

XRAY XB8 EC

INSTRUCTION MANUAL SUPPLEMENTARY SHEET

Use this XB8EC Supplementary Instruction Sheet along with the standard XB8 instruction manual included in the kit. This Supplementary Sheet highlights and explains new updated steps and you should refer to them while building your XB8EC kit. Each step in this Supplementary Sheet indicates the section to which the updated step refers.

New and Improved Parts

All of these parts are new or updated from the previous versions. Each of these parts feature their corresponding part number which can be used to re-order the parts. You can also refer to the complete exploded views.

2007 XB8EC Parts

 #351101 ALU CHASSIS HARD COATED SWISS 7075 T6 (3MM) - V2	 #352089 COMPOSITE FRONT BRACE - V2	 #352091 ALU FRONT SHOCK TOWER CNC MACHINED SWISS 7075 T6 (4MM) - V2	 #352113 FRONT XB8EC LOWER SUSPENSION ARM RIGHT	 #352250 STEERING BLOCK RIGHT - V2
 #352500 STRONG SERVO SAVER COMPLETE SET	 #352651 BALL STUD 5.8MM WITH BACKSTOP - V2 (2)	 #358901 COMPOSITE FUEL FILTER SET	 #354011 CENTER DIFF MOUNTING PLATE SET - HIGHER	 #355601 XB8EC UNIV. CENTR. DRIVE SHAFT SET - HUDY SPRING STEEL
 #356116 ALU RADIO PLATE 7075 T6 (3MM) - V2	 #358013 COMPOSITE FRAME SHOCK PARTS - WIDE	 #358036 SHOCK PISTON SET - WIDE (2)	 #358051 ALU SHOCK CAP NUT - WIDE (2)	 #358060 RUBBER SHORT SHOCK BOOT (4)
 #358081 SHOCK RUBBER MEMBRANE - WIDE (4)	 #358061 FELT SHIM FOR RUBBER SHORT SHOCK BOOT (4)	 #358121 ALU FRONT SHOCK BODY - HARD COATED - WIDE (2)	 #358161 FRONT SHOCK SHAFT - LONG (2)	 #359702 XRAY BODY FOR 1/8 OFF ROAD BUGGY - LIGHT

XB8TQ Parts

 #351345 ALU UPPER PLATE 7075 T6 (4MM)	 #352311 ALU TQ FRONT LOWER SUSP HOLDER - FRONT - 7075 T6 (7MM)	 #352332 ALU TQ FRONT UPPER ARM HOLDER - 7075 T6 (8MM)	 #352620 ADJ. TURNBUCKLE M5 L/R 35 MM SPRING STEEL (2)	 #353091 ALU TQ REAR SHOCK TOWER CNC MACHINED 7075 T6 (4MM)
 #353112 REAR TQ LOWER SUSPENSION ARM RIGHT	 #353122 REAR TQ LOWER SUSPENSION ARM LEFT	 #353312 ALU TQ REAR LOWER SUSP. HOLDER 2°-4° ANTI-SQUAT - FRONT - 7075 T6 (7MM)	 #353323 ALU TQ REAR LOWER SUSP. HOLDER - REAR - 7075 T6 (5MM)	 #354055 ALU CENTER DIFF MOUNTING PLATE 7075 T6 (3MM)
 #355050 CENTER DIFF SPUR GEAR 46T	 #355061 FRONT DIFF OUTDRIVE ADAPTER - LONG (2)	 #358012 COMPOSITE SET OF SHIMS FOR SHOCKS 0.7 & 1.3 MM	 #358040 HARDENED SHOCK SHIMS (4)	 #358513 CLUTCH BELL 13T
 #358531 FLYWHEEL	 #358561 ALU CLUTCH SHOES CNC MACHINED - LIGHT 1.71g (3)	 #359050 CLUTCH BELL BALL-BEARING 5x10x4 (2)	 #357221 FRONT UPPER PIVOT PIN (2)	 #357212 LOWER INNER PIVOT PIN F+R (2)

1. FRONT & REAR DIFFERENTIAL

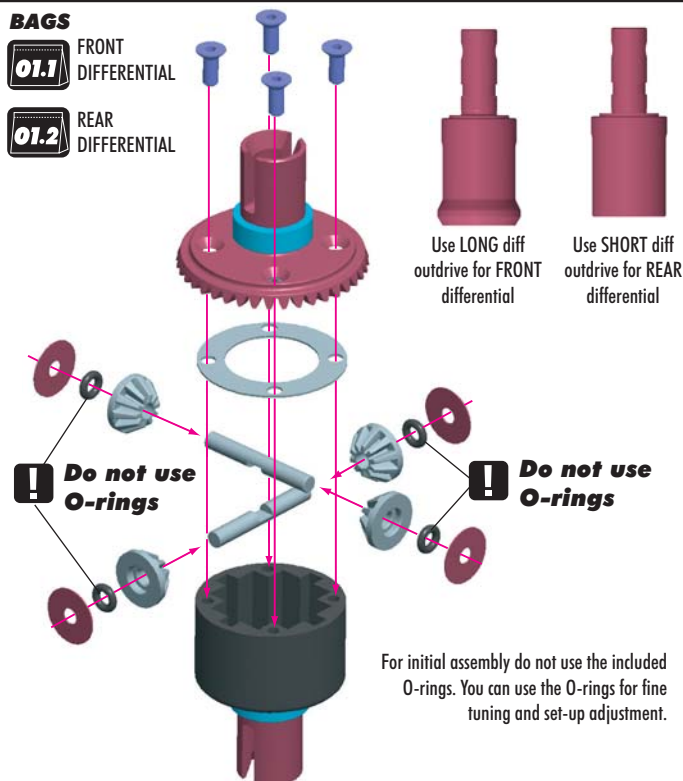
PAGE 7

STEP 2

BAGS

01.1 FRONT DIFFERENTIAL

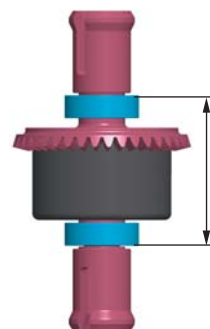
01.2 REAR DIFFERENTIAL



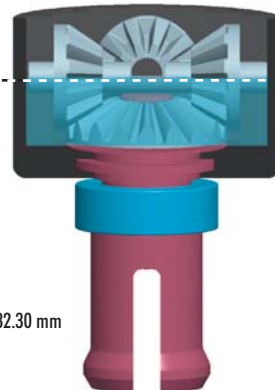
VERY IMPORTANT!

