

1/8 Nitro Powered 4WD Racing Buggy



 $_{
m ackslash}$ Please read all instructions throughly before assembling the kit.

The contents are subject to change without prior notice due to product improvements and specification changes.

INSTRUCTION MANUAL

WARRANTY

Thunder Tiger Corporation guarantees this model kit to be free from defects in both material and workmanship. 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. Part or parts missing from this kit must be reported within 60 days of purchase. No part or parts will be sent under warranty without proof of purchase. To receive part or parts under warranty, the service center must receive a proof of purchase and/or the defective part or parts. Should you find a defective or missing part, contact the authorized Thunder Tiger Service/Distributor nearest you. Under no circumstances can a dealer or distributor accept return of a kit if assembly has started.



INTRODUCTION

The Thunder Tiger EB-4 S3 was designed as a whole new off-road 4WD nitro-racing buggy, especially on a high-speed and bumpy off-road track. There's no doubt that the innovation would be the very first priority of our design team. We have set this buggy far ahead of the current form of existing buggy design in the market in terms of the future designing trend. The new EB-4 S3 comes with some totally new settings that have never been applied on 1/8th scale nitro buggy before, such as the super low center of gravity, radical engineering of a car construction and more than innovative, good looking and high performance suspension. This is a look into the future for 1/8th scale cars and the future is here with Thunder Tiger. However there is no compromise between the innovation and quality. Thunder Tiger guarantees you should have many hours of trouble free use from this R/C product. We race and test our products around the world to bring you state-of-the-art R/C products.

CAUTION

Thank you for purchasing a Thunder Tiger Product.

Please read all instructions and familiarize yourself with the products and controls before operation.

- 1. This product is not a toy. It is a high performance model product. It is important to familiarize yourself with the model, its manual, and its construction before assembly or operation. A child operating under the supervision of the adults is necessary.
- 2. Always keep this instruction manual ready at your hand for your assembling and operating reference, even after completing the assembly.
- 3. Make sure all the screws are properly tightened and all the parts are checked after running the car for a long period of time.
- 4. For the best performance, it is important to make sure all the moveable parts work free without binding.
- 5. Do not operate model products in rain, on public roads, near crowds, near airport, or near areas with restricted radio operation.
- 6. Always keep fuel away from heat and open flame. Only operate in open, well-ventilated area. Store fuel in cool, dry area. Keep the fuel bottle cap tightly closed. Clean up any leak or excess fuel before starting the engine.
- 7. This product, its parts, and its construction tools can be harmful to your health. Always exercise extreme caution when assembling and/or operating this product. Do not touch any part of the model that rotates.
- 8. Check your radio frequency with the proper operating frequency of the area or country. Always check to see if there are any modelers operating on the same frequency as yours. Also, check your radio for proper operation before operating a model.

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IMPORTANT NOTES & WARNING

FUEL SELECTION



- 1. Choose a fuel from a reputable, brand name company that is approved for car/truck use. Do not use airplane or boat fuels in your car/truck. Choose methanol based model engine glow fuel that has a nitro content in the range 10%-30% and 5% to 18% caster/synthetic oil content for lubrication. Lower nitro percentages will generally result in a cooler engine running temperature and therefore last longer before needing a rebuild; cooler-running engines also generally produce less power. 20% nitro is the most widely used fuel.
- 2. Fuel color is for identification purpose only and is not important to performance or durability of your engine.
- 3. Be careful. If the tank overflows it might get on your radio gear or on your brakes and it may create an unsafe driving situation. Always keep your fuel bottle closed when not in use.
- 4. Do not dispose of fuel or empty fuel containers in a fire. It may possibly cause fire or explosion.

ENGINE



- 1. For proper engine break-in procedure, please refer to the manual of your engine.
- 2. Never run your vehicle without the air filter .If the vehicle will be operated in an area with fine dust, use filter oil or caster oil instead of fuel. It is important that the foam is only moist to trap dirt and allow air passage. With the foam too wet, limited air can pass through; therefore, limiting engine performance.
- 3. The parts around engine could be dangerously hot after operation. Do not touch it without any protection!



- 1. When turning radio on, first turn on the transmitter and extend the transmitter antenna.
- 2. Then, turn on the receiver. When turning off, first turn the receiver off, then the transmitter off.

FIRST AID



- 1. If you drink nitro fuel by accident, immediately drink large quantities of water and try to induce vomiting. Consult with physician right after then.
- 2. If the nitro fuel gets into your eyes, rinse them well with water. Consult with physician right after then.
- 3. If the fuel gets onto your skin, wash it well with soap and water.

WARNING



- 1. Improper operations may cause personal and/or property damage. Thunder Tiger and its distributor have no control over damage resulting from shipping, improper construction, or improper usage.
- 2. Thunder Tiger assumes and accepts no responsibility for personal and/or property damages resulting from the use of improper building materials, equipment and operations. 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.



ITEMS REQUIRED FOR ASSEMBLY

Notice: The following items are required for completion of the EB-4 S3. Some of them are not included with this kit (unless noted), and should be obtained from the local hobby shop nearby you. (For separate purchasing products, please refer to Thunder Tiger professional R/C model products.)

