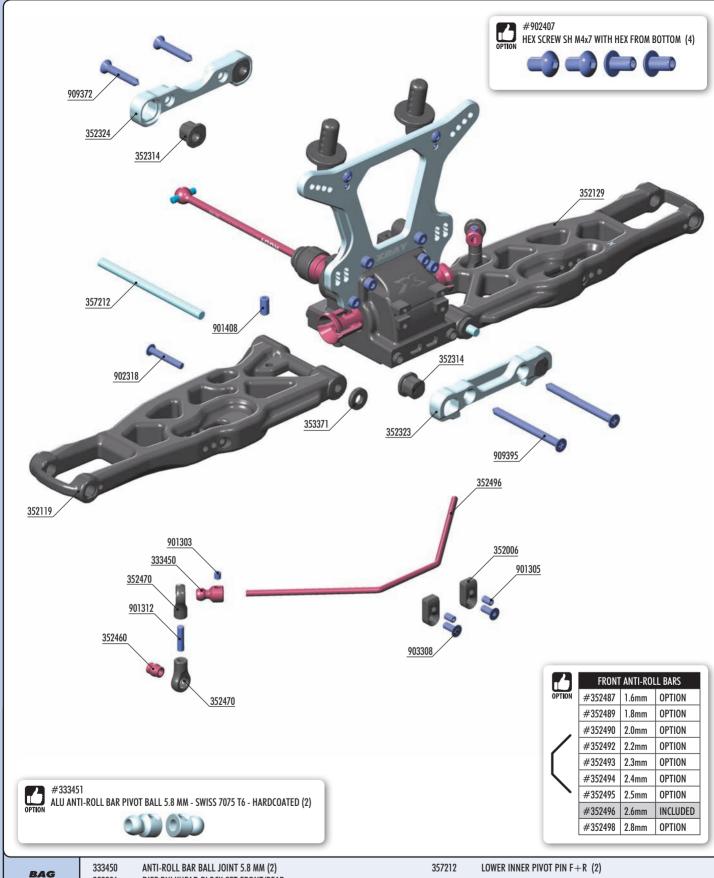












	BAG
1	
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333450	ANTI-ROLL BAR BALL JOINT 5.8 MM (2)	357212	LOWER INNER PIVOT PIN F+R (2)
352006	DIFF BULKHEAD BLOCK SET FRONT/REAR		
352119	XT8 COMPOSITE FRONT LOWER SUSPENSION ARM RIGHT	901303	HEX SCREW SB M3x3 (10)
352129	XT8 COMPOSITE FRONT LOWER SUSPENSION ARM LEFT	901305	HEX SCREW SB M3x5 (10)
352323	ALU FRONT LOWER SUSP. HOLDER - FRONT - SQUARE ADJ. ROLL CENTER - V2	901312	HEX SCREW SB M3x12 (10)
352324	ALU FRONT LOWER SUSP. HOLDER - REAR - SQUARE ADJ. ROLL CENTER - V2	901408	HEX SCREW SB M4x8 (10)
352314	COMPOSITE SQUARE ADJ. ROLL CENTER BUSHINGS - V2 (2)	902318	HEX SCREW SH M3x18 (10)
352460	PIVOT BALL 5.8 (10)	903308	HEX SCREW SFH M3x8 (10))
352470	BALL JOINT 5.8 (8)	909372	SCREW PHILLIPS SS 3.5x22 (10)
352496	FRONT ANTI-ROLL BAR 2.6MM	909395	SCREW PHILLIPS SS 3.5x45 (10)
353371	SET OF COMPOSITE LOWER ARM SHIMS		

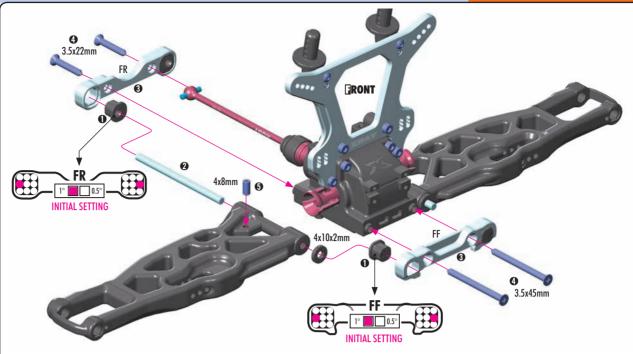




SET-UP BOOK KICK UP ROLL CENTER DOWNSTOP

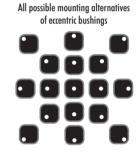
WHEELBASE

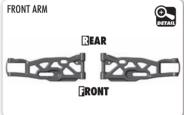
TRACK-WIDTH

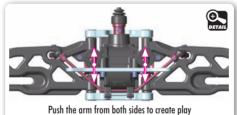






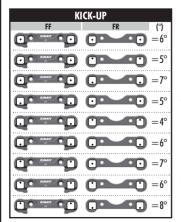








The new XRAY alu front lower suspension holders provide even greater range of adjustment for the front suspension. Using different combinations of eccentric bushings, you can obtain fine adjustment of front kick-up and roll center. For more information about the influence of kick-up and roll centers on car handling, please refer to HUDY Off-Road Set-up Book (#209099).



ROLL-CENTER			
FF	FR	(mm)	
	0	=1	
O **** O	00	=0	
		=-1	

The tables below describe the amounts of kick-up, 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:	
$O(FF) - O(FR) = 6^{\circ}$	D SRAY D D = 6°
$0.5(FF) - 0(FR) = 6.5^{\circ}$	= 6.5°
$1(FF)$ - $0(FR) = 7^{\circ}$	**************************************

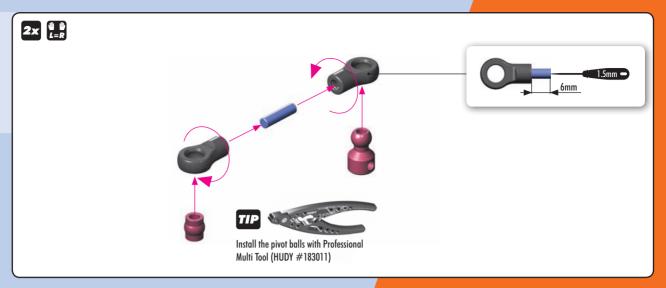
TOTAL CASTER = C-HUB CASTER + CASTER ECCENTRIC BUSHING + KICK-UP					
	KICK-UP				
C-Hub Caster	4°	7°	8°		
16° 💍	20°	21°	22°	23°	24°
15° 🔘	19°	20°	21°	22°	23°
14° 😞	18°	19°	20°	21°	22°

Total caster is the angle that the C-hub is to the flat chassis bottom. Caster is affected not only by front kick up but also by the C-hub caster and caster eccentric bushing. The combination of all three represents the total caster angle. The XT8 includes a 15°caster block with the centric bushing. 1 and 2mm eccentric bushings can be purchased as options.

