

XRAY 808

INSTRUCTION MANUAL SUPPLEMENTARY SHEET

Use this XB808 2011 Spec Supplementary Instruction Sheet along with the standard XB808 Instruction Manual included in the kit. This Supplementary Sheet highlights and explains new updated steps and you should refer to them while building your XB808 2011 Spec 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.

Please note that this kit does not include a turnbuckle tool. We recommend that you purchase the #181030 - 3mm, #181040 - 4mm and #181050 - 5mm HUDY Turnbuckle Tool.

XB808 2011 SPEC



#351104
XB808'11 ALU CHASSIS
LONG - SWISS 7075 T6
(3MM) - HARDCOATED



#352004
XB808'11 DIFF
BULKHEAD BLOCK SET
FRONT/REAR



#352304
XB808 ALU FRONT
LOWER SUSP. HOLDERS
SET - SQUARE ADJ.
ROLL-CENTER



#355108
BEVEL DRIVE GEAR 10T



#353088
XB808 COMPOSITE REAR
BRACE - V2



#353304
XB808 ALU REAR
LOWER SUSP. HOLDERS
SET - SWISS 7075 T6
(7MM) - HARDCOATED



#355417
CENTRAL CVD SHAFT
UNIVERSAL JOINT -
HUDY SPRING STEEL™



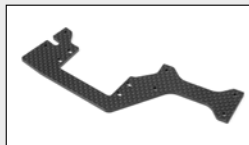
#355424
XB808'11 FRONT
CENTRAL CVD DRIVE
SHAFT - HUDY SPRING
STEEL™



#355624
XB808'11 REAR
CENTRAL CVD DRIVE
SHAFT - HUDY SPRING
STEEL™



#356002
XB808'11 RADIO CASE
SET



#356117
XB808'11
GRAPHITE RADIO
PLATE



#358723
XB808'11 EXHAUST
WIRE MOUNT SET



#358083
SHOCK RUBBER
MEMBRANE RIBBED (4)



#359706
XRAY XB808'11 BODY
- EXTRA DOWNFORCE



#971034
SILICONE O-RING
3.4x2 (10)

XB808 2009 & 2010 SPEC



#358602 FUEL TANK
123CC - SET - V3



#358801 AIR FILTER SET
- LOW PROFILE



#940816 HIGH-SPEED
BALL-BEARING 8x16x5
RUBBER SEALED (2)



#354110 BRAKE DISK -
LASER CUT - V2



#352501 XB808 SERVO
SAVER COMPLETE SET - V2



#358141 XB808 ALU
SHOCK BODY NUT FOR
SHOCK BOOT (2)



#358072 XB808 FOLDING
SHOCK BOOT (4)



#358016 COMPOSITE
SHOCK BALL JOINT FOR
SHOCK BOOT (2)



#352664 XB808
COMPOSITE STEERING
BALL JOINT 6.8MM - V2
(2)