1. ADDITIONAL ITEMS NEEDED FOR COMPLETION



2. ADDITIONAL ITEMS NEEDED FOR STARTING ENGINE



3. TOOLS NEEDED FOR ASSEMBLY



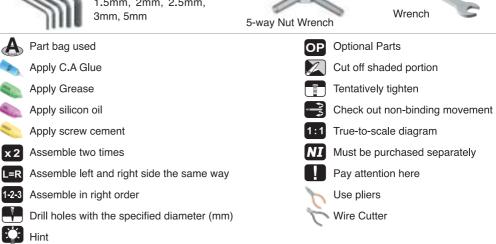
4. EQUIPMENT NEEDED FOR ASSEMBLY



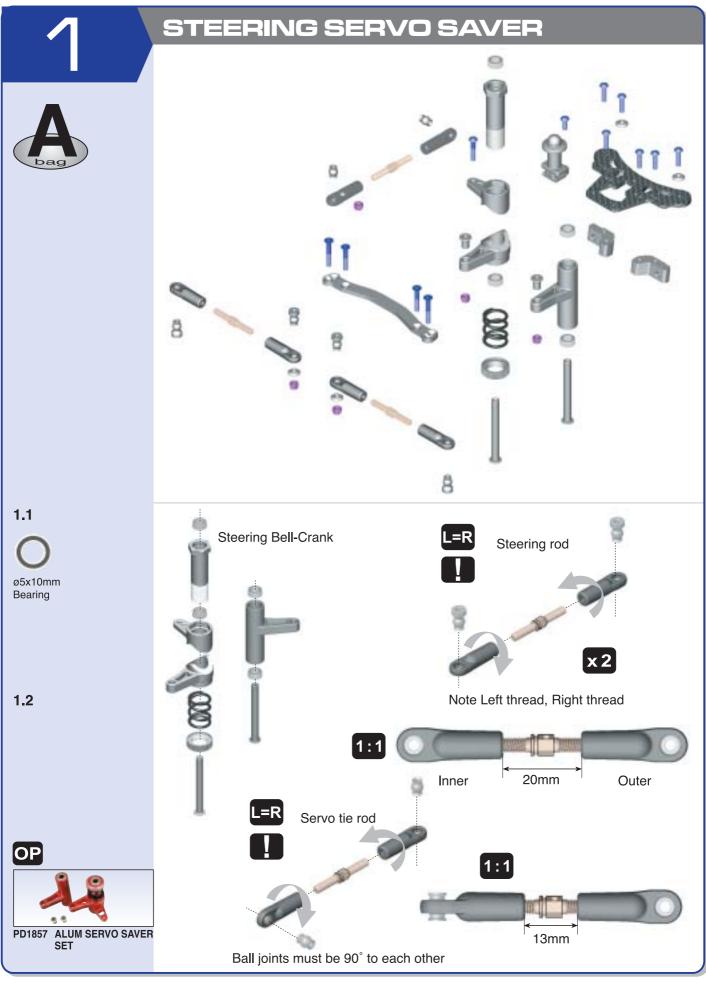
5. TOOLS INCLUDED IN KIT



6. SYMBOL USED THROUGHOUT THE INSTRUCTION MANUAL







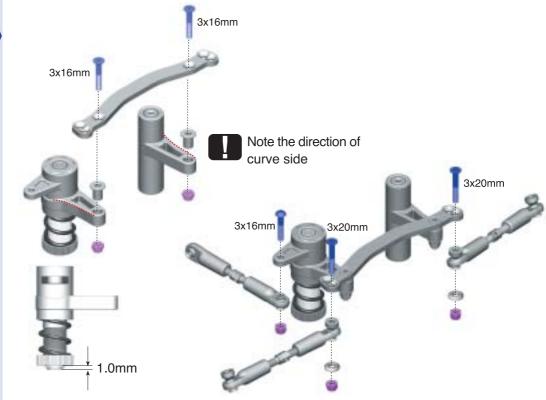
1.3

M3x16mm
Flat Head Hex Screw

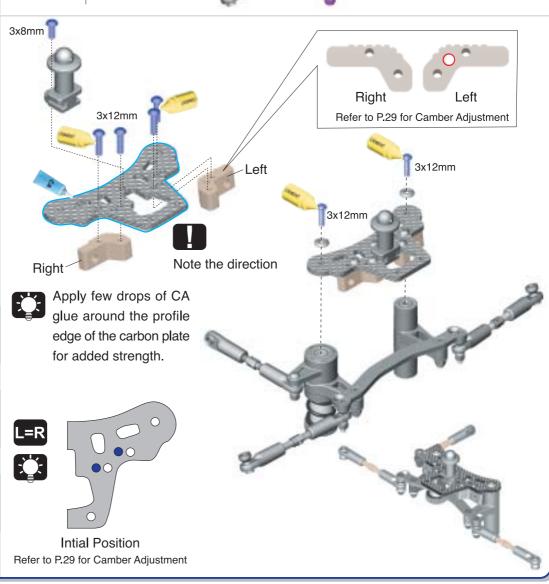
M3x20mm
Flat Head Hex Screw

Lock Nut, M3

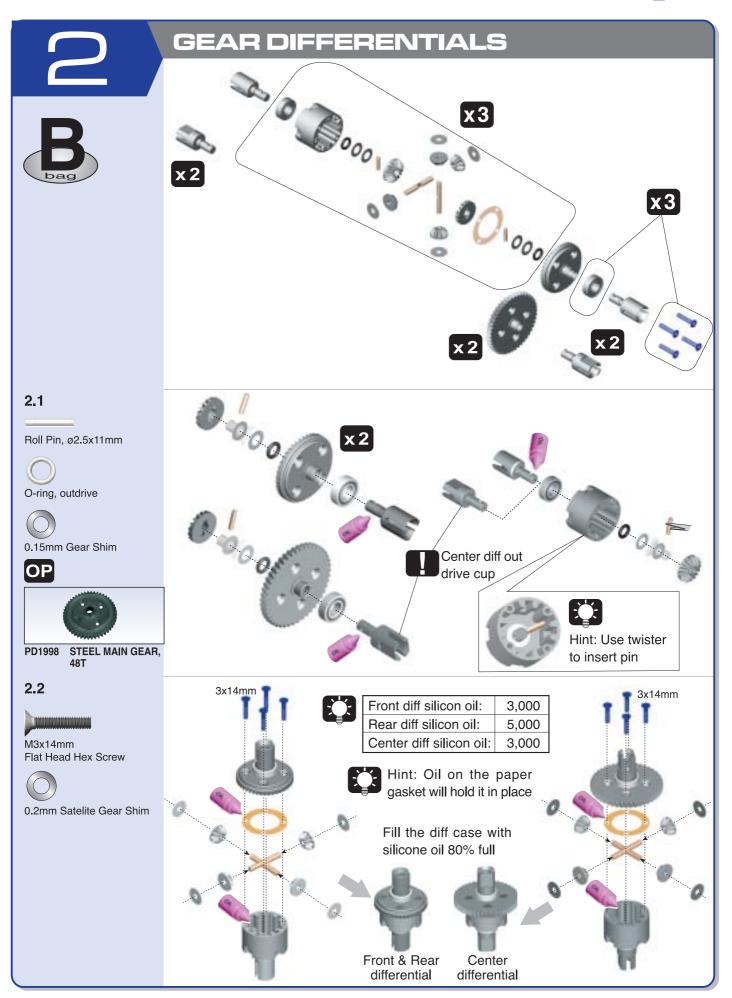
M3x16mm
Button Head Hex Screw







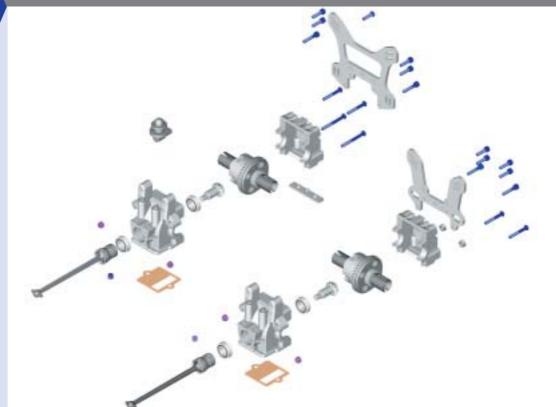






bag

FRONT & REAR BULKHEADS





M3x22mm Button Head Hex Screw

MANAGEMENT

M3x12mm Socket Head Hex Screw



M3x16mm Socket Head Hex Screw

3.2



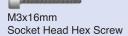
Button Head Hex Screw



M3x12mm Button Head Hex Screw



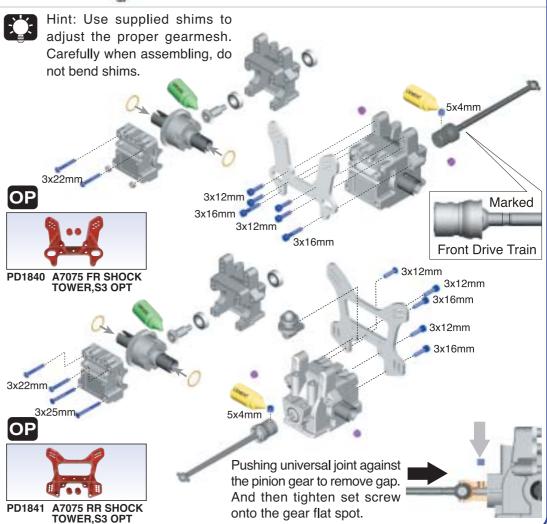
M3x12mm Socket Head Hex Screw







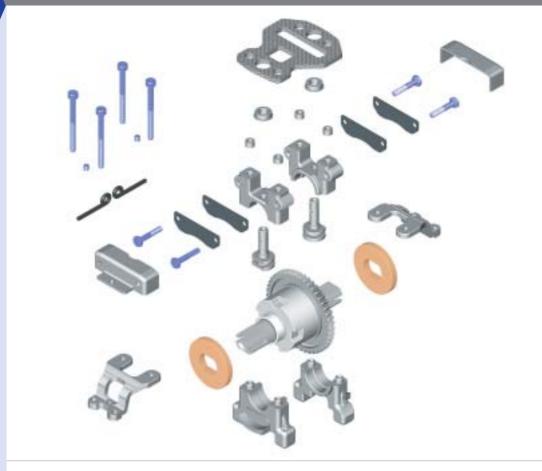
