

BEFORE YOU START

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

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

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

carefully and fully understand the instructions before beginning assembly.

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

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

XRAY Europe

K Výstavisku 6992 91101 Trenčín Slovakia, EUROPE Phone: +421-32-7401100 Fax: +421-32-7401109 Email: info@teamxrav.com

XRAY USA

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

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

SAFETY PRECAUTIONS

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

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

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

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

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.

🛕 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 maximum performance. Using any third party parts on this model will void guaranty immediately.

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

- 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.

- · 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 shortcircuits, 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

<u> A</u> 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 inflammable, explosive, and poisonus. 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,

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.

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

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 newlypurchased kit are manufactured with the highest regard to quality. However, due to the many factors inherent in model racecar competition, we cannot guarantee any 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.

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.

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.

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.

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

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



X FRAN

At the beginning of each section is an exploded view of the parts to be assembled. There is also a list of all the parts and part numbers that are related to the assembly of that section. The part descriptions are color-coded to make it easier for you to identify the source of a part. Here are what the different colors mean: STYLE A - indicates parts that are included in the bag marked for the section. STYLE B - indicates parts that are included in the box. STYLE C - indicates parts that are already assembled from previous steps.

XB8 TECH TIPS

TIP FRONT & REAR DIFF GEAR MESH ADJUSTMENT

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

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



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 T 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 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

when the pins are worn

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.





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

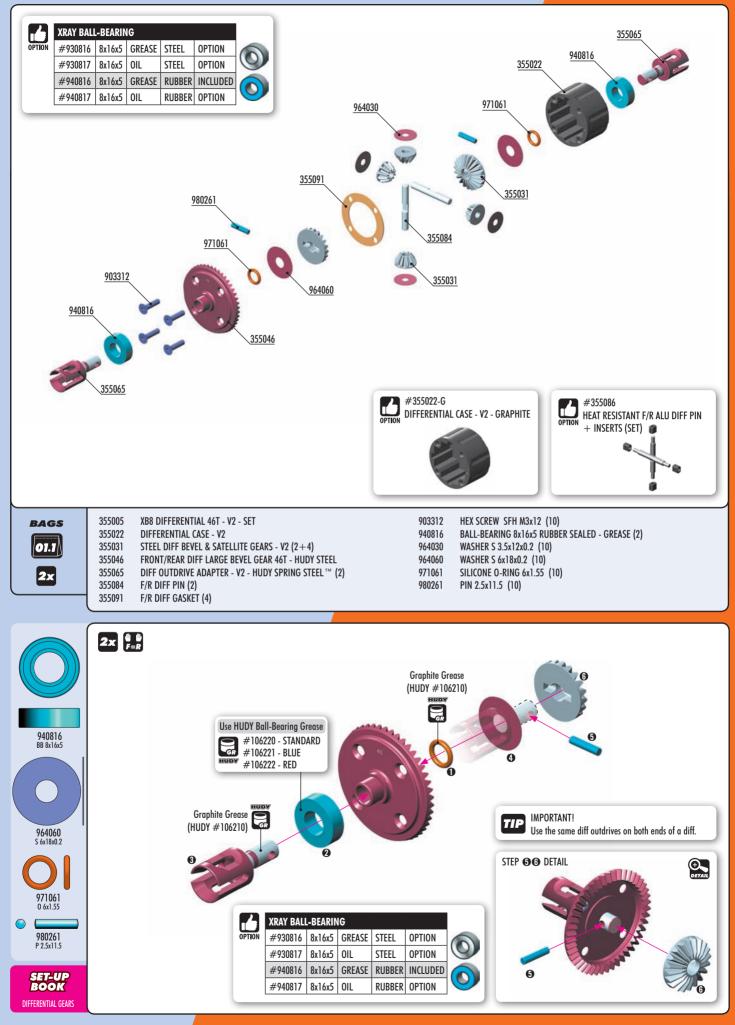


To replace the worn pins use only premium HUDY drive pins #106050.

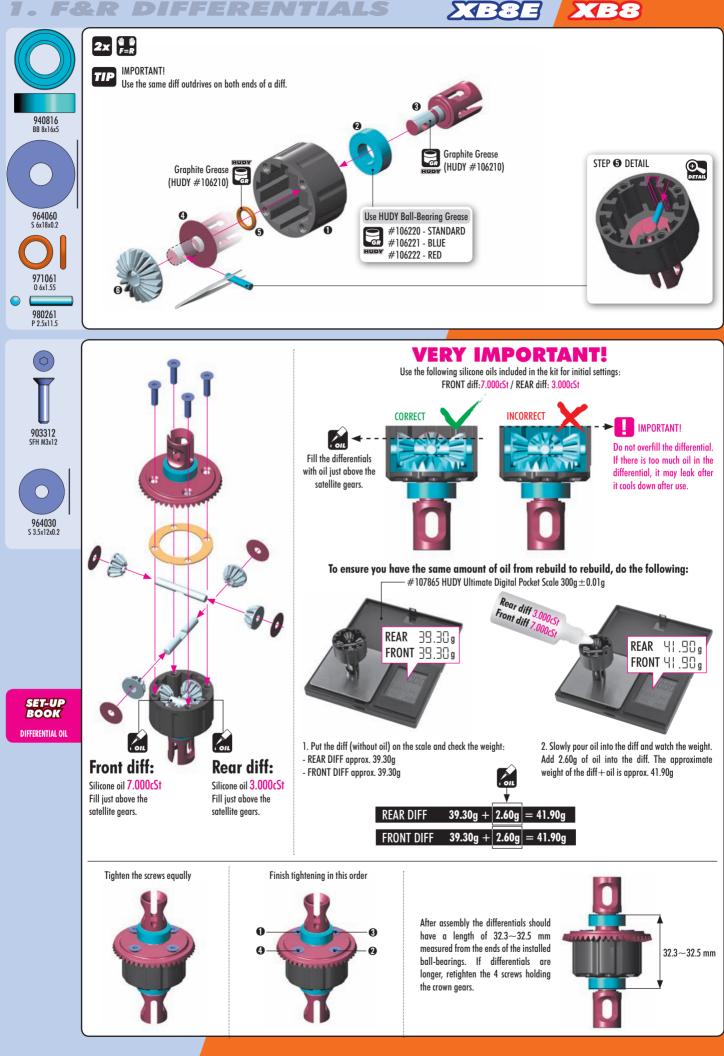
9. FUEL TANK & ENGINE XB8	12. FINAL ASSEMBLY	1. DIFFERENTIAL XB8
MANUAL STEPS ONLY FOR XB8	MANUAL STEPS ONLY FOR XB8E	MANUAL DUAL STEPS FOR XB8E & XB8

regularly inspect for wear.

