

1/10 LUXURY NITRO TOURING CAR

# XRAY NT1



*INSTRUCTION MANUAL*  
*XRAY NT1.2*

## BEFORE YOU START

The NT1 is a high-competition, high-quality, 1/10-scale nitro car intended for persons aged 16 years and older with previous experience building and operating RC model racing cars. This is not a toy; it is a precision racing model. This model racing car is not intended for use by beginners, inexperienced customers, or by children without direct supervision of a responsible, knowledgeable adult. If you do not fulfill these requirements, please return the kit in unused and unassembled form back to the shop where you have purchased it.

Before building and operating your NT1, YOU MUST read through all of the operating instructions and instruction manual and fully understand them to get the maximum enjoyment and prevent unnecessary damage.

## CUSTOMER SUPPORT

We have made every effort to make these instructions as easy to understand as possible. However, if you have any difficulties, problems, or questions, please do not hesitate to contact the XRAY support team at [info@teamxray.com](mailto:info@teamxray.com). Also, please visit our Web site at [www.teamxray.com](http://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](http://www.teamxray.com)

Read carefully and fully understand the instructions before beginning assembly.

Make sure you review this entire manual, the included set-up book, and examine all details carefully. If for some reason you decide the NT1 is not what you wanted or expected, do not continue any further. Your hobby dealer cannot accept your NT1 kit for return or exchange after it has been partially or fully assembled.

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

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Email: [xray@rcamerica.com](mailto:xray@rcamerica.com)

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

## SAFETY PRECAUTIONS

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

### CAUTION: CANCER HAZARD

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

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

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

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

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



## IMPORTANT NOTES – GENERAL

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

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



## IMPORTANT NOTES – NITRO ENGINES

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

## IMPORTANT NOTES – ELECTRICAL

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

## IMPORTANT NOTES – NITRO FUEL

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

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

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

## R/C & BUILDING TIPS

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

- you stop tightening a screw when you feel some resistance.
- Ask your local hobby shop for any advice.

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

## WARRANTY

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

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

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

### Limitations of Liability

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

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

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

## QUALITY CERTIFICATE

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

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


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

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


# SYMBOLS USED

Apply threadlock	Assemble left and right sides the same way	Number of teeth	Use pliers
Apply oil (may indicate specific type)	Ensure smooth non-binding movement	Scale	Part bags used
Apply cyanoacrylate (CA) glue	Cut off remaining material	Pay attention here	Assemble in the specified order
Apply grease	Assemble as many times as specified (here twice)	Follow tip here	Follow Set-Up Book
Assembly view	Detail view		

## INCLUDED




Silicone Shock Oil  
(HUDY #106360 600cSt)



Silicone Diff Oil  
(HUDY #106560 60.000cSt)  
(HUDY #106630 300.000cSt)


## NOT INCLUDED



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](http://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 up-to-date version.

## TOOLS REQUIRED


Allen 1.5 / 2.0 / 2.5 / 3.0mm  
Phillips 3.5mm  
Exhaust Spring / Caster Clip Remover



Professional Multi Tool  
(HUDY #183011)



Ball Joint Wrench  
(HUDY #181110)



Turnbuckle Tools  
(HUDY #181030 - 3.0mm)  
(HUDY #181091 - 3.0mm/4.0mm)




Flywheel Tool  
(HUDY #182010)



Pinion Tool Set  
(XRAY #339901)



Pliers  
(HUDY #189020)



Scissors  
(HUDY #188990)



Side Cutters  
(HUDY #189010)



Pocket Hobby Knife  
(HUDY #188981)



Wrench Glowplug/Clutchnut  
(HUDY #107581)



Reamer  
(HUDY #107602)  
(HUDY #107601)




## EQUIPMENT REQUIRED

Transmitter



Receiver & Personal Transponder



Steering & Throttle Servos



Engine



Starter Box (HUDY #104400) & Battery Pack




Glowplug Igniter




Manifold & Exhaust




Lexan® Paint  
Bodyshell



One-Way Lube  
(HUDY #106231)



Receiver Battery Pack  
Battery Charger



Fibre Tape (HUDY #107870)  
Double-sided Tape (HUDY 107875)



Wheels & Tires



Fuel + Fuel Bottle  
(HUDY #104200)



Bearing Oil  
(HUDY #106230)




Graphite Grease  
(HUDY #106210)



Air Filter & Oil



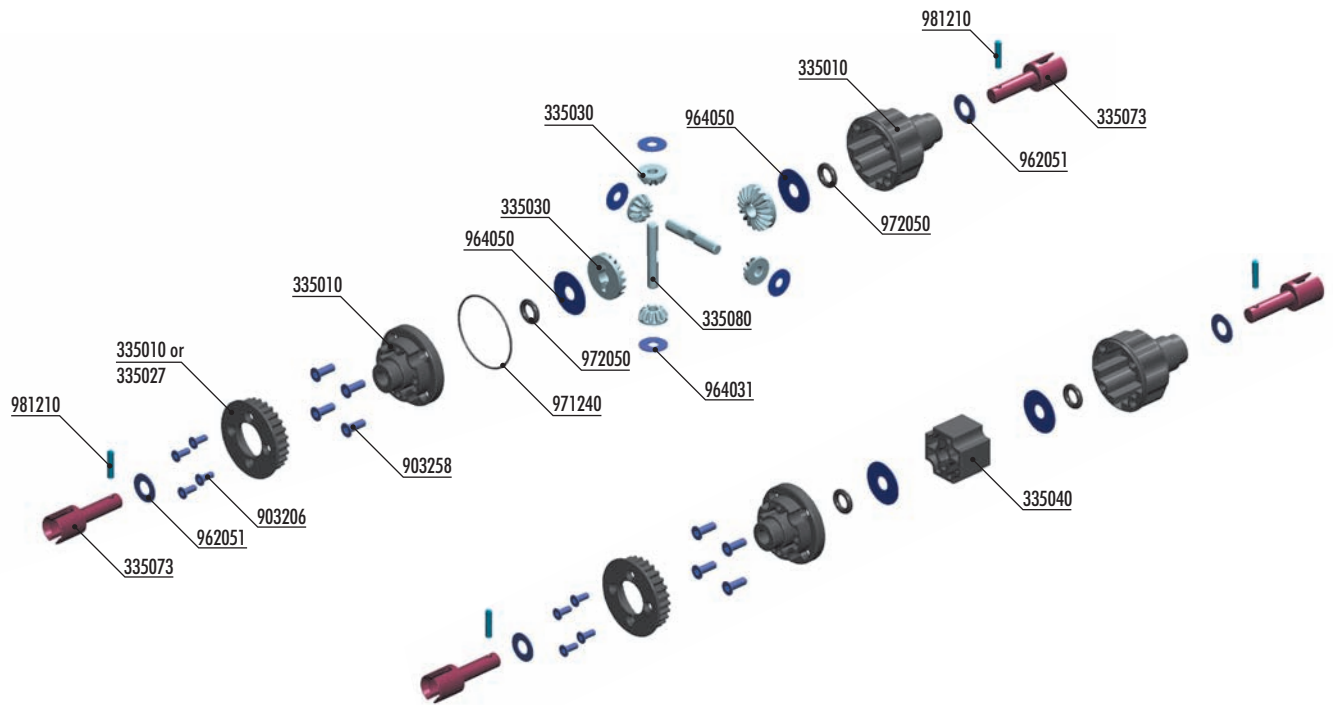
Threadlock & CA Glue  
TL CA



Tire Truer  
(HUDY #102003)



# 1. FRONT GEAR DIFFERENTIAL & SOLID AXLE



**#335081**  
ALU DIFFERENTIAL PIN - HARDCOATED (2)  
OPTION



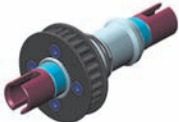
**#304932**  
GRAPHITE GEAR DIFF BEVEL & SATELLITE GEARS (2+4)  
OPTION



**#104002**  
HUDY AIR VAC – VACUUM PUMP - ON-ROAD  
OPTION



**#335100**  
XRAY MULTI DIFFERENTIAL - ONE-WAY - SOLID - SET  
OPTION



**#335180**  
XRAY SUPERLIGHT SOLID AXLE SET - HUDY SPRING STEEL™  
OPTION

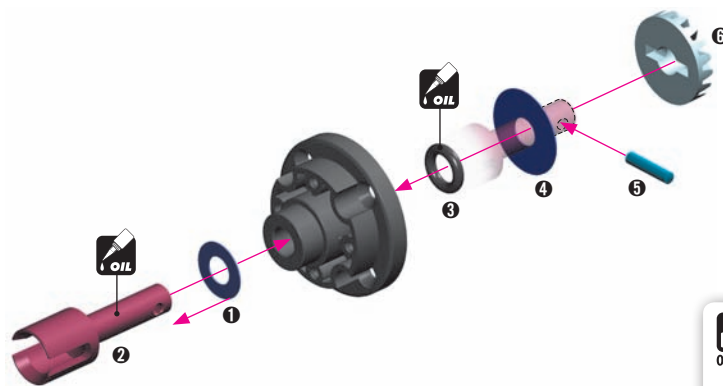
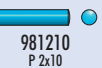


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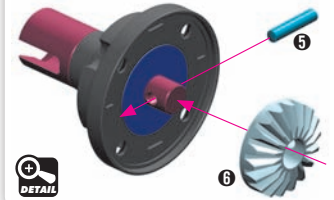


- 335000 FRONT GEAR DIFFERENTIAL - SET
- 335010 COMPOSITE FRONT DIFF CASE, COVER & 27T BELT PULLEY
- 335027 COMPOSITE TIMING BELT PULLEY 27T
- 335030 DIFF BEVEL & SATELLITE GEARS (2+4)
- 335040 COMPOSITE SOLID AXLE ADAPTER
- 335073 LIGHTWEIGHT DIFF OUTDRIVE ADAPTER - LONG - HUDY SPRING STEEL™ (2)
- 335080 DIFF PIN (2)

- 903206 HEX SCREW SFH M2x6 (10)
- 903258 HEX SCREW SFH M2.5x8 (10)
- 962051 WASHER S 5x10x0.2 (10)
- 964031 WASHER S 3.5x10x0.2 (10)
- 964050 WASHER S 5x15x0.3 (10)
- 971240 SILICONE O-RING 24x0.7 (10)
- 972050 SILICONE O-RING 5x2 (10)
- 981210 PIN 2x10 (10)



STEP 5 6 DETAIL



**#304932**  
GRAPHITE GEAR DIFF BEVEL & SATELLITE GEARS (2+4)  
OPTION



# 1. FRONT GEAR DIFFERENTIAL & SOLID AXLE

962051  
S 5x10x0.2

964050  
S 5x15x0.3

972050  
O 5x2

981210  
P 2x10

STEP 5 DETAIL

CUTAWAY VIEW

Use tweezers to insert pin

Silicone oil **300.000cSt**

**TIP** Fill differential up to the top of the diff pins. DO NOT fill the diff to the top of the housing.

Remove the nozzle of the bottle to allow easy filling of the diff.

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

12.70

12.70g

Put the diff (without oil) on the scale and check the weight (approximately 12.70g)

Silicone oil **300.000cSt**

14.70

14.70g

Slowly pour oil into the diff and watch the weight. Add 2.0g of oil into the diff. The approximate weight of the diff including oil is 14.70g.

$12.70g + 2.0g = 14.70g$

964031  
S 3.5x10x0.2

**SET-UP BOOK**

GEAR DIFF ADJUSTMENT

1

2

Push down

Rotate

3

Wait approx. 5min

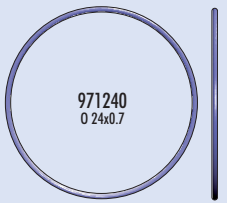
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OPTION HUDY AIR VAC – VACUUM PUMP

#335081  
OPTION ALU DIFFERENTIAL PIN - HARDCOATED (2)

# 1. FRONT GEAR DIFFERENTIAL & SOLID AXLE



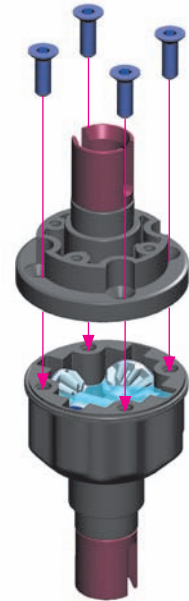
903258  
SFH M2.5x8



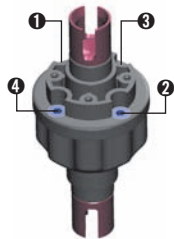
971240  
0.24x0.7



After disassembling the differential, the large O-ring may have an increased size and may be more difficult to re-install. We recommend either replacing the O-ring with a new one or carefully re-inserting the old O-ring in the diff cover.



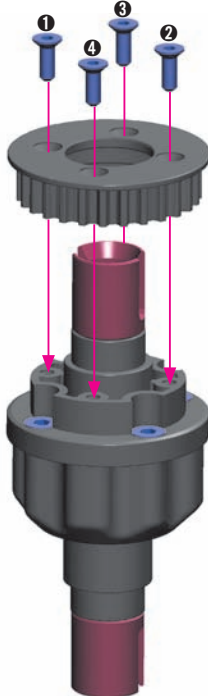
Tighten the screws  
equally but do NOT  
tighten them completely



Finish tightening in  
this order



903206  
SFH M2x6



## SOLID AXLE



903258  
SFH M2.5x8



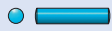
962051  
5.5x10x0.2



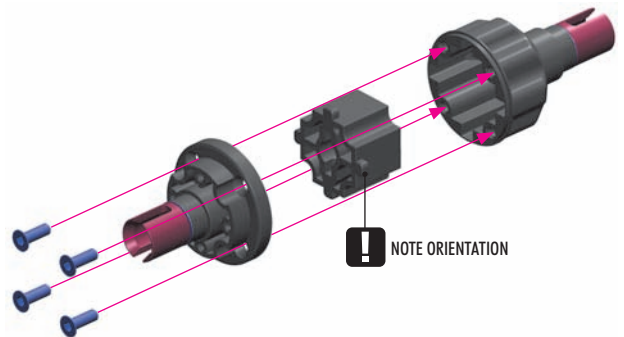
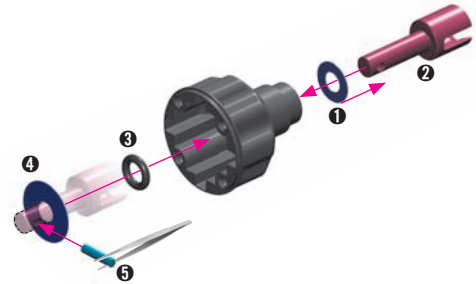
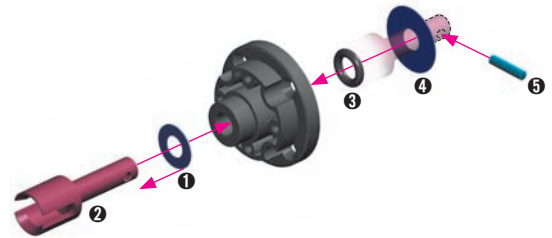
964050  
5.5x15x0.3



972050  
0.5x2



981210  
P 2x10



The front diff can be easily changed into a solid axle. Remove the internal gears and replace with the solid axle locking body. DO NOT add silicone oil inside the housing when making a solid axle.

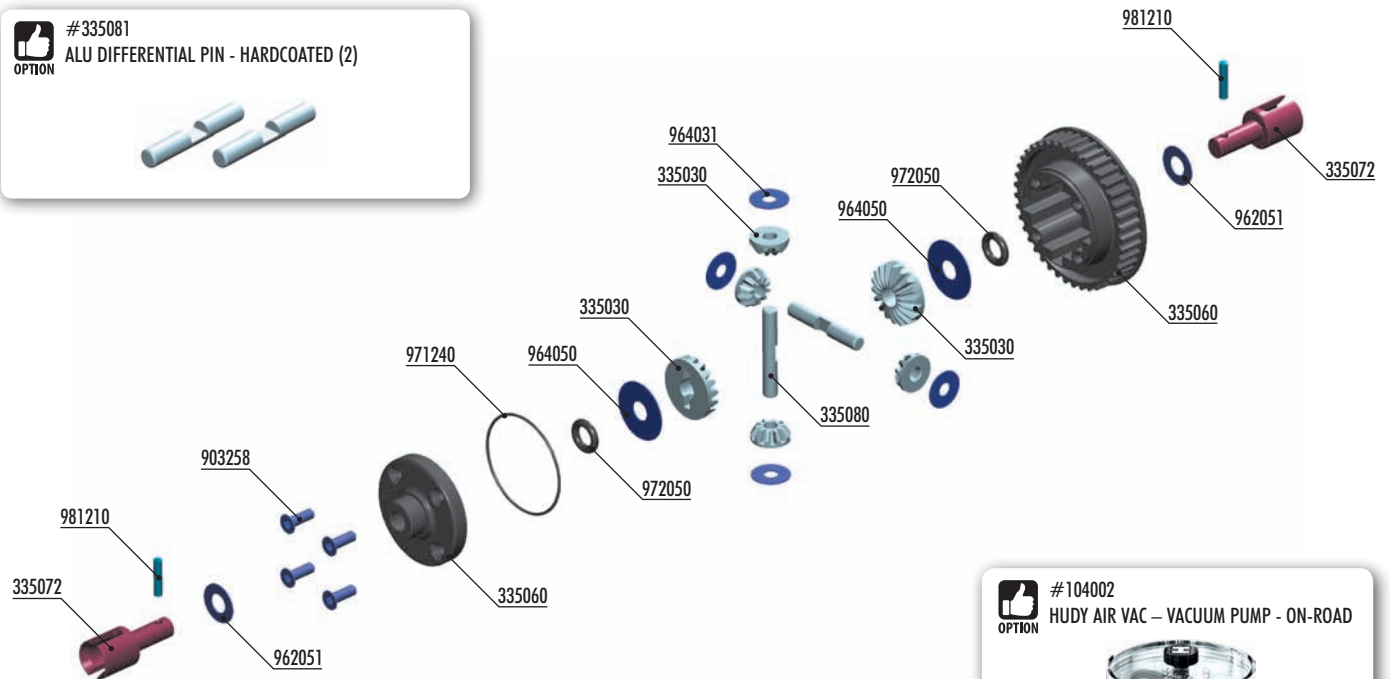
# 1. REAR GEAR DIFFERENTIAL



#304932  
GRAPHITE GEAR DIFF BEVEL & SATELLITE GEARS (2+4)



#335081  
ALU DIFFERENTIAL PIN - HARDCOATED (2)



#104002  
HUDY AIR VAC - VACUUM PUMP - ON-ROAD



**BAG**

**01.2**

335030 DIFF BEVEL & SATELLITE GEARS (2+4)  
335050 REAR GEAR DIFFERENTIAL - SET  
335060 COMPOSITE REAR DIFF CASE & COVER  
335072 LIGHTWEIGHT DIFF OUTDRIVE ADAPTER - HUDY SPRING STEEL™ (2)  
335080 DIFF PIN (2)

903258 HEX SCREW SFH M2.5x8 (10)  
962051 WASHER S 5x10x0.2 (10)  
964031 WASHER S 3.5x10x0.2 (10)  
964050 WASHER S 5x15x0.3 (10)  
971240 SILICONE O-RING 24x0.7 (10)  
972050 SILICONE O-RING 5x2 (10)  
981210 PIN 2x10 (10)



962051  
S 5x10x0.2



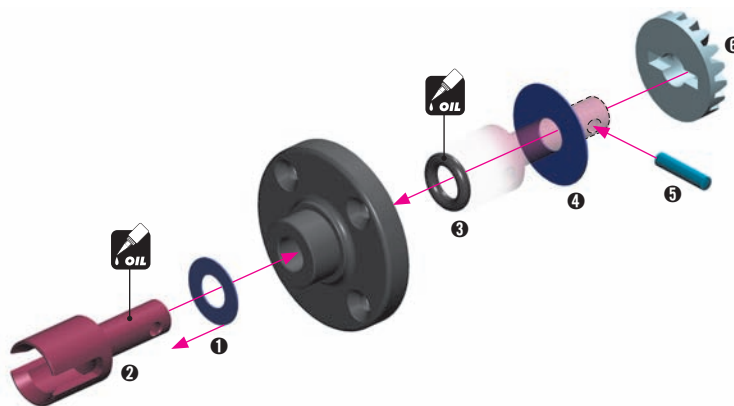
964050  
S 5x15x0.3



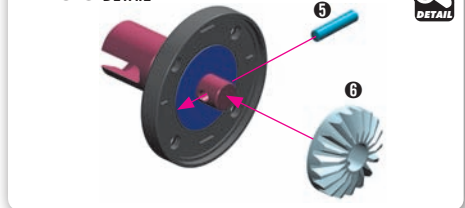
972050  
O 5x2



981210  
P 2x10



STEP 5 6 DETAIL



#304932  
GRAPHITE GEAR DIFF BEVEL & SATELLITE GEARS (2+4)





# 1. REAR GEAR DIFFERENTIAL



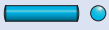
962051  
S 5x10x0.2



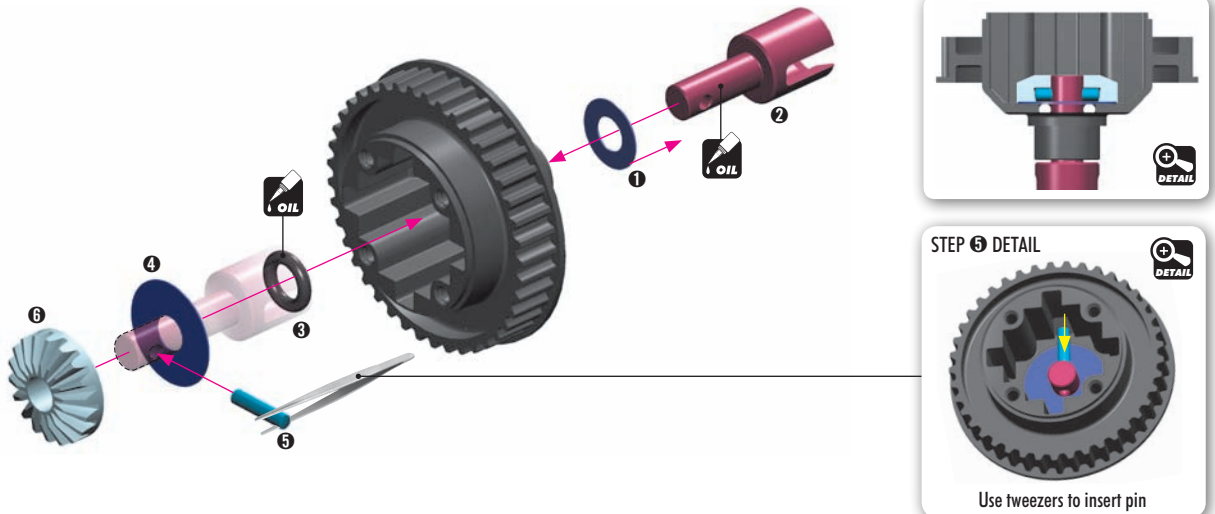
964050  
S 5x15x0.3



972050  
O 5x2

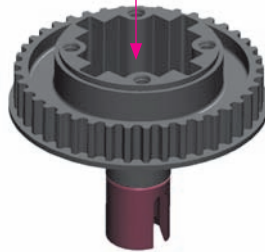


981210  
P 2x10



Use tweezers to insert pin

Silicone oil **60.000cSt**



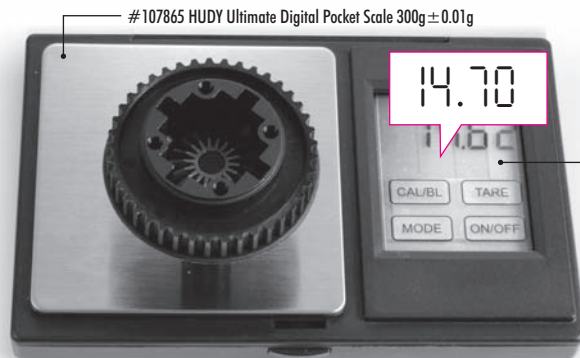
**TIP**

Fill differential up to the top of the diff pins. DO NOT fill the diff to the top of the housing.

Remove the nozzle of the bottle to allow easy filling of the diff.



**TO ENSURE YOU HAVE THE SAME AMOUNT OF OIL FROM REBUILD TO REBUILD, DO THE FOLLOWING:**

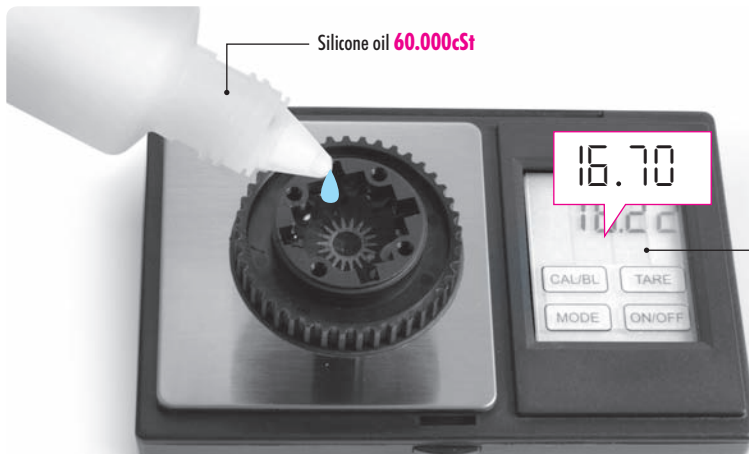


14.70g

❶ Put the diff (without oil) on the scale and check the weight (approximately 14.70g)



$$14.70g + 2.0g = 16.70g$$



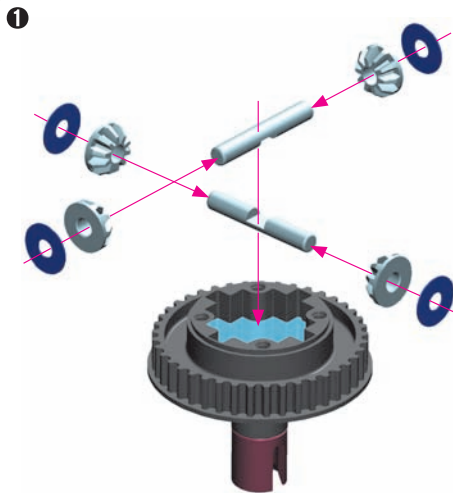
16.70g

❷ Slowly pour oil into the diff and watch the weight. Add 2.0g of oil into the diff. The approximate weight of the diff including oil is 16.70g.

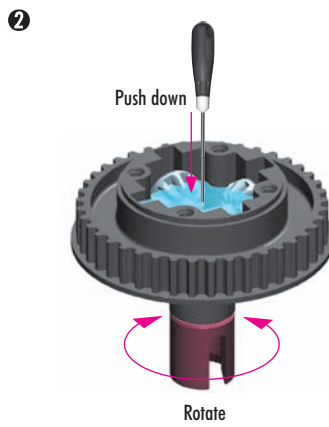
# 1. REAR GEAR DIFFERENTIAL



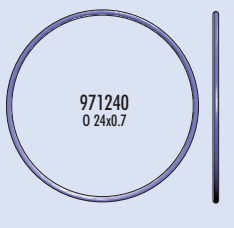
964031  
S 3.5x10x0.2



#335081  
ALU DIFFERENTIAL PIN - HARDCOATED (2)



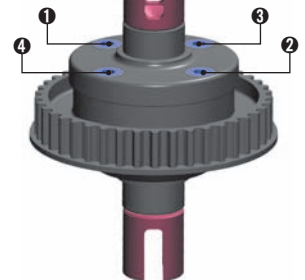
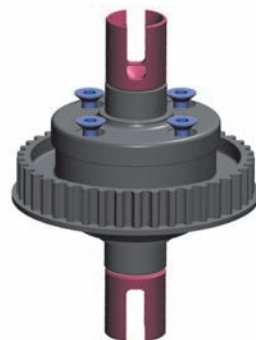
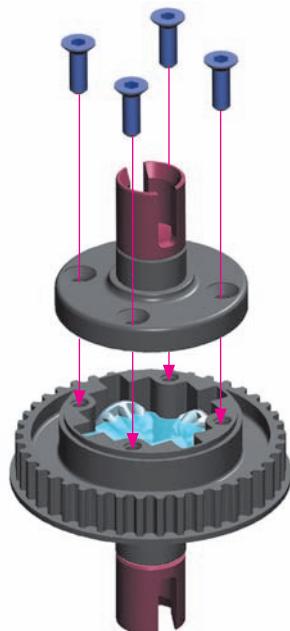
#104002  
HUDY AIR VAC – VACUUM PUMP



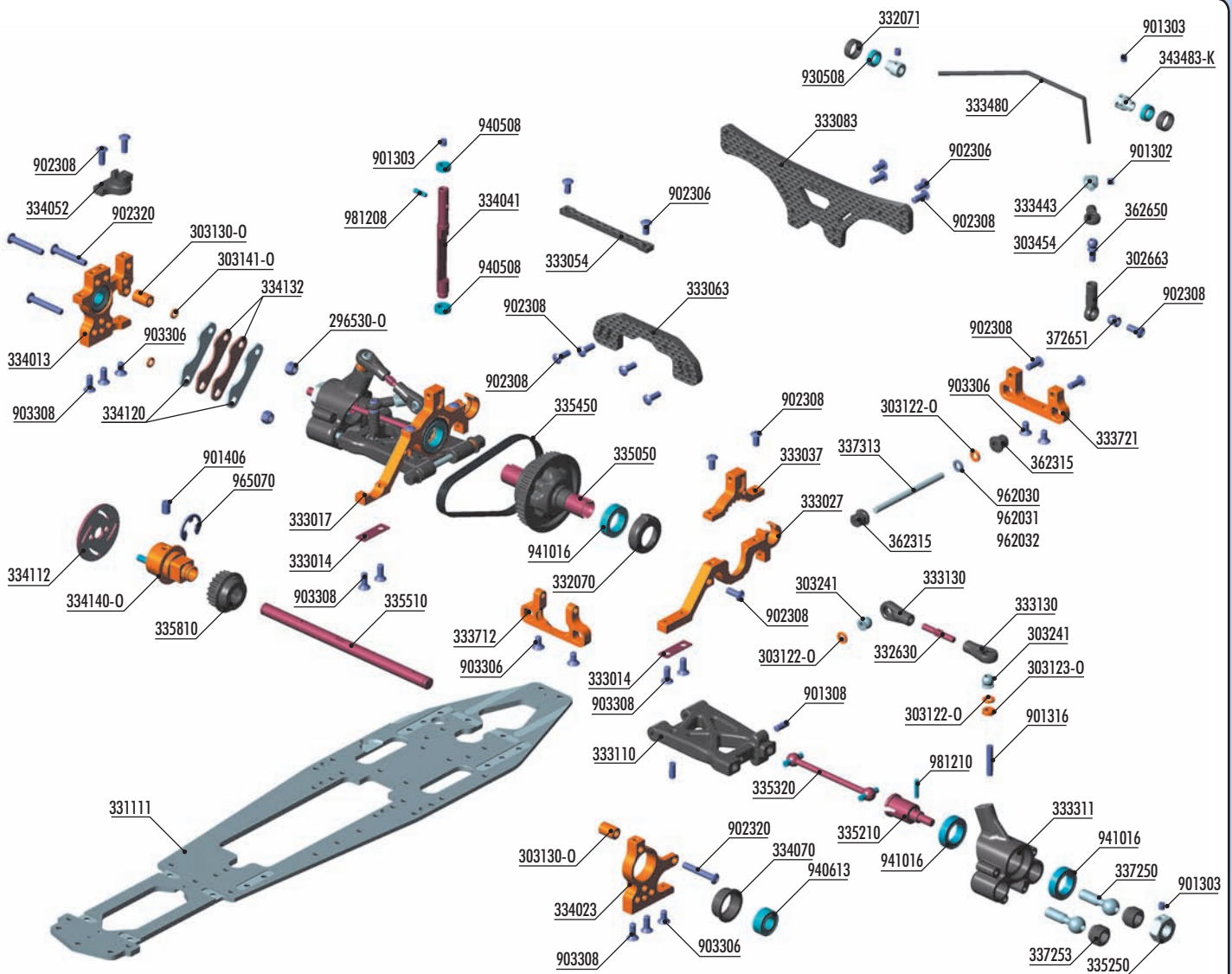
After disassembling the differential, the large O-ring may have an increased size and may be more difficult to re-install. We recommend either replacing the O-ring with a new one or carefully re-inserting the old O-ring in the diff cover.