5. FRONT SUSPENSION

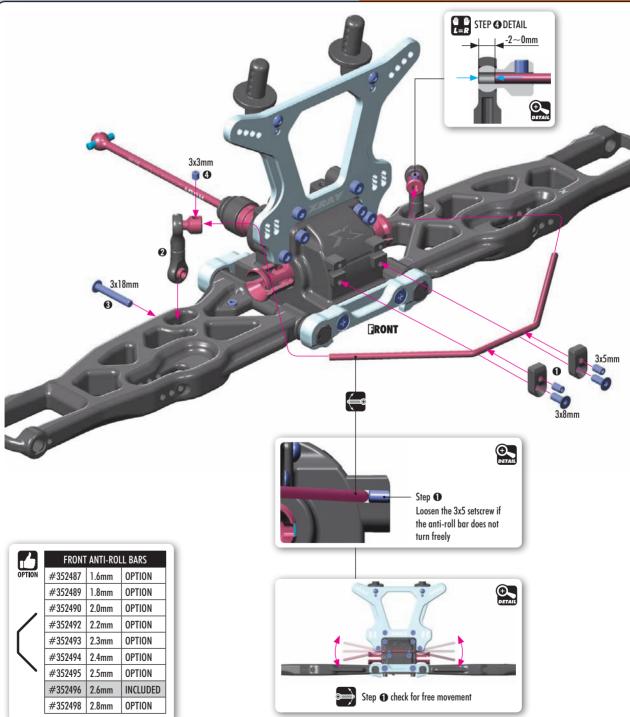








903308 SFH M3x8

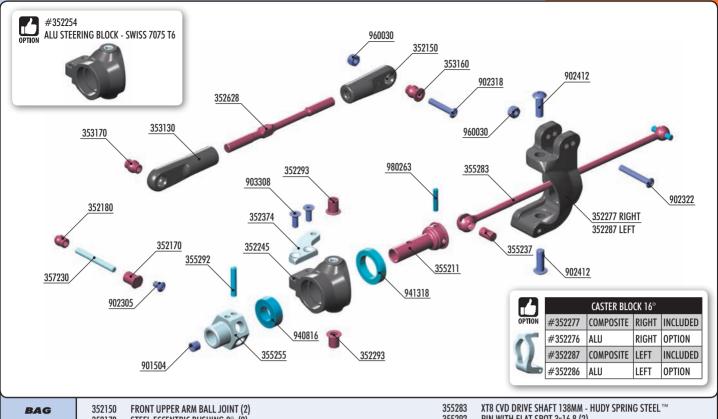


SET-UP BOOK ANTI-ROLL BAR



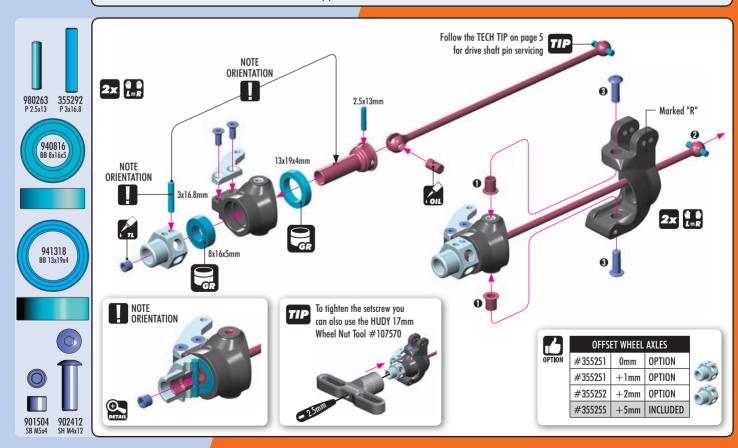
6. FRONT SUSPENSION

XT8E XT8



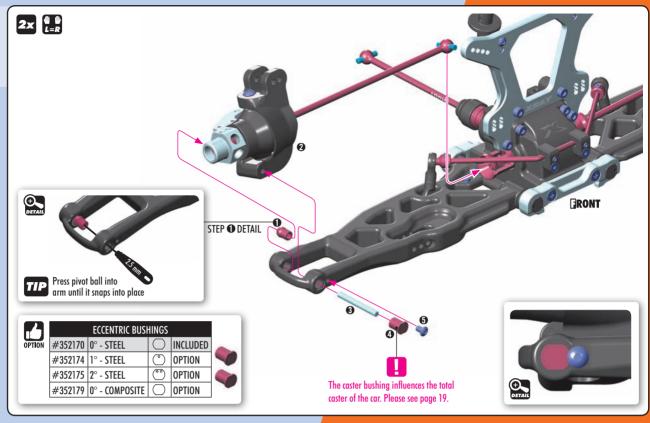


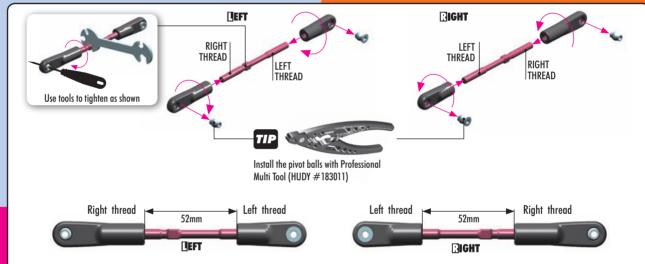
352150	FRONT UPPER ARM BALL JOINT (2)	355283	XT8 CVD DRIVE SHAFT 138MM - HUDY SPRING STEEL™
352170	STEEL ECCENTRIC BUSHING 0° (2)	355292	PIN WITH FLAT SPOT 3x16.8 (2)
352180	BALL MOUNT (2)	357230	FRONT LOWER OUTER PIVOT PIN (2)
352245	C-HUB STEERING BLOCK LB WITH ALU INSERTS		
352277	COMPOSITE C-HUB 16° RIGHT	901504	HEX SCREW SB M5x4 (10)
352287	COMPOSITE C-HUB 16° LEFT	902305	HEX SCREW SH M3x5 (10)
352374	ALU STEERING PLATE - SWISS 7075 T6 (L+R)	902318	HEX SCREW SH M3x18 (10)
352293	STEEL C-HUB BUSHING (2)	902322	HEX SCREW SH M3x22 (10)
352628	XT8 ADJ. TURNBUCKLE M5 L/R 75 MM - SPRING STEEL (2)	902412	HEX SCREW SH M4x12 (10)
353130	REAR UPPER INNER CAMBER LINK BALL JOINT (2)	903308	HEX SCREW SFH M3x8 (10)
353160	MOUNTING BALL 6.8 (4)	940816	BALL-BEARING 8x16x5 RUBBER SEALED - GREASE (2)
353170	PIVOT BALL 6.8 (4)	941318	BALL-BEARING 13x19x4 RUBBER SEALED - GREASE (2)
355211	CVD DRIVE AXLE - HUDY SPRING STEEL™	960030	NUT M3 (10)
355237	CVD DRIVE SHAFT COUPLING - HUDY SPRING STEEL™	980263	PIN 2.5x13 (10)
355255	ALU WHEEL AXLE OFFSET "+5MM" - HARDCOATED (2) - LIGHTWEIGHT		