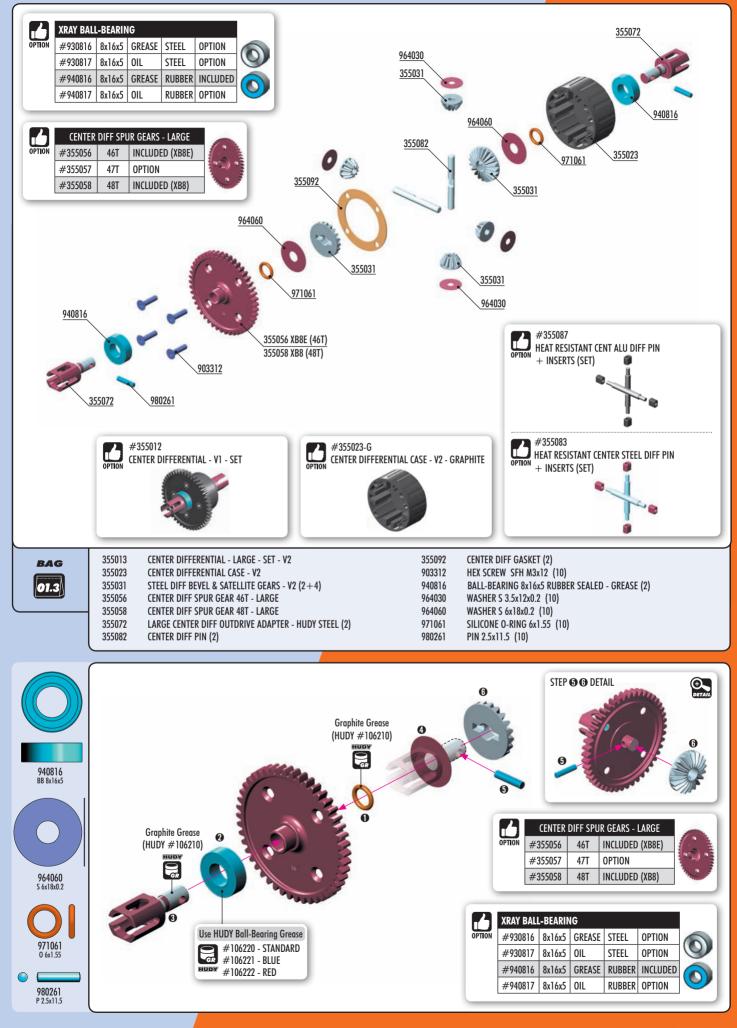




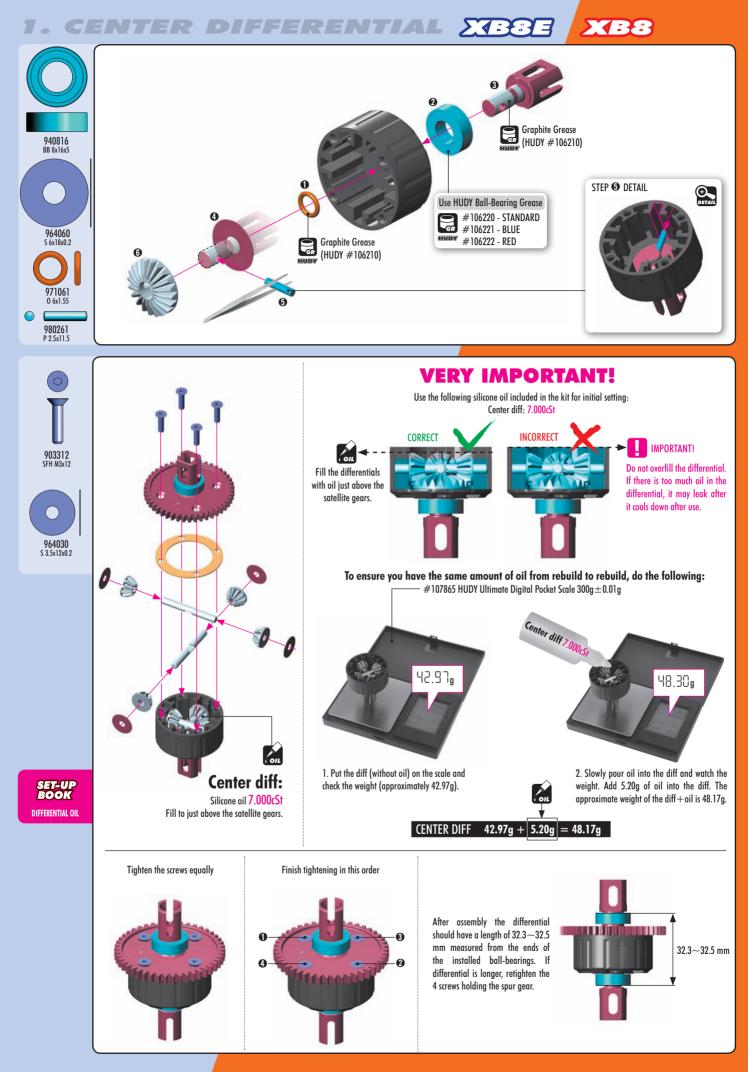


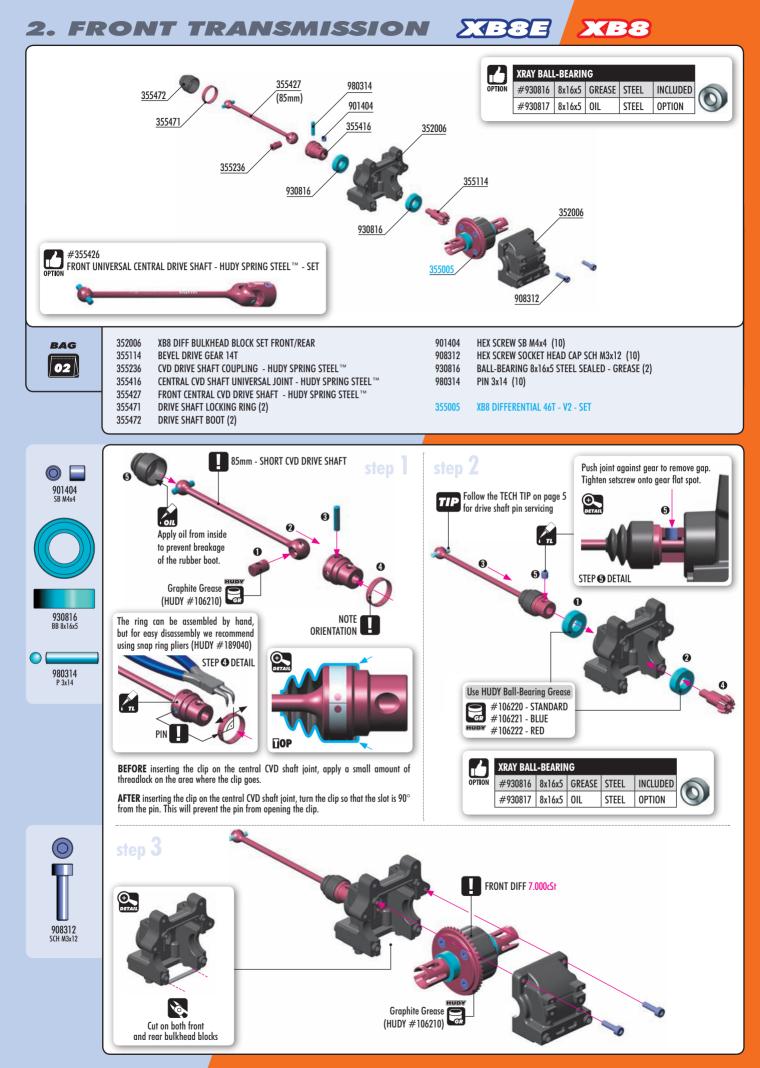


1. CENTER DIFFERENTIAL STEE XB8

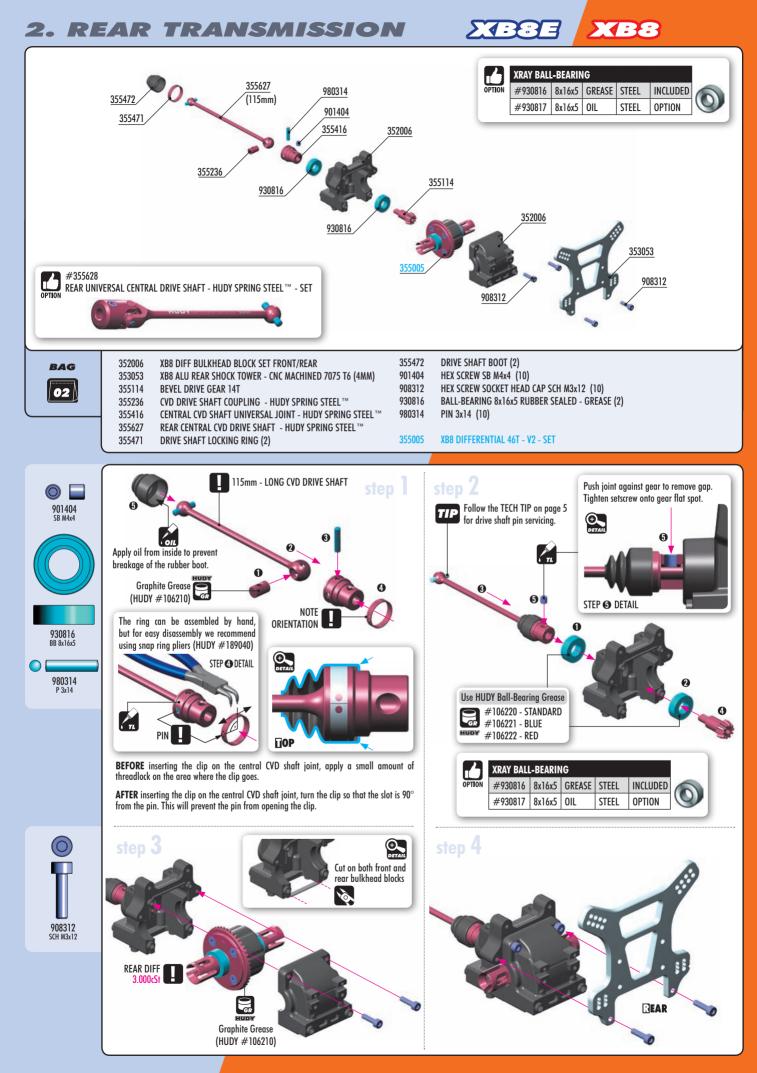


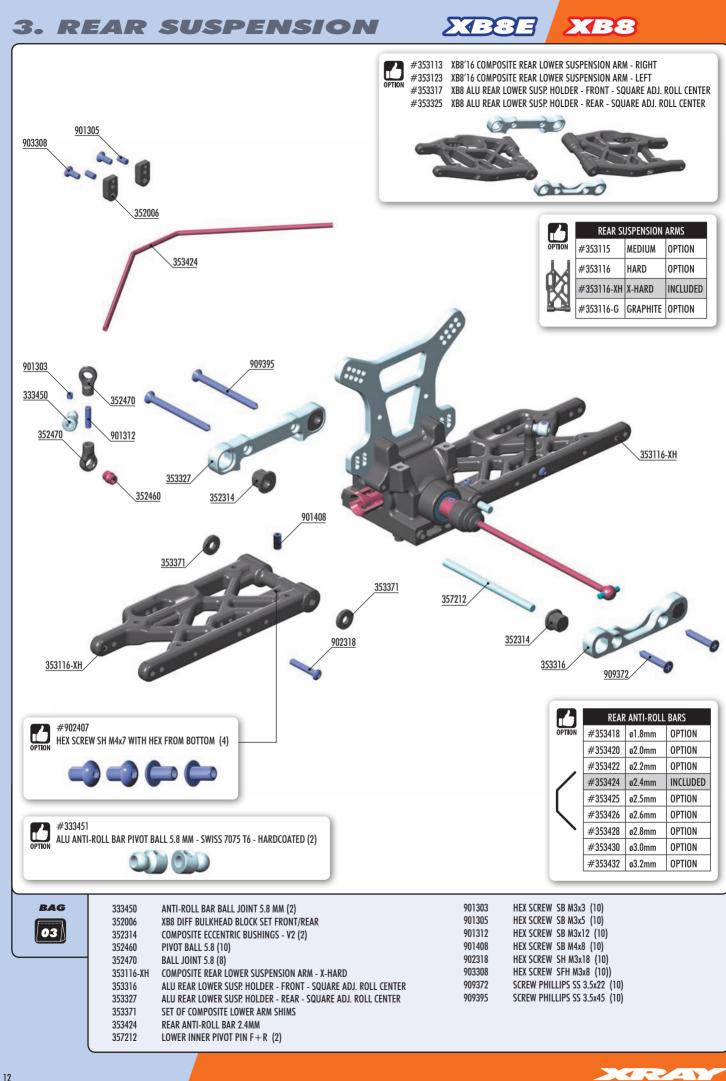


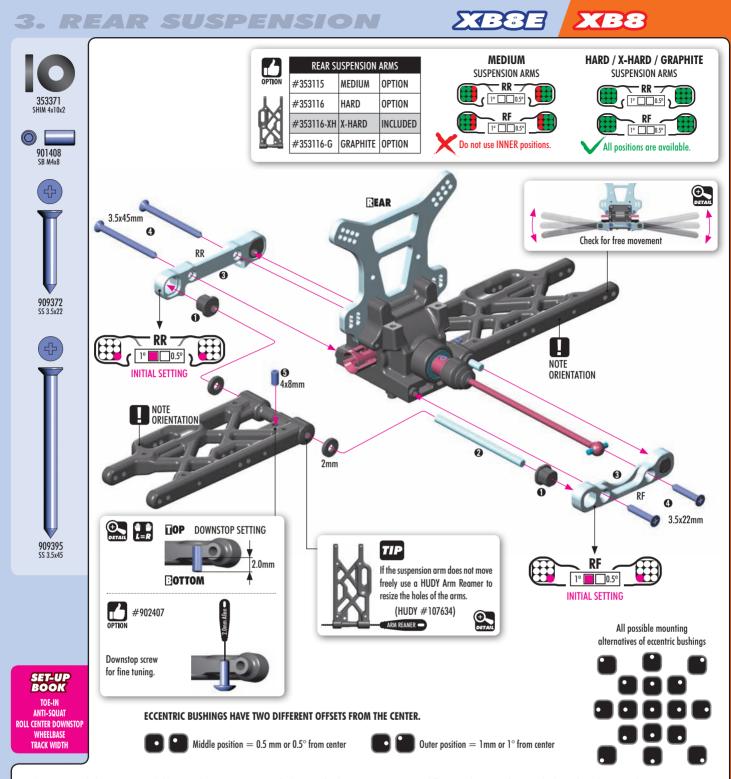




SCRAN



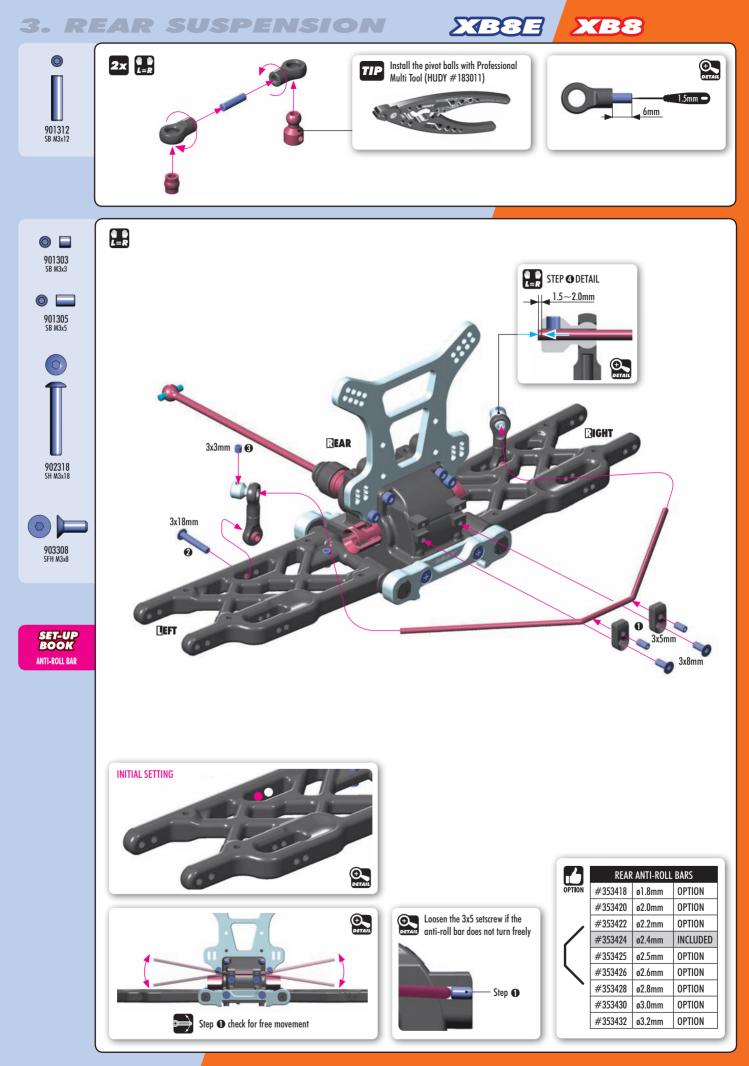




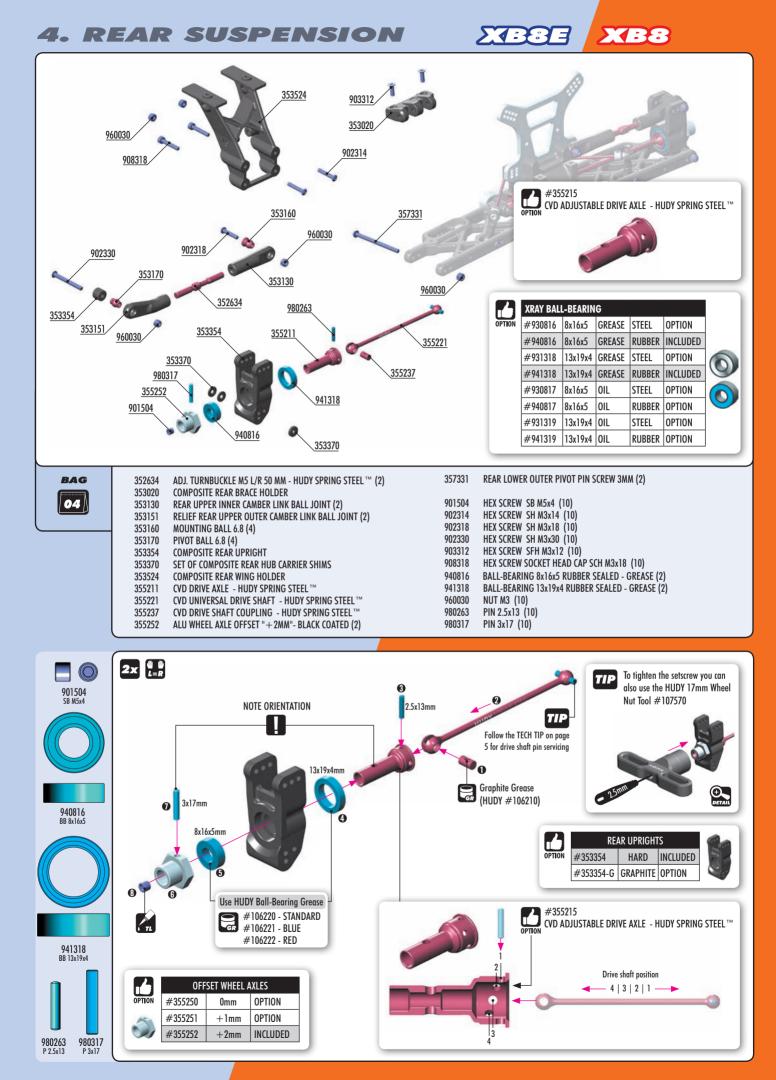
The XRAY rear alu lower suspension holders provide even greater range of adjustment for the rear suspension. Using different combinations of eccentric bushings, fine adjustment of rear anti-squat, rear toe-in, rear roll center, and rear track-width can be obtained. For more information about the influence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

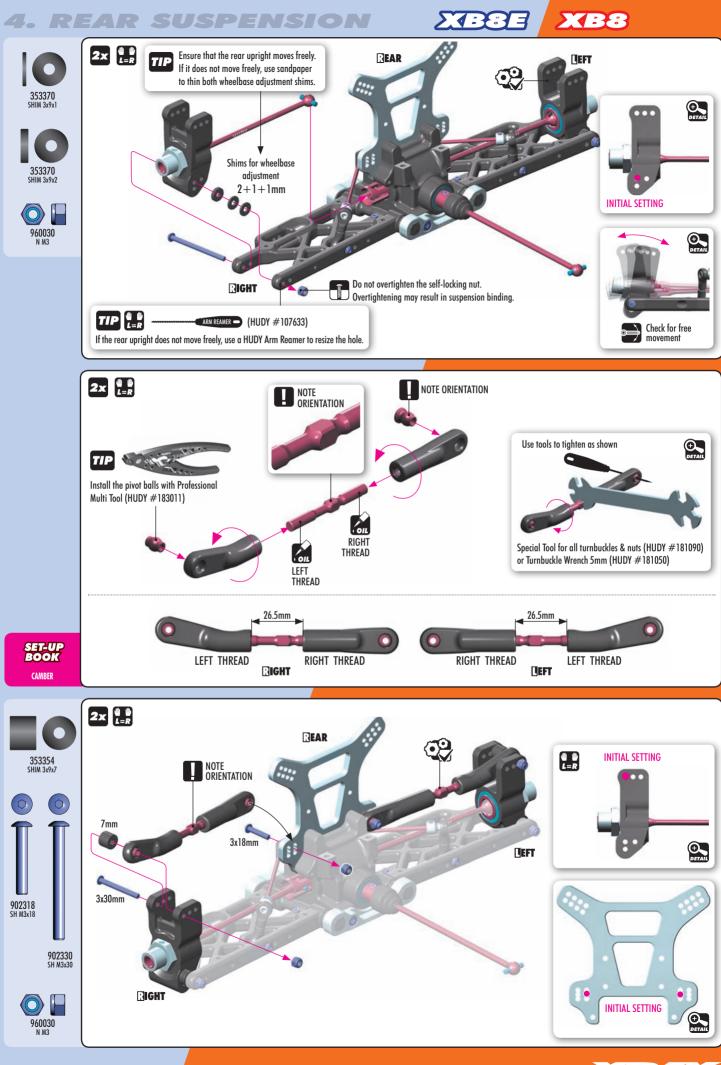
ANTI-SQUAT				
RR	RF (°)			
