

1/8 LUXURY NITRO OFF-ROAD BUGGY

XRAY

2017

INSTRUCTION MANUAL



MADE IN
EUROPE

NATIONAL
CHAMPION
56x

EUROPEAN
CHAMPION 40+

EUROPEAN
CHAMPION 40+

EUROPEAN
CHAMPION B
2x

EUROPEAN
CHAMPION

EUROPEAN
VICE-CHAMPION
2x

CAR
OF THE
YEAR
3x

ROAR
NATIONALS
CHAMPION
JUNIOR

INTRODUCTION

The XRAY XB8 is a modern, high-competition premium luxury racing 1/8 nitro buggy that is the epitome of high-performance and fine distinctive design. Your XB8 offers highest performance, responsive handling, and traditionally exceptional XRAY quality, engineering, and design. The superb craftsmanship and attention to detail are clearly evident everywhere on the XRAY XB8.

XB8 was designed around a no compromise platform; the attention to detail creates a low maintenance, extra long life nitro buggy. The ultra-low center of gravity (CG) and optimized weight balance makes set-up, driving, and maintenance easy and quick.

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

Failure to follow these instructions will be considered as abuse and/or neglect.

SAFETY PRECAUTIONS

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

CAUTION: CANCER HAZARD

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

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

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

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.

The XRAY XB8 was created by blending highest-quality materials and excellent design. On high-speed flat tracks or bumpy tracks, whether driving for fun or racing to win, the XB8 delivers outstanding performance, speed, and precision handling.

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.

XRAY Europe

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

XRAY USA

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

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 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

IMPORTANT NOTES - NITRO FUEL

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

- 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.

R/C & BUILDING TIPS

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

- Ask your local hobby shop for any advice.

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

WARRANTY

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

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

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

Limitations of Liability

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

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

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

All rights reserved.

QUALITY CERTIFICATE

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

you start racing the car. Products which have been worn out, abused, neglected or improperly operated will not be covered under warranty.

We wish you enjoyment of this high-quality and high-performance RC car and wish you best success on the track!

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

SYMBOLS USED

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

TOOLS REQUIRED

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)	17mm Wheel Nut Tool (HUDY #107570) 	Flywheel Tool (HUDY #182015) 	Special Tool for all turnbuckles, nuts (HUDY #181090) 	Cross Wrench (HUDY #107581)
Side Cutters (HUDY #189010) 	Hobby Knife 	Needle Nose Pliers (HUDY #189020) 	Snap Ring Pliers (HUDY #189040) 	Scissors (HUDY #188990)
			Turnbuckle Wrench (HUDY #181040 4mm) (HUDY #181050 5mm) 	Body Reamer (HUDY #107600) or (HUDY #107601)

TOOLS & EQUIPMENT INCLUDED

Silicone Shock Oil (HUDY #106351 500cSt 100ml) (HUDY #106366 650cSt 100ml) 	Silicone Diff Oil (HUDY #106431 3000cSt 100ml) (HUDY #106451 5000cSt 100ml) (HUDY #106471 7000cSt 100ml) 	Air Filter Oil (HUDY #106240) 	Graphite Grease (HUDY #106210)
--	--	-----------------------------------	------------------------------------

NOT INCLUDED

SET-UP BOOK

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

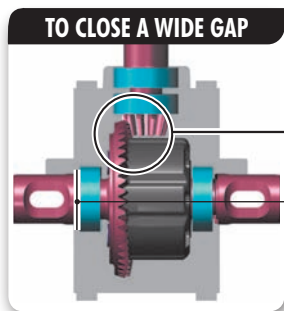
EQUIPMENT REQUIRED

Transmitter Receiver 	.21ci (3.5cc) Engine (FX K5 DC #650301) 	Manifold (FX #659706) 	Starter Box & Battery Pack (HUDY #104500) 	Glow Plug Igniter 	Battery Charger
Steering and Throttle Servos 	Receiver Pack 	Exhaust (FX #659503) 	Transmitter Batteries 	Fuel + Fuel Bottle (HUDY #104200) 	Lexan™ Paint

TIP FRONT & REAR DIFF GEAR MESH ADJUSTMENT

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

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

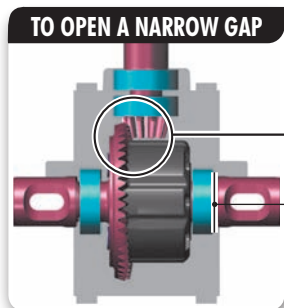


TO CLOSE A WIDE GAP

TO CLOSE A WIDE GAP



insert shim(s) here

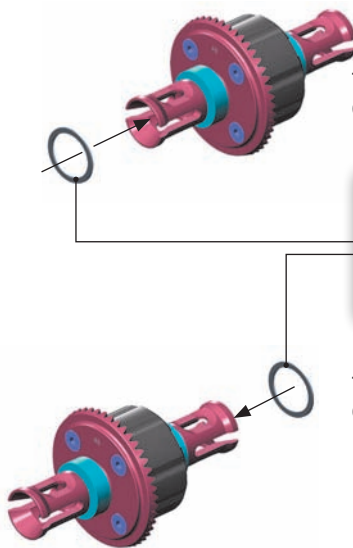


TO OPEN A NARROW GAP

TO OPEN A NARROW GAP

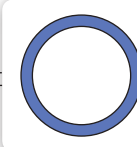


insert shim(s) here



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

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



WASHER

#962131 S 13 x 16 x 0.1 mm (10)

#962130 S 13 x 16 x 0.2 mm (10)

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.



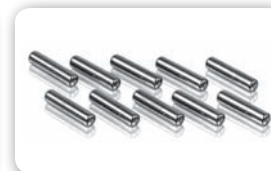
Do not use drive shafts when the pins are worn.

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.

TIP INSTALLING PIVOT BALLS INTO COMPOSITE BALL-JOINTS



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



Tighten screw until pivot ball is tight against block.



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



The finished joint.

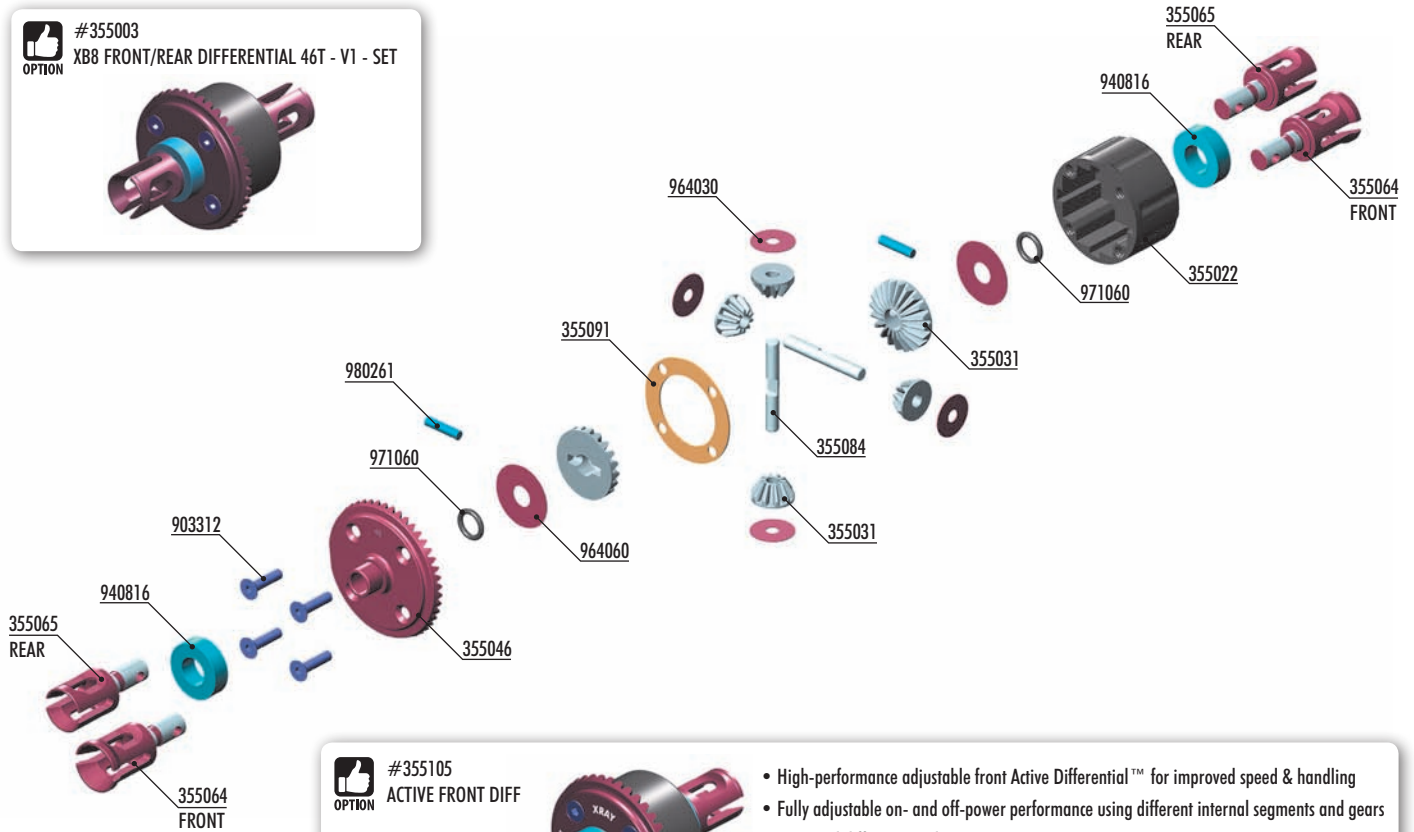


Loosen and remove screw.

1. FRONT & REAR DIFFERENTIALS



#355003
XB8 FRONT/REAR DIFFERENTIAL 46T - V1 - SET



#355105
ACTIVE FRONT DIFF



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

BAGS

01.1

2x

35 5004	XB8 FRONT DIFFERENTIAL 46T - V2 - SET	35 5091	F/R DIFF GASKET (4)
35 5005	XB8 REAR DIFFERENTIAL 46T - V2 - SET	90 3312	HEX SCREW SFH M3x12 (10)
35 5022	DIFFERENTIAL CASE - V2	94 0816	HIGH-SPEED BALL-BEARING 8x16x5 BLUE COVERED (2)
35 5031	STEEL DIFF BEVEL & SATELLITE GEARS - V2 (2+4)	96 4030	WASHER S 3.5x12x0.2 (10)
35 5046	FRONT/REAR DIFF LARGE BEVEL GEAR 46T - HUDY STEEL	96 4060	WASHER S 6x18x0.2 (10)
35 5064	FRONT DIFF OUTDRIVE ADAPTER LONG - V2 - HUDY SPRING STEEL™ (2)	97 1060	SILICONE O-RING 6x1.5 (10)
35 5065	REAR DIFF OUTDRIVE ADAPTER - V2 - HUDY SPRING STEEL™ (2)	98 0261	PIN 2.5x11.5 (10)
35 5084	F/R DIFF PIN (2)		



940816
BB 8x16x5



964060
S 6x18x0.2



971060
O 6x1.5

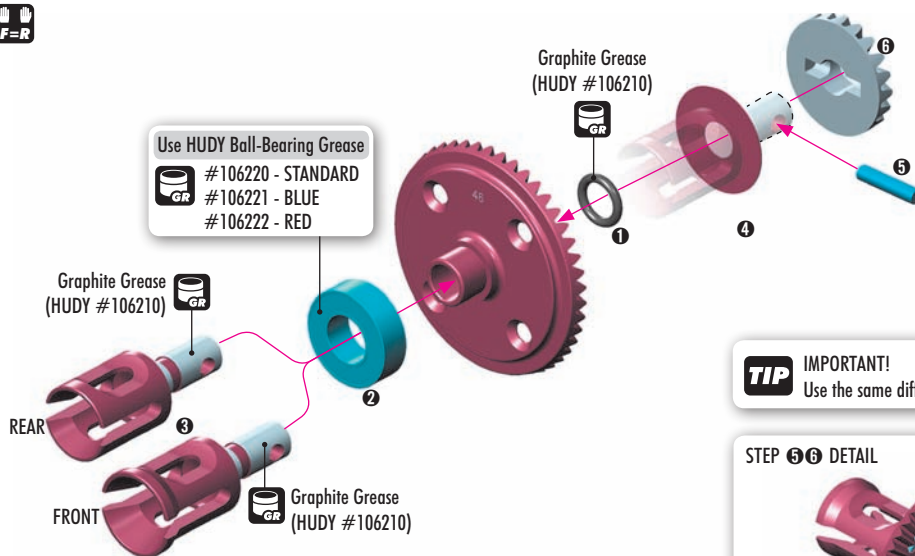


980261
P 2.5x11.5

SET-UP
BOOK

DIFFERENTIAL GEARS

2x F=R



Use HUDY Ball-Bearing Grease

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

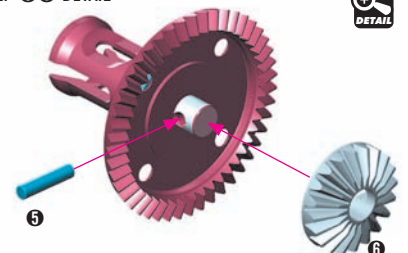
Graphite Grease
(HUDY #106210)

Graphite Grease
(HUDY #106210)

Graphite Grease
(HUDY #106210)

TIP IMPORTANT!
Use the same diff outdrives on both ends of a diff.

STEP 5 6 DETAIL



1. FRONT & REAR DIFFERENTIALS



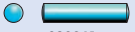
940816
BB 8x16x5



964060
S 6x18x0.2



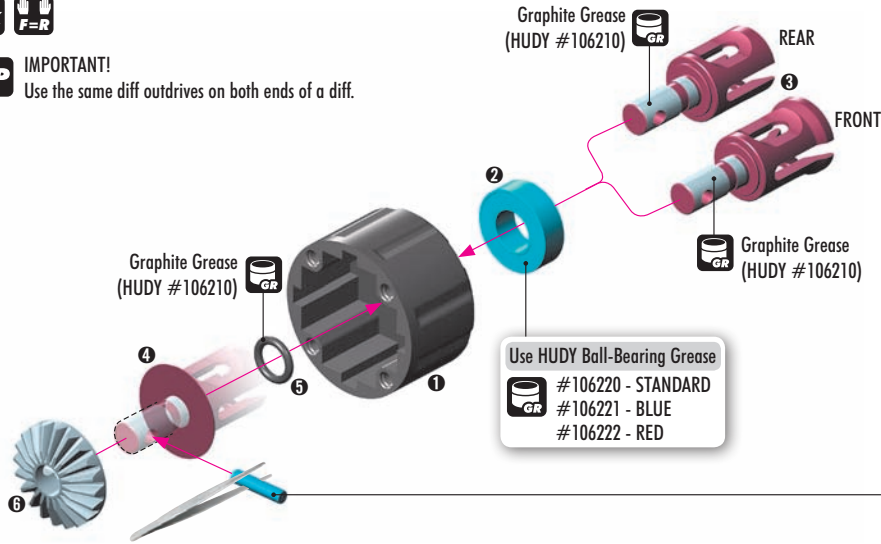
971060
O 6x1.5



980261
P 2.5x11.5

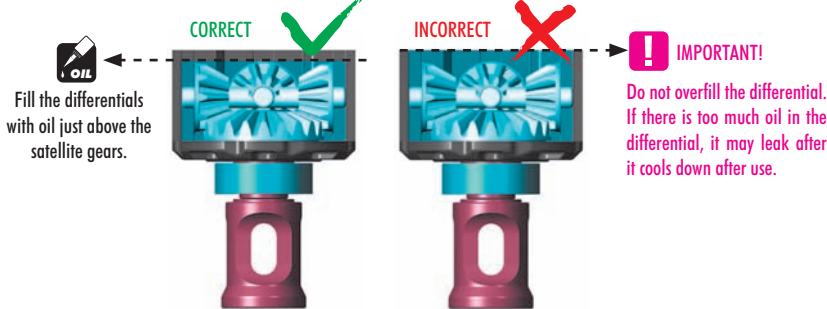
2x F=R

TIP IMPORTANT!
Use the same diff outrides on both ends of a diff.



VERY IMPORTANT!

Use the following silicone oils included in the kit for initial settings:
FRONT diff: 5 000cSt / REAR diff: 3 000cSt



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

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

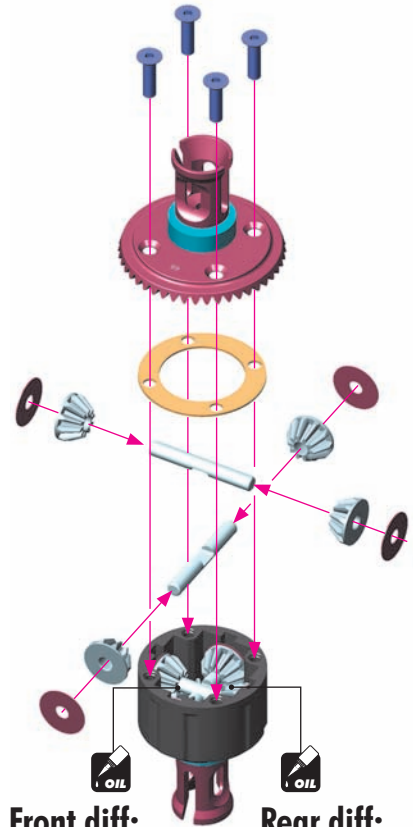


1. Put the diff (without oil) on the scale and check the weight:

- 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

REAR DIFF	39.30g + 2.70g	= 42.00g
FRONT DIFF	40.10g + 2.70g	= 42.80g



Front diff:

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

Rear diff:

Silicone oil 3 000cSt
Fill just above the satellite gears.

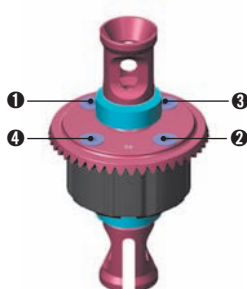
SET-UP BOOK

DIFFERENTIAL OIL

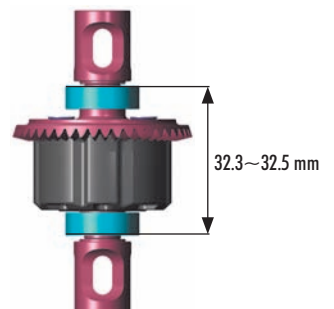
Tighten the screws equally



Finish tightening in this order



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

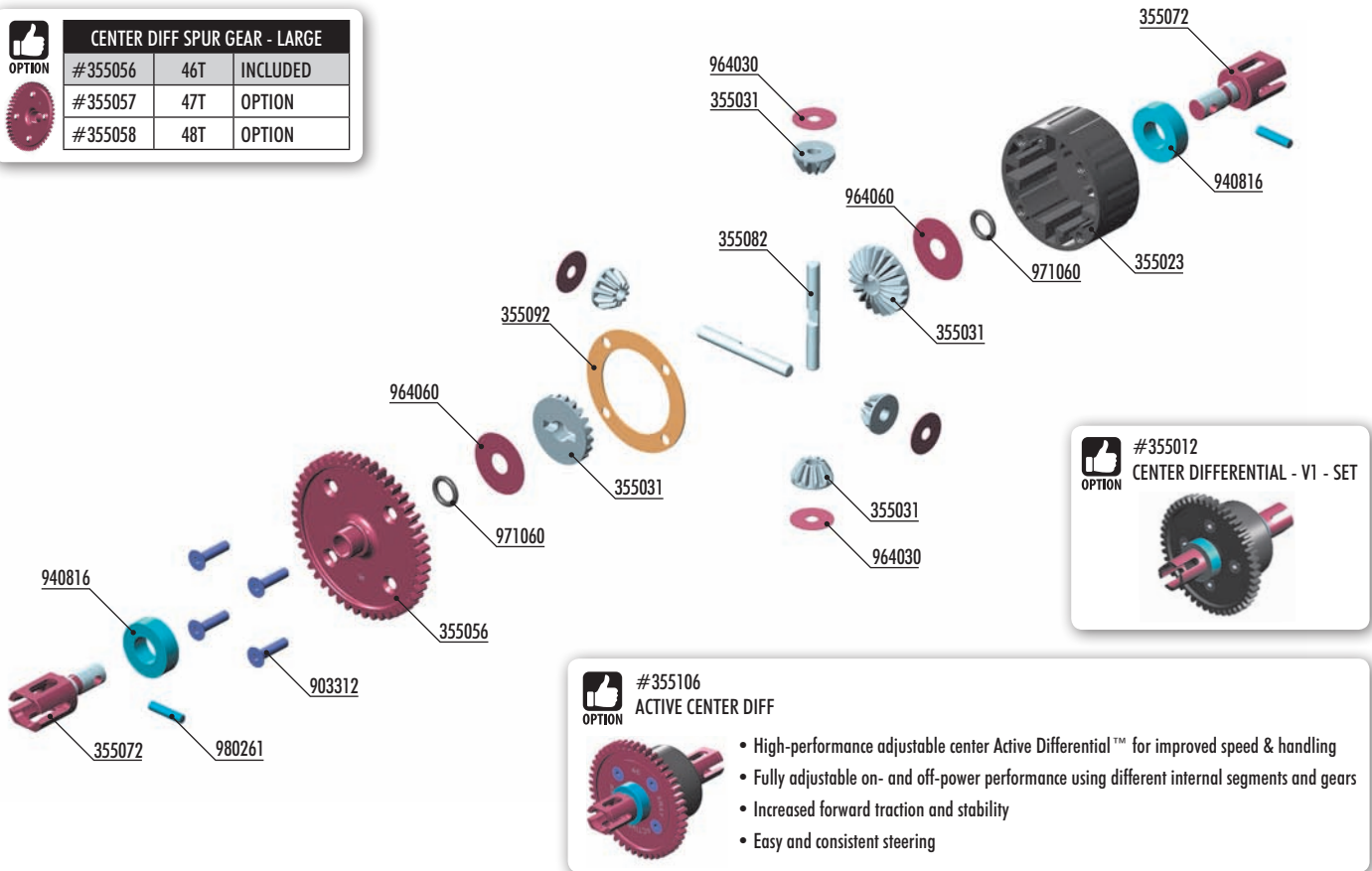


1. CENTER DIFFERENTIAL



CENTER DIFF SPUR GEAR - LARGE

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



#355012 CENTER DIFFERENTIAL - V1 - SET



#355106 ACTIVE CENTER DIFF



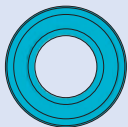
- High-performance adjustable center Active Differential™ for improved speed & handling
- Fully adjustable on- and off-power performance using different internal segments and gears
- Increased forward traction and stability
- Easy and consistent steering

BAG

01.3

- 35 5013 CENTER DIFFERENTIAL - LARGE - SET
- 35 5023 CENTER DIFFERENTIAL CASE - V2
- 35 5031 STEEL DIFF BEVEL & SATELLITE GEARS - V2 (2+4)
- 35 5056 CENTER DIFF SPUR GEAR 46T - LARGE
- 35 5072 LARGE CENTER DIFF OUTDRIVE ADAPTER - HUDY STEEL (2)
- 35 5082 CENTER DIFF PIN (2)
- 35 5092 CENTER DIFF GASKET (2)

- 90 3312 HEX SCREW SFH M3x12 (10)
- 94 0816 HIGH-SPEED BALL-BEARING 8x16x5 BLUE COVERED (2)
- 96 4030 WASHER S 3.5x12x0.2 (10)
- 96 4060 WASHER S 6x18x0.2 (10)
- 97 1060 SILICONE O-RING 6x1.5 (10)
- 98 0261 PIN 2.5x11.5 (10)



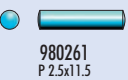
940816
BB 8x16x5



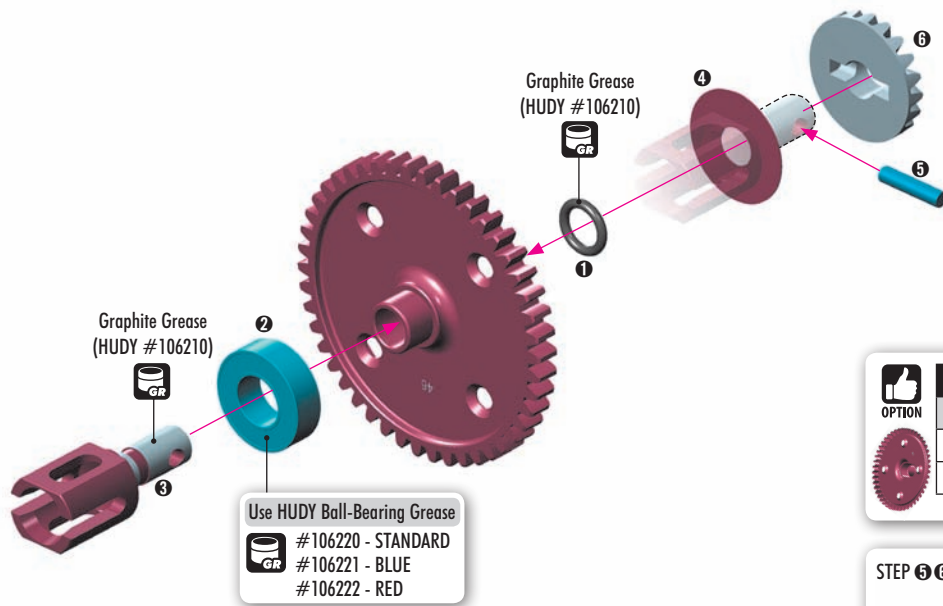
964060
S 6x18x0.2



971060
O 6x1.5



980261
P 2.5x11.5



Graphite Grease
(HUDY #106210)

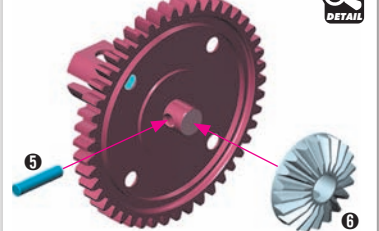
Use HUDY Ball-Bearing Grease
#106220 - STANDARD
#106221 - BLUE
#106222 - RED



CENTER DIFF SPUR GEAR - LARGE

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

STEP 5 & 6 DETAIL



SET-UP BOOK
DIFFERENTIAL GEARS

1. CENTER DIFFERENTIAL



940816
BB 8x16x5



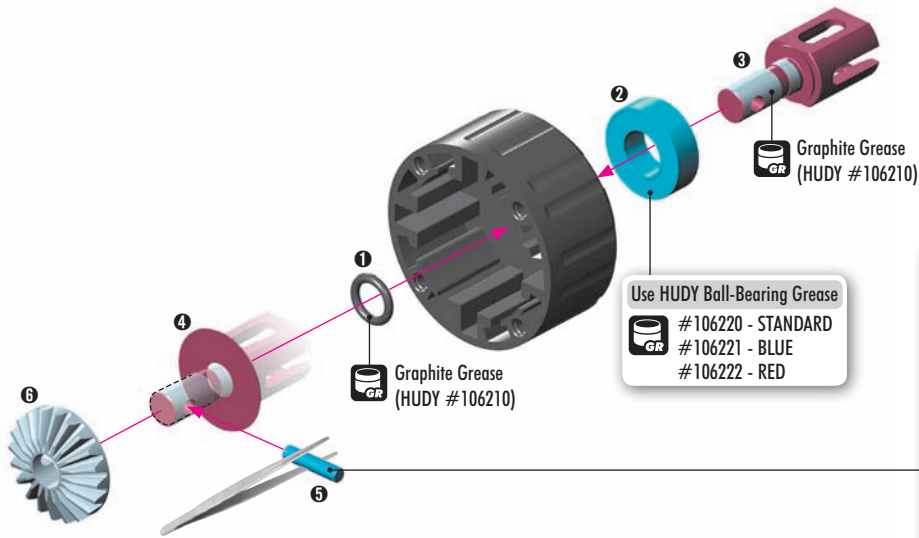
964060
S 6x18x0.2



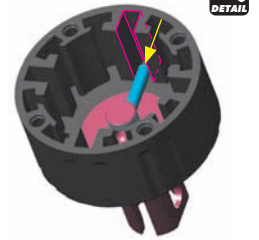
971060
O 6x1.5



980261
P 2.5x11.5

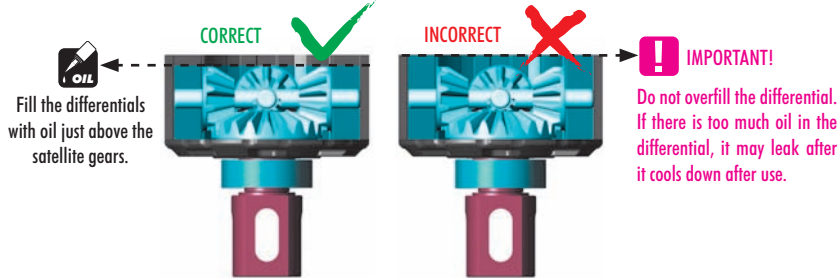


STEP 6 DETAIL



VERY IMPORTANT!