M5x4mm Set Screw



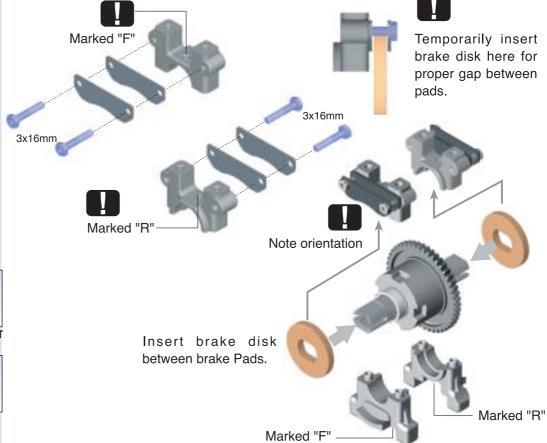


GEAR DIFFERENTIALS









4.2

OP

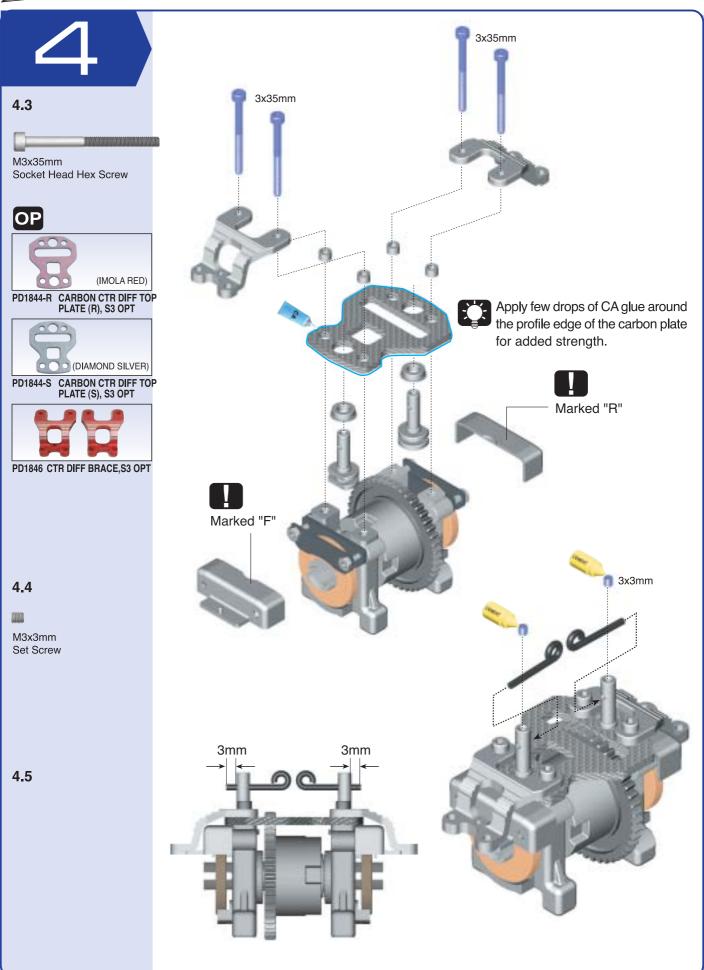


PD1845 CTR DIFF MOUNT, S3 OPT



PD1861 HEATSINK DISC BRAKE, S3 OPT











5.1



M4x10mm Flat Head Hex Screw



M4x12mm Flat Head Hex Screw



M3x10mm Button Head Hex Screw



M3x8mm Button Head Hex Screw



M3x12mm Button Head Hex Screw



M3x10mm Flat Head Hex Screw





PD1850 A7075 RR PLATE FR TRANS, FR0, S3 OPT

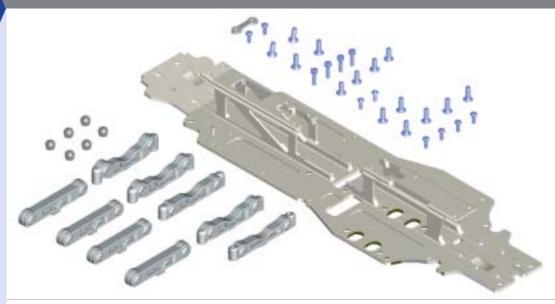


PD1851 A7075 FR PLATE RR TRANS, RF0, S3 OPT

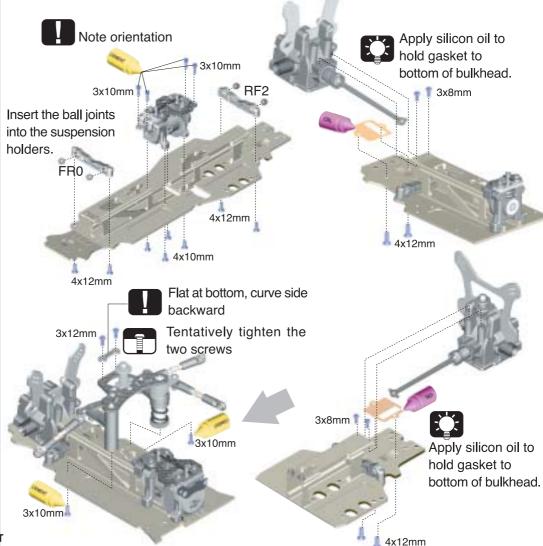


PD1852 A7075 FR PLATE RR TRANS, RF+4, S3 OPT

CENTER DRIVE TRAIN



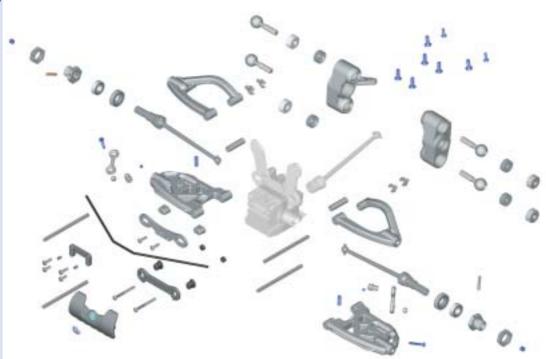
Choose the FR0 toe block and RF2 toe block for the initial setting. You can adjust front caster, rear inboard toe and rear anti-squat by changing the different suspension arm holders to meet your race requirement. For more adjusting details, please refer to "Set Up" section.