0	⊡ =3°			
0,0	•••••=4°			
0,000				
	••••• =4°			
	: =5°			
	••••• =2°			
	 =3°			

ROLL CENTER	TRACK-WIDTH	TOE-IN
RR RF (mm)	RR RF (mm)	RR RF (°)
••••••••••••••••••••••••••••••••••••••	• • • • • • • = 310	
The tables describe the amounts of rear anti-squat, rear toe-in, rear track-width change depending		
on the combinations of eccentric bushings used with 0 and 1mm, 1° offset. The 0.5mm, 0.5° represents the half change.		
Anti-Squat Example:		
$O(RR) - O(RF) = 3^{\circ}$		
$O(RR) - 0.5 (RF) = 3.5^{\circ}$	• • • • • • • = 3.5°	
$O(RR) - 1 (RF) = 4^{\circ}$		



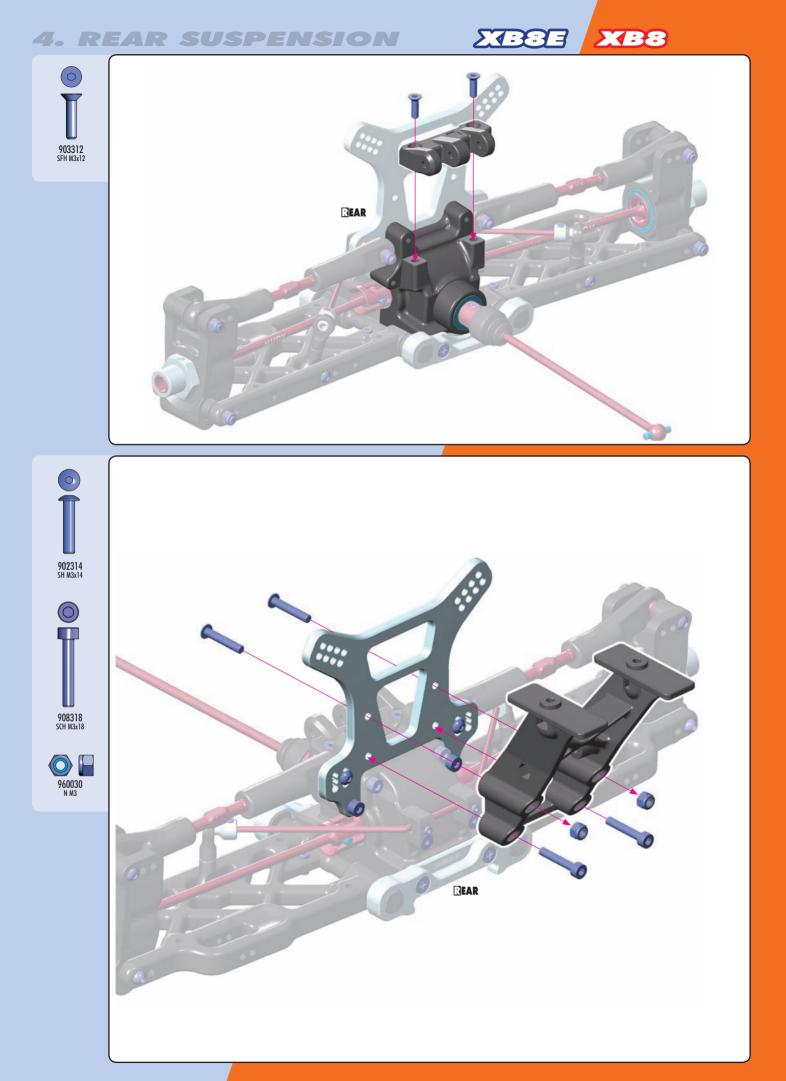


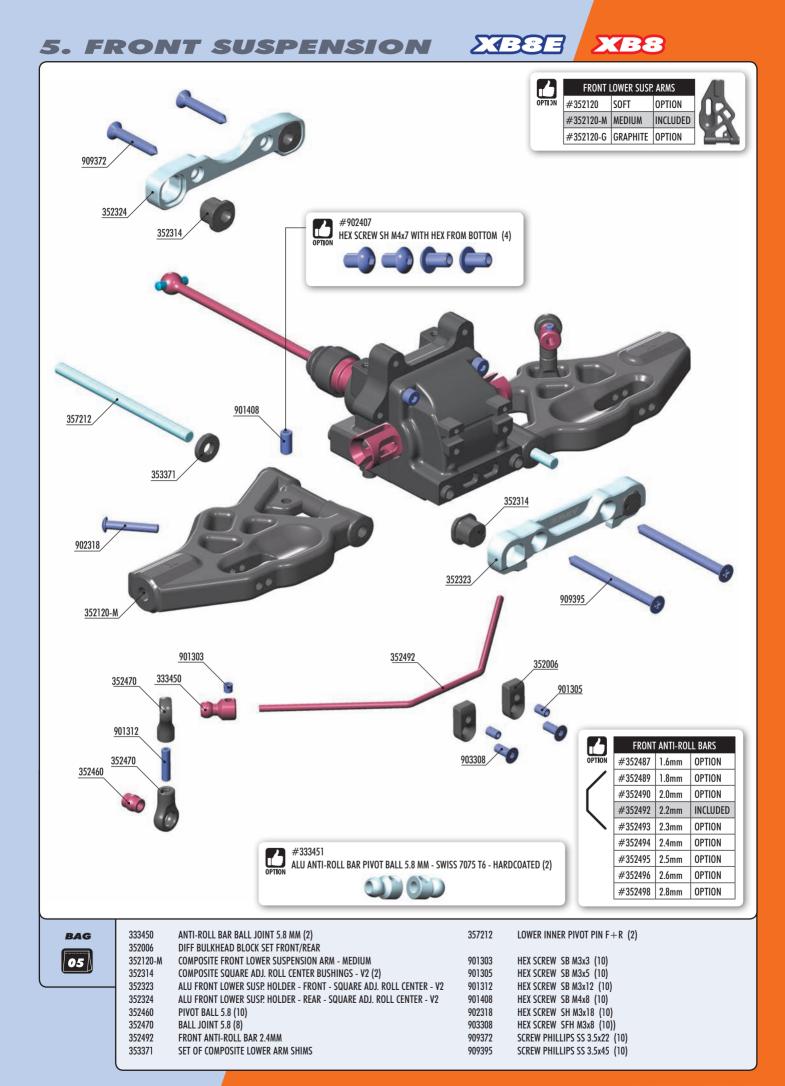




16

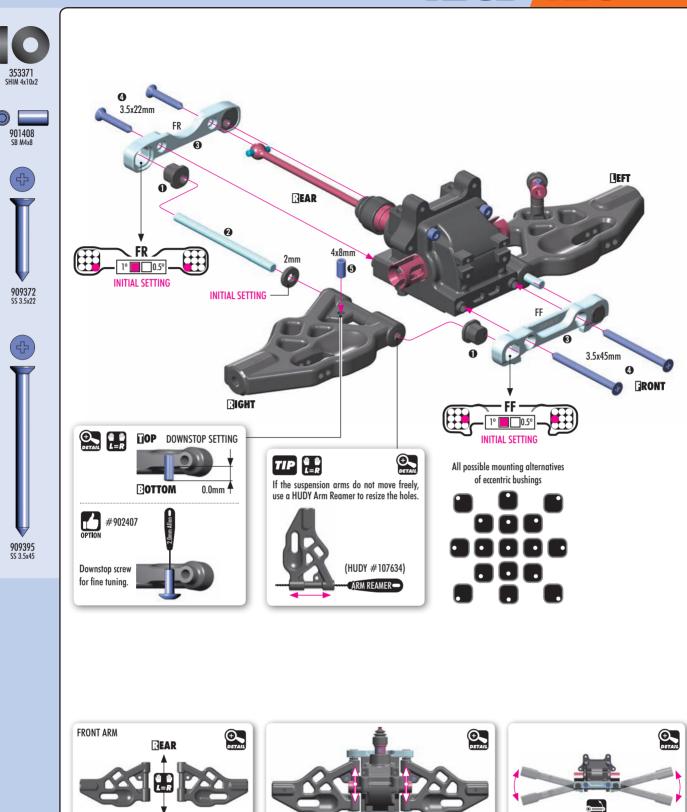
XCR24Y











Check for free movement

Eccentric bushings have two different offsets from the center.