Use the following silicone oil included in the kit for initial setting:
Center diff: 7 000cSt



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

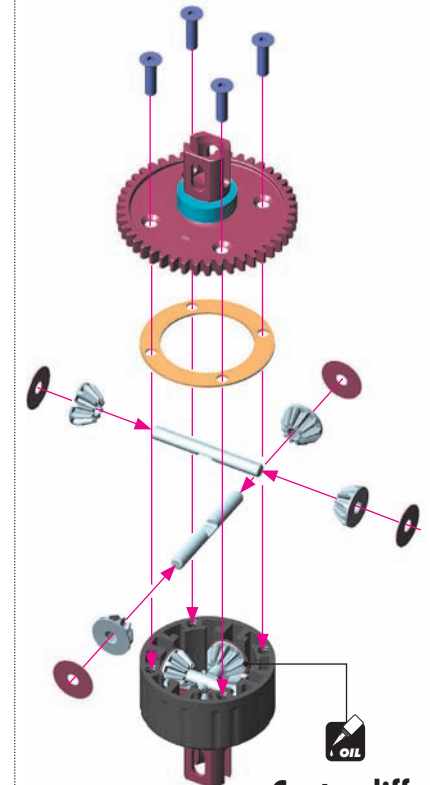
#107865 HUDY Ultimate Digital Pocket Scale 300g ± 0.01g



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

2. Slowly pour oil into the diff and watch the weight. Add 5.33g of oil into the diff. The approximate weight of the diff + oil is 48.30g.

$$\text{CENTER DIFF } 42.97\text{g} + 5.33\text{g} = 48.30\text{g}$$



Center diff:

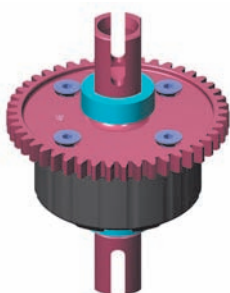
Silicone oil 7 000cSt

Fill to just above the satellite gears.

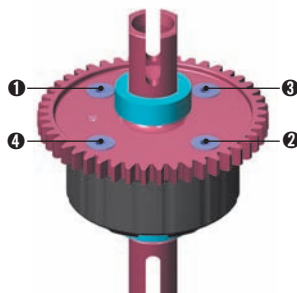
SET-UP BOOK

DIFFERENTIAL OIL

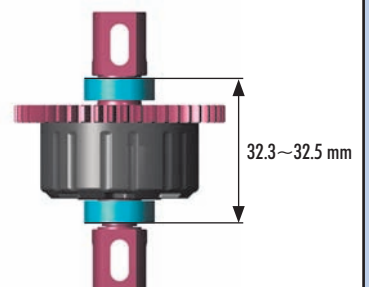
Tighten the screws equally



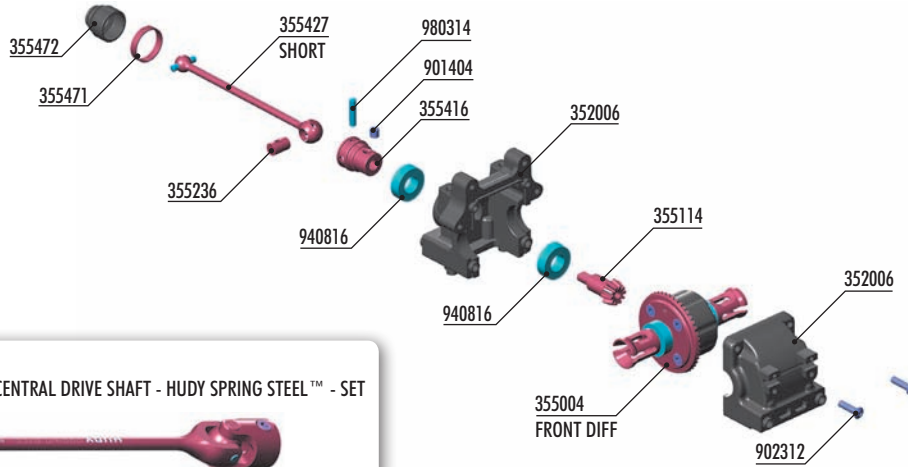
Finish tightening in this order



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



2. FRONT TRANSMISSION



#355426
OPTION
FRONT UNIVERSAL CENTRAL DRIVE SHAFT - HUDY SPRING STEEL™ - SET

BAG

02

35 2006	XB8'16 DIFF BULKHEAD BLOCK SET FRONT/REAR	35 5472	DRIVE SHAFT BOOT (2)
35 5004	XB8 FRONT DIFFERENTIAL 46T - V2 - SET	90 1404	HEX SCREW SB M4x4 (10)
35 5114	BEVEL DRIVE GEAR 14T	90 2312	HEX SCREW SH M3x12 (10)
35 5236	CVD DRIVE SHAFT COUPLING - HUDY SPRING STEEL™	94 0816	HIGH-SPEED BALL-BEARING 8x16x5 RUBBER SEALED (2)
35 5416	CENTRAL CVD SHAFT UNIVERSAL JOINT - HUDY SPRING STEEL™	98 0314	PIN 3x14 (10)
35 5427	FRONT CENTRAL CVD DRIVE SHAFT - HUDY SPRING STEEL™		
35 5471	DRIVE SHAFT LOCKING RING (2)		

- 901404 SB M4x4
- 902312 SH M3x12
- 940816 BB 8x16x5
- 980314 P 3x14

step 1

SHORT CVD DRIVE SHAFT

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

Graphite Grease (HUDY #106210)

NOTE ORIENTATION

STEP 4 DETAIL

PIN

TOP

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

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

step 2

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

TL

DETAIL

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

STEP 5 DETAIL

Use HUDY Ball-Bearing Grease

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

step 3

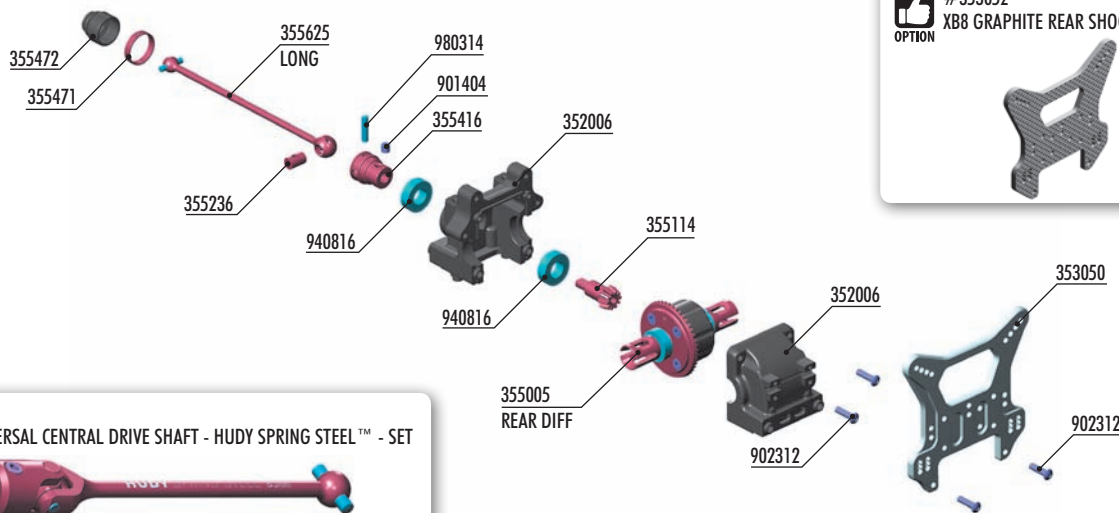
FRONT DIFF 5 000 cSt

Graphite Grease (HUDY #106210)

DETAIL

Cut on both front and rear bulkhead blocks

2. REAR TRANSMISSION



#355626
REAR UNIVERSAL CENTRAL DRIVE SHAFT - HUDY SPRING STEEL™ - SET
OPTION



BAG

02

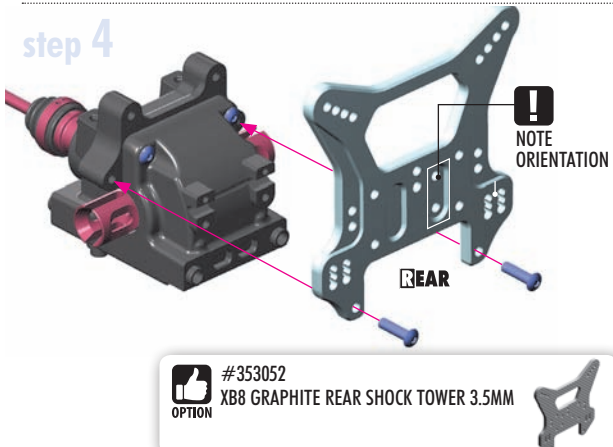
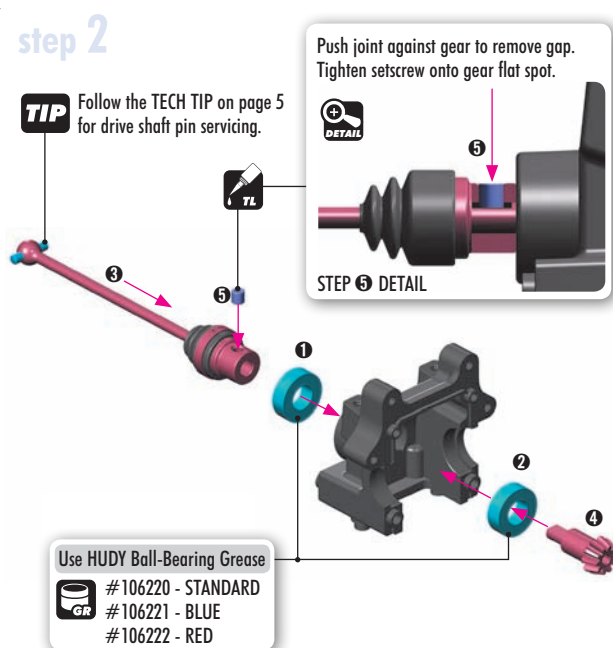
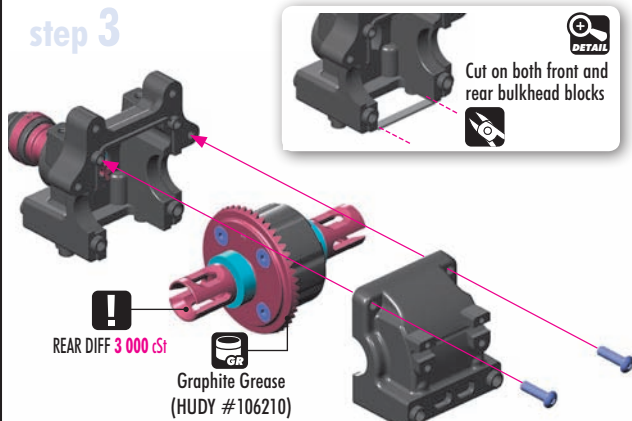
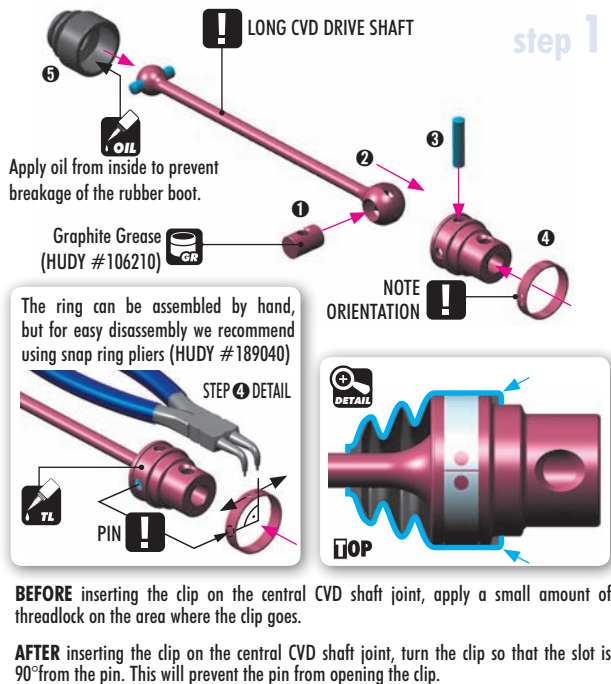
35 2006	XB8'16 DIFF BULKHEAD BLOCK SET FRONT/REAR	35 5471	DRIVE SHAFT LOCKING RING (2)
35 5005	XB8 REAR DIFFERENTIAL 46T - V2 - SET	35 5472	DRIVE SHAFT BOOT (2)
35 3050	XB8 ALU REAR SHOCK TOWER - CNC MACHINED 7075 T6 (4MM)	90 1404	HEX SCREW SB M4x4 (10)
35 5114	BEVEL DRIVE GEAR 14T	90 2312	HEX SCREW SH M3x12 (10)
35 5236	CVD DRIVE SHAFT COUPLING - HUDY SPRING STEEL™	94 0816	HIGH-SPEED BALL-BEARING 8x16x5 RUBBER SEALED (2)
35 5416	CENTRAL CVD SHAFT UNIVERSAL JOINT - HUDY SPRING STEEL™	98 0314	PIN 3x14 (10)
35 5625	REAR CENTRAL CVD DRIVE SHAFT - HUDY SPRING STEEL™		

901404
SB M4x4





902312
SH M3x12

940816
BB 8x16x5

980314
P 3x14

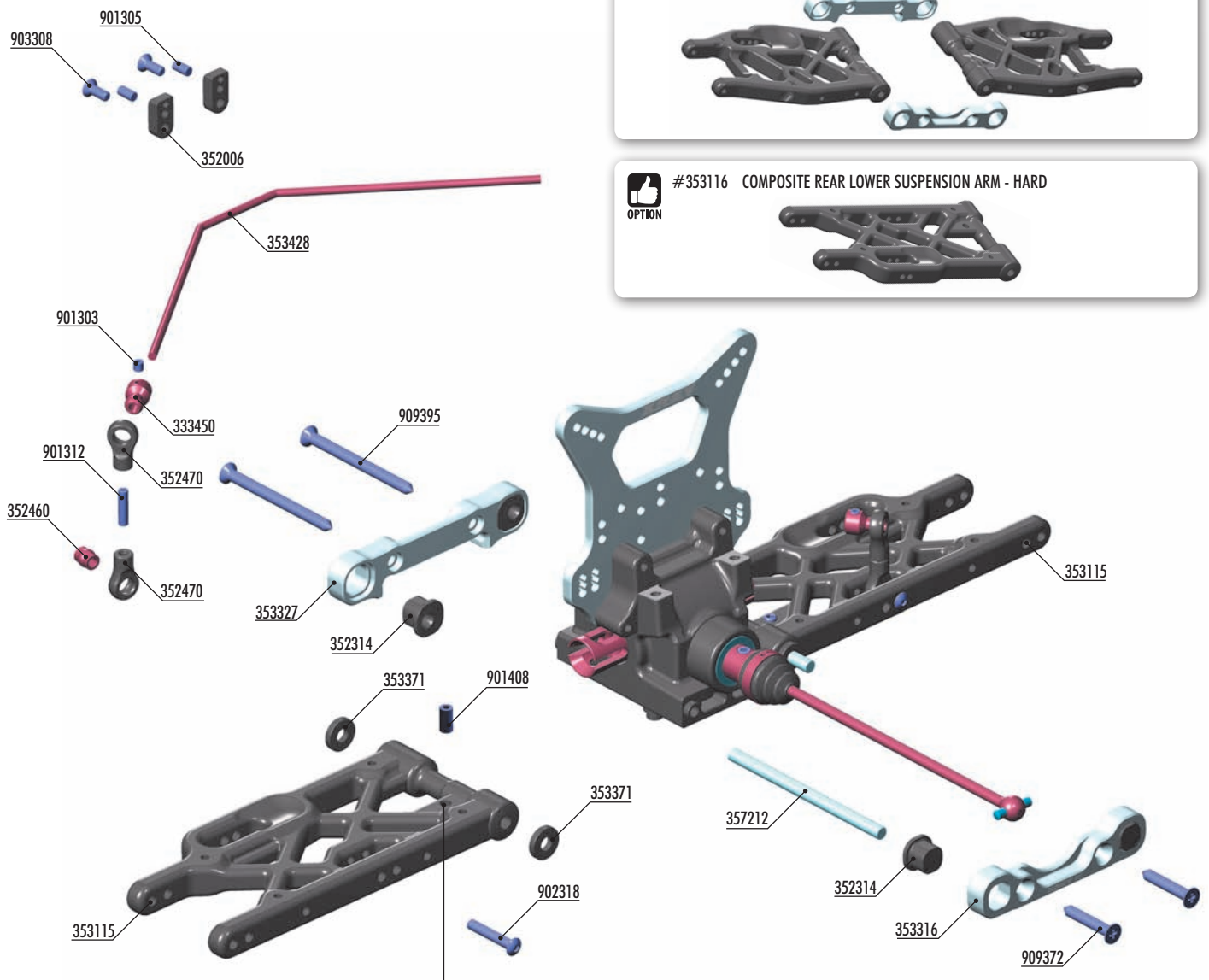


3. REAR SUSPENSION

-  #353113 XB8'16 COMPOSITE REAR LOWER SUSPENSION ARM - RIGHT
-  #353123 XB8'16 COMPOSITE REAR LOWER SUSPENSION ARM - LEFT
-  #353317 XB8 ALU REAR LOWER SUSP. HOLDER - FRONT - SQUARE ADJ. ROLL CENTER
-  #353325 XB8 ALU REAR LOWER SUSP. HOLDER - REAR - SQUARE ADJ. ROLL CENTER




-  #353116 COMPOSITE REAR LOWER SUSPENSION ARM - HARD



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

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

 REAR ANTI-ROLL BARS

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

BAG
03

- | | | | |
|---------|---|---------|-------------------------------|
| 33 3450 | ANTI-ROLL BAR BALL JOINT 5.8 MM (2) | 90 1303 | HEX SCREW SB M3x3 (10) |
| 35 2006 | XB8'16 DIFF BULKHEAD BLOCK SET FRONT/REAR | 90 1305 | HEX SCREW SB M3x5 (10) |
| 35 2314 | COMPOSITE ECCENTRIC BUSHINGS - V2 (2) | 90 1312 | HEX SCREW SB M3x12 (10) |
| 35 2460 | PIVOT BALL 5.8 (10) | 90 1408 | HEX SCREW SB M4x8 (10) |
| 35 2470 | BALL JOINT 5.8 (8) | 90 2318 | HEX SCREW SH M3x18 (10) |
| 35 3115 | COMPOSITE REAR LOWER SUSPENSION ARM | 90 3308 | HEX SCREW SFH M3x8 (10) |
| 35 3116 | ALU REAR LOWER SUSP. HOLDER - FRONT - SQUARE ADJ. ROLL CENTER | 90 9372 | SCREW PHILLIPS SS 3.5x22 (10) |
| 35 3316 | ALU REAR LOWER SUSP. HOLDER - REAR - SQUARE ADJ. ROLL CENTER | 90 9395 | SCREW PHILLIPS SS 3.5x45 (10) |
| 35 3327 | ALU REAR LOWER SUSP. HOLDER - REAR - SQUARE ADJ. ROLL CENTER | | |
| 35 3371 | SET OF COMPOSITE LOWER ARM SHIMS | | |
| 35 3428 | REAR ANTI-ROLL BAR 2.8MM | | |
| 35 7212 | LOWER INNER PIVOT PIN F+R (2) | | |

3. REAR SUSPENSION



353371
SHIM 4x10x2



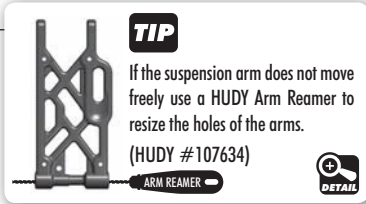
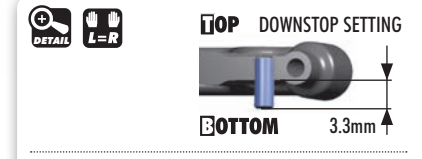
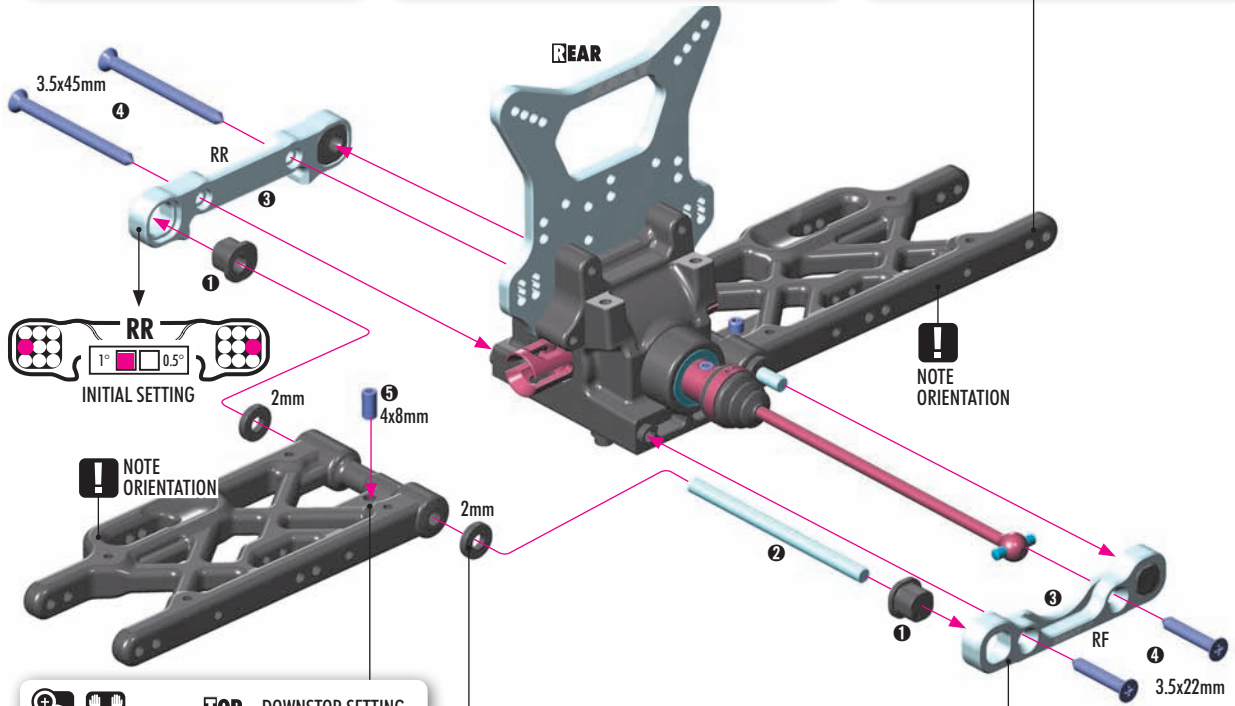
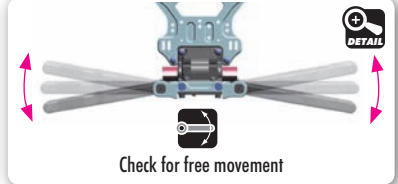
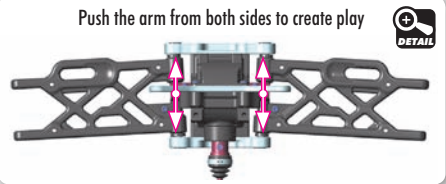
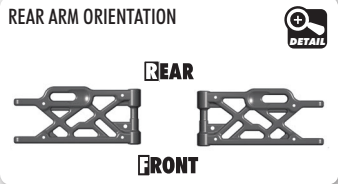
901408
SB M4x8



909372
SS 3.5x22



909395
SS 3.5x45

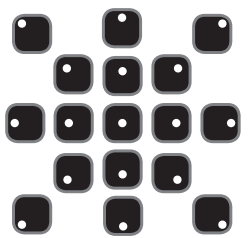


#902407
OPTION

Downstop screw for fine tuning.



All possible mounting alternatives of eccentric bushings



ECCENTRIC BUSHINGS HAVE TWO DIFFERENT OFFSETS FROM THE CENTER.

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

SET-UP BOOK
TOE-IN
ANTI-SQUAT
ROLL CENTER
DOWNSTOP
WHEELBASE
TRACK WIDTH

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

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

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

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

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

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

Anti-Squat Example:

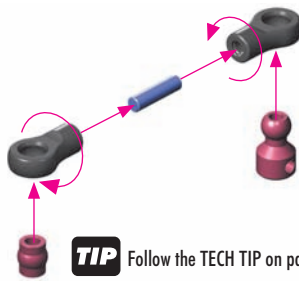
0(RR) - 0 (RF) = 3°		= 3°
0(RR) - 0.5 (RF) = 3.5°		= 3.5°
0(RR) - 1 (RF) = 4°		= 4°

3. REAR SUSPENSION

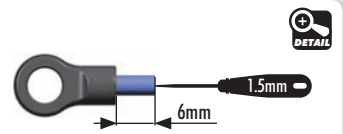


901312
SB M3x12

2x L-R



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



901303
SB M3x3



901305
SB M3x5

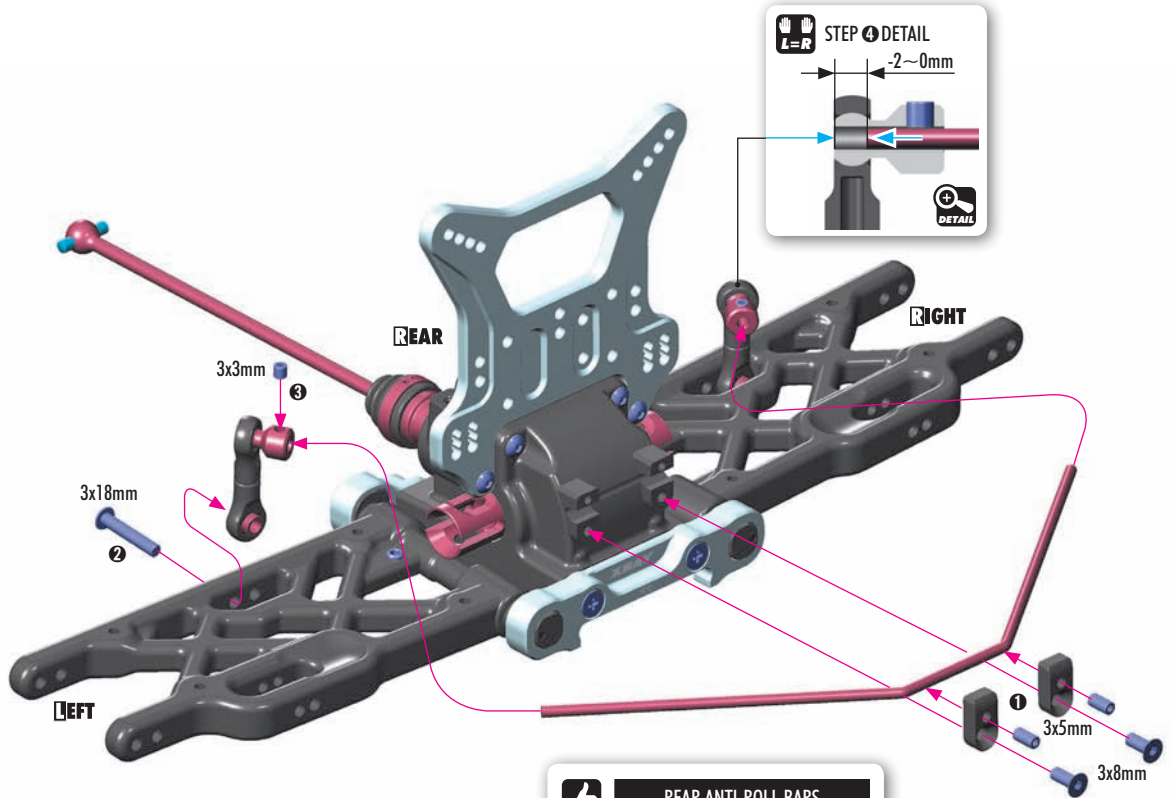


902318
SFH M3x18



903308
SFH M3x8

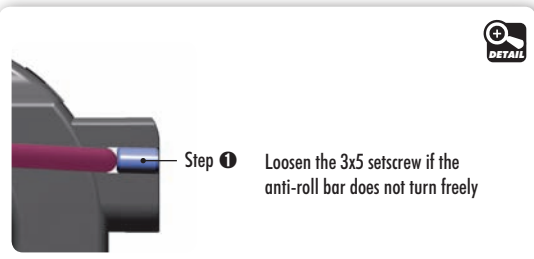
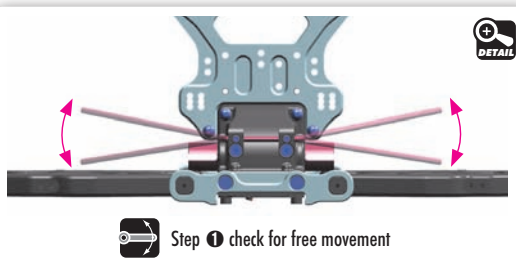
L-R