Use these silicone oils included in the kit for initial settings:
Front diff: "7000"
Rear diff: "7000"

Fill differentials by **50%** only, so that oil is up to the middle of the pin.



32.15~32.30 mm



After assembly the differentials should have a length of 32.15~32.30 mm measured from the ends of the installed ball-bearings. If differentials are longer, retighten the 4 screws holding the crown gears.

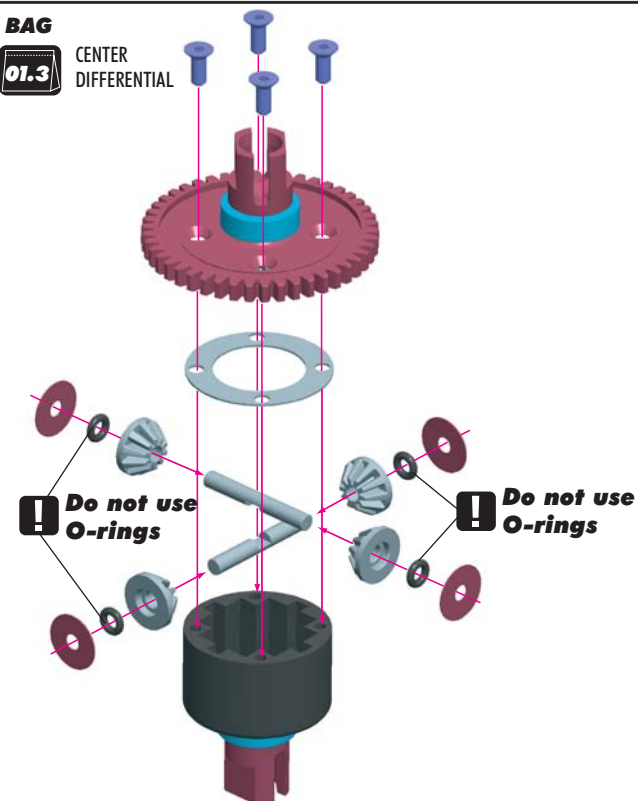
CENTER DIFFERENTIAL

PAGE 9

STEP 2

BAG

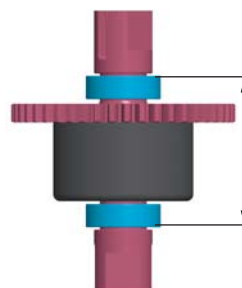
01.3 CENTER DIFFERENTIAL



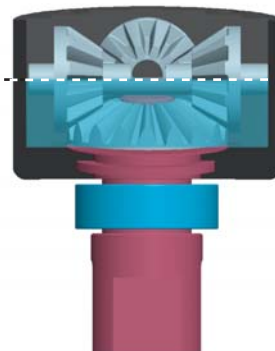
VERY IMPORTANT!

Fill differential by **50%** only, so that oil is up to the middle of the pin.

Use the following silicone oil included in the kit for initial setting:
Center diff: "7000"



32.15~32.30 mm



After assembly the differential should have a length of 32.15~32.30 mm measured from the ends of the installed ball-bearings. If differential is longer, retighten the 4 screws holding the spur gear.



TIP

USE THESE DIFFERENTIAL OIL COMBINATIONS FOR FOLLOWING RACING CONDITIONS:

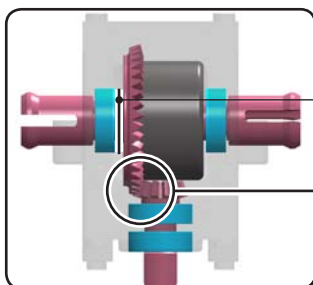
	FRONT DIFFERENTIAL	CENTER DIFFERENTIAL	REAR DIFFERENTIAL
BASIC SET-UP FOR EASY HANDLING AND LOW-TRACTION TRACKS	"7000"	"7000"	"7000"
FOR LOW TRACTION TRACKS AND EURO-STYLE TRACKS	"3000"	"5000" ~ "7000"	"1000"
FOR MEDIUM~HIGH TRACTION TRACKS AND US-STYLE TRACKS	"3000" ~ "5000"	"5000" ~ "7000"	"3000" ~ "5000"

TIP TECH TIP FRONT & REAR DIFF GEAR MESH ADJUSTMENT

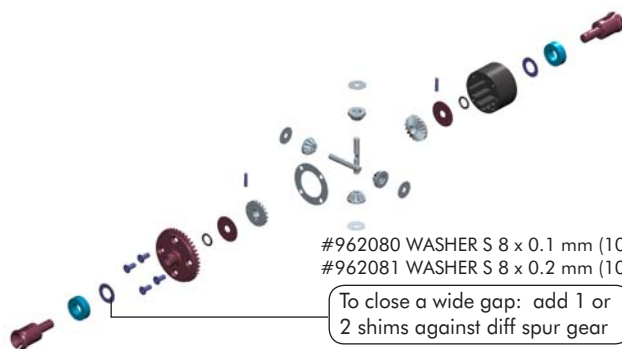
In the event that the composite diff bulkhead allows too much diff side play, this may create non-optimal gear mesh between the diff spur gear and the pinion drive gear. This is easily resolved by inserting 1 or 2 of the included thin shims behind a diff outdrive ball-bearing, depending on how much play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

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

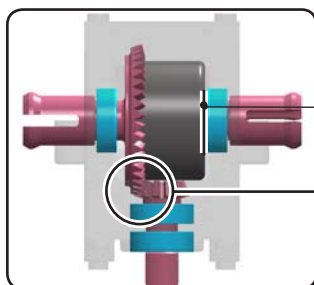
TO CLOSE A WIDE GAP



insert shim(s) here



TO OPEN A NARROW GAP



insert shim(s) here



TIP Follow this handy tip to install pivot balls into composite ball joints.



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



Tighten screw until pivot ball is tight against block.



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



The finished joint.



Loosen and remove screw.