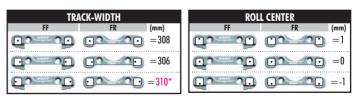
RONT

Middle position = 0.5 mm or 0.5° from center



Outer position = 1mm 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).

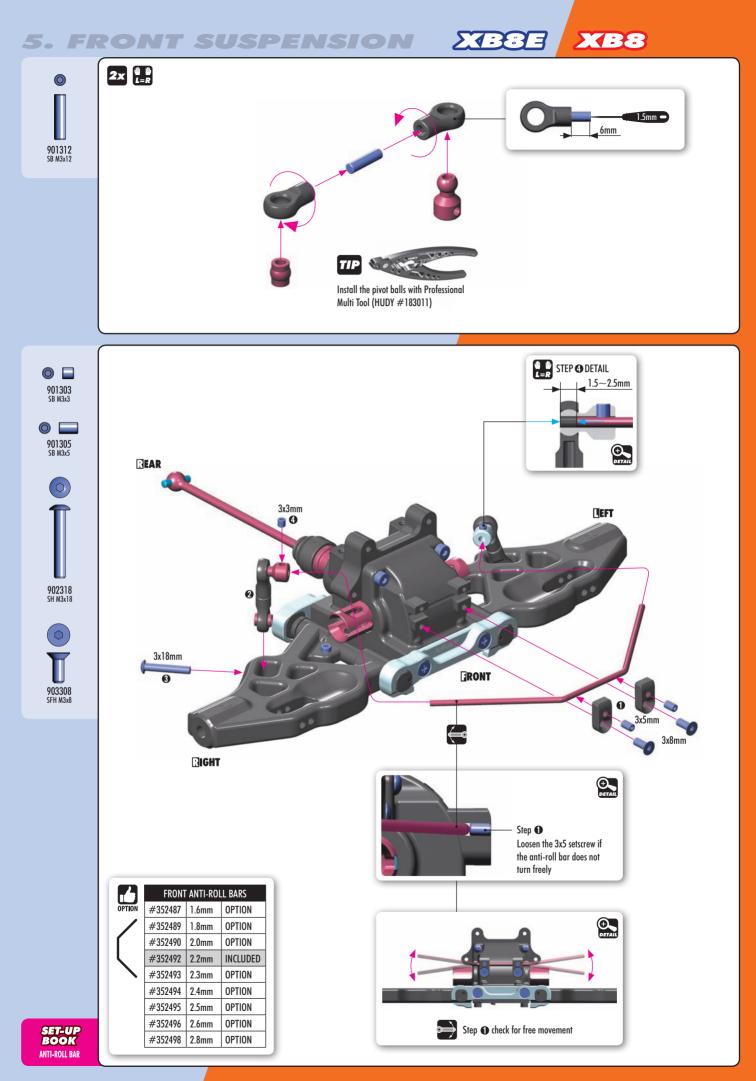


The tables below describe the amounts of kick-up, front track-width change depending on the combinations of eccentric bushings used with 0 and 1mm, 1° offset. The 0.5mm, 0.5° represents the half change.

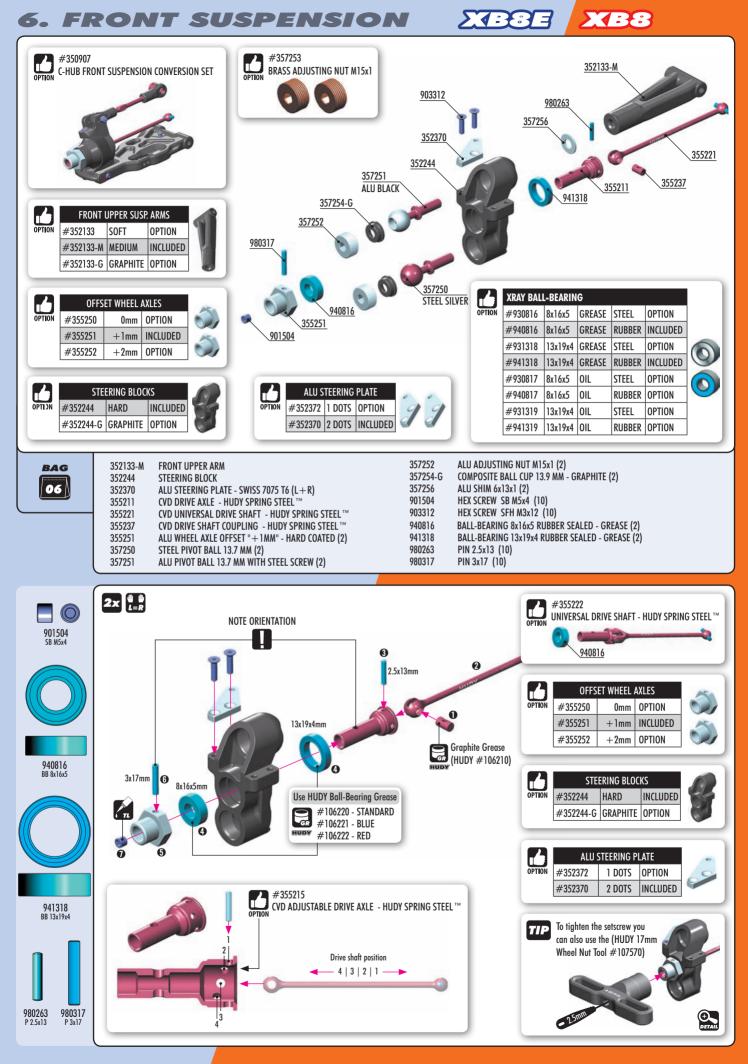
* Not recommended to use this setting.

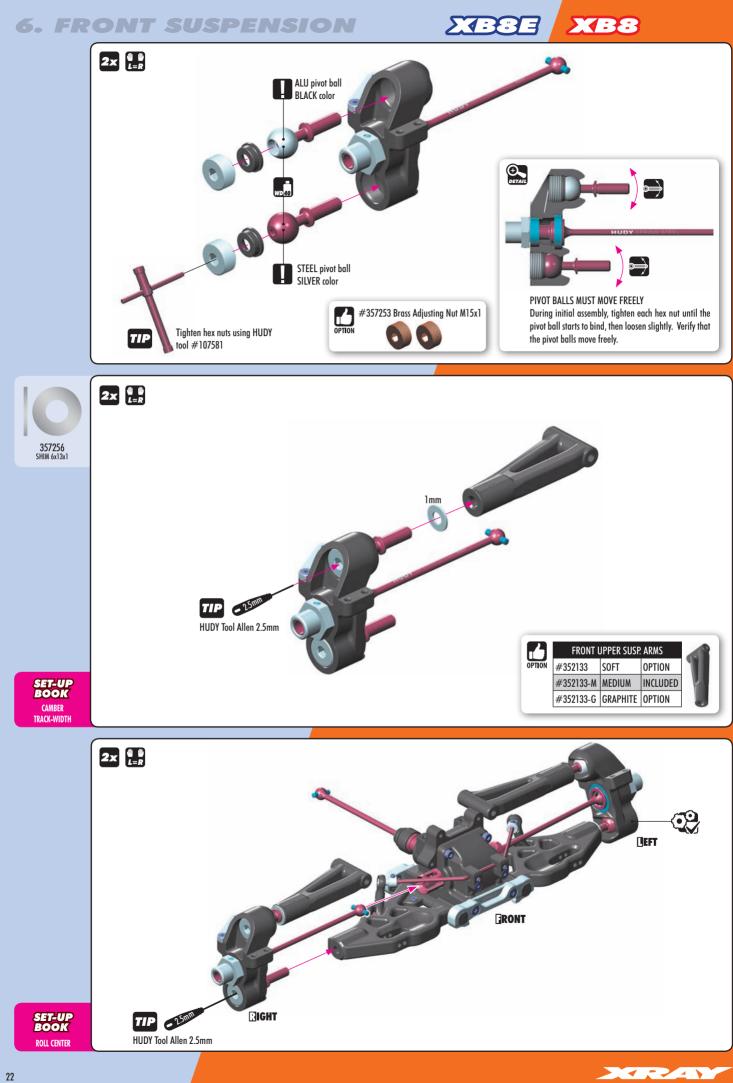
Push the arm from both sides to create play

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

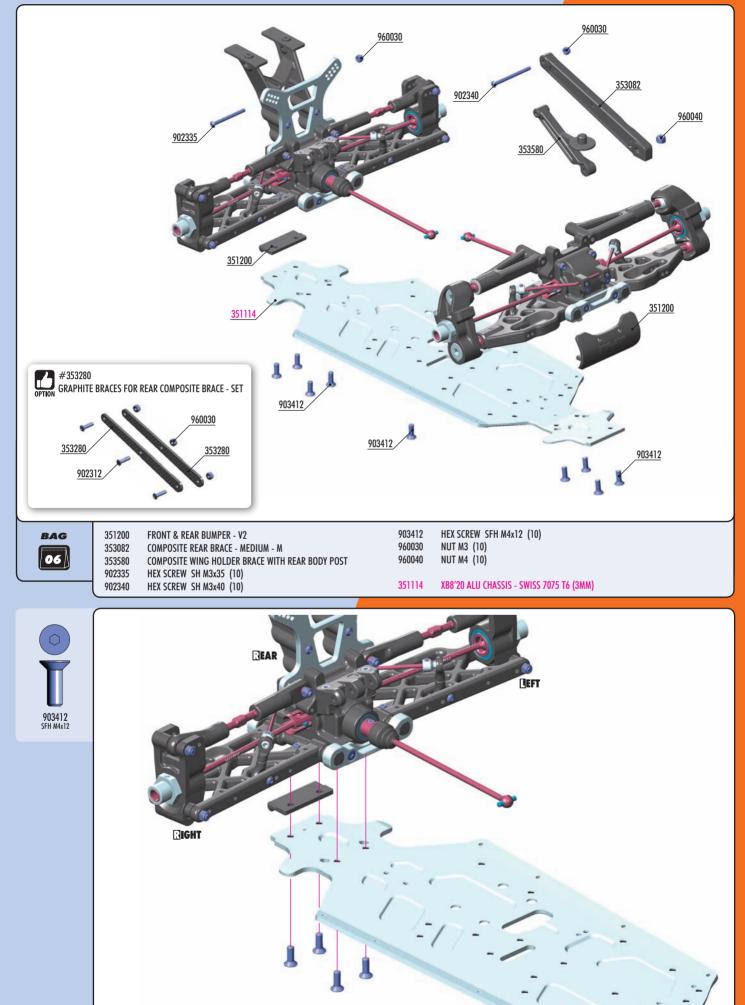


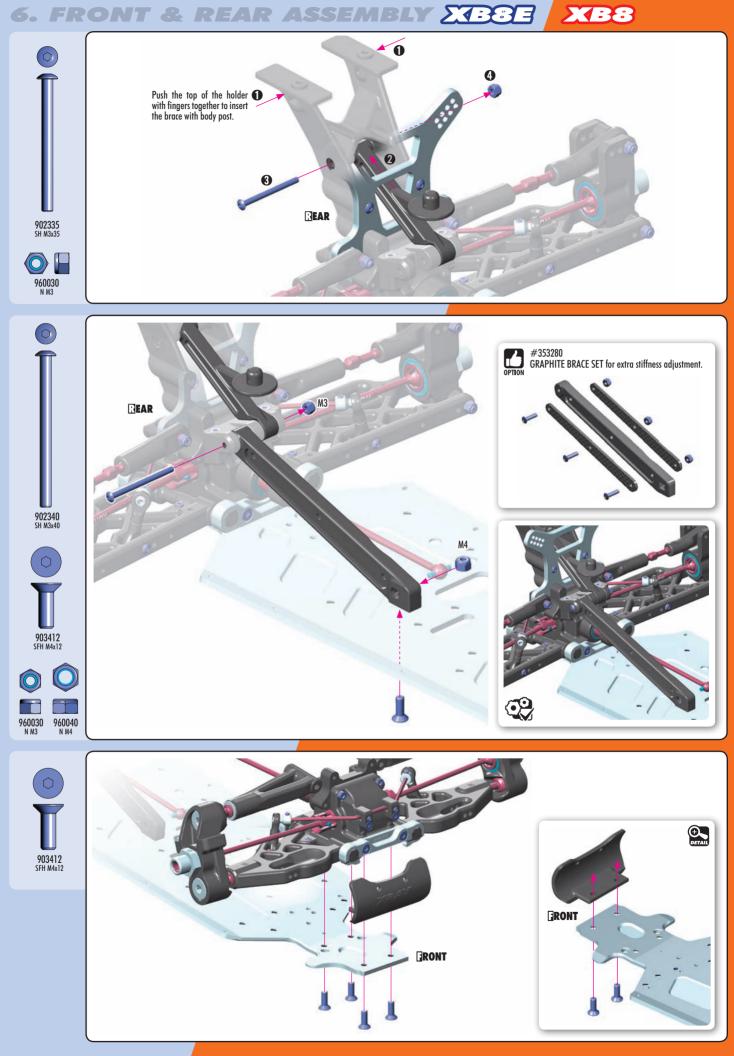
SCRAN



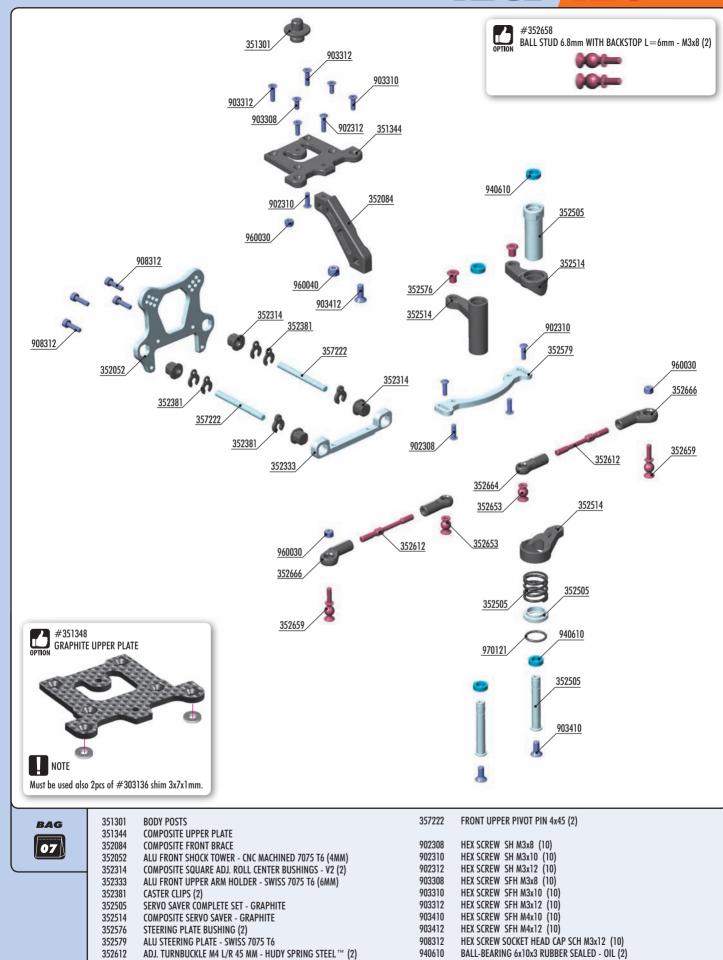


6. FRONT & REAR ASSEMBLY STEE XB8









7. STEERING

352653

352659

352664

352666

BALL STUD 6.8MM WITH BACKSTOP - M3 (2)