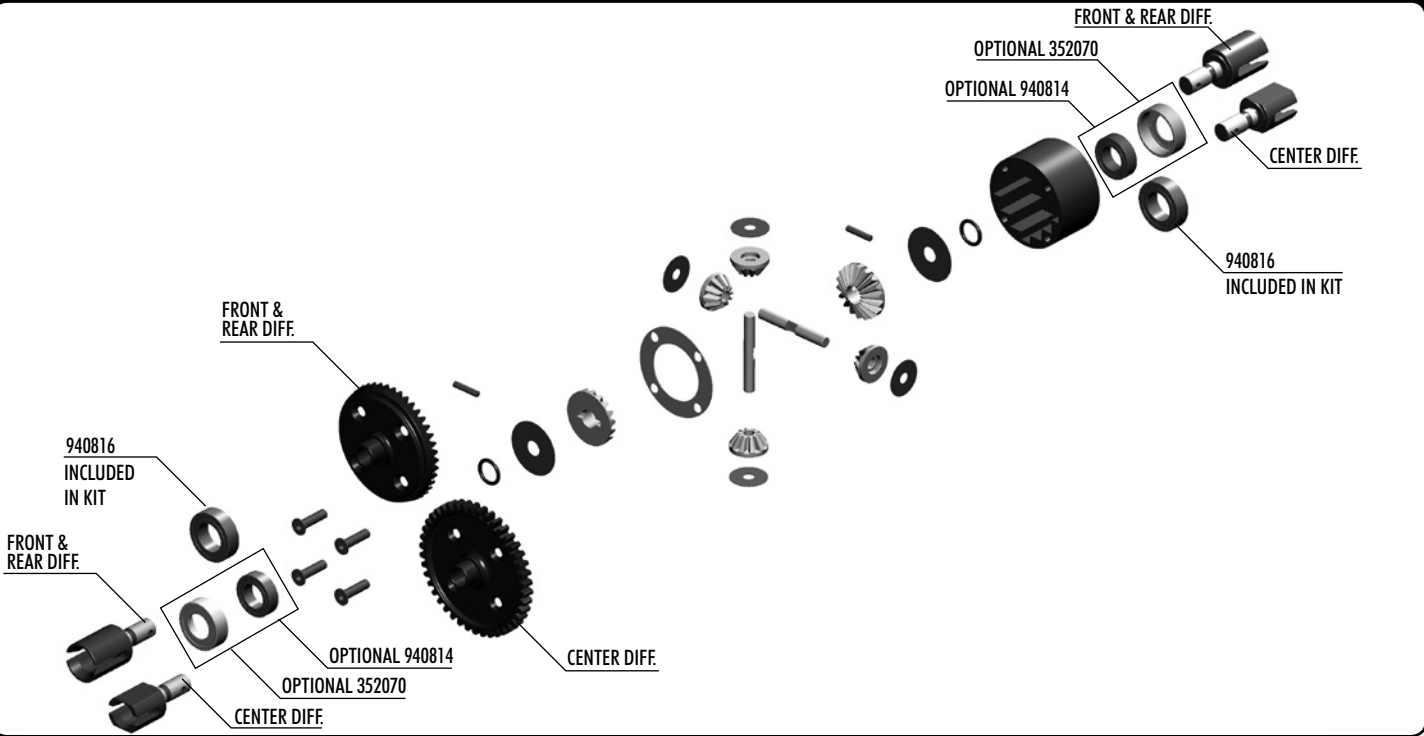
#352151 XB808 FRONT
UPPER ARM BALL JOINT
- V2 (2)
#353131 XB808 REAR
UPPER INNER CAMBER LINK
BALL JOINT - V2 (2)



#352665 XB808
COMPOSITE RELIEF
STEERING BALL JOINT
6.8MM - V2 (2)



#351330 XB808
COMPOSITE REAR
BODYPOST LONG

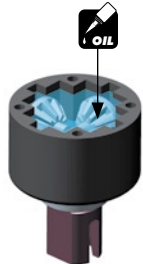


1. CENTER DIFFERENTIAL

Center diff:

Silicone oil **5000cst**
Fill to just above the satellite gears.