FRONT SUSPENSION





6.1

Roll Pin, ø3x17mm



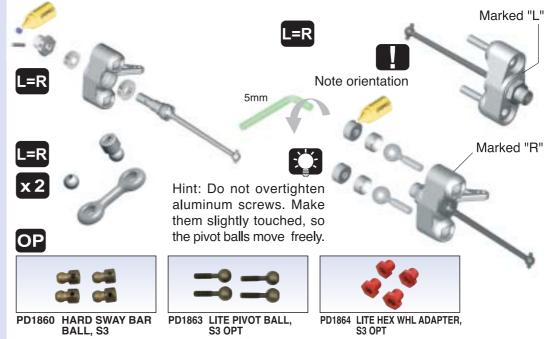
M5x4mm Set Screw



ø8x16mm Bearing



ø9x9mm Bearing



6.2

100010000000000

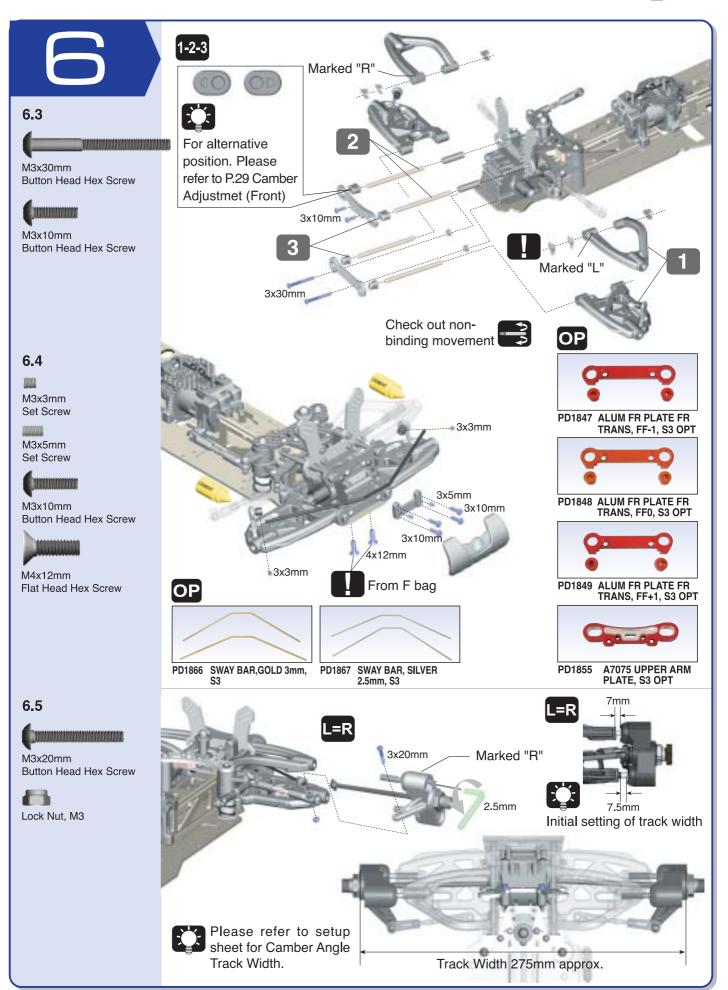
M4x12mm Set Screw



M3x16mm Button Head Hex Screw





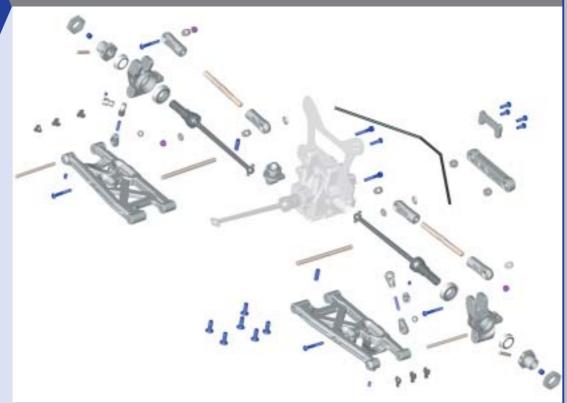




/

bag

REAR SUSPENSION



7.1

M3x12mm Set Screw

Roll Pin, ø3x17mm



M5x4mm Set Screw



ø8x16mm Bearing



ø9x9mm Bearing

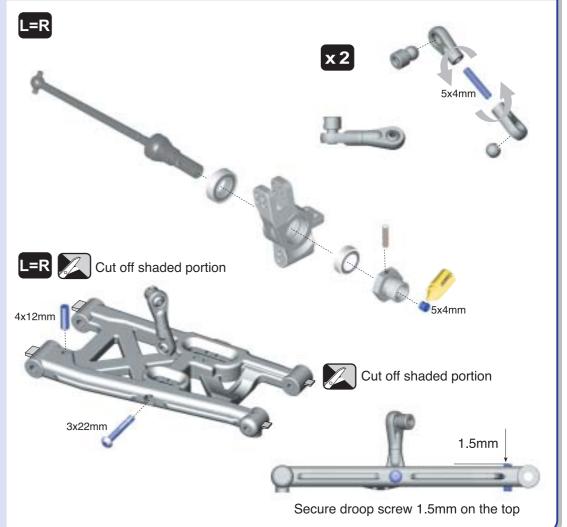
7.2



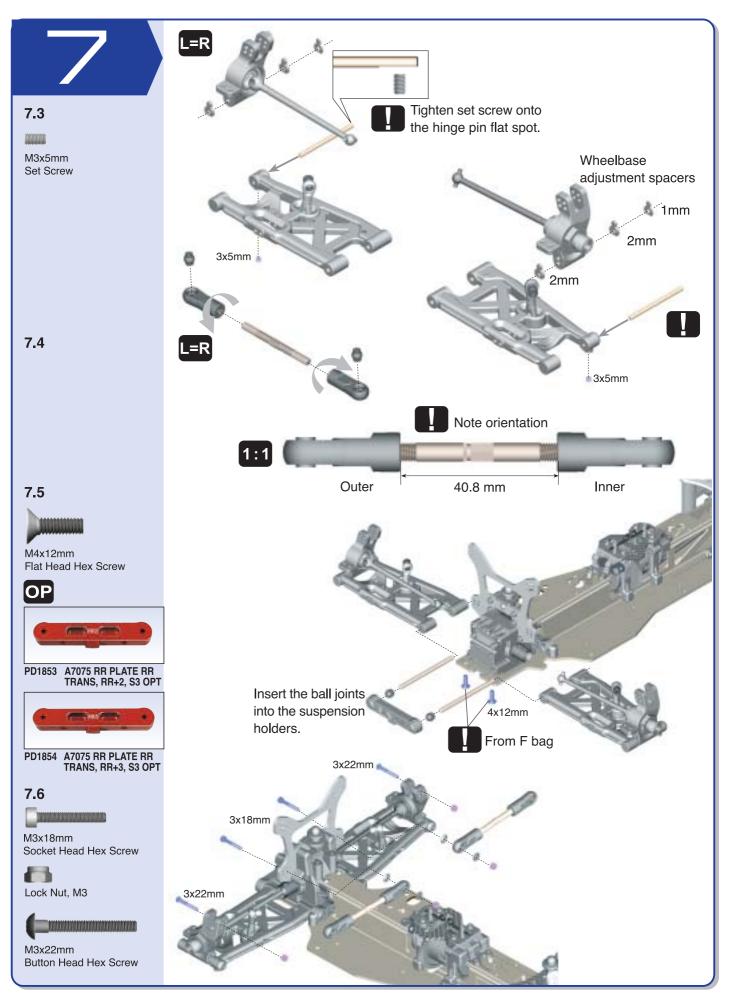
M4x12mm Set Screw



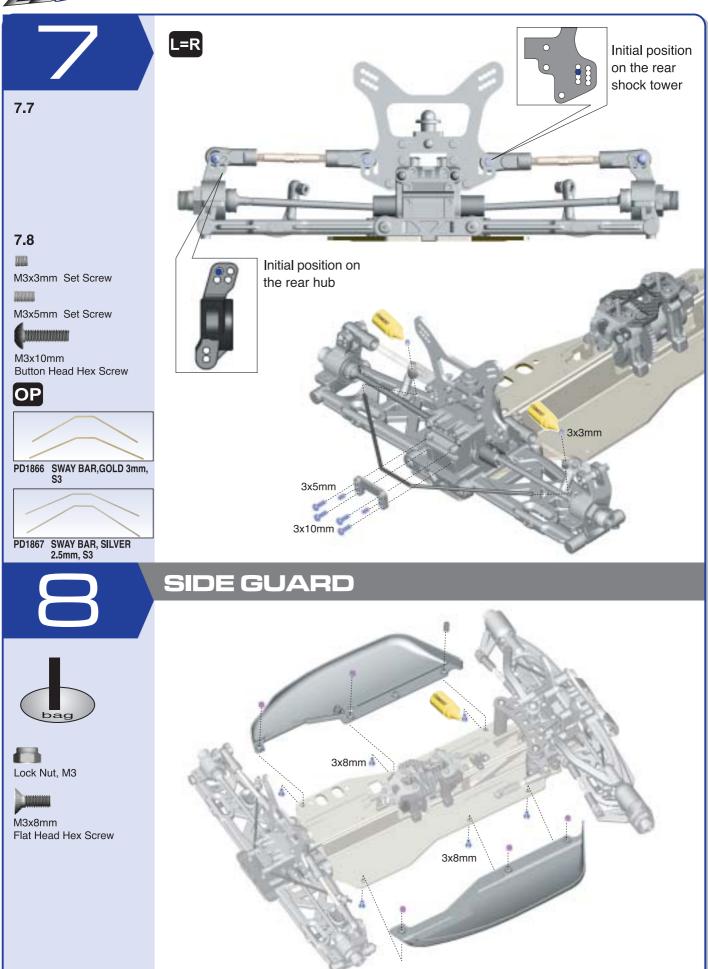
M3x22mm Button Head Hex Screw