903258  
SFH M2.5x8



## 2. REAR SUSPENSION



**BAG**

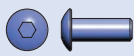
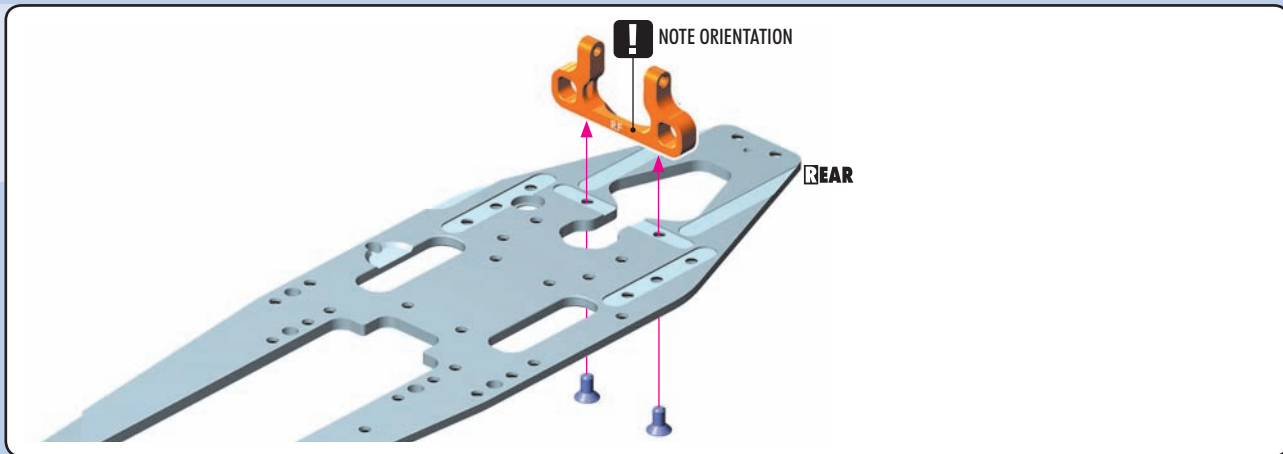
**02**

296530-0	ALU NUT M3 - ORANGE (10)	335050	REAR GEAR DIFFERENTIAL - SET
302663	COMPOSITE BALL JOINT 4.9MM - OPEN - V2 (8)	335210	DRIVE AXLE - HUDY SPRING STEEL™
303121-0	ALU SHIM 3x6x0.5MM - ORANGE (10)	335250	ALU WHEEL HUB 12MM - BLACK (2)
303122-0	ALU SHIM 3x6x1.0MM - ORANGE (10)	335320	DRIVE SHAFT - 60 MM - HUDY SPRING STEEL™
303123-0	ALU SHIM 3x6x2.0MM - ORANGE (10)	335450	PUR®-REINFORCED DRIVE BELT REAR 5.5 x 177 MM
303130-0	ALU SHIM 3x6x9.0MM - ORANGE (10)	335510	2-SPEED SHAFT - V2
303141-0	ALU SHIM 3x5x1.0MM - ORANGE (10)	335810	COMPOSITE BELT PULLEY 20T - 2-SPEED-CENTER
303241	BALL UNIVERSAL 5.8 MM HEX (4)	337250	STEEL PIVOT BALL 8.4 MM (2)
303454	BALL JOINT 4.9MM - OPEN (4)	337253	COMPOSITE ADJUSTING NUT M10x1 WITH BALL CUP (4)
331111	CHASSIS 3MM - CNC MACHINED - SWISS 7075 T6	337313	REAR LOWER INNER PIVOT PIN (2)
332070	COMPOSITE ADJUST. BALL-BEARING HUB (4)	343483-K	ALU CUTTED ANTI-ROLL BAR COLLAR ø2.3 - BLACK (2)
332071	COMPOSITE BALL-BEARING HUB (4)	362315	ECCENTRIC BUSHING SET (2)
332630	ADJ. TURNBUCKLE L/R 25 MM - HUDY SPRING STEEL™ (2)	362650	BALL END 4.9MM WITH THREAD 6MM (2)
333014	BULKHEAD SHIM (2)	372651	PIVOT BALL UNIVERSAL 4.9 MM - HUDY SPRING STEEL (2)
333017	ALU LOWER BULKHEAD REAR RIGHT - SWISS 7075 T6		
333027	ALU LOWER BULKHEAD REAR LEFT - SWISS 7075 T6	901302	HEX SCREW SB M3x2.5 (10)
333037	ALU UPPER CLAMP REAR (L+R) - SWISS 7075 T6	901303	HEX SCREW SB M3x3 (10)
333054	GRAPHITE REAR BULKHEAD BRACE	901308	HEX SCREW SB M3x8 (10)
333063	GRAPHITE ROLL-CENTER BRIDGE	901316	HEX SCREW SB M3x16 (10)
333083	GRAPHITE SHOCK TOWER REAR	901406	HEX SCREW SB M4x6 (10)
333110	COMPOSITE SUSPENSION ARM REAR LOWER - V2	902306	HEX SCREW SH M3x6 (10)
333130	COMPOSITE REAR UPPER CAMBER LINK BALL JOINT 5.8 MM (4)	902308	HEX SCREW SH M3x8 (10)
333311	COMPOSITE UPRIGHT REAR FOR AERO DISC	902320	HEX SCREW SH M3x20 (10)
333443	ALU ANTI-ROLL BAR COLLAR ø2.2 (2)	903306	HEX SCREW SFH M3x6 (10)
333480	ANTI-ROLL BAR FOR BALL-BEARINGS - REAR 2.0 MM	903308	HEX SCREW SFH M3x8 (10)
333712	ALU REAR LOWER 1-PIECE SUSPENSION HOLDER - FRONT - RF	930508	BALL-BEARING 5x8x2.5 STEEL SEALED - OIL (2)
333721	ALU REAR LOWER 1-PIECE SUSPENSION HOLDER - REAR - RR	940508	BALL-BEARING 5x8x2.5 RUBBER SEALED - OIL (2)
334013	ALU BRAKE STAND - SWISS 7075 T6	940613	BALL-BEARING 6x13x5 RUBBER SEALED - OIL (2)
334023	ALU 2-SPEED HOLDER - SWISS 7075 T6 - SET	941016	BALL-BEARING 10x16x4 RUBBER SEALED - OIL (2)
334041	BRAKE CAM POST - STEEL	962030	WASHER S 3x6x0.3 (10)
334052	COMPOSITE BRAKE UPPER PLATE	962031	WASHER S 3x6x0.1 (10)
334070	COMPOSITE 6x13x5 BALL-BEARING HUB (2)	962032	WASHER S 3x6x0.2 (10)
334112	VENTILATED BRAKE DISK - LASER CUT - PRECISION-GROUND	965070	E-CLIP 7 (10)
334120	HARDENED STEEL BRAKE PAD - LASER CUT (2)	981208	PIN 2x8 (10)
334132	BRAKE PAD "SLS" (2)	981210	PIN 2x10 (10)
334140-0	BRAKE DISK ADAPTER - ALU 7075 T6 - ORANGE		

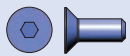
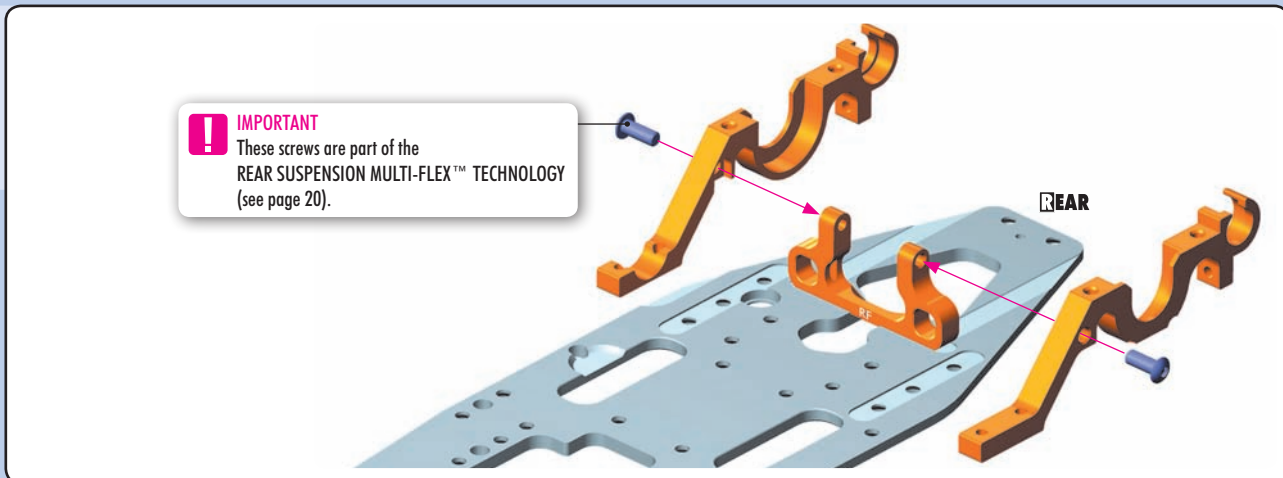
## 2. REAR SUSPENSION



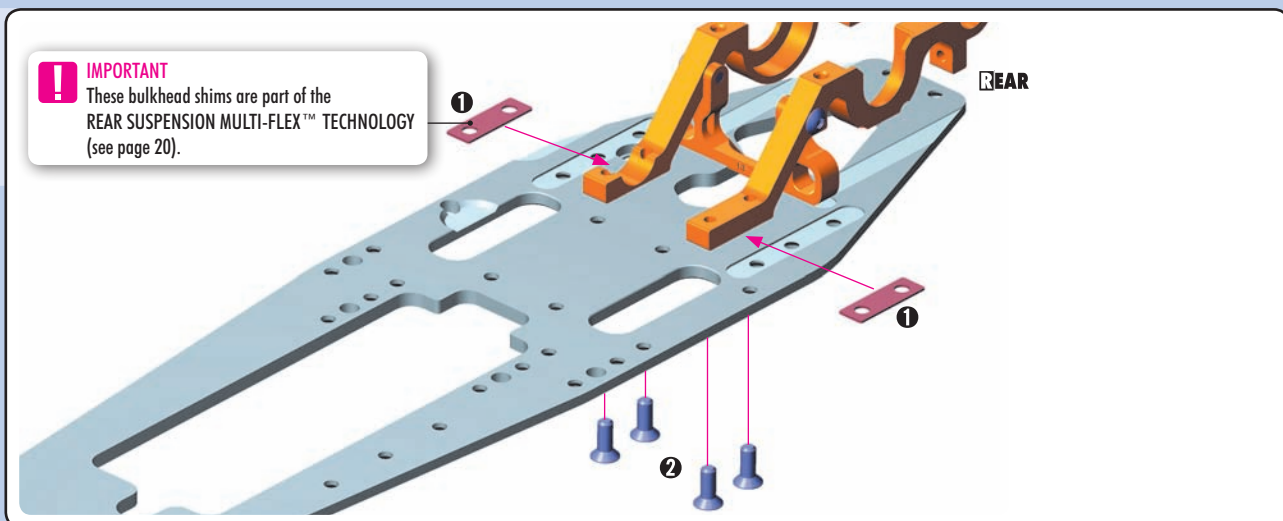
903306  
SFH M3x6



902308  
SFH M3x8



903308  
SFH M3x8



901308  
SB M3x8

**2x** REAR ARMS

RIGHT REAR ARM

LEFT REAR ARM

**TOP** **TOP**

**BOTTOM** 1.3mm 1.3mm **BOTTOM**

**TOP** **TOP**

**BOTTOM** 2.5mm 2.5mm **BOTTOM**

**OPTION**

REAR SUSPENSION ARMS		
#333110	MEDIUM	INCLUDED
#333111	HARD	OPTION



REAR DOWNSTOP  
ADJUSTMENT

## 2. REAR SUSPENSION

**10**  
303122-0  
SHIM 3x6x1

**902308**  
SH M3x8

**903306**  
SFH M3x6

**962030**  
SHIM 3x6x0.3

**962032**  
SHIM 3x6x0.2

**962031**  
SHIM 3x6x0.1

**2x**  
**L=R**

**REAR**      **RIGHT REAR ARM**

**INITIAL SETTING**

1   0.5   0   0.5   1

Composite eccentric bushings

**!** SHIMS 0.1 / 0.2 / 0.3mm  
Use included shims to eliminate suspension play.

**NOTE ORIENTATION**  
**!**

**LEFT REAR ARM**

**INITIAL SETTING**

1   0.5   0   0.5   1

Composite eccentric bushings

**!** It is extremely important that the arms move freely on the pivot pins. If they do not, use the #107633 HUDY Arm Reamer to slightly resize the holes in the arms.

**941016**  
BB 10x16x4

**!** NOTE ORIENTATION  
Both bushings must be in same position

**BEARING OIL** **OIL**

**!** NOTE ORIENTATION

**!** NOTE ORIENTATION  
Both bushings must be in same position

**OPTION** #335452  
LOW FRICTION DRIVE BELT REAR 5.5 X 177 MM

**REAR**

**902308**  
SH M3x8

**!** NOTE ORIENTATION  
Hole is from outside

**DETAIL**

**LEFT**      **RIGHT**

**REAR BELT TENSION ADJUSTMENT**

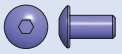
**INITIAL POSITION**

**REAR**      **FRONT**

**TO TIGHTEN REAR BELT:** Rotate both rear nylon hubs in arrow direction **B**

**TO LOOSEN REAR BELT:** Rotate both rear nylon hubs in arrow direction **A**

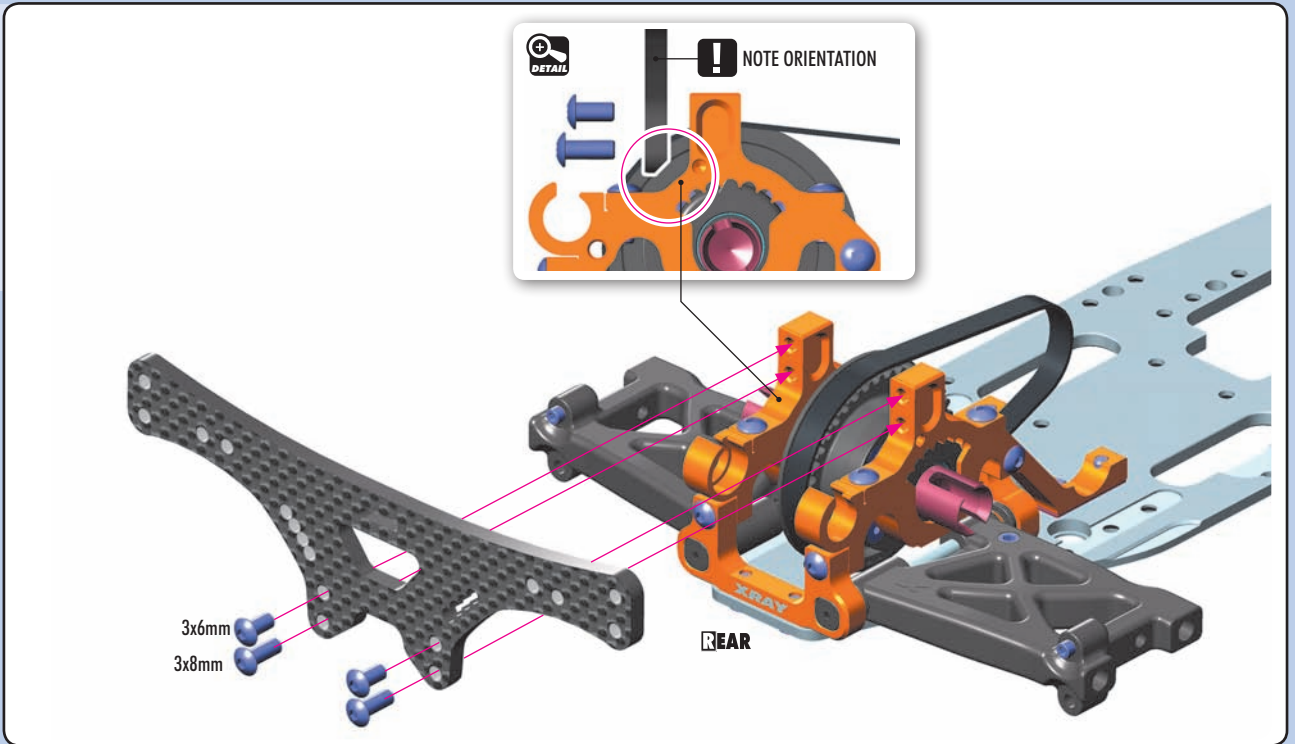
## 2. REAR SUSPENSION



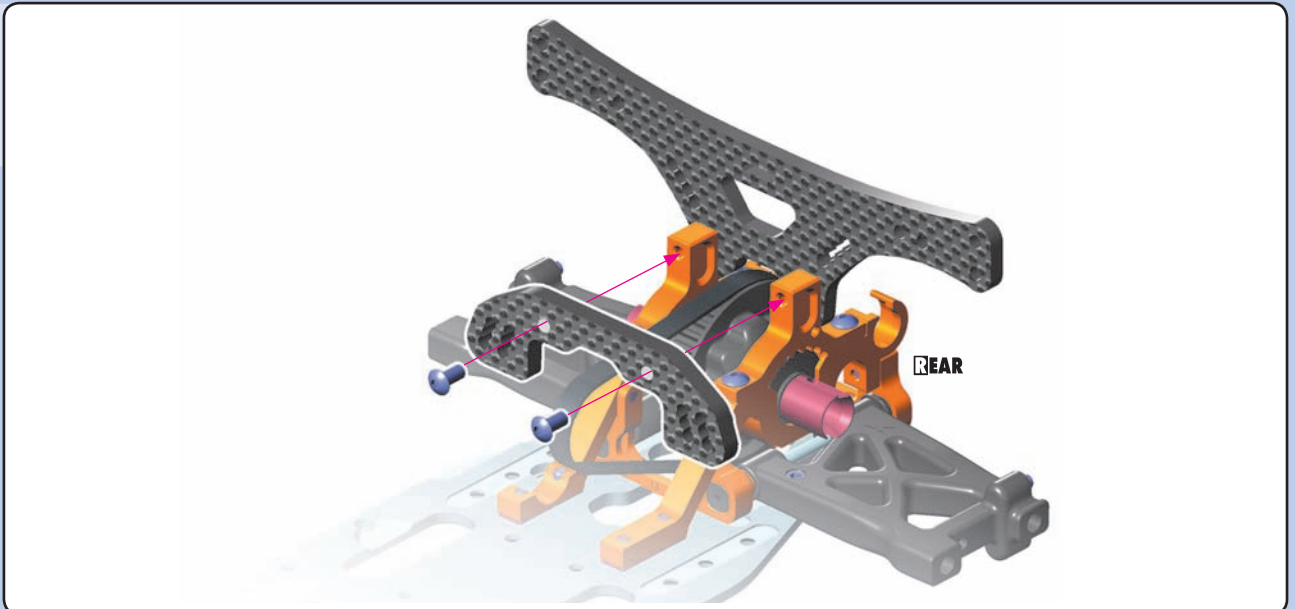
902306  
SH M3x6



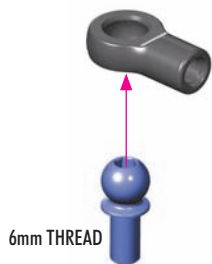
902308  
SH M3x8



902308  
SH M3x8

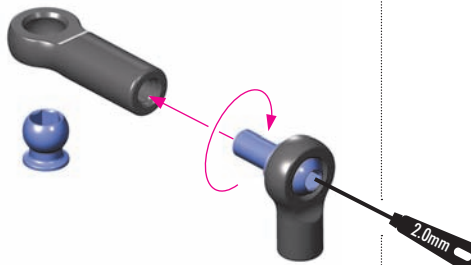


2x

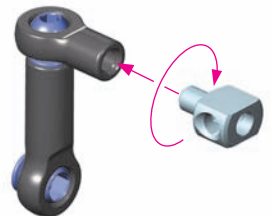


6mm THREAD

2x



2x

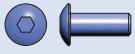


**TIP** Install the pivot balls with Professional Multi Tool (HUDY #183011)



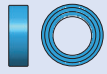
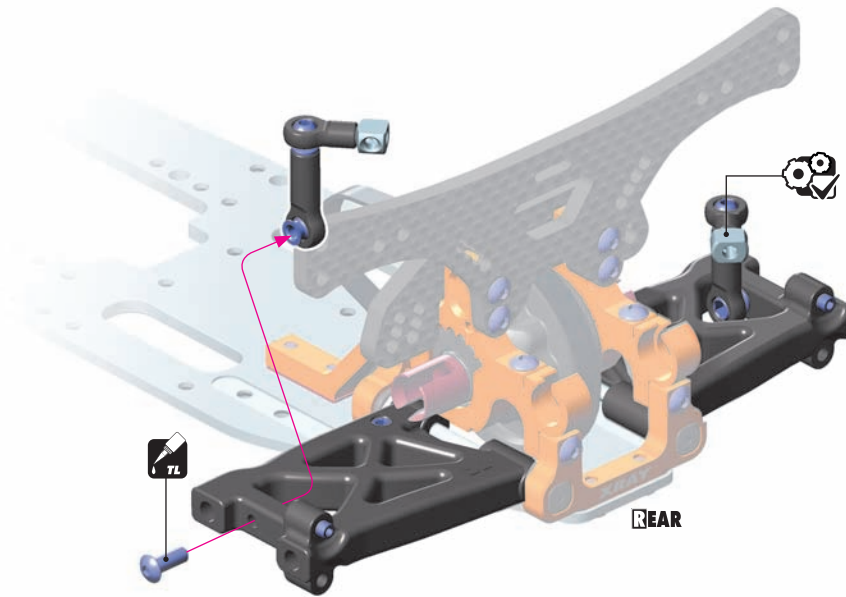
26mm

## 2. REAR SUSPENSION

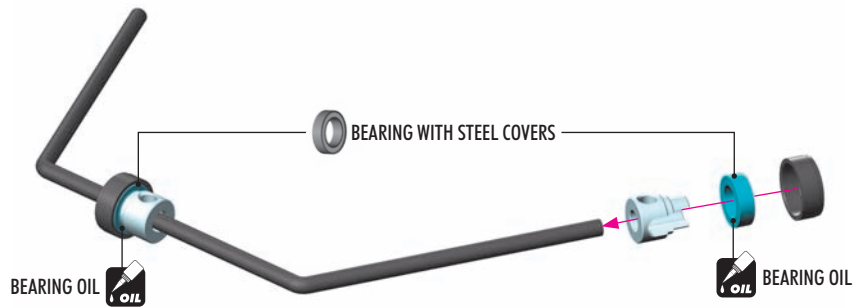


902308  
SH M3x8

2x  
L=R



930508  
BB 5x8x2.5



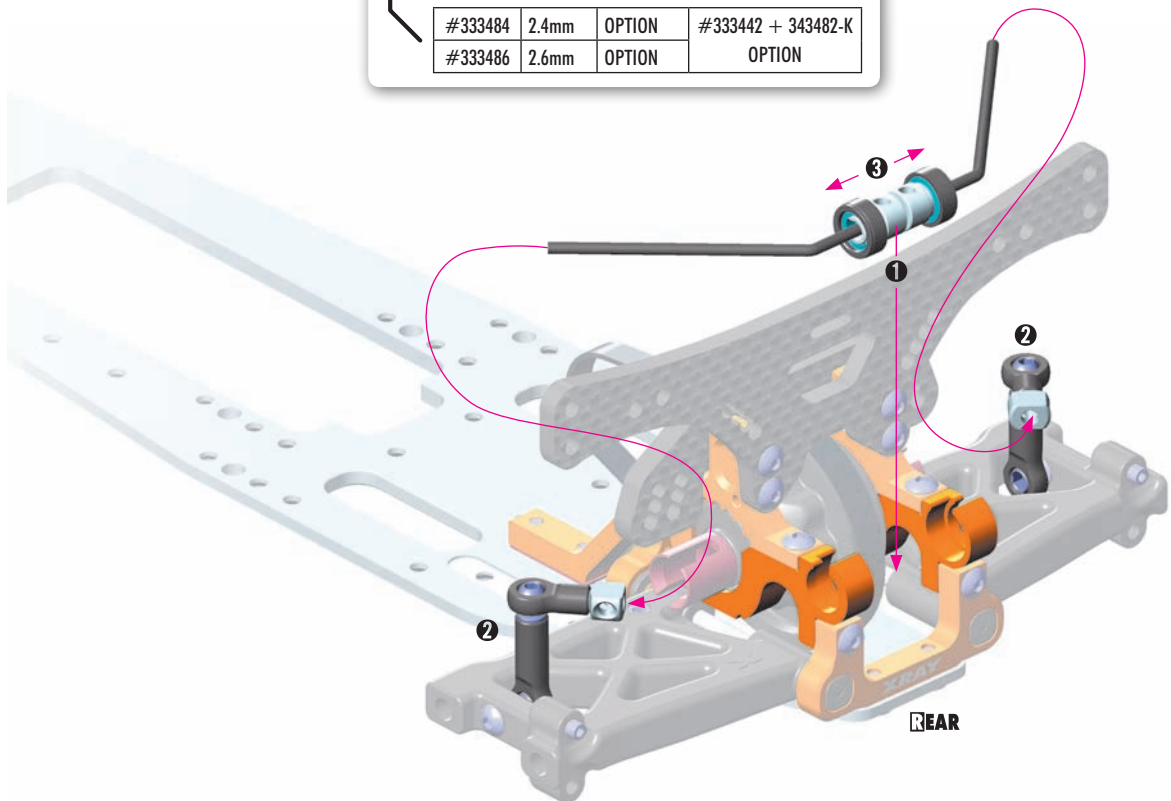
OPTION

### WIRE REAR ANTI-ROLL BARS

#333478	1.8mm	OPTION
#333480	2.0mm	INCLUDED
#333482	2.2mm	OPTION
#333484	2.4mm	OPTION
#333486	2.6mm	OPTION

### COLLARS

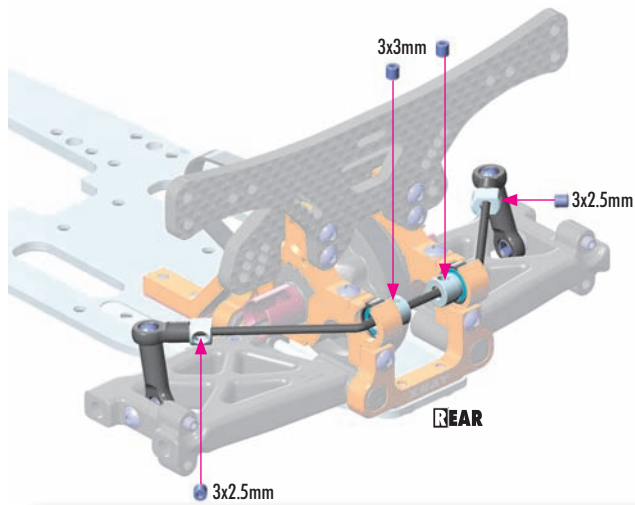
#333443 + 343483-K	INCLUDED
#333442 + 343482-K	OPTION



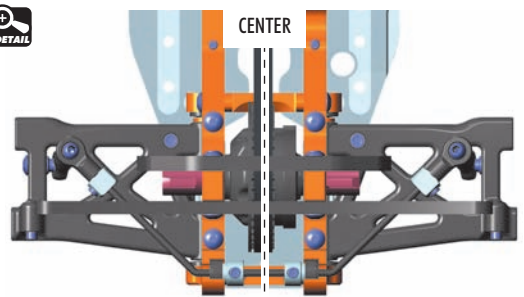
## 2. REAR SUSPENSION

901302  
SB M3x2.5

901303  
SB M3x3



DETAIL



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

TOP VIEW

REAR

SET-UP BOOK

REAR ANTI-ROLL BAR ADJUSTMENT



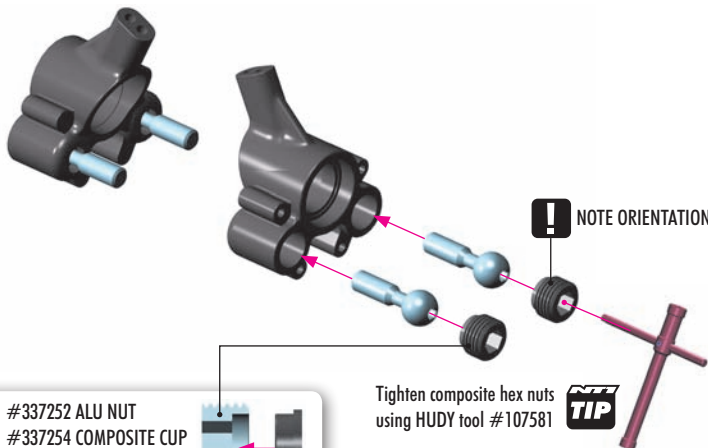
When the bars are set, verify that both sides move at the same time. If they do, the bars are set up correctly. If not, make sure that both downstops are the same and that the bar wire is flat.



If the sides still do not move at the same time, adjust the length of the bar holders.

2x

L=R



OPTION  
#337252 ALU NUT  
#337254 COMPOSITE CUP

Tighten composite hex nuts using HUDY tool #107581

TIP

DETAIL

Pivot balls must move freely.

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

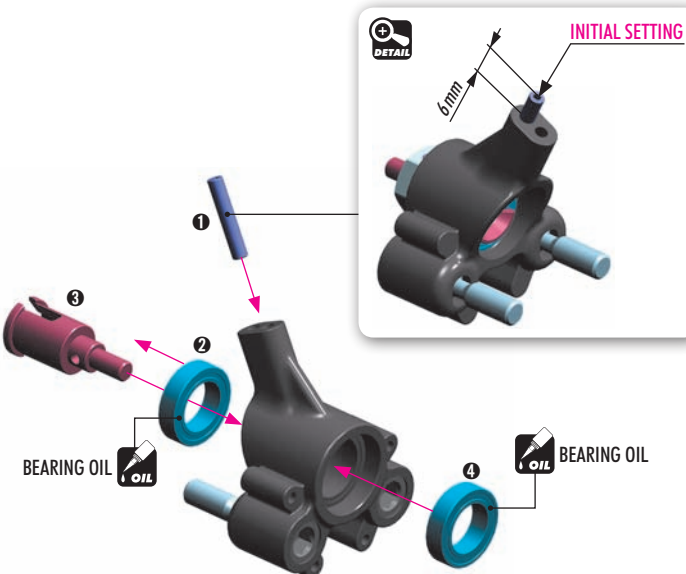
OPTION

PIVOT BALLS

#337250	STEEL	INCLUDED	
#337251	ALU	OPTION	
#337255	TITANIUM	OPTION	

2x

L=R

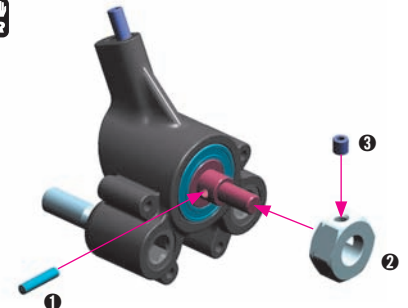


BEARING OIL

BEARING OIL

2x

L=R



OPTION

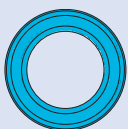
WHEEL HUBS

#335250	0mm	INCLUDED	
#335251	-0.75MM	OPTION	
#335252	+0.75MM	OPTION	

901303  
SB M3x3

901316  
SB M3x16

901316  
SB M3x16



941016  
BB 10x16x4

981210  
P 2x10



## 2. REAR SUSPENSION



303241  
BALL 5.8

2x

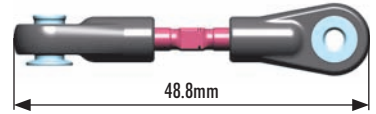
! Use ball joints WITH DOT



**TIP** BALL JOINT WRENCH  
(HUDY #181110)



L=R 1:1



48.8mm

!

90° angle difference between the ball joints

**TIP** Install the pivot balls with Professional Multi Tool (HUDY #183011)

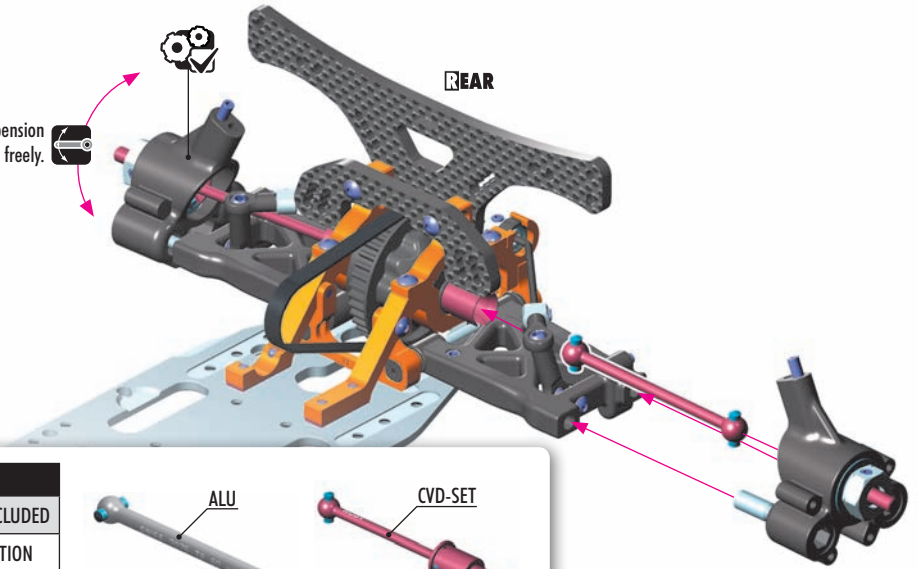


REAR CAMBER  
ADJUSTMENT

2x

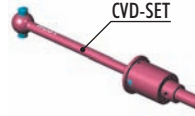
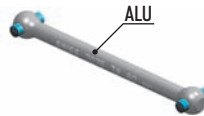
L=R

Ensure that both suspension assemblies move freely.



OPTION

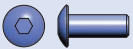
DRIVE SHAFT		
#335320	HUDY SPRING STEEL™	INCLUDED
#335321	ALU	OPTION
#335305	CVD - SET	OPTION



303122-0  
SHIM 3x6x1



303123-0  
SHIM 3x6x2



902308  
SH M3x8

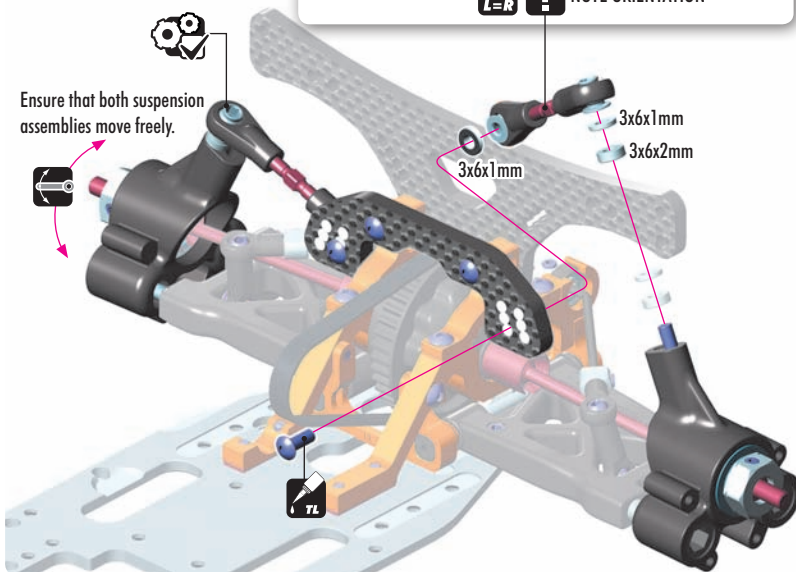
2x

L=R

INSIDE OUTSIDE

L=R ! NOTE ORIENTATION

Ensure that both suspension assemblies move freely.



INITIAL SETTING

3.2mm 3mm

REAR

FRONT

## 2. REAR SUSPENSION



296530-0  
N M3



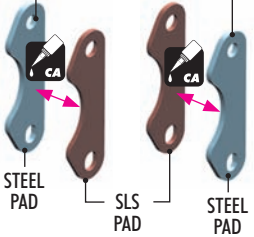
303141-0  
SHIM 3x5x1



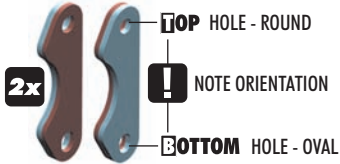
902320  
SH M3x20

Roughen steel plates with sandpaper

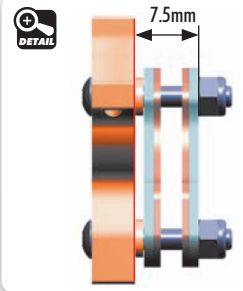
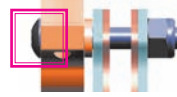
before gluing SLS pads



We recommend gluing the brake pads to the steel pads, however there is no performance difference between glued & unglued brake pads.