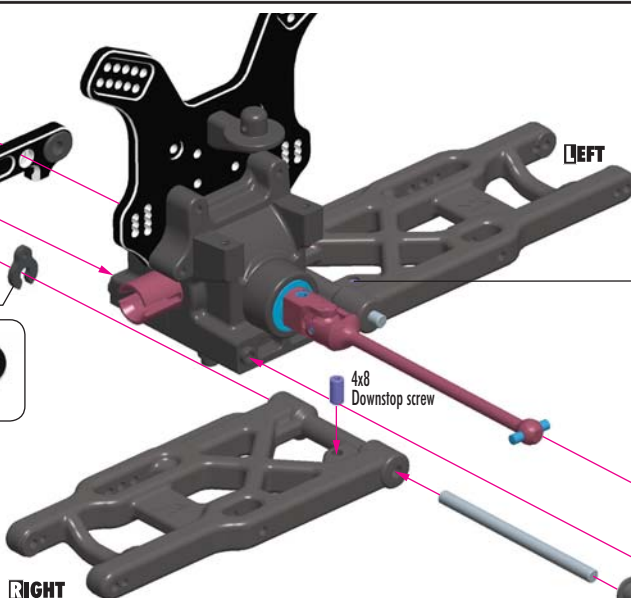
3. REAR SUSPENSION

PAGE 12 STEP 1

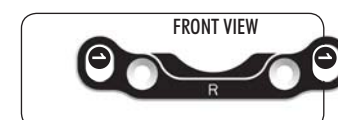
Tighten screws equally

3.5x45

2 mm



4x8
Downstop screw



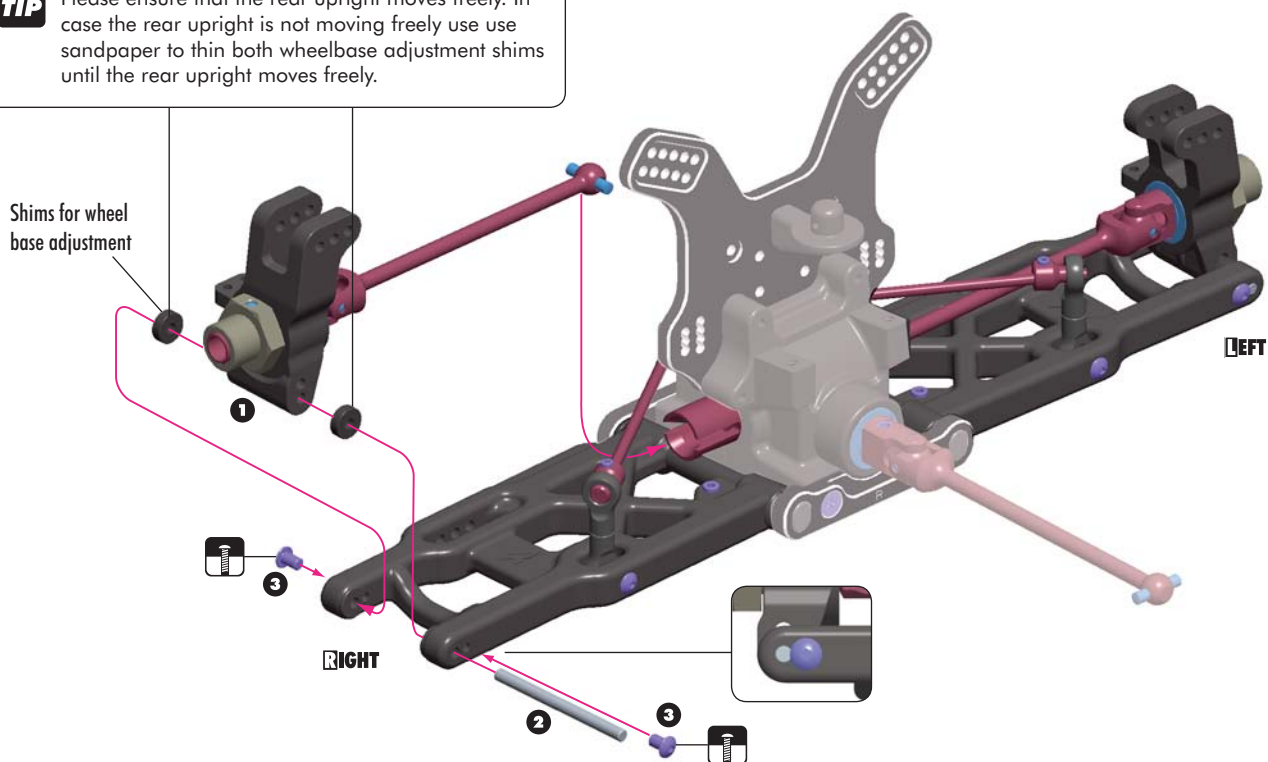
3.5x22

4. REAR SUSPENSION

PAGE 14

STEP 1

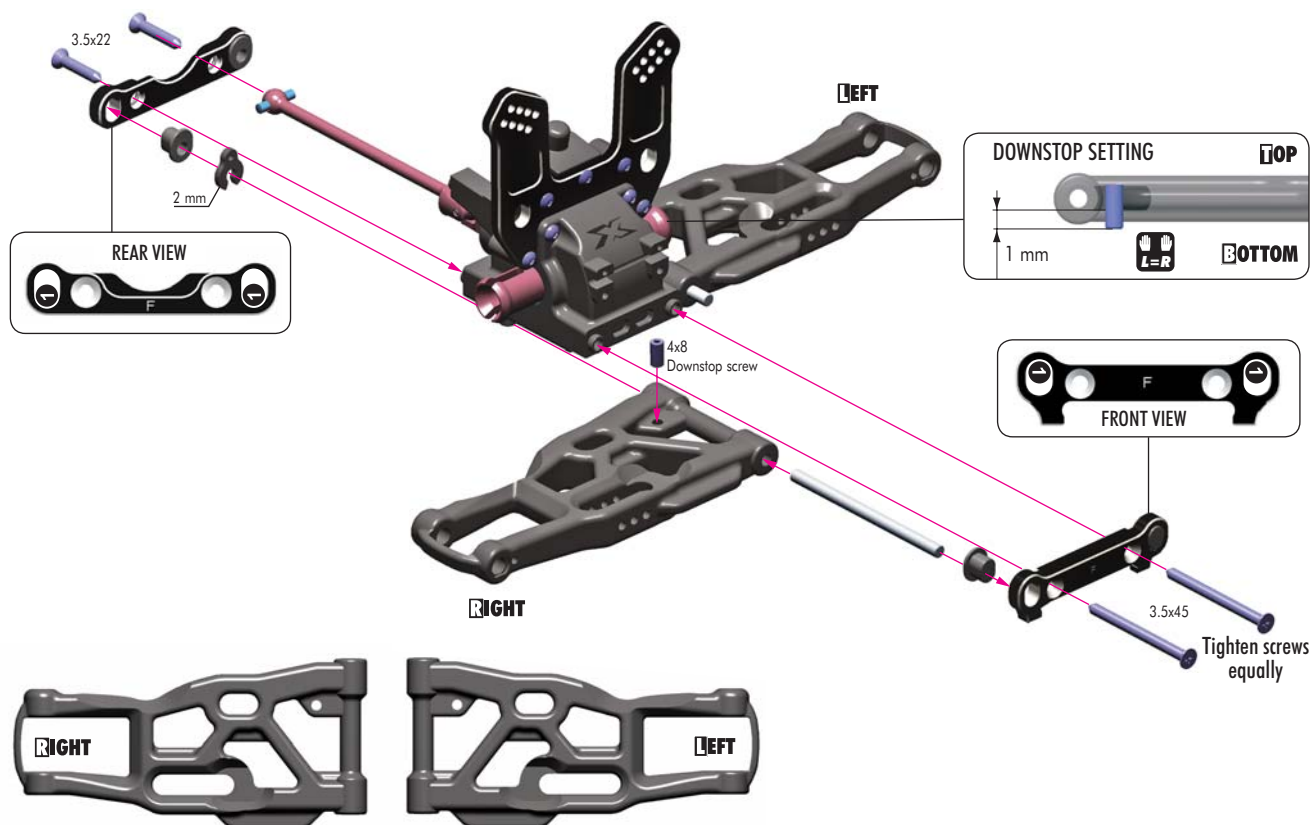
TIP Please ensure that the rear upright moves freely. In case the rear upright is not moving freely use sandpaper to thin both wheelbase adjustment shims until the rear upright moves freely.