BALL STUD 6.8MM WITH BACKSTOP L = 6MM - M3x11 (2)

COMPOSITE STEERING BALL JOINT 6.8MM - V3 (2)

COMPOSITE RELIEF STEERING BALL JOINT 6.8MM (2)

BALL-BEARING 6x10x3 RUBBER SEALED - OIL (2) 960030 NUT M3 (10) NUT M4 (10) 960040 970121 0-RING 12.1 x 1.6 (10)

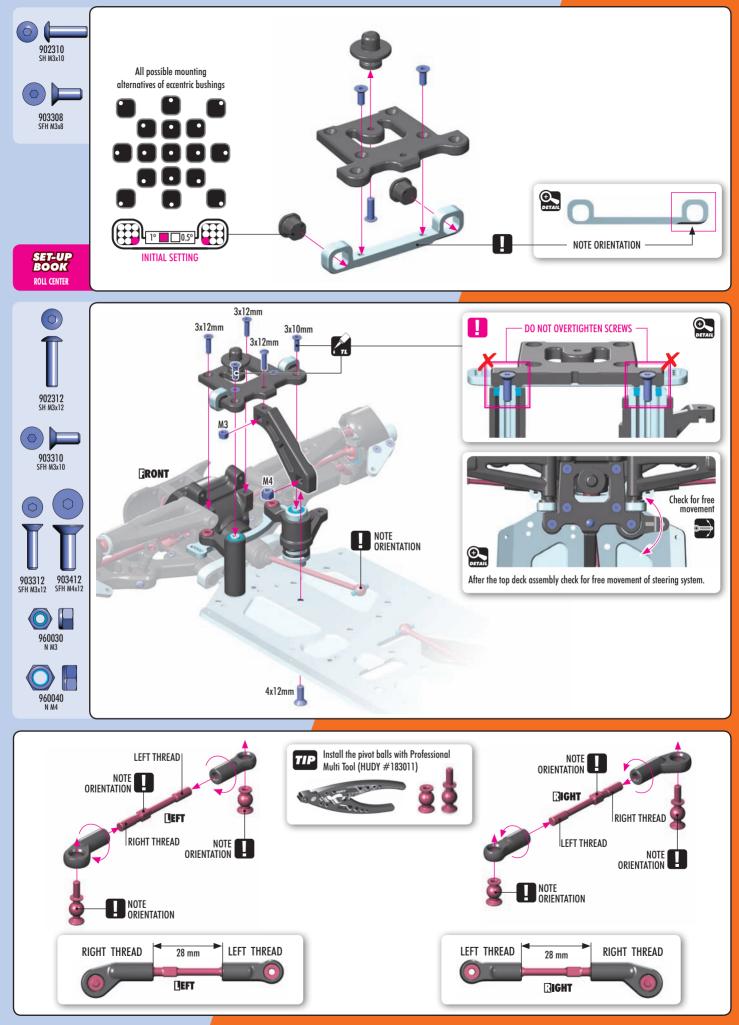
 Σ





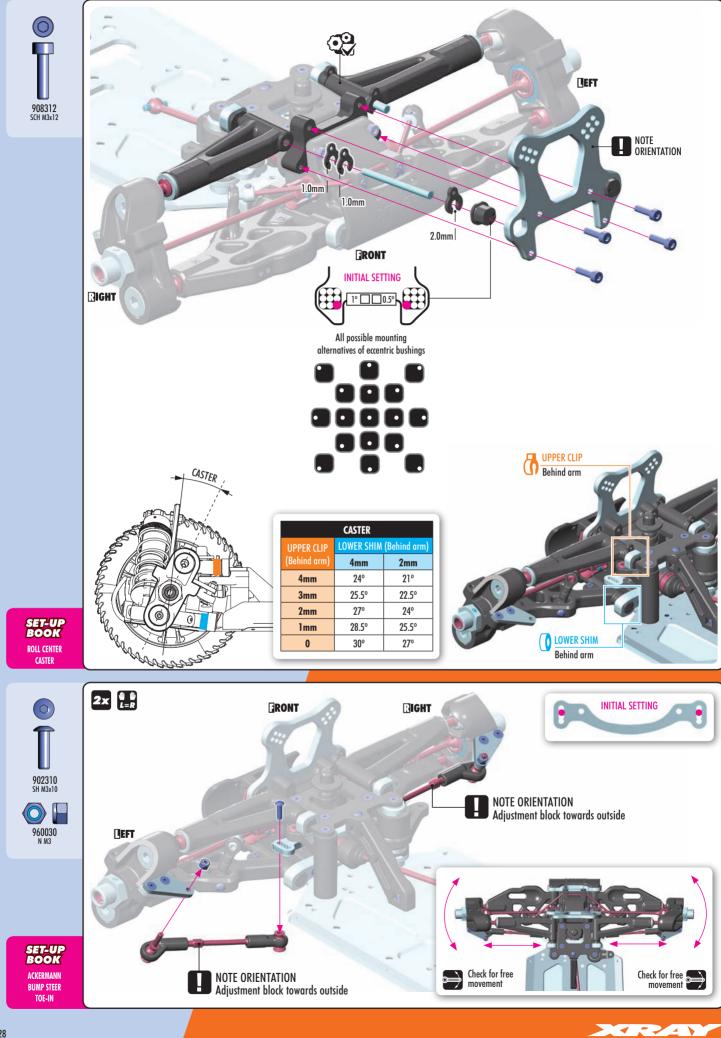
7. STEERING

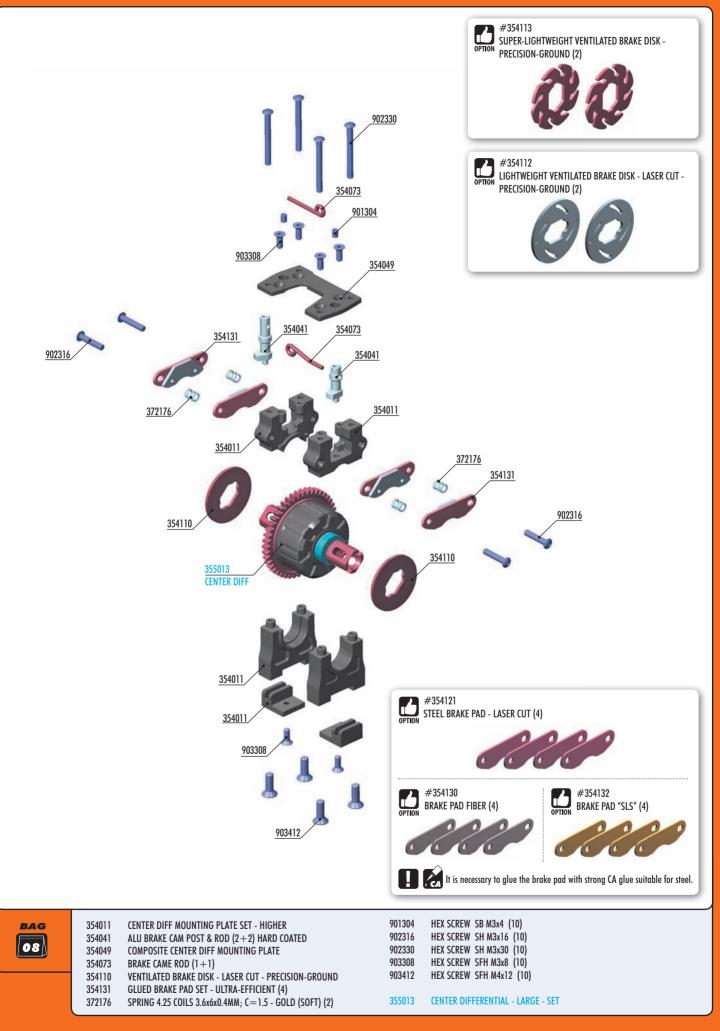
STBEE XBE

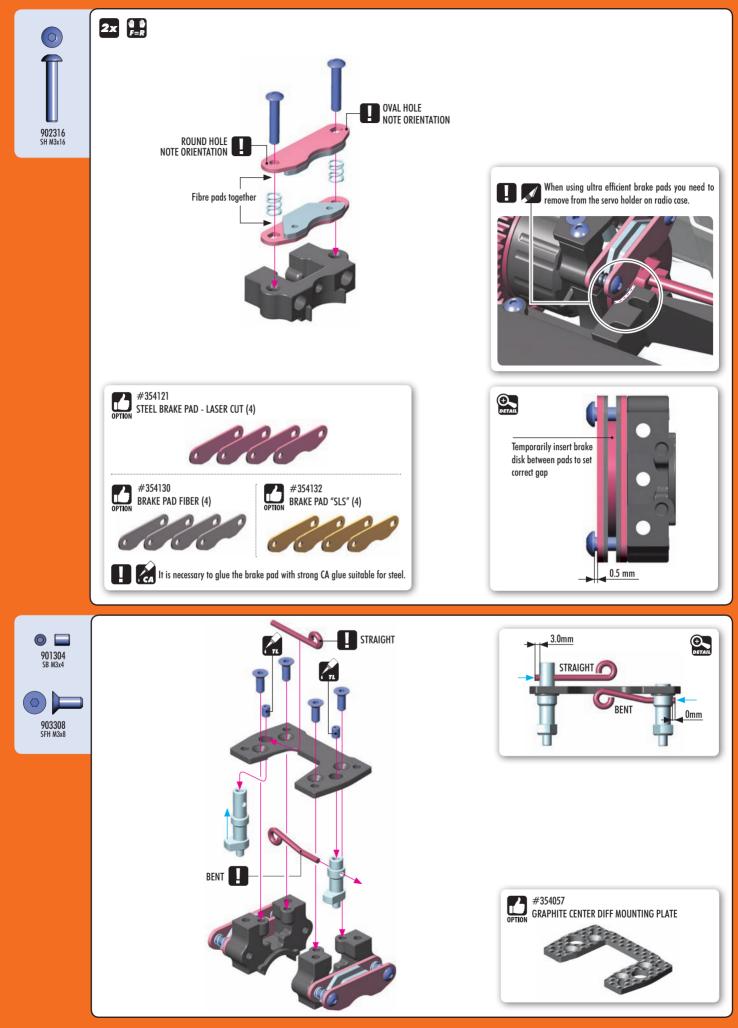


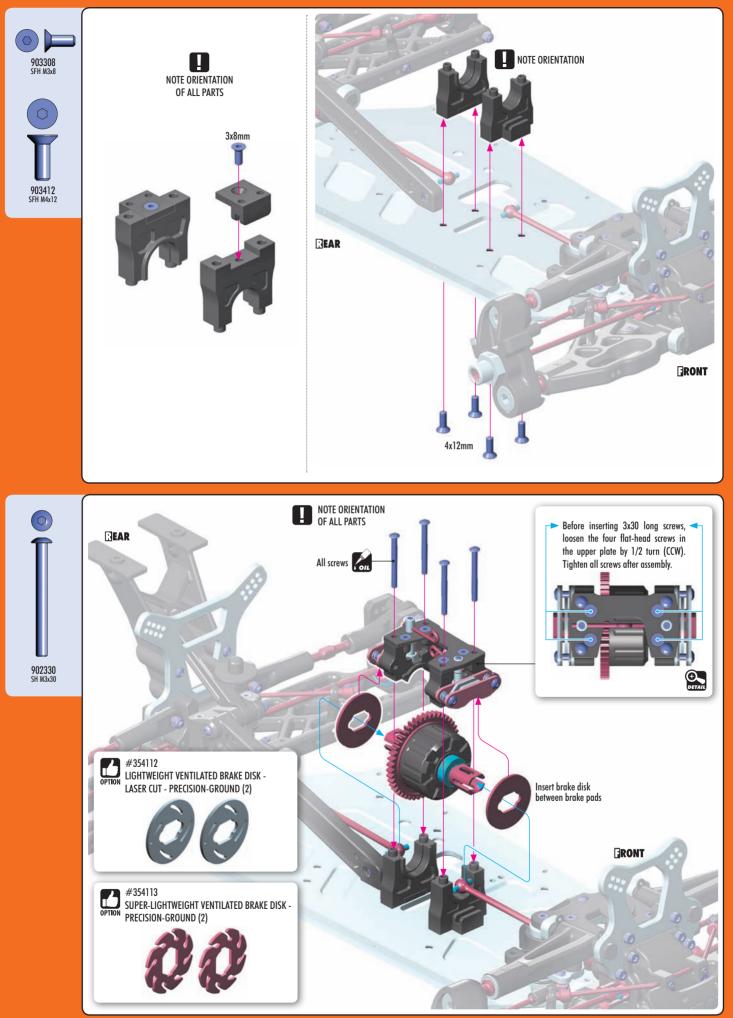


XIBSE XBS



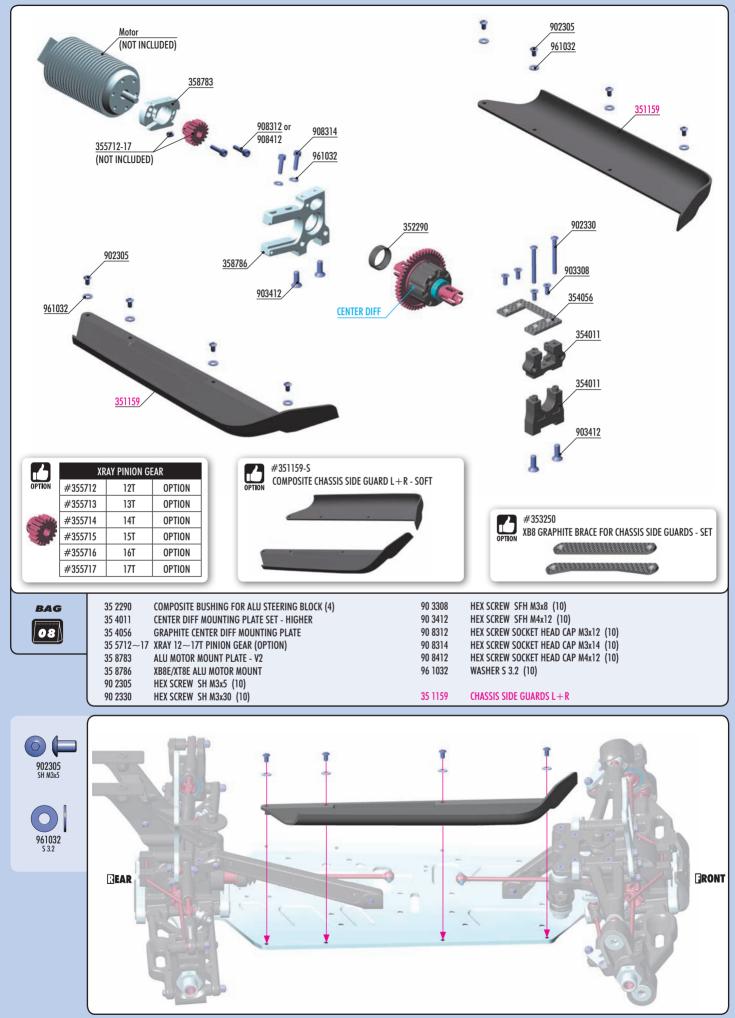






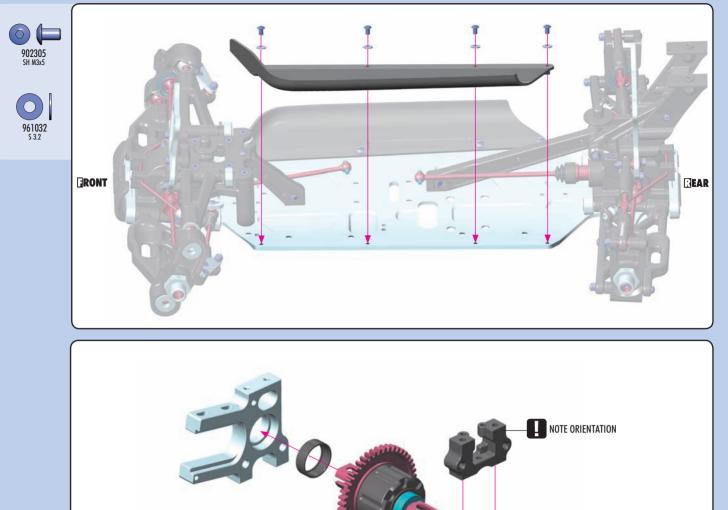
8. CENTER DIFF & MOTOR

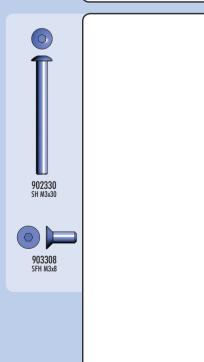
SABGE

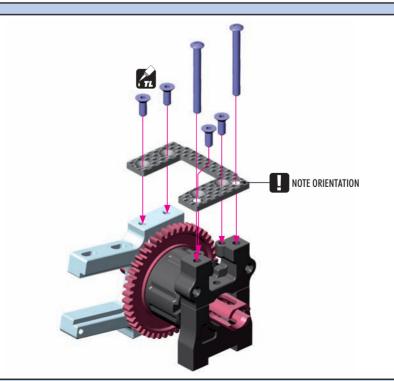


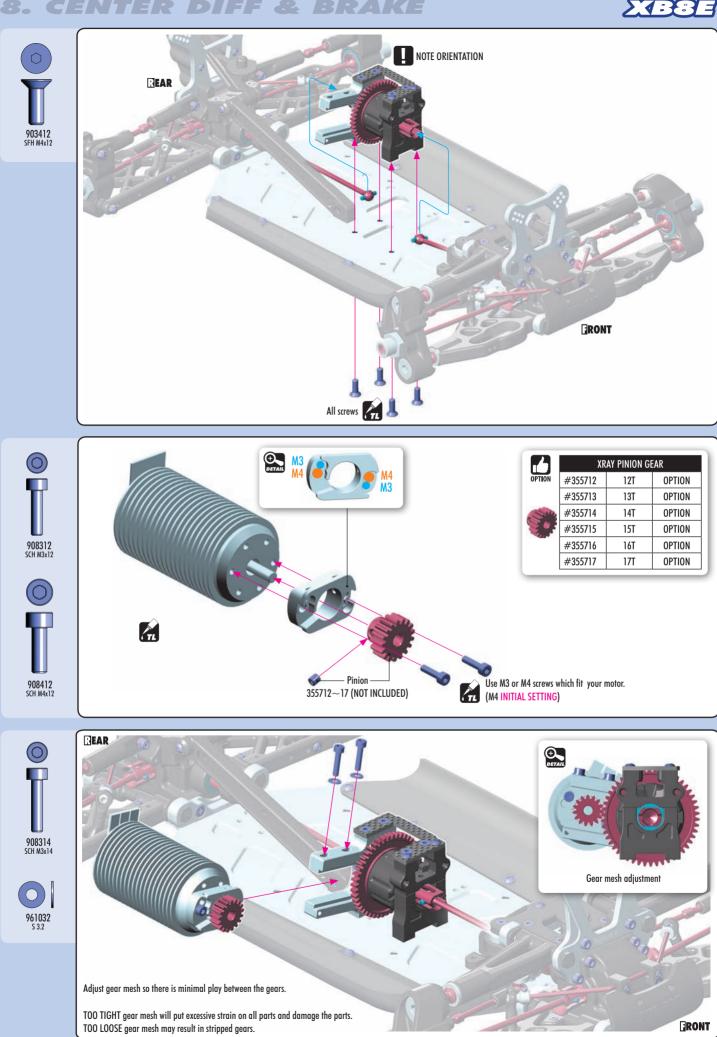
STEE

NOTE ORIENTATION







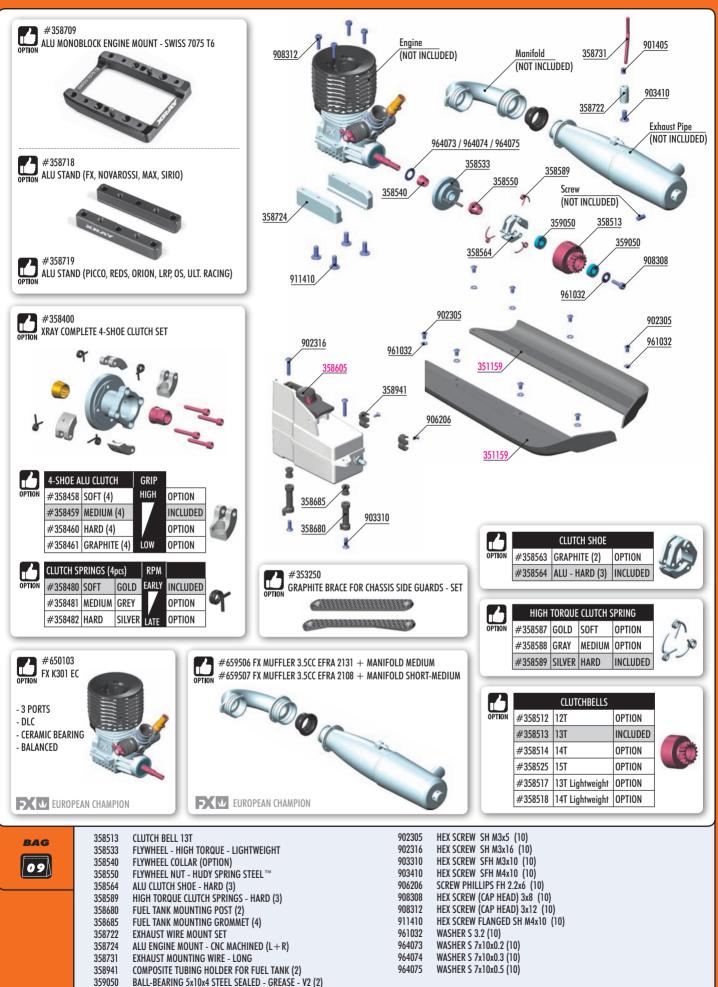


-4

9. FUEL TANK & ENGINE

HEX SCREW SB M4x5 (10)

901405



351159

358605

CHASSIS SIDE GUARDS L+R

FUEL TANK 125CC WITH FLOATING FILTER & TRANSIENT JET

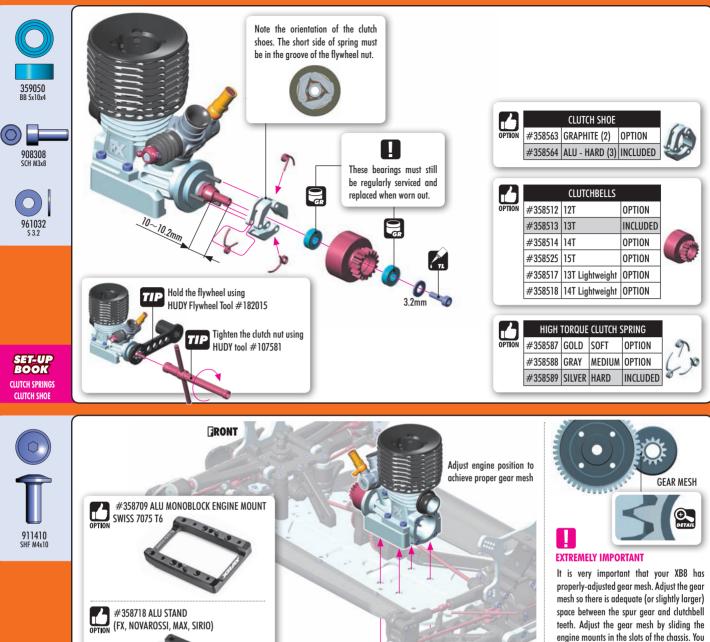
XZBE

9. FUEL TANK & ENGINE

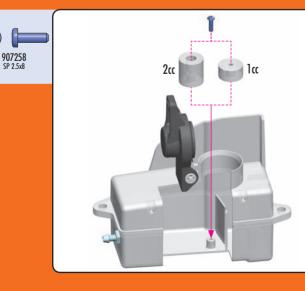
E Threadlock on all screws 902305 SH M3x5 1 961032 S 3.2 REAR RONT RIGHT **T** Threadlock on all screws RONT REAR DEFT \bigcirc All screws 908312 SCH M3x12 IMPORTANT! \sim - 7x10x0.2 / 0.3 / 0.5 Use appropriate shims to achieve proper clutchbell endplay 964073 S 7x10x0.2 \bigcirc **964074** S 7x10x0.3 0 When installing the engine, first check that the drive shaft does not touch the engine. If it does, remove some material from the engine **964075** S 7x10x0.5 mount as shown to make some room between engine and shaft. NOTE ORIENTATION



9. FUEL TANK & ENGINE



GEAR MESH ADL



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.

EAR

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

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

TL

Threadlock on all screws

1CC FUEL TANK INSERT The smaller insert decreases the fuel tank volume by 1cc.

NOTE ORIENTATION

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

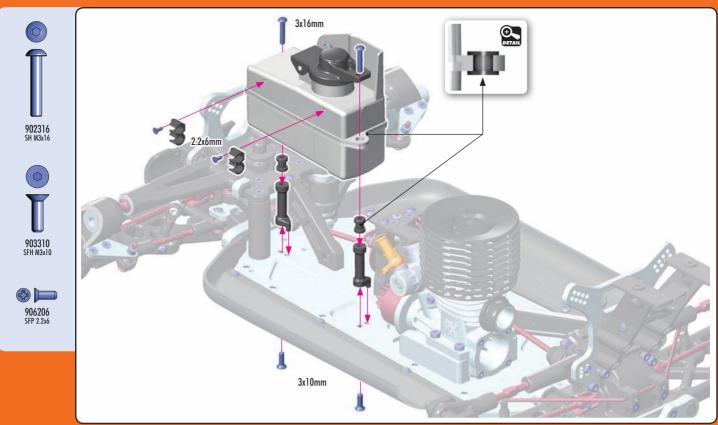
to ensure the engine mounts did not move.

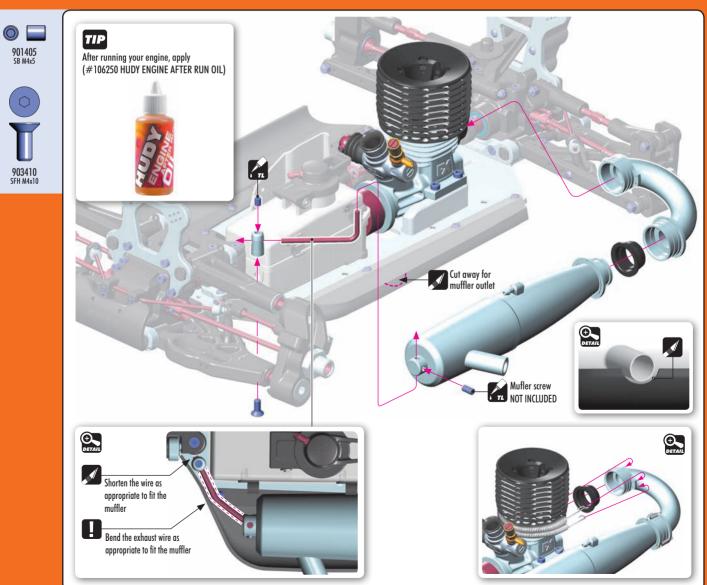
XBS

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.