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



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



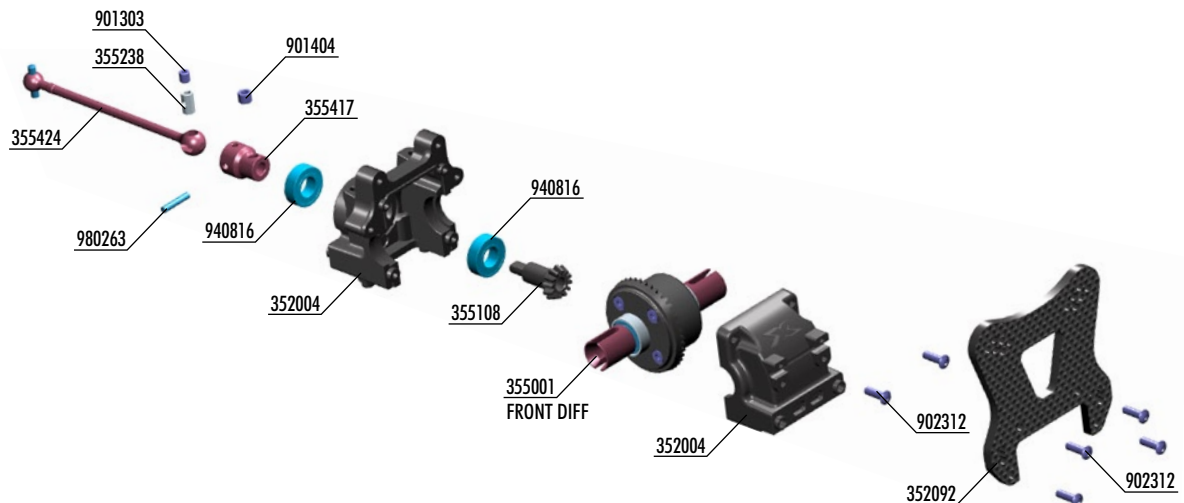
1. Put the diff (without oil) on the scale and check the weight (approximately 40.95g).



2. Slowly pour oil into the diff and watch the weight. Add 2.7g of oil into the diff. The approximate weight of the diff+oil is 43.65g.

$$40.95g + 2.7g = 43.65g$$

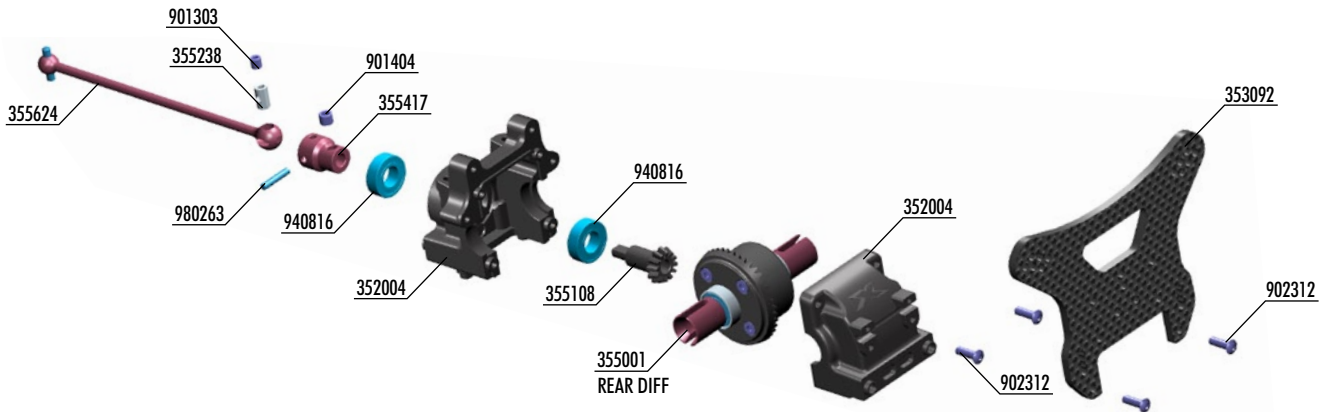
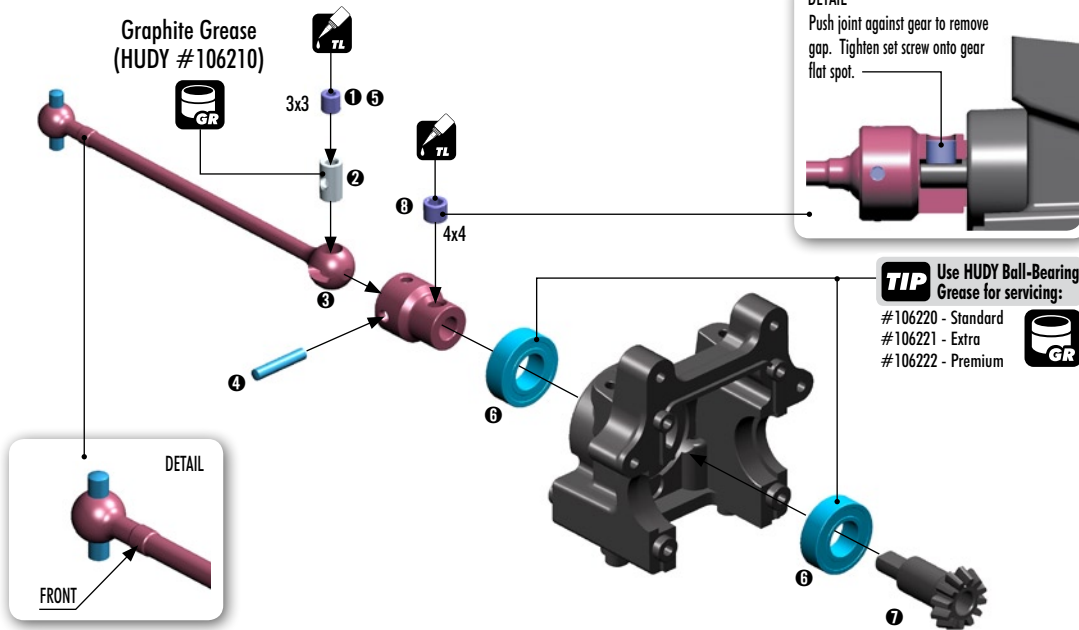
2. FRONT TRANSMISSION