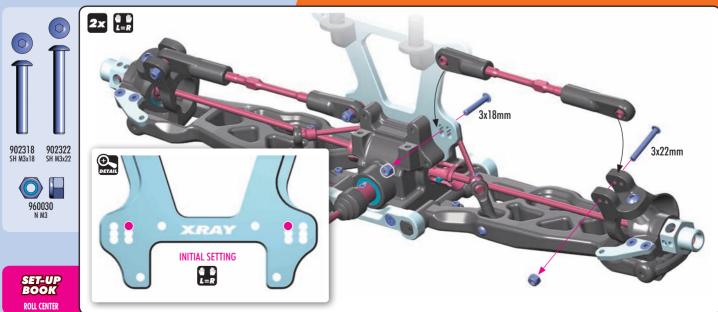






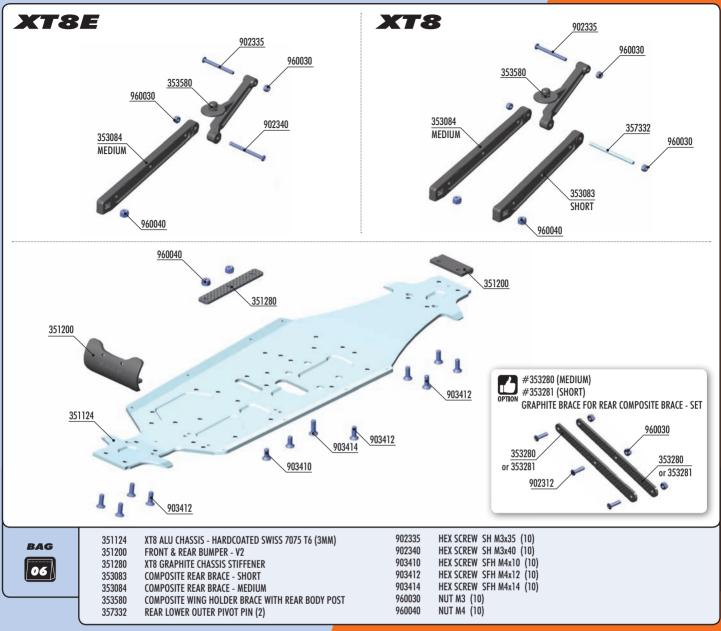
SET-UP BOOK

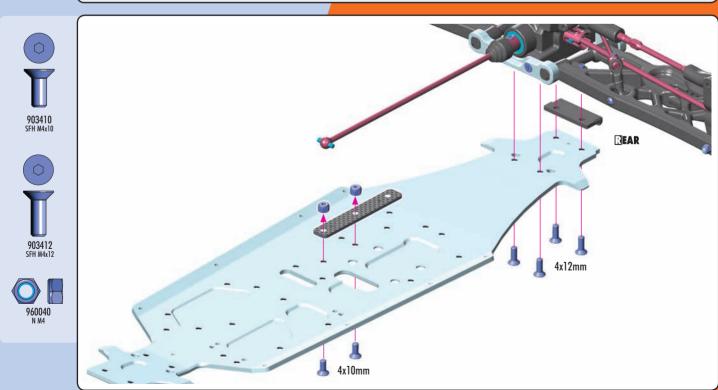
CAMBER





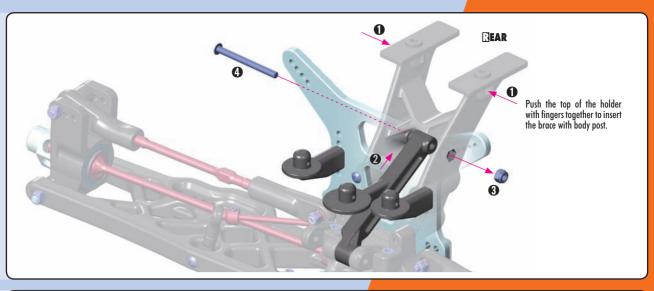
6. FRONT & REAR ASSEMBLY XISE XIS





6. FRONT & REAR ASSEMBLY XTS XTS

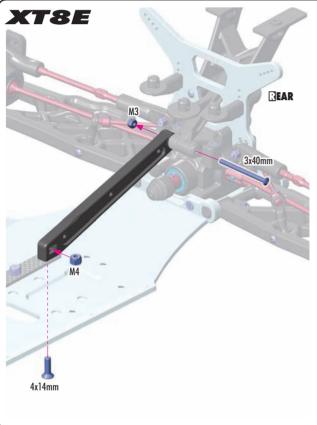


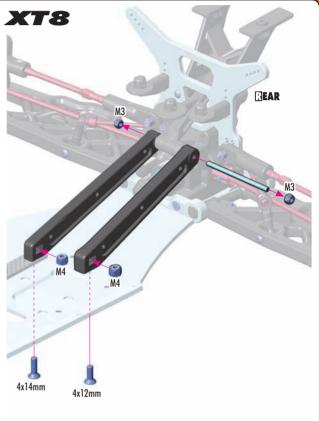




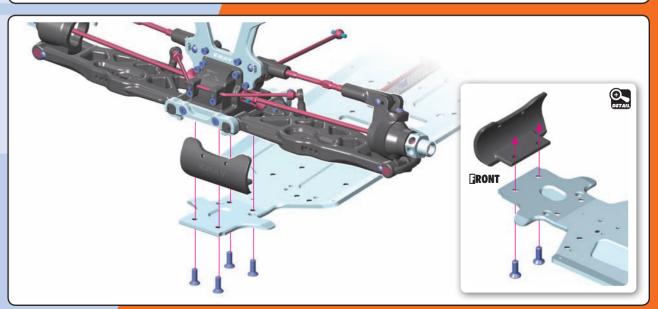






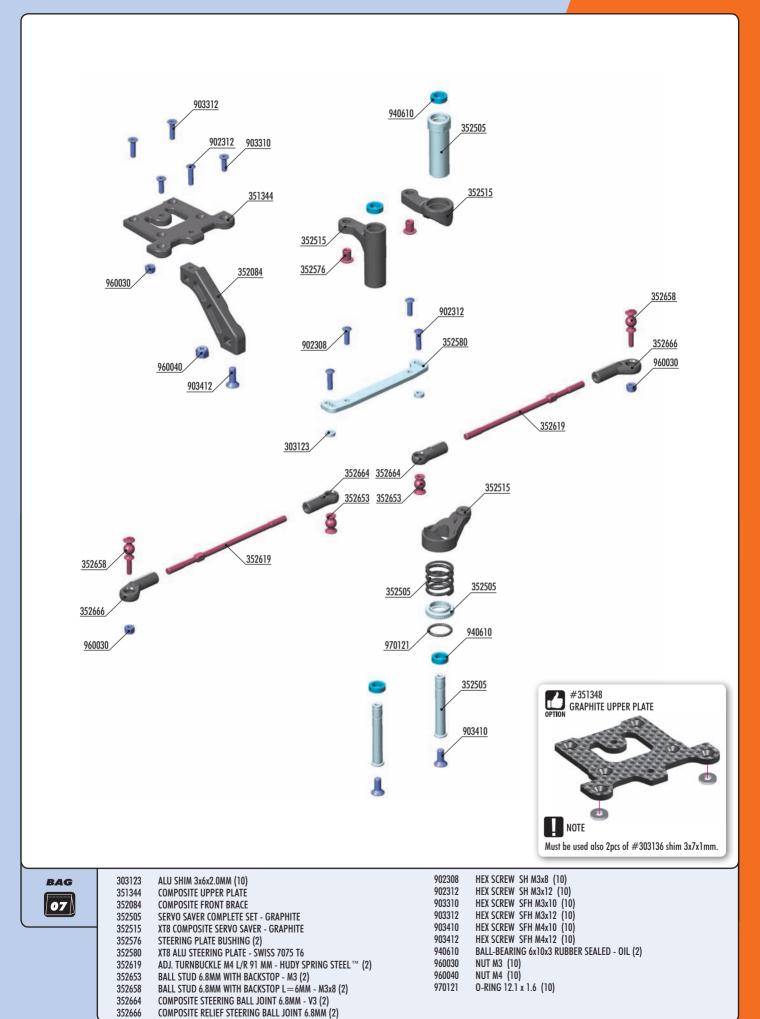






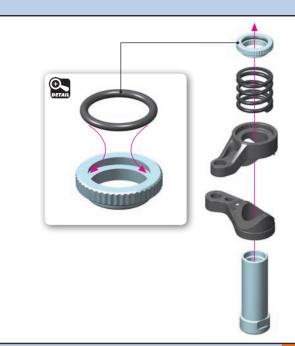








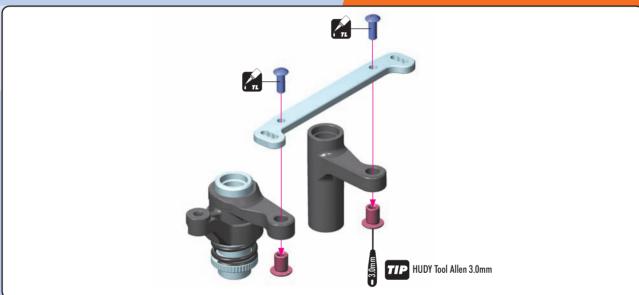




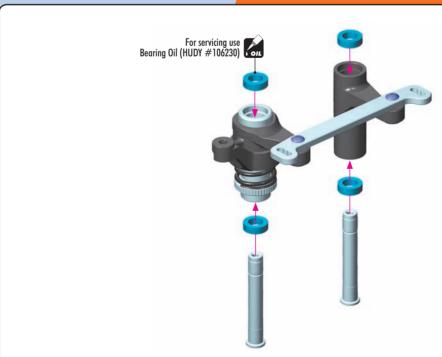






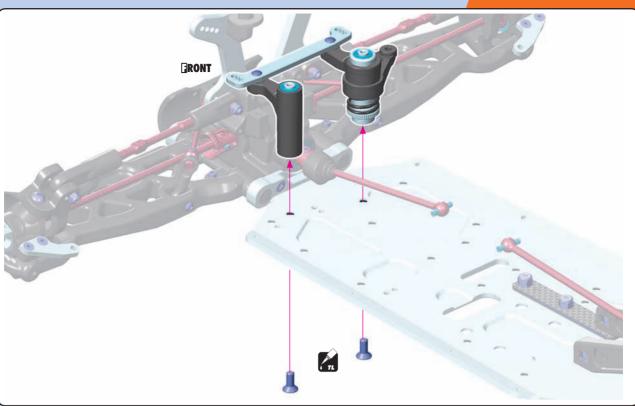




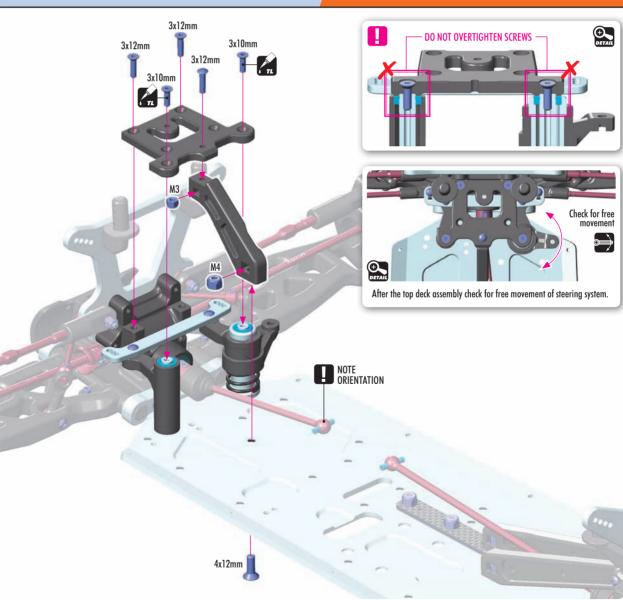




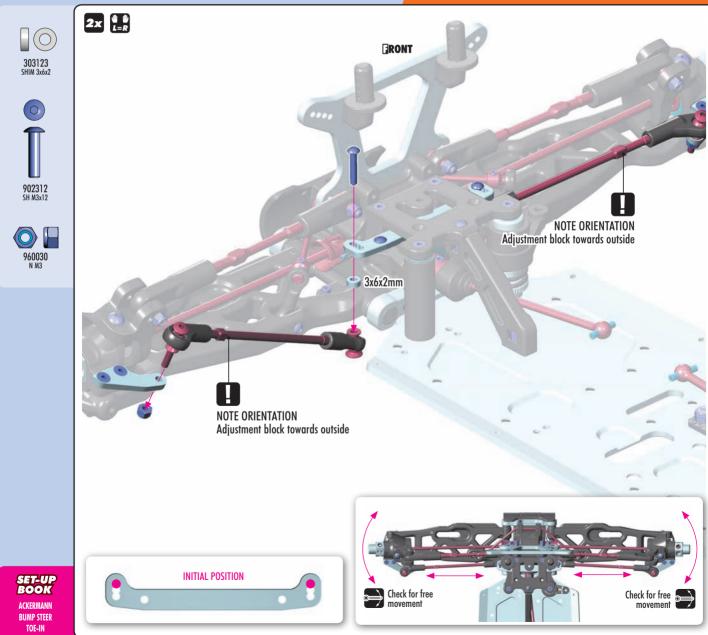


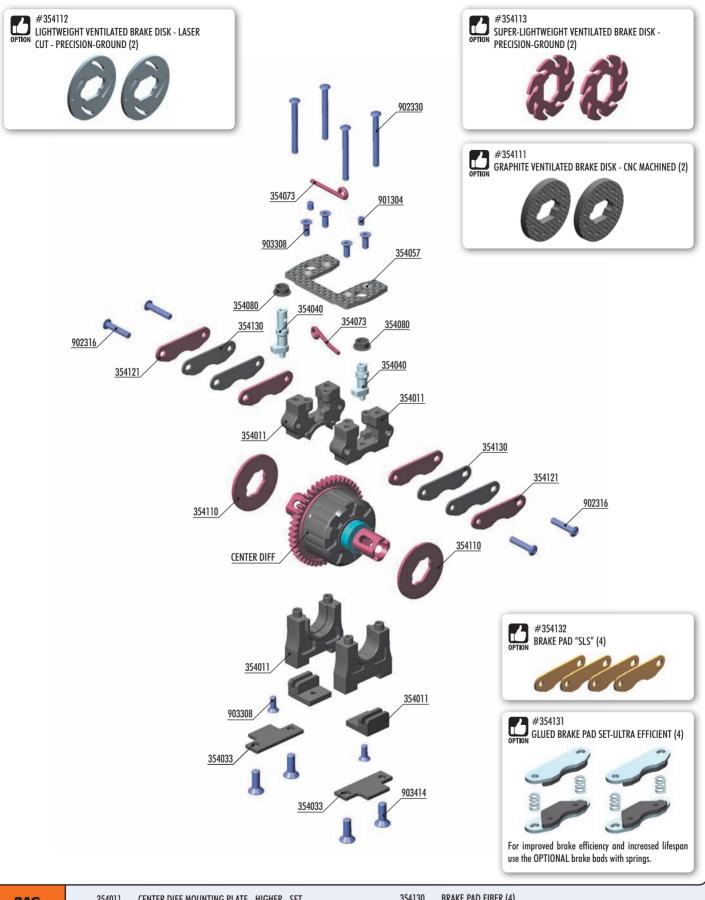






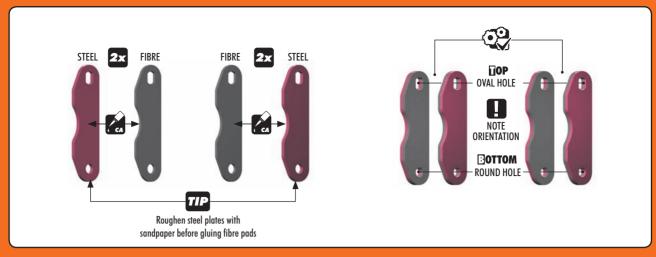








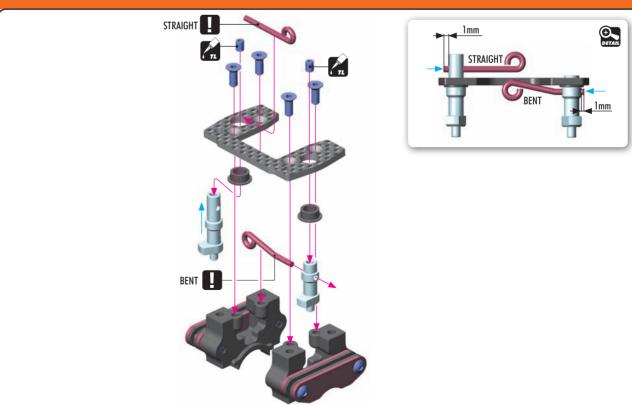
354011	CENTER DIFF MOUNTING PLATE - HIGHER - SET	354130	BRAKE PAD FIBER (4)
354033	COMPOSITE 2-SPEED HOLDER PLATE (2)		
354040	BRAKE CAM POST & ROD (2+2)	901304	HEX SCREW SB M3x4 (10)
354057	XT8 GRAPHITE CENTER DIFF MOUNTING PLATE	902316	HEX SCREW SH M3x16 (10)
354073	BRAKE CAME ROD $(1+1)$	902330	HEX SCREW SH M3x30 (10)
354080	COMPOSITE BUSHING FOR DIFF MOUNTING PLATE (2)	903308	HEX SCREW SFH M3x8 (10)
354110	VENTILATED BRAKE DISK - LASER CUT - PRECISION-GROUND	903414	HEX SCREW SFH M4x14 (10)
354121	STEEL BRAKE PAD - LASER CUT (4)		