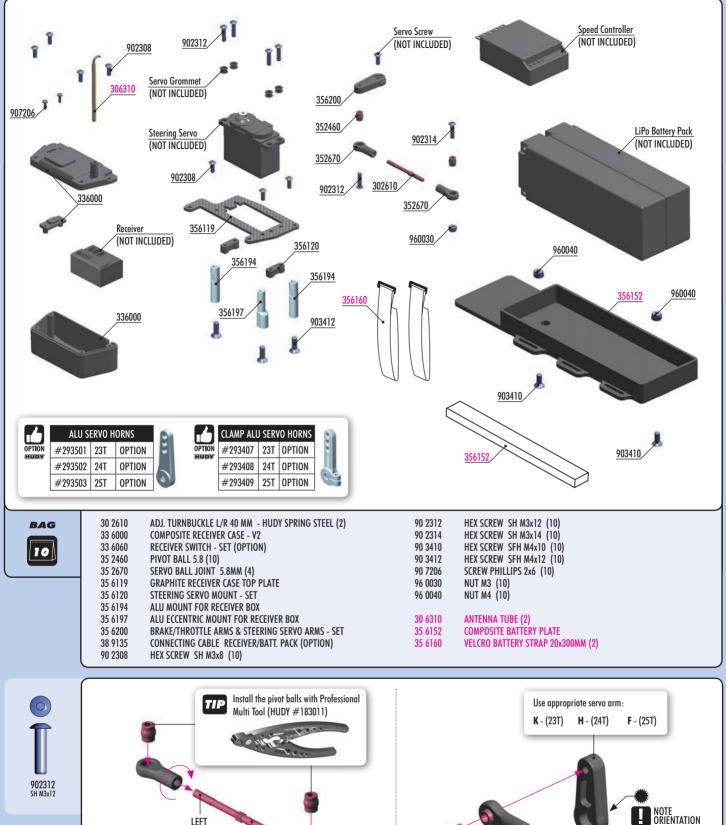
9. FUEL TANK & ENGINE





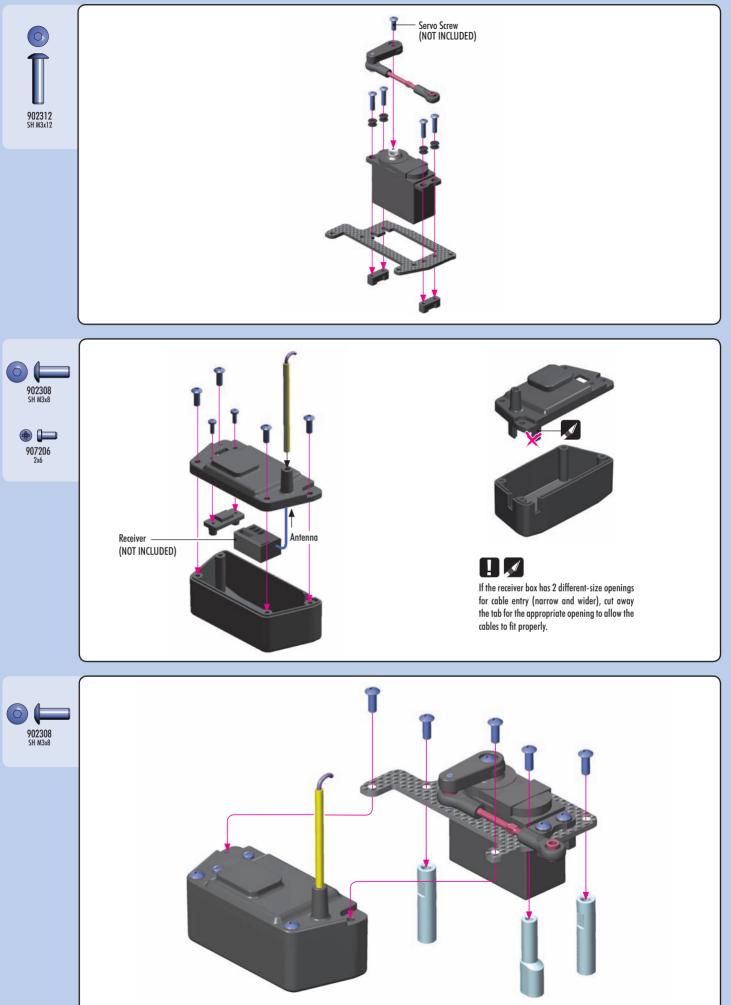






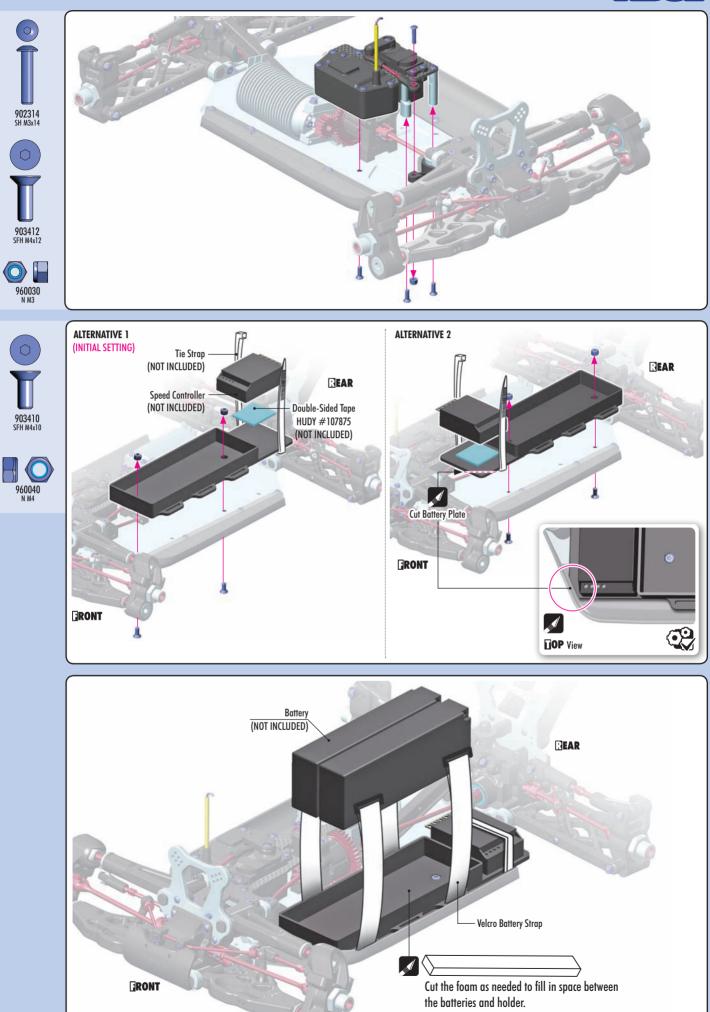


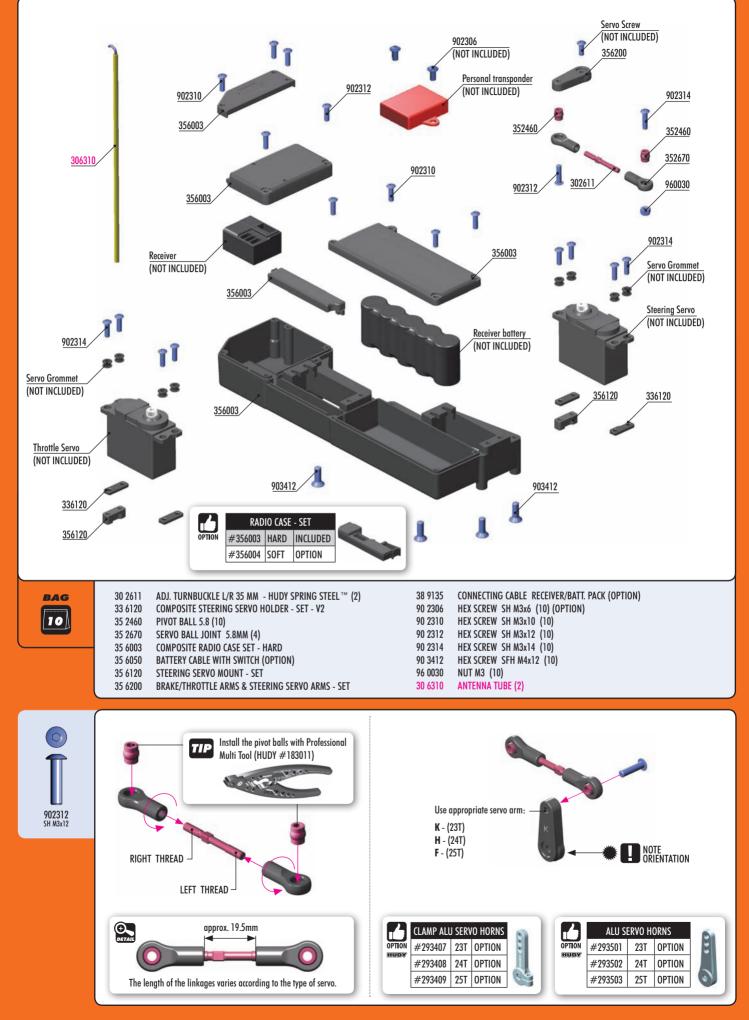




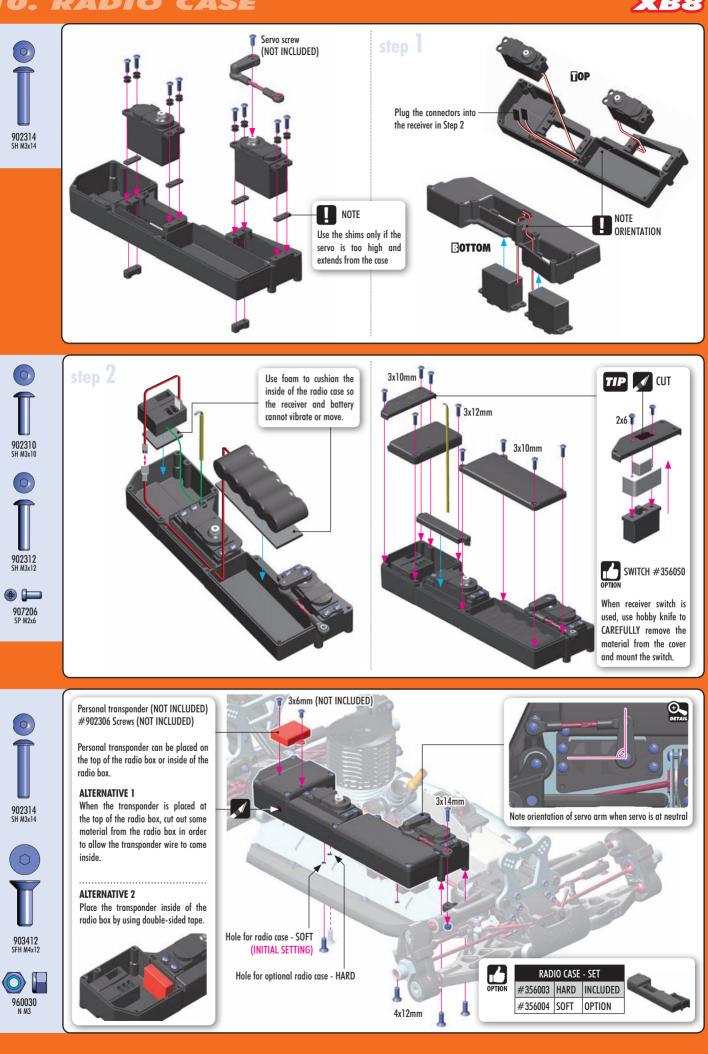


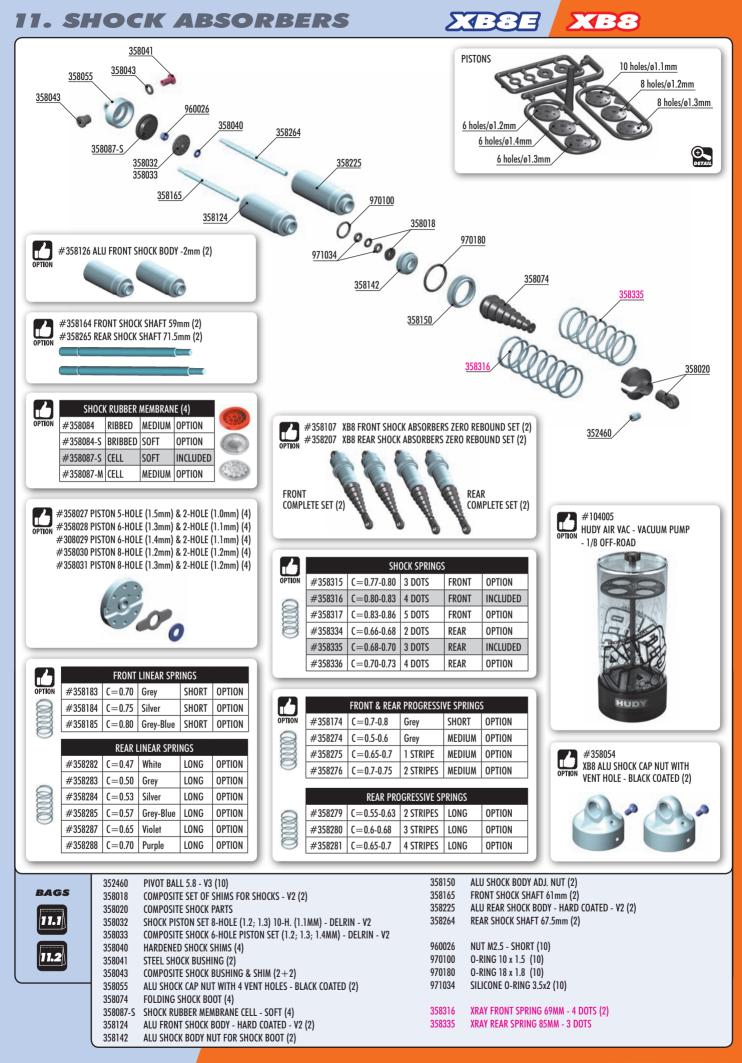






XBB

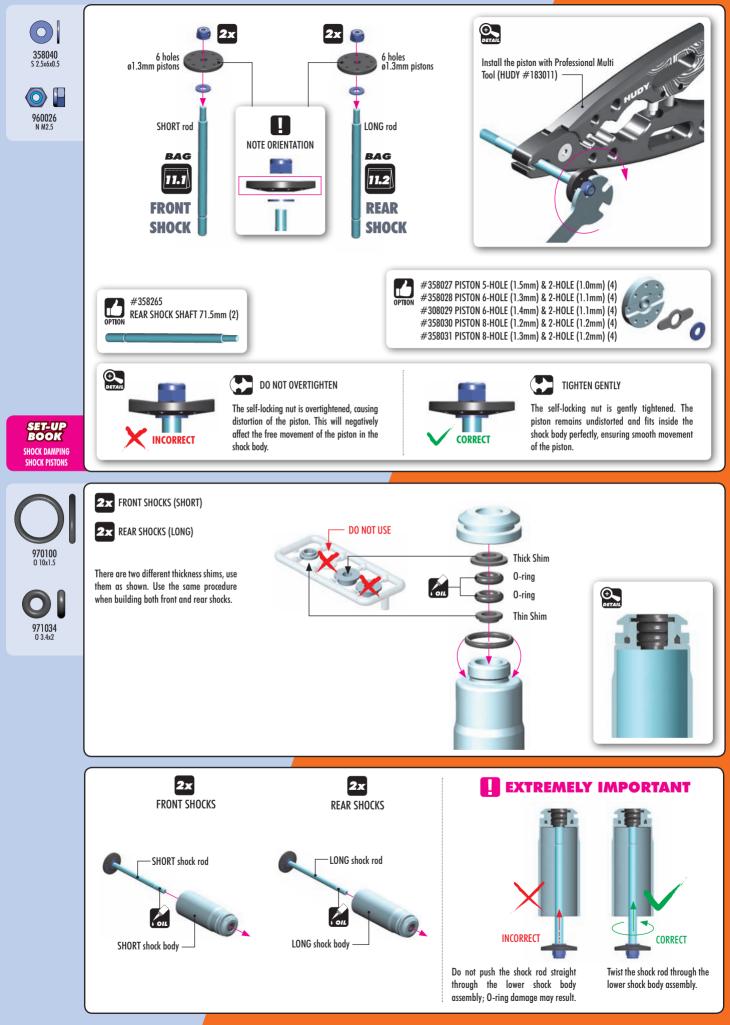


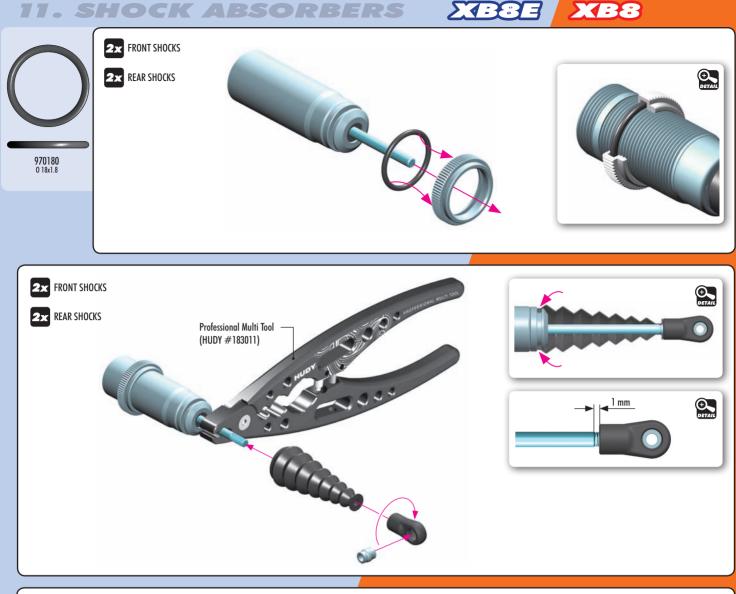




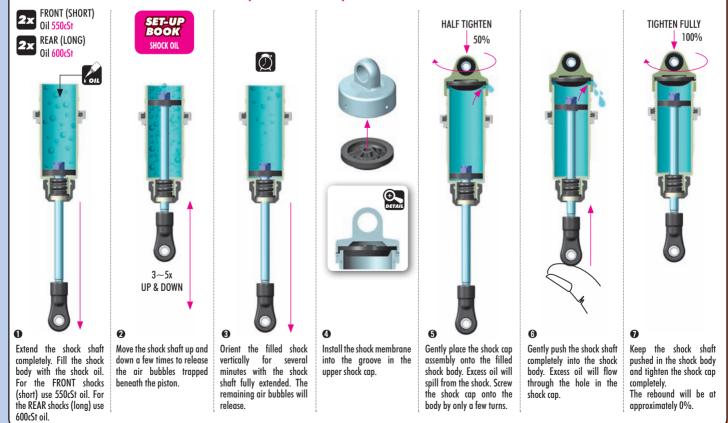
11. SHOCK ABSORBERS

XIBE XB8





DEFAULT SHOCK REBOUND SETTING 0% (LOW REBOUND)



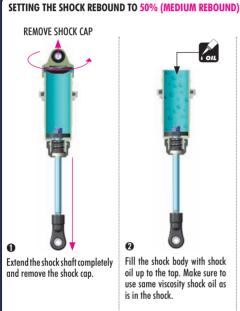
Follow the steps below to set the shock rebound to the default setting of 0%.



11. SHOCK ABSORBERS XABBE XB8 FRONT shock PRELOAD Ð. 2x REAR SHOCKS **2x** FRONT SHOCKS SHORT front shock LONG rear shock 2mm approx. REAR shock PRELOAD SHORT sprin LONG sprin IMPORTANT! SET-UP BOOK IMPORTANT! IMPORTANT! Both front shocks Both rear shocks SPRING RATE must be the same SHOCK PRELOAD must be the same FRONT & REAR SHOCKS **RIDE HEIGHT** overall length. overall length.

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.







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

4

6)

HALF TIGHTEN

50%



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

4



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)



Extend the shock shaft completely and remove the shock cap.

a



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

Ø



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%.

AIR FILTER ELBOW - LOW PROFILE

SILICONE TUBING 1M (2.4 x 5.5MM)

ALU CONICAL SHIM 3x6x2.0MM (10)

BODY CLIP (10)

AIR FILTER BODY & CAP - LOW PROFILE

AIR FILTER FOAM & OIL - LOW PROFILE

358811

358821

358841

358950

359400

362280

903312 359400 353565 (Ph 356510 353513-K 356402 <u>901303</u> 356402 <u>3564</u>02 C. 358950 356402 35882 <u>3564</u>02 901303 903314 960030 902310 356402 961022 358811 901303 35884 356402 356402 356402 358950 358841 356402 356200 902308 356402 359809 356402 (NOT INCLUDED) 960030 358047 358821 358047 960030 4х Tires (NOT INCLUDED) 960030 355261 902318 Inserts CHUCK (NOT INCLUDED) 902319 SERVO BRACE LINK 362651 30266 302630 362280 362652 #358832 7 303125 AIR FILTER RAIN COVER 6 A connecting brace between the throttle servo and the radio CLAMP ALU SERVO HORNS XRAY STARBURST WHEELS box compensates for the softer, more flexible radio box, as OPTION OPTION 23T #293444 well as eliminating throttle servo vibrations to the chassis. #359808 PINK OPTION D #293445 24T OPTION #359809 YELLOW OPTION #293446 OPTION #359712 BODY HIGH-SPEED - LIGHTWEIGHT 25T #293447 23T OPTION 17 #293448 WHEEL NUTS OPTION 24T #355261 OPEN INCLUDED #293449 25T OPTION #293560 OPTION COVERED #355265 COVERED OPTION OPTION ALU SERVO HORNS #293504 OPTION 23T OPTION WINGS WING SHIMS #293505 24T OPTION #353513-K BLACK INCLUDED OPTION #353565 COMPOSITE INCLUDED #293506 25T OPTION #353513 WHITE OPTION OPTION #293507 OPTION #293561 ALU 23T P #353513-Y OPTION YELLOW OPTION #293561-0 ALU #293508 24T OPTION #353512 LEXAN® OPTION OPTION #353561 ALU #293509 25T OPTION ADJ. TURNBUCKLE L/R 20 MM - HUDY SPRING STEEL [™] (2) BALL END 4.9MM WITH THREAD 8MM (2) 302630 362651 BAG COMPOSITE BALL JOINT 4.9MM - OPEN - V2 (8) 302663 362652 BALL END 4.9MM WITH THREAD 10MM (2) ALU SHIM 3x6x3.0MM (10) 303125 12 HEX SCREW SB M3x3 (10) HEX SCREW SH M3x8 (10) COMPOSITE REAR WING SHIM - BLACK (2) 353565 901303 WHEEL NUT - RIBBED - HARD COATED (2) 355261 902308 356200 BRAKE/THROTTLE ARMS & SERVO ARMS - SET 902310 HEX SCREW SH M3x10 (10) 356402 XB8 BRAKE/THROTTLE SYSTEM - SET 902318 HEX SCREW SH M3x18 (10) 356510 CLOSED BALL JOINT 3.9 (4) 902319 HEX SCREW SH M3x18 - LEFT THREAD (10) 358047 STEEL SCREW SHOCK PIVOT BALL WITH HEX (2) 903312 HEX SCREW SFH M3x12 (10)

HEX SCREW SFH M3x14 (10)

REAR WING - IFMAR - BLACK

XB8 BODY HIGH-SPEED FOR 1/8 OFF-ROAD BUGGY

NUT M3 (10)

WASHER S 2.2 (10)