5. FRONT SUSPENSION

PAGE 15

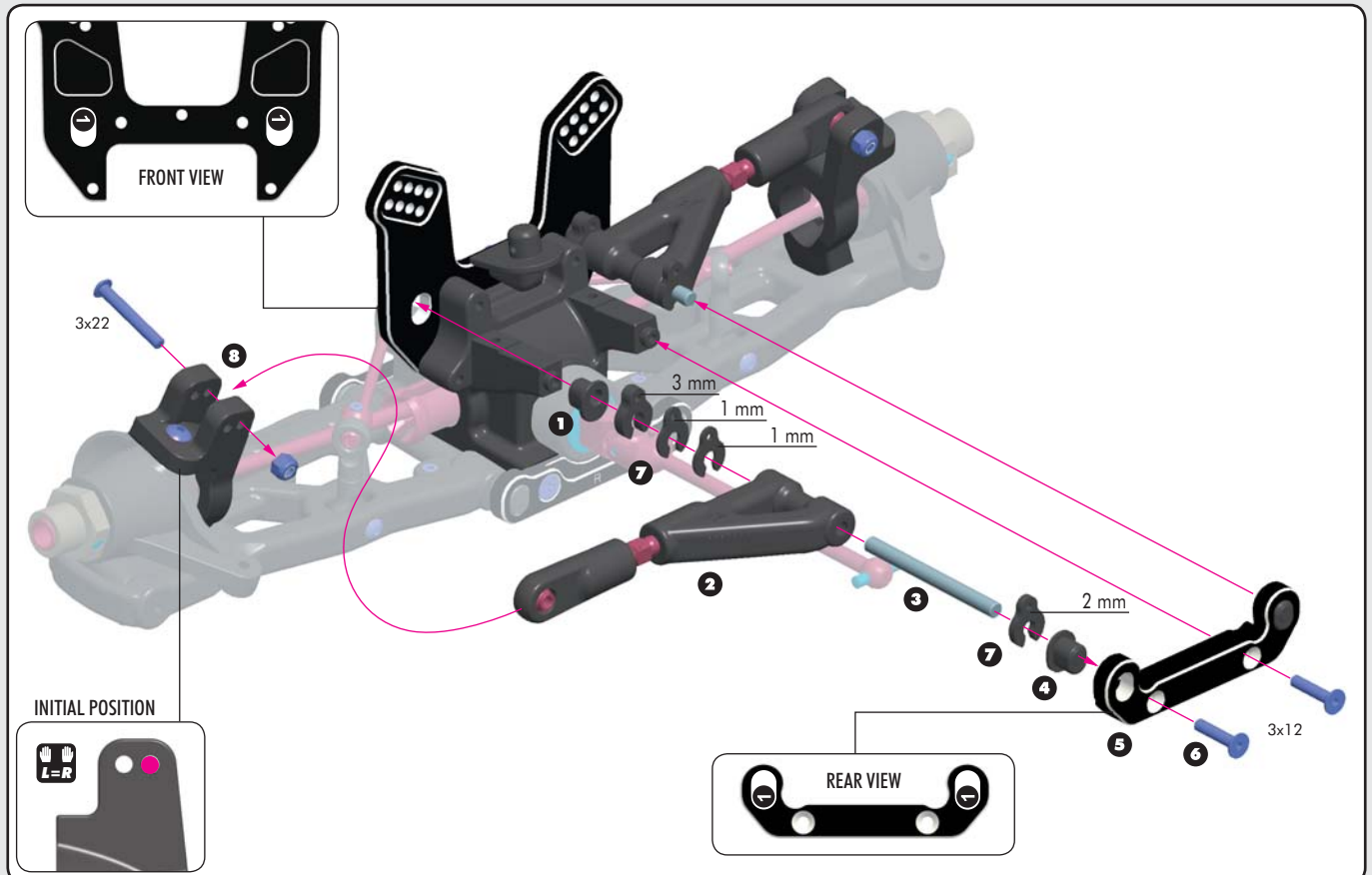
STEP 1



6. FRONT SUSPENSION

PAGE 17

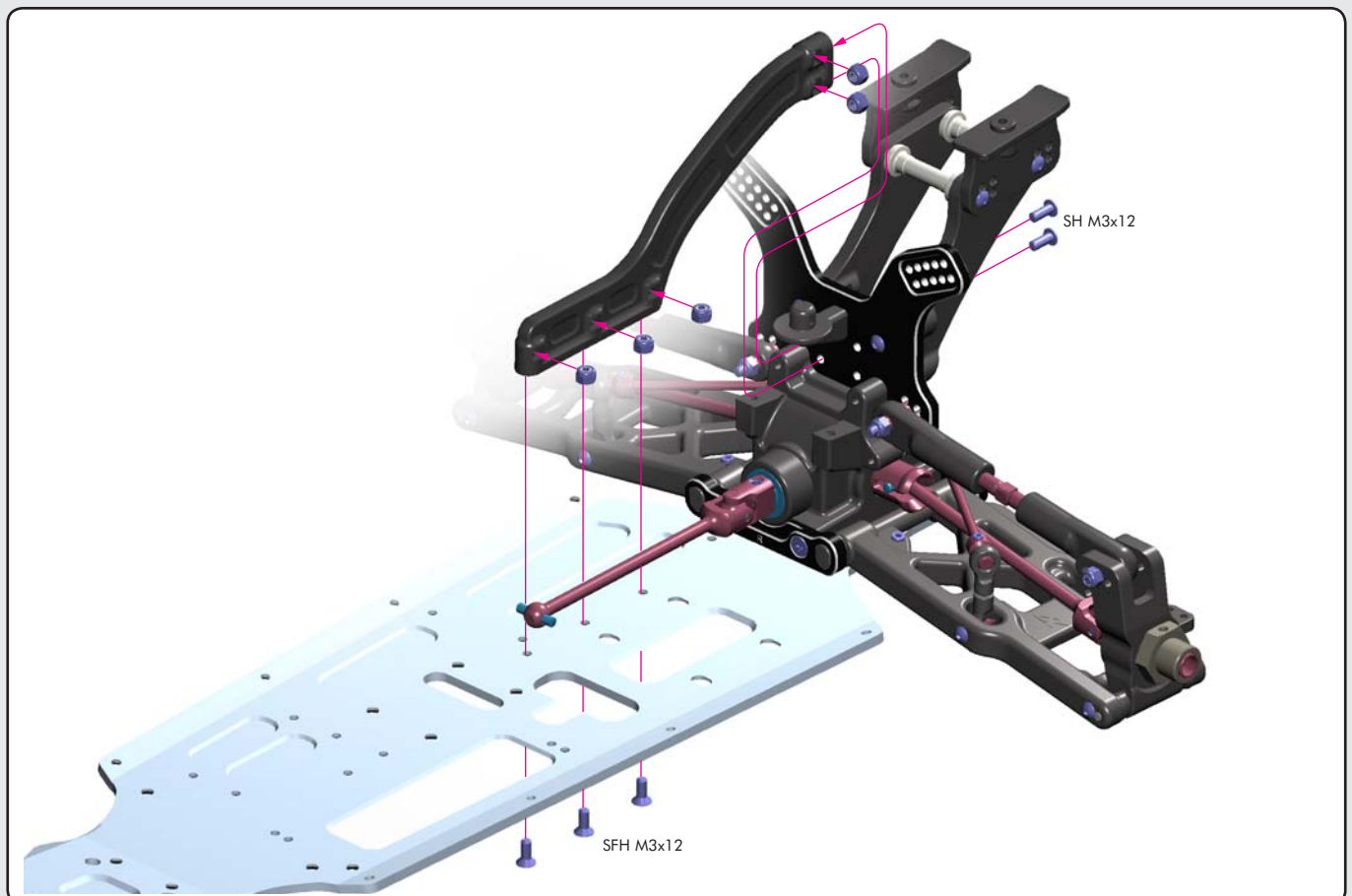
STEP 3



6. FRONT & REAR ASSEMBLY

PAGE 19

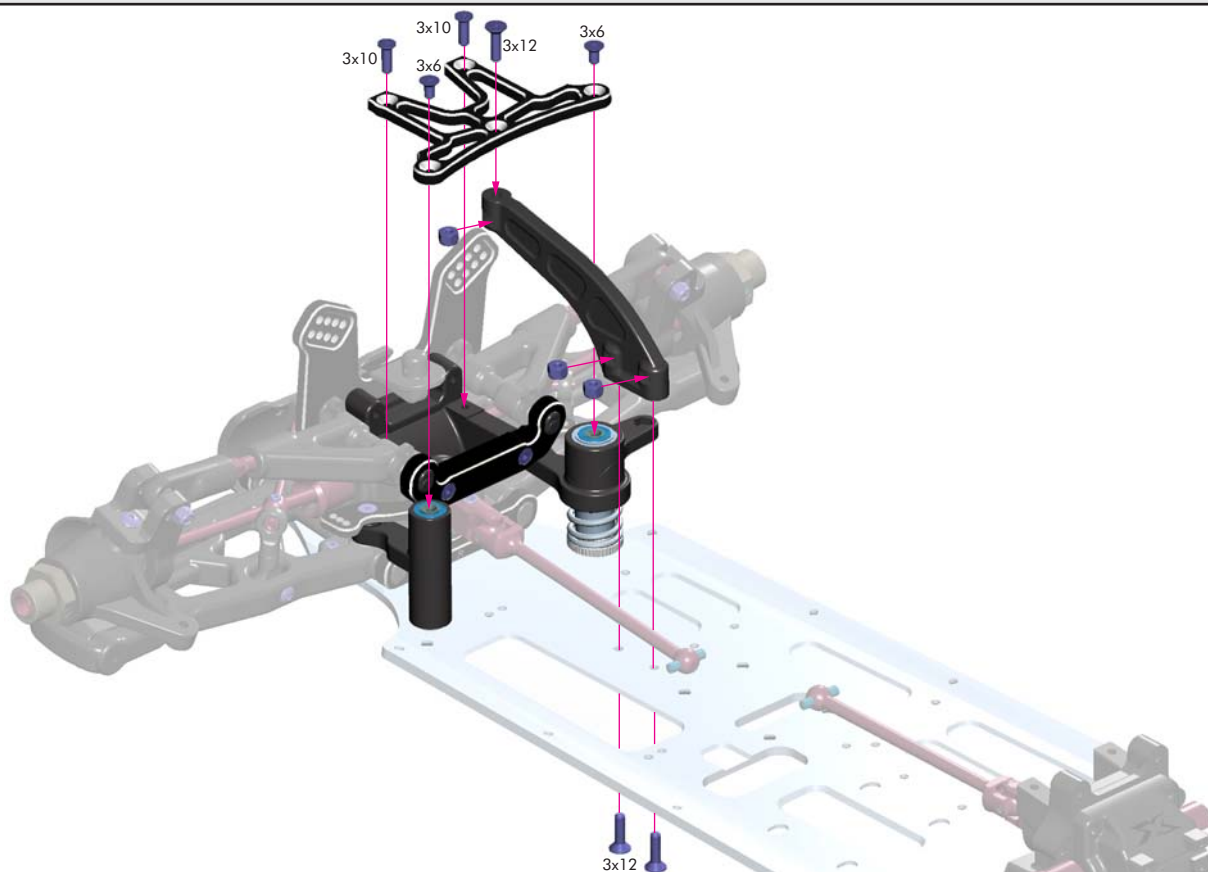
STEP 1



7. STEERING

PAGE 21

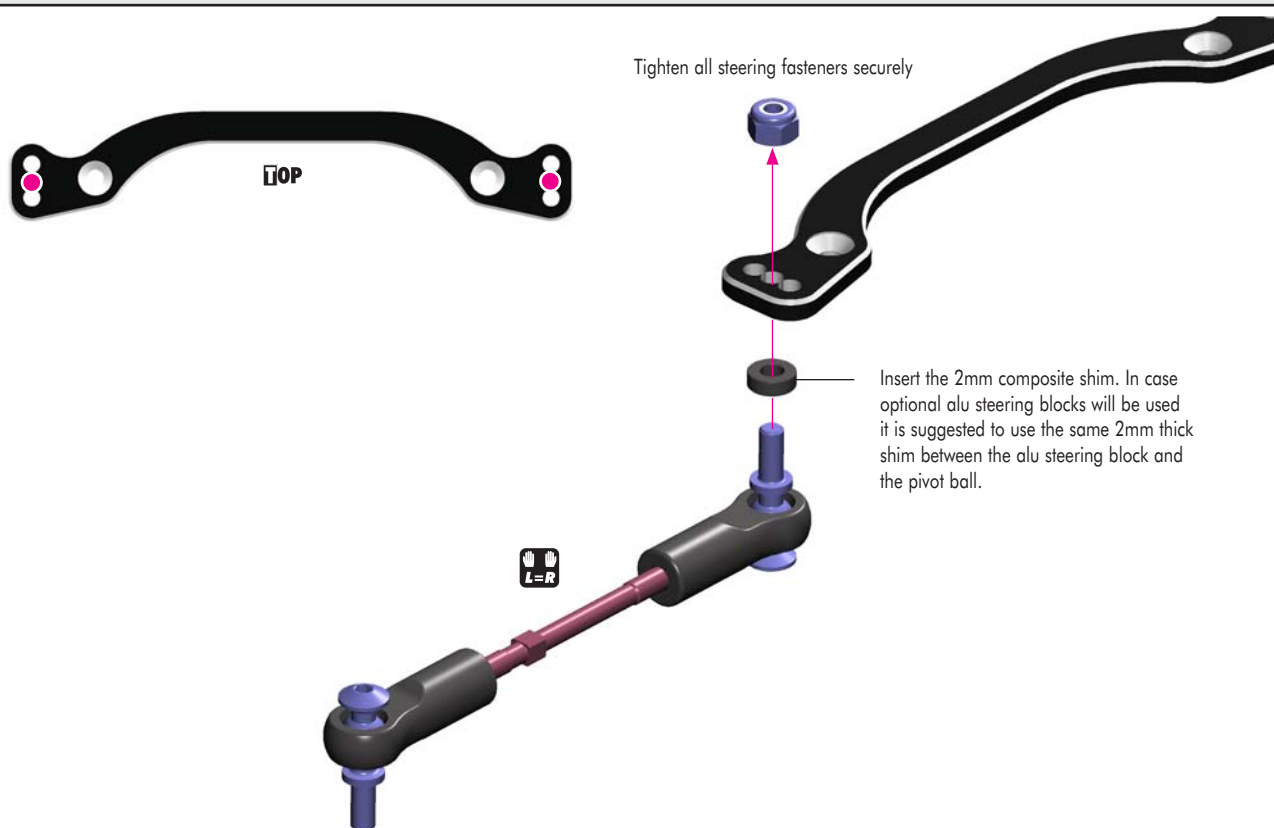
STEP 2



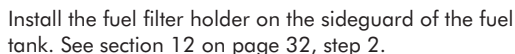
7. STEERING

PAGE 21

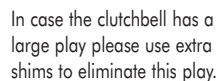
STEP 3



STEP 1



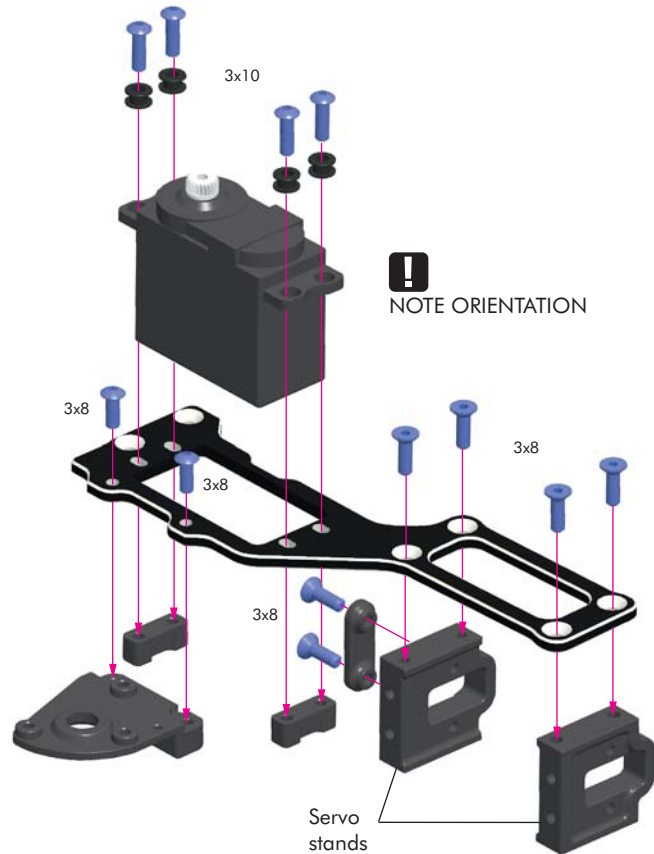
STEP 1



10. RADIO CASE