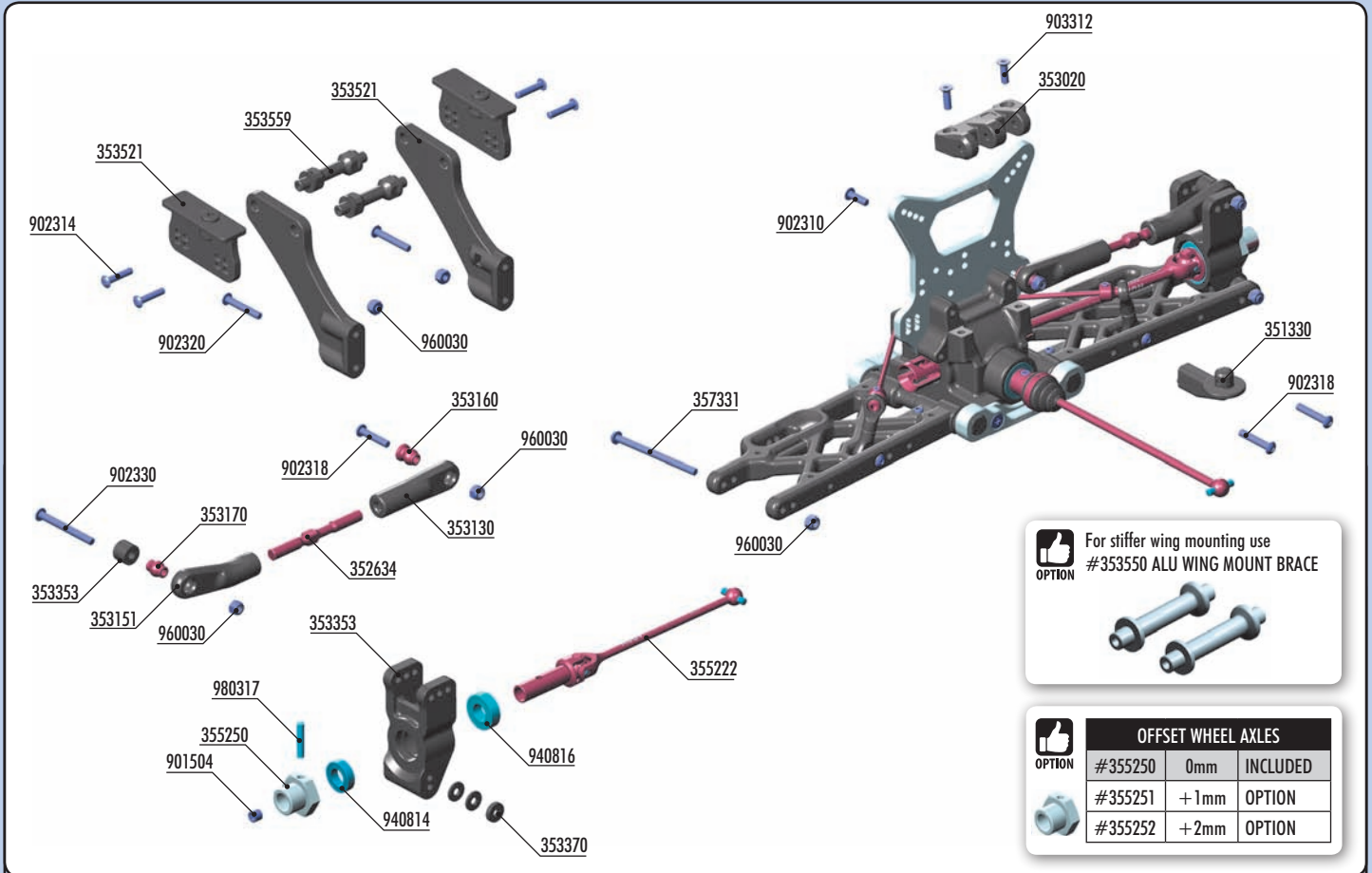
SET-UP BOOK
ANTI-ROLL BAR

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

INITIAL SETTING



4. REAR SUSPENSION



OPTION For stiffer wing mounting use #353550 ALU WING MOUNT BRACE

OPTION

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

BAG

04

- 35 1330 COMPOSITE REAR BODY POST - LONG
- 35 2634 ADJ. TURNBUCKLE M5 L/R 50 MM - HUDY SPRING STEEL™ (2)
- 35 3020 COMPOSITE REAR BRACE HOLDER
- 35 3130 REAR UPPER INNER CAMBER LINK BALL JOINT (2)
- 35 3151 RELIEF REAR UPPER OUTER CAMBER LINK BALL JOINT (2)
- 35 3160 MOUNTING BALL 6.8 (4)
- 35 3170 PIVOT BALL 6.8 (4)
- 35 3353 XBB8'16 COMPOSITE REAR UPRIGHT
- 35 3370 SET OF COMPOSITE REAR HUB CARRIER SHIMS
- 35 3521 REAR WING POSTS
- 35 3559 COMPOSITE REAR WING MOUNT BRACE (2)
- 35 5222 UNIVERSAL DRIVE SHAFT - HUDY SPRING STEEL™
- 35 5250 ALU WHEEL AXLE - BLACK COATED (2)

- 35 7331 XBB08 REAR LOWER OUTER PIVOT PIN SCREW 3MM (2)
- 90 1504 HEX SCREW SB M5x4 (10)
- 90 2310 HEX SCREW SH M3x10 (10)
- 90 2314 HEX SCREW SH M3x14 (10)
- 90 2318 HEX SCREW SH M3x18 (10)
- 90 2320 HEX SCREW SH M3x20 (10)
- 90 2330 HEX SCREW SH M3x30 (10)
- 90 3312 HEX SCREW SH M3x12 (10)
- 94 0814 HIGH-SPEED BALL-BEARING 8x14x4 BLUE COVERED (2)
- 94 0816 HIGH-SPEED BALL-BEARING 8x16x5 BLUE COVERED (2)
- 96 0030 NUT M3 (10)
- 98 0317 PIN 3x17 (10)



940814
BB 8x14x4

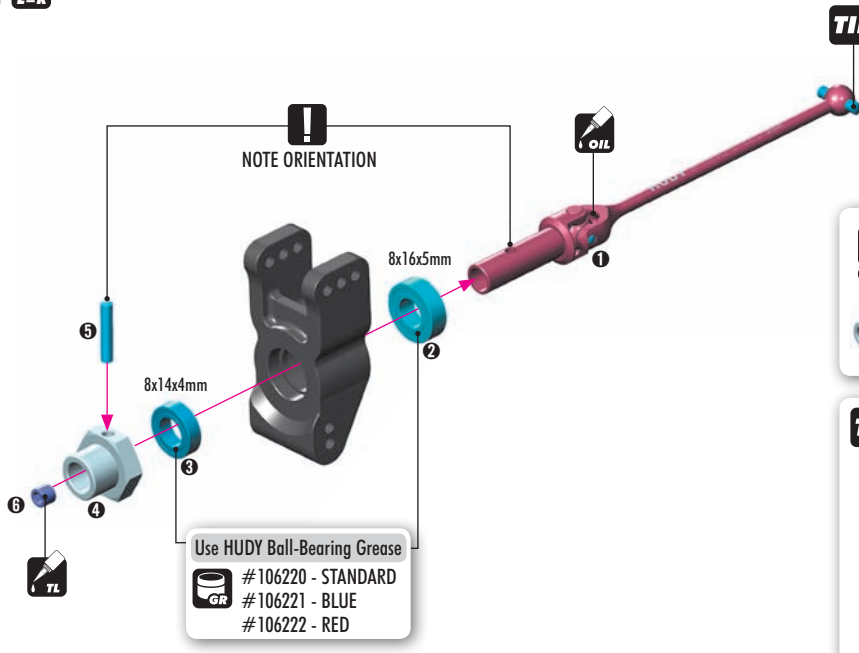


940816
BB 8x16x5



901504 SB M5x4
980317 P 3x17

2x **L=R**



OPTION

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

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

4. REAR SUSPENSION



353370
SHIM 3x9x1



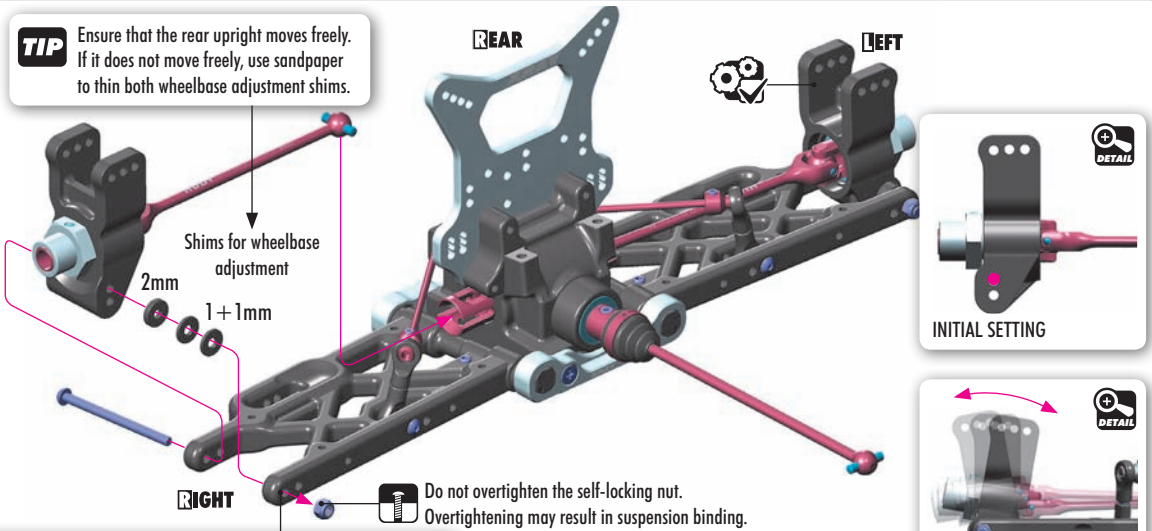
353370
SHIM 3x9x2



960030
N M3

2x

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

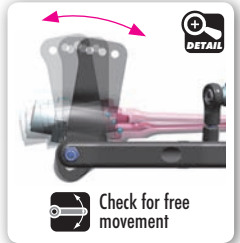
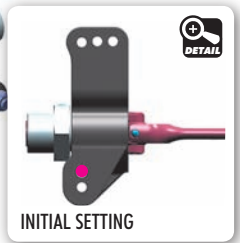


Do not overtighten the self-locking nut. Overtightening may result in suspension binding.

TIP

ARM REAMER (HUDY #107633)

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



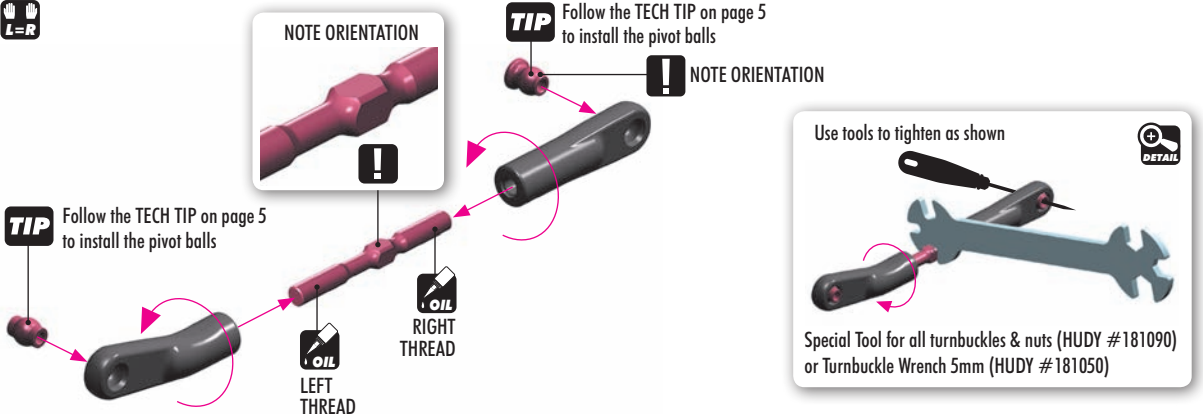
2x

NOTE ORIENTATION

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

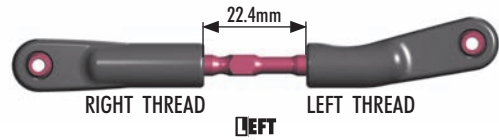
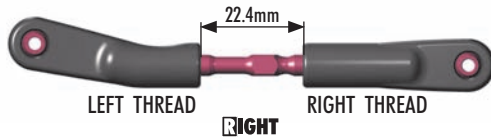
NOTE ORIENTATION

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



Use tools to tighten as shown

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

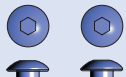


SET-UP BOOK

CAMBER



353353
SHIM 3x9x7



902318
SH M3x18

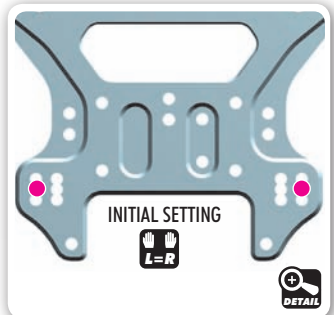
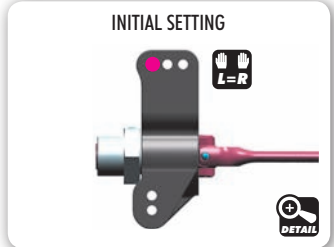
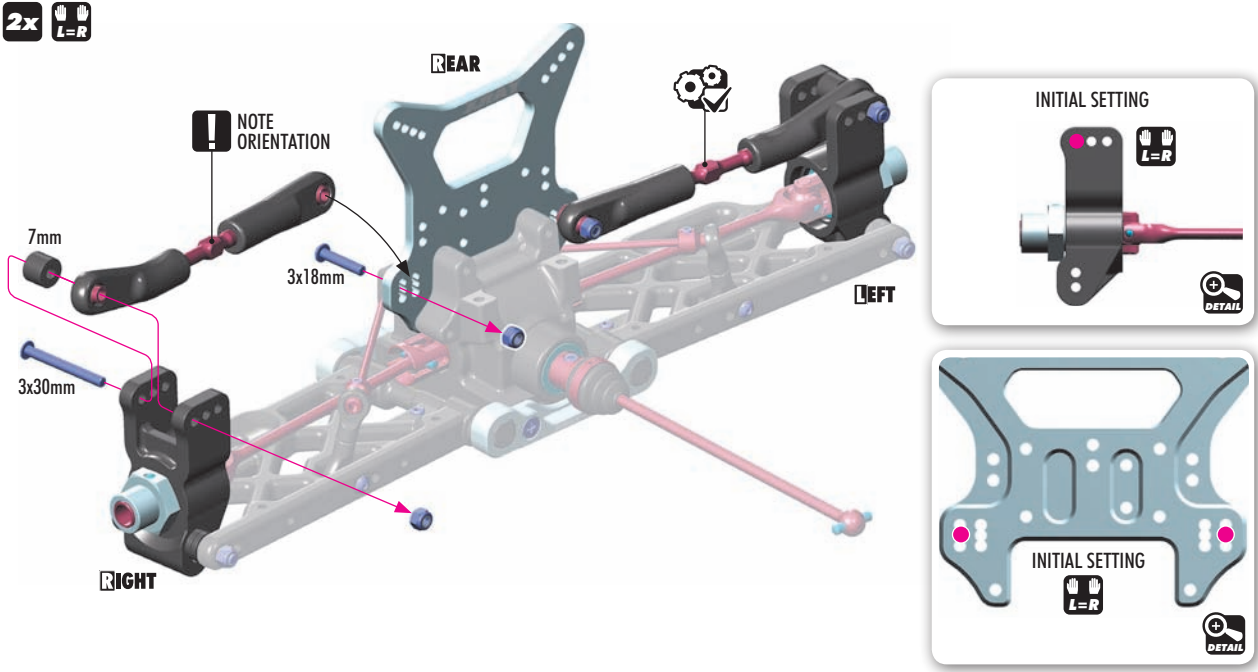
902330
SH M3x30



960030
N M3

2x

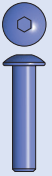
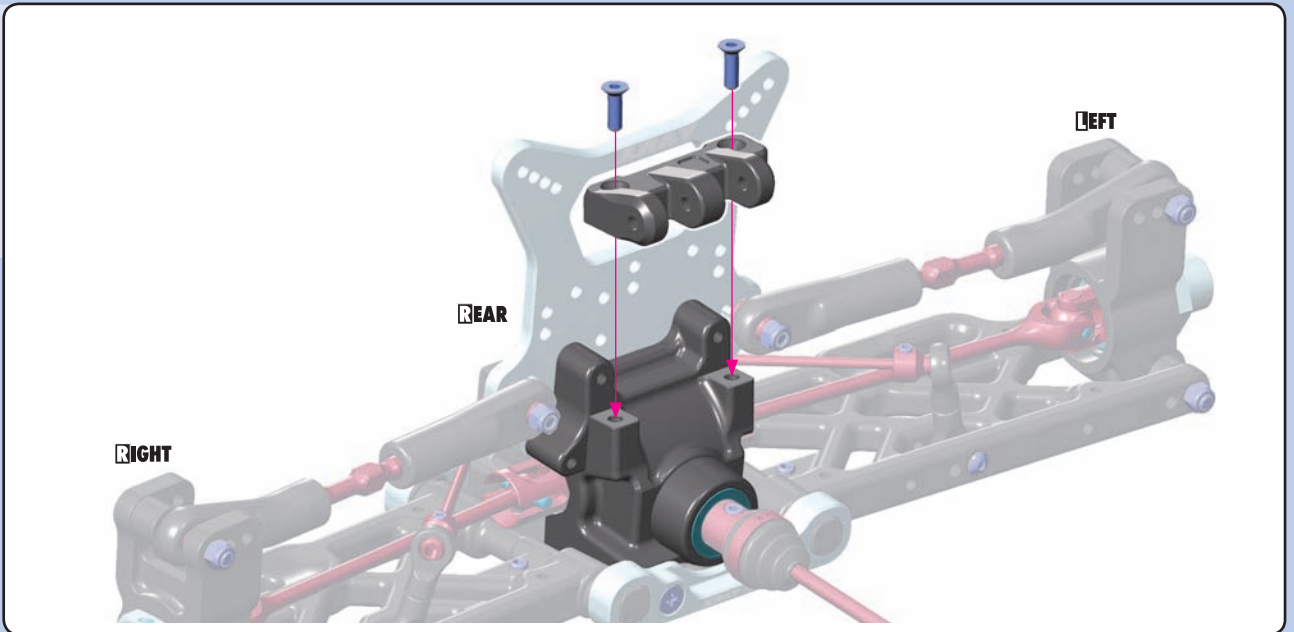
NOTE ORIENTATION



4. REAR SUSPENSION



903312
SFH M3x12



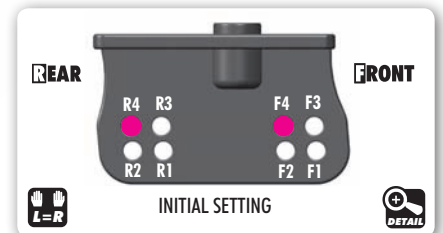
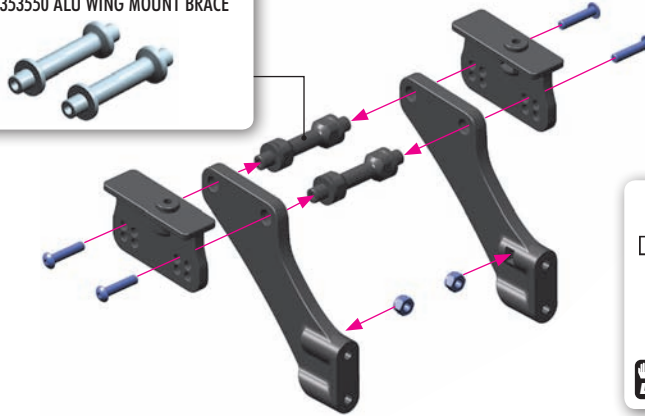
902314
SH M3x14



960030
N M3

2x L=R

OPTION For stiffer wing mounting use #353550 ALU WING MOUNT BRACE



SET-UP BOOK
REAR WING



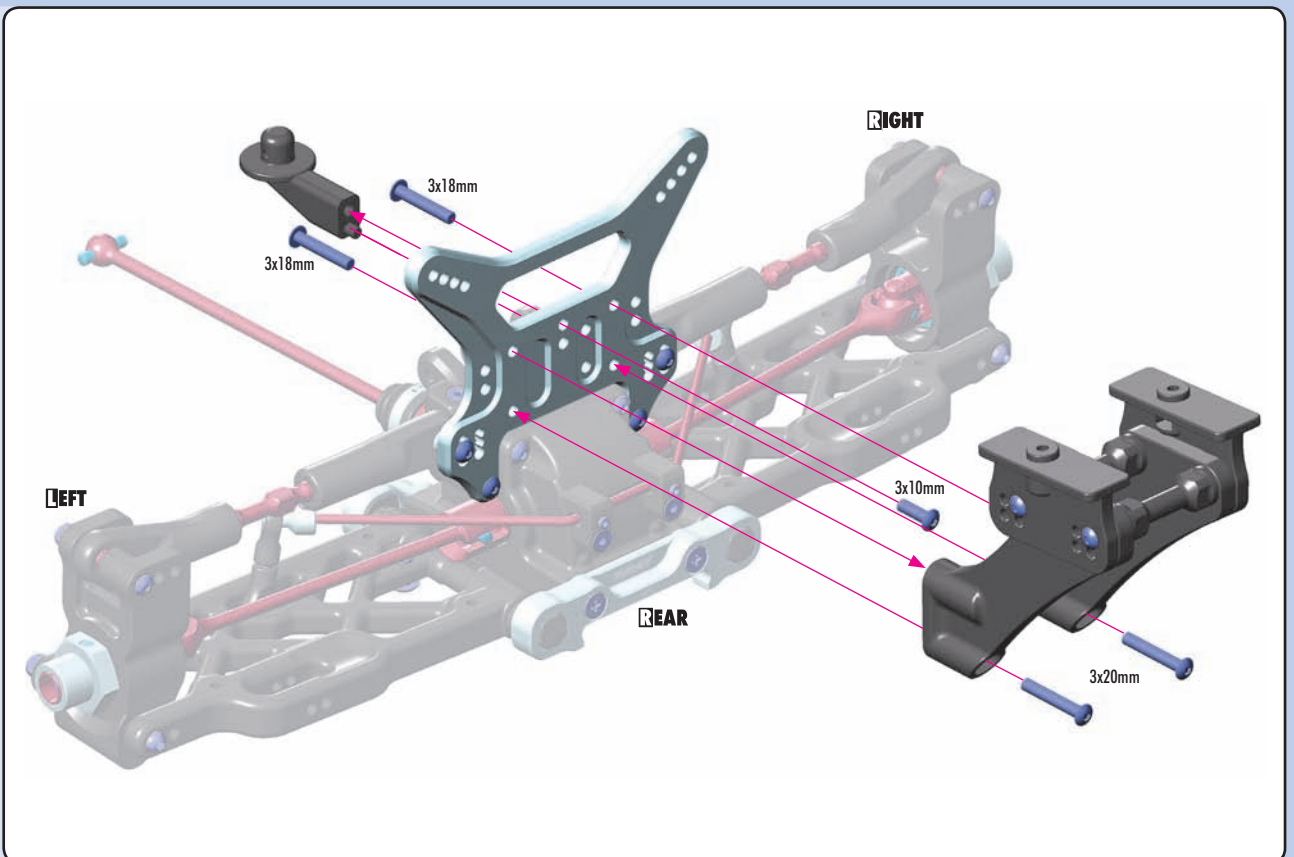
902310
SH M3x10



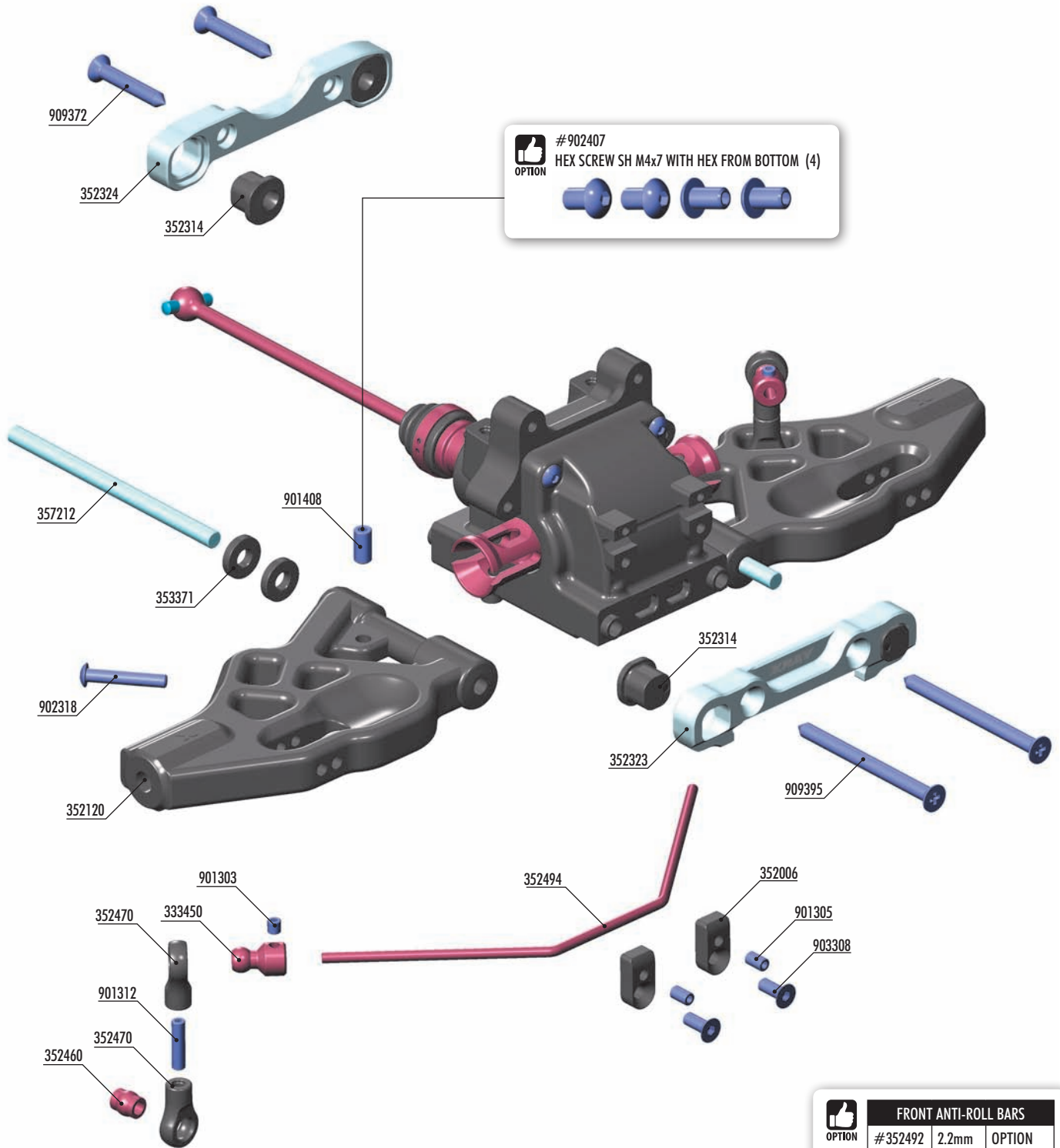
902318
SH M3x18



902320
SH M3x20



5. FRONT SUSPENSION



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

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

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

BAG

05

- 33 3450 ANTI-ROLL BAR BALL JOINT 5.8 MM (2)
- 35 2006 XB8'16 DIFF BULKHEAD BLOCK SET FRONT/REAR
- 35 2120 XB8 COMPOSITE FRONT LOWER SUSPENSION ARM
- 35 2323 ALU FRONT LOWER SUSP. HOLDER - FRONT - SQUARE ADJ. ROLL CENTER - V2
- 35 2324 ALU FRONT LOWER SUSP. HOLDER - REAR - SQUARE ADJ. ROLL CENTER - V2
- 35 2314 COMPOSITE SQUARE ADJ. ROLL CENTER BUSHINGS - V2 (2)
- 35 2460 PIVOT BALL 5.8 (10)
- 35 2470 BALL JOINT 5.8 (8)
- 35 2494 FRONT ANTI-ROLL BAR 2.4MM
- 35 3371 SET OF COMPOSITE LOWER ARM SHIMS

- 35 7212 LOWER INNER PIVOT PIN F+R (2)
- 90 1303 HEX SCREW SB M3x3 (10)
- 90 1305 HEX SCREW SB M3x5 (10)
- 90 1312 HEX SCREW SB M3x12 (10)
- 90 1408 HEX SCREW SB M4x8 (10)
- 90 2318 HEX SCREW SH M3x18 (10)
- 90 3308 HEX SCREW SFH M3x8 (10)
- 90 9372 SCREW PHILLIPS SS 3.5x22 (10)
- 90 9395 SCREW PHILLIPS SS 3.5x45 (10)

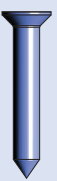
5. FRONT SUSPENSION



353371
SHIM 4x10x2



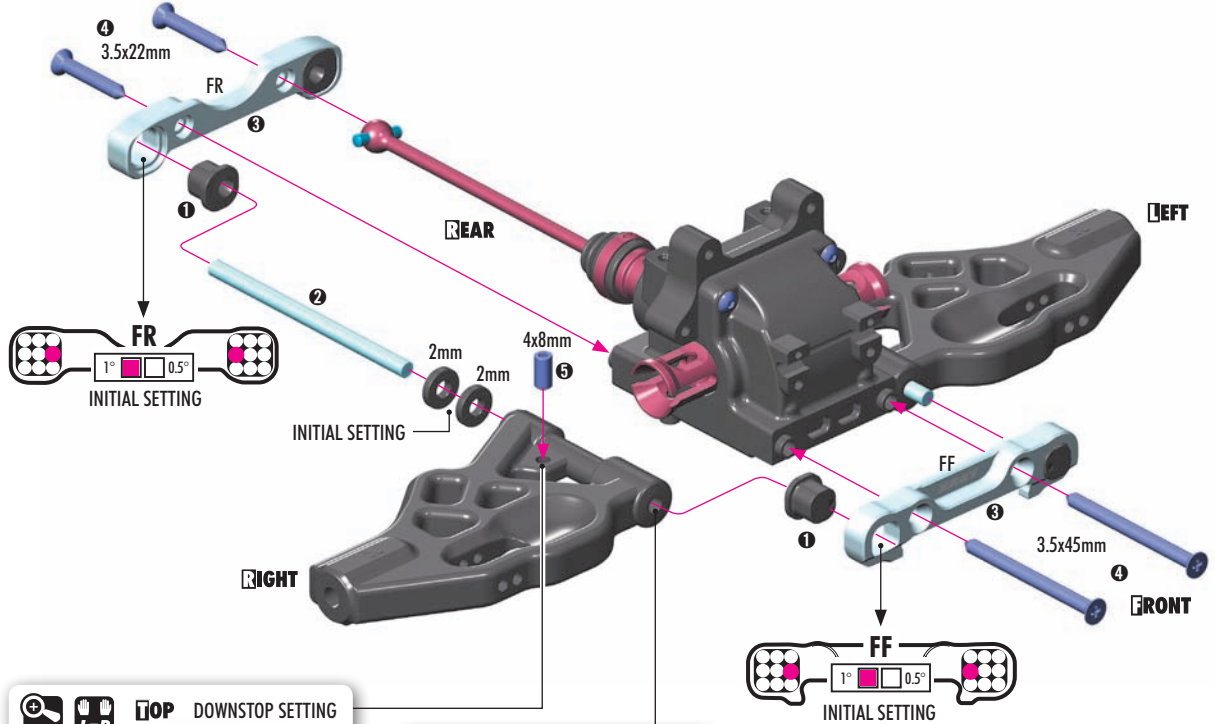
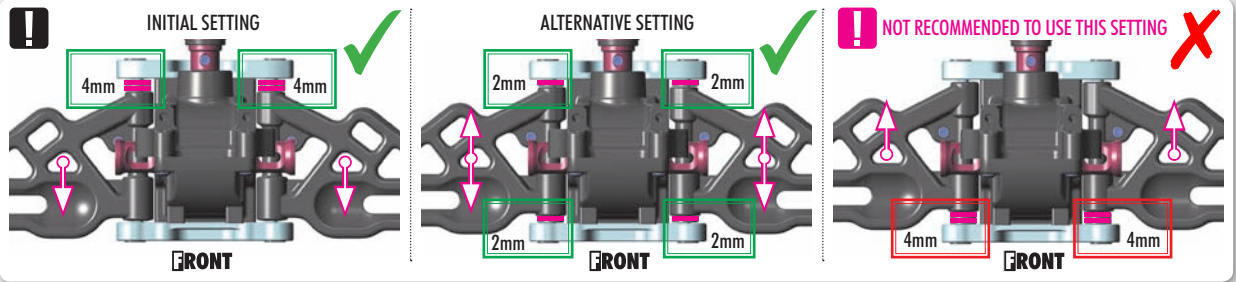
901408
SB M4x8



909372
SS 3.5x22



909395
SS 3.5x45



TOP DOWNSTOP SETTING

DETAIL **L=R**

BOTTOM 3.3mm

#902407 OPTION

Downstop screw for fine tuning.