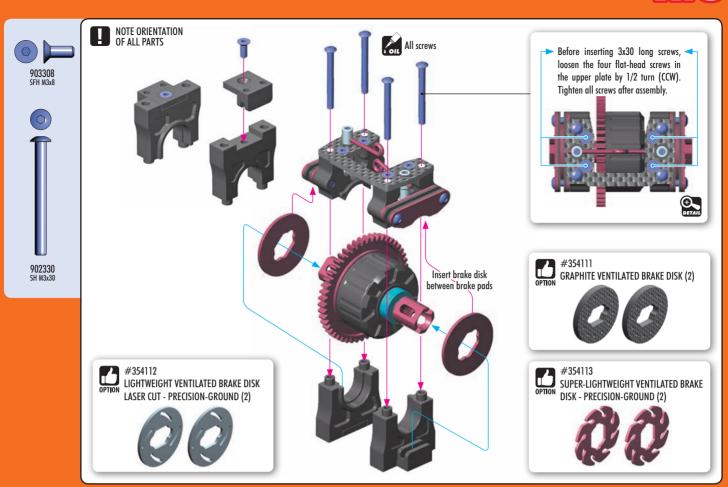


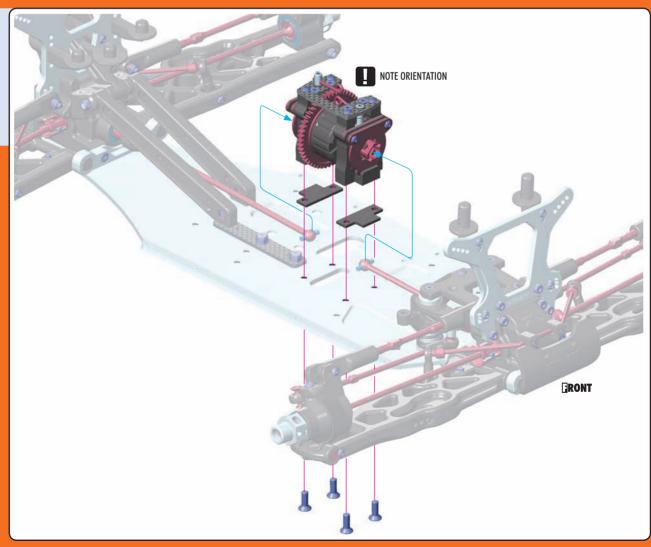




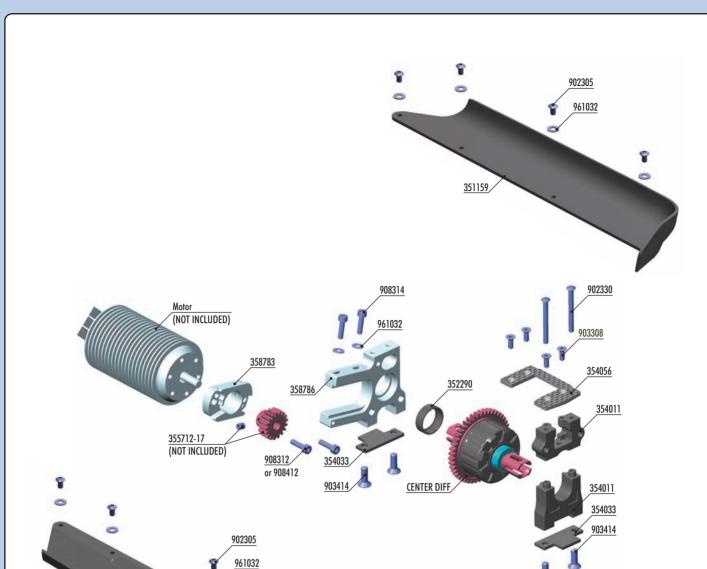


903414 SFH M4x14











<u>351159</u>/





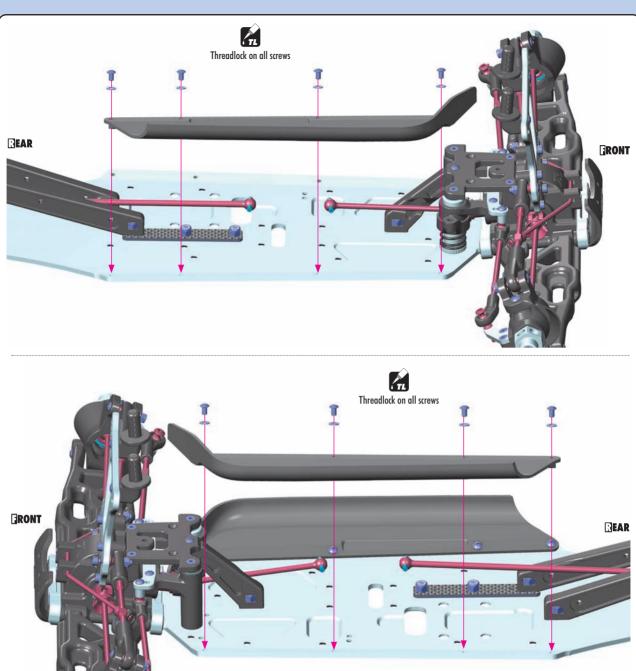
BAG	
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351159	CHASSIS SIDE GUARDS L+R	902305	HEX SCREW SH M3x5 (10)
352290	COMPOSITE BUSHING FOR ALU STEERING BLOCK (4)	902330	HEX SCREW SH M3x30 (10)
354011	CENTER DIFF MOUNTING PLATE SET - HIGHER	903308	HEX SCREW SFH M3x8 (10)
354033	COMPOSITE 2-SPEED HOLDER PLATE (2)	903414	HEX SCREW SFH M4x14 (10)
354056	XT8E GRAPHITE CENTER DIFF MOUNTING PLATE	908312	HEX SCREW SOCKET HEAD CAP M3x12 (10)
355712~17	12~17T PINION GEAR (OPTION)	908314	HEX SCREW SOCKET HEAD CAP M3x14 (10)
358783	ALU MOTOR MOUNT PLATE - V2	908412	HEX SCREW SOCKET HEAD CAP M4x12 (10)
358786	XB8E/XT8E ALU MOTOR MOUNT	961032	WASHER S 3.2 (10)