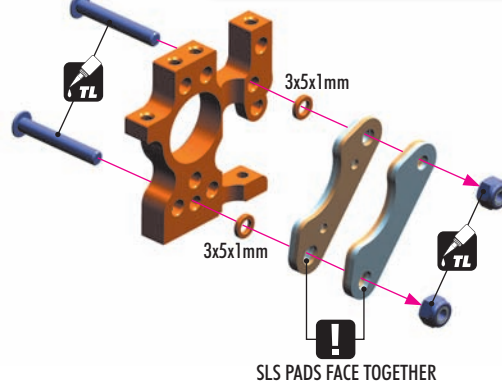
**IMPORTANT**  
Tighten the screws fully so there is no gap between screw head and bulkhead.



#372180  
OPTION SPRING 4.0 COILS 3.6x6x0.5mm  
C=3.5 - GOLD



The springs can be used only in combination with #334111 Ventilated Brake Disc.



903306  
SFH M3x6



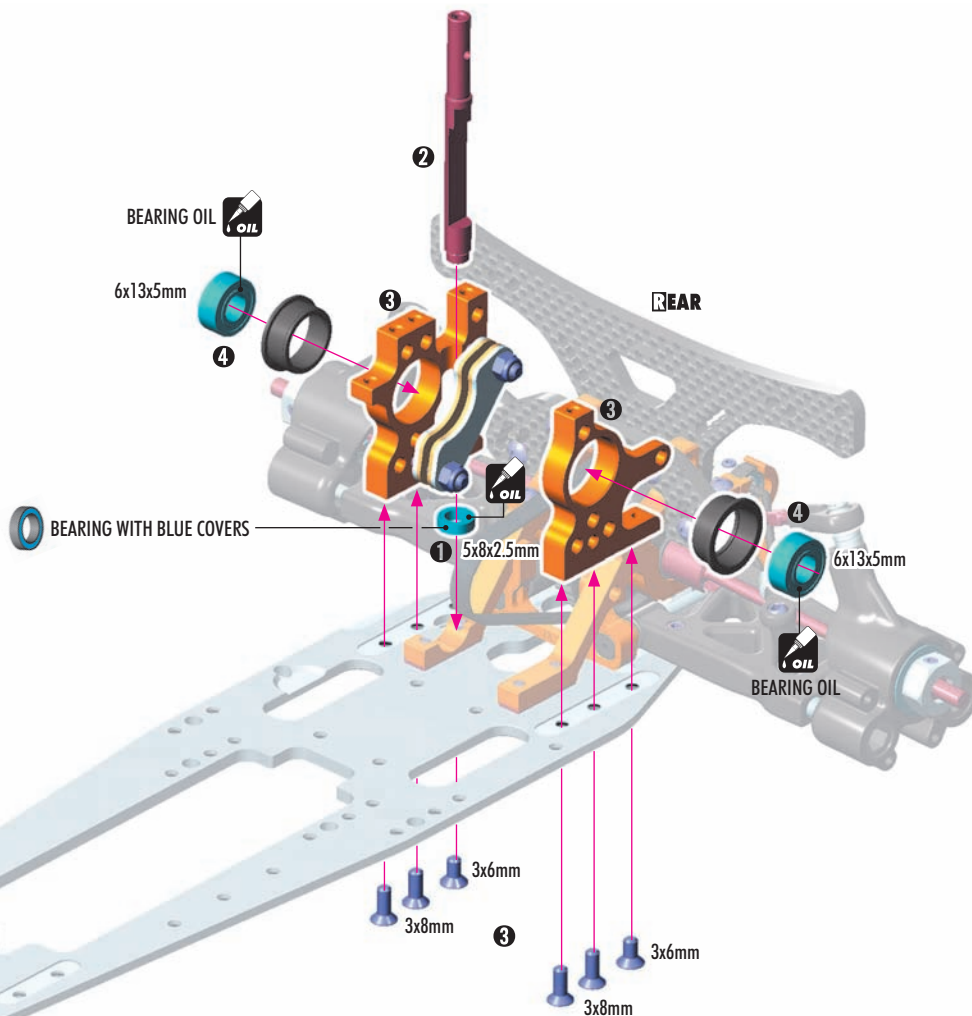
903308  
SFH M3x8



940508  
BB 5x8x2.5



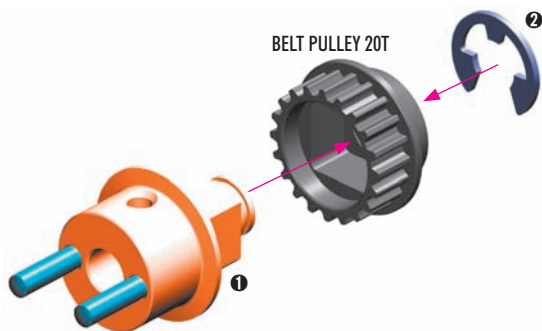
940613  
BB 6x13x5



## 2. REAR SUSPENSION



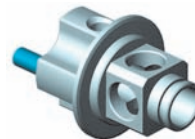
965070  
C7



BELT PULLEY 20T



#334141  
ALU LIGHTWEIGHT BRAKE DISK ADAPTER - SWISS 7075 T6



#335801-0  
LOW FRICTION COMPOSITE BELT PULLEY SET - GRAPHITE

BELT PULLEY 20T - 2-SPEED CENTER  
BELT PULLEY 18T - 2-SPEED SIDE  
BELT PULLEY 19T - MID-CENTER  
BELT PULLEY 25T - MID-SIDE  
BELT PULLEY 26T - MID-SIDE



303130-0  
SHIM 3x6x9



902308  
SH M3x8

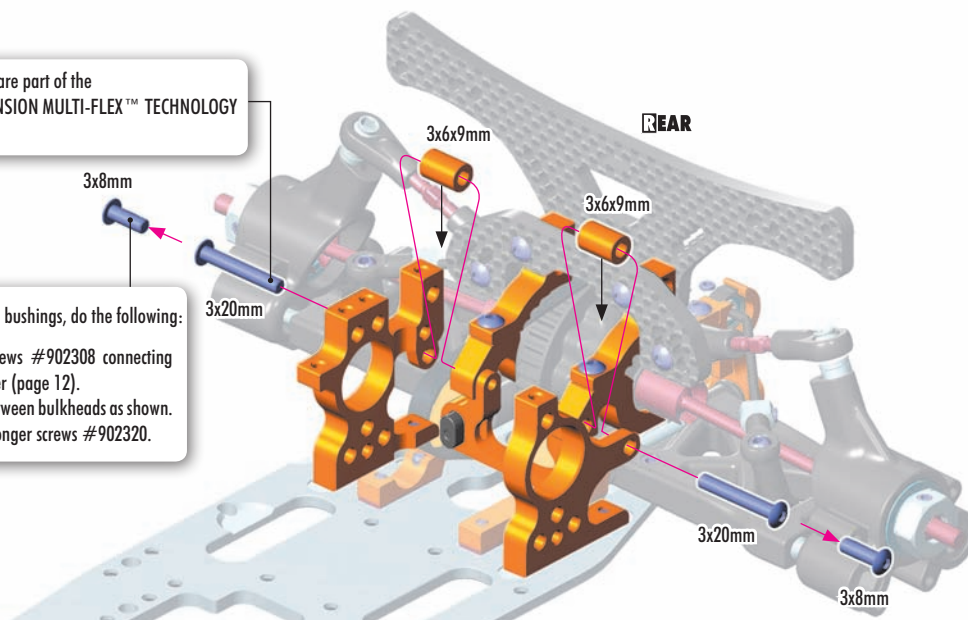


902320  
SH M3x20

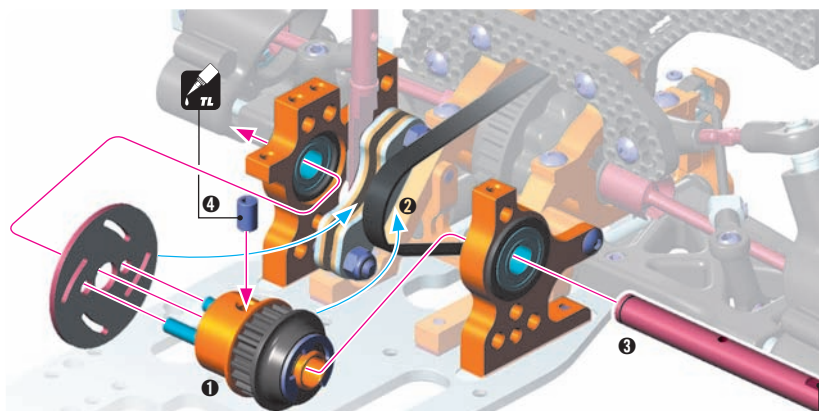
**TIP** These screws are part of the  
REAR SUSPENSION MULTI-FLEX™ TECHNOLOGY  
(see page 20)

**!** When installing bushings, do the following:

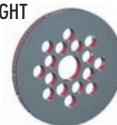
- 1 Remove short screws #902308 connecting bulkheads to RF holder (page 12).
- 2 Insert bushings between bulkheads as shown.
- 3 Install & tighten longer screws #902320.



901406  
SB M4x6



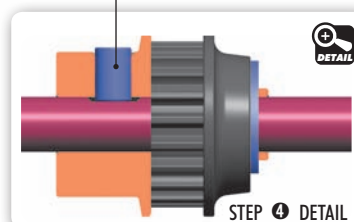
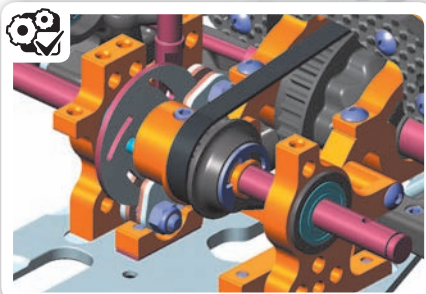
#334111  
VENTILATED BRAKE DISC PRECISION-GROUND  
LIGHTWEIGHT



#335511  
2-SPEED SHAFT - LIGHTWEIGHT



NOTE ORIENTATION **!** Tighten set-screw  
onto flat spot

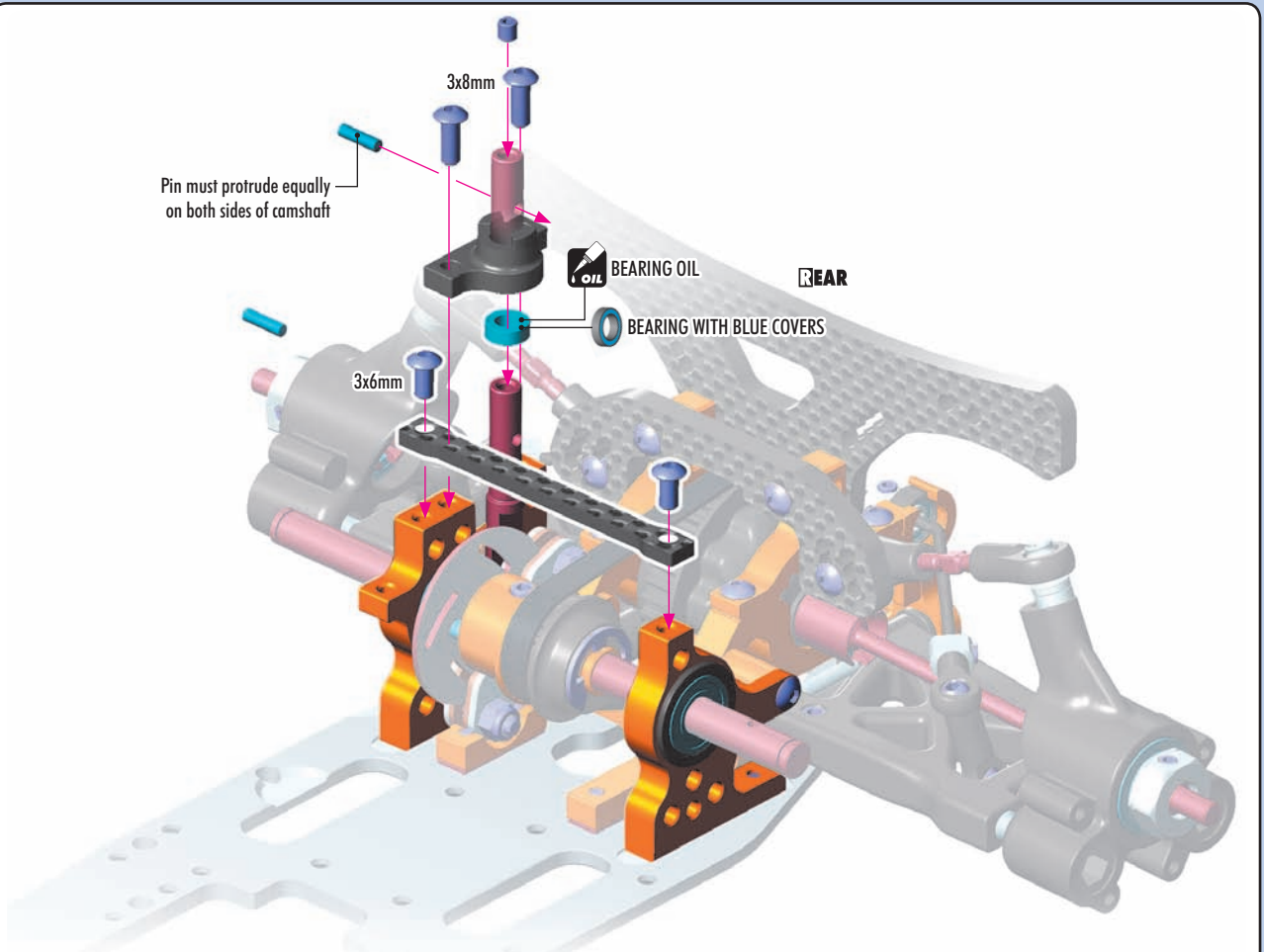


DETAIL

STEP 4 DETAIL

## 2. REAR SUSPENSION

-  901303  
SB M3x3
-  902306  
SH M3x6
-  902308  
SH M3x8
-  940508  
BB 5x8x2.5
-  981208  
P 2x8

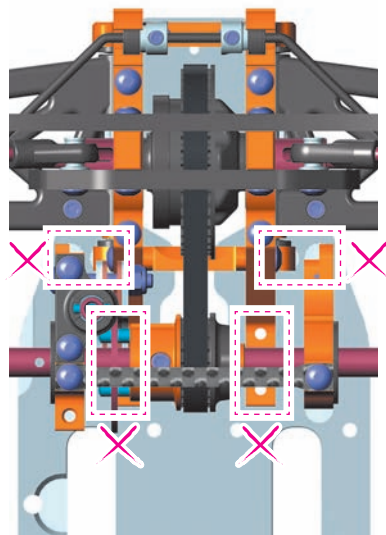


### REAR SUSPENSION MULTI-FLEX™ TECHNOLOGY

The all-new rear suspension design features Multi-Flex™ quick adjustment to easily adapt the handling of the car to particular track conditions and tires used. There are 3 different flex characteristics to choose from.

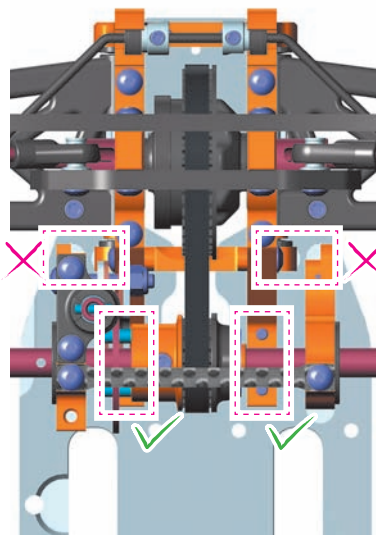
#### ALTERNATIVE 1 SOFT

Steel spacers and bracket bushings are not used. This allows maximum flex of the rear suspension and generates maximum rear traction. Recommended for low-traction tracks, or races with spec hard or large tires.



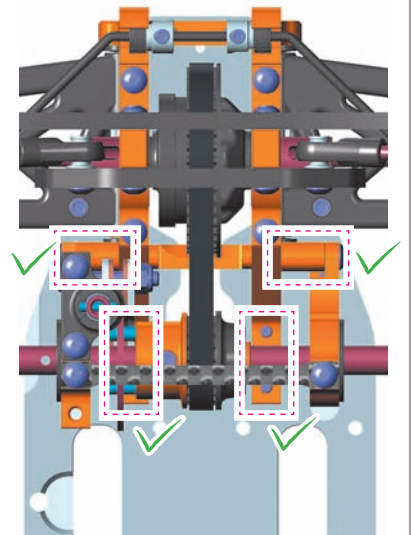
#### ALTERNATIVE 2 MEDIUM (INITIAL SETTING)

Steel spacers connects the rear bulkheads with chassis, bracket bushings not used. This reduces the flex of the rear suspension and improves out-of-corner steering and rotation of the car, but also slightly decreases rear traction. Recommended for medium-traction tracks, or races with spec softer tires.



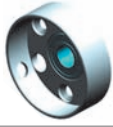
#### ALTERNATIVE 3 STIFF

Steel spacers connects the rear bulkheads with chassis, bracket bushings are used. This connects the entire rear suspension together, creating a stiff frame which allows the car to rotate more and improves out-of-corner steering. Recommended for high-traction tracks, or when tires with additive are used.



# 3. REAR TRANSMISSION

**#335523**  
**OPTION** CARRIER FOR 2-SPEED GEAR (2ND) - SWISS 7075 T6 - SOFT

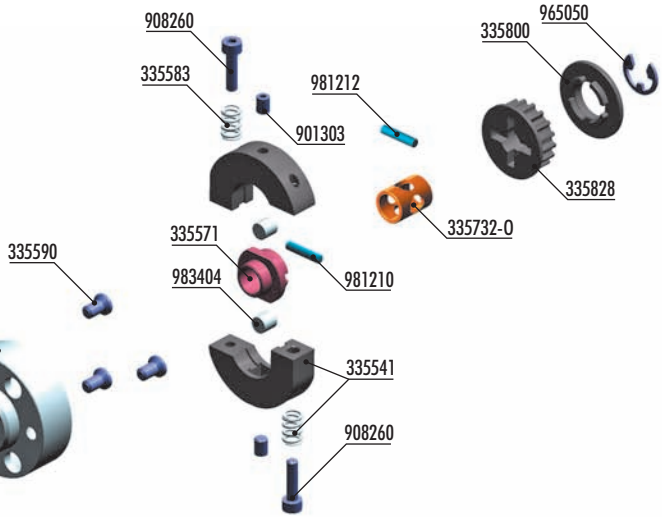
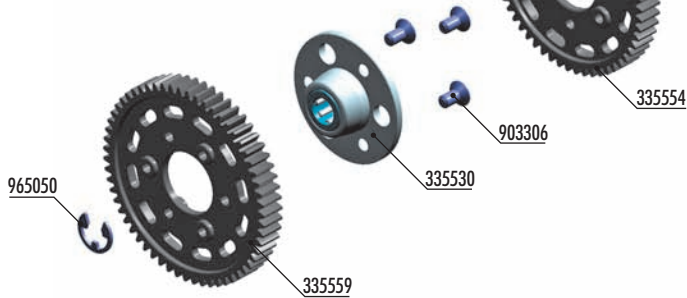


**#335531-0**  
**OPTION** ALU LIGHTWEIGHT DRIVE FLANGE W/ 1-WAY BEARING



**GEAR BOX SPRING**

#335581	C=7.8	OPTION
#335582	C=10.4	OPTION
#335583	C=8.5	INCLUDED



**COMPOSITE 2-SPEED GEARS**

#335553	53T	2ND	OPTION
#335554	54T	2ND	INCLUDED
#335555	55T	2ND	OPTION
#335557	57T	1ST	OPTION
#335558	58T	1ST	OPTION
#335559	59T	1ST	INCLUDED
#335560	60T	1ST	OPTION

**GRAPHITE 2-SPEED GEARS**

#335653	53T	2ND	OPTION
#335654	54T	2ND	OPTION
#335655	55T	2ND	OPTION
#335657	57T	1ST	OPTION
#335658	58T	1ST	OPTION
#335659	59T	1ST	OPTION
#335660	60T	1ST	OPTION

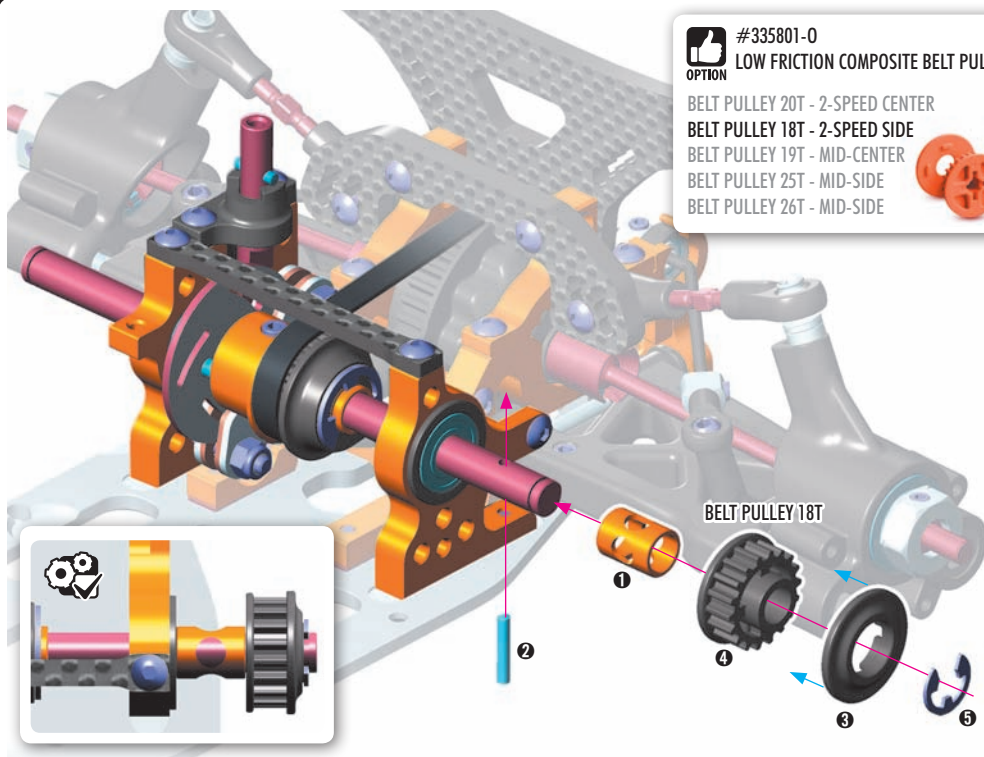
**BAG**  
**03**

- 335522 ALU SMALL CARRIER FOR 2-SPEED GEAR (2nd) + BALL-BEARING - ALU 7075 T6
- 335530 DRIVE FLANGE WITH ONE-WAY BEARING - ALU 7075 T6
- 335541 COMPOSITE SMALL 2-SPEED GEAR BOX SHOE - SET
- 335554 COMPOSITE 2-SPEED GEAR 54T (2nd) - V3
- 335559 COMPOSITE 2-SPEED GEAR 59T (1st)
- 335571 ADAPTER SMALL 2-SPEED
- 335590 HEX SCREW SFH M3x6 - GRINDED (3)
- 335583 SPRING FOR SMALL GEAR BOX - MEDIUM-HARD (2)
- 335732-0 ALU LIGHTWEIGHT LOCATING COLLAR - ORANGE (2)
- 335800 COMPOSITE BELT PULLEY COVER SET

- 335828 COMPOSITE BELT PULLEY 18T - 2-SPEED-SIDE
- 901303 HEX SCREW SB M3x3 (10)
- 903306 HEX SCREW SFH M3x6 (10)
- 908260 HEX SCREW SOCKET HEAD CAP M2.5x10 (10)
- 965050 E-CLIP 5 (10)
- 981210 PIN 2x10 (10)
- 981212 PIN 2x12 (10)
- 983404 ROLLER PIN 4x4 MM (2)

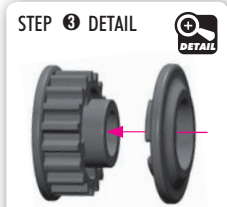
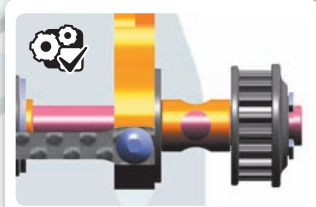
**965050**  
 C5

**981212**  
 P 2x12






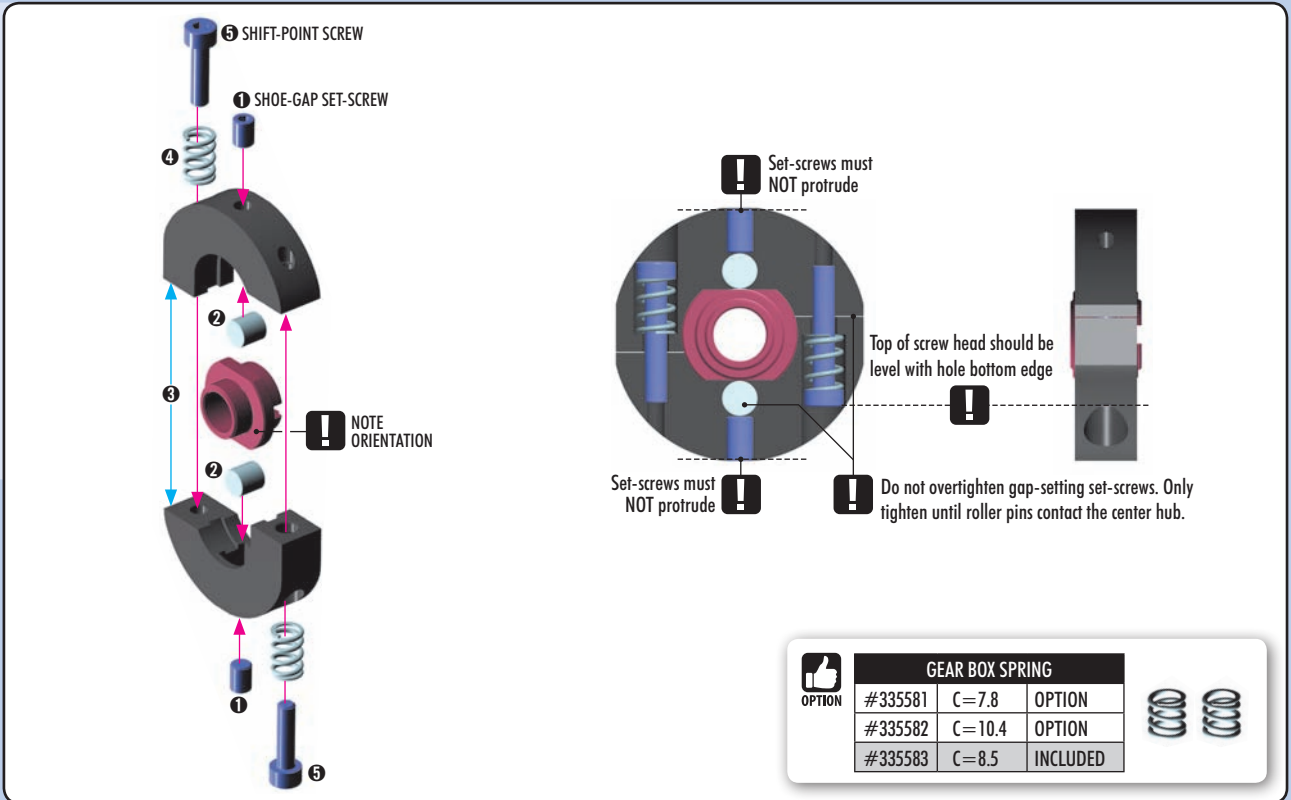
**#335801-0**  
**OPTION** LOW FRICTION COMPOSITE BELT PULLEY SET - GRAPHITE

- BELT PULLEY 20T - 2-SPEED CENTER
- BELT PULLEY 18T - 2-SPEED SIDE
- BELT PULLEY 19T - MID-CENTER
- BELT PULLEY 25T - MID-SIDE
- BELT PULLEY 26T - MID-SIDE



# 3. REAR TRANSMISSION

-  901303  
SB M3x3
-  908260  
SCH M2.5x10
-  983404  
RP 4x4



GEAR BOX SPRING			
OPTION	#335581	C=7.8	OPTION
	#335582	C=10.4	OPTION
	#335583	C=8.5	INCLUDED

-  335590  
SFH M3x6  
GROUND
-  903306  
SFH M3x6

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

ARM REAMER

BEARING OIL

3x6mm GROUND

#335523  
OPTION  
CARRIER FOR 2-SPEED GEAR (2ND) - SWISS 7075 T6 - SOFT

Softer material results in more consistent clutch engagement.

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

ARM REAMER

NOTE ORIENTATION

3x6mm

ONE WAY LUBE

#335531-0  
OPTION  
ALU LIGHTWEIGHT DRIVE FLANGE W/ 1-WAY BEARING - ORANGE

-  965050  
C5
-  981210  
P 2x10

**IMPORTANT!** Adjust the shoe gap according to the Set-Up Book

REAR

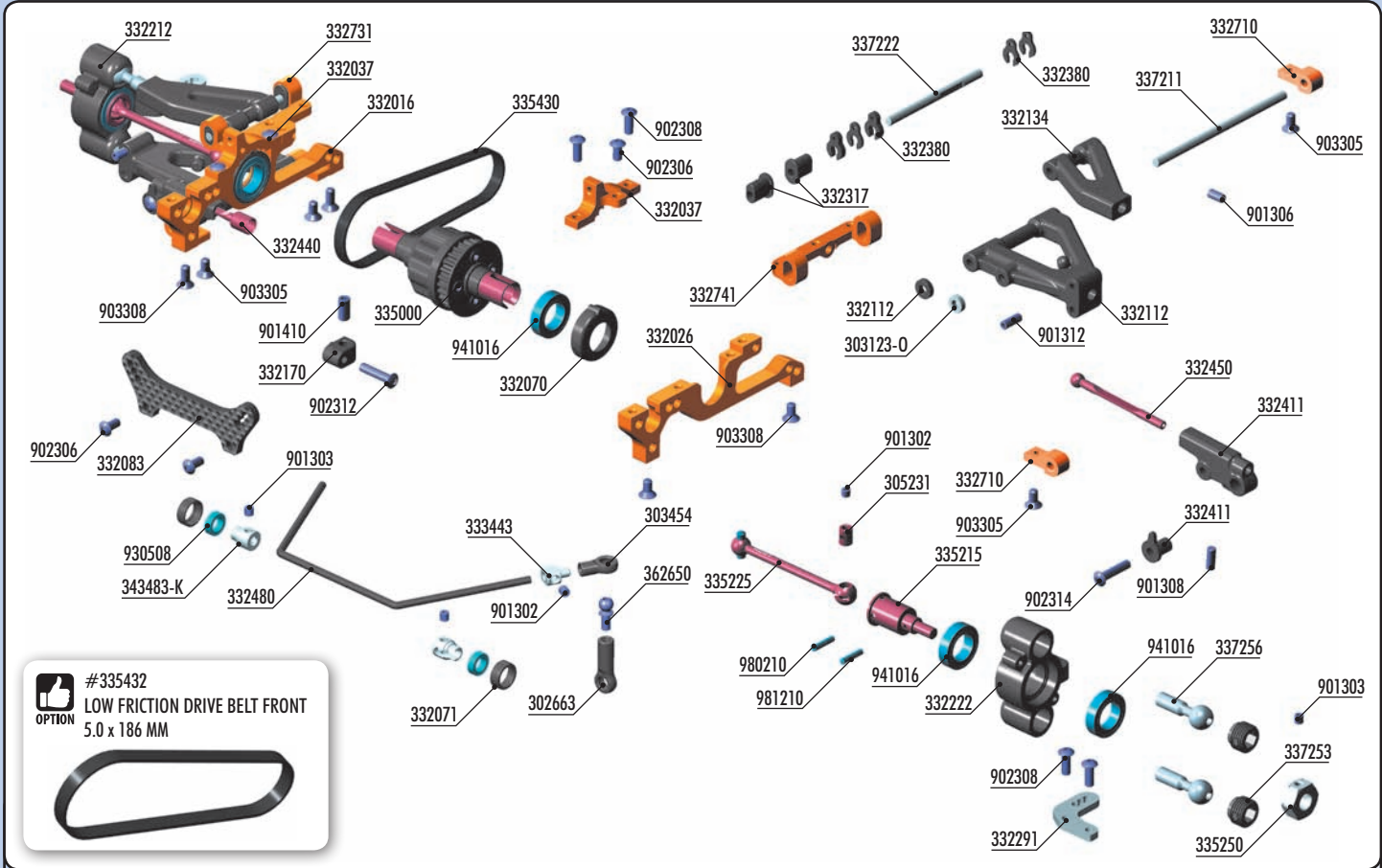
NOTE ORIENTATION

NOTE ORIENTATION

COMPOSITE 2-SPEED GEARS				GRAPHITE 2-SPEED GEARS				
OPTION	#335553	53T	2ND	OPTION	#335653	53T	2ND	OPTION
	#335554	54T	2ND	INCLUDED	#335654	54T	2ND	OPTION
	#335555	55T	2ND	OPTION	#335655	55T	2ND	OPTION
	#335557	57T	1ST	OPTION	#335657	57T	1ST	OPTION
	#335558	58T	1ST	OPTION	#335658	58T	1ST	OPTION
	#335559	59T	1ST	INCLUDED	#335659	59T	1ST	OPTION
	#335560	60T	1ST	OPTION	#335660	60T	1ST	OPTION