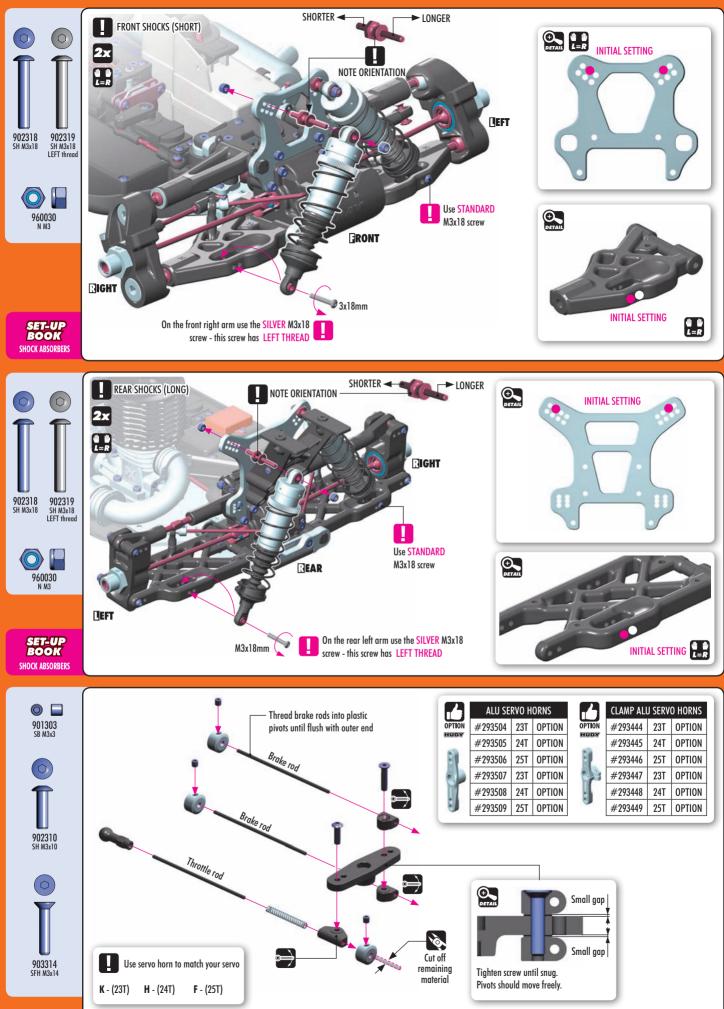
903314

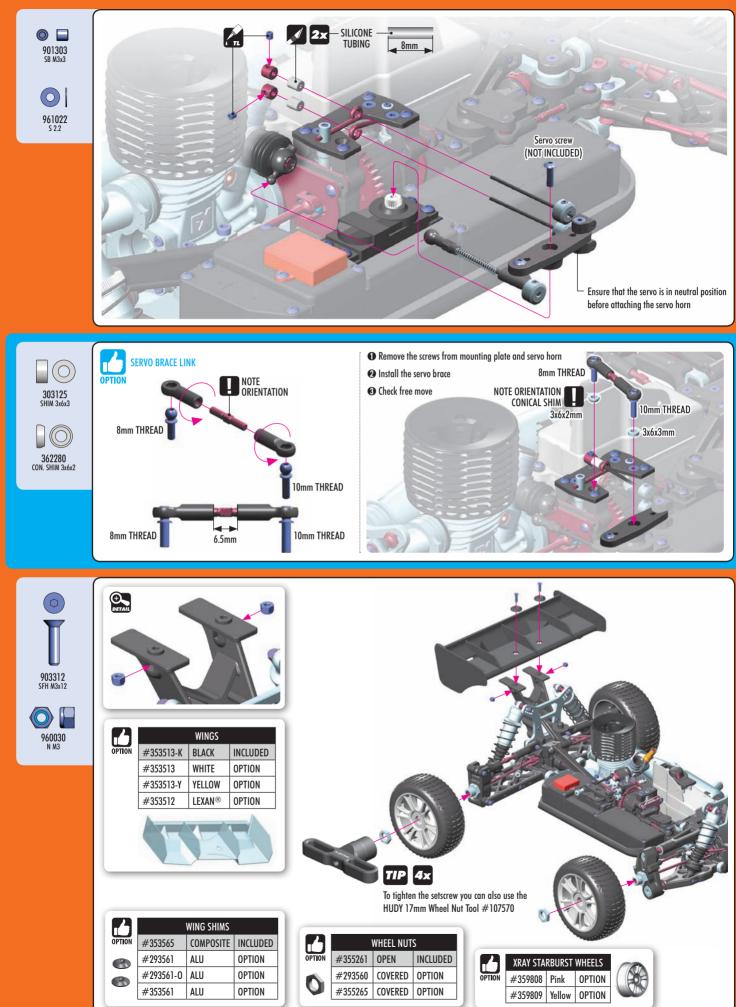
960030

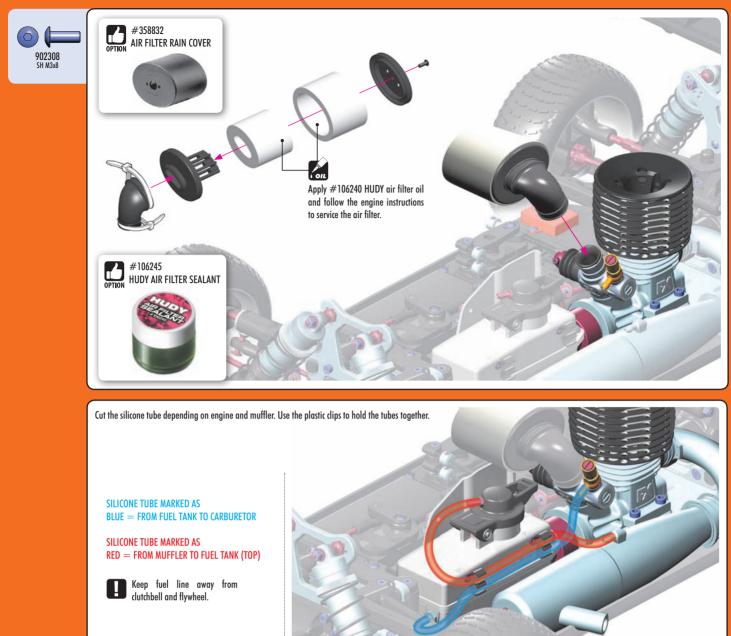
961022

353513-K

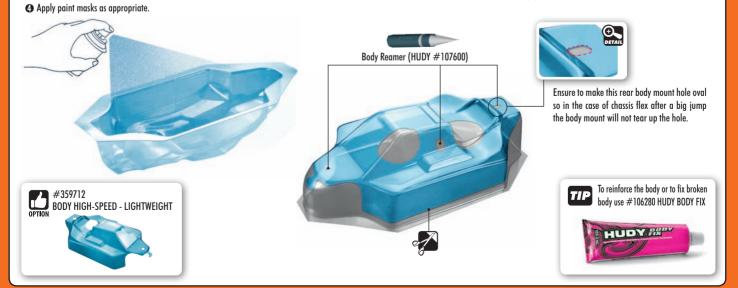
359711







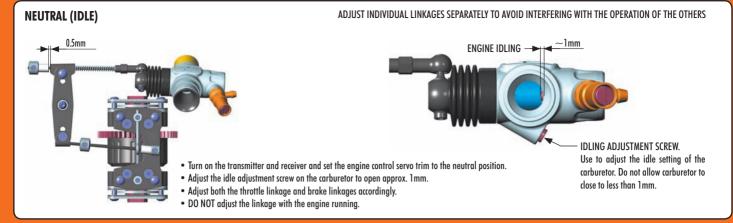
- Before cutting and making holes on the body, put the unpainted body on the chassis to confirm the mounting position and location for holes and cutouts.
- Before painting, wash the inside of the body with mild detergent, and then rinse and dry thoroughly.
 Mask all windows.
- Paint the body using paints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



XBB

THROTTLE LINKAGE ADJUSTMENT

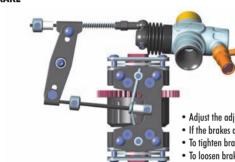
XB8



FULL THROTTLE







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



• Adjust the adjustable collars so the brakes work smoothly.

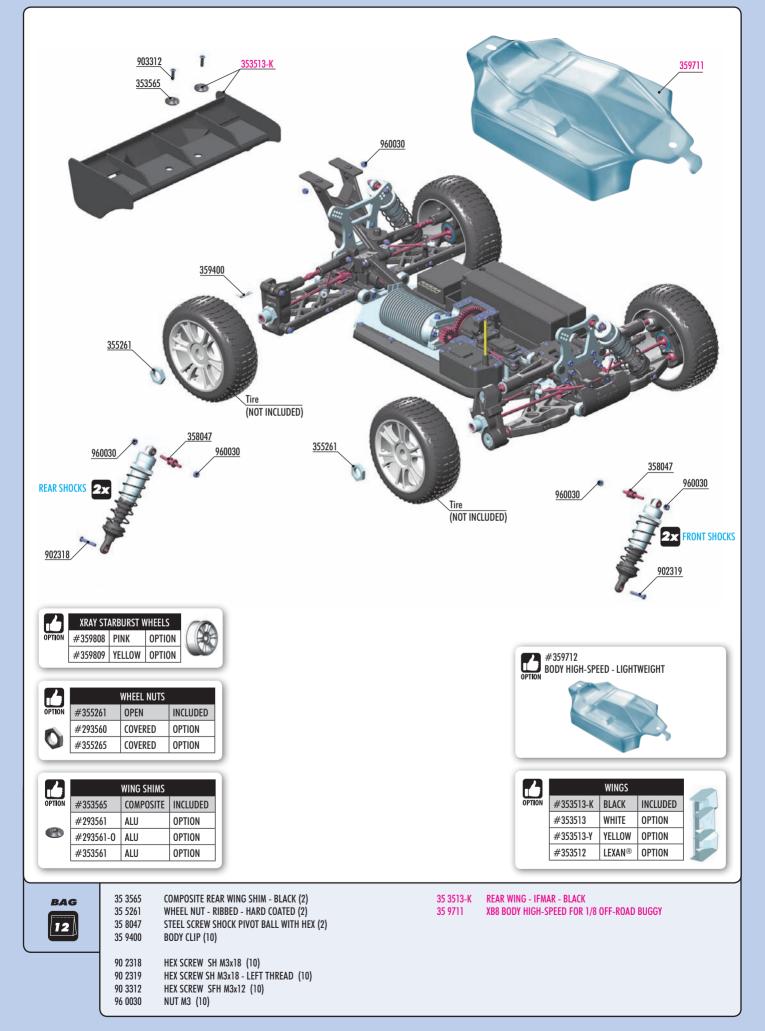
- If the brakes apply too much or not enough, adjust the adjustable collars accordingly. Or if available on the transmitter, adjust the brake endpoint.
- To tighten brakes, turn collar to thread brake rod INTO pivot.
- To loosen brakes, turn collar to thread brake rod OUT of pivot.

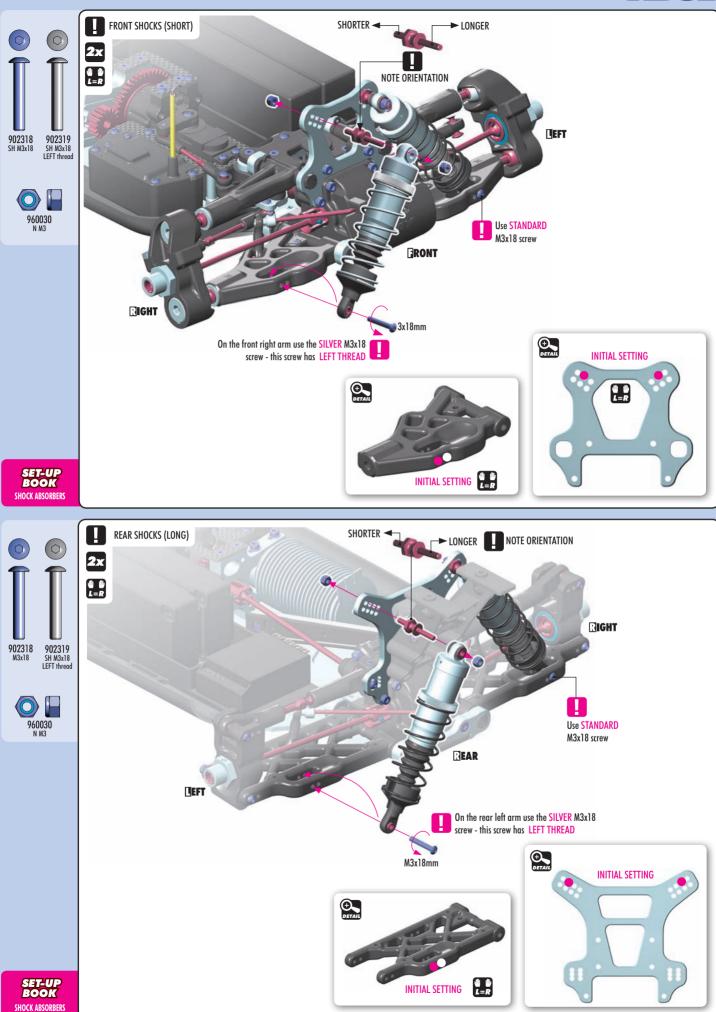
TROUBLESHOOTING GUIDE

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



SADSE

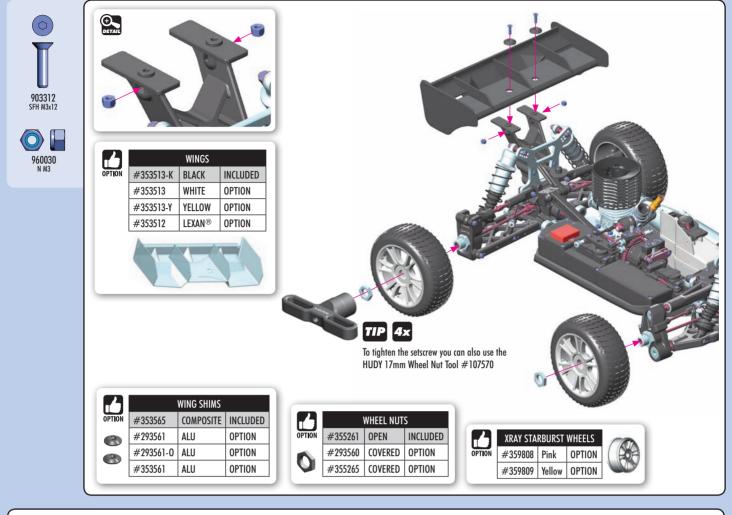




X RAN

ZABBE

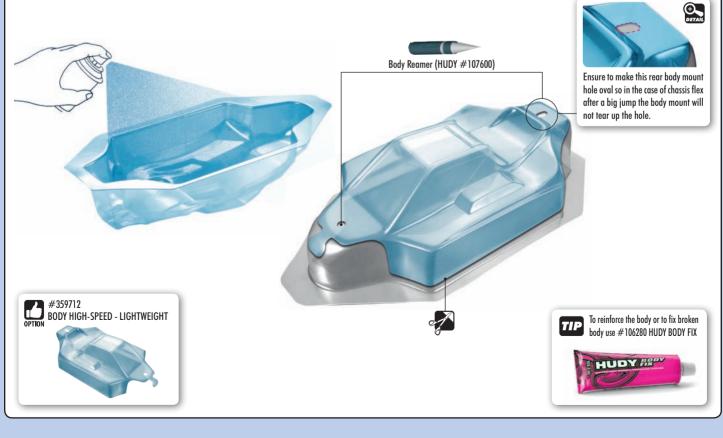
XABBE



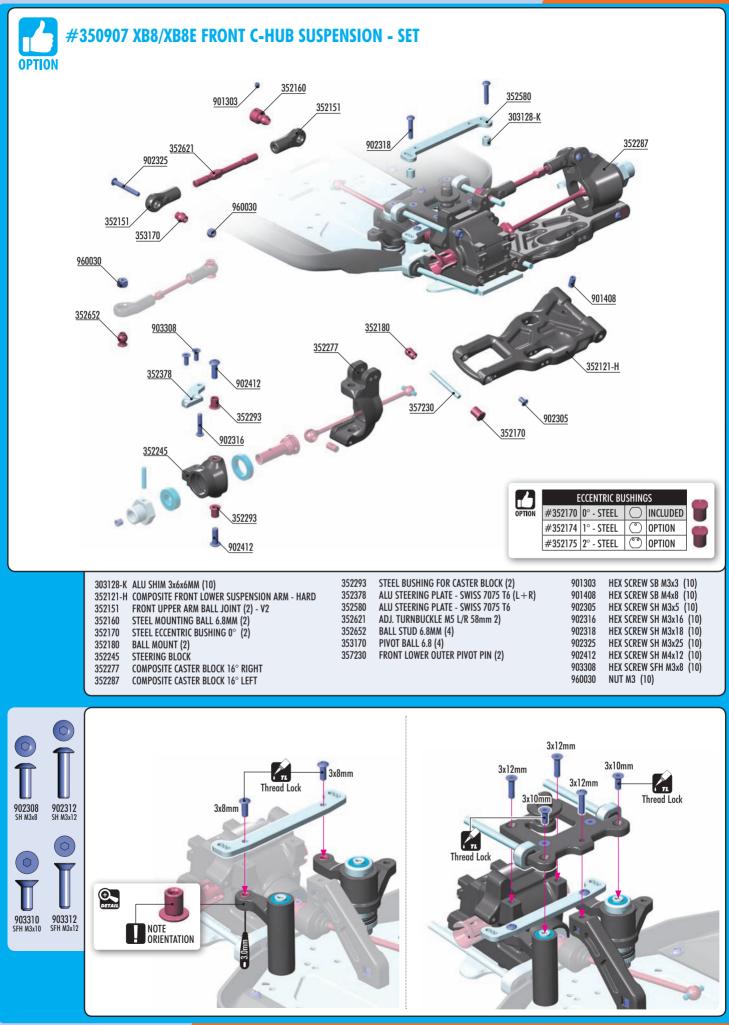
Before cutting and making holes on the body, put the unpainted body on the chassis to confirm the mounting position and location for holes and cutouts.
 Before painting, wash the inside of the body with mild detergent, and then rinse and dry thoroughly.

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

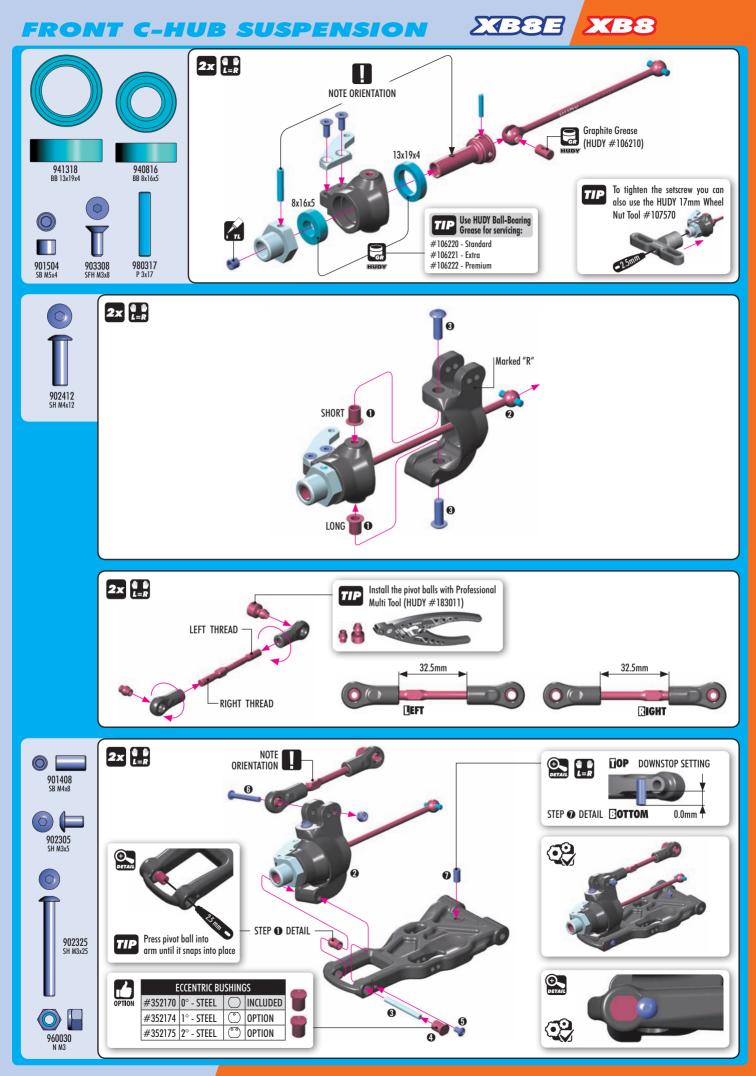
Mask all windows.Apply paint masks as appropriate.