PAGE 27

STEP 1



11. SHOCK ABSORBERS

PAGE 28

STEP 1

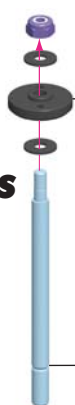
STEP 2

BAG



FRONT SHOCKS

1step



Use 1.4mm pistons, straight (no dot on the piston)



✓ CORRECT

TIGHTEN GENTLY

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



✗ INCORRECT

DO NOT OVERTIGHTEN

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

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

BAG

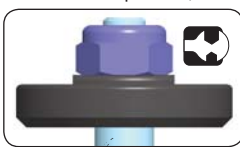


REAR SHOCKS

1step



Use 1.5mm pistons, straight (no dot on the piston)



✓ CORRECT

TIGHTEN GENTLY

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



✗ INCORRECT

DO NOT OVERTIGHTEN

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

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

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



2step

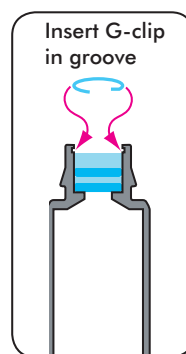
G-clip

THICK Shim 1.3mm

O-ring

THIN Shim 0.7mm

O-ring



TIP 350 shock oil: Use in standard and cold weather.
500 shock oil: Use in hot weather.