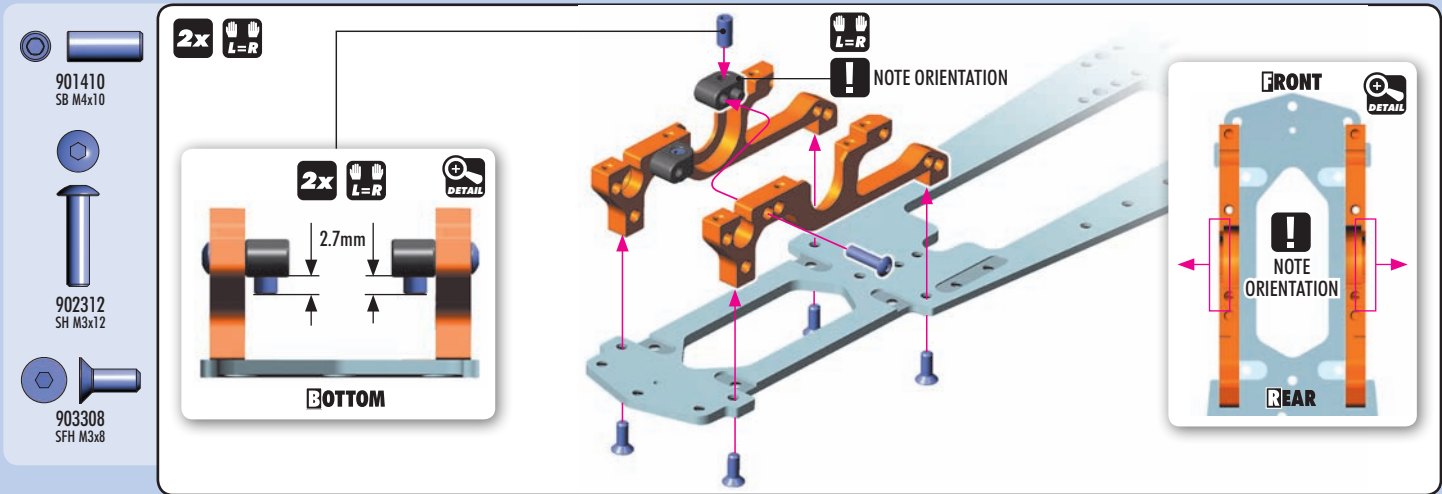
# 4. FRONT SUSPENSION



#335432  
**LOW FRICTION DRIVE BELT FRONT**  
 5.0 x 186 MM

**BAG**  
 04

- |          |   |          |  |
|----------|---|----------|--|
| 302663   | COMPOSITE BALL JOINT 4.9MM - OPEN - V2 (8)                        | 335215   | CVD AXLE - SUPER LIGHT - HUDY SPRING STEEL™      |
| 303123-0 | ALU SHIM 3x6x2.0MM - ORANGE (10)                                  | 335225   | CVD DRIVE SHAFT - FRONT - HUDY SPRING STEEL™     |
| 303454   | BALL JOINT 4.9MM - OPEN (4)                                       | 335250   | ALU WHEEL HUB 12MM - BLACK (2)                   |
| 305231   | DRIVE SHAFT COUPLING - HUDY SPRING STEEL™                         | 335430   | PUR®-REINFORCED DRIVE BELT FRONT 5 x 186 MM      |
| 332016   | ALU LOWER BULKHEAD FRONT RIGHT - SWISS 7075 T6                    | 337211   | FRONT LOWER INNER PIVOT PIN (2)                  |
| 332026   | ALU LOWER BULKHEAD FRONT LEFT - SWISS 7075 T6                     | 337222   | FRONT UPPER PIVOT PIN WITH FLAT SPOT (2)         |
| 332037   | ALU UPPER CLAMP FRONT (L+R) - SWISS 7075 T6                       | 337253   | COMPOSITE ADJUSTING NUT M10x1 WITH BALL CUP (4)  |
| 332070   | COMPOSITE ADJUST. BALL-BEARING HUB (4)                            | 337256   | STEEL PIVOT BALL 8.4 MM (2)                      |
| 332071   | COMPOSITE BALL-BEARING HUB (4)                                    | 343483-K | ALU CUTTED ANTI-ROLL BAR COLLAR ø2.3 - BLACK (2) |
| 332083   | GRAPHITE SHOCK TOWER FRONT 2.5MM                                  | 362650   | BALL END 4.9MM WITH THREAD 6MM (2)               |
| 332112   | COMPOSITE SUSP. ARM FRONT LOWER FOR WIRE ANTI-ROLL BAR            | 901302   | HEX SCREW SB M3x2.5 (10)                         |
| 332134   | COMPOSITE SUSP. ARM FRONT UPPER WITH HOLE - SOFT                  | 901303   | HEX SCREW SB M3x3 (10)                           |
| 332170   | COMPOSITE SUSP. ARM BACKSTOP (2)                                  | 901306   | HEX SCREW SB M3x6 (10)                           |
| 332212   | COMPOSITE STEERING BLOCK RIGHT FOR AERO DISC                      | 901308   | HEX SCREW SB M3x8 (10)                           |
| 332222   | COMPOSITE STEERING BLOCK LEFT FOR AERO DISC                       | 901312   | HEX SCREW SB M3x12 (10)                          |
| 332291   | ALU EXTENSION FOR STEERING BLOCK - SWISS 7075 T6 (2)              | 901410   | HEX SCREW SB M4x10 (10)                          |
| 332317   | COMPOSITE SUSP. ECCENTRIC BUSHING (2+2)                           | 902306   | HEX SCREW SH M3x6 (10)                           |
| 332380   | COMPOSITE CASTER CLIPS (2)  | 902308   | HEX SCREW SH M3x8 (10)                           |
| 332411   | COMPOSITE FRONT ANTI-ROLL BAR HOLDER & ECCENTRIC W/O UPSTOP (2+2) | 902312   | HEX SCREW SH M3x12 (10)                          |
| 332440   | ANTI-ROLL BAR FRONT FEMALE - HUDY SPRING STEEL™                   | 902314   | HEX SCREW SH M3x14 (10)                          |
| 332450   | ANTI-ROLL BAR FRONT MALE - HUDY SPRING STEEL™                     | 903305   | HEX SCREW SFH M3x5 (10)                          |
| 332480   | ANTI-ROLL BAR FRONT 2.0 MM  | 903308   | HEX SCREW SFH M3x8 (10)                          |
| 332710   | ALU LOWER 2-PIECE FRONT SUSPENSION HOLDER (1)                     | 930508   | BALL-BEARING 5x8x2.5 (2)                         |
| 332731   | ALU UPPER ARM HOLDER RIGHT - SWISS 7075 T6 - SET                  | 941016   | BALL-BEARING 10x16x4 RUBBER SEALED - OIL (2)     |
| 332741   | ALU UPPER ARM HOLDER LEFT - SWISS 7075 T6 - SET                   | 980210   | PIN 2x10 (10)                                    |
| 333443   | ALU ANTI-ROLL BAR COLLAR ø2.2 (2)                                 | 981210   | PIN 2x10 (10)                                    |
| 335000   | FRONT GEAR DIFFERENTIAL - SET                                     |          |  |



# 4. FRONT SUSPENSION

The NT1 kit comes with both types of front anti-roll bars; blade-style or wire. Decide which anti-roll bar to use.

**Blade anti-roll bar (Alternative 1)** page 24

is recommended for long, fast tracks when maximum cornering speed is needed. With the blade anti-roll bar, the car will not dive in the corners and will maintain maximum speed. Follow the "Alternative 1" assembly steps described immediately below.

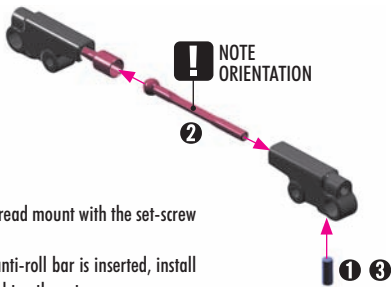
**Wire anti-roll bar (Alternative 2)** go to page 28

is recommended for smaller, technical tracks when fast direction changes and side weight changes are needed. Follow the "Alternative 2" assembly steps starting on page 28; DO NOT assemble the blade bar as described immediately below.

## ALTERNATIVE 1 (BLADE ANTI-ROLL BAR)



901308  
SB M3x8



- 1 Pre-thread mount with the set-screw
- 2 NOTE ORIENTATION
- 3 After anti-roll bar is inserted, install and tighten the set-screw



### FRONT BLADE ANTI-ROLL BARS

#332440	FEMALE 1.0MM	INCLUDED
#332441	FEMALE 0.7MM	OPTION
#332450	MALE 1.0MM	INCLUDED
#332451	MALE 0.7MM	OPTION



#332401-0  
DOWNSTOP INDEPENDENT ALU  
FRONT ANTI-ROLL BAR - ORANGE



303123-0  
SHIM 3x6x2



332112  
SHIM 3x7x2



901312  
SB M3x12



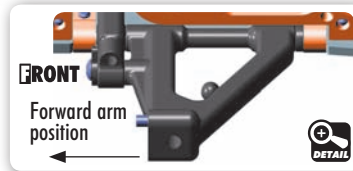
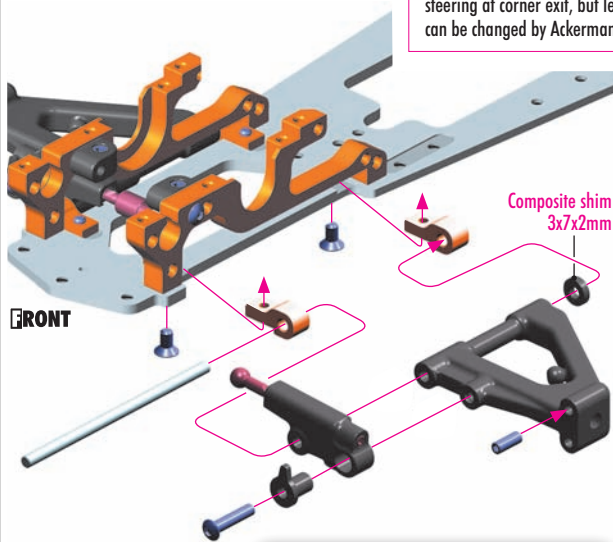
902314  
SH M3x14



903305  
SFH M3x5



### Forward Arm Position (A) Shim BEHIND arm

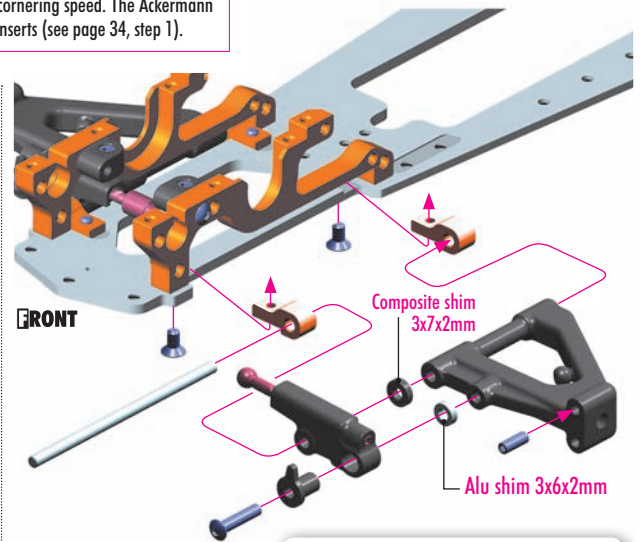


### IMPORTANT!

The position of the front arm directly influences the steering Ackermann (angle of the steering linkages). When the arm is moved to rearward position (shim in front of the arm), the angle of the steering linkages changes and gives less Ackermann. By decreasing the Ackermann, the car gets more turn-in & increased steering at corner exit, but less cornering speed. The Ackermann can be changed by Ackermann inserts (see page 34, step 1).



### Rearward Arm Position (B) (INITIAL SETTING) Shim IN FRONT OF arm

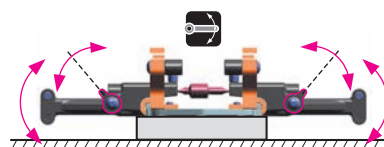


Each anti-roll bar blade has a hex hole at its end. Use a 1.5mm wrench to adjust the blades.

1.5mm



Do not insert ball into cup too deeply or bars will bind during operation



Ensure that the suspension arms move freely. Ensure that the eccentric holders move freely.

When the bar is set, verify that both sides move at the same time. If they do, the bars are set up correctly. If the arms still do not move at the same time, gently loosen the screw which holds eccentric bushing and rotate the bushing until the arms move at the same time. Retighten the screws fully.



### FRONT SUSPENSION ARMS

#332112	MEDIUM	INCLUDED
#332113	HARD	OPTION



FRONT ANTI-ROLL BAR  
ADJUSTMENT  
DOWNSTOP ADJUSTMENT



# 4. FRONT SUSPENSION



941016  
BB 10x16x4

**NOTE ORIENTATION**  
Both bushings must be in same position

**NOTE ORIENTATION**

**NOTE ORIENTATION**  
Both bushings must be in same position

BEARING OIL

BEARING OIL

#335432  
OPTION  
LOW FRICTION DRIVE BELT FRONT  
5.0 x 186 MM

**FRONT**



902308  
SH M3x8

**2x** **L=R**

**FRONT BELT TENSION ADJUSTMENT**

**INITIAL POSITION**

**FRONT** **REAR**

**TO TIGHTEN FRONT BELT:** Rotate both front nylon hubs in arrow direction **B**  
**TO LOOSEN FRONT BELT:** Rotate both front nylon hubs in arrow direction **A**

**RIGHT** **LEFT**

**FRONT**



902306  
SH M3x6

**2x** **L=R**

**Do not tighten fully.**  
This screw will be tightened after assembling the radio plate (see page 37).

**NOTE ORIENTATION**

**FRONT**

# 4. FRONT SUSPENSION

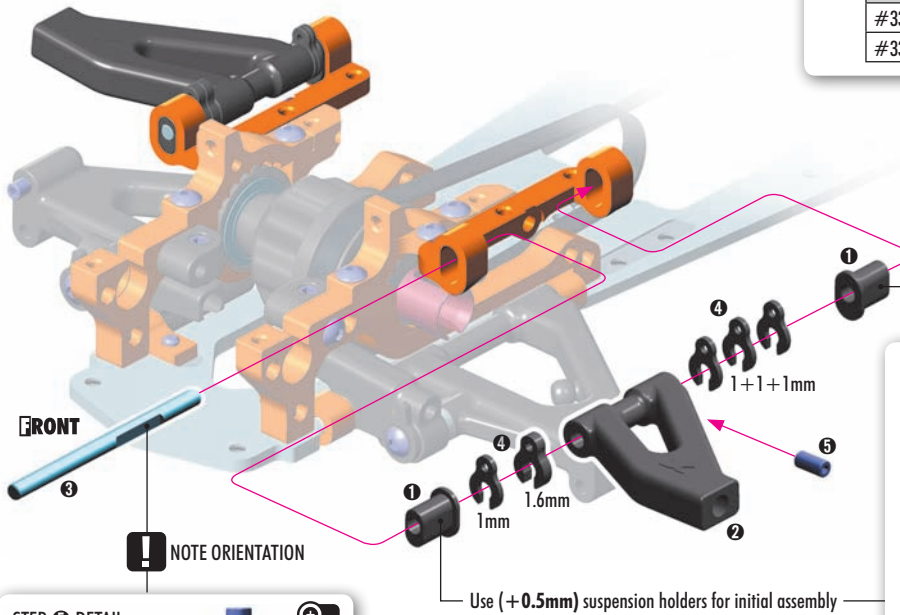
901306  
SB M3x6

2x L=R

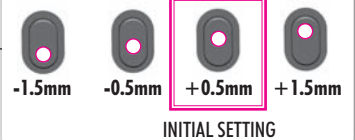
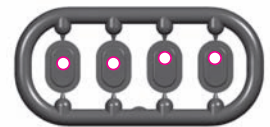


### FRONT UPPER ARMS

#332134	SOFT	INCLUDED
#332133	HARD	OPTION
#332132	MEDIUM	OPTION



### FRONT ROLL CENTER INSERT POSITIONS



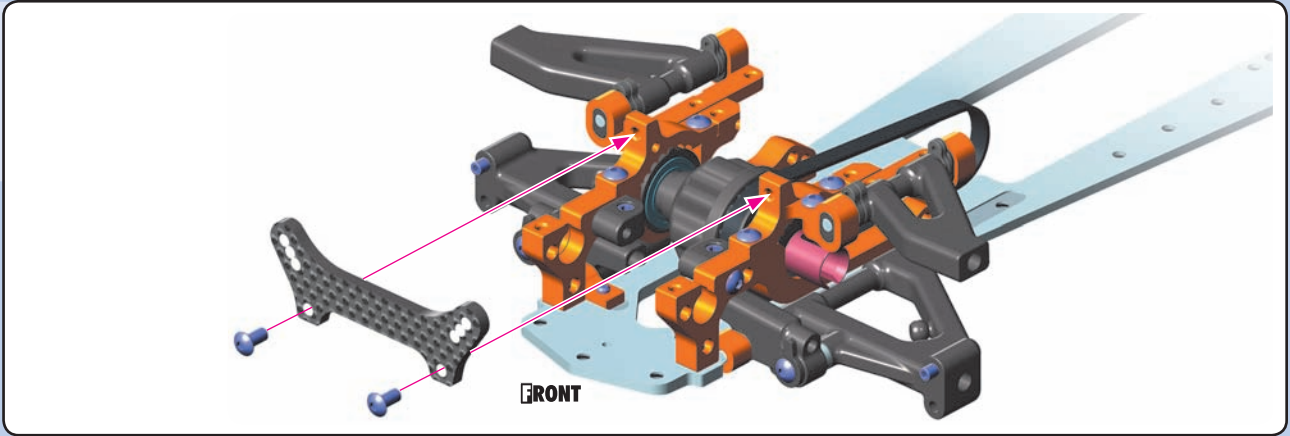
STEP 5 DETAIL



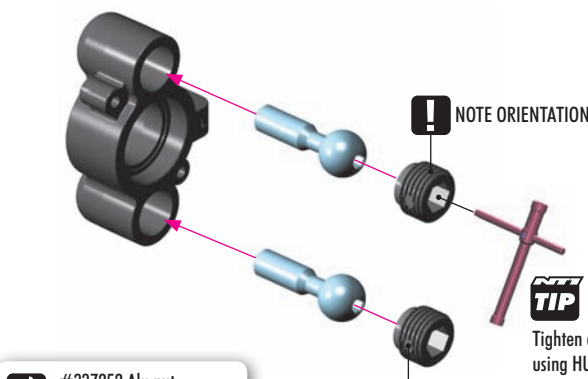
Use (+0.5mm) suspension holders for initial assembly

**SET-UP BOOK**  
FRONT ROLL CENTER ADJUSTMENT

902306  
SH M3x6

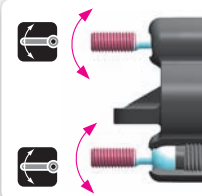


2x L=R



#337252 Alu nut  
#337254 Composite cup

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



Pivot balls must move freely. During initial assembly, tighten each composite hex nut until the pivot ball starts to bind, then loosen slightly. Verify that the pivot balls move freely.



### STEERING BLOCK

#332212	0°	RIGHT	INCLUDED
#332213	1°	RIGHT	OPTION
#332222	0°	LEFT	INCLUDED
#332223	1°	LEFT	OPTION



### PIVOT BALLS

#337256	STEEL	INCLUDED
#337251	ALU	OPTION
#337255	TITANIUM	OPTION



# 4. FRONT SUSPENSION

**902308**  
SH M3x8

**2x** **L=R**

NOTE ORIENTATION

MARKED "L" LEFT

**#332290**  
OPTION GRAPHITE EXTENSION FOR STEERING BLOCK (2)

Optional graphite steering arms are available. They give more flex and front traction, but they are more fragile.

MARKED "R" RIGHT

**901302**  
SB M3x2.5

**980210**  
P 2x10

**2x** **L=R**

THREADLOCK TL

GREASE GR

STEP 5 DETAIL

Tighten the screw fully when the pin is installed

**941016**  
BB 10x16x4

**2x** **L=R**

BEARING OIL OIL

LEFT STEERING BLOCK

**901303**  
SB M3x3

**981210**  
P 2x10

**2x** **L=R**

WHEEL HUBS		
OPTION #335250	0.0mm	INCLUDED
#335251	-0.75mm	OPTION
#335252	+0.75mm	OPTION

**2x** **L=R**

RIGHT STEERING BLOCK

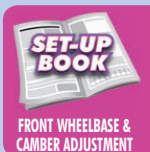
LEFT STEERING BLOCK

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

4.3mm

3.7mm

Ensure that the front suspension moves freely

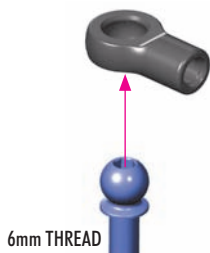


# 4. FRONT SUSPENSION

## ALTERNATIVE 2 (WIRE ANTI-ROLL BAR)

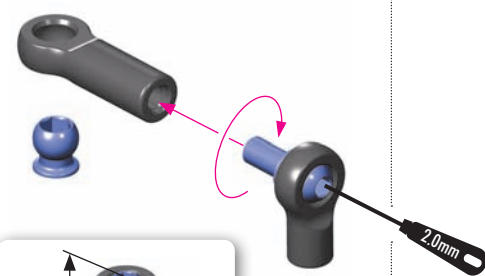
 901308  
SB M3x8

**2x**



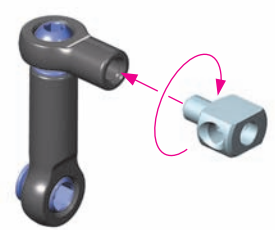
6mm THREAD

**2x**





2.0mm

**2x**




**TIP** Install the pivot balls with Professional Multi Tool (HUDY #183011)








26mm


**DETAIL**

 303123-0  
SHIM 3x6x2

 332112  
SHIM 3x7x2

 902314  
SH M3x14

 903305  
SFH M3x5

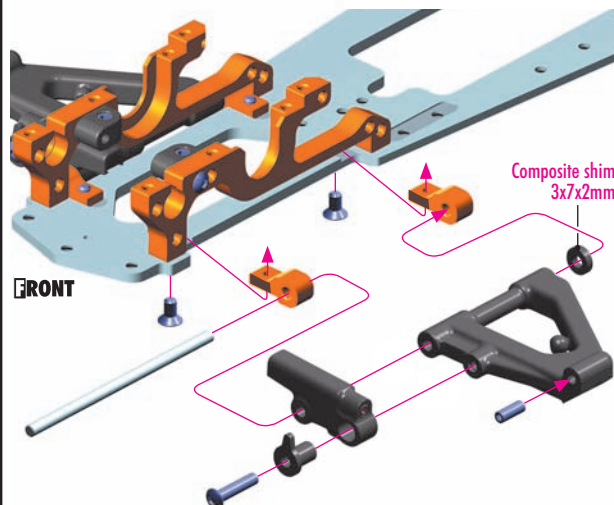
 901312  
SB M3x12

**Forward Arm Position (A)**  
Shim **BEHIND** arm

**IMPORTANT!**


The position of the front arm directly influences the steering Ackermann (angle of the steering linkages). When the arm is moved to rearward position (shim in front of the arm), the angle of the steering linkages changes and gives less Ackermann. By decreasing the Ackermann, the car gets more turn-in & increased steering at corner exit, but less cornering speed. The Ackermann can be changed by Ackermann inserts (see page 34, step 1).

**Rearward Arm Position (B)**  
**(INITIAL SETTING)**  
Shim **IN FRONT** of arm



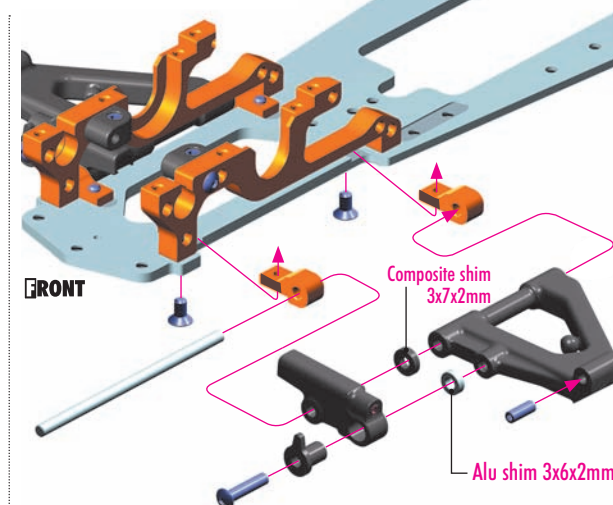
**FRONT**

Composite shim 3x7x2mm



**FRONT**  
Forward arm position

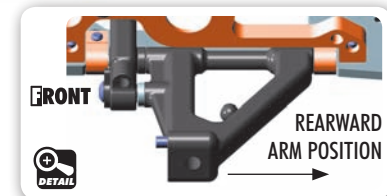
**DETAIL**



**FRONT**

Composite shim 3x7x2mm


Alu shim 3x6x2mm



**FRONT**  
REARWARD ARM POSITION

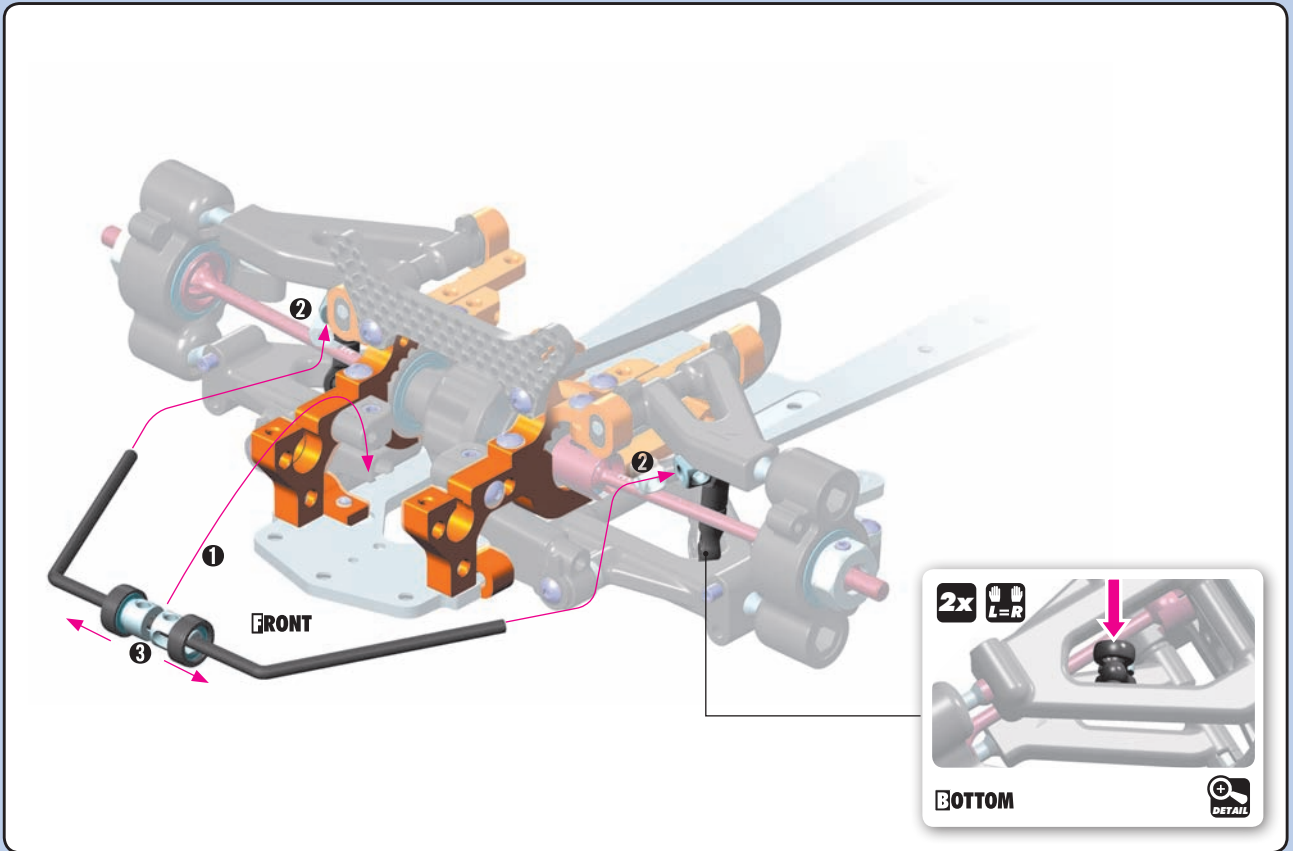
**DETAIL**

 930508  
BB 5x8x2.5



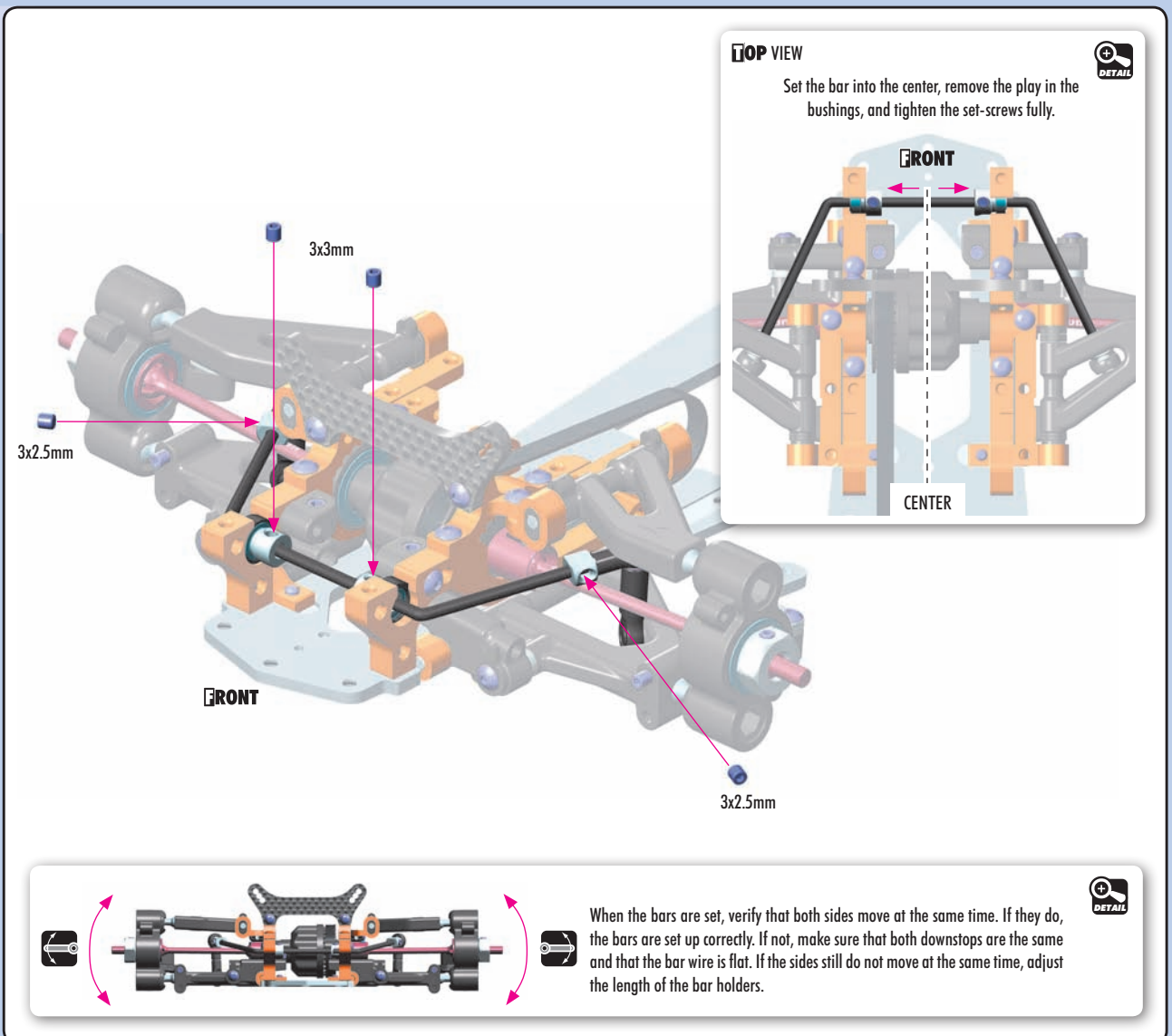
WIRE FRONT ANTI-ROLL BARS			COLLARS
<b>OPTION</b>	#332479	1.8mm	<b>OPTION</b>
	#332480	2.0mm	<b>INCLUDED</b> #333443 + 343483-K
	#332482	2.2mm	<b>INCLUDED</b>
	#332484	2.4mm	<b>OPTION</b> #333442 + 343482-K
	#332486	2.6mm	<b>OPTION</b>
	#332488	2.8mm	<b>OPTION</b> #333441 + 343481-K

# 4. FRONT SUSPENSION



901302  
SB M3x2.5

901303  
SB M3x3



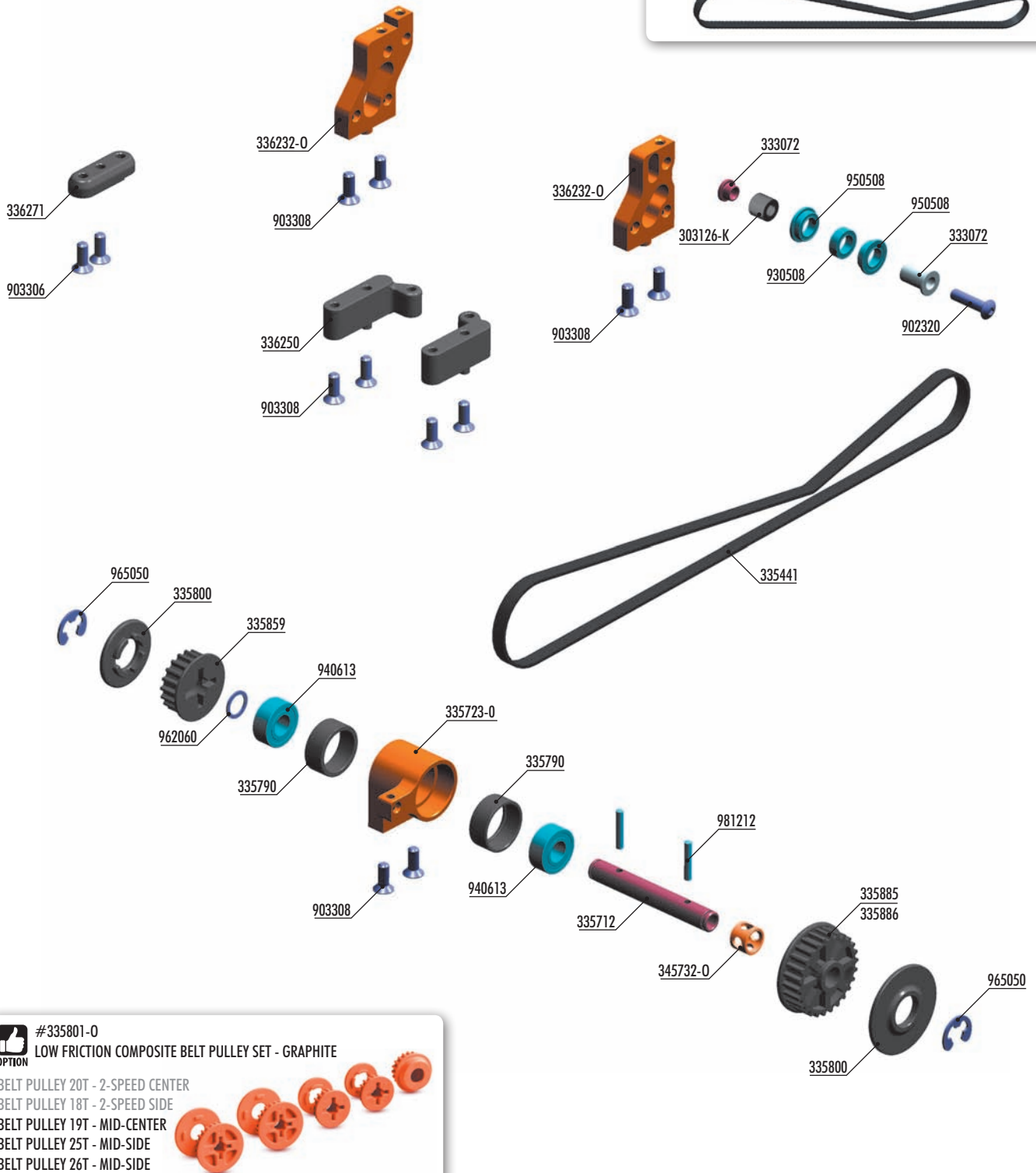
When the bars are set, verify that both sides move at the same time. If they do, the bars are set up correctly. If not, make sure that both downstops are the same and that the bar wire is flat. If the sides still do not move at the same time, adjust the length of the bar holders.