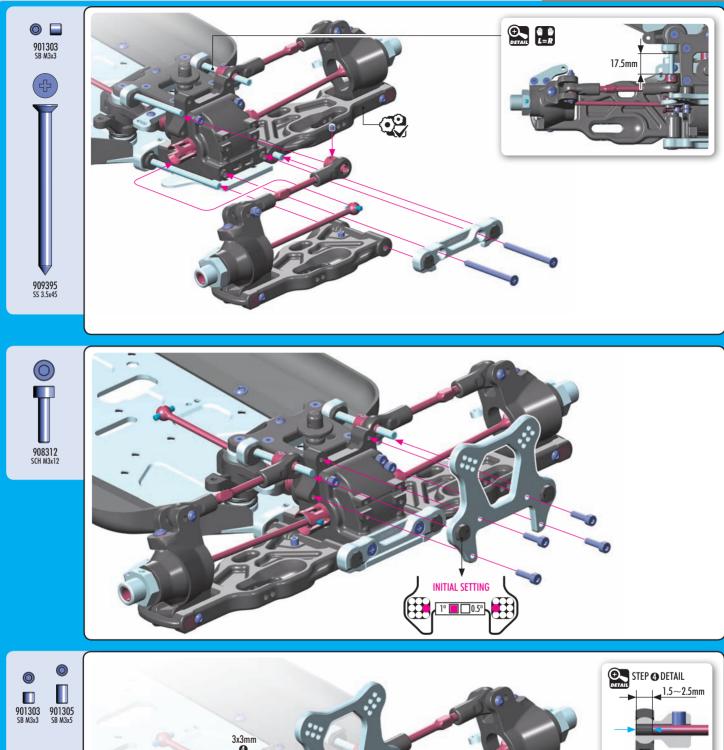
FRONT C-HUB SUSPENSION 2788 XB8

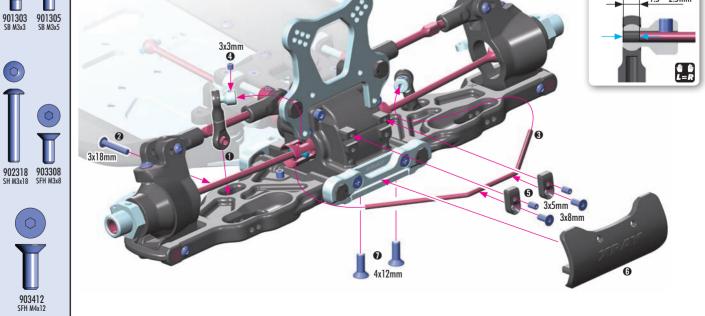




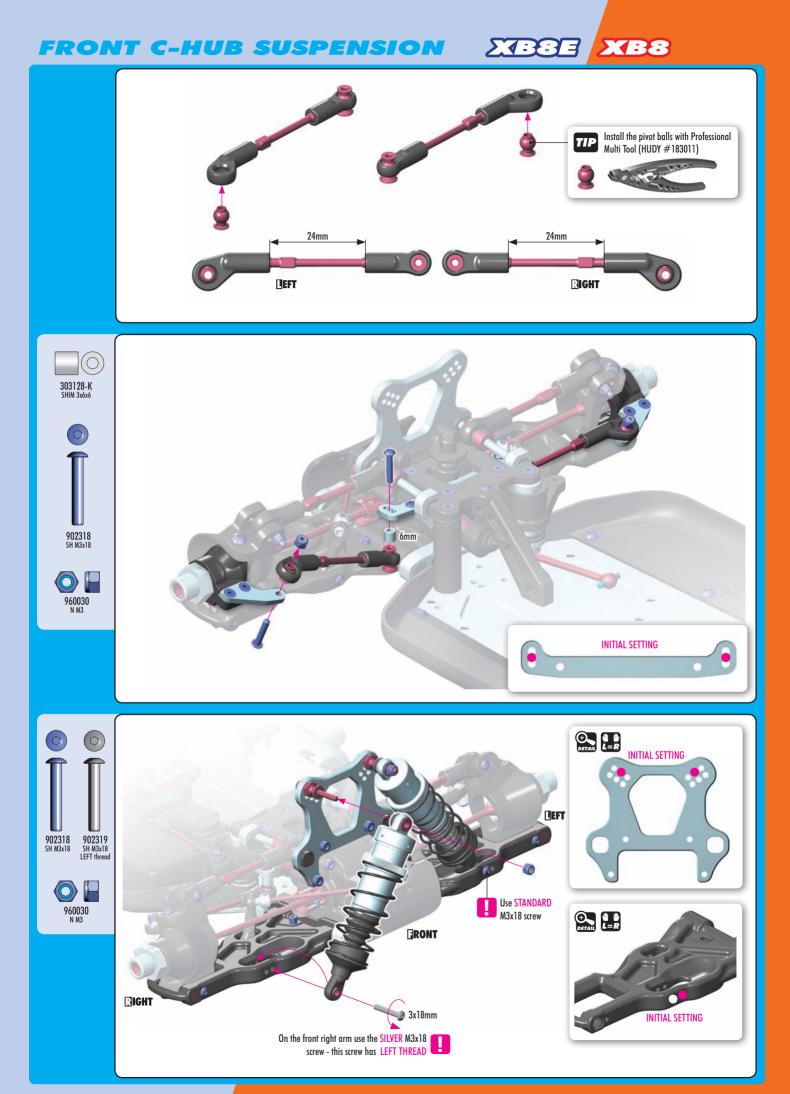


FRONT C-HUB SUSPENSION XESE XB8









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.

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.
 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.

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.

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.

• For proper engine break-in, please refer to the manual that came with the engine

7. Put fuel in the fuel tank, and close the cap securely.

Apply the glow igniter to the engine glowplug.

10. When the engine has started, remove the glow igniter.

manual and be sure to break in the new engine properly).

11. Follow your engine break-in procedure and tune the engine as appropriate.

8

9.

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.

Push the model car onto the starter box to start the engine. (If the engine is new, follow the instruction

- 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.
- 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 ballbearings 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.
- 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 dutch 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.

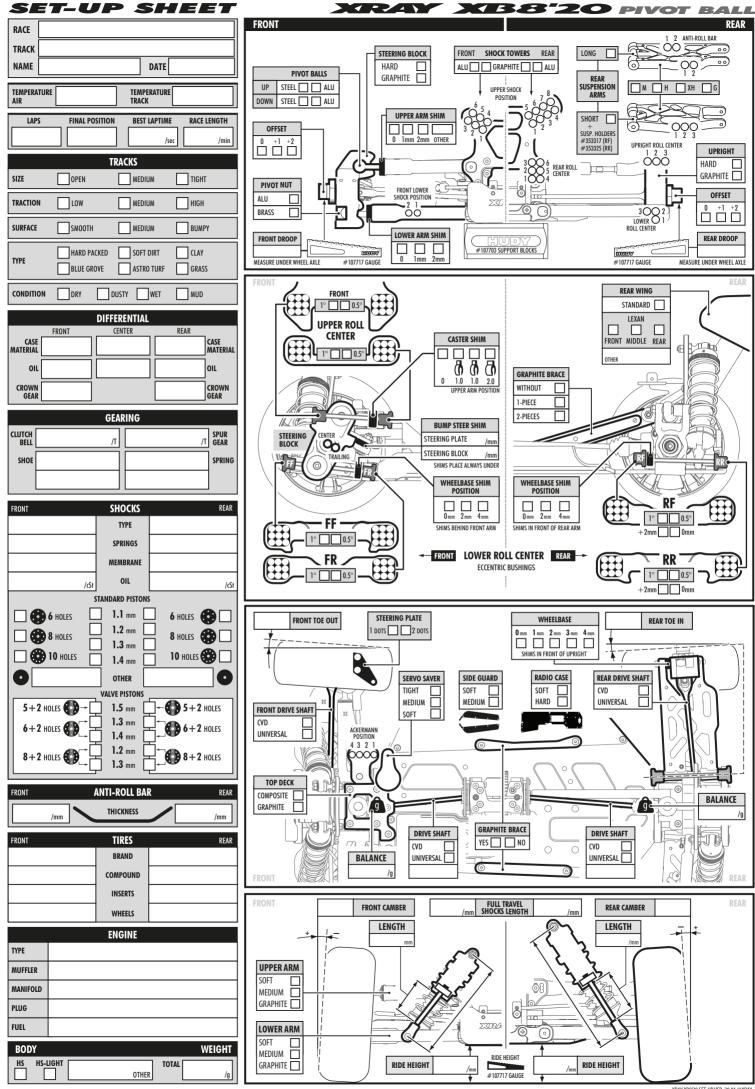
RECOMMENDED PRODUCTS

- 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.

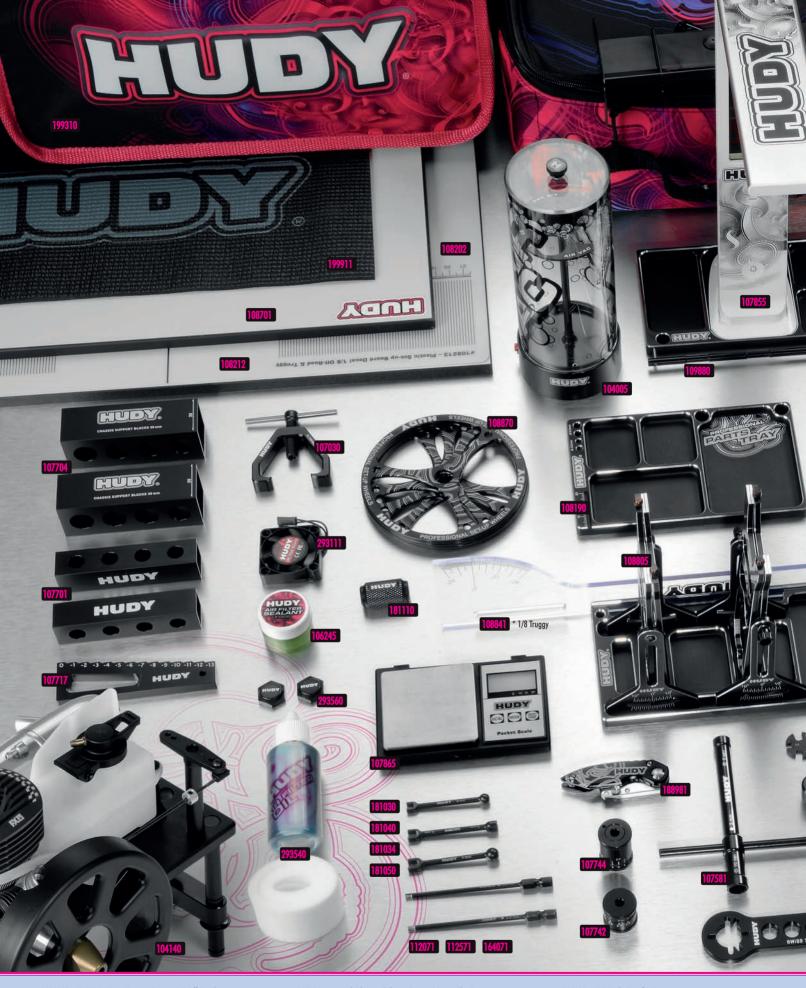




HUDY #106230



XRAY XB8'20 SET-UP VER. 20.01 ©XR/



- #104005 #104140 #104500 HUDY Air Vac - Vacuum Pump - 1/8 Off-Road HUDY Engine Break-In Bench HUDY Star-Box 1/8 Off-Road HUDY Universal Tire Balancing Station HUDY Universal Tire Balancing Station Wheel Adapter for 1/8 Off-Road Cars, Truggy & Rally Game HUDY Drive Pin Replacement Tool (for 3mm Pins) HUDY Magic Cleaning Gum HUDY Air Filter Sealant #105500
- #105510

- #106000 #106200
- #106245
- #107030
- HUDY Flywheel Puller HUDY Bearing Check Tool
- #107090
- #107570 #107581
- HUDY 17mm Off-Road Wheel Nut Tool HUDY 17mm Off-Road Wheel Nut Tool HUDY Cross Wrench Glowplug # 8mm / Clutchnut # 10mm Limited Edition Reamer for Body 0-18mm + Cover Large #107602
- Limited Edition Exhaust Spring / Caster Clip Remover Limited Edition Arm Reamer # 4.0mm Chassis Droop Gauge Support Blocks 20mm for 1/8 LW(2) Chassis Droop Gauge Support Blocks 30mm 1/8 Off-Road LW (2) Chassis Droop Gauge 0 to -13 mm for 1/8 Off-Road HUDY Adjustable Ride Height Gauge 20-30mm HUDY Adjustable Ride Height Gauge 30-45mm HUDY Adjustable Camber Gauge 110mm HUDY Adjustable Camber Gauge 80-140mm #107612 #107644 #107701
- #107704
- #107717
- #107742 #107744
- #107762
- HUDY Adjustable Droop Gauge 80-140mm HUDY Droop Gauge 70-140mm
- #107780
- #107783
- #107855 HUDY Pit LED
- #107855 HUDY Ultimate Digital Pocket Scale 300g/0.01g #108170 HUDY Off-Road & Truggy Car Stand

- #108190
- #108202 #108212
- #108701
- HUDY Alu Tray for Parts Flat Set-Up Board for 1/8 Off-Road & Truggy Plastic Set-up Board Decal for 1/8 Off-Road & Truggy Flat Set-Up Board for 1/8 Off-Road & GT Lightweight Universal Exclusive Set-up System for 1/8 Off-Road Cars Upside Measure Plate for 1/8 Truggy Alu Nut for 1/8 Off-Road System (4) Alu Set-up Wheel for 1/8 Off-Road Cars V2 (4) HUDY Alu Tray for 1/8 Off-Road Diff & Shocks HUDY Alu Tray for 1/8 Off-Road Diff & Shocks
- #108805
- #108841
- #108860
- #108870
- #109802
- #109801
 HUDY Alu Tray for 1/8 Off-Road Diff Assembly

 #109801
 HUDY Alu Tray for Stel-Up System

 #109800
 HUDY Alu Tray for Accessories & Pit LED

 #111545
 Limited Edition Allen Wrench # 1.5mm



- #112045 Limited Edition - Allen Wrench # 2.0mm Power Tool Tip Allen 2.0 x 90 mm Limited Edition - Allen Wrench # 2.5mm #112071 #112545 #112571 Power Tool Tip Allen 2.5 x 90 mm rower tool 1ip Allen 2.5 x 90 mm Limited Edition - Allen Wrench # 3.0mm Limited Edition - Allen Wrench + Ball Repl. Tip # 2.0mm Limited Edition - Allen Wrench + Ball Repl. Tip # 2.5mm Long Slotted Screwdriver 4.0 mm - for Engine Adjust. - SPC - V2 Limited Edition - Phillips Screwdriver # 4.0mm Power Tool Tip Phillips 4.0 x 90 mm Sorbet Driver 5.0 mm #113045 #132045 #132545 #154060 #164045

- #164071
- #170050
- Socket Driver 5.0 mm Limited Edition Socket Driver # 5.5mm HUDY Spring Steel Turnbuckle Wrench 3 mm #175535
- #181030
- HUDY Spring Steel Turnbuckle Wrench 3 & 4mm HUDY Spring Steel Turnbuckle Wrench 4 mm HUDY Spring Steel Turnbuckle Wrench 5 mm HUDY Special Tool For Turnbuckles & Nuts HUDY Ball Joint Wrench HUDY 1/8 Off-Road Flywheel/Wheel Nut Multi-Tool HUDY Professional Multi Tool #181034 #181040 #181050
- #181090
- #181110
- #182015
- #183011
- #188981 HUDY Pocket Hobby Knife
- #188990 HUDY Professional Body Scissors
- #199060 HUDY Alu Tool Stand
- HUDY Car Bag 1/8 & 1/10 Off-Road HUDY LiPo Safety Bag #199184
- #199270
- #199310 HUDY Pit Bag Compact

- #199911 HUDY Pit Mat Roll 750x1200mm with Printing
- #293111
- HUDY Brushless RC Fan 40mm Air Filter Foam & Oil (10) XRAY XB8 Low Profile Style #293540
 - #293560 HUDY Alu Wheel Nut with Cover - Ribbed (2)

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





XRAY EUROPE

XRAY, K VÝSTAVISKU 6992, 91101 TRENCIN, SLOVAKIA, EUROPE PHONE: +421-32-740 11 00, FAX: +421-32-740 11 09, info@teamxray.com

XRAY USA

RC AMERICA, 2030 Century Center Blvd #15, Irving, TX 75062, USA PHONE: 214-744-2400, FAX: 214-744-2401, xray@rcamerica.com