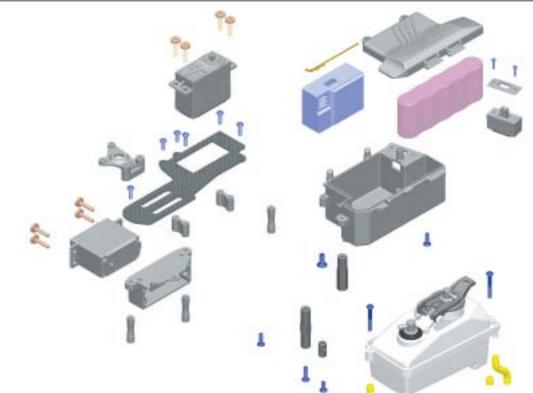






J

RADIO BOX & FUEL TANK





M3x8mm Button Head Hex Screw



M3x10mm Button Head Hex Screw



M3x14mm Flat Head Socket Screw

OP



AD2523-R ANODIZED WASHER, OPT



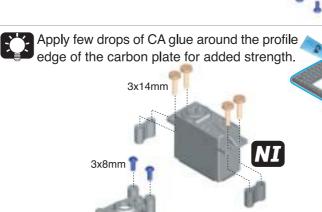
PD0680 CT MACHINE SCREW M3x14mm



PD1842-R CARBON SERVO TRAY(R), S3 OPT



PD1842-S CARBON SERVO TRAY(S), S3 OPT



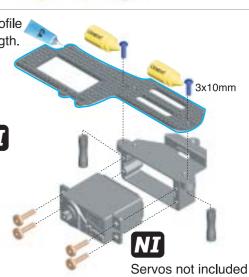
Hint: You can use servo grommets to protect your servo (Not Included)

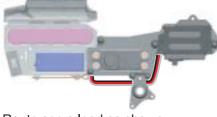


NI Foam not included



Hint: Use foam to cushion the battery pack and receiver for vibration protection.