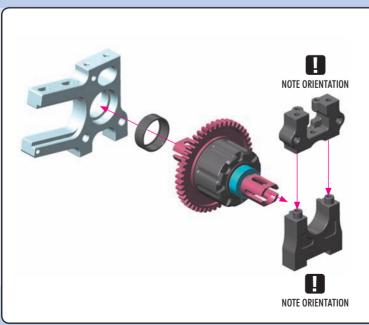


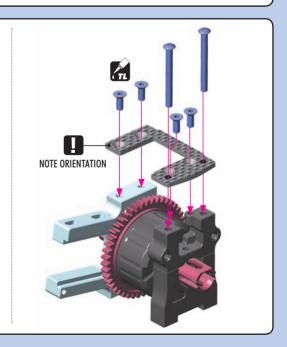






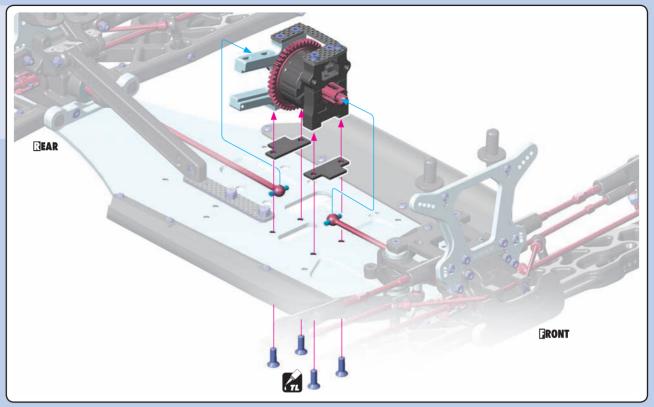


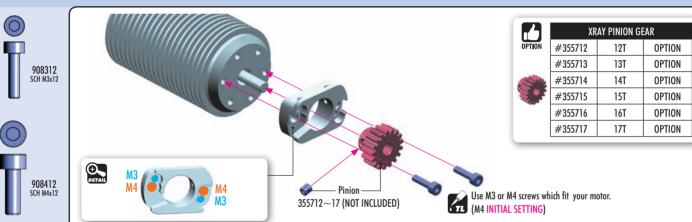


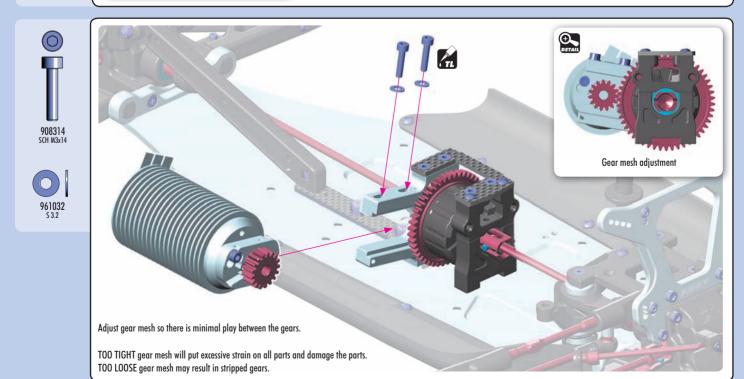




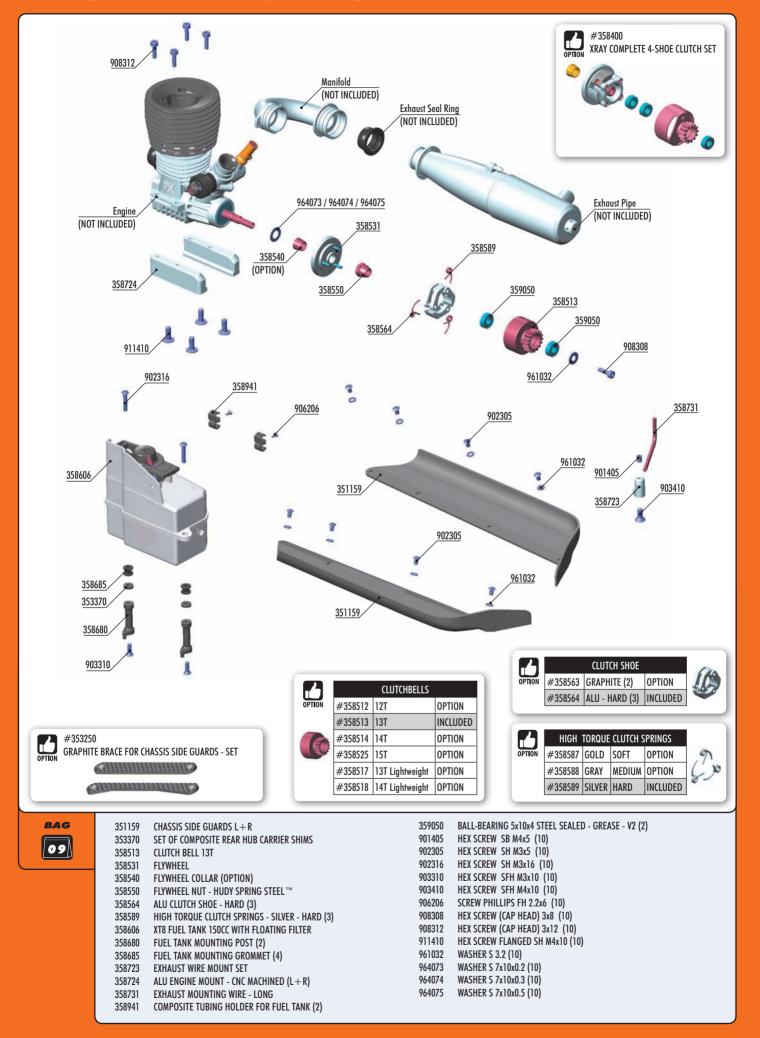






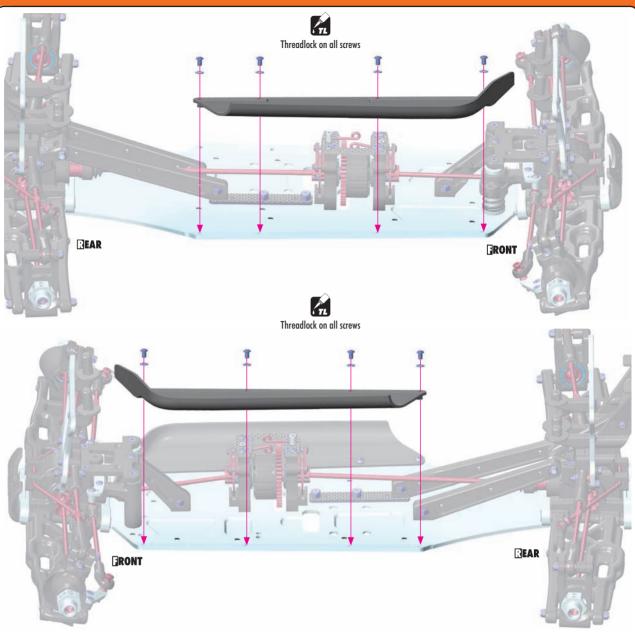


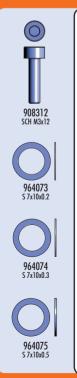
9. FUEL TANK & ENGINE

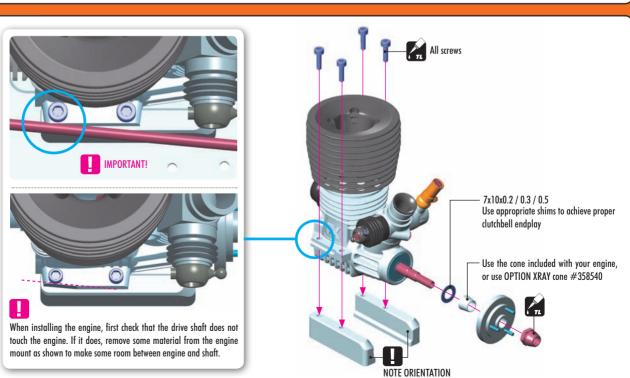


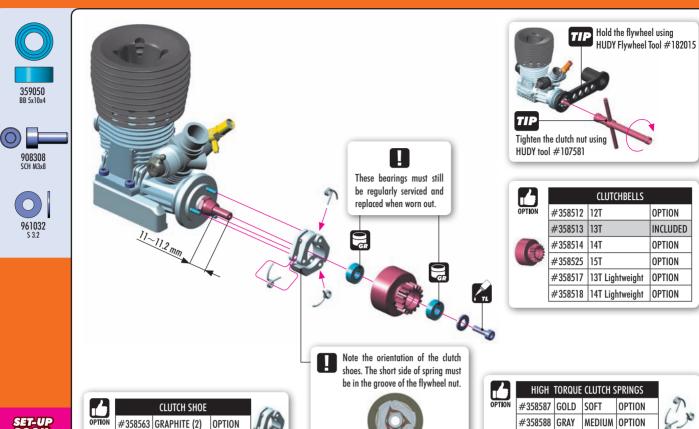


961032 5 3.2



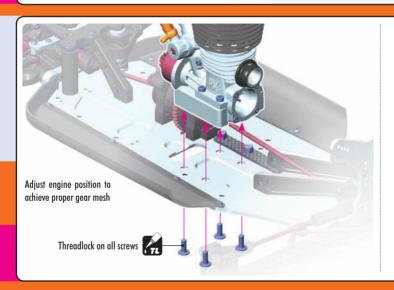






SET-UP BOOK CLUTCH SPRINGS CLUTCH SHOE

911410



#358564 ALU - HARD (3) INCLUDED



#358589 SILVER HARD

INCLUDED

EXTREMELY IMPORTANT

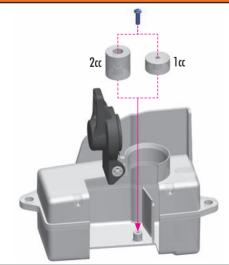
It is very important that your XT8 has properly-adjusted gear mesh. Adjust the gear mesh so there is adequate (or slightly larger) space between the spur gear and clutchbell teeth. Adjust the gear mesh by sliding the engine mounts in the slots of the chassis. You should be able to rock one gear back and forth slightly while holding the other one firmly. Be sure to check the gear mesh all the way around the spur gear. Tighten the screws once the engine alignment and gear mesh are correct, and then re-check the gear mesh to ensure the engine mounts did not move.



SET-UP BOOK

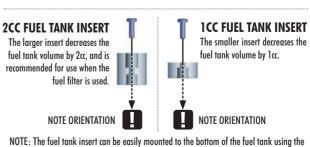
GEARING

GEAR MESH ADJ



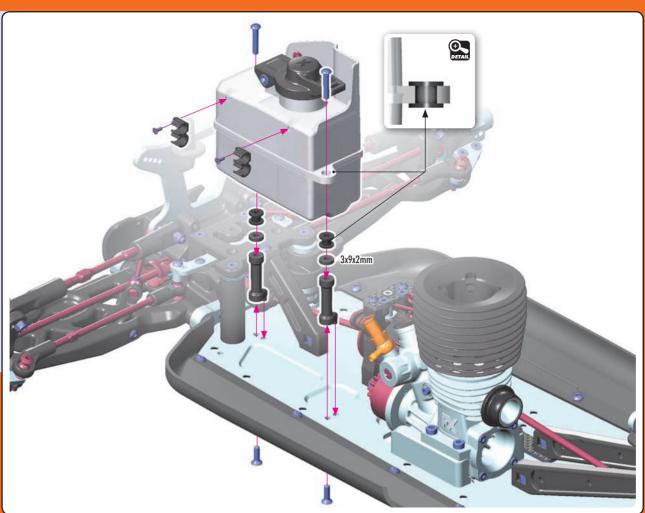
The fuel tank has the larger fuel volume and includes OPTIONAL tank inserts for decreasing the volume of the tank. Using the inserts allows you to adjust the volume of fuel inside the tank; this works in conjunction with variables such as fuel filter capacity and/or length of fuel line to ensure you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

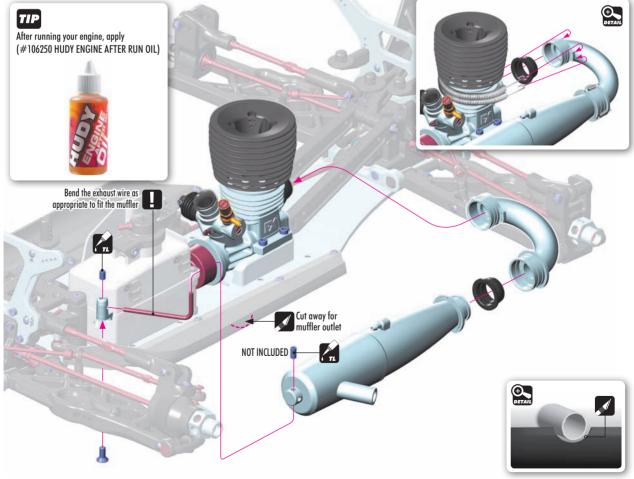


NOTE: The fuel tank insert can be easily mounted to the bottom of the fuel tank using the provided screw, when the fuel tank cap is opened fully.

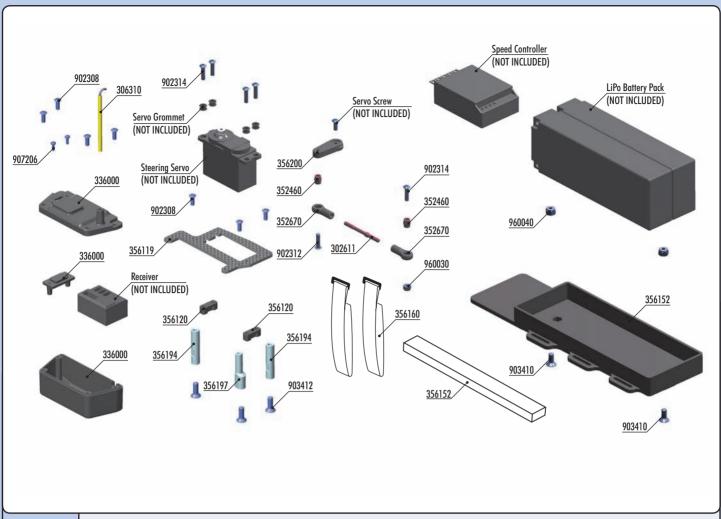








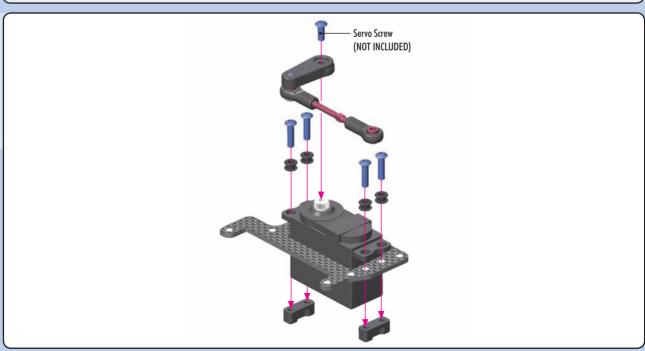






302611 306310	ADJ. TURNBUCKLE L/R 35 MM - HUDY SPRING STEEL (2) Antenna Tube (2)	356200	BRAKE/THROTTLE ARMS & STEERING SERVO ARMS - SET
336000	COMPOSITE RECEIVER CASE - V2	902308	HEX SCREW SH M3x8 (10)
336060	RECEIVER SWITCH - SET (OPTION)	902312	HEX SCREW SH M3x12 (10)
352460	PIVOT BALL 5.8 (10)	902314	HEX SCREW SH M3x14 (10)
352670	SERVO BALL JOINT 5.8MM (4)	903410	HEX SCREW SFH M4x10 (10)
356119	XT8E GRAPHITE RECEIVER CASE TOP PLATE	903412	HEX SCREW SFH M4x12 (10)
356120	STEERING SERVO MOUNT - SET	907206	SCREW PHILLIPS 2x6 (10)
356152	COMPOSITE BATTERY PLATE	960030	NUT M3 (10)
356160	VELCRO BATTERY STRAP 20x300MM (2)	960040	NUT M4 (10)
356194	ALU MOUNT FOR RECEIVER BOX		
356197	ALU MOUNT FOR RECEIVER BOX		

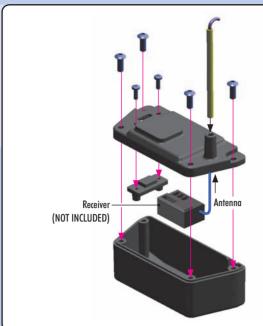










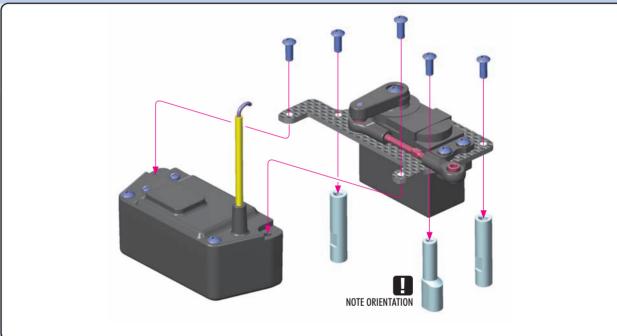




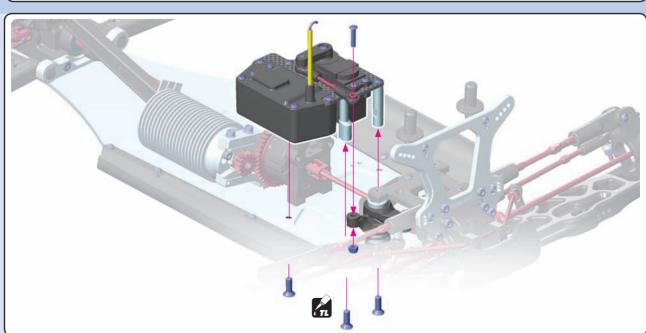


If the receiver box has 2 different-size openings for cable entry (narrow and wider), cut away the tab for the appropriate opening to allow the cables to fit properly.