# 5. FRONT TRANSMISSION



#335443  
LOW FRICTION DRIVE BELT SIDE 4.5 X 396 MM



#335801-0  
LOW FRICTION COMPOSITE BELT PULLEY SET - GRAPHITE

BELT PULLEY 20T - 2-SPEED CENTER  
BELT PULLEY 18T - 2-SPEED SIDE  
BELT PULLEY 19T - MID-CENTER  
BELT PULLEY 25T - MID-SIDE  
BELT PULLEY 26T - MID-SIDE



**BAG**

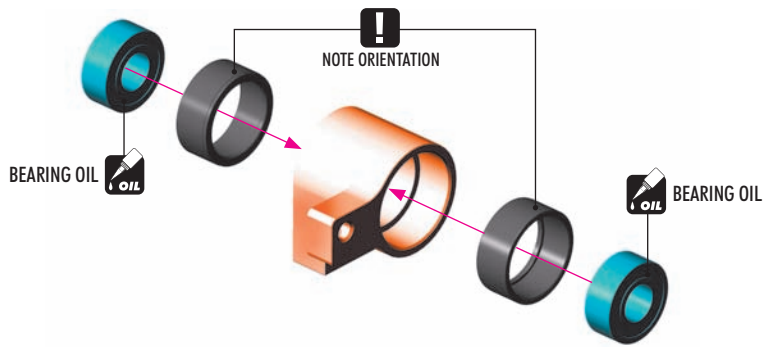
**05**

303126-K	ALU SHIM 3x6x5.0MM - BLACK (10)	336271	COMPOSITE BATTERY PLATE HOLDER
333072	BELT TENSIONER SET	345732-0	ALU MIDDLE SHAFT LOCATING COLLAR - SHORT - LIGHTWEIGHT - ORANGE
335441	PUR®-REINFORCED DRIVE BELT SIDE 4.5 x 390 MM	902320	HEX SCREW SH M3x20 (10)
335712	FRONT MIDDLE SHAFT - HUDY SPRING STEEL™ - LIGHTWEIGHT	903306	HEX SCREW SFH M3x6 (10)
335723-0	ALU FRONT MIDDLE SHAFT HOLDER - ORANGE	903308	HEX SCREW SFH M3x8 (10)
335790	COMPOSITE BALL-BEARING BUSHING FOR MIDDLE SHAFT (2)	930508	BALL-BEARING 5x8x2.5 STEEL SEALED - OIL (2)
335800	COMPOSITE BELT PULLEY COVER SET	940613	BALL-BEARING 6x13x5 RUBBER SEALED - OIL (2)
335859	COMPOSITE BELT PULLEY 19T - MID-CENTER	950508	BALL-BEARING 5x8x2.5 FLANGED - STEEL SEALED - OIL (2)
335885	COMPOSITE BELT PULLEY 25T - MID-SIDE	962060	WASHER S 6x8x0.5 (10)
335886	COMPOSITE BELT PULLEY 26T - MID-SIDE	965050	E-CLIP 5 (10)
336232-0	ALU RADIO PLATE MOUNTS (L+R) - SWISS 7075 T6 - ORANGE	981212	PIN 2x12 (10)
336250	COMPOSITE BATTERY MOUNT L+R (2)		

# 5. FRONT TRANSMISSION



940613  
BB 6x13x5



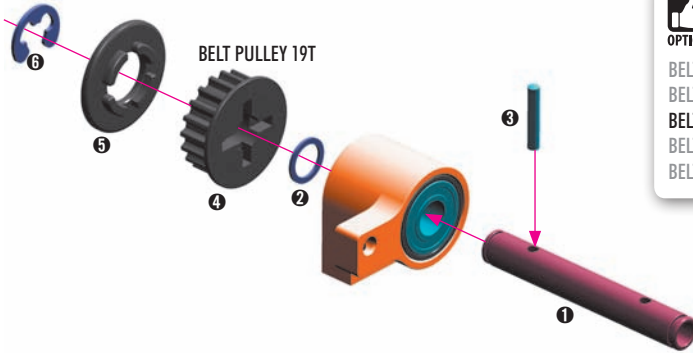
962060  
SHIM 6x8x0.5



965050  
C5



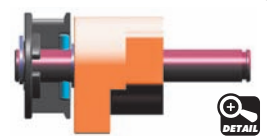
981212  
P 2x12



#335801-0  
OPTION

LOW FRICTION COMPOSITE BELT PULLEY SET - GRAPHITE

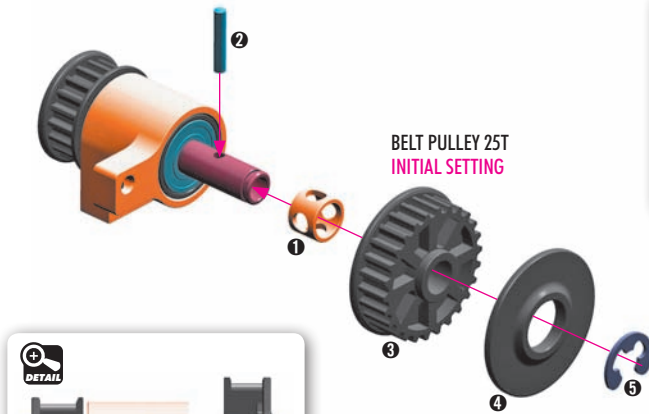
BELT PULLEY 20T - 2-SPEED CENTER  
BELT PULLEY 18T - 2-SPEED SIDE  
BELT PULLEY 19T - MID-CENTER  
BELT PULLEY 25T - MID-SIDE  
BELT PULLEY 26T - MID-SIDE



965050  
C5



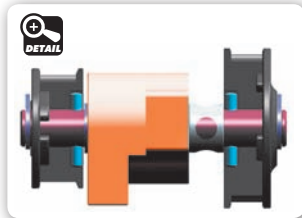
981212  
P 2x12



#335801-0  
OPTION

LOW FRICTION COMPOSITE BELT PULLEY SET - GRAPHITE

BELT PULLEY 20T - 2-SPEED CENTER  
BELT PULLEY 18T - 2-SPEED SIDE  
BELT PULLEY 19T - MID-CENTER  
BELT PULLEY 25T - MID-SIDE  
BELT PULLEY 26T - MID-SIDE



#335986  
OPTION

ALU BELT PULLEY 26T - MID-SIDE - SET

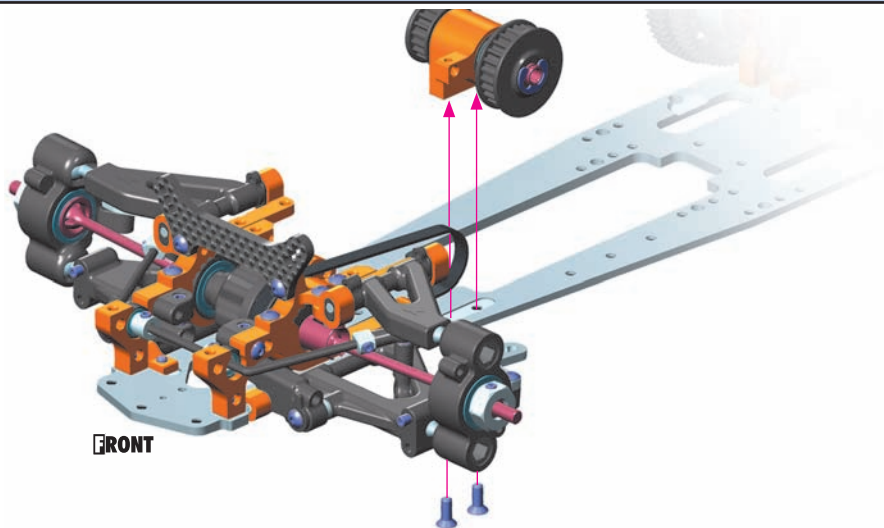


COMPOSITE BELT PULLEY

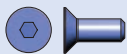
#335885	25T	INCLUDED	INITIAL SETTING
#335886	26T	INCLUDED	-



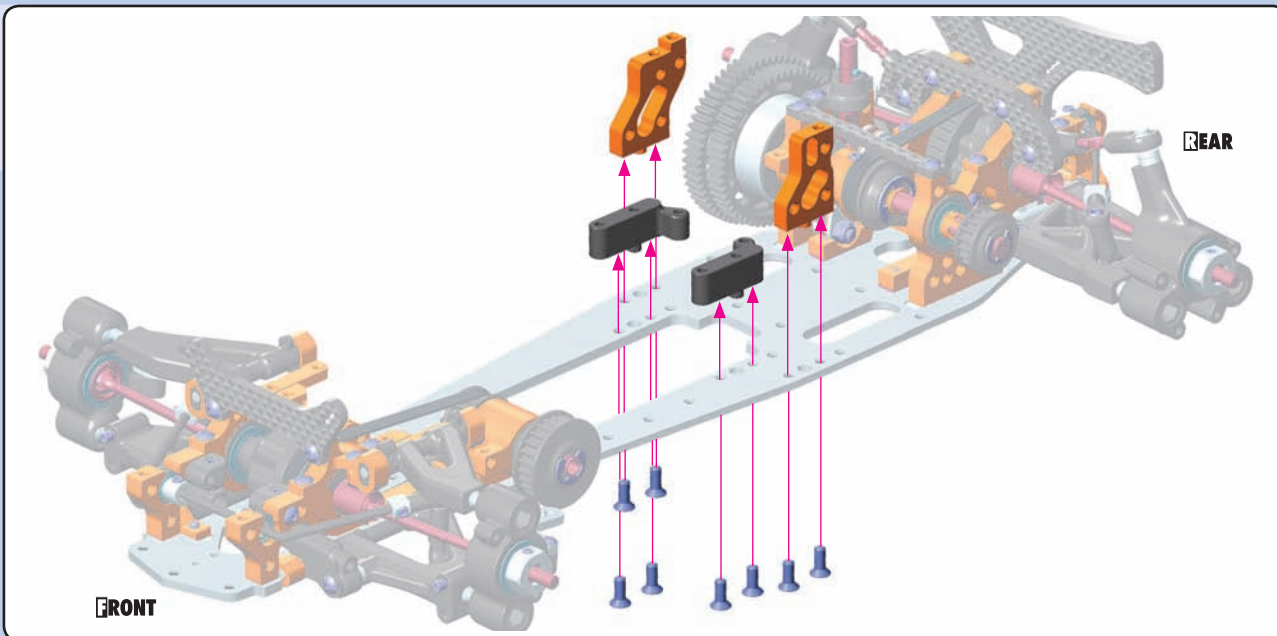
903308  
SFH M3x8



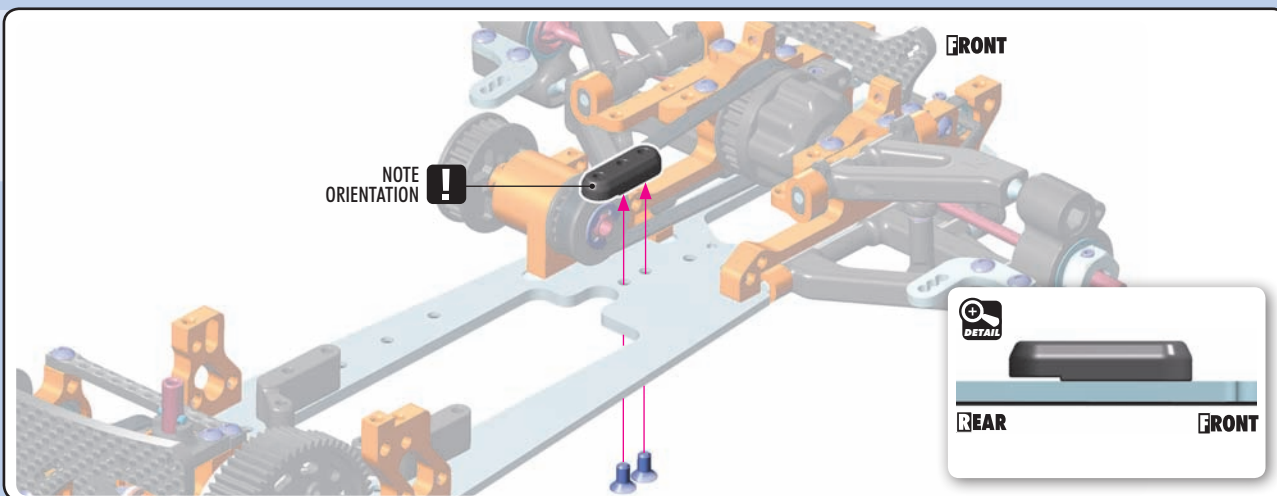
# 5. FRONT TRANSMISSION



903308  
SFH M3x8



903306  
SFH M3x6



303126-K  
SHIM 3x6x5



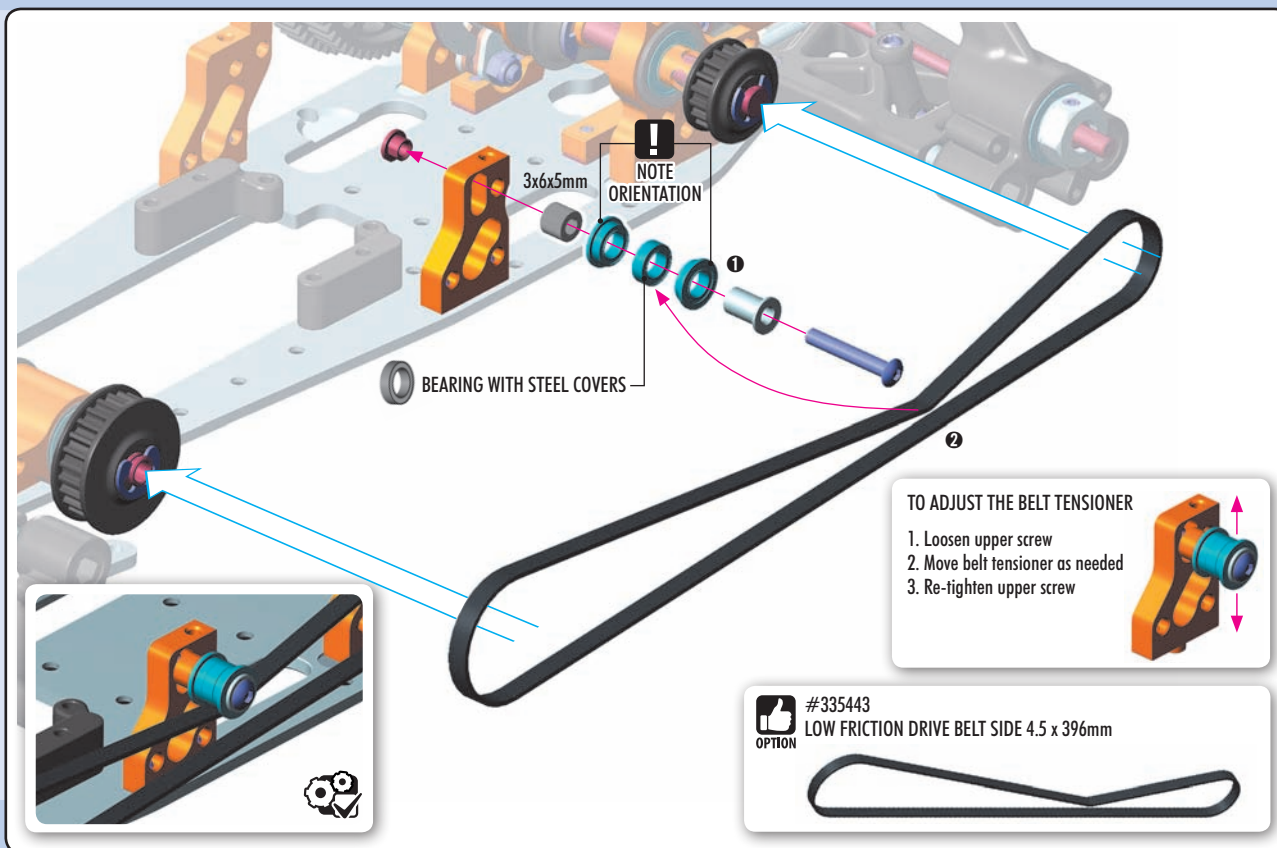
902320  
SH M3x20



930508  
BB 5x8x2.5



950508  
BB 5x8x2.5



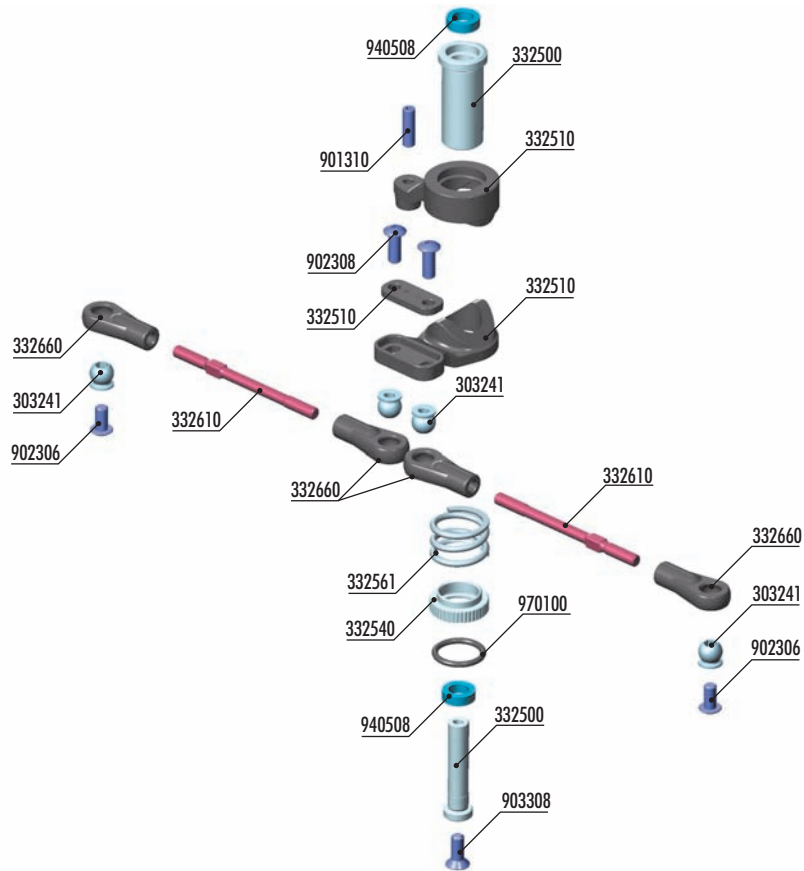
**TO ADJUST THE BELT TENSIONER**

1. Loosen upper screw
2. Move belt tensioner as needed
3. Re-tighten upper screw

**#335443**  
LOW FRICTION DRIVE BELT SIDE 4.5 x 396mm



# 6. STEERING



## BAG

06

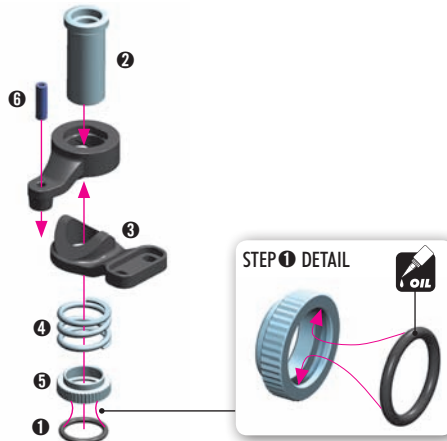
303241	PIVOT BALL UNIVERSAL 5.8 MM WITH HEX (4)	901310	HEX SCREW SB M3x10 (10)
332500	SERVO SAVER COMPLETE SET	902306	HEX SCREW SH M3x6 (10)
332510	COMPOSITE SERVO SAVER	902308	HEX SCREW SH M3x8 (10)
332540	ALU SERVO SAVER ADJUSTABLE NUT	903308	HEX SCREW SFH M3x8 (10)
332561	SERVO SAVER SPRING C=14	940508	BALL-BEARING 5x8x2.5 RUBBER SEALED - OIL (2)
332610	ADJ. TURNBUCKLE L/R 42 MM - HUDY SPRING STEEL™ (2)	970100	O-RING 10 x 1.5 (10)
332660	COMPOSITE STEERING & SERVO BALL JOINT 5.8 MM (4+2)		



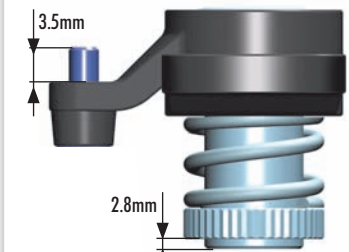
901310  
SB M3x10



970100  
O 10x1.5



### INITIAL PRELOAD



Tightening the nut makes the servo saver work harder. A harder servo saver gives the car better in-corner steering and steering response. However, it increases the risk of breaking the servo in serious crashes.

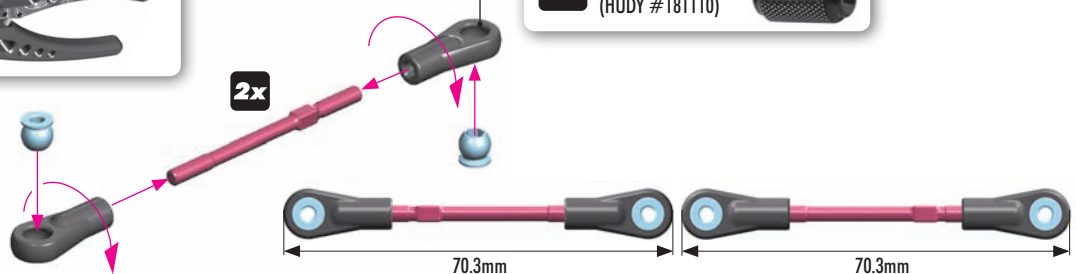


303241  
BALL 5.8

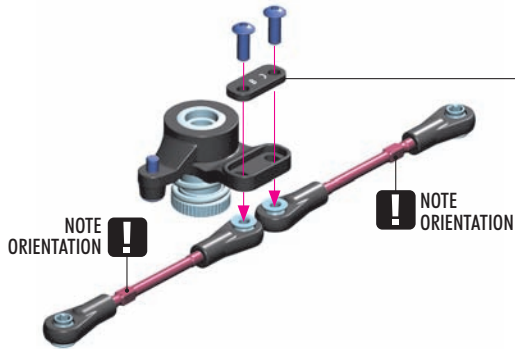
**TIP** Install the pivot balls with Professional Multi Tool (HUDY #183011)



**TIP** BALL JOINT WRENCH (HUDY #181110)

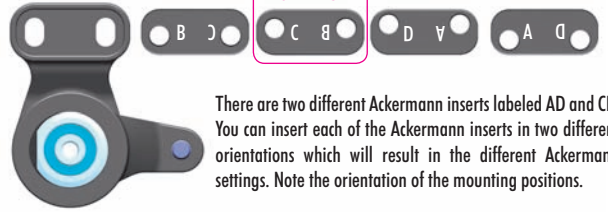


# 6. STEERING

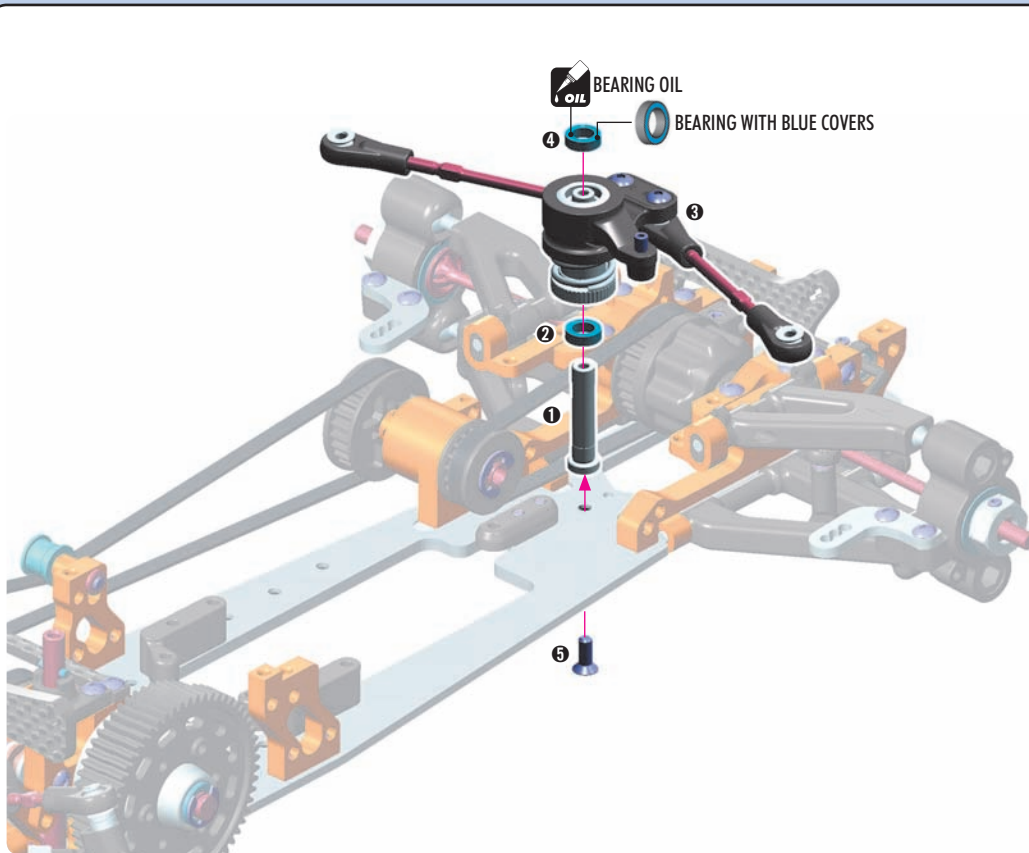


## ACKERMANN SETTINGS

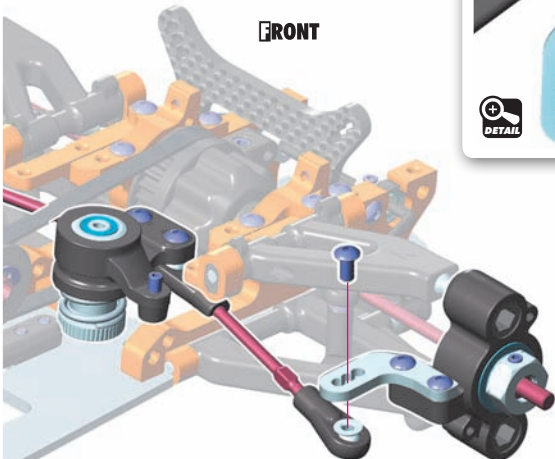
INITIAL SETTING



There are two different Ackermann inserts labeled AD and CB. You can insert each of the Ackermann inserts in two different orientations which will result in the different Ackermann settings. Note the orientation of the mounting positions.

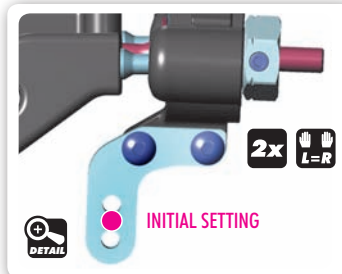


## 2x L=R BUMPSTEER ADJUSTMENT ALTERNATIVE 1 (INITIAL SETTING)

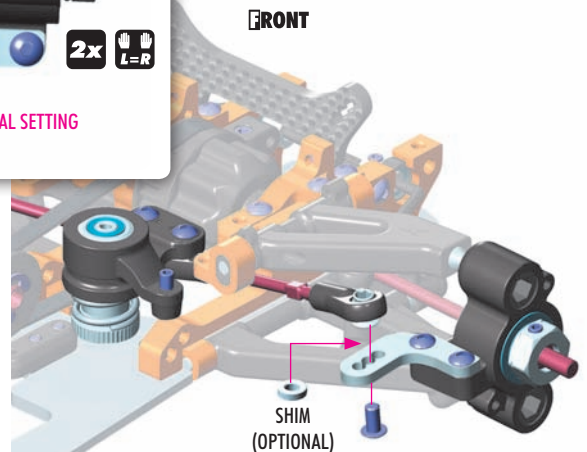


**ALTERNATIVE 1**  
Extension for the steering block mounted from the TOP.

The car has maximum steering response and in-corner steering. Recommended bumpsteer setting for big, hard tires.



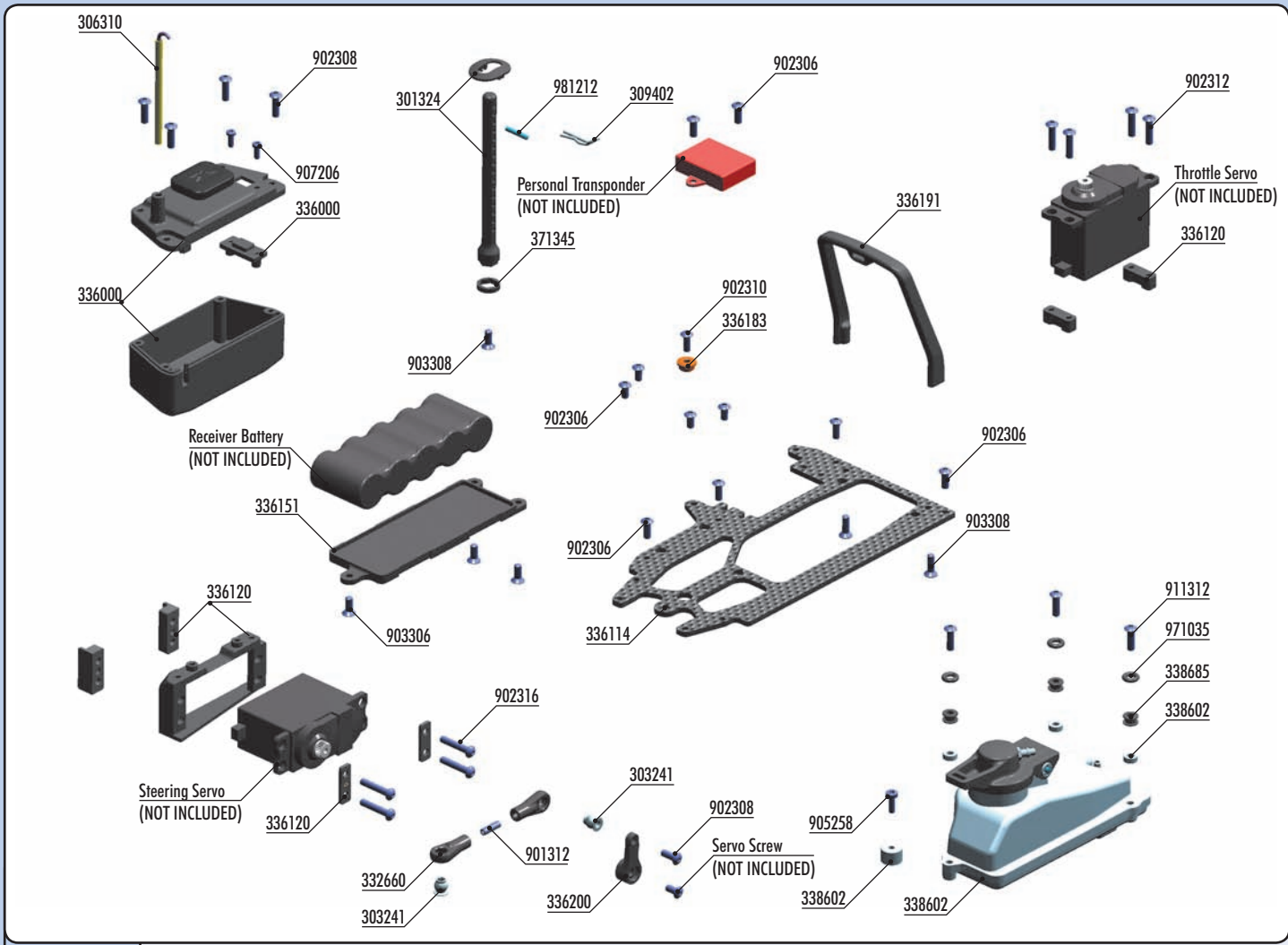
## 2x L=R BUMPSTEER ADJUSTMENT ALTERNATIVE 2



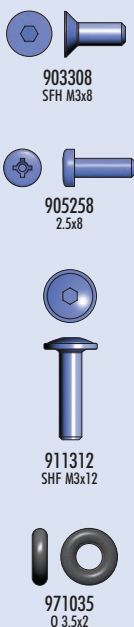
**ALTERNATIVE 2**  
Extension for the steering block mounted from the BOTTOM with extra shims.

By adding shims, the car becomes less responsive, but easier to drive. Recommend bumpsteer setting when softer tires or tires with additive are used.