BAG

02

35 2004	XB808'11 DIFF BULKHEAD BLOCK SET FRONT/REAR	90 1303	HEX SCREW SB M3x3 (10)
35 2092	XB808 GRAPHITE FRONT SHOCK TOWER - CNC MACHINED 4 MM	90 1404	HEX SCREW SB M4x4 (10)
35 5108	BEVEL DRIVE GEAR 10T	90 2312	HEX SCREW SH M3x12 (10)
35 5238	XB808 CVD DRIVE SHAFT COUPLING HUDY SPRING STEEL™	94 0816	HIGH-SPEED BALL-BEARING 8x16x5 RUBBER SEALED (2)
35 5417	CENTRAL CVD SHAFT UNIVERSAL JOINT - HUDY SPRING STEEL™	98 0263	PIN 2.5x13 (10)
35 5424	XB808'11 FRONT CENTRAL CVD DRIVE SHAFT - HUDY SPRING STEEL™		

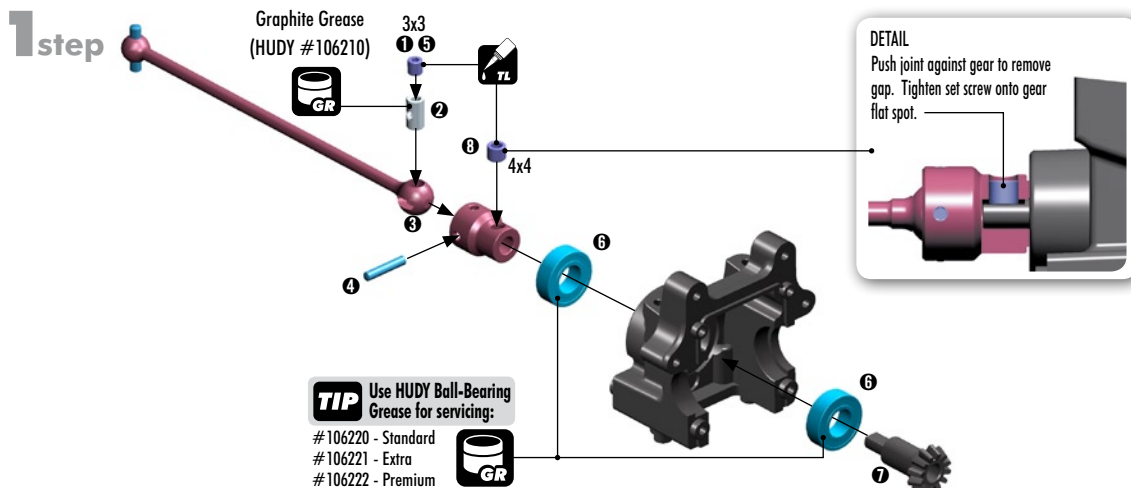


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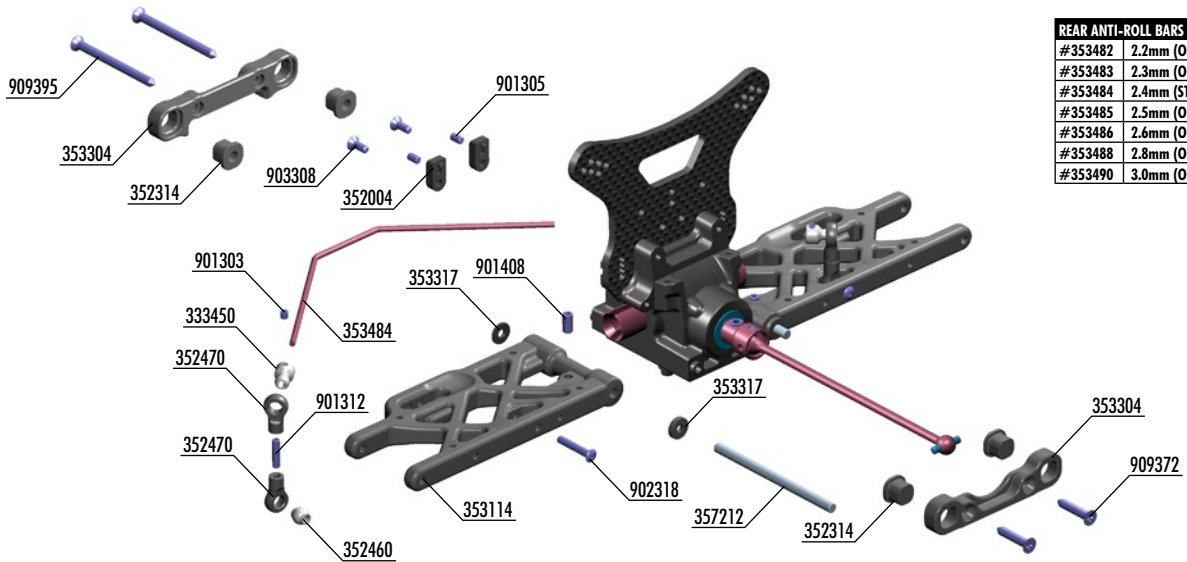
02

- 35 2004 XB808'11 DIFF BULKHEAD BLOCK SET FRONT/REAR
- 35 3092 XB808 GRAPHITE REAR SHOCK TOWER - CNC MACHINED 3.5 MM
- 35 5108 BEVEL DRIVE GEAR 10T