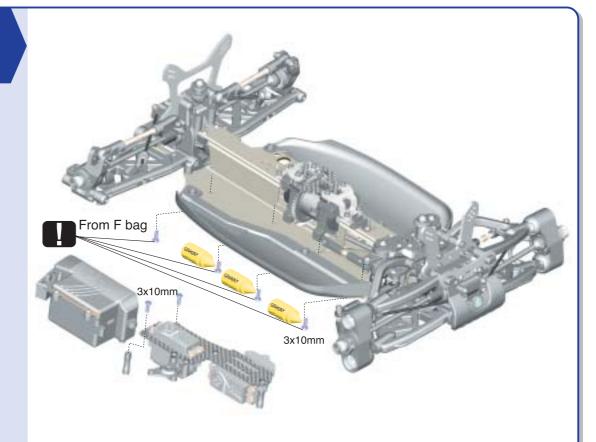
9.3



M3x10mm Button Head Hex Screw



M3x10mm Flat Head Hex Screw



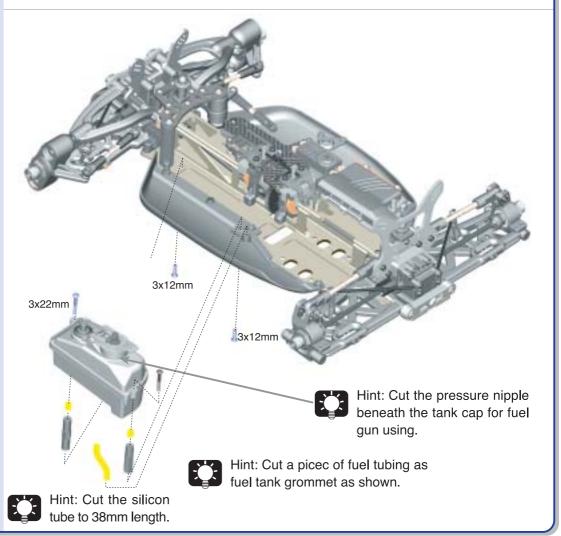
9.4



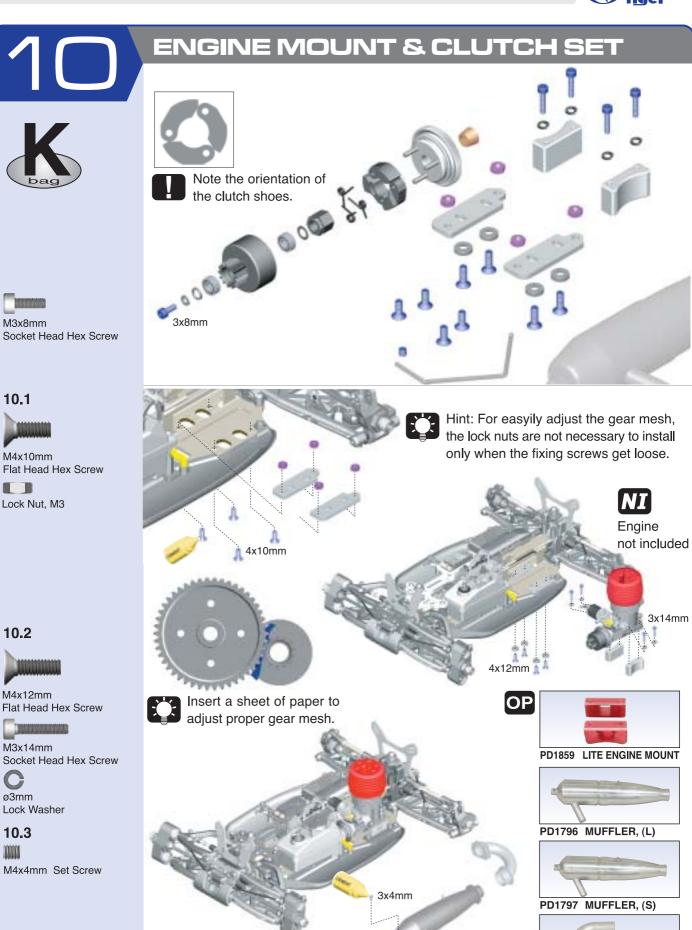
M3x12mm Flat Head Hex Screw



M3x22mm Button Head Hex Screw







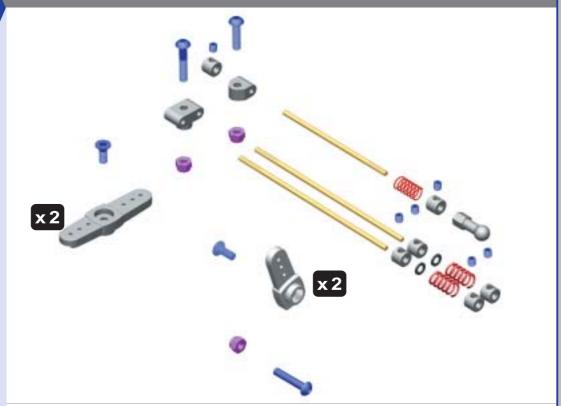
Muffler and manifold not included

PD1798 MANIFOLD



bag

THROTTLE AND BRAKE LINKAGE



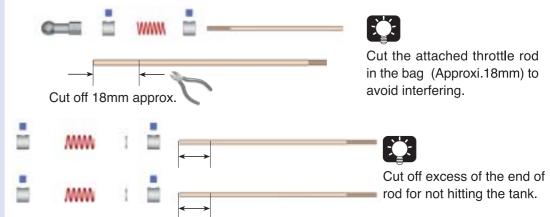
11.1



M3x3mm Set Screw



Flat Washer, ø2.6



11.2



M3x8mm Button Head Hex Screw



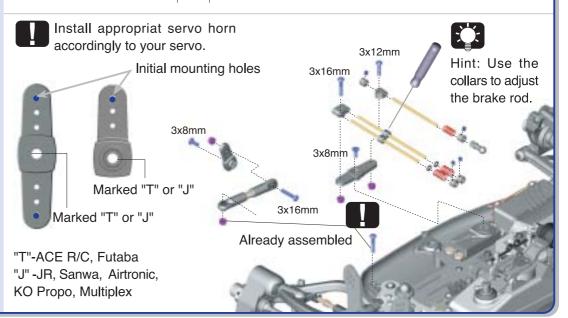
M3x12mm Button Head Hex Screw



M3x16mm Button Head Hex Screw

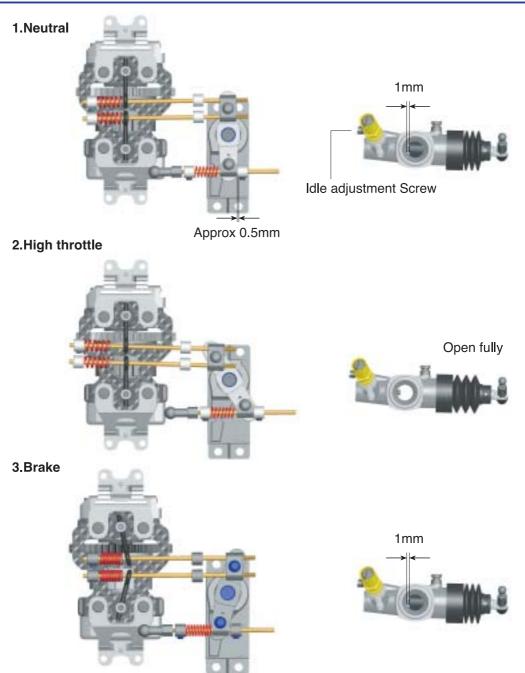


Lock Nut, M3





11.3 Throttle linkage adjustment



Neutral

- Turn on the transmitter and receiver and set engine control servo trim to the neutral position.
- Adjust the idle adjustment screw on the carburetor to open approx. 1mm.
- Adjust both throttle linkage and brake linkage accordingly.
- * Do not adjust engine while it is running.

High throttle

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

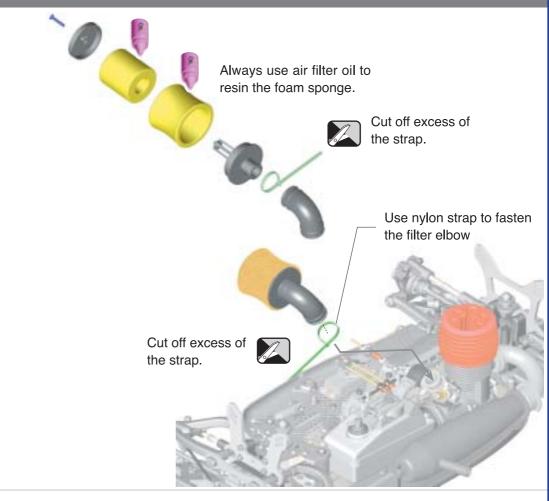
Brake

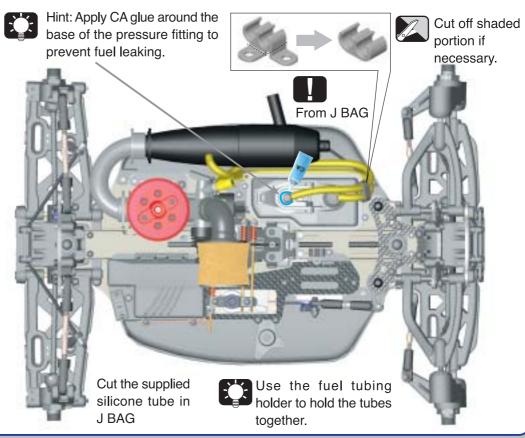
- Adjust the collars so the brakes work smoothly.
- If the brake applies too much or not enough, adjust the adjustment collars accordingly.
- Or if available on the transmitter, adjust the brake endpoint.



AIR FILTER



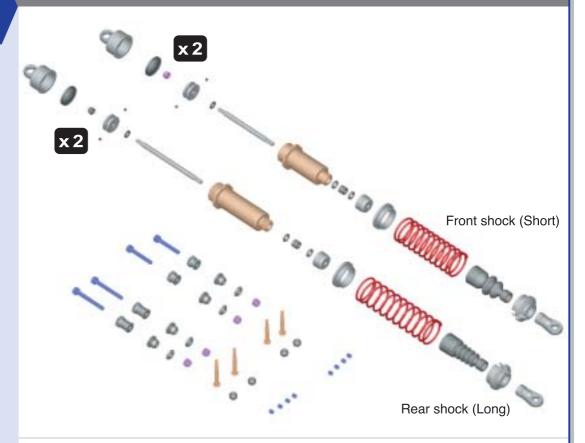








SHOCK ABSORBERS



13.1



Lock Nut, M2.6

Place a few drop of silicon oil on the tip of the shaft before inserting through the shock body to prevent shaft thread from damaging the o-ring seals.



HINT: There are two attached steel oballs installed inside the Anti-Bumping piston for variable shock damping.