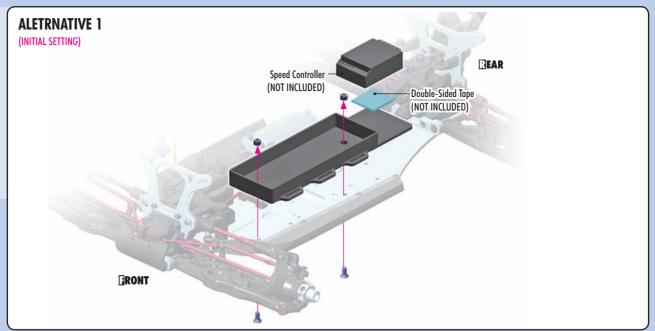






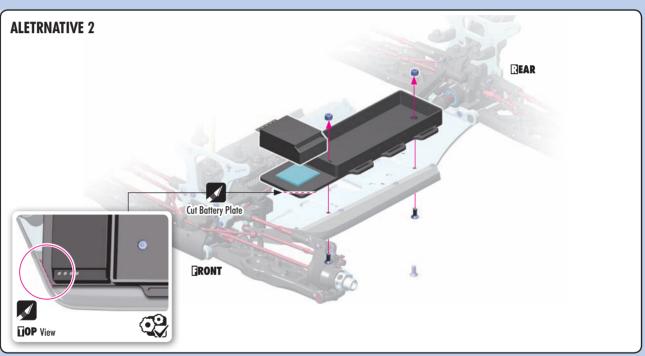


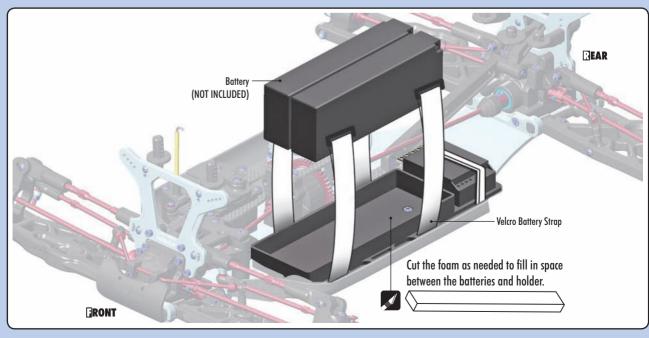


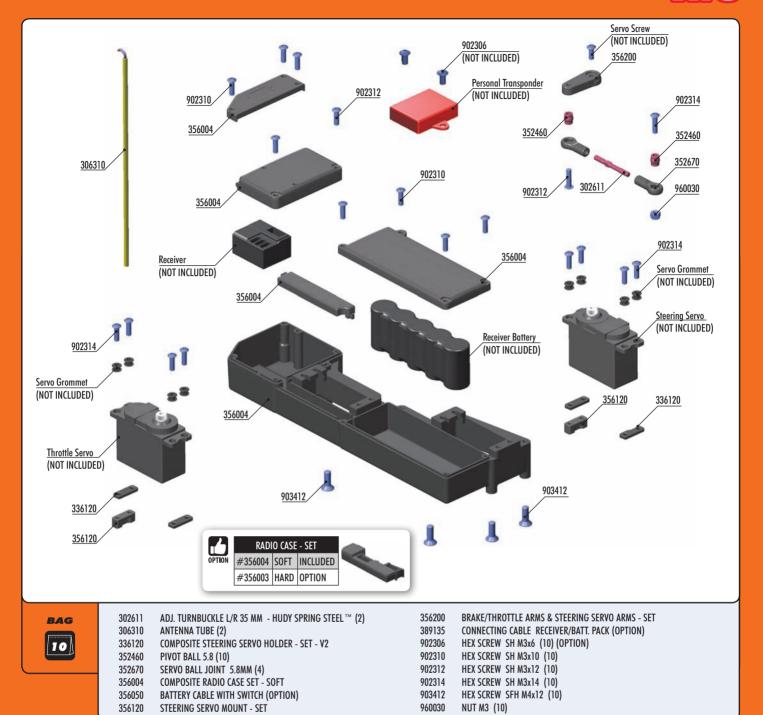


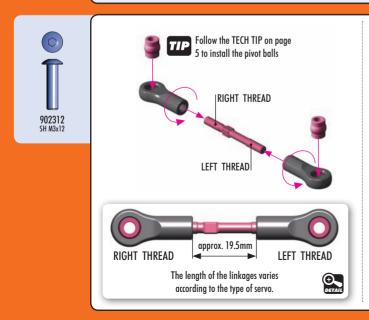






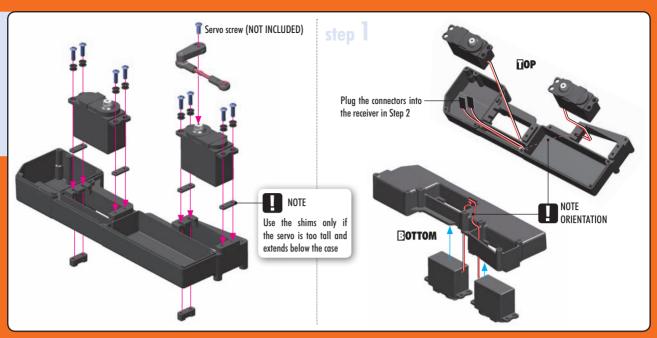










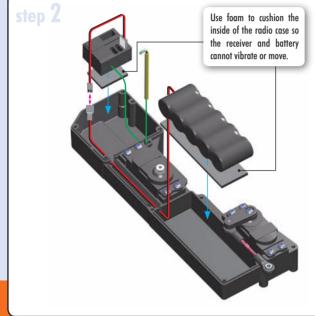


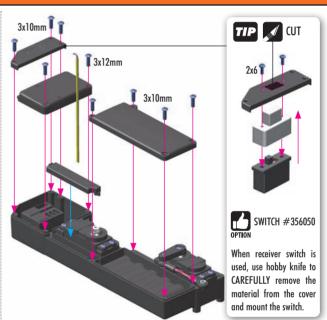
3x6mm (NOT INCLUDED)



902312 SH M3x12

907206 SP M2x6







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

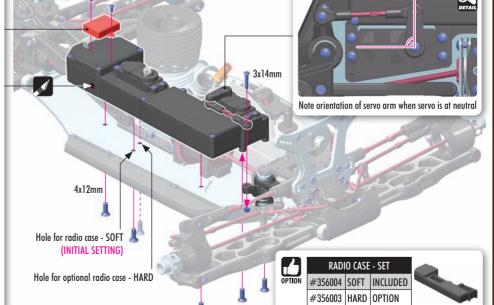
ALTERNATIVE 1

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.

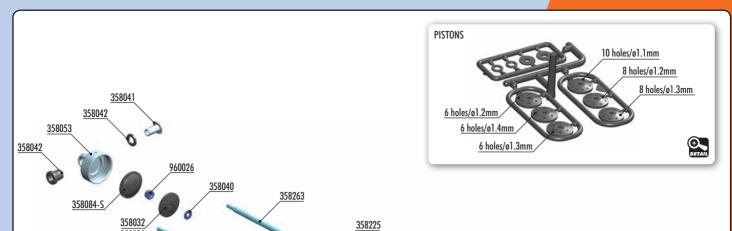
ALTERNATIVE 2

Place the transponder inside of the





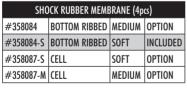




<u>358150</u>







4	2-WAY FLOW DELRIN SHOCK PISTON (4pcs)				
PTION	#358027	5-HOLE (1.5mm)	2-HOLE (1.0mm)	OPTION	
	#358028	6-HOLE (1.3mm)	2-HOLE (1.1mm)	OPTION	
	#358029	6-HOLE (1.4mm)	2-HOLE (1.1mm)	OPTION	
	#358027	8-HOLE (1.2mm)	2-HOLE (1.2mm)	OPTION	
	#358027	8-HOLE (1.3mm)	2-HOLE (1.2mm)	OPTION	





80mm

<u>358020</u>

BAGS	
11.1	

358084-S 358142	SHOCK RUBBER MEMBRANE BOTTOM RIBBED - SOFT (4) ALU SHOCK BODY NUT FOR SHOCK BOOT (2)
358074	FOLDING SHOCK BOOT (4)
358053	ALU SHOCK CAP NUT - BLACK COATED (2)
358042	COMPOSITE SHOCK BUSHING & SHIM - V2 (2+2)
358041	STEEL SHOCK BUSHING (2)
358040	HARDENED SHOCK SHIMS (4)
358033	COMPOSITE SHOCK 6-HOLE PISTON SET (1.2; 1.3; 1.4MM) - DELRIN - V2
358032	SHOCK PISTON SET 8-HOLE (1.2; 1.3) 10-H. (1.1MM) - DELRIN - V2
358020	COMPOSITE SHOCK PARTS
358019	COMPOSITE SET OF SHIMS FOR SHOCKS - V2 (2)
352460	PIVOT BALL 5.8 - V3 (10)

358150 ALU SHOCK BODY ADJ. NUT (2) 358225 XB8'16 ALU REAR SHOCK BODY - HARDCOATED (2) 358230 XT8 ALU REAR SHOCK BODY - HARDCOATED (2) 358263 XB8 REAR SHOCK SHAFT (2) 358270 XT8 REAR SHOCK SHAFT (2) 358365 XRAY FRONT SPRING 80MM - 3 DOTS (2) 358385 XRAY REAR SPRING 90MM - 3 DOTS 960026 NUT M2.5 - SHORT (10) 970100 O-RING 10 x 1.5 (10) 970180 O-RING 18 x 1.8 (10)		
358230 XT8 ALU REAR SHOCK BODY - HARDCOATED (2) 358263 XB8 REAR SHOCK SHAFT (2) 358270 XT8 REAR SHOCK SHAFT (2) 358365 XRAY FRONT SPRING 80MM - 3 DOTS (2) 358385 XRAY REAR SPRING 90MM - 3 DOTS 960026 NUT M2.5 - SHORT (10) 970100 O-RING 10 x 1.5 (10)	358150	ALU SHOCK BODY ADJ. NUT (2)
358263 XB8 REAR SHOCK SHAFT (2) 358270 XT8 REAR SHOCK SHAFT (2) 358365 XRAY FRONT SPRING 80MM - 3 DOTS (2) 358385 XRAY REAR SPRING 90MM - 3 DOTS 960026 NUT M2.5 - SHORT (10) 970100 O-RING 10 x 1.5 (10)	358225	XB8'16 ALU REAR SHOCK BODY - HARDCOATED (2)
358270 XT8 REAR SHOCK SHAFT (2) 358365 XRAY FRONT SPRING 80MM - 3 DOTS (2) 358385 XRAY REAR SPRING 90MM - 3 DOTS 960026 NUT M2.5 - SHORT (10) 970100 O-RING 10 x 1.5 (10)	358230	XT8 ALU REAR SHOCK BODY - HARDCOATED (2)
358365 XRAY FRONT SPRING 80MM - 3 DOTS (2) 358385 XRAY REAR SPRING 90MM - 3 DOTS 960026 NUT M2.5 - SHORT (10) 970100 O-RING 10 x 1.5 (10)	358263	
358385 XRAY REAR SPRING 90MM - 3 DOTS 960026 NUT M2.5 - SHORT (10) 970100 O-RING 10 x 1.5 (10)	358270	XT8 REAR SHOCK SHAFT (2)
960026 NUT M2.5 - SHORT (10) 970100 O-RING 10 x 1.5 (10)	358365	XRAY FRONT SPRING 80MM - 3 DOTS (2)
970100 O-RING 10 x 1.5 (10)	358385	XRAY REAR SPRING 90MM - 3 DOTS
970100 O-RING 10 x 1.5 (10)		
, ,	960026	NUT M2.5 - SHORT (10)
970180 O-RING 18 x 1.8 (10)	970100	O-RING 10 x 1.5 (10)
	970180	O-RING 18 x 1.8 (10)
971034 SILICONE O-RING 3.5x2 (10)	971034	SILICONE O-RING 3.5x2 (10)

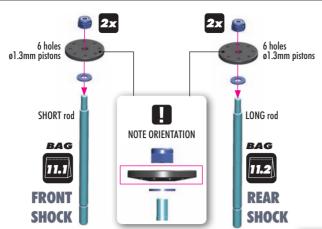
11. SHOCK ABSORBERS







960026 N M2.5





	2-WAY FLOW DELRIN SHOCK PISTON (4pcs)			
OPTION	#358027	5-HOLE (1.5mm)	2-HOLE (1.0mm)	OPTION
	#358028	6-HOLE (1.3mm)	2-HOLE (1.1mm)	OPTION
	#358029	6-HOLE (1.4mm)	2-HOLE (1.1mm)	OPTION
	#358027	8-HOLE (1.2mm)	2-HOLE (1.2mm)	OPTION
	#358027	8-HOLE (1.3mm)	2-HOLE (1.2mm)	OPTION







DO NOT OVERTIGHTEN

The self-locking nut is overtightened, causing distortion of the piston. This will negatively affect the free movement of the piston in the shock body.