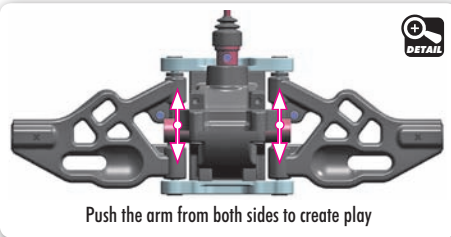
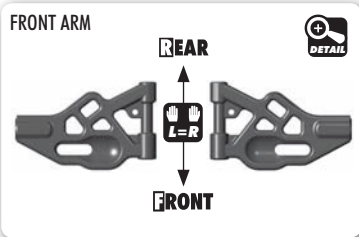
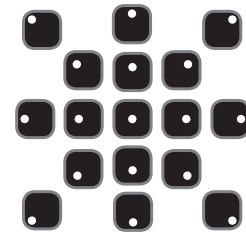
TIP **L=R** **DETAIL**

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

(HUDY #107634)

ARM REAMER

All possible mounting alternatives of eccentric bushings



Eccentric bushings have two different offsets from the center.

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

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

TRACK-WIDTH		
FF	FR	(mm)
		=308
		=306
		=310*

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

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

* Not recommended to use this setting.

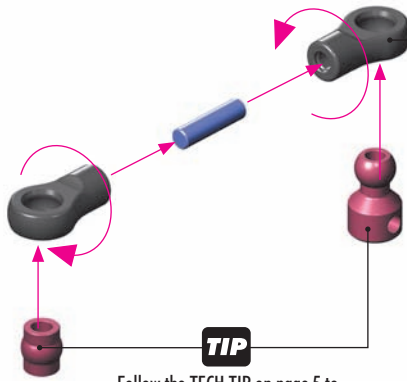
SET-UP BOOK
KICK UP
ROLL CENTER DOWNSTOP
WHEELBASE
TRACK WIDTH

5. FRONT SUSPENSION

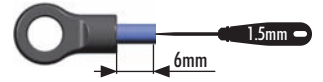


901312
SB M3x12

2x L=R



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



901303
SB M3x3



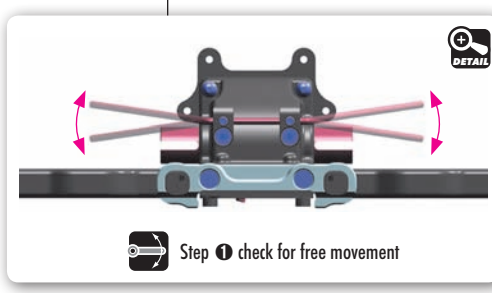
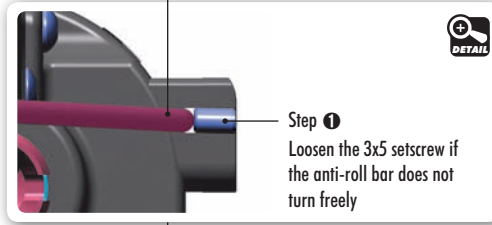
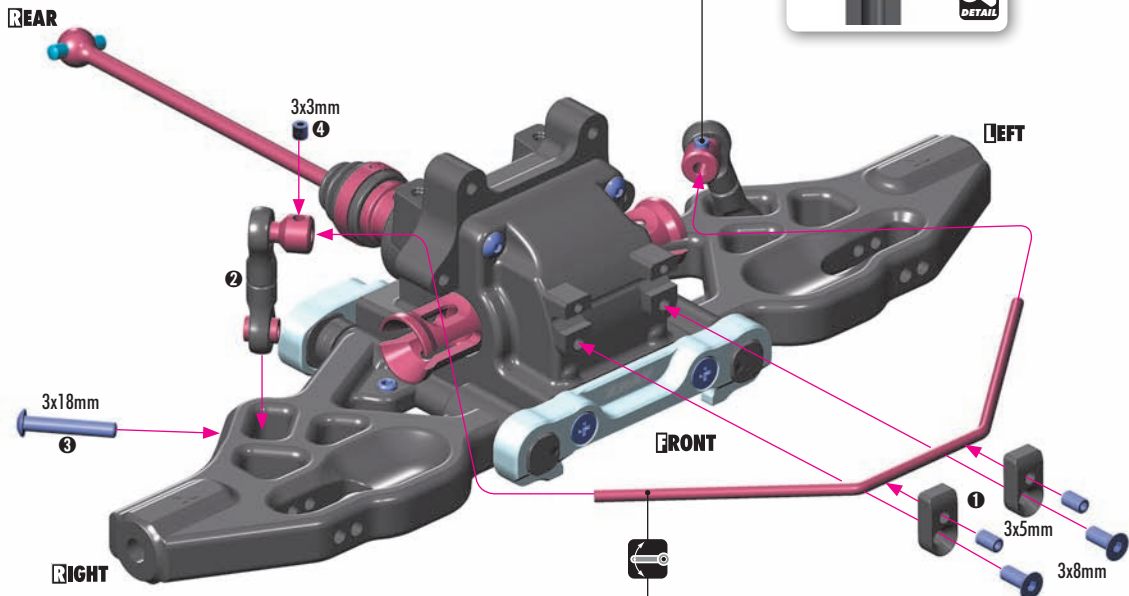
901305
SB M3x5



902318
SH M3x18



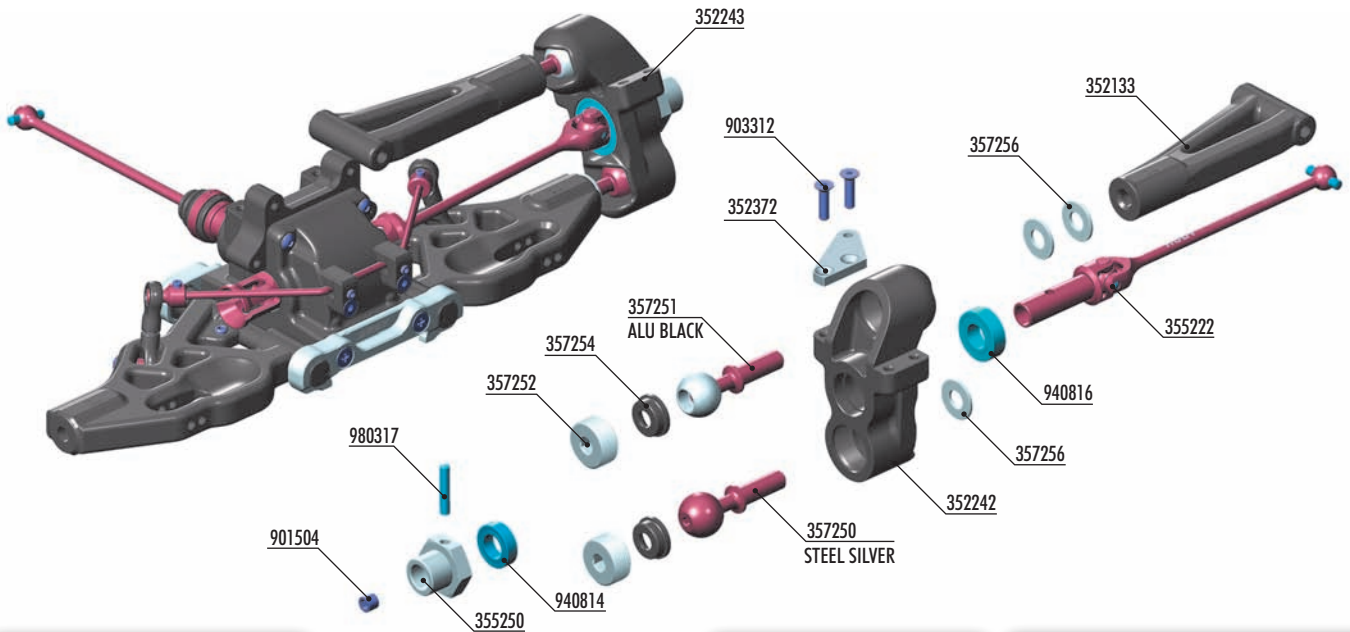
903308
SFH M3x8



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

SET-UP BOOK
ANTI-ROLL BAR

6. FRONT SUSPENSION



#352241
OPTION
 XB8'16 STEERING BLOCK

#357253
OPTION
 BRASS ADJUSTING NUT M15x1

OPTION

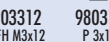
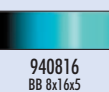
OFFSET WHEEL AXLES		
#355250	0mm	INCLUDED
#355251	+1mm	OPTION
#355252	+2mm	OPTION

BAG

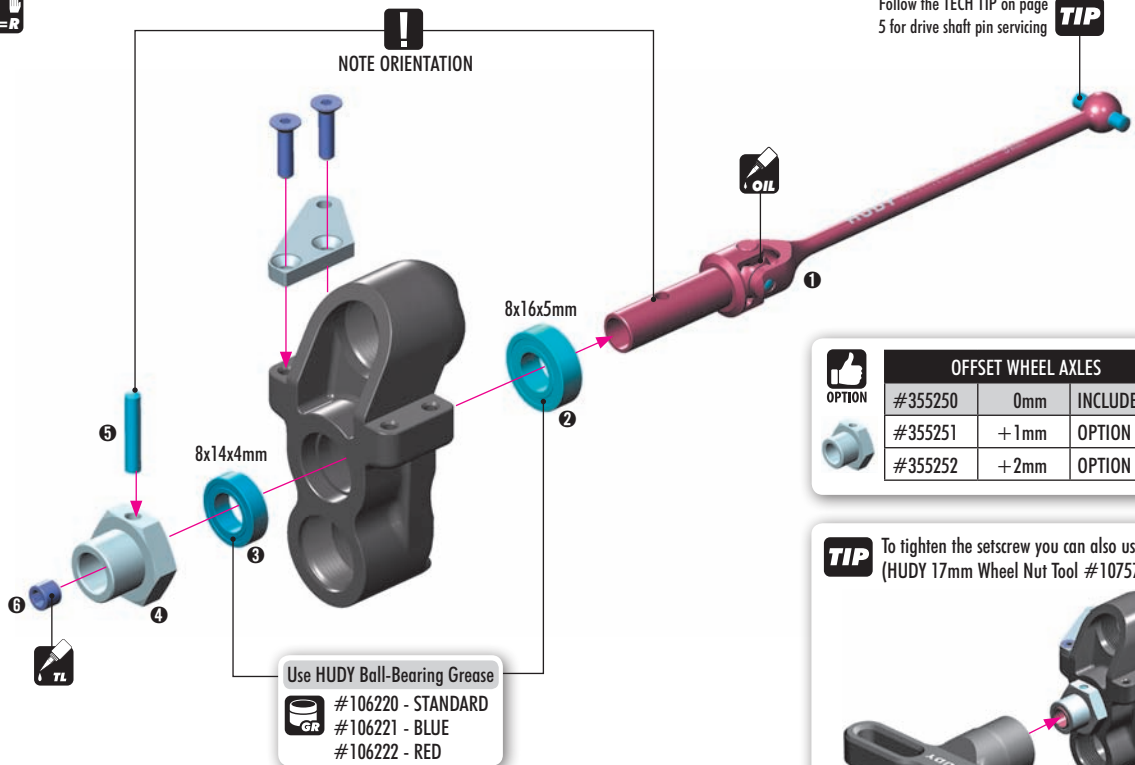


- 35 2133 XB8'16 FRONT UPPER ARM
- 35 2242 XB8'16 STEERING BLOCK - TRAILING AXLE - RIGHT
- 35 2243 XB8'16 STEERING BLOCK - TRAILING AXLE - LEFT
- 35 2372 XB8'17 ALU STEERING PLATE - SWISS 7075 T6 (L+R)
- 35 5222 UNIVERSAL DRIVE SHAFT - HUDY SPRING STEEL™
- 35 5250 ALU WHEEL AXLE - BLACK COATED (2)
- 35 7250 STEEL PIVOT BALL 13.7 MM (2)
- 35 7251 ALU PIVOT BALL 13.7 MM WITH STEEL SCREW (2)
- 35 7252 ALU ADJUSTING NUT M15x1 (2)

- 35 7254 COMPOSITE BALL CUP 13.9 MM (2)
- 35 7256 ALU SHIM 6x13x1 (2)
- 90 1504 HEX SCREW SB M5x4 (10)
- 90 3312 HEX SCREW SFH M3x12 (10)
- 94 0814 HIGH-SPEED BALL-BEARING 8x14x4 BLUE COVERED (2)
- 94 0816 HIGH-SPEED BALL-BEARING 8x16x5 BLUE COVERED (2)
- 98 0317 PIN 3x17 (10)



2x **L-R**



OPTION

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

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

DETAIL

6. FRONT SUSPENSION

2x **L=R**

! ALU pivot ball
BLACK color

WD40

! STEEL pivot ball
SILVER color

TIP Tighten hex nuts using HUDY tool #107581

OPTION **#357253 Brass Adjusting Nut M15x1**

DETAIL

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

357256
SHIM 6x13x1

2x **L=R**

TIP HUDY Tool Allen 2.5mm

TIP For maximum performance in most track conditions, we recommend using the following basic setting.

Use only one from the inner positions in the upper roll center bushing.

2mm

1mm

Use only one from the inner positions in the lower roll center bushing.

L=R

SET-UP BOOK
CAMBER
TRACK-WIDTH

357256
SHIM 6x13x1

2x **L=R**

TIP HUDY Tool Allen 2.5mm

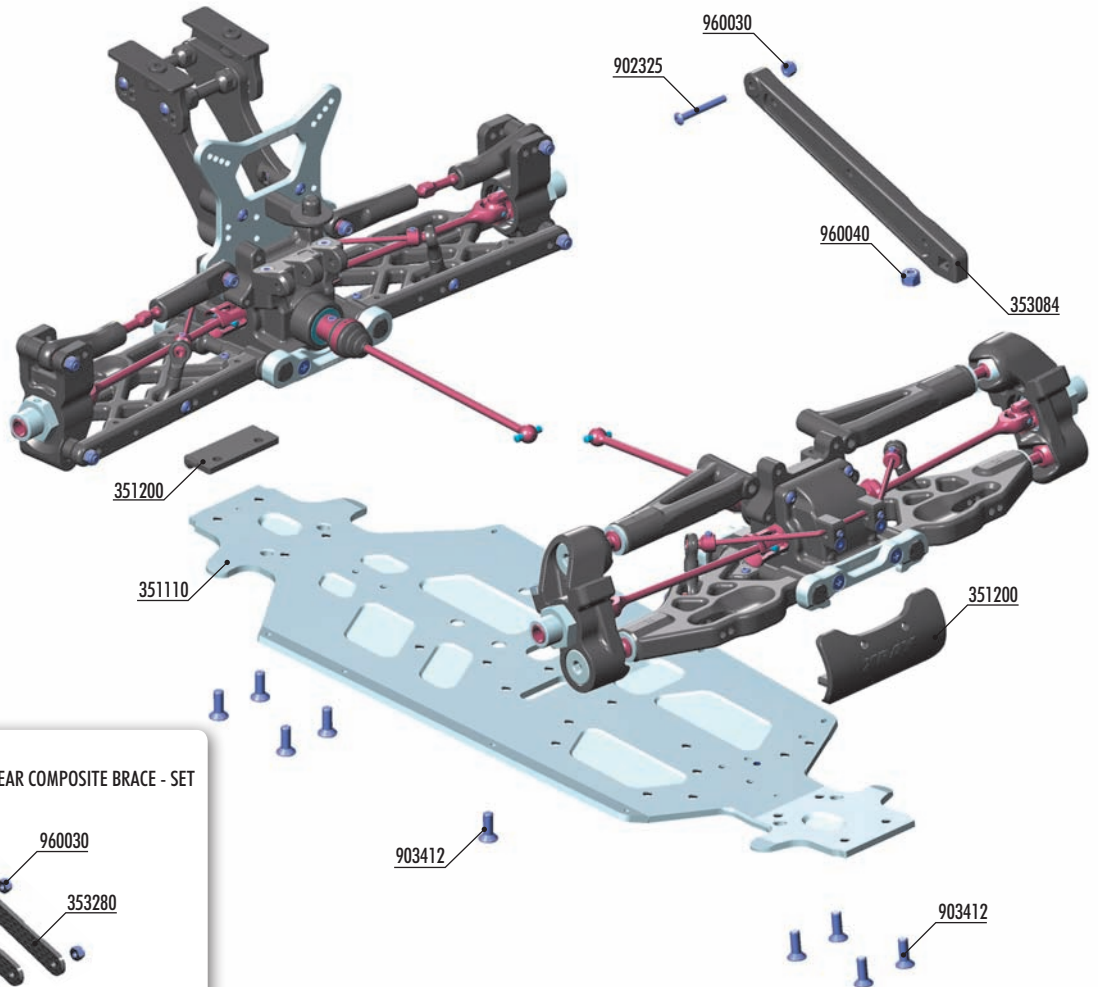
RIGHT

FRONT

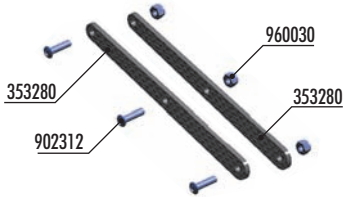
LEFT

SET-UP BOOK
ROLL CENTER

6. FRONT & REAR ASSEMBLY



#353280
OPTION XB8'16 GRAPHITE BRACES FOR REAR COMPOSITE BRACE - SET



BAG

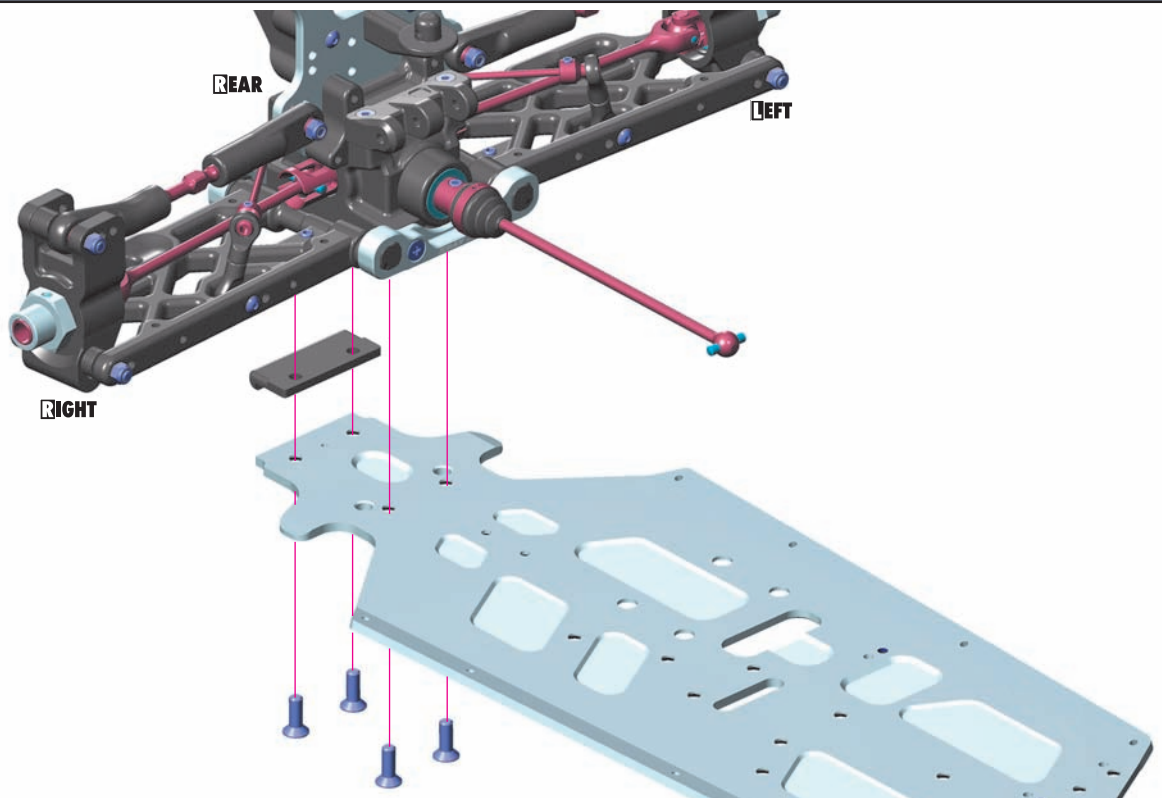
06

35 1110 XB8'16 ALU CHASSIS - SWISS 7075 T6 (3MM)
 35 1200 FRONT & REAR BUMPER - V2
 35 3084 XB8'16 COMPOSITE REAR BRACE - MEDIUM