# 7. FUEL TANK & ELECTRONICS



301324	FRONT BODY MOUNT SET +2MM HEIGHT	336191	COMPOSITE ROLL-OVER BAR WITH EYELET	902312	HEX SCREW SH M3x12 (10)
303241	BALL UNIVERSAL 5.8 MM HEX (4)	336200	STEERING SERVO ARMS - SET	902316	HEX SCREW SH M3x16 (10)
306310	ANTENNA TUBE (2)	338602	FUEL TANK 75CC - SET - V3	903306	HEX SCREW SFH M3x6 (10)
309402	BODY CLIP FOR 6MM BODY POST (4)	338685	FUEL TANK MOUNTING GROMMET (3)	903308	HEX SCREW SFH M3x8 (10)
332660	COMPOSITE STEERING & SERVO BALL JOINT 5.8 MM (4+2)	371345	COMPOSITE SHIM FOR BODY POST (2)	905258	SCREW PHILLIPS 2.5x8 (10)
336000	COMPOSITE RECEIVER CASE - V2			907206	SCREW PHILLIPS M2x6 (10)
336114	GRAPHITE RADIO PLATE - MULTI-FLEX™	901312	HEX SCREW SB M3x12 (10)	911312	HEX SCREW FL. SH M3x12 (10)
336120	COMPOSITE STEERING SERVO HOLDER - SET	902306	HEX SCREW SH M3x6 (10)	971035	SILICONE O-RING 3.5x2 (10)
336183	ALU RADIO PLATE MULTI-FLEX™ BUSHING (2)	902308	HEX SCREW SH M3x8 (10)	981212	PIN 2x12 (10)
336151	COMPOSITE BATTERY PLATE	902310	HEX SCREW SH M3x10 (10)		



### IMPORTANT!

Tighten the screws gently to make sure that the O-ring does not bind. The purpose of the O-rings is to allow movement of the fuel tank in all directions.

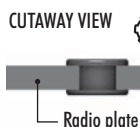
### OPTION ONLY

Use 3mm lowering shims ONLY when using optional micro-size receiver battery pack

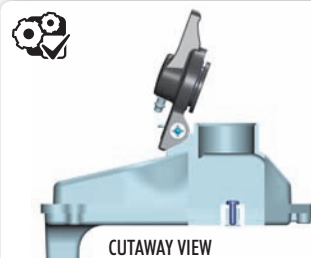
Ensure that bar is square with radio plate

### IMPORTANT!

Do not tight fully, is important that the bar has some play. If the bar is tightened too much, it can tweak the radio plate.

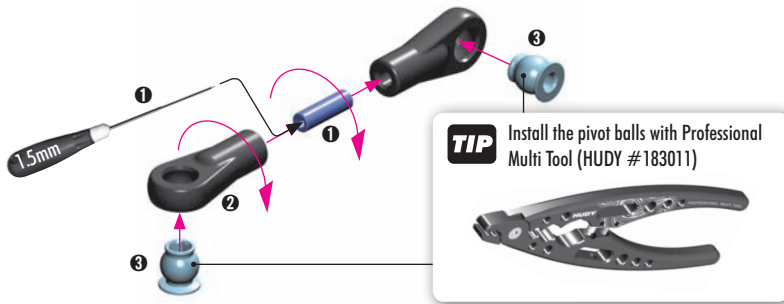


Install insert ONLY if fuel capacity is over the limit



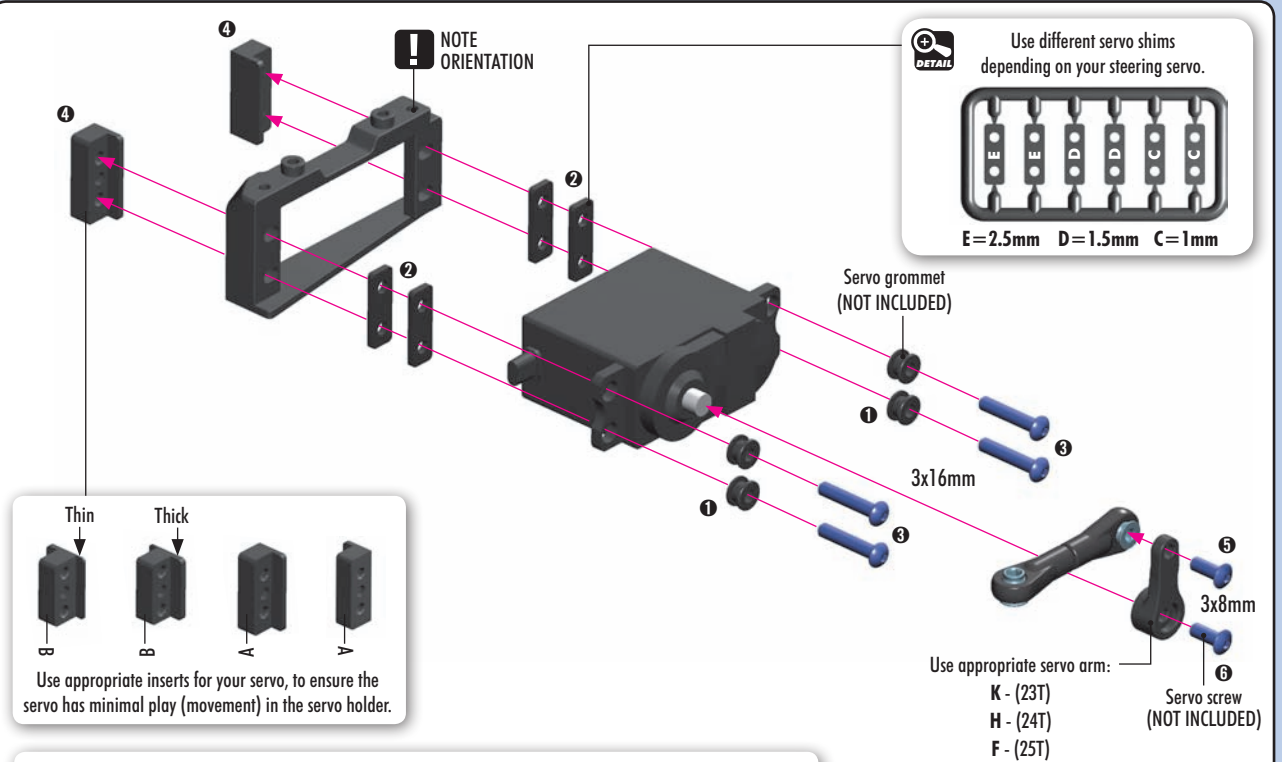
# 7. FUEL TANK & ELECTRONICS

901312  
SB M3x12



902308  
SH M3x8

902316  
SH M3x16



**ALU SERVO HORNS - OFFSET**

#293491	KO, Sanwa - 23T
#293492	Hitec - 24T
#293493	Futaba - 25T

**CLAMP ALU SERVO HORNS - OFFSET**

#293401	KO, Sanwa - 23T
#293402	Hitec - 24T
#293403	Futaba - 25T

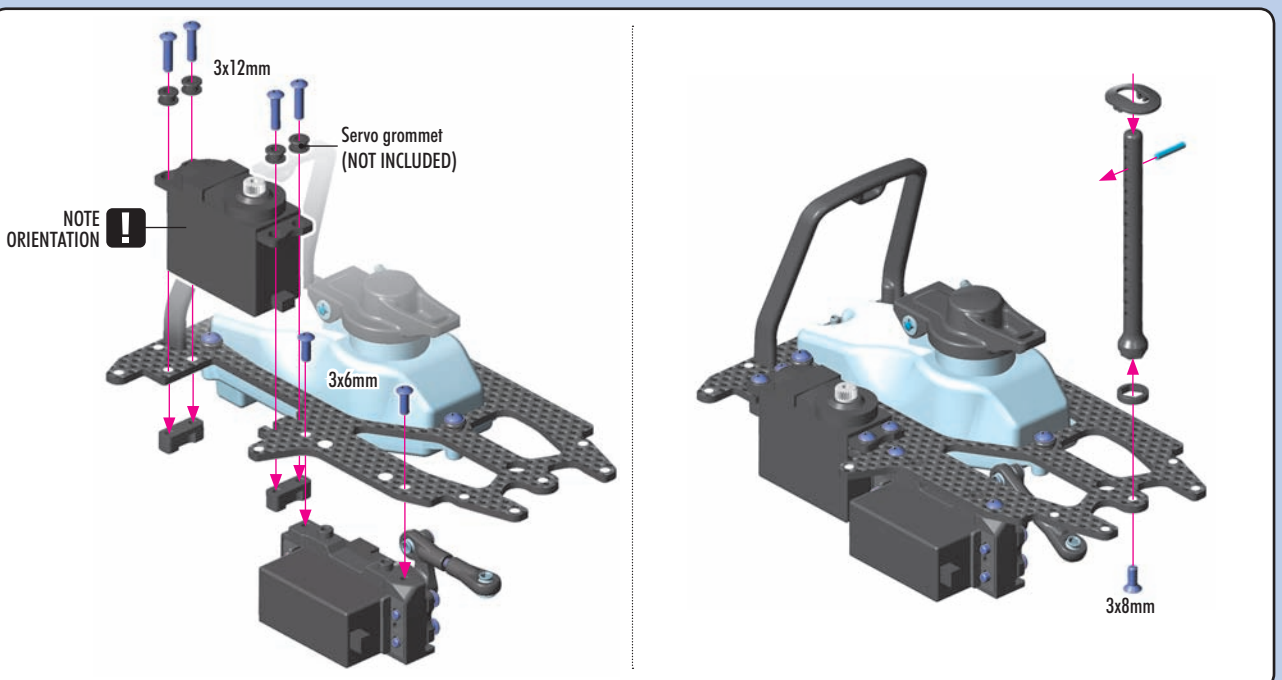
For more in-corner steering and better steering response, aluminum servo horns may be used.

902306  
SH M3x6

902312  
SH M3x12

903308  
SFH M3x8

981212  
P 2x12



# 7. FUEL TANK & ELECTRONICS



**NO FLEX**

When the bushing is used, the radio plate does not flex around the servo saver.

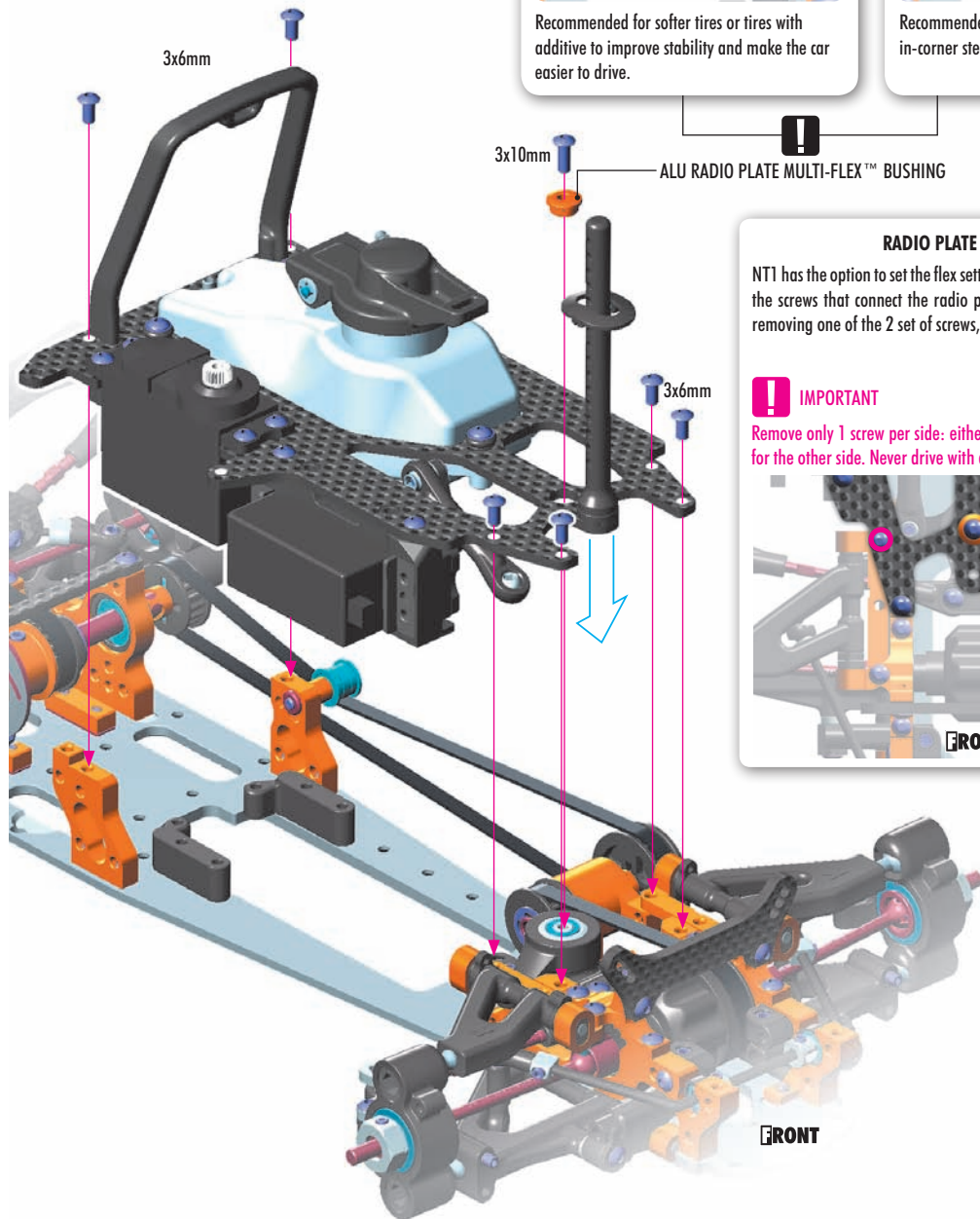
Recommended for softer tires or tires with additive to improve stability and make the car easier to drive.

**FLEX** **INITIAL SETTING**

When the bushing is not used, the radio plate flexes around the servo saver.

Use the screw to tight the servo saver.

Recommended for spec hard tires to improve in-corner steering.



**RADIO PLATE MULTI-FLEX™**

NT1 has the option to set the flex setting also by tightening and loosening the screws that connect the radio plate with the upper arm holder. By removing one of the 2 set of screws, in-corner steering is improved.

**IMPORTANT**

Remove only 1 screw per side: either the front or the rear screw. Repeat for the other side. Never drive with all four screws removed.

**FRONT**

90°~95°

Servo arm must be perpendicular to linkage when servo is in neutral.

Attach steering linkage to servo saver.

# 7. FUEL TANK & ELECTRONICS



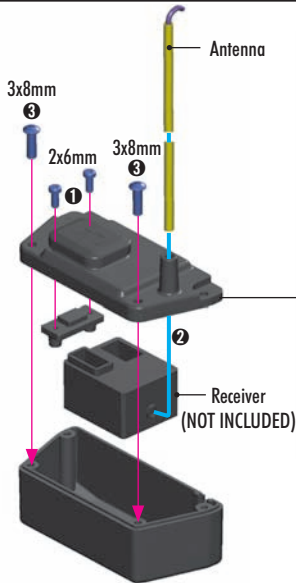
902306  
SH M3x6



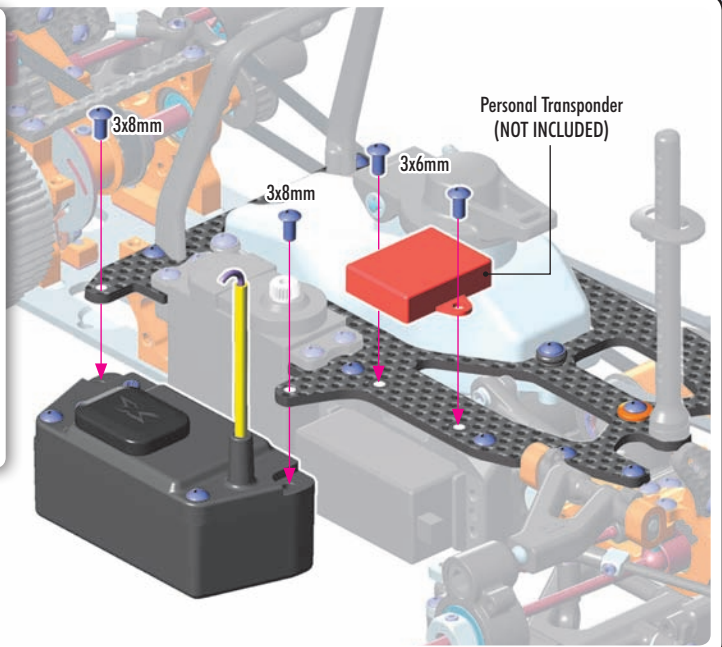
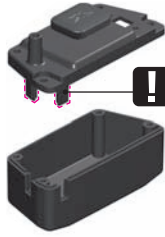
902308  
SH M3x8



907206  
SP M2x6



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



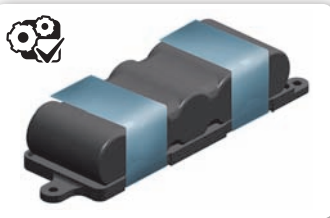
Route servo and transponder leads into box and seal with silicone sealant

Use an appropriate receiver battery pack.

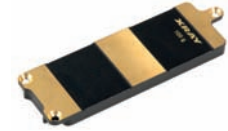
The NT1 accommodates standard 5-cell receiver packs or optional micro-size packs.

Battery (NOT INCLUDED)

Use tape to mount the receiver battery pack to the lower holder.



#336156  
BRASS BATTERY PLATE FOR LIPO BATTERIES-100g - V2



#336155  
GRAPHITE BATTERY PLATE - V2



The battery holder has a direct effect on chassis flex and car weight.

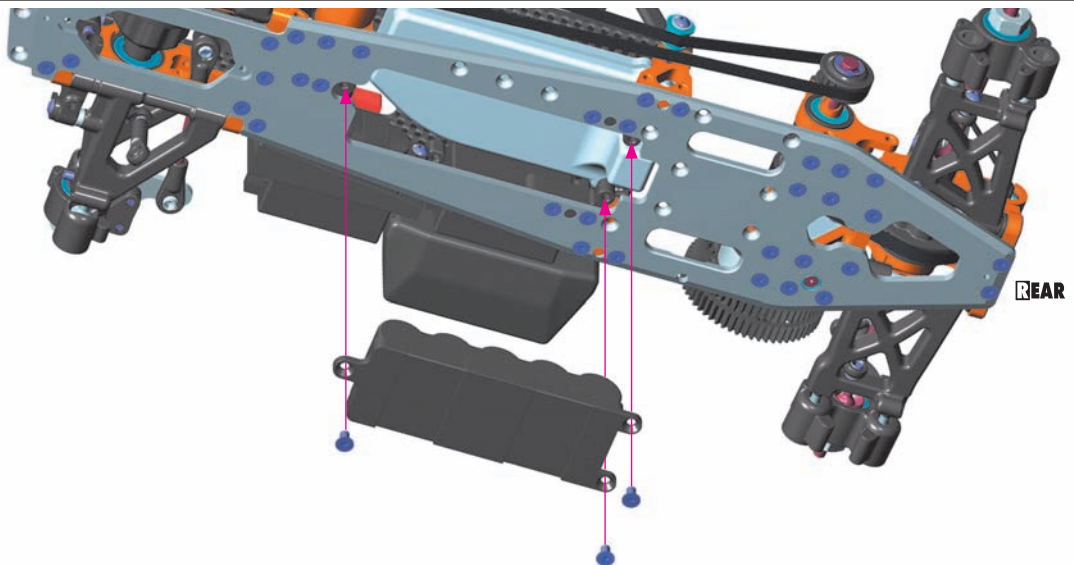
Use the GRAPHITE battery plate to slightly stiffen the chassis flex for better stability.

Use the BRASS battery plate to stiffen the chassis flex and increase weight. Recommended for high-traction tracks or soft tires (or tires with additive) to reduce traction roll and make the car easier to drive.



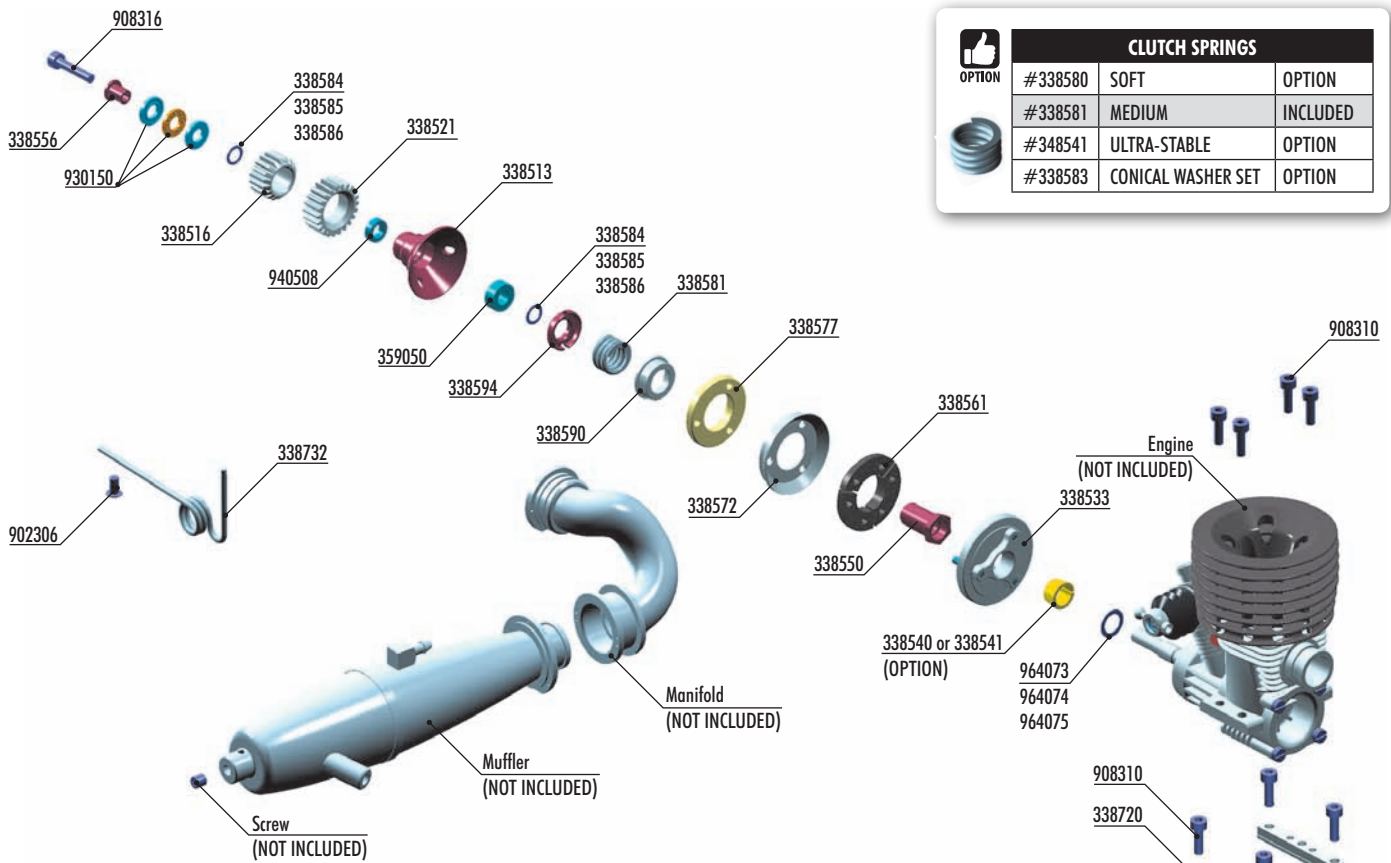
903306  
SFH M3x6

FRONT



REAR

# 8. ENGINE & CLUTCH



CLUTCH SPRINGS		
#338580	SOFT	OPTION
#338581	MEDIUM	INCLUDED
#348541	ULTRA-STABLE	OPTION
#338583	CONICAL WASHER SET	OPTION

XRAY FLYWHEEL COLLAR		
#338540	ø6.0mm	OPTION
#338541	ø7.0mm	OPTION

#338721  
BRASS 1-PIECE ENGINE MOUNT

#338713  
ALU MONOBLOCK ENGINE MOUNT

#338578  
CLUTCH SHOE - HIGH-DYNAMIC - RED

1ST PINION GEARS - XCA HARDCOATED		
#338515	15T (1st)	OPTION
#338516	16T (1st)	INCLUDED
#338517	17T (1st)	OPTION
#338518	18T (1st)	OPTION
#338519	19T (1st)	OPTION

2ND PINION GEARS - XCA HARDCOATED		
#338520	20T (2nd)	OPTION
#338521	21T (2nd)	INCLUDED
#338522	22T (2nd)	OPTION
#338523	23T (2nd)	OPTION
#338524	24T (2nd)	OPTION
#338525	25T (2nd)	OPTION

#338514  
ALU NICKEL-COATED LIGHTWEIGHT CLUTCH BELL 26MM - HIGH-DYNAMIC

## BAG



- |         |   |         |   |
|---------|---|---------|---|
| 33 8502 | XCA (XRAY CENTRIFUGAL-AXIAL) CLUTCH SET - REVERSE         | 33 8594 | CLUTCH PRELOAD ADJ. NUT - HUDY SPRING STEEL™  |
| 33 8513 | XCA CLUTCHBELL - HIGH DYNAMIC - HUDY STEEL                | 33 8720 | ALU STAND FOR ENGINE MOUNT (2)                |
| 33 8516 | XCA ALU 7075 T6 HARDCOATED PINION GEAR - 16T (1ST)        | 33 8722 | ALU ENGINE MOUNTS - LOWER (L+R)               |
| 33 8521 | XCA ALU 7075 T6 HARDCOATED PINION GEAR - 21T (2ND)        | 33 8732 | EXHAUST MOUNTING WIRE - EXTRA-LONG            |
| 33 8533 | FLYWHEEL REVERSE - FLAT - ALU 7075 T6 - HARDCOATED - 32MM | 35 9050 | BALL-BEARING 5x10x4 STEEL SEALED - GREASE (2) |
| 33 8540 | FLYWHEEL COLLAR 7MM - NOVAROSS (OPTION)                   | 90 2306 | HEX SCREW SH M3x6 (10)                        |
| 33 8541 | FLYWHEEL COLLAR 6MM - PICCO (OPTION)                      | 90 3310 | HEX SCREW SFH M3x10 (10)                      |
| 33 8550 | FLYWHEEL NUT - HUDY SPRING STEEL™                         | 90 8310 | HEX SCREW SOCKET HEAD CAP M3x10 (10)          |
| 33 8556 | CLUTCH BELL BUSHING - HUDY SPRING STEEL™                  | 90 8316 | HEX SCREW SOCKET HEAD CAP M3x16 (10)          |
| 33 8561 | CLUTCH FLYWEIGHT SET - HIGH DYNAMIC                       | 93 0150 | CARBIDE BALL-BEARING AXIAL F5-10 5x10x4       |
| 33 8572 | ALU CLUTCH DISK - CONICAL - SWISS 7075 T6                 | 94 0508 | BALL-BEARING 5x8x2.5 RUBBER SEALED - OIL (2)  |
| 33 8577 | CLUTCH SHOE - HIGH DYNAMIC - YELLOW                       | 96 4073 | WASHER S 7x10x0.2 (10)                        |
| 33 8581 | CLUTCH SPRING - MEDIUM                                    | 96 4074 | WASHER S 7x10x0.3 (10)                        |
| 33 8584 | SHIM 5x7x0.2 (10)   | 96 4075 | WASHER S 7x10x0.5 (10)                        |
| 33 8585 | SHIM 5x7x0.3 (10)   |         |   |
| 33 8586 | SHIM 5x7x0.5 (10)   |         |   |
| 33 8590 | CLUTCH SPRING CUP - ALU 7075 T6                           |         |   |

# 8. ENGINE & CLUTCH



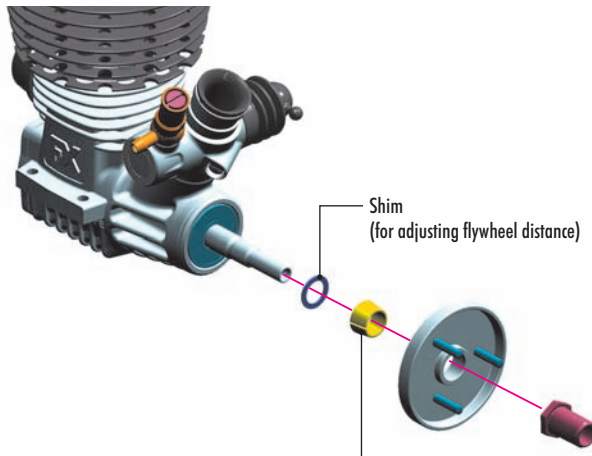
964073  
57x10x0.2



964074  
57x10x0.3



964075  
57x10x0.5

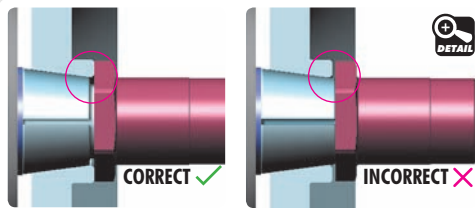


### XRAY FLYWHEEL COLLAR

#338540	ø6.0mm	OPTION
#338541	ø7.0mm	OPTION

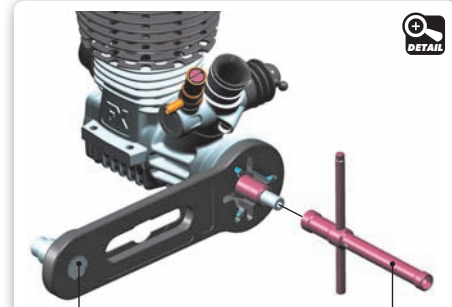


Use the flywheel collar that comes with your engine, or use optional XRAY collars.



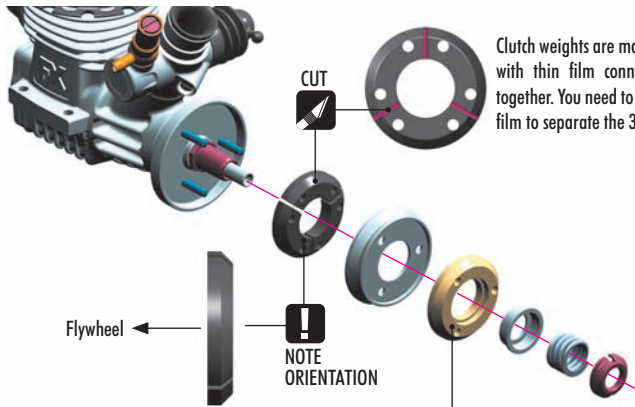
The flywheel collar must stay inside the flywheel.

If the flywheel collar is too long – if it is flush with the flywheel or protrudes slightly – remove a small amount of material from the end, or use an XRAY collar.

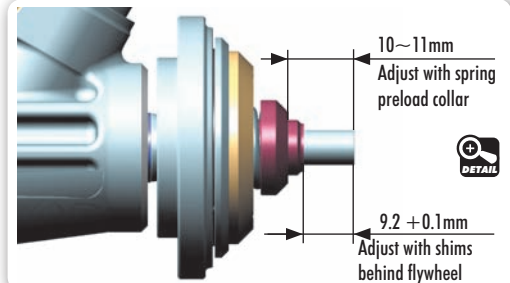


**NT1 TIP** Hold the flywheel using HUDY Flywheel Tool #182010

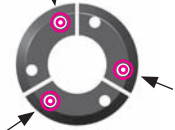
Tighten the clutch nut using HUDY tool #107581



Clutch weights are machined as 1 piece, with thin film connecting the pieces together. You need to cut the connecting film to separate the 3 shoes.



INITIAL POSITION for flywheel pins



#338578  
CLUTCH SHOE- HIGH-DYNAMIC - RED



### CLUTCH SPRINGS

#338580	SOFT	OPTION
#338581	MEDIUM	INCLUDED
#348541	ULTRA-STABLE	OPTION
#338583	CONICAL WASHER SET	OPTION



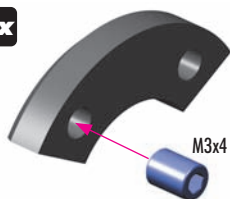
### TECH TIP FOR EXTRA BOTTOM-END POWER

For extra bottom-end power, thread a M3x4 setscrew (#901304) into each clutch flyweight as shown. The set-screw will add more weight to the end of the flyweight which will cause the flyweight to open harder, giving more bottom-end power. This is recommended for high-traction tracks where bottom-end power is required.

#### IMPORTANT!

Install set-screw into free (non-pivot) end of flyweight.

3x



(#901304 NOT INCLUDED)

After inserting the set-screw, some excess material may come out of the hole. REMOVE this excess material with a knife.