STEP 2

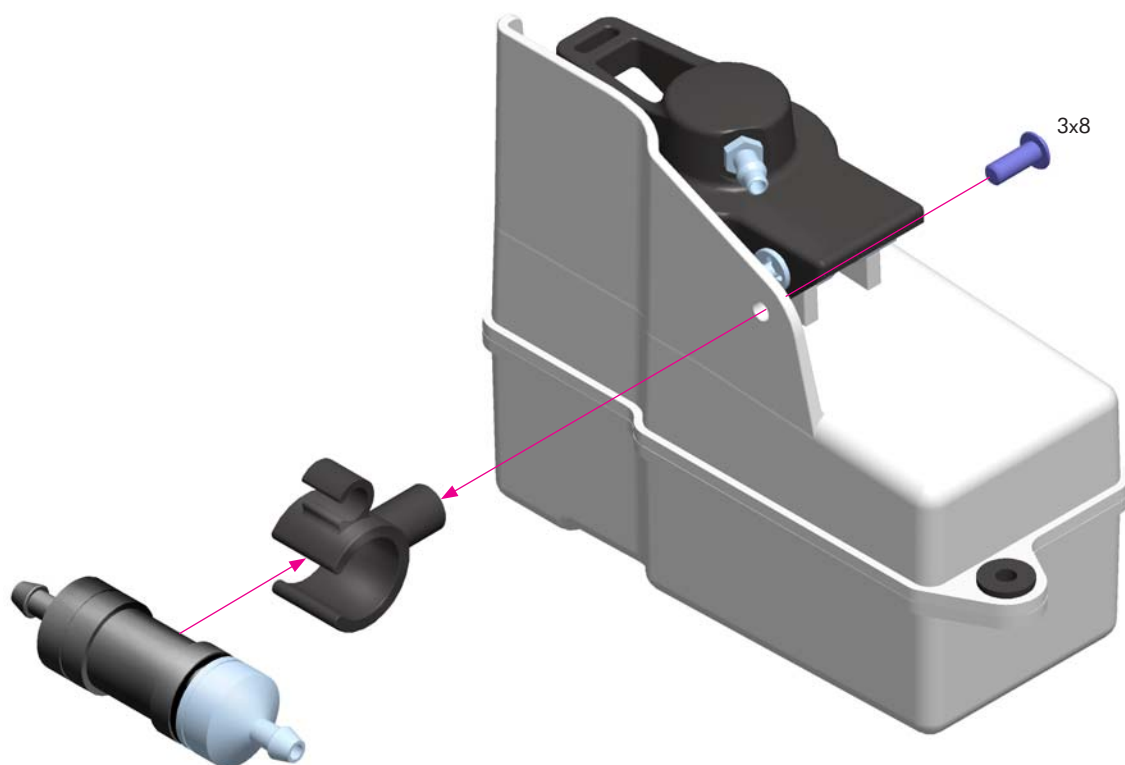
Grip the shock rod at top of exposed threads with side cutting pliers. Be careful not to damage the shock rod.

STEP 1 ~ 2

INITIAL POSITIONS

12. FINAL ASSEMBLY

PAGE 32 STEP 1

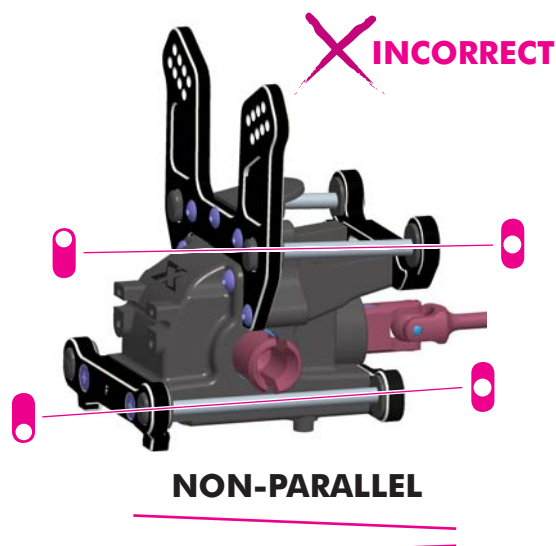
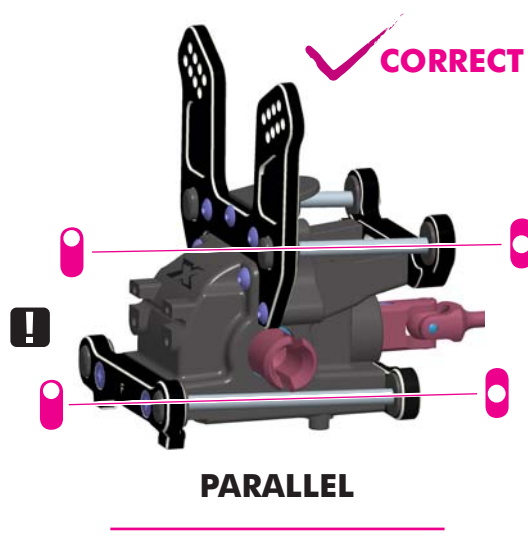


TECH TIP: Front Kick-up Angle Adjust.

IMPORTANT SET-UP NOTICE

Anytime you adjust or change the front kick-up angle, make sure that the front upper arm is parallel to the lower arm. This means that when you change the position (angle) of the front lower arm, you must adjust the front upper arm as well to ensure that there will be no binding in the suspension.



















1. Remove all front upper arm caster clips.
2. Change the front kick-up angle of the front lower arm.
3. Move the suspension up and down a few times and let the front upper arm settle into its own position on the pin.
4. Insert caster clips ahead of and behind the front upper arm to secure it in place.



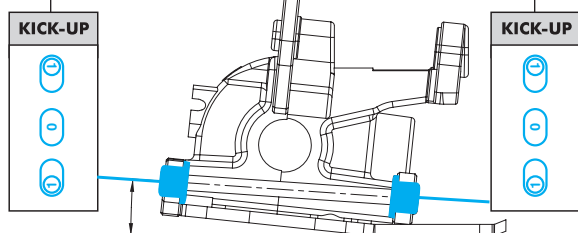
XB8EC SET-UP UPDATE

With the XB8EC suspension, you have to consider also the changes in Kick-up and Anti-Squat geometry. Use this reference sheet for measuring and adjusting the XB8EC suspension.