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



903412
 SFH M4x12



6. FRONT & REAR ASSEMBLY



902325
SH M3x25



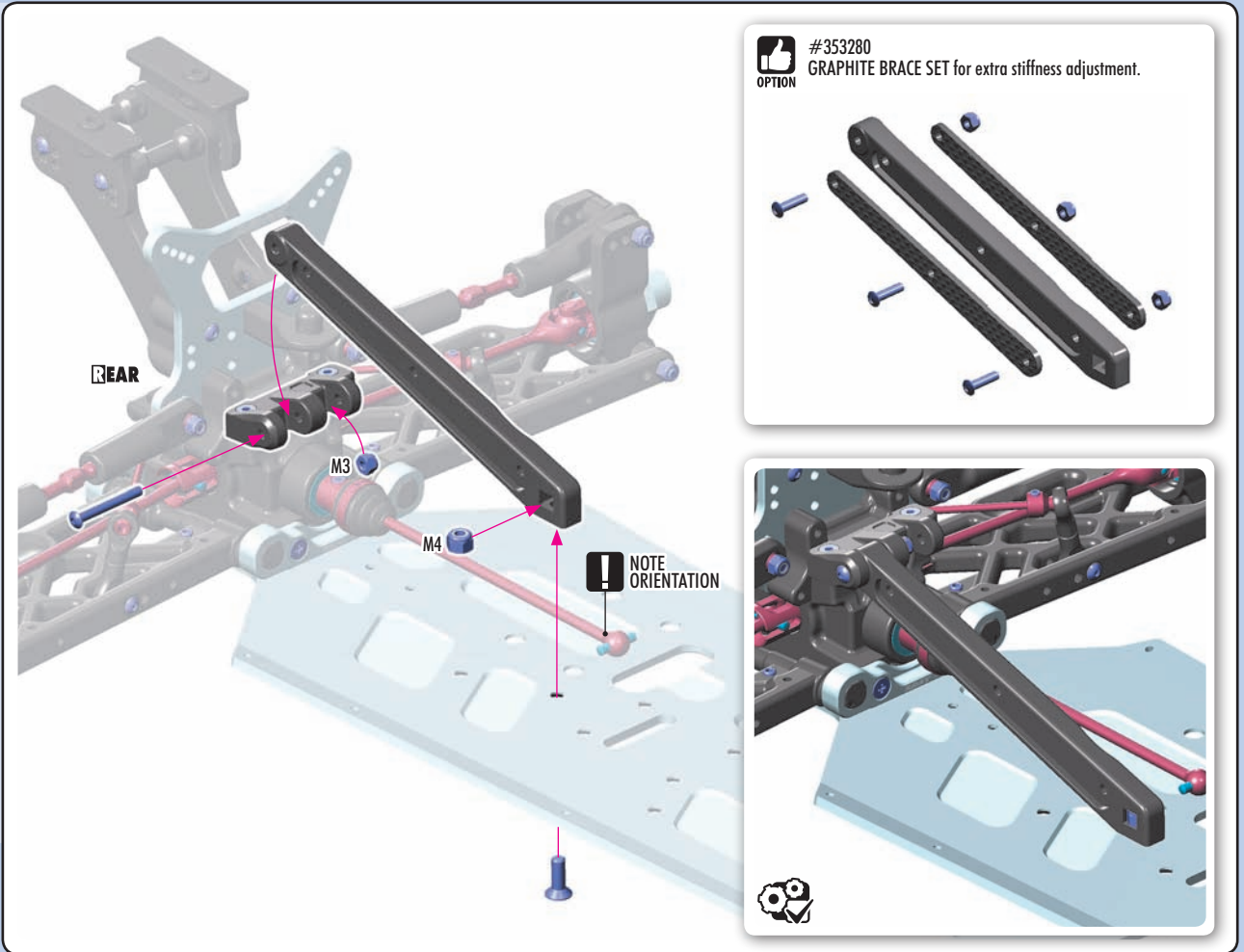
903412
SFH M4x12



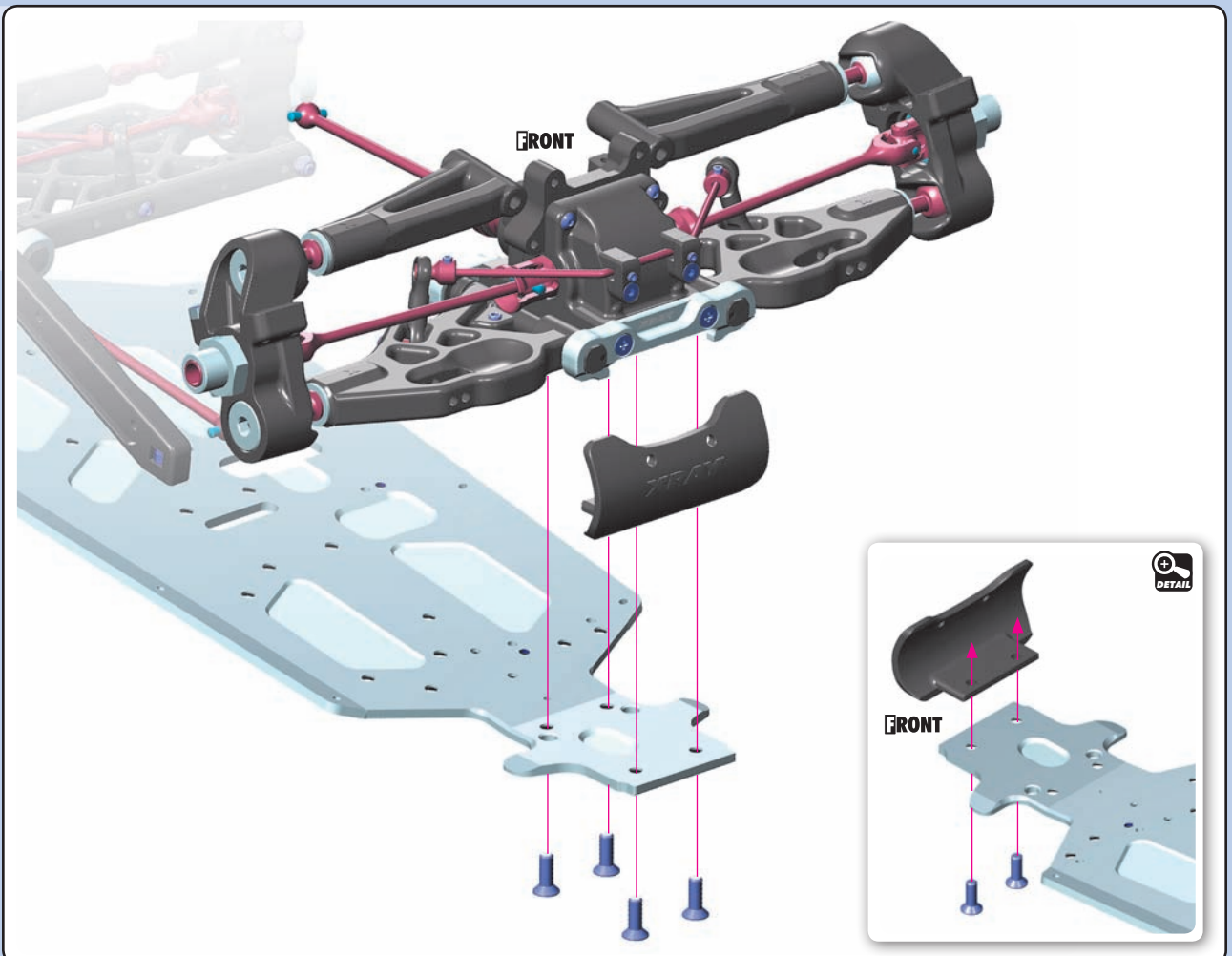
960030
N M3



960040
N M4

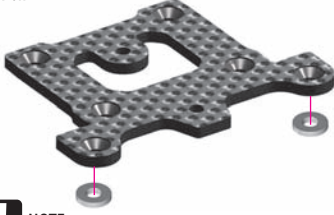


903412
SFH M4x12



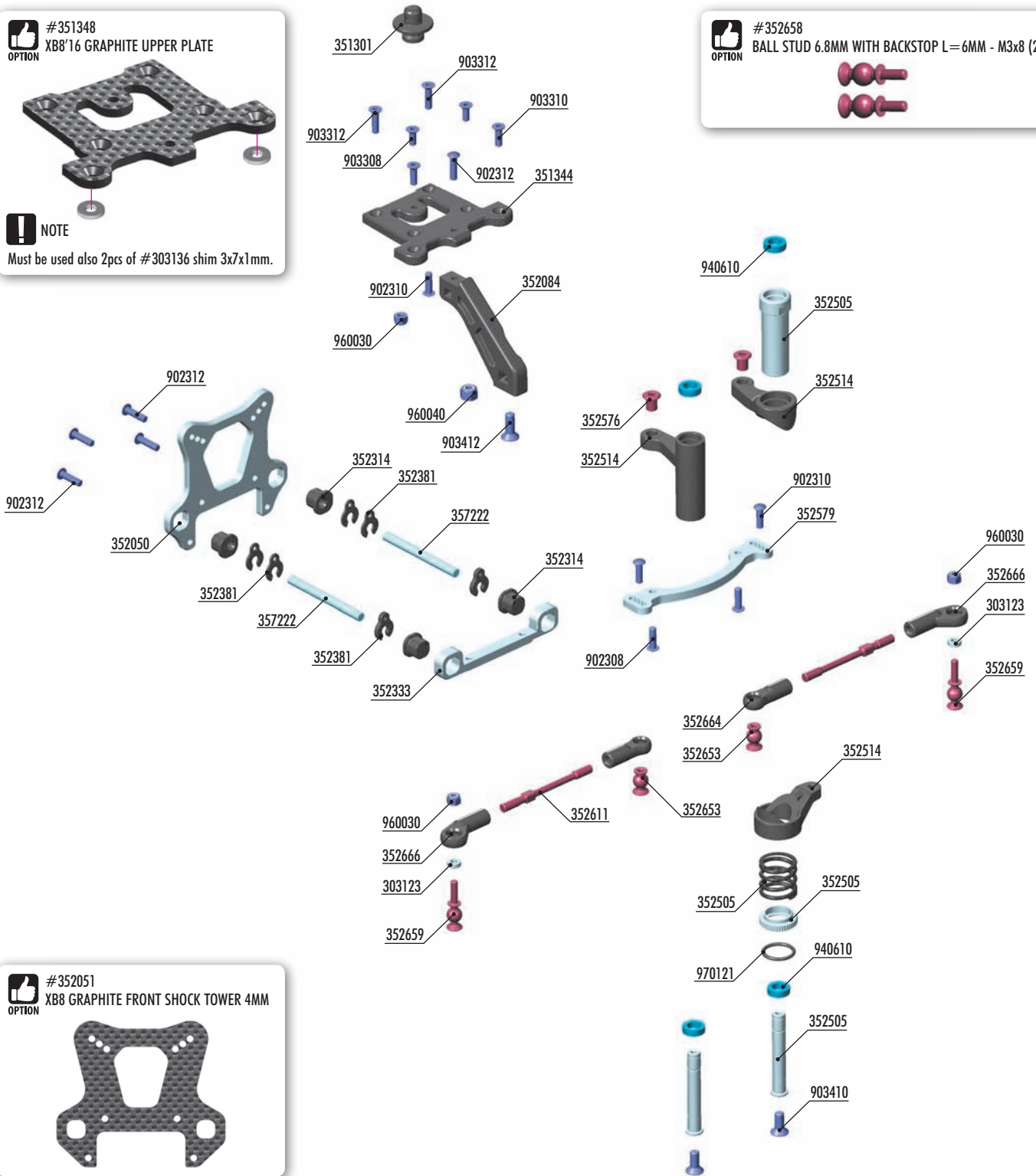
7. STEERING

#351348
XB8'16 GRAPHITE UPPER PLATE
OPTION



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

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



#352051
XB8 GRAPHITE FRONT SHOCK TOWER 4MM
OPTION



BAG

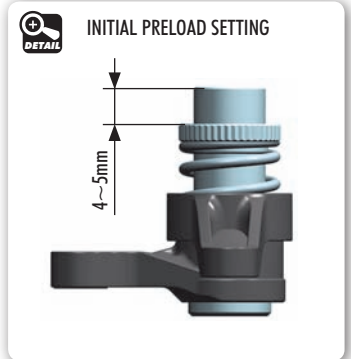
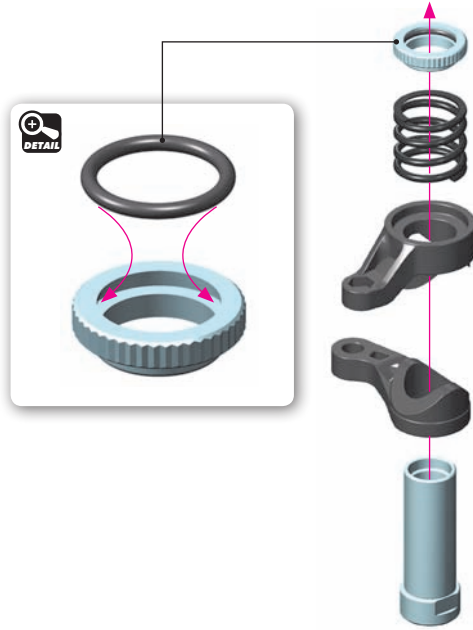
07

30 3123	ALU SHIM 3x6x2.0MM (10)	35 7222	FRONT UPPER PIVOT PIN 4x45 (2)
35 1301	BODY POSTS	90 2308	HEX SCREW SH M3x8 (10)
35 1344	COMPOSITE UPPER PLATE	90 2310	HEX SCREW SH M3x10 (10)
35 2084	XB8'16 COMPOSITE FRONT BRACE	90 2312	HEX SCREW SH M3x12 (10)
35 2050	XB8 ALU FRONT SHOCK TOWER - CNC MACHINED 7075 T6 (4MM)	90 3308	HEX SCREW SFH M3x8 (10)
35 2314	COMPOSITE SQUARE ADJ. ROLL CENTER BUSHINGS - V2 (2)	90 3310	HEX SCREW SFH M3x10 (10)
35 2333	XB8 ALU FRONT UPPER ARM HOLDER - SWISS 7075 T6 (6MM)	90 3312	HEX SCREW SFH M3x12 (10)
35 2381	XB8 CASTER CLIPS (2)	90 3410	HEX SCREW SFH M4x10 (10)
35 2505	XB8'16 SERVO SAVER COMPLETE SET - GRAPHITE	90 3412	HEX SCREW SFH M4x12 (10)
35 2514	XB8 COMPOSITE SERVO SAVER - GRAPHITE	94 0610	HIGH-SPEED BALL-BEARING 6x10x3 BLUE COVERED (2)
35 2576	STEERING PLATE BUSHING (2)	96 0030	NUT M3 (10)
35 2579	XB8'16 ALU STEERING PLATE - SWISS 7075 T6	96 0040	NUT M4 (10)
35 2611	ADJ. TURNBUCKLE M4 L/R 52.5 MM - HUDY SPRING STEEL™ (2)	97 0121	O-RING 12.1 x 1.6 (10)
35 2653	BALL STUD 6.8MM WITH BACKSTOP - M3 (2)		
35 2659	BALL STUD 6.8MM WITH BACKSTOP L=6MM - M3x11 (2)		
35 2664	COMPOSITE STEERING BALL JOINT 6.8MM - V3 (2)		
35 2666	COMPOSITE RELIEF STEERING BALL JOINT 6.8MM (2)		

7. STEERING



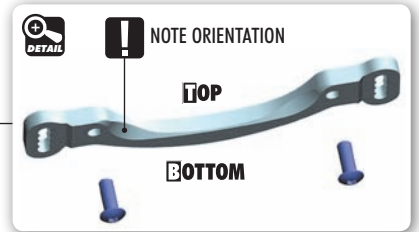
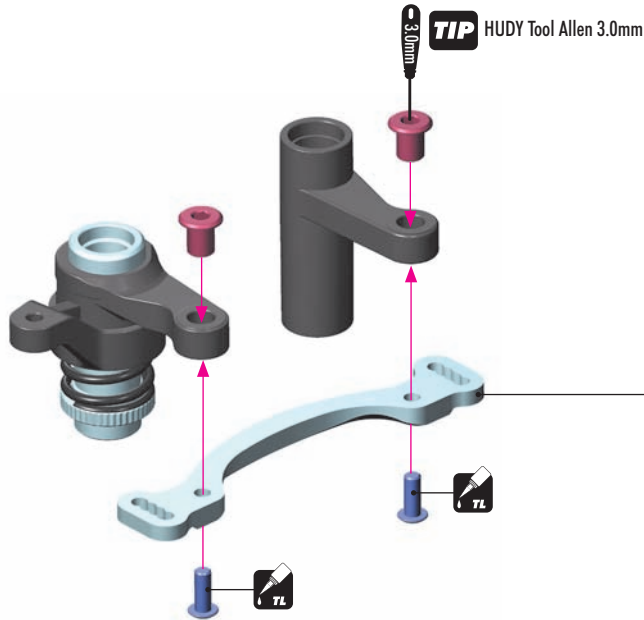
970121
0 12.1x1.6



SET-UP BOOK
SERVO SAVER



902308
SH M3x8

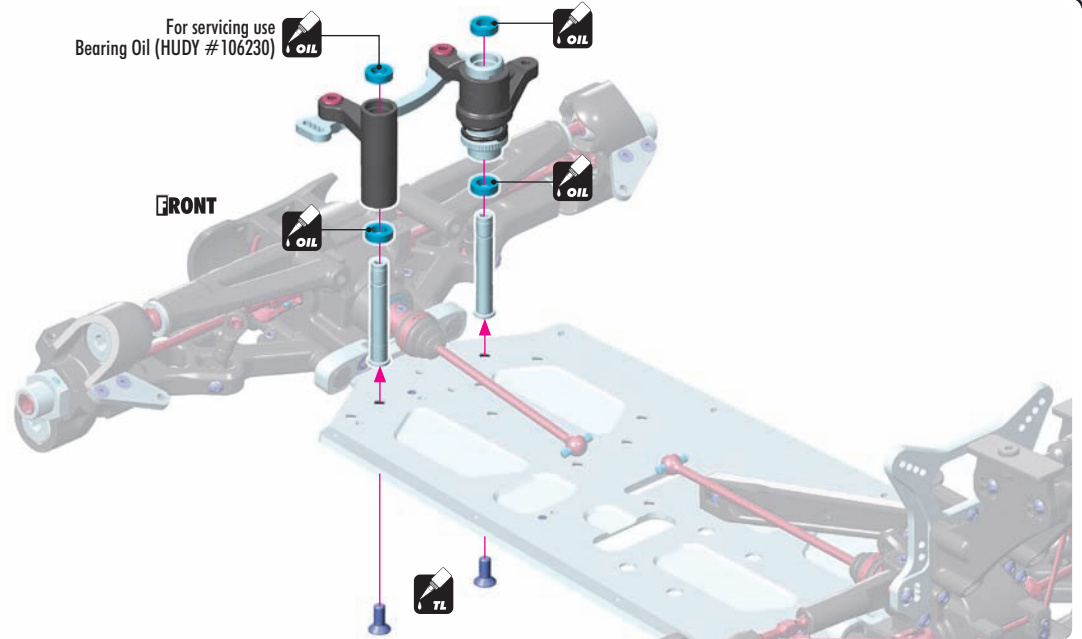


903410
SFH M4x10



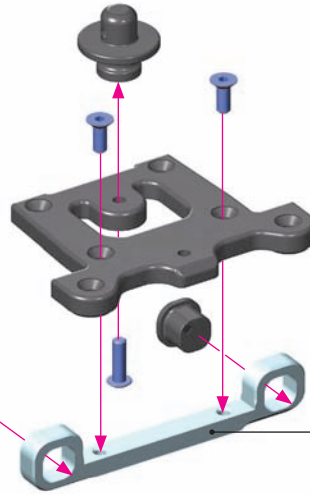
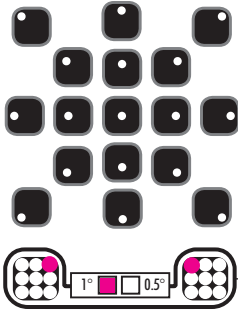
940610
BB 6x10x3

For servicing use
Bearing Oil (HUDY #106230)

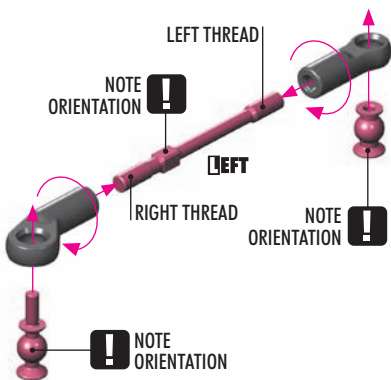
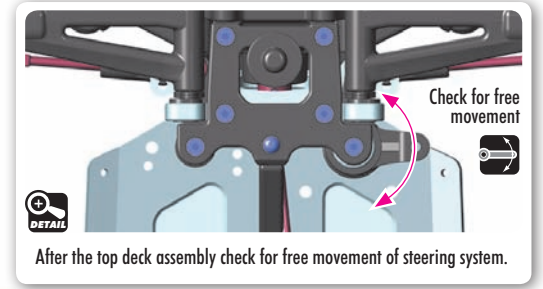
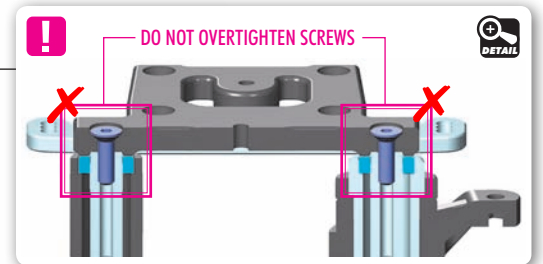
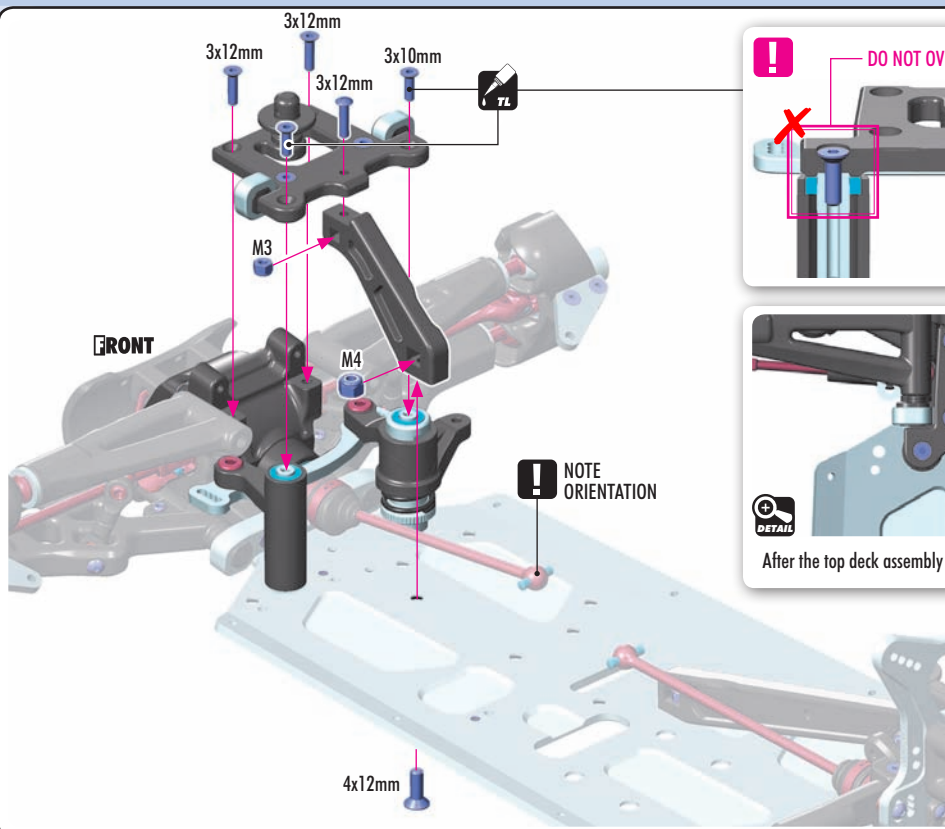
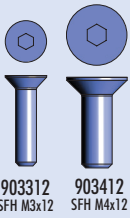




All possible mounting alternatives of eccentric bushings

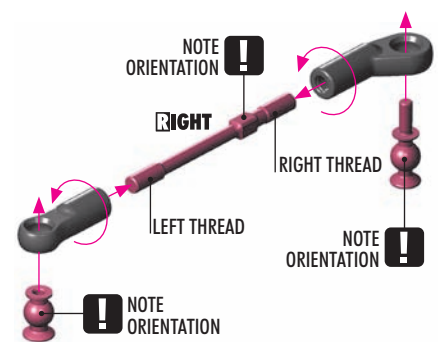


SET-UP BOOK
ROLL CENTER



TIP

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



7. STEERING



902312
SH M3x12

FRONT

LEFT

RIGHT

1.0mm 1.0mm 2.0mm

NOTE ORIENTATION

INITIAL POSITION

1° 0.5°

All possible mounting alternatives of eccentric bushings

#352051 XB8 GRAPHITE FRONT SHOCK TOWER 4MM
OPTION

UPPER CLIP
Behind arm

LOWER SHIM
Behind arm

CASTER

UPPER CLIP (Behind arm)	CASTER		
	4mm	2mm	0
4mm	24°	21°	18°
3mm	25.5°	22.5°	19.5°
2mm	27°	24°	21°
1mm	28.5°	25.5°	22.5°
0	30°	27°	24°

F=R

SET-UP BOOK
ROLL CENTER
CASTER



303123
SHIM 3x6x2



902310
SH M3x10



960030
N M3

2x **L=R**

FRONT **RIGHT**

LEFT

INITIAL POSITION

NOTE ORIENTATION
Adjustment block towards outside

2.0mm

NOTE ORIENTATION
Adjustment block towards outside

Check for free movement

Check for free movement

SET-UP BOOK
ACKERMANN
BUMP STEER
TOE-IN

8. CENTER DIFF & BRAKE

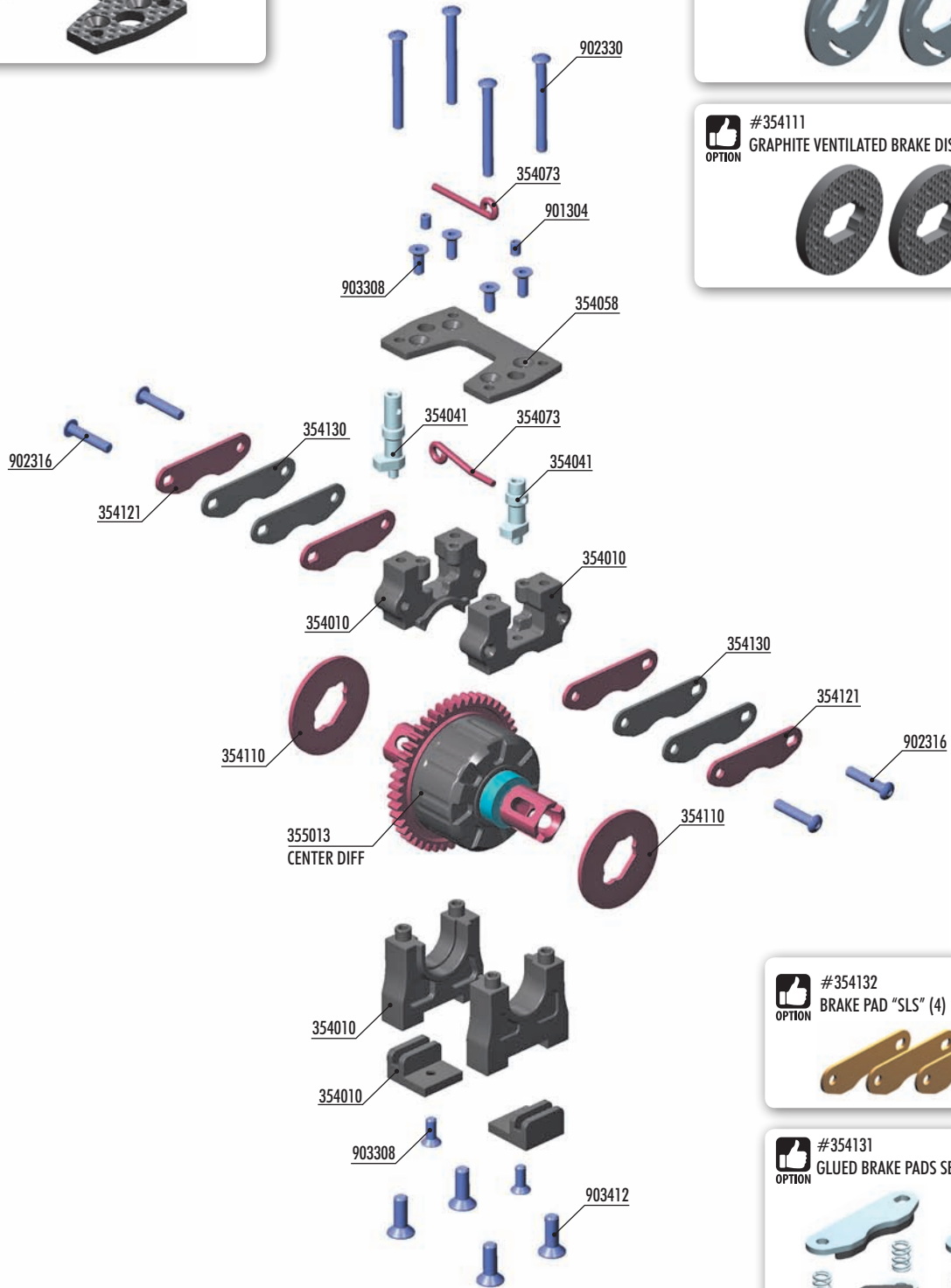
#354051
GRAPHITE CENTER DIFF MOUNTING PLATE



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



#354111
GRAPHITE VENTILATED BRAKE DISK - CNC MACHINED (2)



#354132
BRAKE PAD "SLS" (4)



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



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

BAG

08

- 35 4010 CENTER DIFF MOUNTING PLATE - SET
- 35 4041 ALU BRAKE CAM POST & ROD (2+2) HARD COATED
- 35 4058 COMPOSITE CENTER DIFF MOUNTING PLATE
- 35 4073 BRAKE CAME ROD (1+1)
- 35 4110 VENTILATED BRAKE DISK - LASER CUT - PRECISION-GROUND
- 35 4121 STEEL BRAKE PAD - LASER CUT (4)
- 35 4130 BRAKE PAD FIBER (4)

- 35 5013 CENTER DIFFERENTIAL - LARGE - SET
- 90 1304 HEX SCREW SB M3x4 (10)
- 90 2316 HEX SCREW SH M3x16 (10)
- 90 2330 HEX SCREW SH M3x30 (10)
- 90 3308 HEX SCREW SFH M3x8 (10)
- 90 3412 HEX SCREW SFH M4x12 (10)

8. CENTER DIFF & BRAKE

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

TIP

Roughen steel plates with sandpaper before gluing fibre pads

TOP OVAL HOLE

NOTE ORIENTATION

BOTTOM ROUND HOLE

902316 SH M3x16

2x **F=R**

ROUND HOLE NOTE ORIENTATION

OVAL HOLE NOTE ORIENTATION

Fibre pads together

Temporarily insert brake disk between pads to set correct gap

0.5 mm

OPTION #354132 BRAKE PAD "SLS" (4)