CUTAWAY VIEW

### TECH TIP FOR NT1 CLUTCH SHOE

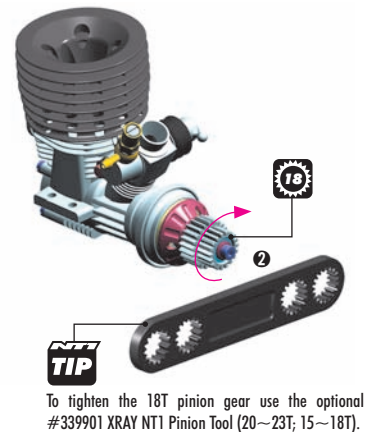
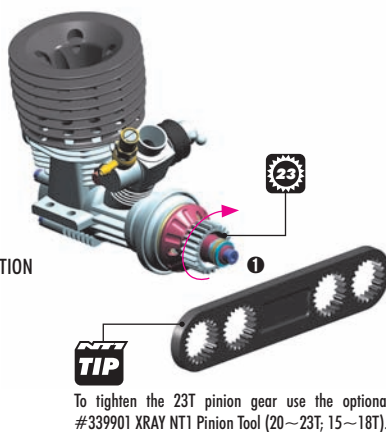
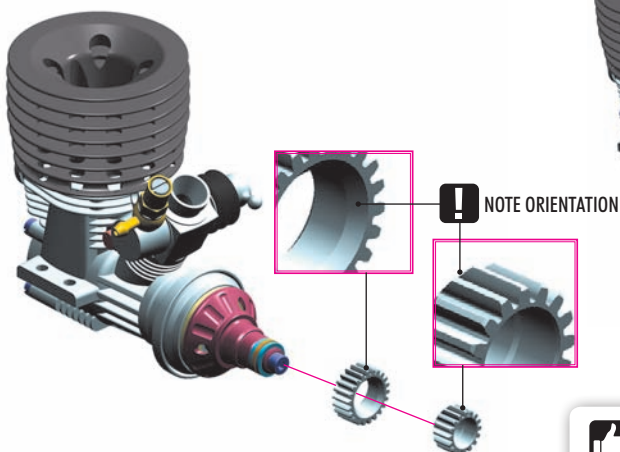
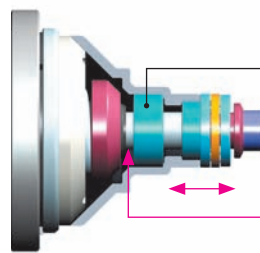
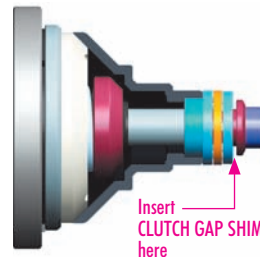
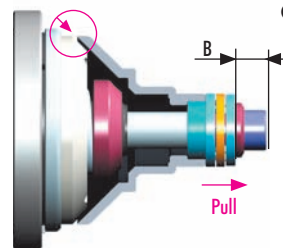
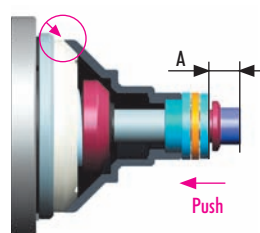
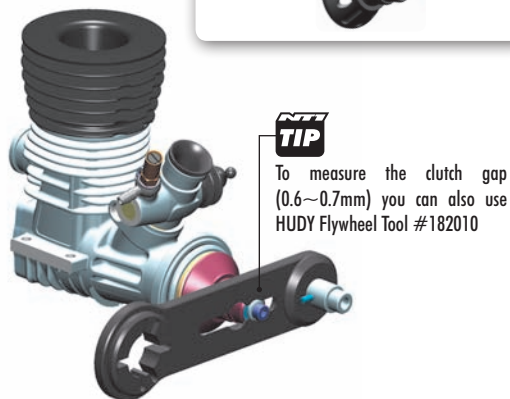
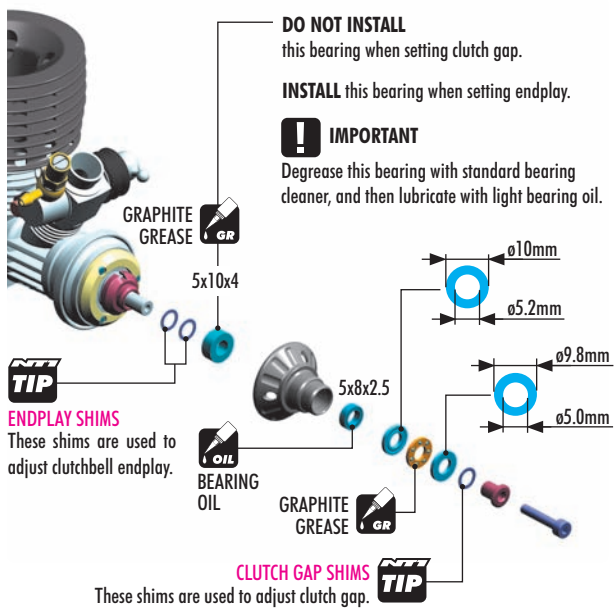
To ensure that the NT1 clutch shoe works properly and for a long time, it is very important to run in the clutch shoe.



Please follow these run-in steps to help ensure proper clutch operation:

- 1 Install clutch according to this Instruction Manual.
- 2 Check that the spring preload is not too much; for run-in process use less preload.
- 3 When you start the engine, the clutch should start to engage under low RPM. If the clutch engages only under high RPM, stop the engine and loosen the spring preload collar. Repeat until the clutch engages under low RPM.
- 4 Run in the clutch shoe on the track, or on the starter box if you have only limited time. (We recommend running it in on the track.)
- 5 Run in the clutch shoe for 1 tank of fuel using a soft preload setting, and then after that slightly tighten the spring preload. DO NOT run in the clutch shoe under high RPM.
- 6 Continue this process until the clutch shoe is properly run in; this will be indicated by a dark and glossy surface colour on the top of the clutch shoe.





<b>OPTION</b>	2ND PINION GEARS - XCA HARDCOATED		
	#338520	20T (2nd)	OPTION
	#338521	21T (2nd)	INCLUDED
	#338522	22T (2nd)	OPTION
	#338523	23T (2nd)	OPTION
	#338524	24T (2nd)	OPTION

<b>OPTION</b>	1ST PINION GEARS - XCA HARDCOATED		
	#338515	15T (1st)	OPTION
	#338516	16T (1st)	INCLUDED
	#338517	17T (1st)	OPTION
	#338518	18T (1st)	OPTION

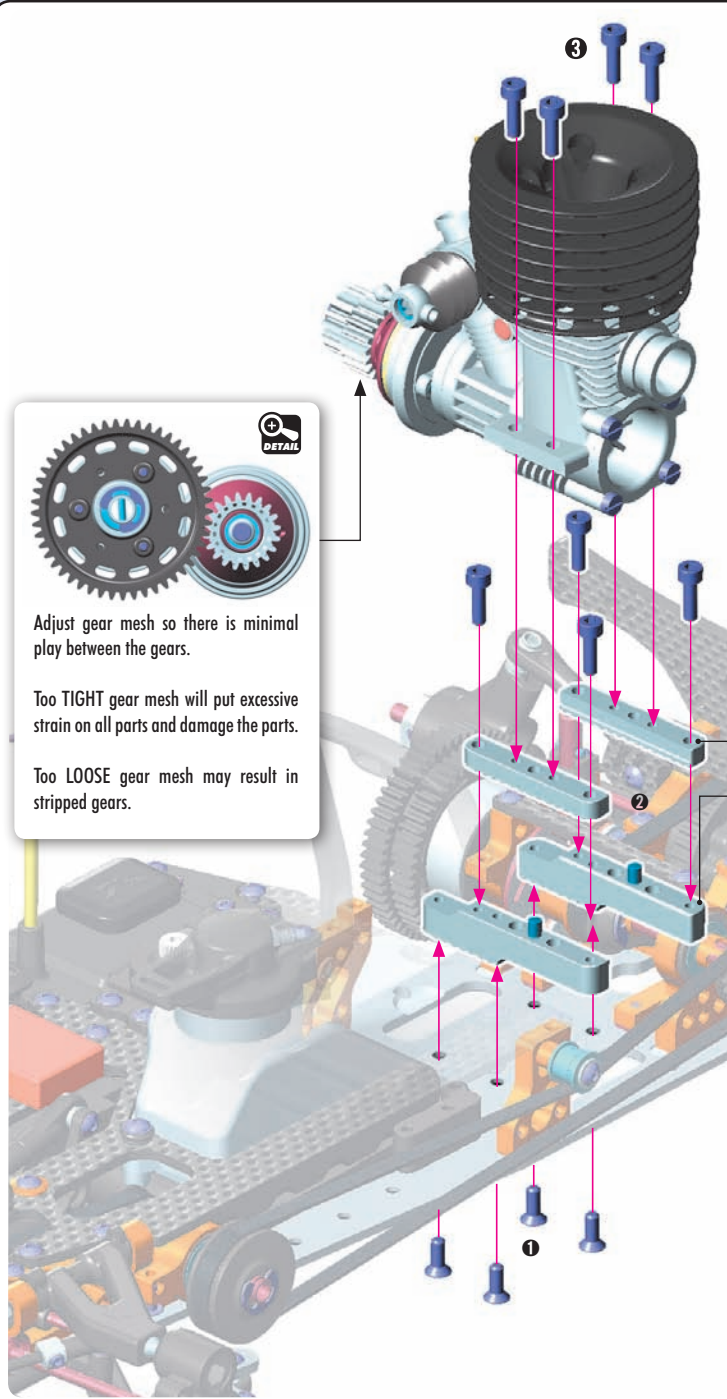
# 8. ENGINE & CLUTCH



903310  
SFH M3x10



908310  
SCH M3x10



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

Too **TIGHT** gear mesh will put excessive strain on all parts and damage the parts.

Too **LOOSE** gear mesh may result in stripped gears.

The engine should be installed on the split mounts as follows:

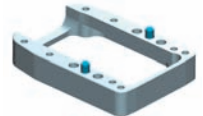
- STEP 1:** Attach lower mounts to chassis.
- STEP 2:** Attach upper mounts to lower mounts.
- STEP 3:** Attach engine to upper mounts.
- STEP 4:** Loosen lower mount screws, adjust gear mesh, and then retighten lower mount screws.

After the gear mesh is initially set, you can remove the engine AND upper mounts as one assembly by removing the screws holding the upper mounts to the lower mounts. When re-installing the engine, you will not have to re-adjust the gear mesh.

**NOTE ORIENTATION**

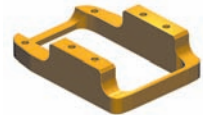
**NOTE ORIENTATION**

**#338713**  
**ALU MONOBLOCK ENGINE MOUNT**  
OPTION

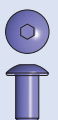


Reinforces the chassis flex around the engine area for improved steering. **RECOMMENDED FOR MEDIUM-HIGH TRACTION TRACKS**

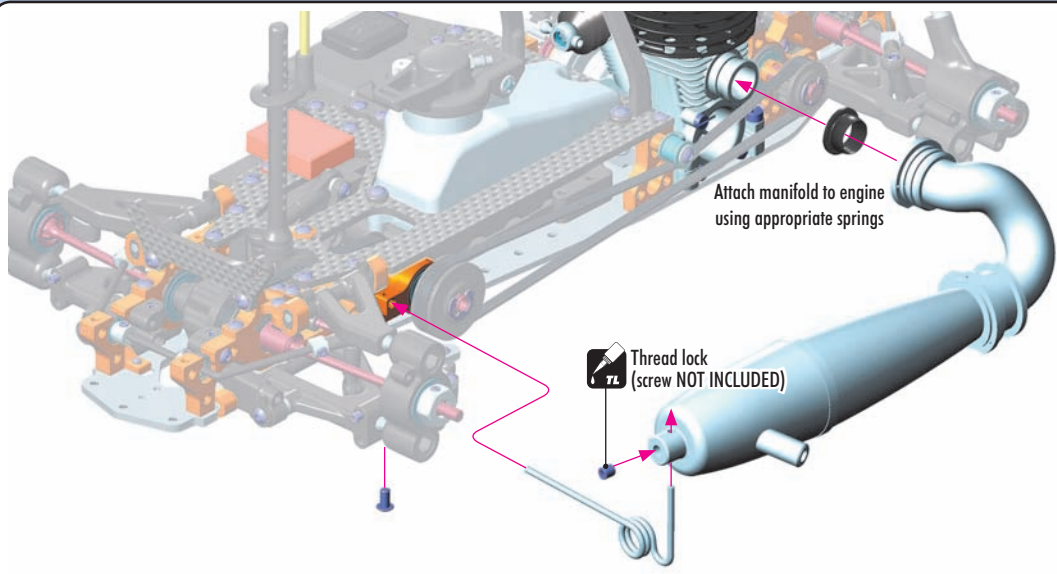
**#338721**  
**BRASS 1-PIECE ENGINE MOUNT**  
OPTION



Reinforces the chassis flex around the engine area and moves the weight balance more to the rear for even more steering and rotation of the car. **RECOMMENDED FOR HIGH-TRACTION TRACKS**



902306  
SH M3x6

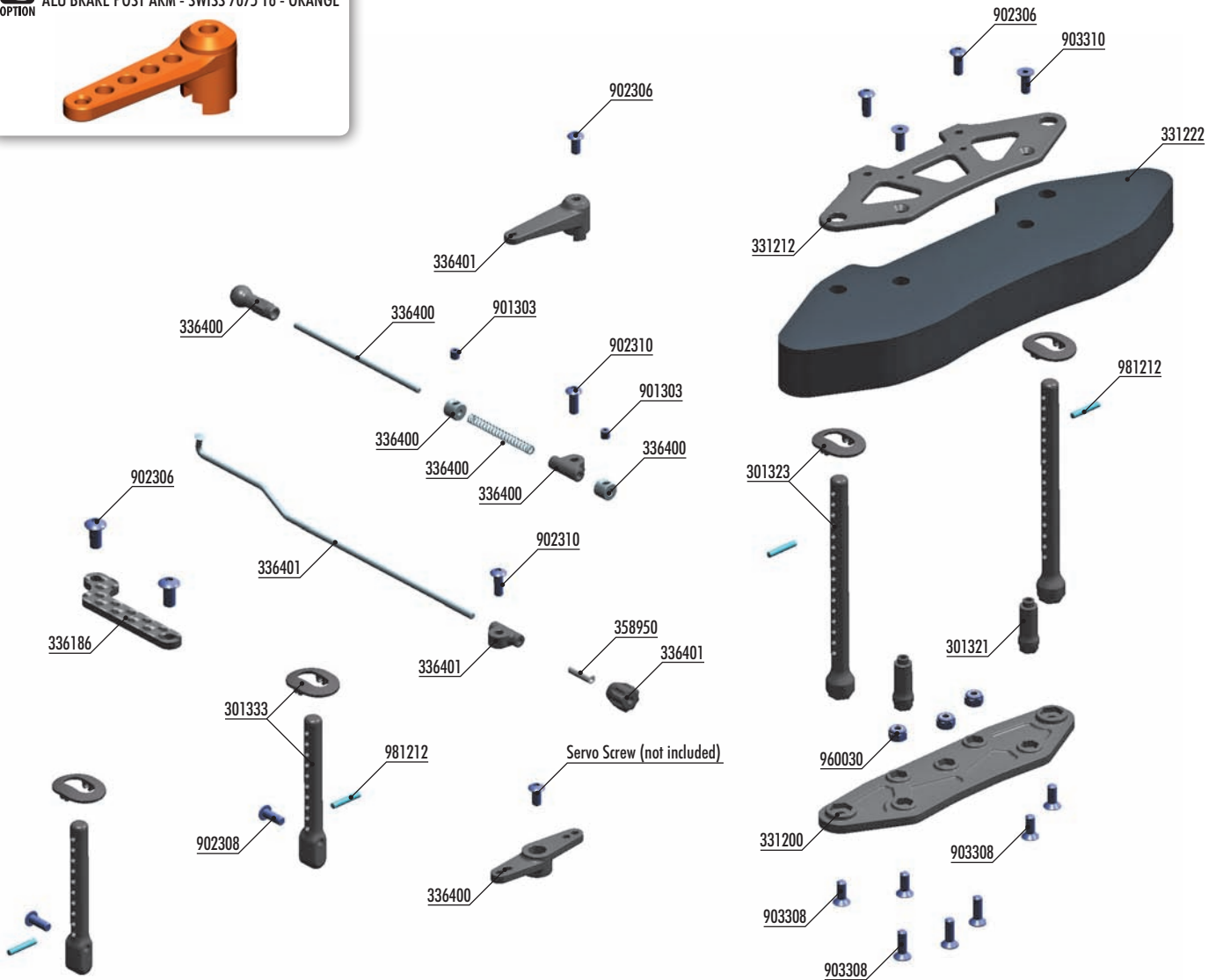


Attach manifold to engine using appropriate springs

**Thread lock (screw NOT INCLUDED)**

# 9. CARB LINKAGE & BODYMOUNTS

#334061-0  
ALU BRAKE POST ARM - SWISS 7075 T6 - ORANGE  
OPTION



### FRONT BODY MOUNTS

#301322	0mm	OPTION
#301323	+1mm	INCLUDED
#301324	+2mm	OPTION



#301351-0  
ALU ADJUSTABLE BODY POST STOP (2)

Very handy, easily externally adjustable body post from Swiss 7075 T6 aluminum. Allows for adjustment of body height by 3mm without needing to change the position on the body post.



#331201  
COMPOSITE WIDE BUMPER



The wider front bumper is used without the foam bumper.

The wider front bumper improves steering, but may allow more front damage under hard crashes.



#331216  
GRAPHITE UPPER HOLDER FOR BUMPER 2.5MM



#331221  
FOAM BUMPER FOR ANTI-ROLL BAR - HARD - V2



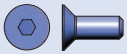
## BAG

09

- 30 1321 COMPOSITE BRACE FOR BUMPER (2)
- 30 1323 FRONT BODY MOUNT SET +1MM HEIGHT
- 30 1333 REAR BODY MOUNT SET +1MM HEIGHT
- 33 1200 COMPOSITE BUMPER
- 33 1212 COMPOSITE UPPER HOLDER FOR BUMPER
- 33 1222 FOAM BUMPER FOR ANTI-ROLL BAR
- 33 6186 GRAPHITE REAR STIFFENER
- 33 6400 THROTTLE SYSTEM SET
- 33 6401 BRAKE SYSTEM SET
- 35 8950 SILICONE TUBING 1M (2.4 x 5.5MM)

- 35 8951 SIL. TUBING 1M (2.4 x 5.5MM) YELLOW (OPTION)
- 90 1303 HEX SCREW SB M3x3 (10)
- 90 2306 HEX SCREW SH M3x6 (10)
- 90 2308 HEX SCREW SH M3x8 (10)
- 90 2310 HEX SCREW SH M3x10 (10)
- 90 3308 HEX SCREW SFH M3x8 (10)
- 90 3310 HEX SCREW SFH M3x10 (10)
- 96 0030 NUT M3 (10)
- 98 1212 PIN 2x12 (10)

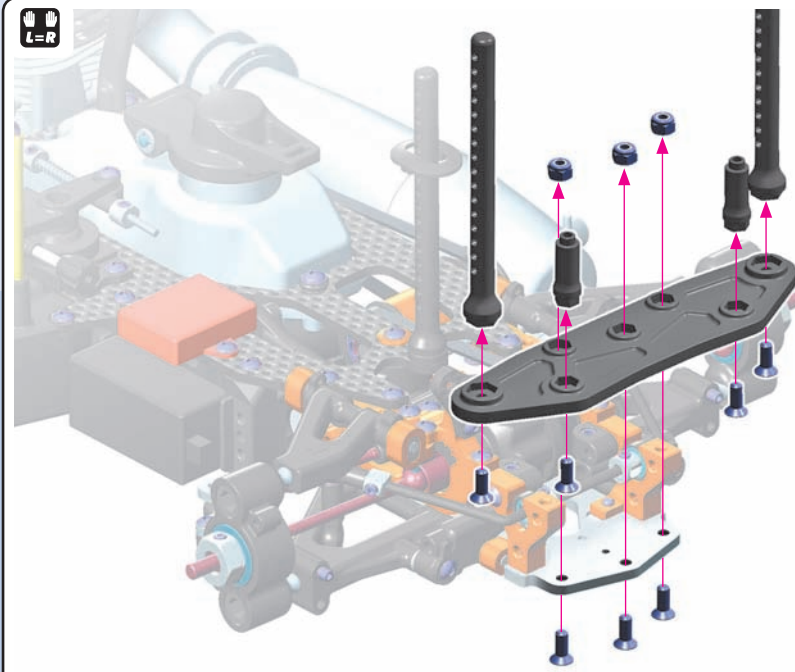
# 9. CARB LINKAGE & BODYMOUNTS



903308  
SFH M3x8



960030  
N M3

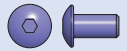


#331201  
COMPOSITE WIDE BUMPER



The wider front bumper is used without the foam bumper.

The wider front bumper improves steering, but may allow more front damage under hard crashes.



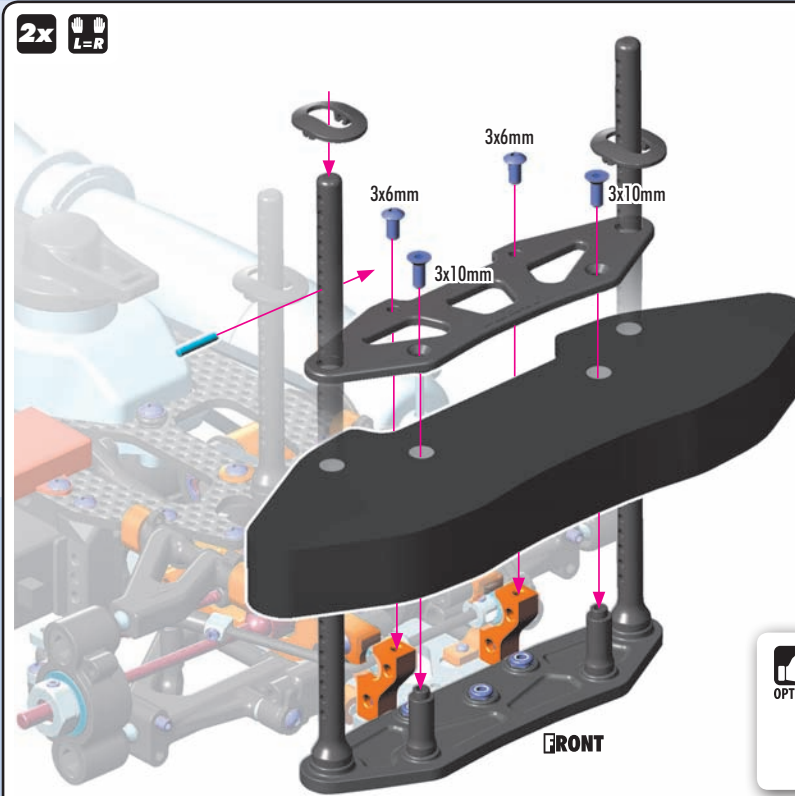
902306  
SH M3x6



903310  
SFH M3x10



981212  
P 2x12



#331216  
GRAPHITE UPPER HOLDER FOR BUMPER 2.5MM



#331221  
FOAM BUMPER FOR ANTI-ROLL BAR - HARD - V2



#301351-0  
ALU ADJUSTABLE BODY POST STOP (2)



### FRONT BODY MOUNTS

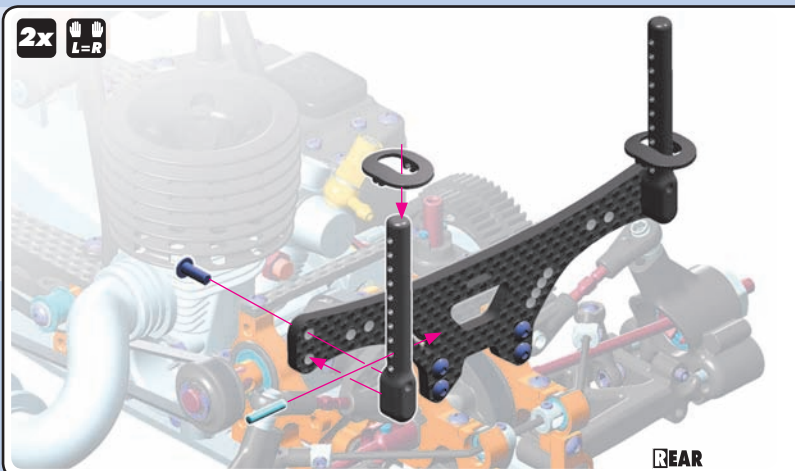
#301322	0mm	OPTION
#301323	+1mm	INCLUDED
#301324	+2mm	OPTION



902308  
SH M3x8



981212  
P 2x12



### REAR BODY MOUNTS

#301332	0mm	INCLUDED
#301333	+1mm	OPTION
#301334	+2mm	OPTION



# 9. CARB LINKAGE & BODYMOUNTS

901303  
SB M3x3



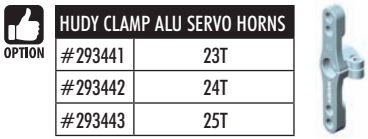
902310  
SH M3x10



Insert rod through hole in brake arm. Bend rod to proper shape.

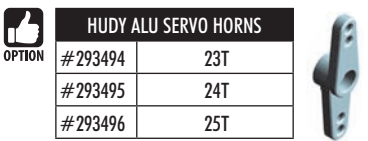


**OPTION** #334061-0  
ALU BRAKE POST ARM - SWISS 7075 T6 - ORANGE



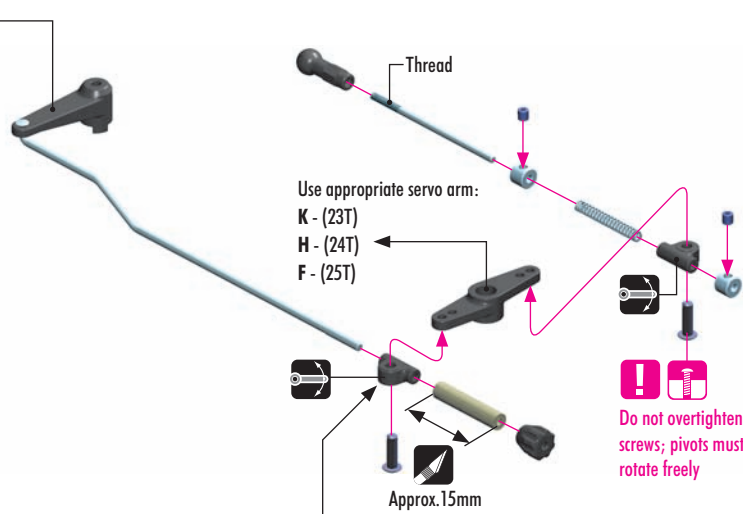
**OPTION** HUDY CLAMP ALU SERVO HORNS

#293441	23T
#293442	24T
#293443	25T



**OPTION** HUDY ALU SERVO HORNS

#293494	23T
#293495	24T
#293496	25T



Use appropriate servo arm:  
K - (23T)  
H - (24T)  
F - (25T)

Approx. 15mm

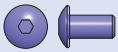


Do not overtighten screws; pivots must rotate freely

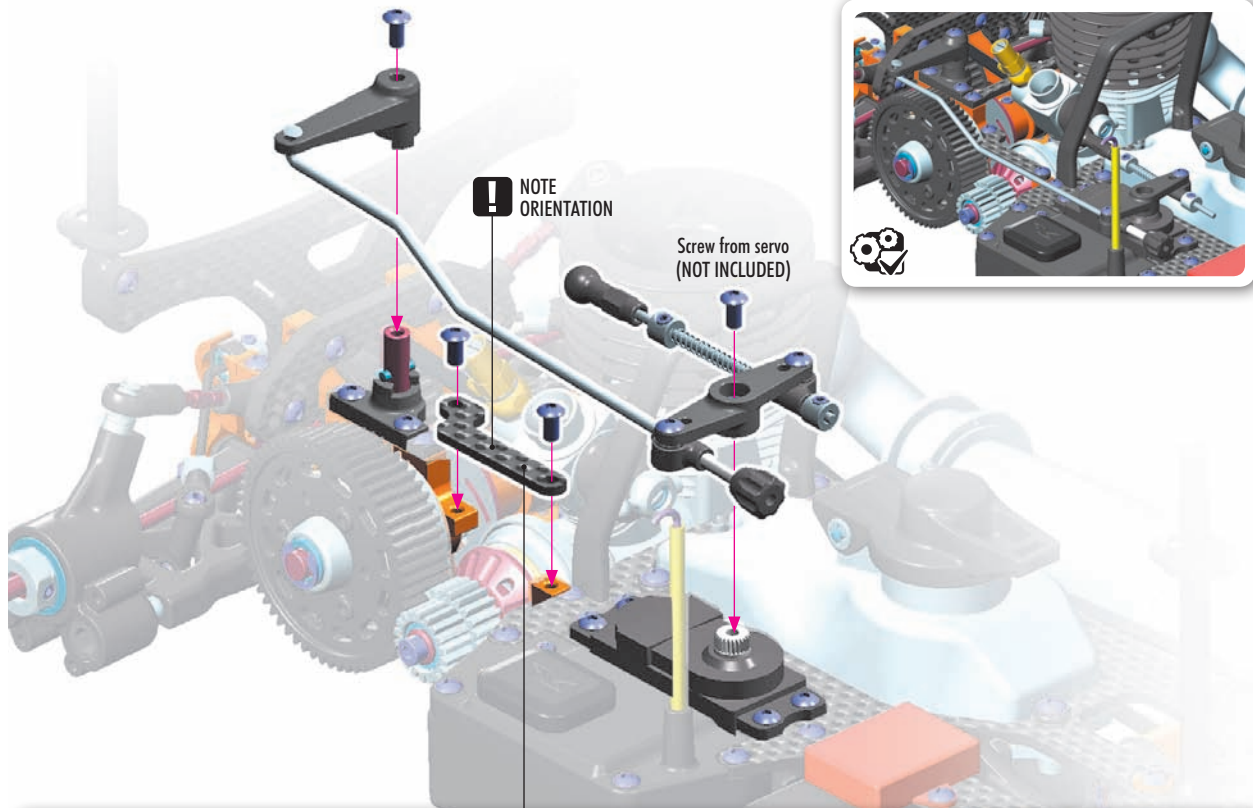


**IMPORTANT:**

The composite holders and servo horn orientation depend on the servo type and servo position which can be mounted either from top of the radio plate or from the bottom.

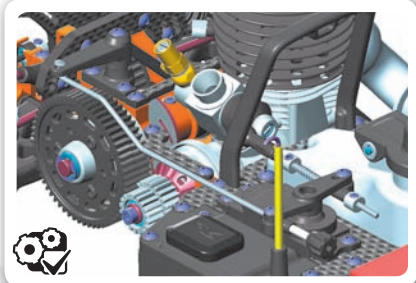


902306  
SH M3x6



**NOTE ORIENTATION**

Screw from servo (NOT INCLUDED)



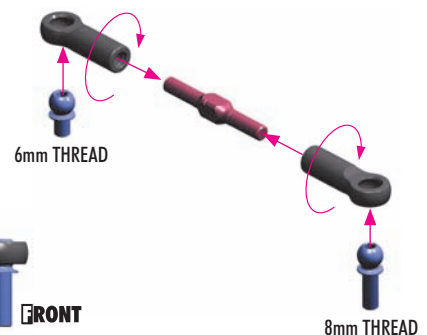
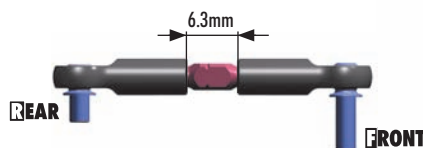
### OPTIONAL REAR STIFFENER LINK

- #332630 ADJ. TURNBUCKLE L/R 25 MM - HUDY SPRING STEEL™ (2)
- #302663 COMPOSITE BALL JOINT 4.9MM - OPEN (8)
- #362650 BALL END 4.9MM WITH THREAD 6MM (2)
- #362651 BALL END 4.9MM WITH THREAD 8MM (2)

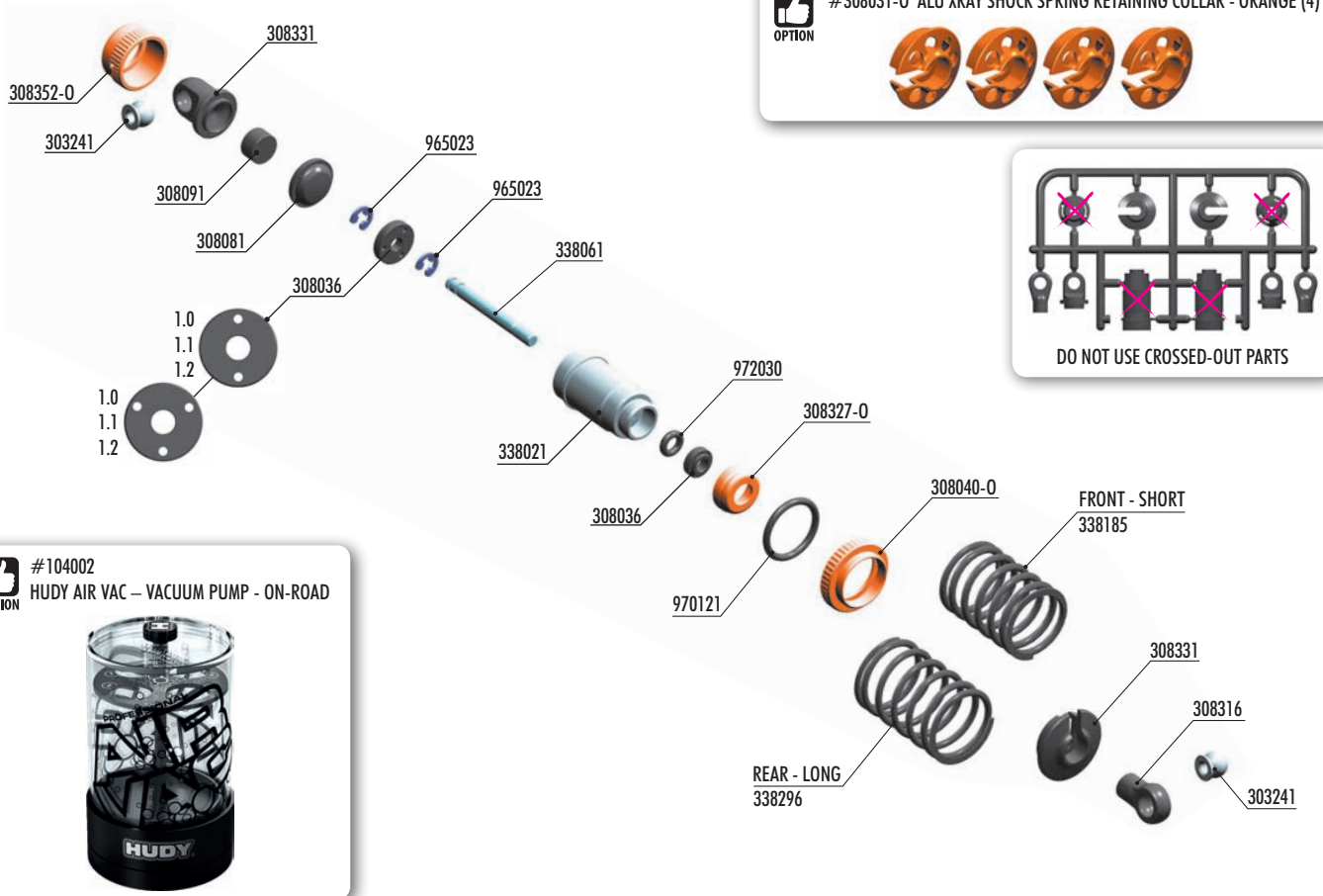


### IMPORTANT

It is important to have the exact length of the linkage. Too long or too short link will cause the chassis to bend and unwanted tweak problems. To check that the length is correct, composite balls must move freely.