TIGHTEN GENTLY

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

SET-UP BOOK SHOCK DAMPING SHOCK PISTONS

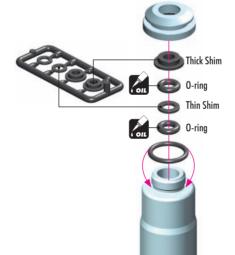




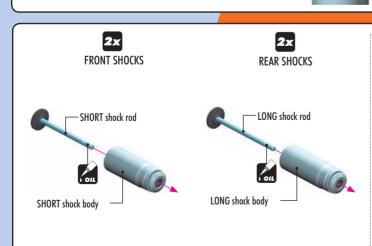
2x FRONT SHOCKS (SHORT)

2× REAR SHOCKS (LONG)

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





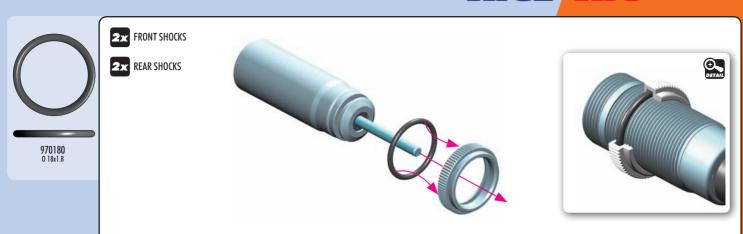


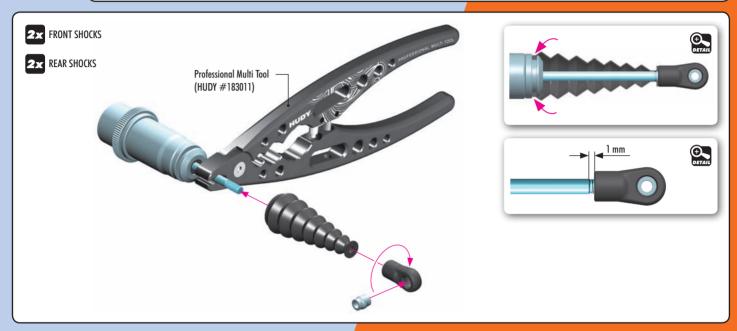


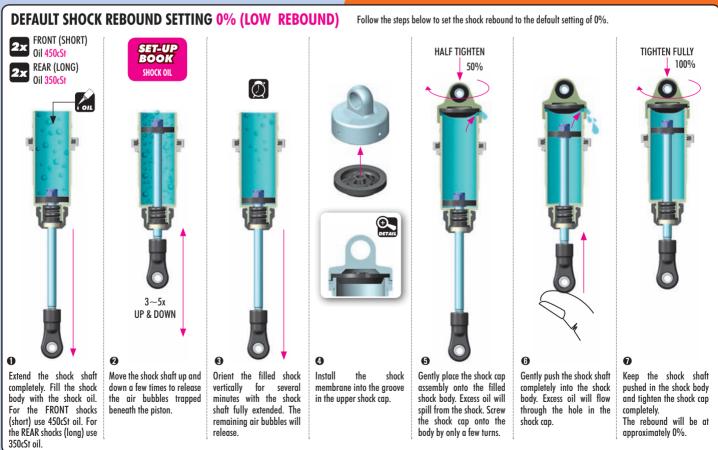
Do not push the shock rod straight through the lower shock body assembly; O-ring damage may result.

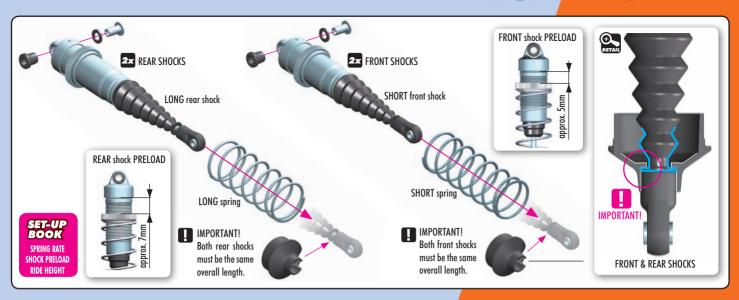
Twist the shock rod through the lower shock body assembly.











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)



Extend the shock shaft completely and remove the shock cap.



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



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



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



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



Keep the shock shaft pushed 50% into the shock body and tighten the shock cap completely.

The rebound will be at

The rebound will be at approximately 50%.

SETTING THE SHOCK REBOUND TO 100% (HIGH REBOUND)



Extend the shock shaft completely and remove the shock cap.



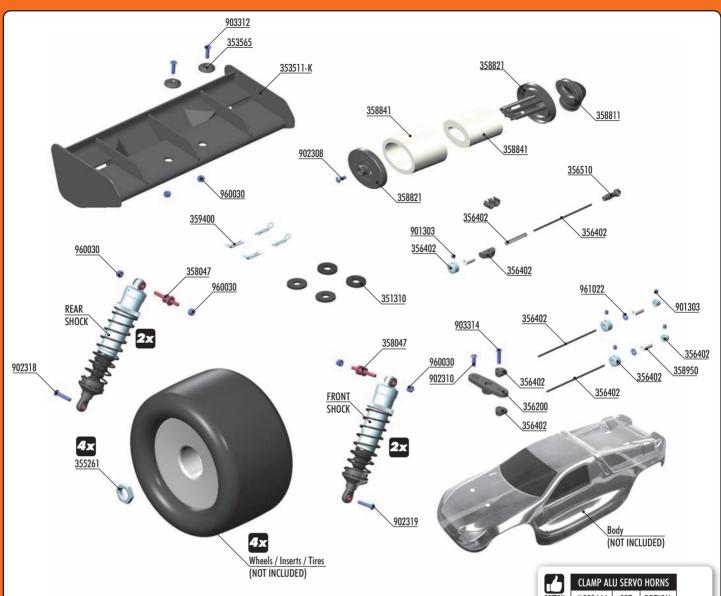
Fill the shock body with shock oil up to the top. Make sure to use same viscosity shock oil as is in the shock.



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



Gently place the shock cap 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%.





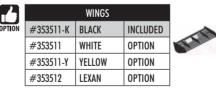




	WING SHIMS			
Ń	#353565	COMPOSITE	INCLUDED	
	#293561	ALU	OPTION	
	#293561-0	ALU	OPTION	
'	#353561	ALU	OPTION	









	ALU S	ERVO HO	ORNS
OPTION	#293504	23T	OPTION
HODY	#293505	24T	OPTION
	#293506	25T	OPTION
	#293507	23T	OPTION
	#293508	24T	OPTION
	#293509	25T	OPTION



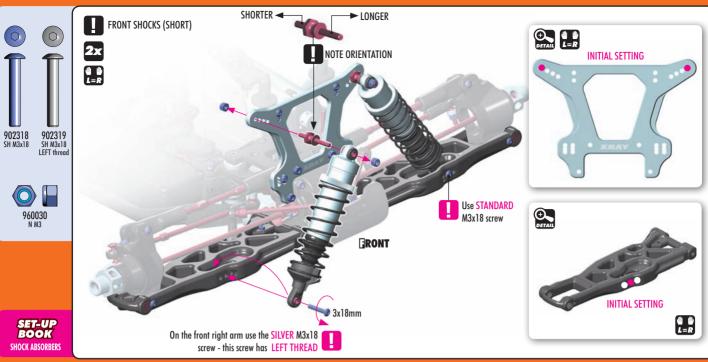
351310	FOAM WASHER FOR BODY POSTS (4)
353511-K	REAR WING - BLACK
353565	COMPOSITE REAR WING SHIM - BLACK (2)
355261	WHEEL NUT - RIBBED - HARDvCOATED (2)
356200	BRAKE/THROTTLE ARMS & SERVO ARMS - SET
356402	BRAKE/THROTTLE SYSTEM - SET
356510	CLOSED BALL JOINT 3.9 (4)
358047	STEEL SCREW SHOCK PIVOT BALL WITH HEX (2)
358811	AIR FILTER ELBOW - LOW PROFILE
358821	AIR FILTER BODY & CAP - LOW PROFILE
358841	AIR FILTER FOAM & OIL - LOW PROFILE
358950	SILICONE TUBING 1M (2.4 x 5.5MM)
359400	BODY CLIP (10)

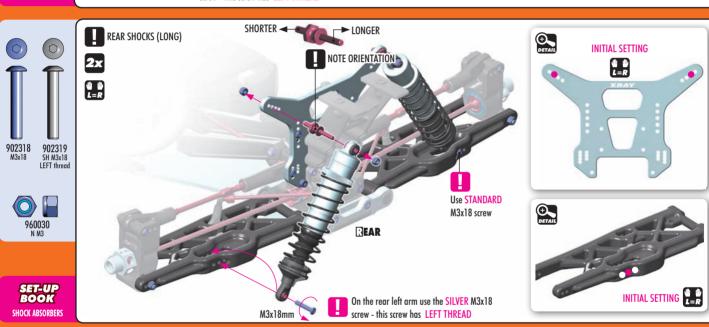
901303	HEX SCREW SB M3x3 (10)
902308	HEX SCREW SH M3x8 (10)
902310	HEX SCREW SH M3x10 (10)
902318	HEX SCREW SH M3x18 (10)
902319	HEX SCREW SH M3x18 - LEFT THREAD (10)
903312	HEX SCREW SFH M3x12 (10)
903314	HEX SCREW SFH M3x14 (10)
960030	NUT M3 (10)
961022	WASHER S 2.2 (10)
	, ,