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

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

901304 SB M3x4

903308 SFH M3x8

STRAIGHT

BENT

3.0mm

STRAIGHT

BENT

0mm

OPTION #354051 GRAPHITE CENTER DIFF MOUNTING PLATE

8. CENTER DIFF & BRAKE

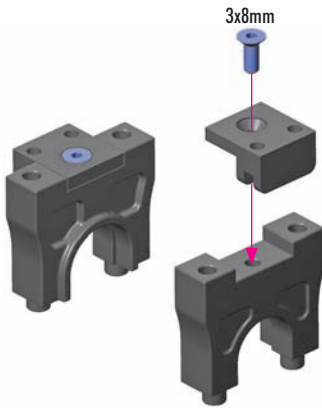


903308
SFH M3x8

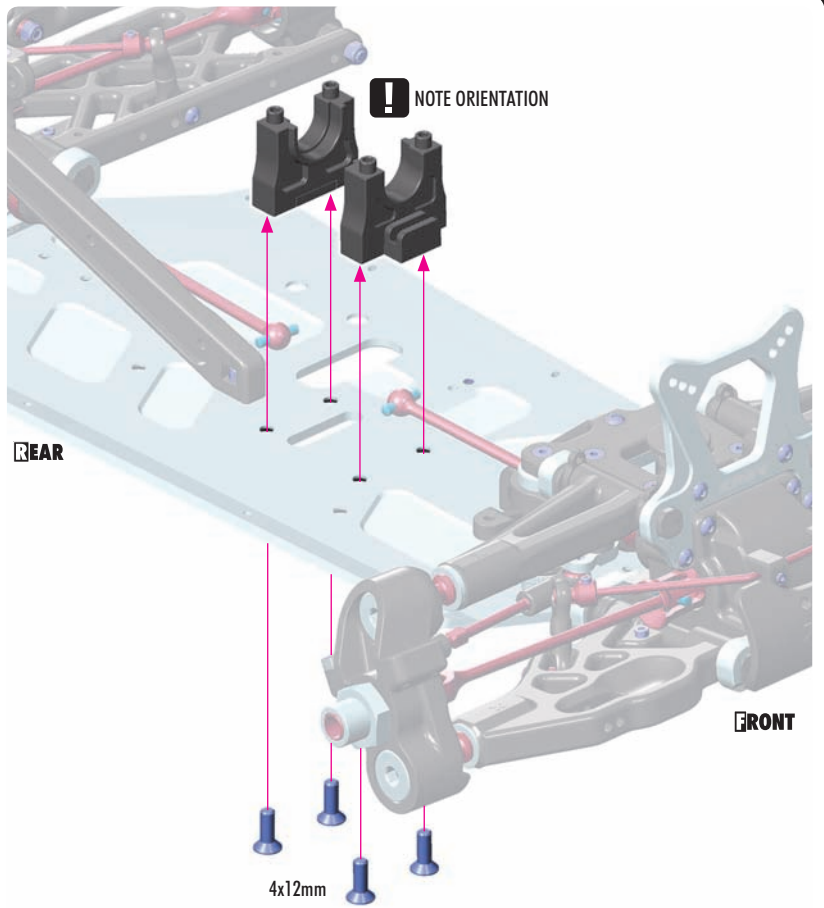


903412
SFH M4x12

!
NOTE ORIENTATION
OF ALL PARTS



3x8mm



! NOTE ORIENTATION

REAR

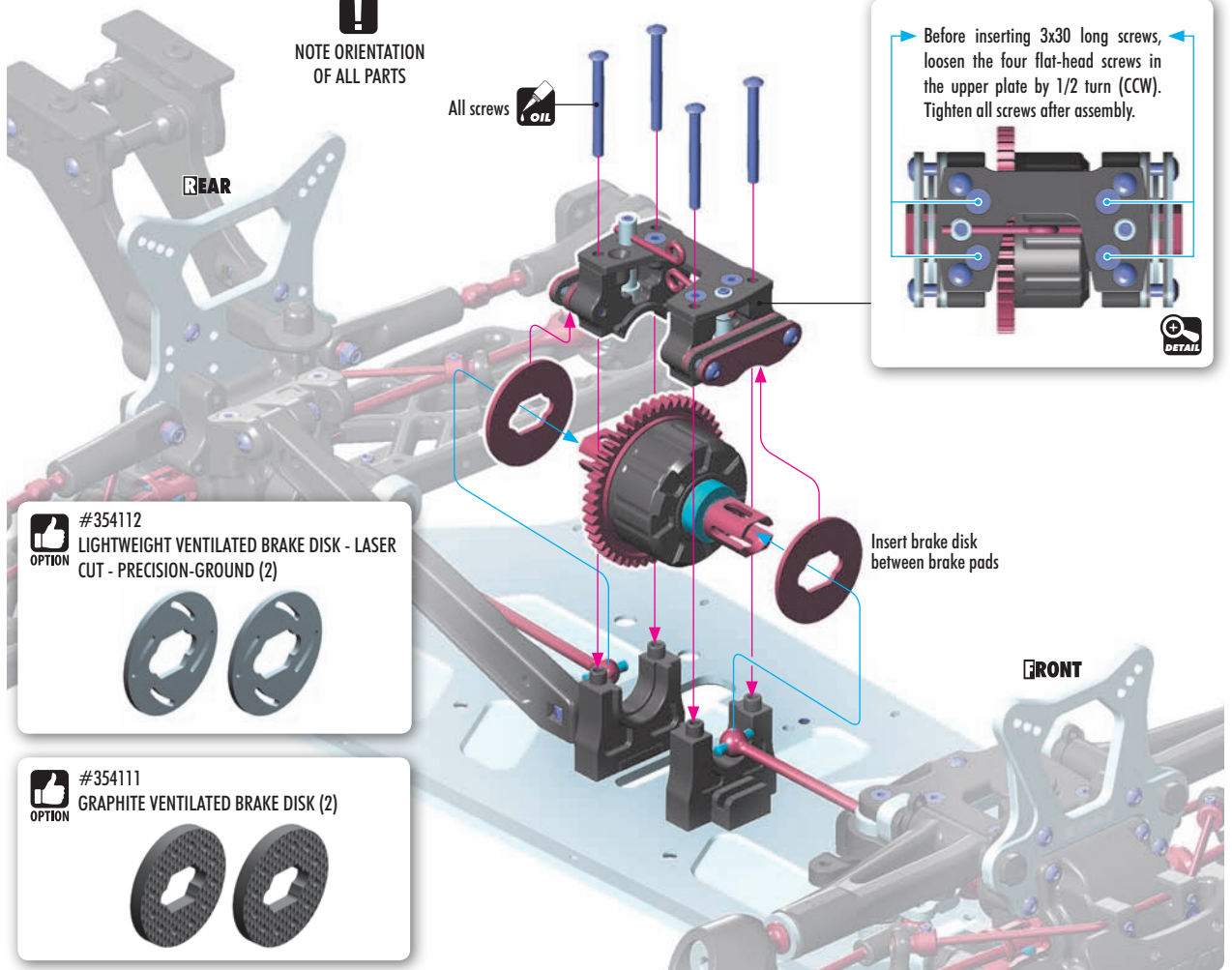
FRONT

4x12mm



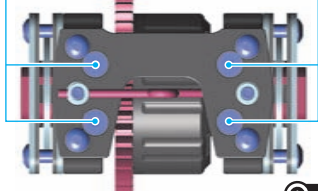
902330
SH M3x30

!
NOTE ORIENTATION
OF ALL PARTS



All screws OIL

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



+
DETAIL

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

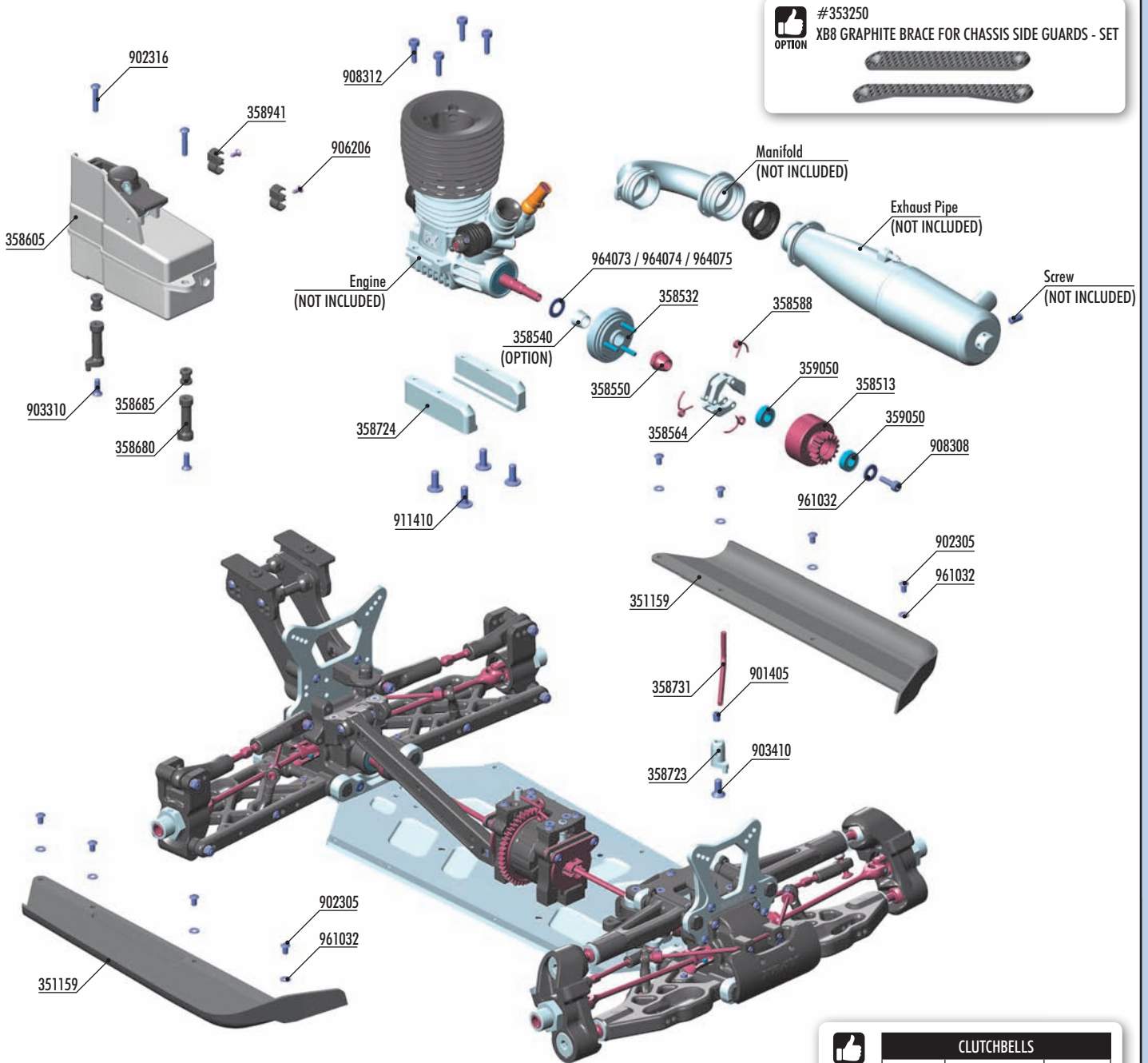
OPTION #354111
GRAPHITE VENTILATED BRAKE DISK (2)

Insert brake disk between brake pads

REAR

FRONT

9. FUEL TANK & ENGINE



#353250
OPTION XB8 GRAPHITE BRACE FOR CHASSIS SIDE GUARDS - SET

OPTION

HIGH TORQUE CLUTCH SPRING			
#358587	GOLD	SOFT	OPTION
#358588	GRAY	MEDIUM	INCLUDED
#358589	SILVER	HARD	OPTION

OPTION

CLUTCH SHOE		
#358561	ALU - LIGHT (3)	OPTION
#358562	ALU - H-TORQUE (3)	OPTION
#358563	GRAPHITE (2)	OPTION
#358564	ALU - HARD (3)	INCLUDED

OPTION

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



- 35 1159 XB8 '16 CHASSIS SIDE GUARDS L+R
- 35 8513 CLUTCH BELL 13T
- 35 8532 FLYWHEEL - HIGH TORQUE
- 35 8540 FLYWHEEL COLLAR (OPTION)
- 35 8550 FLYWHEEL NUT - HUDY SPRING STEEL™
- 35 8564 ALU CLUTCH SHOE - HARD (3)
- 35 8588 HIGH TORQUE CLUTCH SPRINGS - MEDIUM (3)
- 35 8605 XB8 FUEL TANK 123CC WITH FLOATING FILTER
- 35 8680 FUEL TANK MOUNTING POST (2)
- 35 8685 FUEL TANK MOUNTING GROMMET (4)
- 35 8723 EXHAUST WIRE MOUNT SET
- 35 8724 ALU ENGINE MOUNT - CNC MACHINED (L+R)
- 35 8731 EXHAUST MOUNTING WIRE - LONG
- 35 8941 COMPOSITE TUBING HOLDER FOR FUEL TANK (2)
- 35 9050 CLUTCH BELL BALL-BEARING 5x10x4 (2)

- 90 1405 HEX SCREW SB M4x5 (10)
- 90 2305 HEX SCREW SH M3x5 (10)
- 90 2316 HEX SCREW SH M3x16 (10)
- 90 3310 HEX SCREW SFH M3x10 (10)
- 90 3410 HEX SCREW SFH M4x10 (10)
- 90 6206 SCREW PHILLIPS FH 2.2x6 (10)
- 90 8308 HEX SCREW (CAP HEAD) 3x8 (10)
- 90 8312 HEX SCREW (CAP HEAD) 3x12 (10)
- 91 1410 HEX SCREW FLANGED SH M4x10 (10)
- 96 1032 WASHER S 3.2 (10)
- 96 4073 WASHER S 7x10x0.2 (10)
- 96 4074 WASHER S 7x10x0.3 (10)
- 96 4075 WASHER S 7x10x0.5 (10)

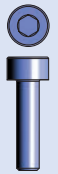
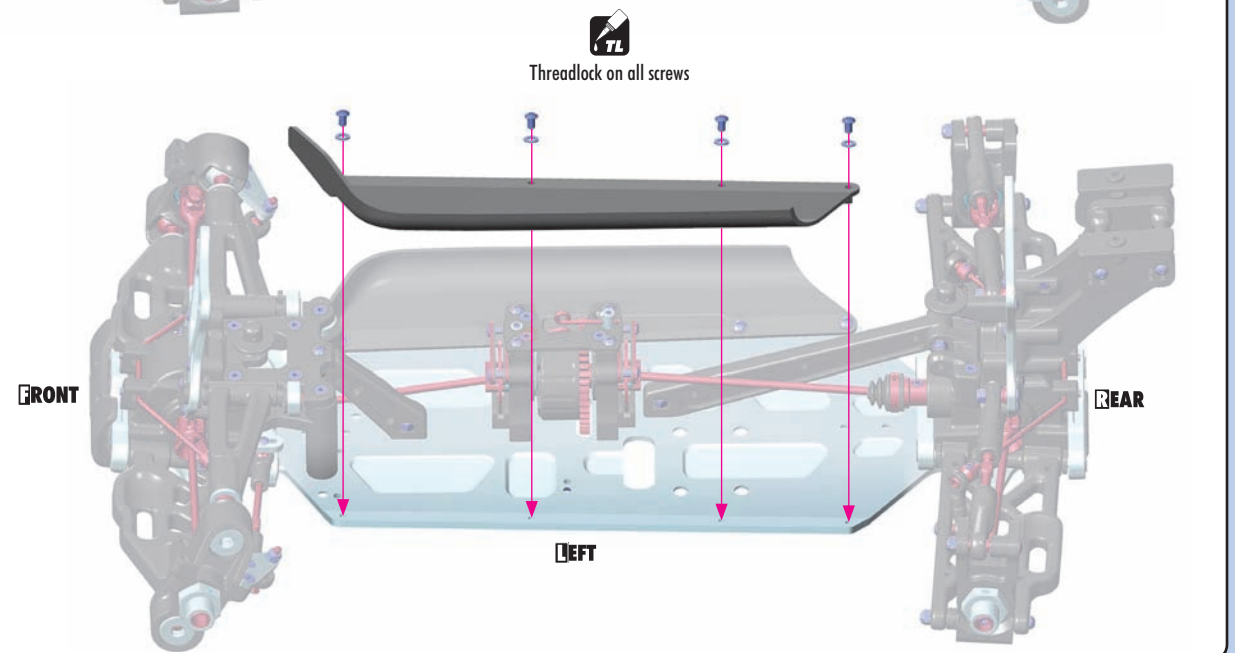
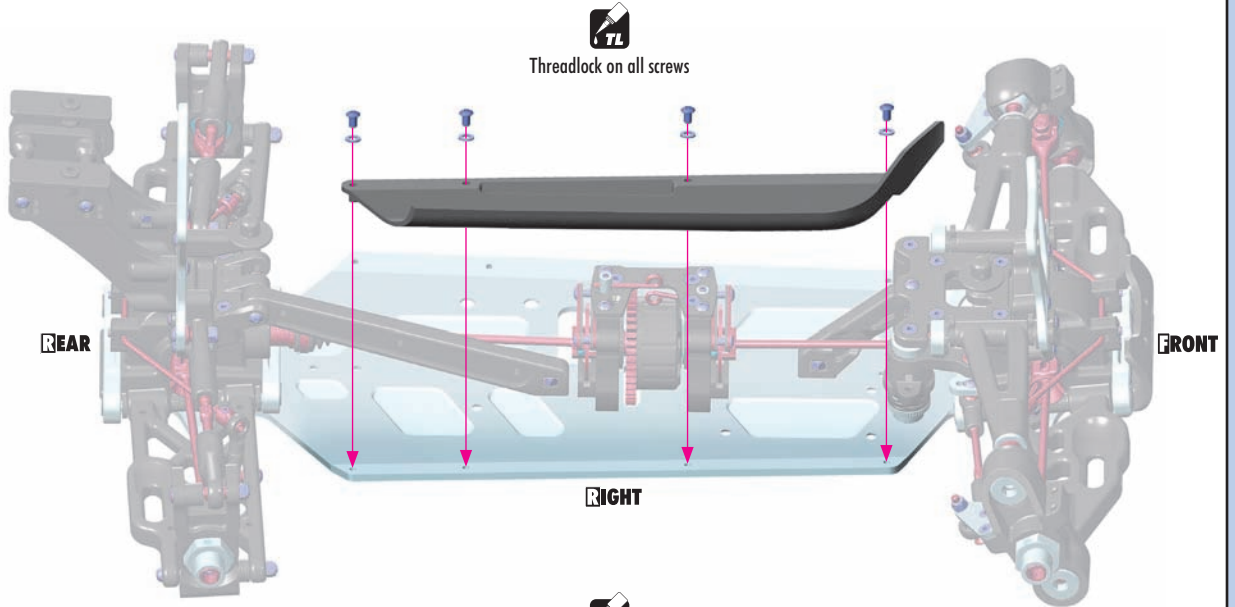
9. FUEL TANK & ENGINE



902305
SH M3x5



961032
S 3.2



908312
SCH M3x12



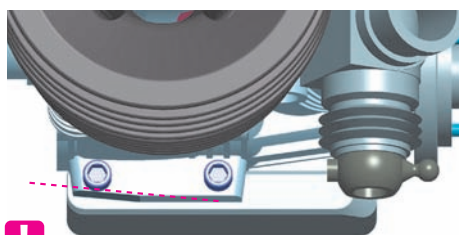
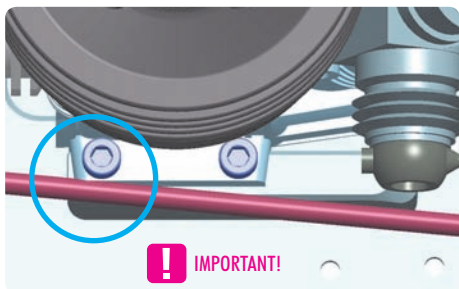
964073
S 7x10x0.2



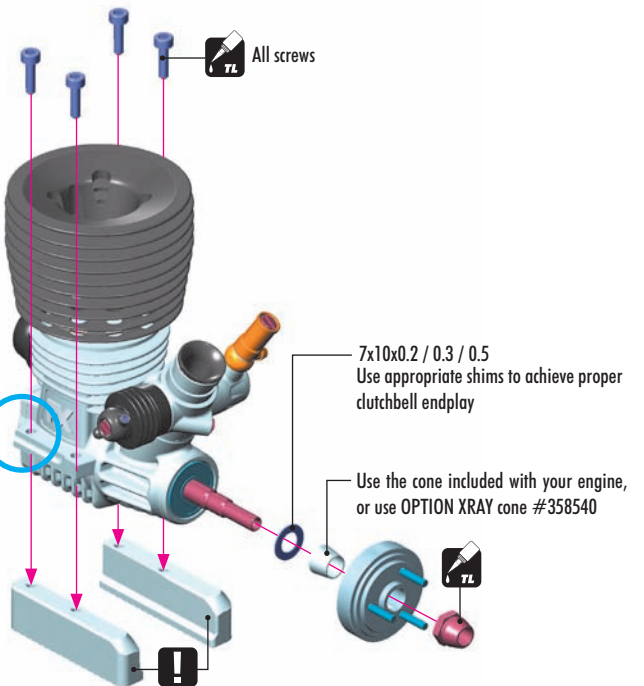
964074
S 7x10x0.3



964075
S 7x10x0.5



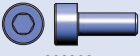
When installing the engine, first check that the drive shaft does not touch the engine. If it does, remove some material from the engine mount as shown to make some room between engine and shaft.



9. FUEL TANK & ENGINE



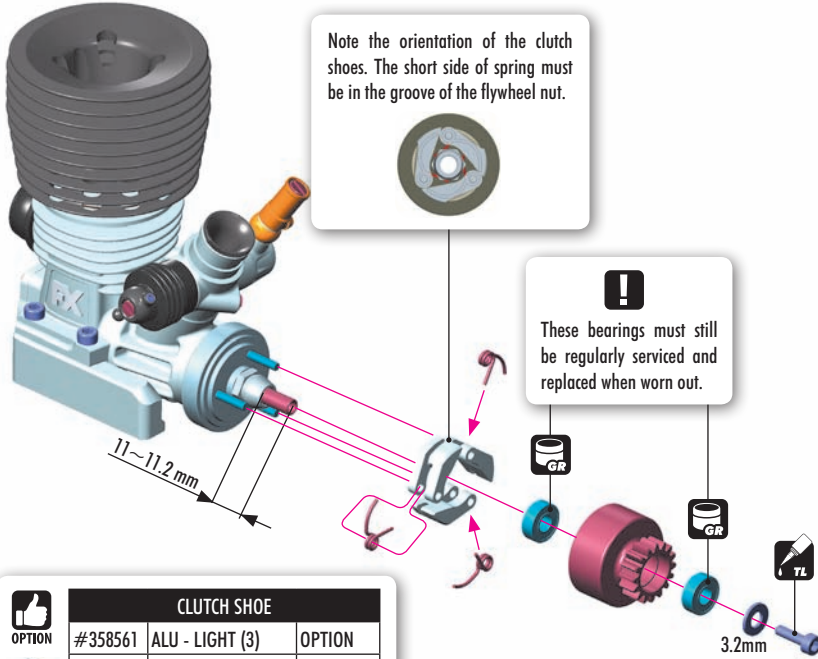
359050
BB 5x10x4



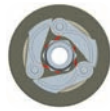
908308
SCH M3x8



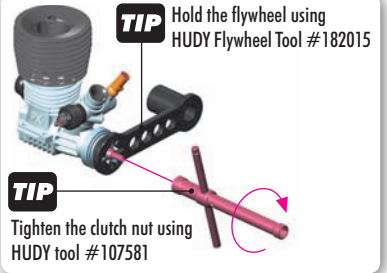
961032
S 3.2



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



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



TIP Tighten the clutch nut using HUDY tool #107581

OPTION	CLUTCH SHOE		
#358561	ALU - LIGHT (3)	OPTION	
#358562	ALU - H-TORQUE (3)	OPTION	
#358563	GRAPHITE (2)	OPTION	
#358564	ALU - HARD (3)	INCLUDED	

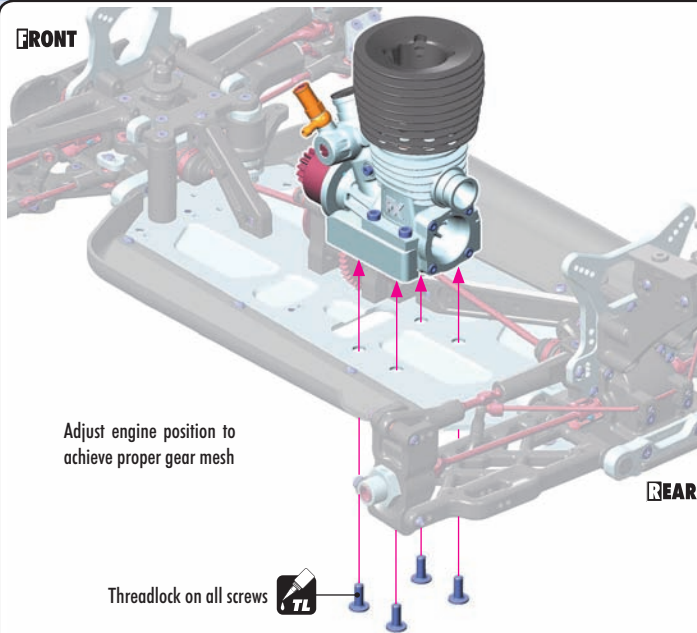
OPTION	CLUTCHBELLS		
#358512	12T	OPTION	
#358513	13T	INCLUDED	
#358514	14T	OPTION	
#358525	15T	OPTION	
#358517	13T Lightweight	OPTION	
#358518	14T Lightweight	OPTION	

OPTION	HIGH TORQUE CLUTCH SPRING		
#358587	GOLD	SOFT	OPTION
#358588	GRAY	MEDIUM	INCLUDED
#358589	SILVER	HARD	OPTION

SET-UP BOOK
CLUTCH SPRINGS
CLUTCH SHOE

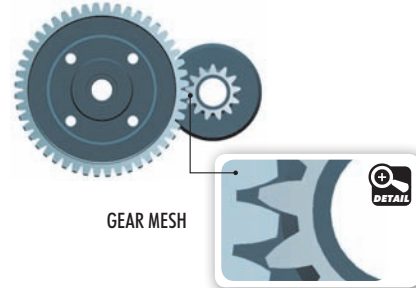


911410
SHF M4x10



Adjust engine position to achieve proper gear mesh

Threadlock on all screws



GEAR MESH

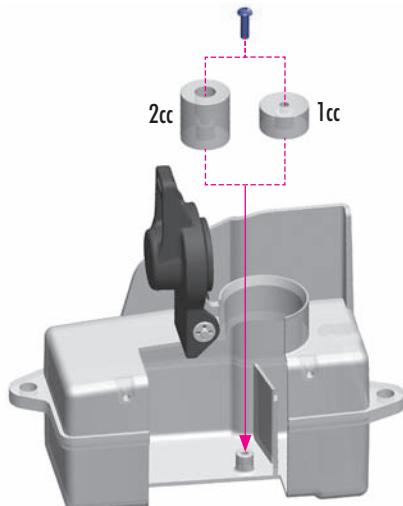
EXTREMELY IMPORTANT

It is very important that your XB8 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.



907258
SP 2.5x8



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

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

2CC FUEL TANK INSERT

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

1CC FUEL TANK INSERT

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

NOTE ORIENTATION

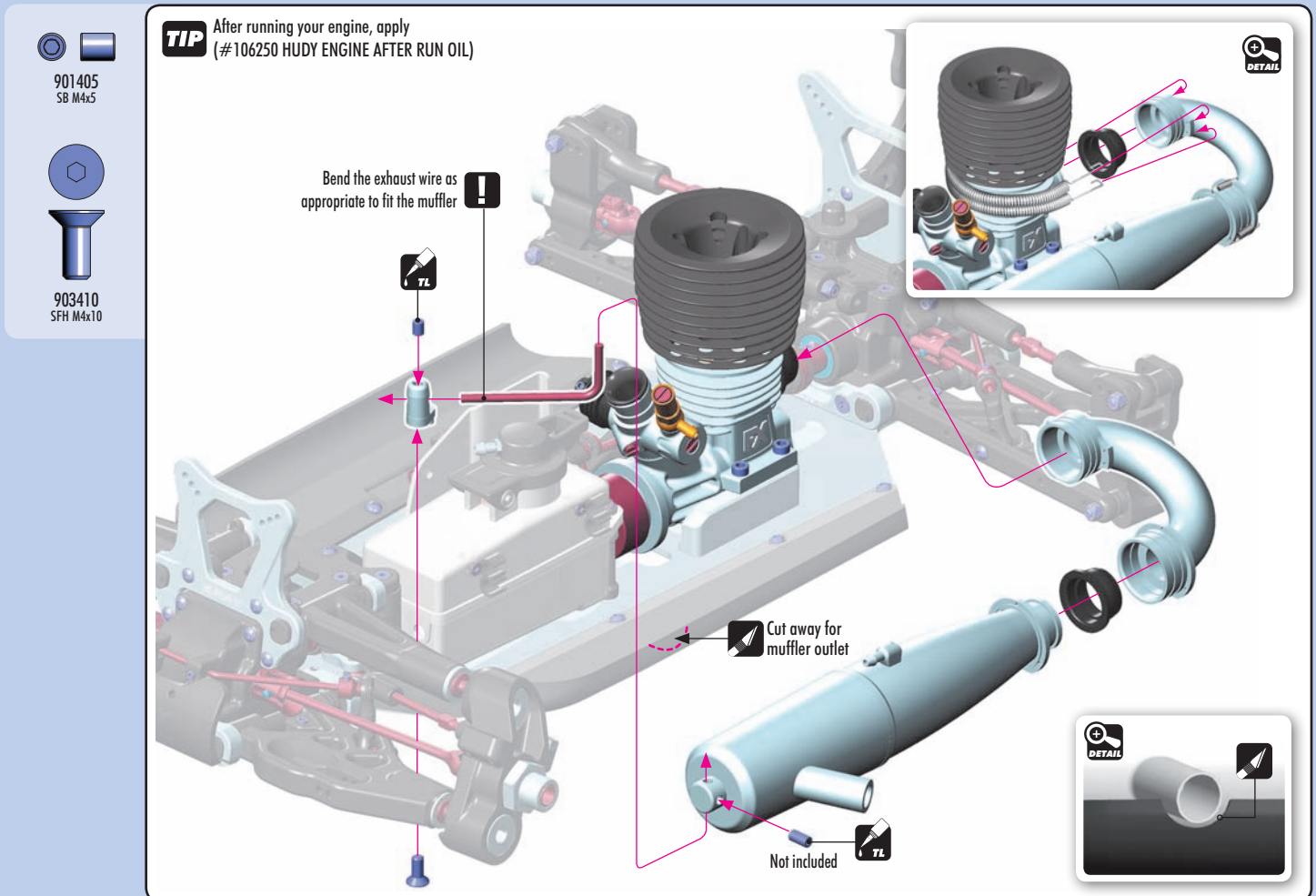
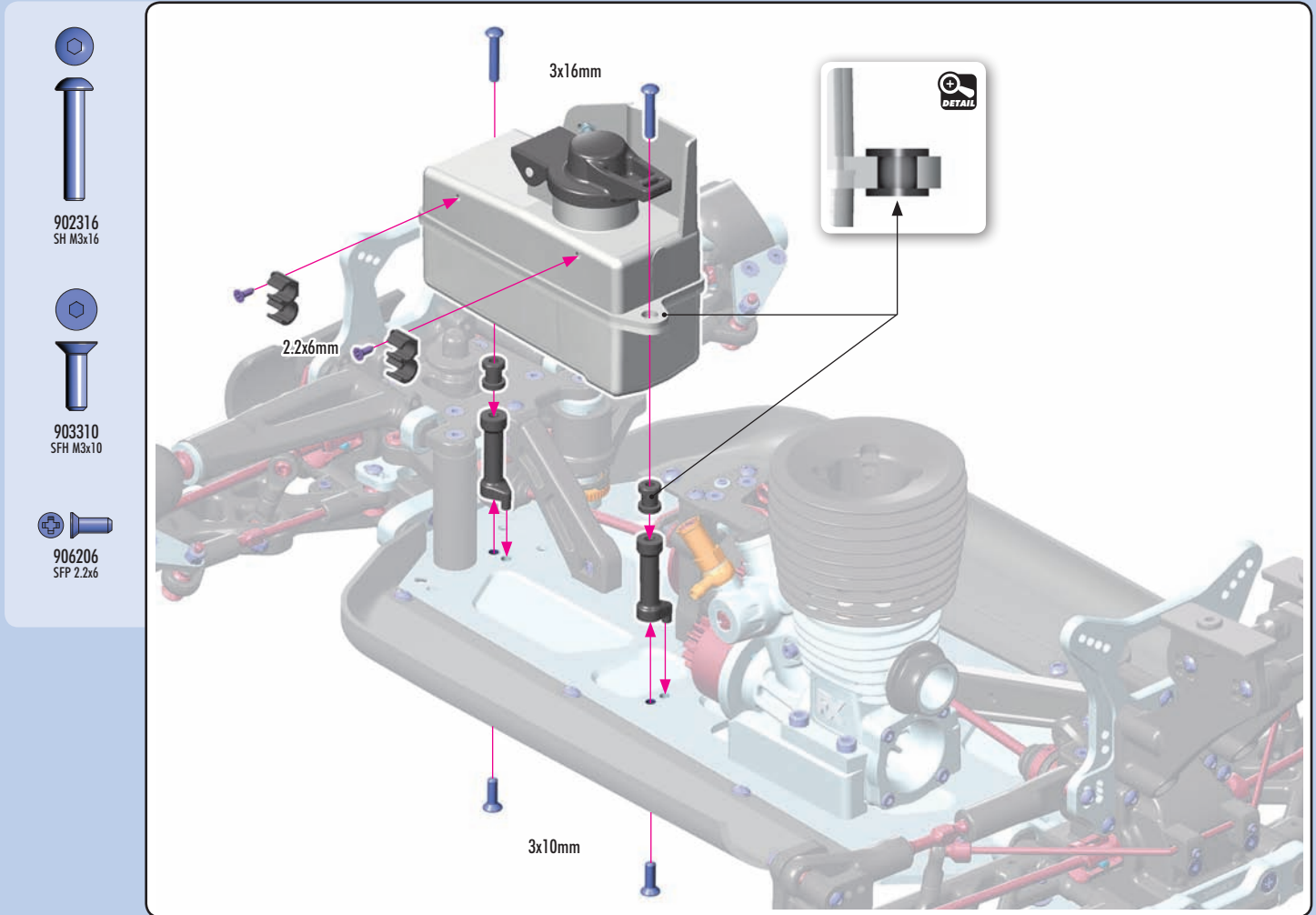