FRONT KICK-UP

Front eccentric bushing	Kick-up	Rear eccentric bushing
 Upper position	6° *	Upper position 
 Upper position	7° *	Middle position 
 Upper position	8°	Lower position 
 Middle position	5° *	Upper position 
 Middle position	6°	Middle position 
 Middle position	7°	Lower position 
 Lower position	4°	Upper position 
 Lower position	5°	Middle position 
 Lower position	6°	Lower position 






* Arm will be in contact with the diff outdrive

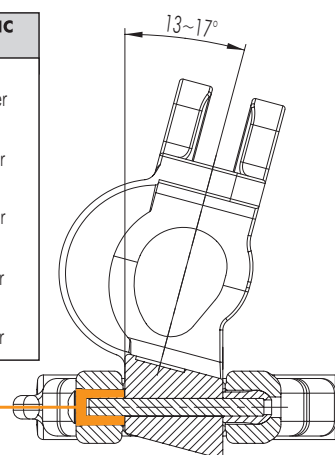


The kick-up is adjusted using different eccentric bushings in different orientations. Refer to the table above.

TOTAL CASTER = C-HUB CASTER + KICK UP




C-Hub caster	Kick-up				
	4°	5°	6°	7°	8°
17°	21°	22°	23°	24°	25°
16°	20°	21°	22°	23°	24°
15°	19°	20°	21°	22°	23°
14°	18°	19°	20°	21°	22°
13°	17°	18°	19°	20°	21°

CASTER ECCENTRIC BUSHING	
	= 17° caster
	= 16° caster
	= 15° caster
	= 14° caster
	= 13° caster

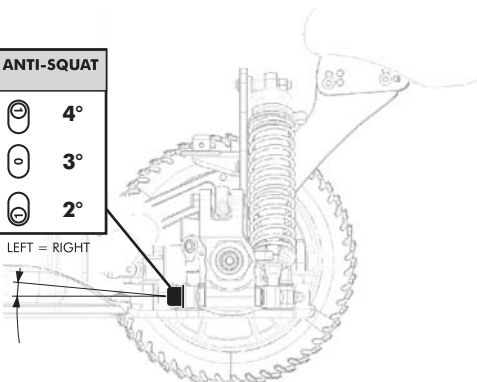


The caster of C-hub is set using different eccentric bushings in different orientations. Refer to the table above.
The XB8EC features only the 2° eccentric bushing so in order to set other positions you need to purchase:
#352170 - Steel Eccentric Bushing 0°
#352174 - Steel Eccentric Bushing 1°

REAR ANTI-SQUAT

ANTI-SQUAT	
	4°
	3°
	2°

LEFT = RIGHT



Using optional suspension holder #353310 you can also adjust the rear anti-squat 0° or 1°.

FRONT & REAR BRACES

XB8EC includes only composite braces which have proven to be the most frequently used braces in most conditions. You can however purchase optional alu braces (#352086 front; #353085 rear) for further chassis flex adjustment.

Use the braces for following application:

Use **composite braces** for low traction tracks and if you want the car to be easy to drive.

Use **alu braces** for high traction tracks and if you want a more aggressive car. Alu braces are suggested for tracks with big jumps.

XRAY XB8 EC

FRONT
● □ ■ ▣ APPLIED
REAR

OFFSET

STANDARD	<input type="checkbox"/>
+1	<input type="checkbox"/>
+2	<input type="checkbox"/>

STEERING BLOCK

PLASTIC	<input type="checkbox"/>
ALU	<input type="checkbox"/>

CAMBER LINK LOCATION

UPPER SHOCK POSITION

REAR ROLL CENTER

CAMBER LINK LOCATION

REAR LOWER SHOCK POSITION

MEASURE UNDER ARM

FRONT DROOP

OFFSET

STANDARD	<input type="checkbox"/>
+1	<input type="checkbox"/>
+2	<input type="checkbox"/>

OPTIONAL ALU UPRIGHT

OUTBOARD TOE-IN

0°	<input type="checkbox"/>
2°	<input type="checkbox"/>

CASTER ECCENTRIC BUSHING

LEFT = RIGHT

+2°	+1°	0°	-1°	-2°
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

KICK-UP

REAR TOE-IN

XRAY XB8TQ

⌚	2°	①
⌚	2.5°	⑤
⌚	3°	⑩
⌚	3.5°	⌚
⌚	4°	⌚

LEFT SIDE MUST BE OPPOSITE TO THE RIGHT SIDE

FRONT ROLL CENTER

LEFT = RIGHT

	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>

BRACE

PLASTIC	<input type="checkbox"/>
ALU	<input type="checkbox"/>
TORQUE	<input type="checkbox"/>

KICK-UP

	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>

WHEELBASE SHIM POSITION

<input type="checkbox"/> FRONT	<input type="checkbox"/> REAR
--------------------------------	-------------------------------

ANTI-SQUAT

LEFT = RIGHT

	4°	<input type="checkbox"/>
	3°	<input type="checkbox"/>
	2°	<input type="checkbox"/>

ANTI-SQUAT

OPTION #353310

	1°	<input type="checkbox"/>
	0°	<input type="checkbox"/>

BRACE

PLASTIC	<input type="checkbox"/>
ALU	<input type="checkbox"/>

WING MOUNTING

F3 F4 R3 R4
F1 F2 R1 R2

LEFT = RIGHT

WING SHIM

YES	<input type="checkbox"/>
NO	<input type="checkbox"/>

WHEELBASE SHIM POSITION

<input type="checkbox"/> FRONT	<input type="checkbox"/> REAR
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FRONT

OUT

IN

FRONT TOE

SHIM UNDER STEERING PLATE

mm

STEERING PLATE

STANDARD	<input type="checkbox"/>
3D	<input type="checkbox"/>

ACKERMANN POSITION

3 2 1

Servo SAVER

TIGHT	<input type="checkbox"/>
MEDIUM	<input type="checkbox"/>
SOFT	<input type="checkbox"/>

FRONT UPPER ARM POSITION

1mm	1mm	2mm	3mm

SHIMS BEHIND ARM

REAR

IN

REAR TOE

REAR UPRIGHT POSITION

WHEELBASE

0	1	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

FRONT CAMBER

mm

SHOCK SPACER

mm

RIDE HEIGHT/mm

REAR CAMBER

mm

RIDE HEIGHT/mm

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COMMENTS