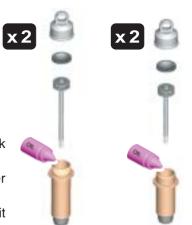
Ba ll Numbers	Damping Characteristics	
0	Softer damping at rebound. Increase traction	
1	\$	
2	Harder damping at rebound. Decrease traction	

Recommended

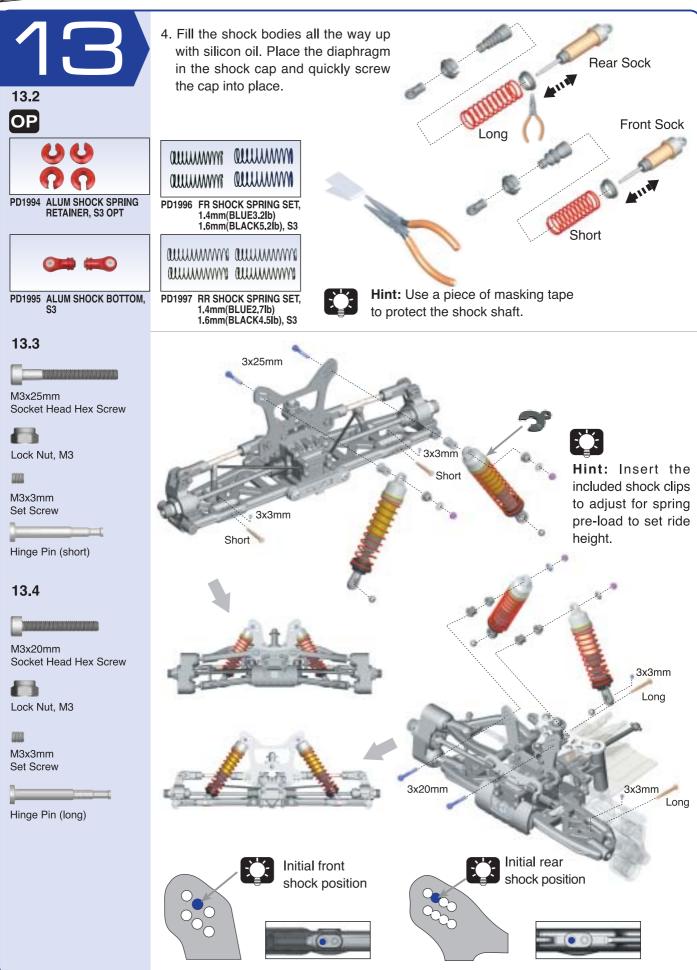
Shock Silicon Oil		
Front 40wt	Rear 35wt	

13.2

- Use recommended grade of silicon oil and fill the shock hodies
- 2. Move the shaft / piston up & down gently (But never broken oil top surface)
- 3. To release any trapped air inside the silicon oil, let it sit for a few minutes for all the air bubbles to be release.













14.1



M3x10mm Button Head Hex Screw

ø3xø8 Special Washer

14.2



Button Head Hex Screw

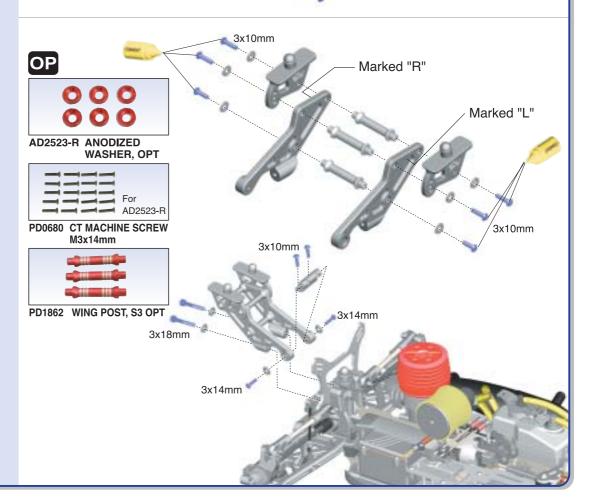


M3x14mm Button Head Hex Screw

ø3xø8 Special Washer



M3x18mm Socket Head Hex Screw





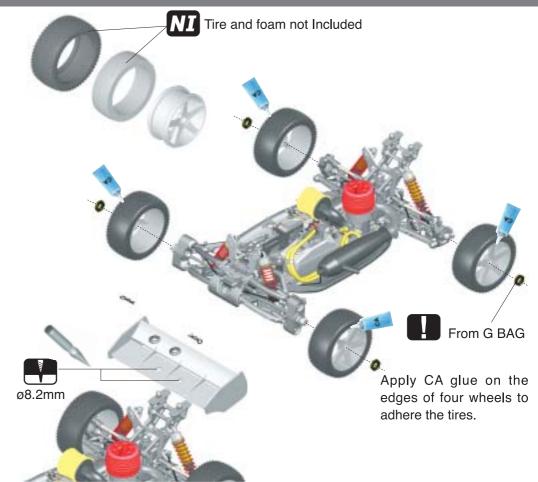


15.1 OP



PD1865 LITE SELF-LOCK WHL HEX NUT, S3 OPT

WHEELS AND TIRES (Not Included)

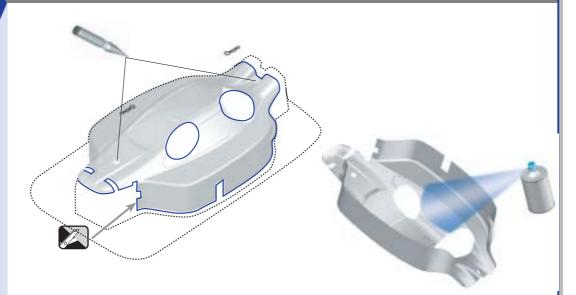


16





BODY



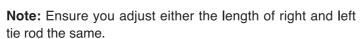
- 1. Use special round scissors or hobby knife to cut out the body around the lines.
- 2. Wash the inside of body using soap and water to remove residual oil or other goop remains.
- 3. Mask the windows and then paint the inside of body with special lexan paint.
- 4. Wait for the paint dry, and then peel off the external protective films.

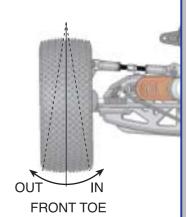


Toe Adjustment (Front)

1. Toe Adjustment (Front) Adjust the front toe angle by tuning the length of the left and right steering rod.

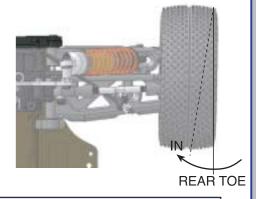
Rod length	Steering Characteristics
Tuning longer More front toe-in	Increases straight-line stabilityMakes the steering response milder
Tuning shorter More front toe-out	Decreases straight-line stability Makes the steering response quicker





Toe Adjustment (Rear)

2. Toe Adjustment (Rear) Adjust the rear toe angle by changing the various toe blocks behind the rear bulkhead. Take out the embedded plastic balls inside of the block length and re-insert to the new toe block. Replace the toe block. There are 4 different blocks that can be chosen for adjustments. Please refer to the table below.



Block No.	Rear toe-in angle	Steering Characteristics
RR1	Less rear toe-in	Increases steering but decreases the
O DAN O	(Less grip)	stability on power when exiting corners.
RR 1.5	1	^
0170		
RR 2	\	
RR 3	More rear toe-in	Decreases steering but increases stability
0 1-110	(More grip)	on power when exiting corners.



Caster Adjustment (Front)

3.Caster Adjustment(Front)Adjust the caster angle by changing the plastic clips in the front upper hinge pin.

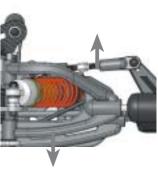
	Steering Characteristics
Clips behind upper arm	Sharper corner-in, slower corner-exit
More Caster (Note)	
Clips in the front of upper arm	Slower corner-in, faster corner-exit
Less Caster	



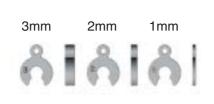
Hint: Using a needle nose pliers to install or reinstall the clips makes the adjustment much easier.

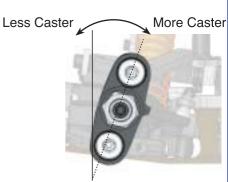
Note1: When putting the clips behind upper arms, cut the ear of the clips to avoid interfering with steering slider.