NOTE ORIENTATION

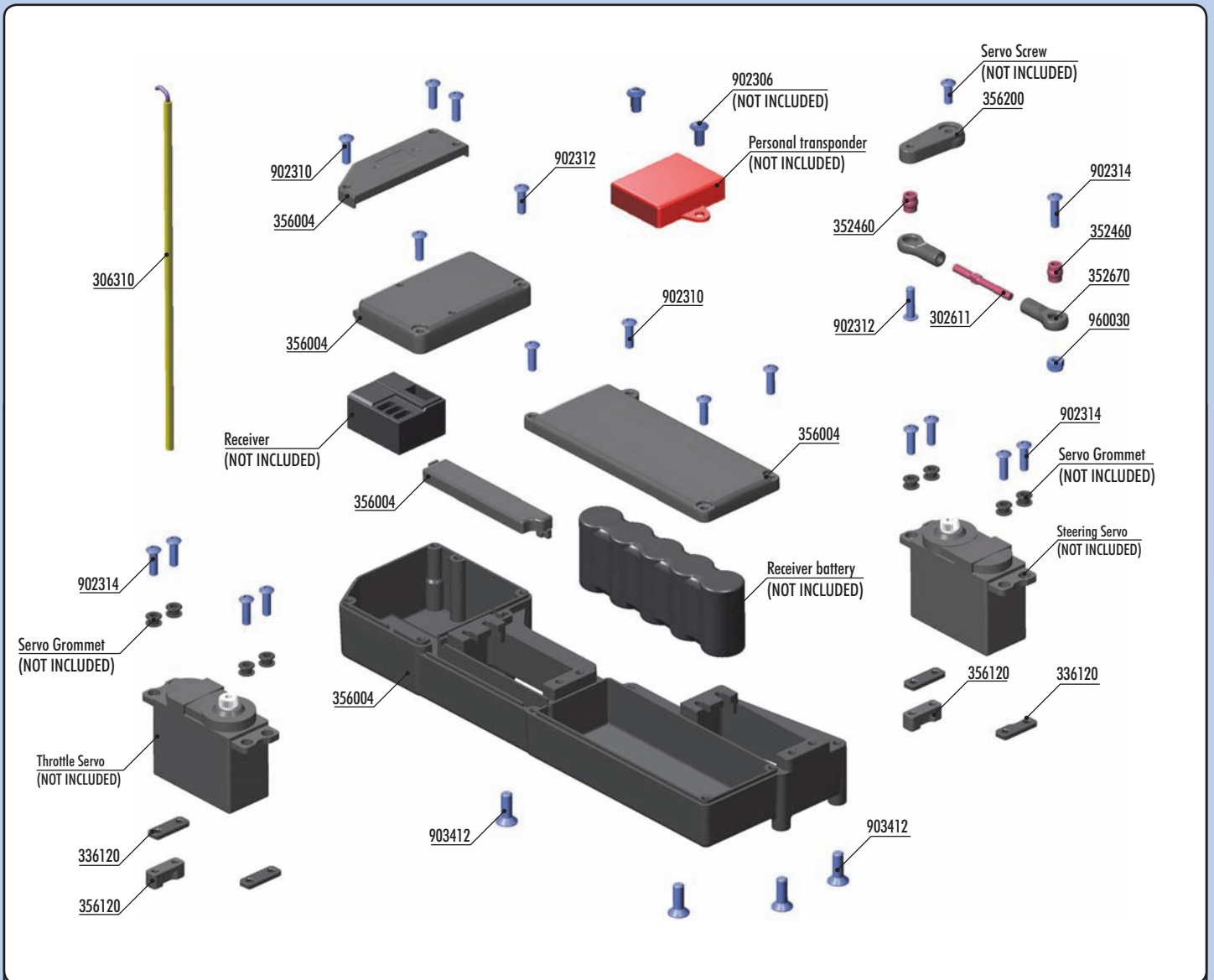


NOTE: The fuel tank insert can be easily mounted to the bottom of the fuel tank using the provided screw, when the fuel tank cap is opened fully.

9. FUEL TANK & ENGINE



10. RADIO CASE



BAG

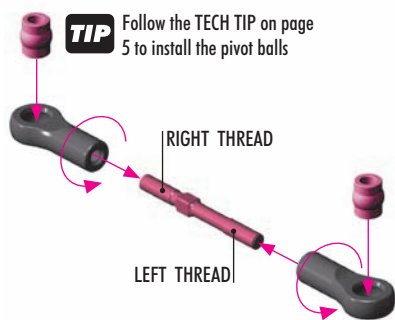
10

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

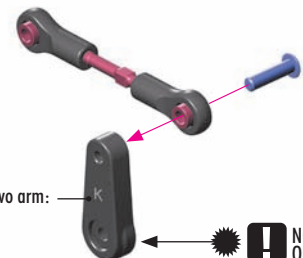
- 35 6200 BRAKE/THROTTLE ARMS & STEERING SERVO ARMS - SET
- 38 9135 CONNECTING CABLE RECEIVER/BATT. PACK (OPTION)
- 90 2306 HEX SCREW SH M3x6 (10) (OPTION)
- 90 2310 HEX SCREW SH M3x10 (10)
- 90 2312 HEX SCREW SH M3x12 (10)
- 90 2314 HEX SCREW SH M3x14 (10)
- 90 3412 HEX SCREW SFH M4x12 (10)
- 96 0030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



902312
SH M3x12

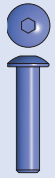


The length of the linkages varies according to the type of servo.

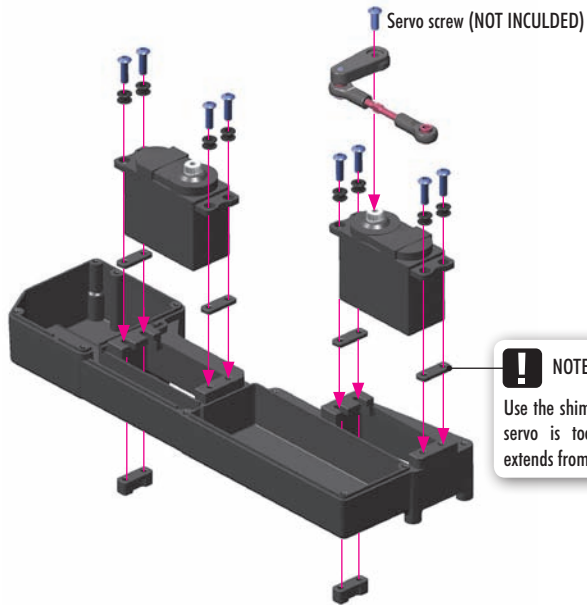


HUDY ALU SERVO HORNS		
#293501	23T KO Propo, Airtronics, Sanwa	OPTION
#293502	24T Hitec	OPTION
#293503	25T Futaba	OPTION



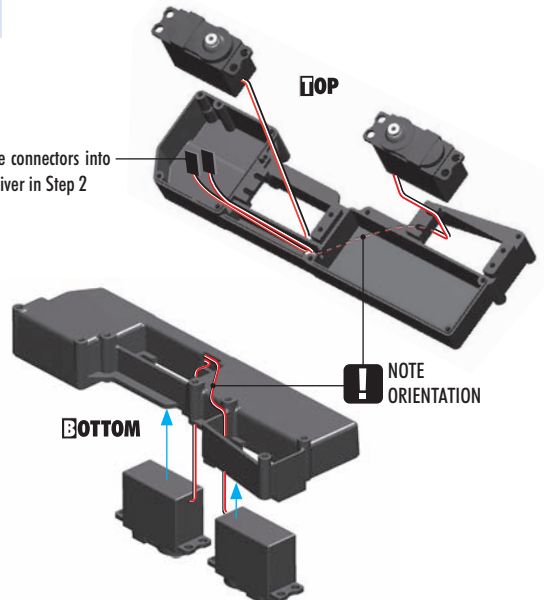


902314
SH M3x14



step 1

Plug the connectors into the receiver in Step 2



902310
SH M3x10

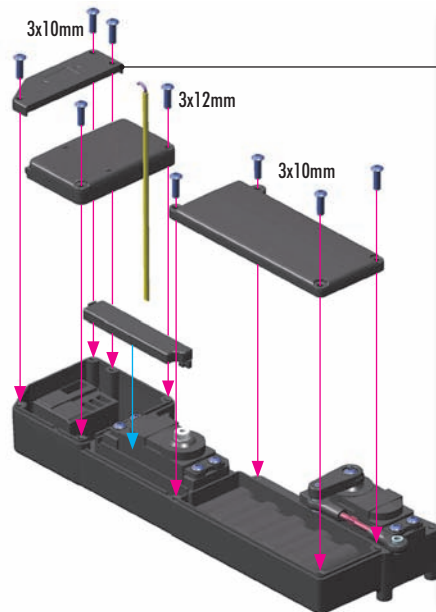
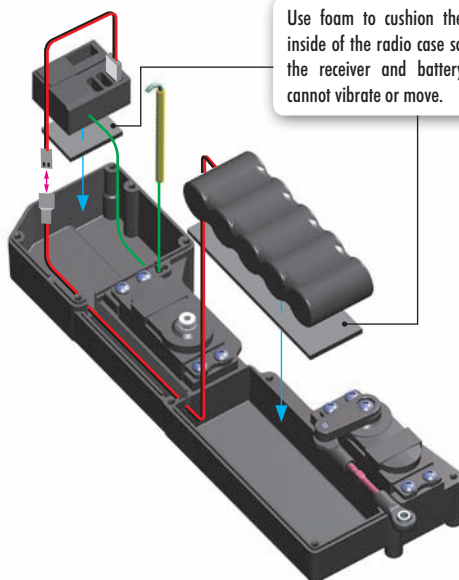


902312
SH M3x12

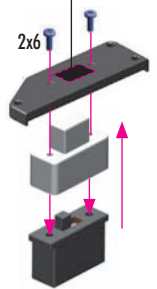


907206
SP M2x6

step 2

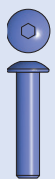


TIP CUT



SWITCH #356050 OPTION

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



902314
SH M3x14



903412
SFH M4x12



960030
N M3

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

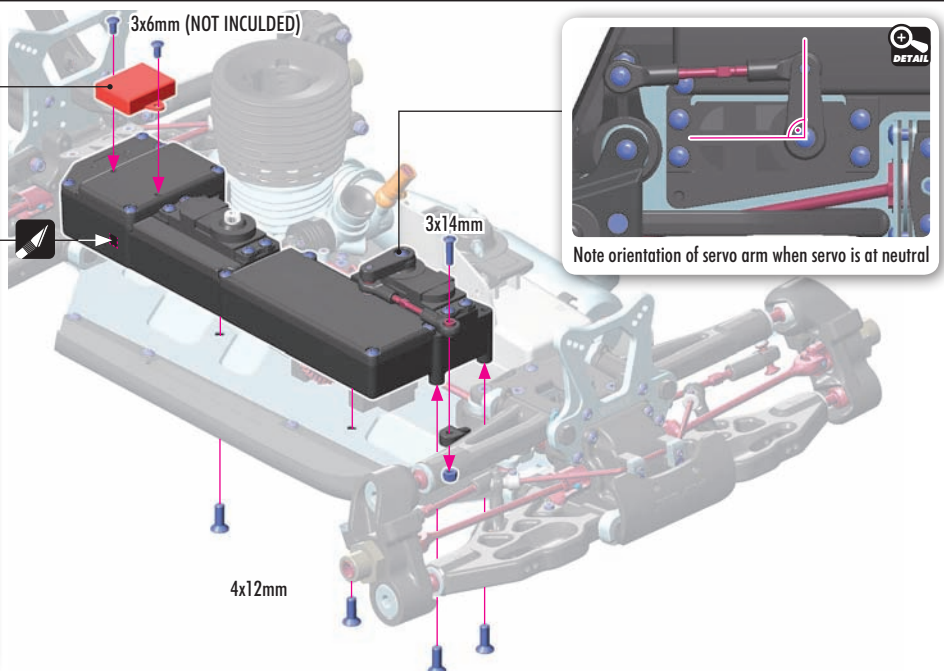
Personal transponder can be placed on the top of the radio box or inside of the radio box

ALTERNATIVE 1

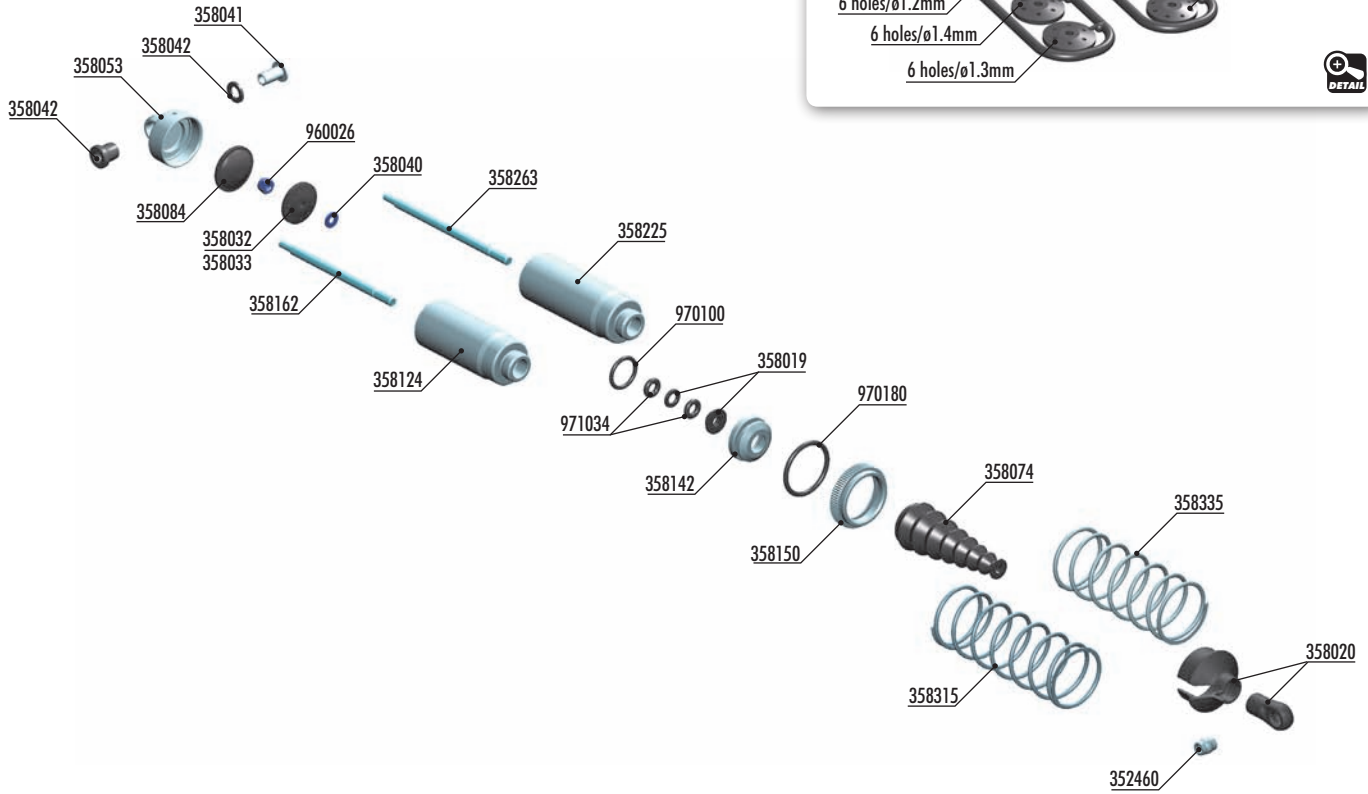
When the transponder is placed at the top of the radio box, cut out some material from the radio box in order to allow the transponder wire to come inside.

ALTERNATIVE 2

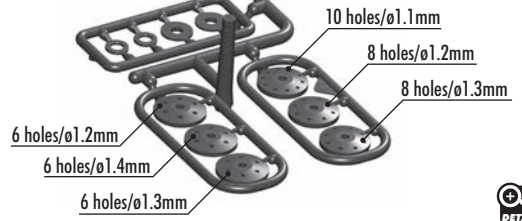
Place the transponder inside of the radio box by using double-sided tape.



11. SHOCK ABSORBERS



PISTONS



FRONT LINEAR SPRINGS

#358182	C=0.65	White	SHORT	OPTION
#358183	C=0.70	Grey	SHORT	OPTION
#358184	C=0.75	Silver	SHORT	OPTION
#358185	C=0.80	Grey-Blue	SHORT	OPTION
#358186	C=0.86	Blue	SHORT	OPTION
#358187	C=0.92	Violet	SHORT	OPTION
#358188	C=0.98	Purple	SHORT	OPTION



REAR LINEAR SPRINGS

#358282	C=0.47	White	LONG	OPTION
#358283	C=0.50	Grey	LONG	OPTION
#358284	C=0.53	Silver	LONG	OPTION
#358285	C=0.57	Grey-Blue	LONG	OPTION
#358286	C=0.61	Blue	LONG	OPTION
#358287	C=0.65	Violet	LONG	OPTION
#358288	C=0.70	Purple	LONG	OPTION



SHOCK SPRINGS

#358315	C=0.77-0.80	3 DOTS	FRONT	INCLUDED
#358316	C=0.80-0.83	4 DOTS	FRONT	OPTION
#358335	C=0.68-0.70	3 DOTS	REAR	INCLUDED
#358336	C=0.70-0.73	4 DOTS	REAR	OPTION



FRONT & REAR PROGRESSIVE SPRINGS

#358174	C=0.7-0.8	Grey	SHORT	OPTION
#358274	C=0.5-0.6	Grey	MEDIUM	OPTION
#358275	C=0.65-0.7	1 STRIPE	MEDIUM	OPTION
#358276	C=0.7-0.75	2 STRIPES	MEDIUM	OPTION
#358277	C=0.72-0.8	3 STRIPES	MEDIUM	OPTION
#358278	C=0.75-0.83	4 STRIPES	MEDIUM	OPTION

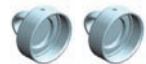


REAR PROGRESSIVE SPRINGS

#358279	C=0.55-0.63	2 STRIPES	LONG	OPTION
#358280	C=0.6-0.68	3 STRIPES	LONG	OPTION
#358281	C=0.65-0.7	4 STRIPES	LONG	OPTION



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



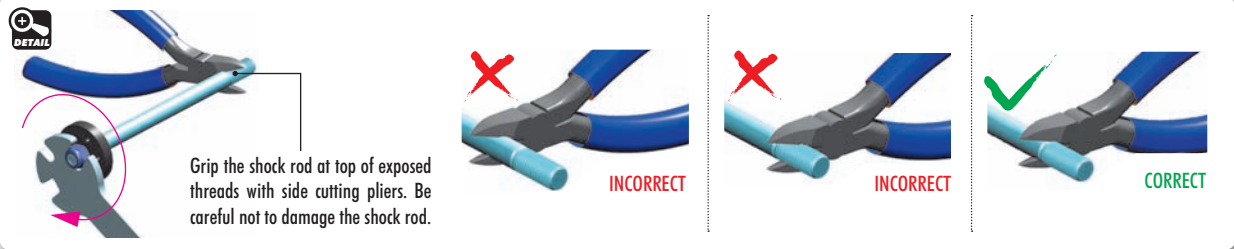
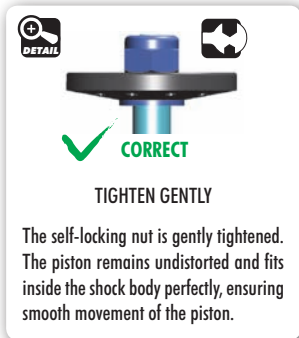
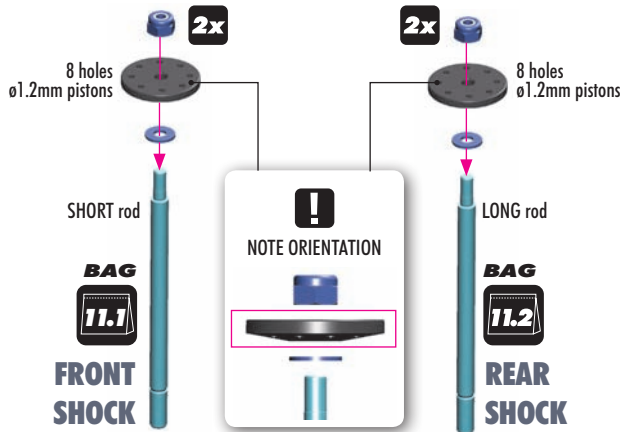
BAGS



- 35 2460 PIVOT BALL 5.8 - V3 (10)
- 35 8019 COMPOSITE SET OF SHIMS FOR SHOCKS - V2 (2)
- 35 8020 COMPOSITE SHOCK PARTS
- 35 8032 SHOCK PISTON SET 8-HOLE (1.2; 1.3) 10-H. (1.1MM) - DELRIN - V2
- 35 8033 COMPOSITE SHOCK 6-HOLE PISTON SET (1.2; 1.3; 1.4MM) - DELRIN - V2
- 35 8040 HARDENED SHOCK SHIMS (4)
- 35 8041 STEEL SHOCK BUSHING (2)
- 35 8042 COMPOSITE SHOCK BUSHING & SHIM - V2 (2+2)
- 35 8053 XB8 ALU SHOCK CAP NUT - BLACK COATED (2)
- 35 8054 XB8 ALU SHOCK CAP NUT WITH VENT HOLE - BLACK COATED (2) (OPTION)
- 35 8074 FOLDING SHOCK BOOT (4)
- 35 8084 SHOCK RUBBER MEMBRANE BOTTOM RIBBED (4)

- 35 8124 XB8 ALU FRONT SHOCK BODY - HARD COATED (2)
- 35 8142 ALU SHOCK BODY NUT FOR SHOCK BOOT (2)
- 35 8150 ALU SHOCK BODY ADJ. NUT (2)
- 35 8162 FRONT SHOCK SHAFT (2)
- 35 8225 XB8 16 ALU REAR SHOCK BODY - HARD COATED (2)
- 35 8263 XB8 REAR SHOCK SHAFT (2)
- 35 8315 XRAY FRONT SPRING 69MM - 3 DOTS (2)
- 35 8335 XRAY REAR SPRING 85MM - 3 DOTS
- 96 0026 NUT M2.5 - SHORT (10)
- 97 0100 O-RING 10 x 1.5 (10)
- 97 0180 O-RING 18 x 1.8 (10)
- 97 1034 SILICONE O-RING 3.5x2 (10)

11. SHOCK ABSORBERS



SET-UP BOOK
SHOCK DAMPING
SHOCK PISTONS



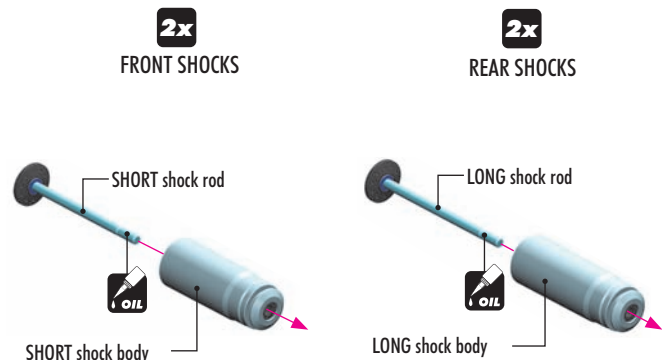
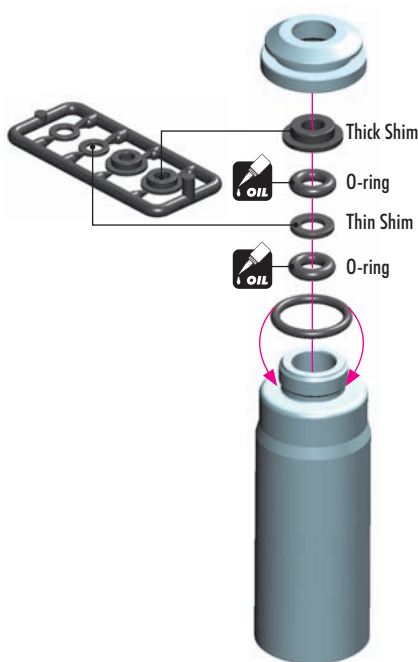
970100
O 10x1.5



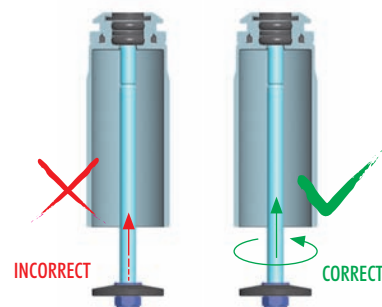
971034
O 3.4x2

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

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



EXTREMELY IMPORTANT



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

Twist the shock rod through the lower shock body assembly.