# 10. SHOCK ABSORBERS



**#308031-0 ALU XRAY SHOCK SPRING RETAINING COLLAR - ORANGE (4)**  
 OPTION

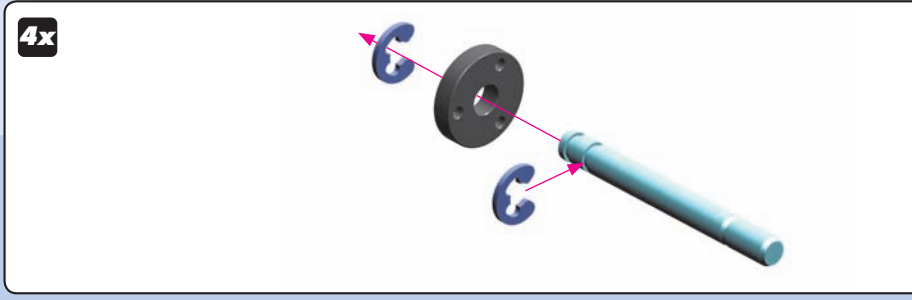
**DO NOT USE CROSSED-OUT PARTS**

**#104002 HUDY AIR VAC – VACUUM PUMP - ON-ROAD**  
 OPTION

**BAG**  
**10**

- |   |   |
|---|---|
| 303241 BALL UNIVERSAL 5.8 MM HEX (4)                  | 338001-0 ALU SHOCK ABSORBER-SET - ORANGE (2)                                  |
| 308036 COMPOSITE NON-ADJUSTABLE PISTONS - DELRIN - V4 | 338021 ALU SHOCK BODY (2)   |
| 308040-0 SHOCK ADJ. NUT ALU + O-RING - ORANGE (4)     | 338061 HARDENED SHOCK SHAFT (2)   |
| 308081 SHOCK ABSORBER MEMBRANE - LOW (4)              | 338185 SPRING-SET D=1.8 (33 LB) LIGHT-PURPLE - MEDIUM-MEDIUM HARD - FRONT (2) |
| 308091 SHOCK FOAM INSERTS - LOW (4)                   | 338296 SPRING-SET D=1.7 (28 LB) VIOLET - MEDIUM - REAR (2)                    |
| 308316 COMPOSITE SHOCK BALL JOINT - OPEN (4)          | 965023 E-CLIP 2.3 (10)  |
| 308327-0 ALU CAP FOR XRAY SHOCK BODY - ORANGE (2)     | 970121 O-RING 12.1x1.6 (10)   |
| 308331 COMPOSITE FRAME SHOCK PARTS 4-STEP - SHORT     | 972030 SILICONE O-RING 3x2 (10)   |
| 308352-0 ALU SHOCK CAP-NUT WITH HOLE - ORANGE (2)     |   |

**965023**  
 C 2.3



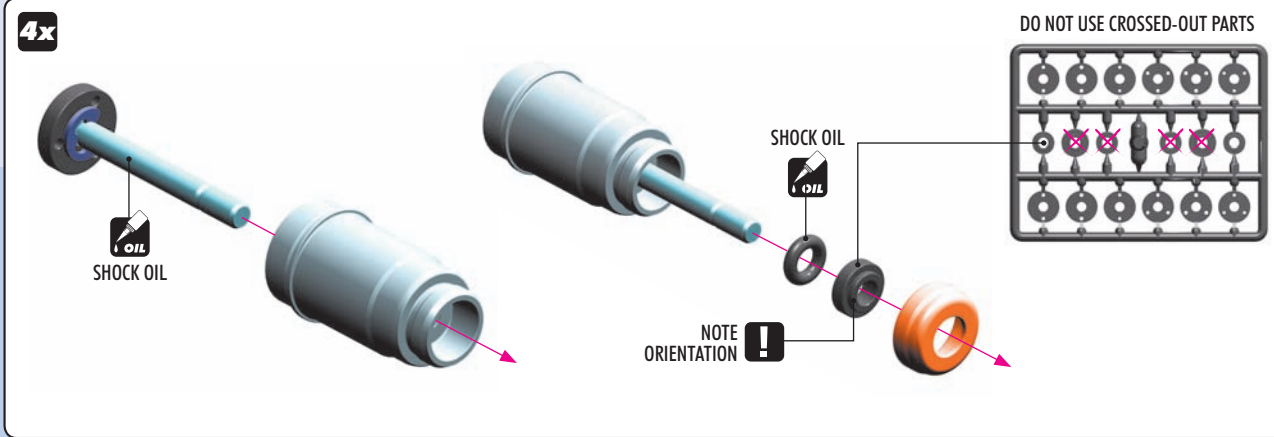
**1.0**  
**1.1**  
**1.2**

**4x** **1.1** INITIAL SETTING

**1.2**

**DETAIL**

**972030**  
 O 3x2

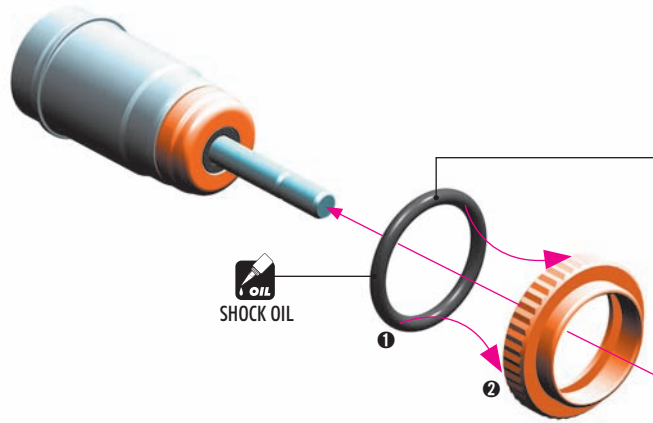


# 10. SHOCK ABSORBERS

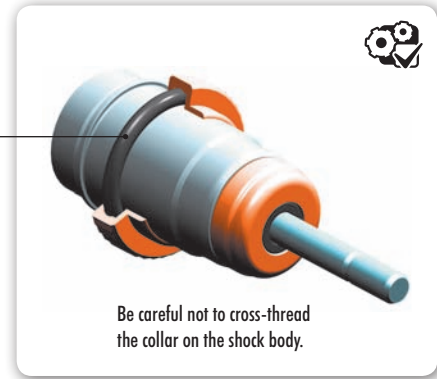


970121  
0 12.1x1.6

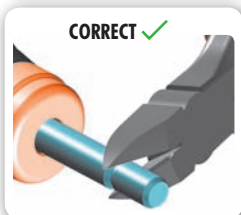
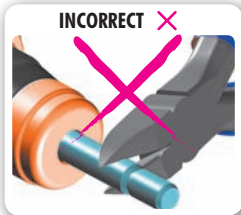
4x



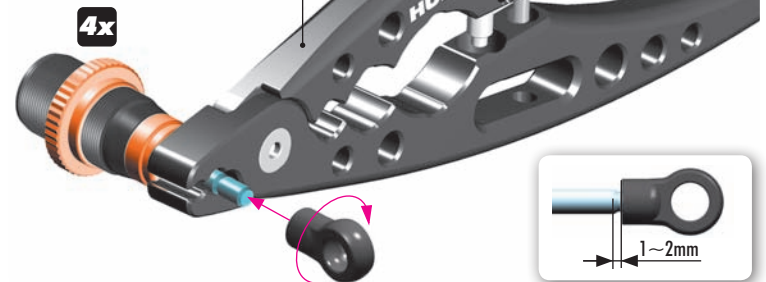
SHOCK OIL



Be careful not to cross-thread the collar on the shock body.



**TIP** Install the ball joint with Professional Multi Tool (HUDY #183011)



4x

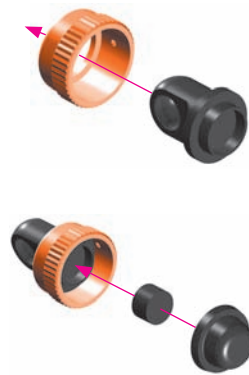


### SHOCK FILLING

- 1 Fully extend the piston rod so the piston is at the bottom of the shock body.
- 2 Hold the shock upright and slightly overfill the shock body with shock oil.
- 3 Let the oil settle and allow air bubbles to rise to the top. Slowly move the piston up and down until no more air bubbles appear. Add shock oil as necessary.
- 4 Pull the piston rod most of the way out of the shock body. Let the shock rest for 5 minutes to allow the air bubbles to escape.

**TIP** #104002  
HUDY AIR VAC – VACUUM PUMP - ON-ROAD

4x



### CUTAWAY VIEW



After you insert the membrane ensure that it sits properly all around the alu cup properly.

4x



When installing the shock cap assembly on the shock body, some oil will leak out... this is normal.

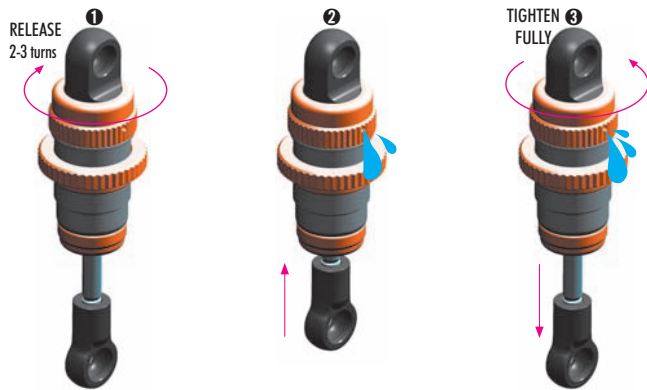
Fully tighten the cap and clean off any excess oil.

After the shock is assembled, the shock rod will push itself out of the shock body fairly quickly.

Follow the next procedure to adjust the rebound.

# 10. SHOCK ABSORBERS

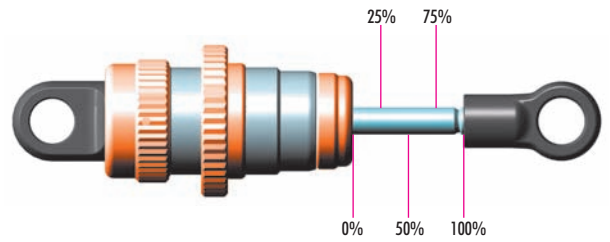
4x



## REBOUND ADJUSTMENT

AFTER THE SHOCK IS ASSEMBLED YOU HAVE TO SET THE SHOCK REBOUND.

- 1 Release the shock cap by 2-3 turns.
- 2 Push the shock shaft fully up. For the first time the extra oil will release through the hole in the alu cap-nut.
- 3 Tighten the shock cup. When tightening the shock cap, extra oil will again release through the hole in the alu cap-nut. When tightening, the shock shaft will push out from the shock body.



## REBOUND CHECK

It is very important to push the shock shaft into the shock body slowly otherwise air can come into the shock body which would create bubbles.

- 100% rebound - repeat step 2 and 3 two - three times
- 75% rebound - repeat step 2 and 3 until the shock shaft will push out 75% of its length
- 50% rebound - repeat step 2 and 3 until the shock shaft will push out 50% of its length
- 25% rebound - repeat step 2 and 3 until the shock shaft will push out 25% of its length
- 0% rebound - repeat step 2 and 3 until the shock shaft will push out 0% of its length

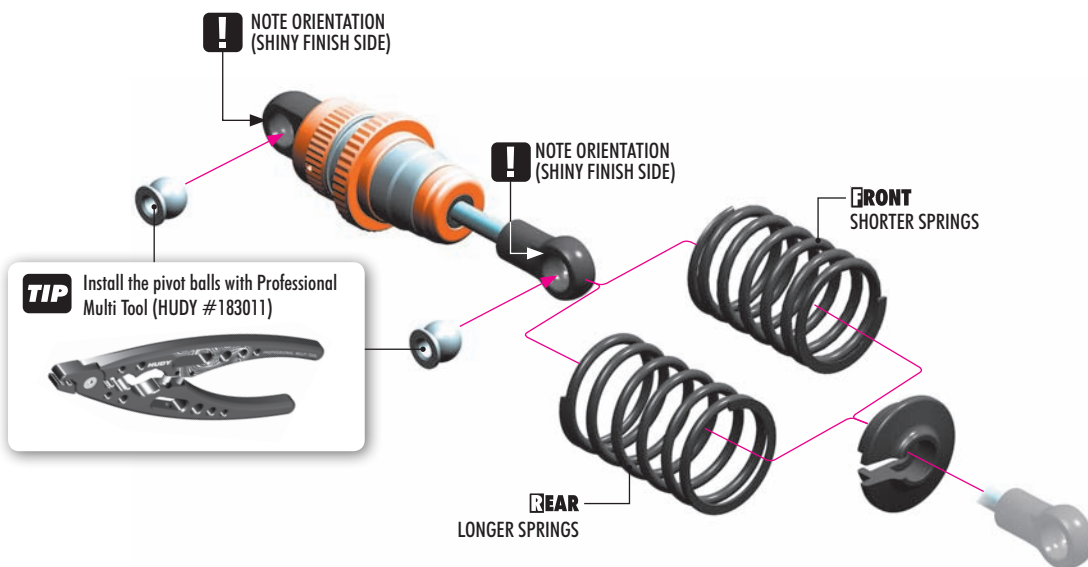
If the shock shaft does not rebound enough, you will have to refill the shock with shock oil, and then repeat the bleeding and rebound adjustment procedure.

4x

## SHOCK LENGTH ADJUSTMENT:

It is VERY important that all shocks are equal length.

Fully extend the shock absorber and measure the end-to-end length; we recommend using digital calipers to give an accurate measurement. If a shock absorber is shorter or longer than others, adjust the shock length by tightening or loosening the ball joint on the shock rod.



FRONT SPRINGS		
338182	PROGRESSIVE C=4.0-5.6	OPTION
338183	C=4.6 DARK-BLUE	OPTION
338184	C=5.0 VIOLET	OPTION
338185	C=5.4 LIGHT-PURPLE	INCLUDED
338186	C=5.8 PURPLE	OPTION
338187	C=6.3 LIGHT-RED	OPTION



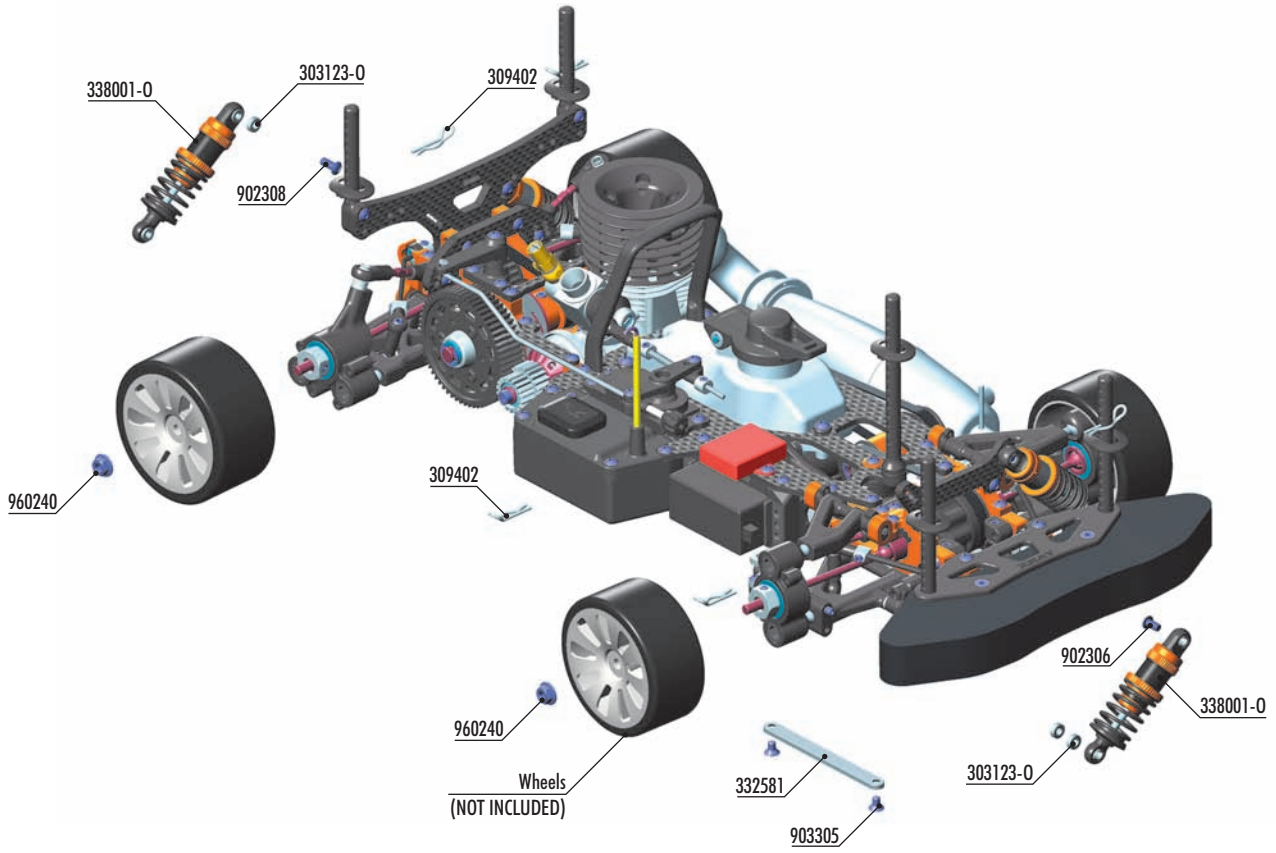
REAR SPRINGS		
338281	PROGRESSIVE C=3.7-4.7	OPTION
338286	C=3.6 DARK-BLUE	OPTION
338296	C=4.0 VIOLET	INCLUDED
338287	C=4.5 LIGHT-PURPLE	OPTION
338297	C=5.0 PURPLE	OPTION
338288	C=5.6 LIGHT-RED	OPTION



#308031-0  
ALU XRAY SHOCK SPRING RETAINING COLLAR - ORANGE (4)







**BAG**

**09**

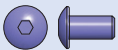
- 30 3123-0 ALU SHIM 3x6x2.0MM - ORANGE (10)
- 30 9402 BODY CLIP FOR 6MM BODY POST (4)
- 33 2581 ALU FRONT CHASSIS BRACE

- 90 2306 HEX SCREW SH M3x6 (10)
- 90 2308 HEX SCREW SH M3x8 (10)
- 90 3305 HEX SCREW SFH M3x5 (10)
- 96 0240 NUT M4 WITH SERRATED FLANGE (10)

- 33 8001-0 ALU SHOCK ABSORBER-SET - ORANGE (2)

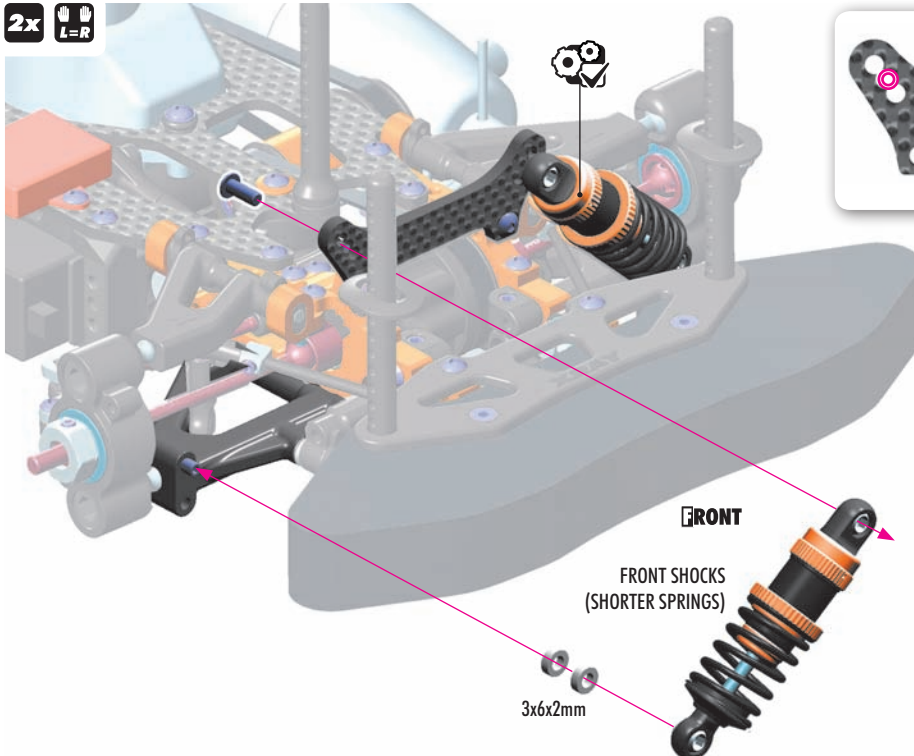
**10**

303123-0  
SHIM 3x6x2



902306  
SH M3x6

**2x**



**FRONT**

FRONT SHOCKS  
(SHORTER SPRINGS)

3x6x2mm

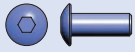


SHOCK POSITION  
ADJUSTMENT

# FINAL ASSEMBLY

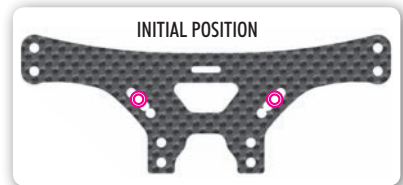
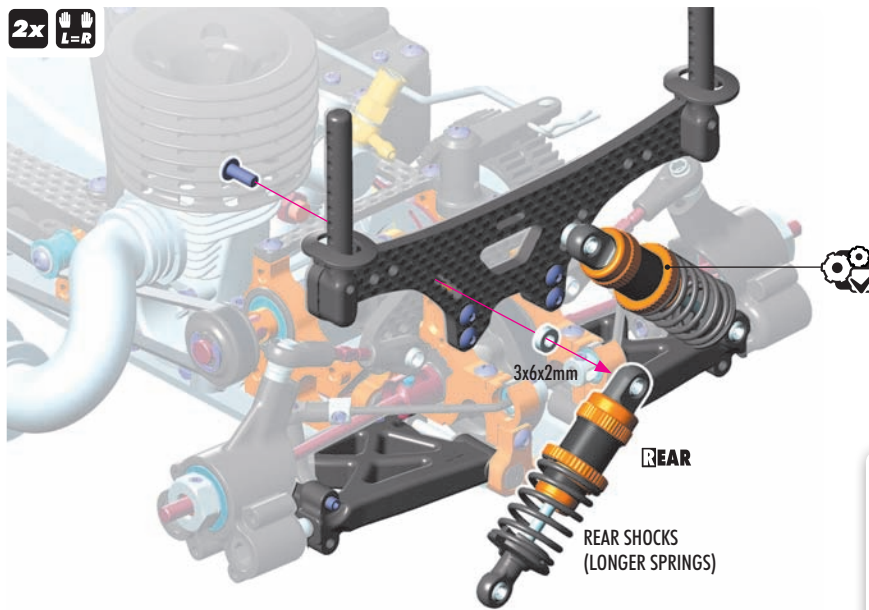
**10**

303123-0  
SHIM 3x6x2



902308  
SH M3x8

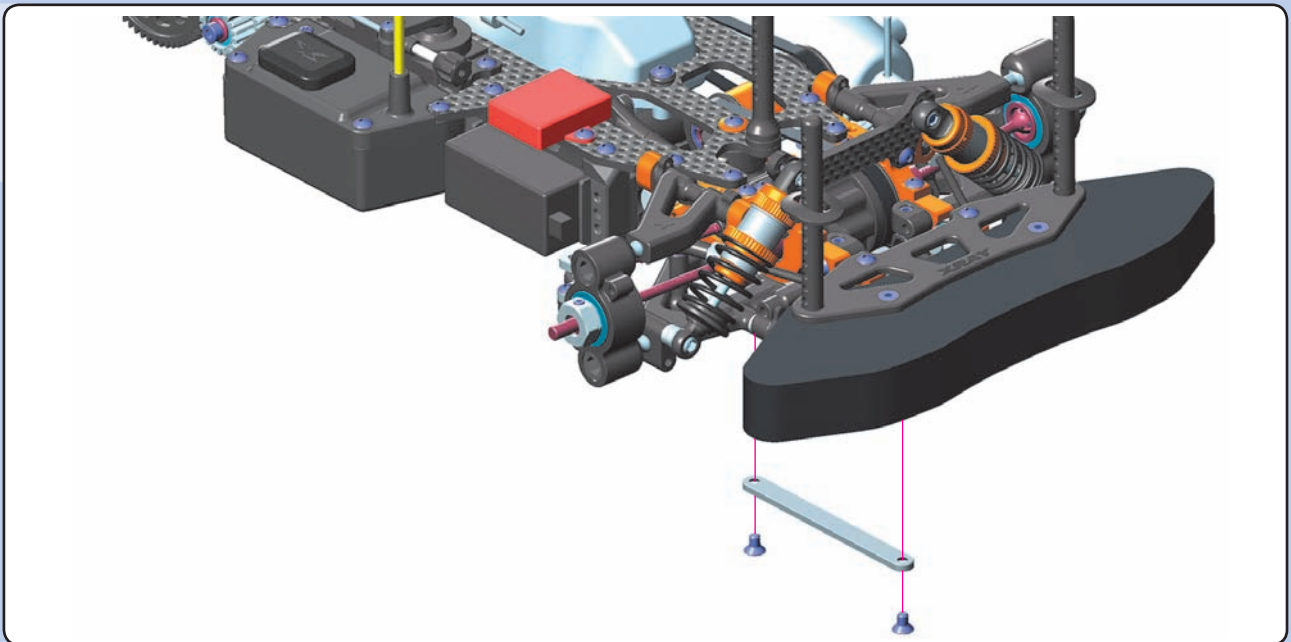
**2x**  
L=R



SHOCK POSITION  
ADJUSTMENT



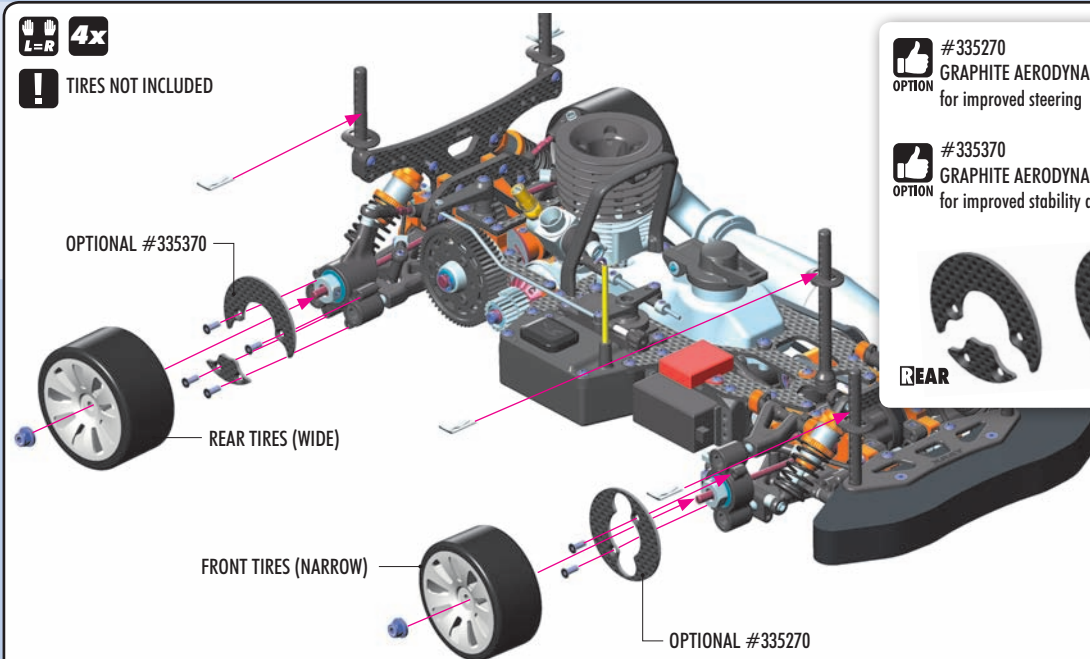
903305  
SFH M3x5



960240  
N M4

**4x**  
L=R

**!** TIRES NOT INCLUDED



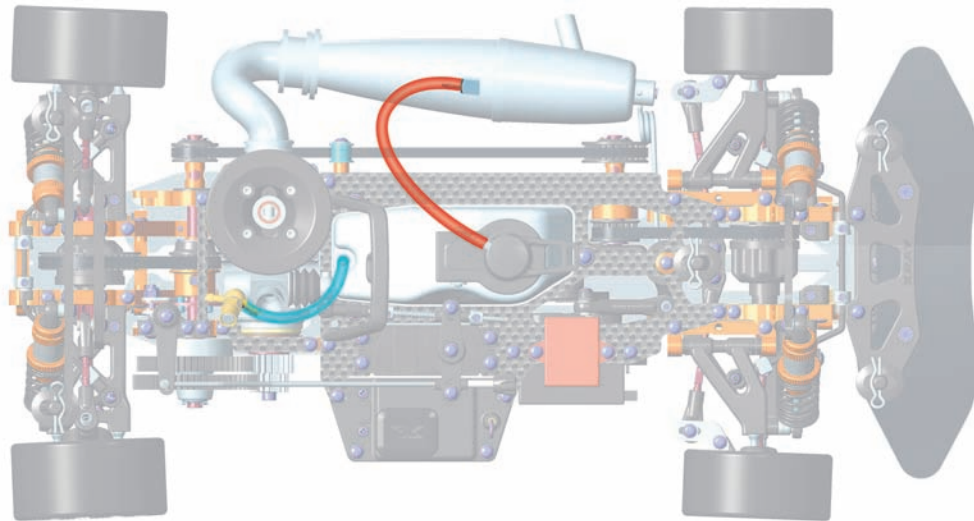
**OPTION** #335270  
GRAPHITE AERODYNAMIC DISK - FRONT  
for improved steering

**OPTION** #335370  
GRAPHITE AERODYNAMIC DISK - REAR  
for improved stability and traction



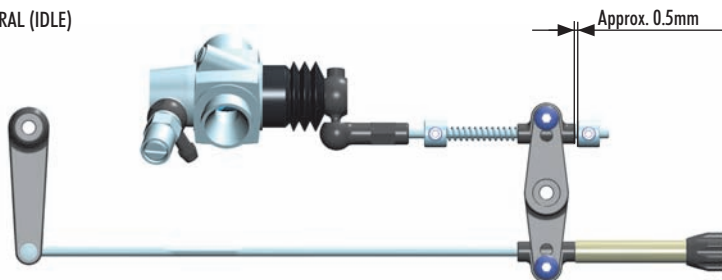
Cut 2 pieces of silicone tubing and install as follows: **SILICONE TUBING MARKED AS RED**  
muffler to fuel tank cap

**SILICONE TUBING MARKED AS BLUE**  
fuel tank to carburetor



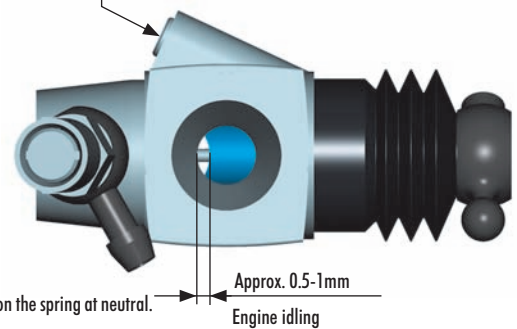
## CARB LINKAGE ADJUSTMENT

### NEUTRAL (IDLE)



### IDLE ADJUSTMENT SCREW

Do not allow carburetor to close to less than **0.5mm**.



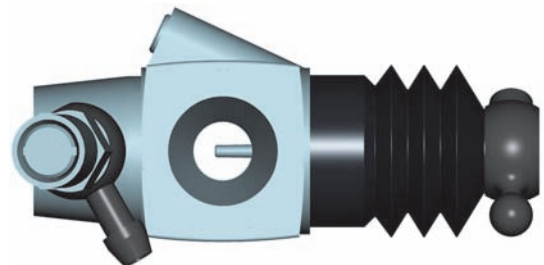
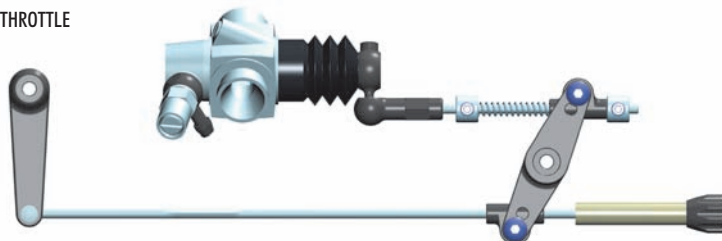
Turn on transmitter and receiver and set the throttle servo trim to the neutral position.

Adjust the idle adjustment screw on the carburetor to open approx. 0.5-1mm.

Adjust both collars on the carb and brake linkages accordingly. The carb linkage must have approximately 0.5mm of preload on the spring at neutral.

DO NOT ADJUST while the engine is running.

### FULL THROTTLE

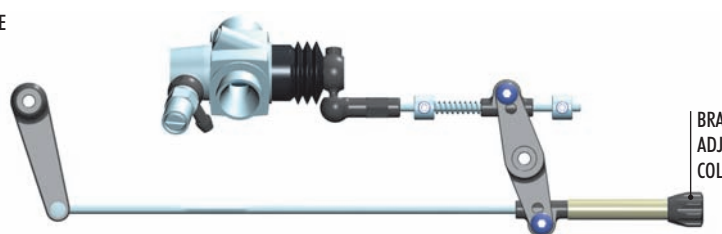


With the engine NOT RUNNING but the receiver turned ON, apply full throttle at the transmitter.

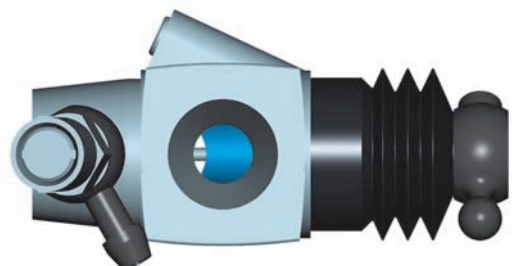
Adjust the transmitter's throttle servo high-end point so that the servo horn fully opens the carburetor when the transmitter's throttle control (e.g., throttle trigger) is at 95% of full throttle. The servo should not have excessive strain when at full throttle, or throttle/carb damage will result.

If the transmitter does not have throttle high-end point adjustment, adjust the throttle linkage pivot position on the servo horn until full throttle is obtained.

### BRAKE



BRAKE  
ADJUSTING  
COLLAR



Adjust the composite collar on the brake linkage so the brakes work smoothly.

If the brakes apply too much or not enough, adjust the collar accordingly. If your transmitter has throttle servo low-end point adjustment (or brake adjustment), use that to set the appropriate amount of throttle servo horn throw.

[www.teamxray.com](http://www.teamxray.com)

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