Note2: Ensure you make equal adjustments on both left and right sides of the car.





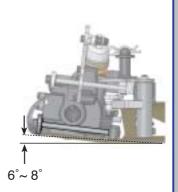




Front Anti-Squat Adjustment

4 Front Anti-Squat: The Front Anti-Squat angle can be adjusted using the different plastic eccentric bushings in the front suspension plate. Please refer to the table below.

Eccentric Bushing	Total	Characteristics
FF-1	6°	Decreases steering response. Good handling on bumpy tracks.
FF0	7°	Ţ
FF1	8°	Increases steering response. Good handling on smooth tracks







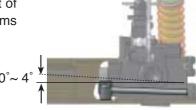


Note: Ensure you make equal adjustments on both left and right sides of the car.



Rear Anti-Squat Adjustment

5.Rear Anti-Squat Adjustment: Adjust the rear anti-squat of the rear lower arms by replacing the different plastic arms suspension holders at the front of the rear bulkhead.



Rear susp. arm holders	Characteristics
RF 0	Less anti-squat, flat arm Increases rear traction when cornering Decrease rear traction when accelerating.
RF2	Easy handling on bumpy tracks
RF4	More anti-squat, leaning backwards Decreases rear traction when cornering Increases rear traction when accelerating
O I TO	Easy handling on smooth or slippery tracks

Camber Adjustment (Front)

6.Camber Adjustment(Front): Adjust the front camber by adjusting the lengths of threaded parts of the front pivot balls in the upper arms longer or shorter.

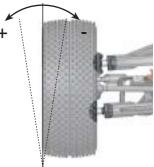
Length(L)	Steering Characteristics	
Making longer.	Less steering	
Positive camber.		
Making shorter.	More steering	
Negative camber.		

Note1: To expanding the adjusting range of the front camber, you can also change the eccentric bushing in the upper plate at the very front of the front bulkhead and the mounting holes of hinge holders on the servo saver top plate.

Eccentric	Servo saver	Camber adjusting range
bushings	top plate	of the front camber
Outer hole		More camber adjustment
Inner hole		Less camber adjustment

Note2: Ensure you make equal adjustments on both left and right sides of the car.







Camber Adjustment (Rear)

7. Camber Adjustment(Rear): Adjust the rear camber by adjusting the lengths of the upper tie rods.

Length(L)	Steering Characteristics
Making longer.	Decreases traction when entering corners.
Positive camber.	
Making shorter.	Increases traction when entering corners
Negative camber.	

Note1: You can also adjust the rear camber by positioning the rear upper tie rods in the different holes in the shock towers and outer rear hubs. For more information, please refer to the "Set-Up Sheet" in a separate sheet.

Note2: Ensure you make equal adjustments on both left and right sides of the car.

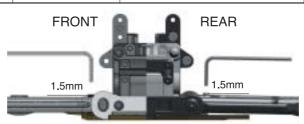


REAR CAMBER

Ride Height (or Droop) Adjustment

8.Ride Height (or Droop) Adjustment: The front/rear ride height can be adjusted by screwing in or unscrewing the setscrews in the lower arms.

Setscrews	Ride height	Characteristics
Screwing in	Becomes lower	Less steering, good handling
		on smooth tracks
Unscrewing	Becomes higher	More steering, good handling
		on rough tracks



Horizontal Setting

Ackerman Adjustment

9.Ackerman Adjustment: Adjust the Ackerman angle by linking the front steering rods into the different holes on the steering slider.

Steering tie-rod mounting holes	Characteristics	
Forward holes	Makes the steering response milder	
	Suitable for high speed race way.	
Rearward holes	Makes the steering response sharper.	
	Suitable for narrow, tight tracks	

Note: Ensure you make equal adjustments on both left and right sides of the car.







SET UP SHEET



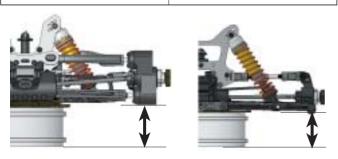
Name of Driver	Date	Track	Radio	Servo	Engine	Plug
Fuel	Spur/ Clutc	h Bell	Wheels	Tires	Inner	Muffler
Brand: Nitro: %	T/	Т				

SHOCKS

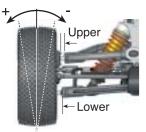
(Shock Oil Brand:

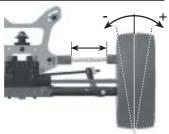
(OHOOK OH L	Jiana	_ /
	Front	Rear
Shaft Type	☐ Std ☐ Other:	☐ Std ☐ Other:
Piston		
Piston Ball	□0 □1 □2	□0 □1 □2
Oil	#	#
Spring	☐ Blue: Softer(3.2lb)	☐ Blue: Softer(2.7lb)
	☐ Red: Average(4.3lb)	☐ Red: Average(3.2lb)
	☐ Black: Harder(5.2 lb)	☐ Black: Harder(4.5lb)
Spacer	mm	mm

REBOUND STOP				
Front	Rear			
mm	mm			

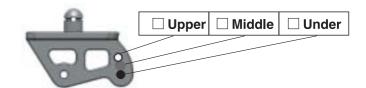


CAMBER ANGLE				
Front		Rear		
°Upper	mm,			
°Lower	mm	·	mm	

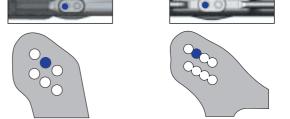




WING ANGLE



SHOCK	MOUNT POSITION	
Arm Front		Rear
Mounting	□ IN / □ OUT	□IN / □ OUT



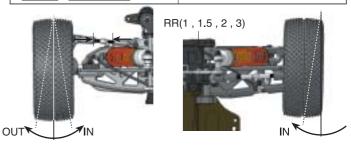
Tower Front		Rear	
Mounting	\square IN / \square OUT	□ IN / □ OUT	

FRONT ARM MOUNTING



DIFF. OIL				
	Front	Center	Rear	
Oil	#	#	#	

TOE ANGLE			
Front	Rear		
°mm	□1,□1.5,□2,□3		
	200 00 400 00 400 00		

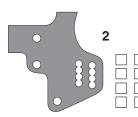


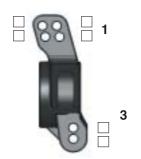


FRONT/ REAR SUSPENSION HOLDER Front Rear □ FF-1 □ RF0 □ RF2 □ RF3 □ FF1 □ RF4 □ FR □ RR1 □ RR2 □ RR2 □ RR3 □ RR3

REAR UPPER ARM POSITION

- 1. Rear Hub Position
- 2.Upper Arm Position
- 3. Upright Pin Position





FRONT CASTER

Spacer:	
Front:	mm
Rear:	mm



RACE NOTE

STEERING PLATE

A: Front

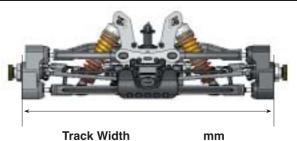
B: Rear



SWAY BAR

Front	Gold ø3	Black ø2.7	Silver ø2.5
Rear	Gold ø3	Black ø2.7	Silver ø2.5

TRACK WIDTH



WHEELBASE ADJUSTMENT

Front: mm
Rear: mm



TRACK CONDITIONS

Surface: \square Smooth \square Bumpy

Bumps:

Traction: \square Low \square Med \square High

Composition:

 \square Sandy \square Soft Dirt \square Grass \square Clay \square Other

☐ Wet ☐ Dry ☐ Dusty ☐ Other