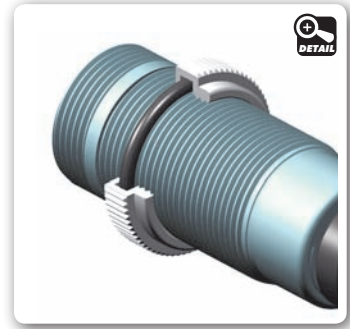
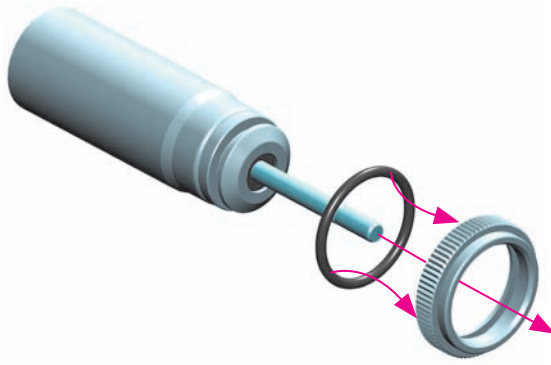
11. SHOCK ABSORBERS



970180
0 18x1.8

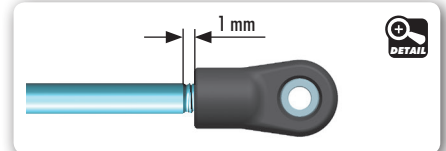
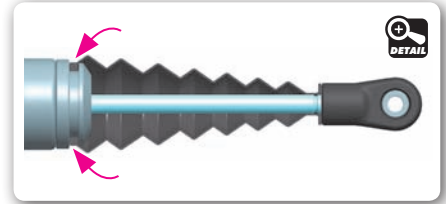
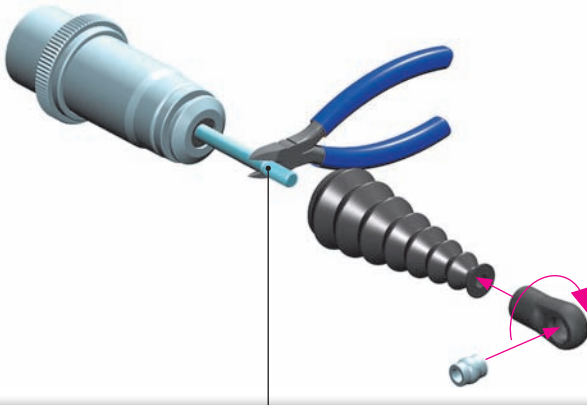
2x FRONT SHOCKS

2x REAR SHOCKS



2x FRONT SHOCKS

2x REAR SHOCKS



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



DEFAULT SHOCK REBOUND SETTING 0% (LOW REBOUND)

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

2x FRONT (SHORT)

Oil 650cSt

2x REAR (LONG)

Oil 500cSt

SET-UP BOOK
SHOCK OIL



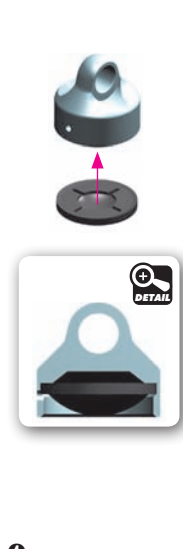
1 Extend the shock shaft completely. Fill the shock body with the shock oil. For the FRONT shocks (short) use 650cSt oil. For the REAR shocks (long) use 500cSt oil.



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



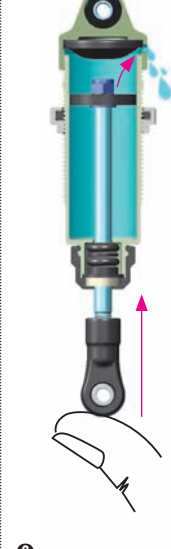
3 Orient the filled shock vertically for several minutes with the shock shaft fully extended. The remaining air bubbles will release.



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



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



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



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

2x REAR SHOCKS
LONG rear shock

2x FRONT SHOCKS
SHORT front shock

LONG spring

SHORT spring

REAR shock PRELOAD
approx. 2mm

FRONT shock PRELOAD
approx. 2mm

SET-UP BOOK
SPRING RATE SHOCK PRELOAD RIDE HEIGHT

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

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

FRONT & REAR SHOCKS
IMPORTANT!

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

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

SETTING THE SHOCK REBOUND TO 50% (MEDIUM REBOUND)

REMOVE SHOCK CAP



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



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

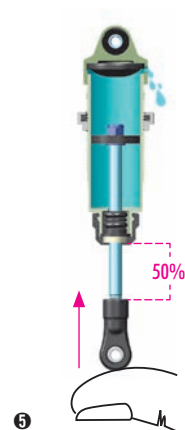


3 Orient the filled shock vertically for several minutes with the shock shaft fully extended. The remaining air bubbles will release.

HALF TIGHTEN



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



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

TIGHTEN FULLY



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

SETTING THE SHOCK REBOUND TO 100% (HIGH REBOUND)

REMOVE SHOCK CAP



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



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



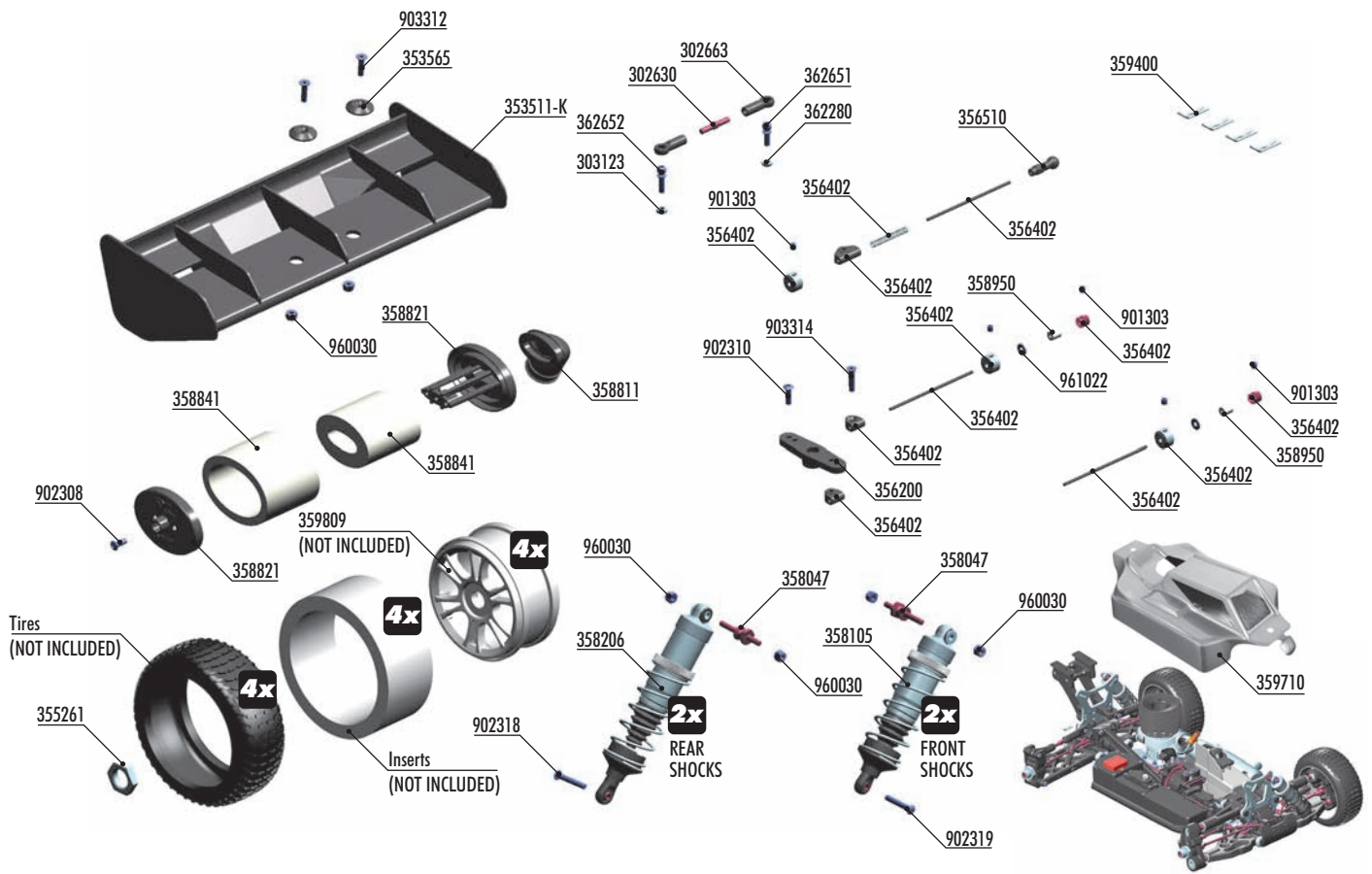
3 Orient the filled shock vertically for several minutes with the shock shaft fully extended. The remaining air bubbles will release.

TIGHTEN FULLY



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

12. FINAL ASSEMBLY



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

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

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

#358832 AIR FILTER RAIN COVER			
OPTION			

XRAY STARBURST WHEELS			
OPTION	#359808	PINK	OPTION
	#359809	YELLOW	OPTION

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



- | | | | |
|-----------|--|---------|--|
| 30 2630 | ADJ. TURNBUCKLE L/R 20 MM - HUDY SPRING STEEL™ (2) | 35 9400 | BODY CLIP (10) |
| 30 2663 | COMPOSITE BALL JOINT 4.9MM - OPEN - V2 (8) | 35 9710 | XRAY XB8'16 BODY |
| 30 3123 | ALU SHIM 3x6x2.0MM (10) | 35 9809 | WHEELS STARBURST - YELLOW (4) (OPTION) |
| 35 3511-K | XB8 REAR WING - BLACK | 36 2280 | ALU CONICAL SHIM 3x6x2.0MM (10) |
| 35 3565 | COMPOSITE REAR WING SHIM - BLACK (2) | 36 2651 | BALL END 4.9MM WITH THREAD 8MM (2) |
| 35 5261 | WHEEL NUT - RIBBED - HARD COATED (2) | 36 2652 | BALL END 4.9MM WITH THREAD 10MM (2) |
| 35 6200 | BRAKE/THROTTLE ARMS & SERVO ARMS - SET | 90 1303 | HEX SCREW SB M3x3 (10) |
| 35 6402 | XB8 BRAKE/THROTTLE SYSTEM - SET | 90 2308 | HEX SCREW SH M3x8 (10) |
| 35 6510 | CLOSED BALL JOINT 3.9 (4) | 90 2310 | HEX SCREW SH M3x10 (10) |
| 35 8047 | STEEL SCREW SHOCK PIVOT BALL WITH HEX (2) | 90 2318 | HEX SCREW SH M3x18 (10) |
| 35 8105 | XB8 FRONT SHOCK ABSORBERS + BOOTS COMPLETE SET (2) | 90 2319 | HEX SCREW SH M3x18 - LEFT THREAD (10) |
| 35 8206 | XB8'16 REAR SHOCK ABSORBERS + BOOTS COMPLETE SET (2) | 90 3312 | HEX SCREW SFH M3x12 (10) |
| 35 8811 | AIR FILTER ELBOW - LOW PROFILE | 90 3314 | HEX SCREW SFH M3x14 (10) |
| 35 8821 | AIR FILTER BODY & CAP - LOW PROFILE | 96 0030 | NUT M3 (10) |
| 35 8841 | AIR FILTER FOAM & OIL - LOW PROFILE | 96 1022 | WASHER S 2.2 (10) |
| 35 8950 | SILICONE TUBING 1M (2.4 x 5.5MM) | | |

12. FINAL ASSEMBLY

FRONT SHOCKS (SHORT)

2x

L-R

902318 SH M3x18

902319 SH M3x18 LEFT thread

960030 N M3

SHORTER ← → LONGER

NOTE ORIENTATION

LEFT

FRONT

RIGHT

Use **STANDARD** M3x18 screw

3x18mm

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

INITIAL SETTING

INITIAL SETTING

L-R

SET-UP BOOK
SHOCK ABSORBERS

REAR SHOCKS (LONG)

2x

L-R

902318 M3x18

902319 SH M3x18 LEFT thread

960030 N M3

SHORTER ← → LONGER

NOTE ORIENTATION

RIGHT

REAR

LEFT

Use **STANDARD** M3x18 screw

M3x18mm

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

INITIAL SETTING

INITIAL SETTING

L-R

SET-UP BOOK
SHOCK ABSORBERS

901303 SB M3x3

902310 SH M3x10

903314 SFH M3x14

Thread brake rods into plastic pivots until flush with outer end

Brake rod

Brake rod

Throttle rod

Use servo horn to match your servo

Cut off remaining material

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

HUDY ALU SERVO HORNS

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

Small gap

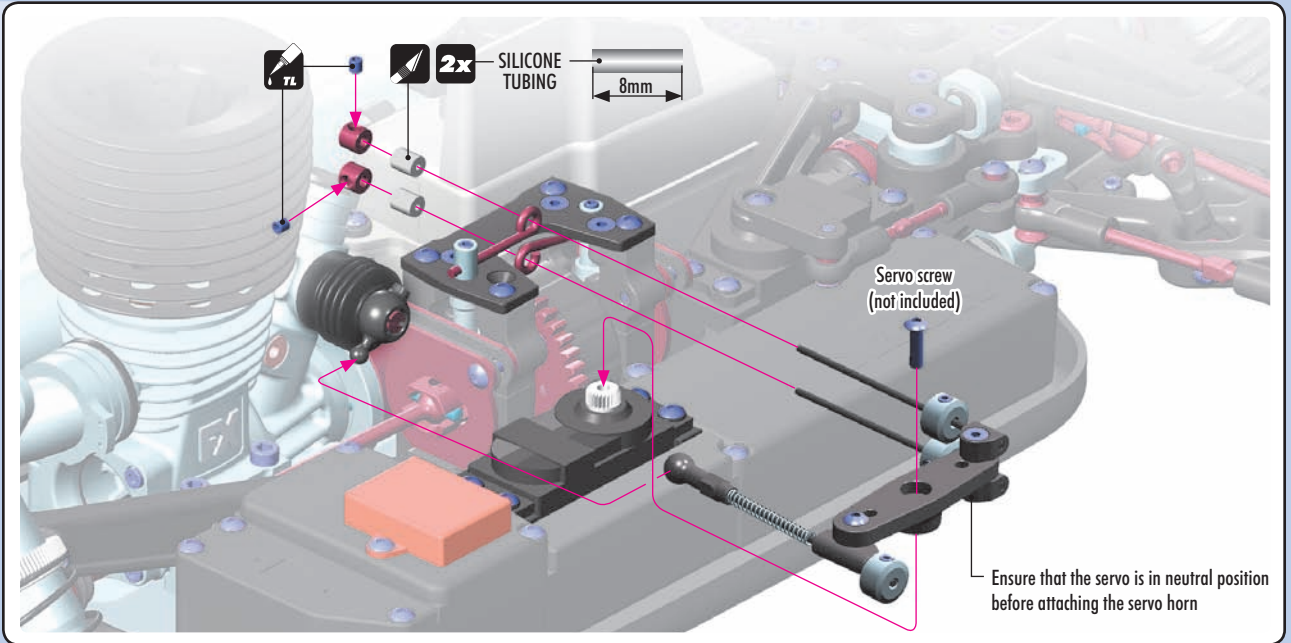
Small gap

Tighten screw until snug. Pivots should move freely.

12. FINAL ASSEMBLY

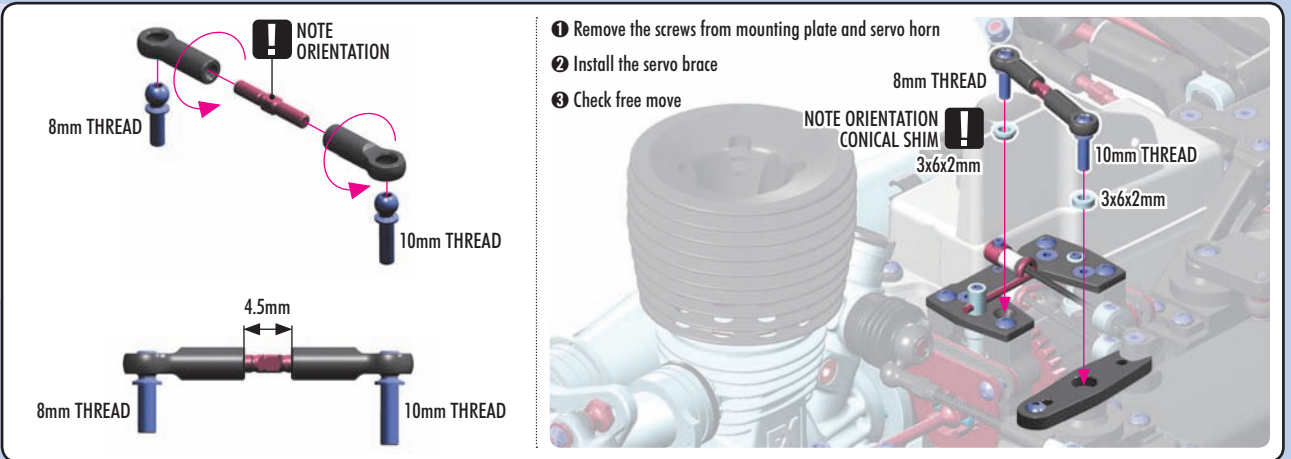
901303
SB M3x3

961022
S 2.2



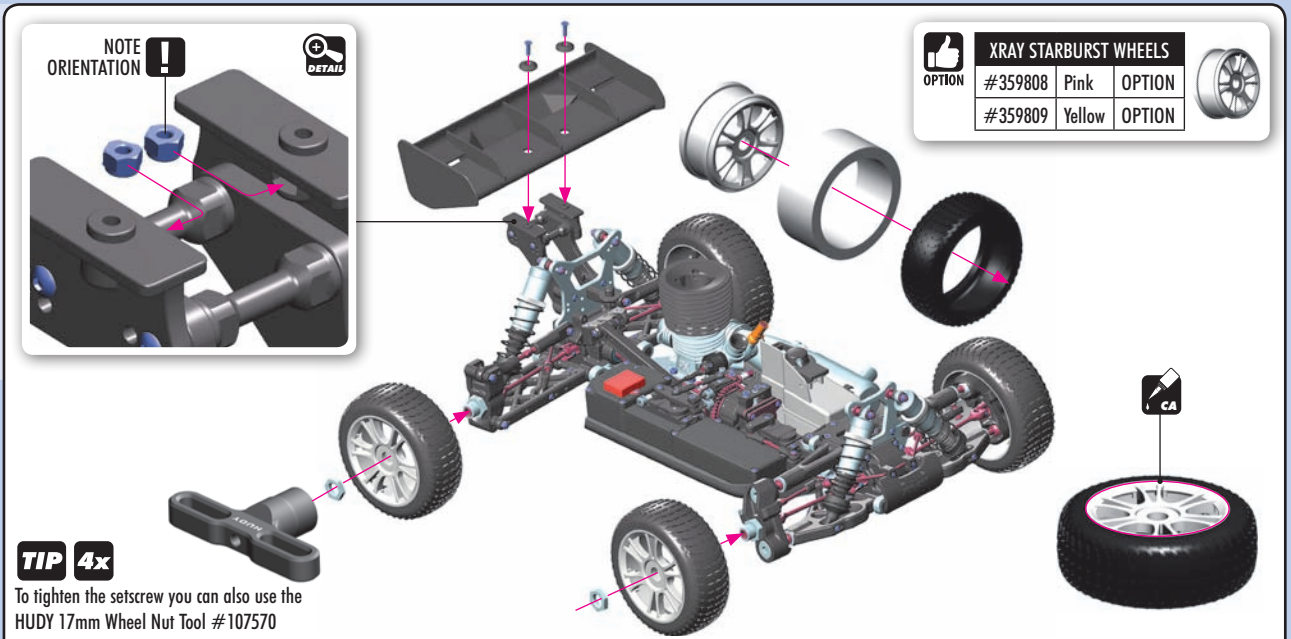
303123
SHIM 3x6x2

362280
CON. SHIM 3x6x2



903312
SFH M3x12

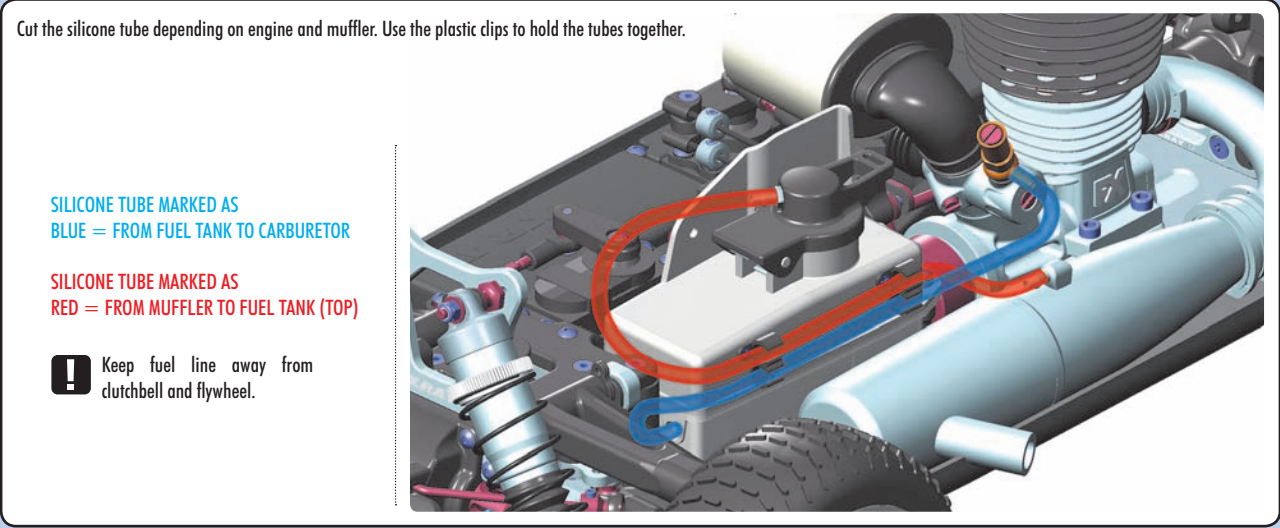
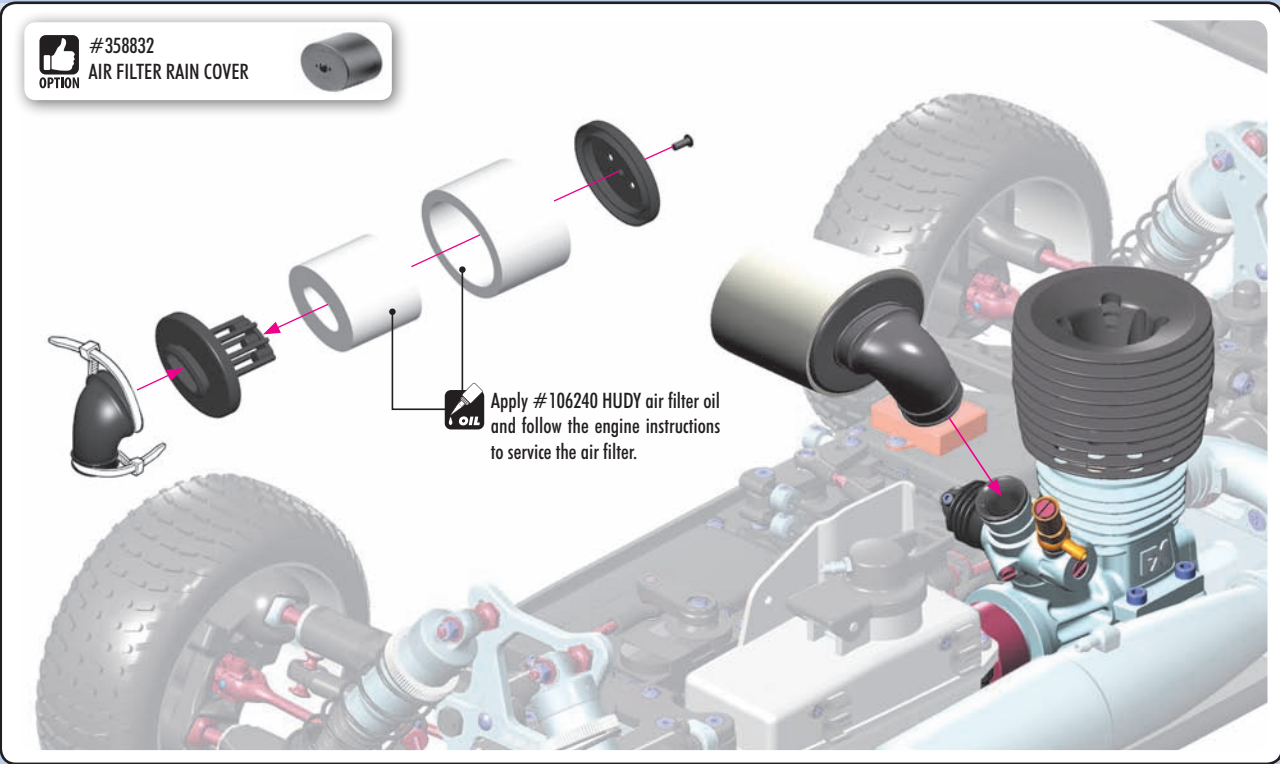
960030
N M3



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

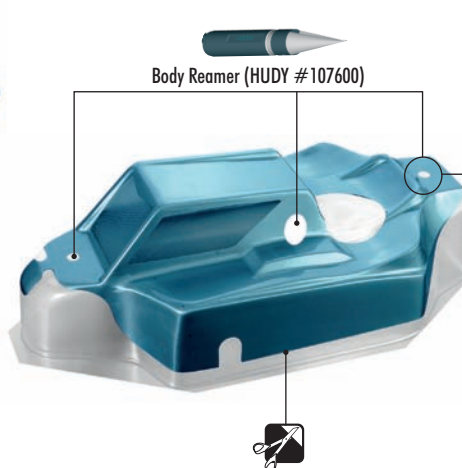
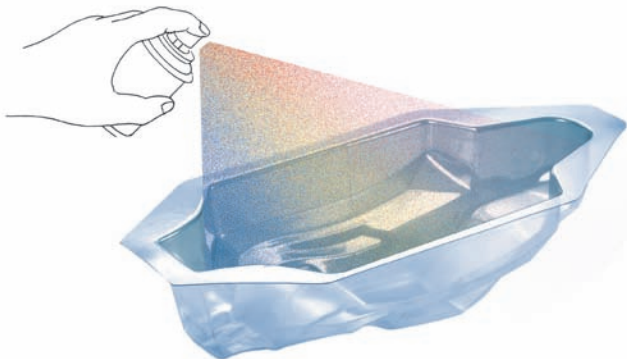
OPTION	WHEEL NUTS		
#35261	OPEN	INCLUDED	
#293560	COVERED	OPTION	
#35265	COVERED	OPTION	

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



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

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



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

ENGINE OPERATION

PREPARING TO OPERATE THE ENGINE

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

STARTING AND RUNNING THE ENGINE

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

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

STOPPING THE ENGINE

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

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

FINISHING OPERATIONS

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

MAINTENANCE AFTER RUNNING

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

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

SHOCK MAINTENANCE

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

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

BEARING MAINTENANCE

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

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

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

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

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

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

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

CLUTCH BEARINGS

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

RECOMMENDED PRODUCTS

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

HUDY
#106213



HUDY
#106220



HUDY
#106222



HUDY
#106221



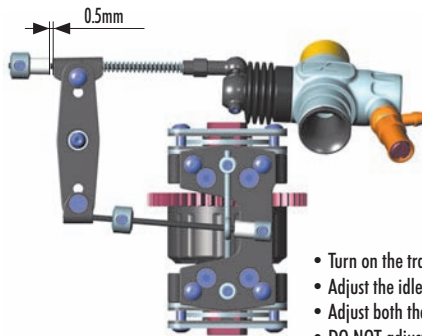
HUDY #106230
HUDY #106232



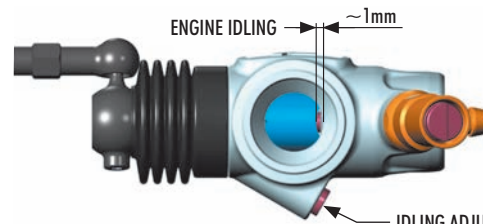
THROTTLE LINKAGE ADJUSTMENT

NEUTRAL (IDLE)

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



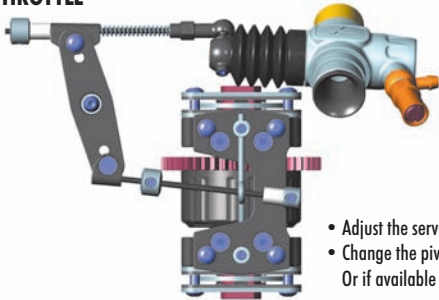
- Turn on the transmitter and receiver and set the engine control servo trim to the neutral position.
- Adjust the idle adjustment screw on the carburetor to open approx. 1mm.
- Adjust both the throttle linkage and brake linkages accordingly.
- DO NOT adjust the linkage with the engine running.



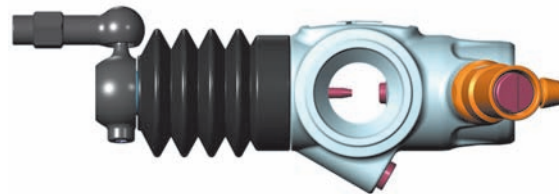
ENGINE IDLING → ~1mm

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

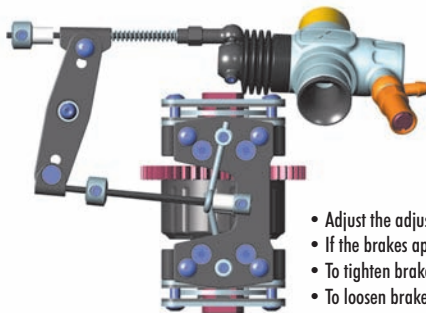
FULL THROTTLE



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



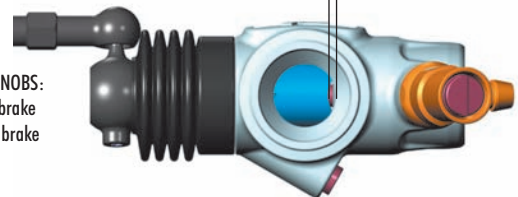
BRAKE



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

ENGINE IDLING → cca 1mm

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



TROUBLESHOOTING GUIDE

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

www.teamxray.com

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