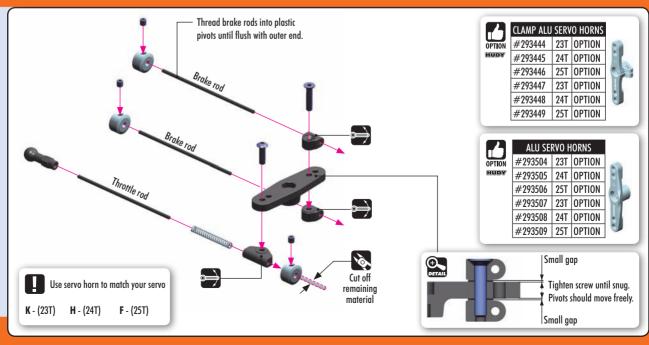
901303 SB M3x3

902310 SH M3x10

903314 SFH M3x14



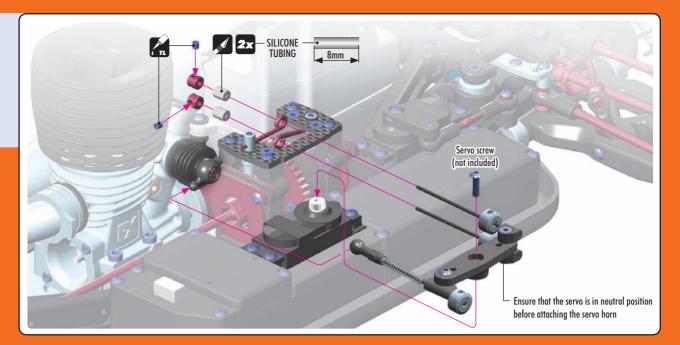




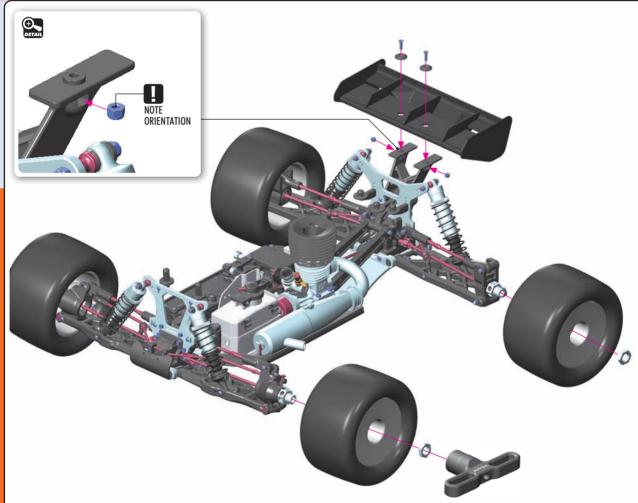




961022 S 2.2







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

ALU

OPTION

#353561

	WINGS		
OPTION	#353511-K	BLACK	INCLUDED
	#353511	WHITE	OPTION
	#353511-Y	YELLOW	OPTION
	#353512	LEXAN	OPTION

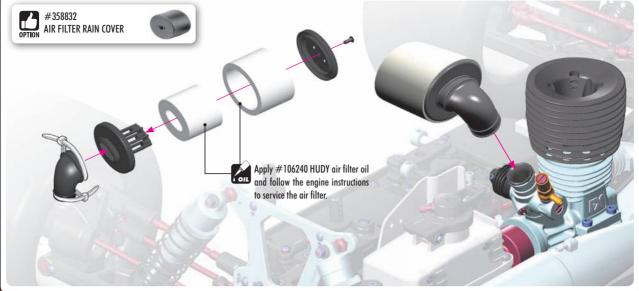
		WHEEL NUTS	
OPTION	#355261	OPEN	INCLUDED
•	#293560	COVERED	OPTION
Q	#355265	COVERED	OPTION

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

TIP 4x





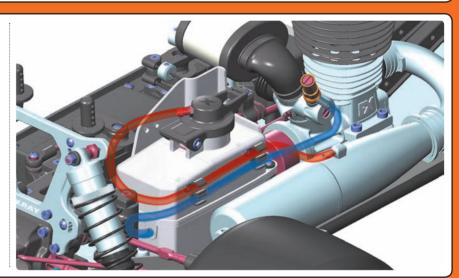


Cut the silicone tube depending on engine and muffler.
Use the plastic clips to hold the tubes together.

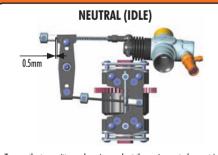
SILICONE TUBE MARKED AS
BLUE = FROM FUEL TANK TO CARBURETOR

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

Keep fuel line away from clutchbell and flywheel.

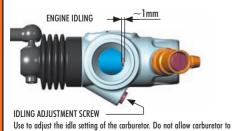


THROTTLE LINKAGE ADJUSTMENT



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.

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



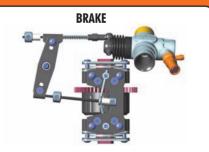
close to less than 1mm

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 birth and point.

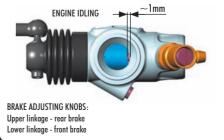
FULL THROTTLE

high end point.

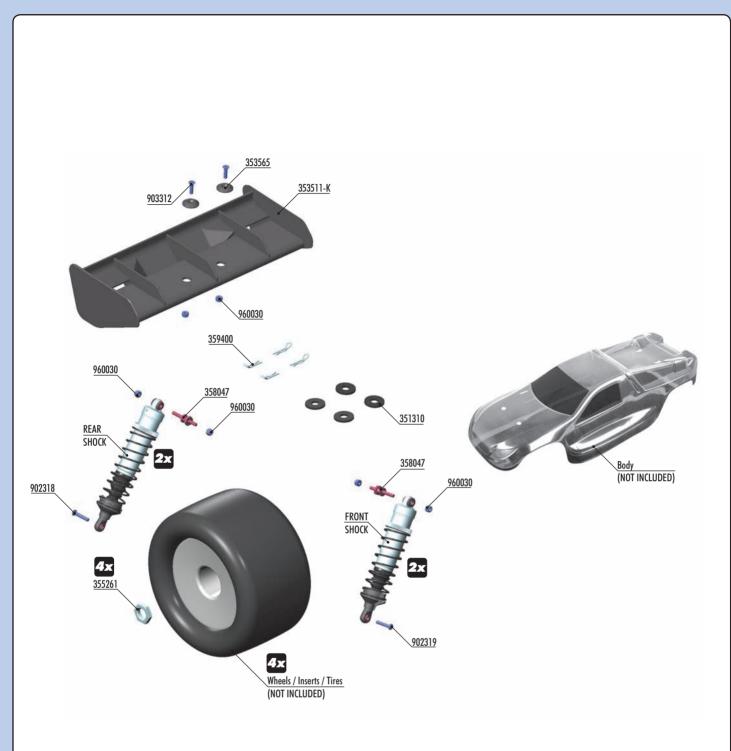




Adjust the adjustable collars so the brakes work smoothly. If the brakes apply too much or not enough, adjust the adjustable collars accordingly. Or if available on the transmitter, adjust the brake endpoint. To tighten brakes, turn collar to thread brake rod INTO pivot. To loosen brakes, turn collar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









	WINGS			
N F	#353511-K	BLACK	INCLUDED	1
	#353511	WHITE	OPTION	N.
-	#353511-Y	YELLOW	OPTION	
-	#353512	LEXAN	OPTION	
Ŀ	#353512	LEXAN	OPTION	_

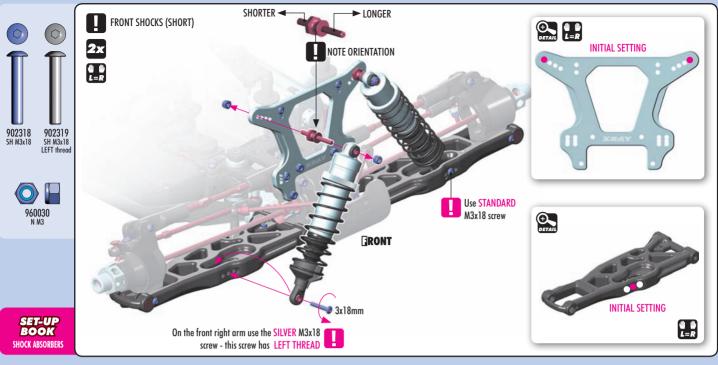
	WHEEL NUTS			
OPTION	#355261	OPEN	INCLUDED	
•	#293560	COVERED	OPTION	
Q	#355265	COVERED	OPTION	

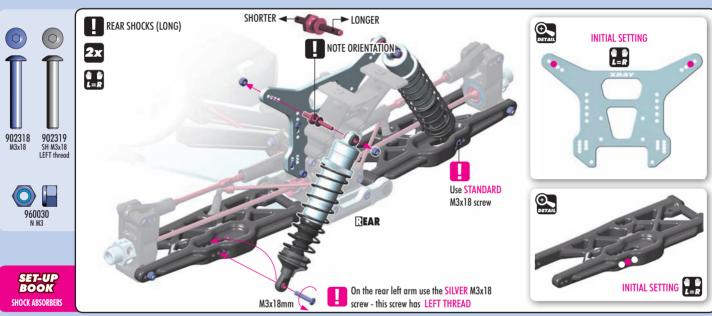


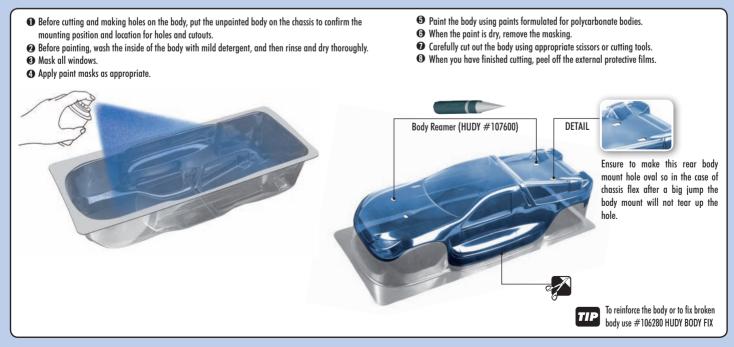
FOAM WASHER FOR BODY POSTS (4) REAR WING - BLACK COMPOSITE REAR WING SHIM - BLACK (2) 351310 353511-K 353565 355261 WHEEL NUT - RIBBED - HARDyCOATED (2) 358047 STEEL SCREW SHOCK PIVOT BALL WITH HEX (2) 359400 BODY CLIP (10)

HEX SCREW SH M3x18 (10) HEX SCREW SH M3x18 - LEFT THREAD (10) HEX SCREW SFH M3x12 (10) NUT M3 (10)





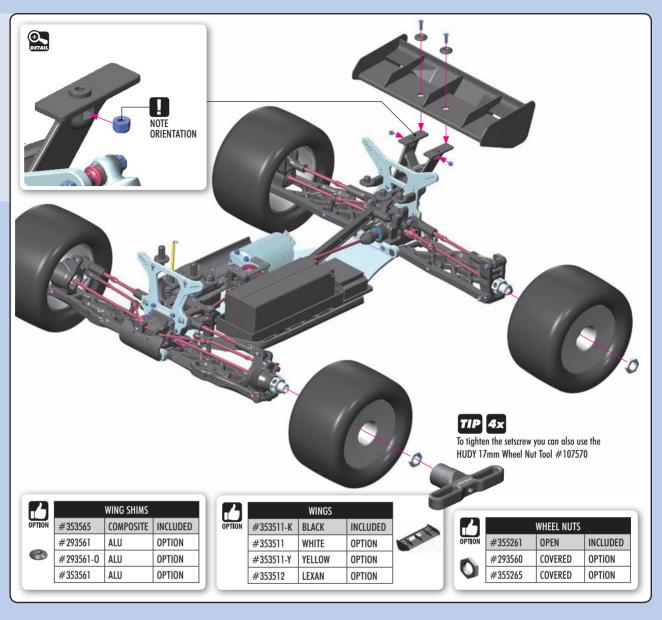












TROUBLESHOOTING GUIDE

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

MAINTENANCE

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.
- 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.
- 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.

- 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.
- 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



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