- 35 5238 XB808 CVD DRIVE SHAFT COUPLING HUDY SPRING STEEL™
- 35 5417 CENTRAL CVD SHAFT UNIVERSAL JOINT - HUDY SPRING STEEL™
- 35 5624 XB808'11 REAR CENTRAL CVD DRIVE SHAFT - HUDY SPRING STEEL™

- 90 1303 HEX SCREW SB M3x3 (10)
- 90 1404 HEX SCREW SB M4x4 (10)
- 90 2312 HEX SCREW SH M3x12 (10)
- 94 0816 HIGH-SPEED BALL-BEARING 8x16x5 RUBBER SEALED (2)
- 98 0263 PIN 2.5x13 (10)



TIP Use HUDY Ball-Bearing Grease for servicing:
 #106220 - Standard
 #106221 - Extra
 #106222 - Premium



REAR ANTI-ROLL BARS	
#353482	2.2mm (OPTION)
#353483	2.3mm (OPTION)
#353484	2.4mm (STANDARD)
#353485	2.5mm (OPTION)
#353486	2.6mm (OPTION)
#353488	2.8mm (OPTION)
#353490	3.0mm (OPTION)

BAG

03

- | | | | |
|---------|--|---------|-------------------------------|
| 33 3450 | ANTI-ROLL BAR BALL JOINT 5.8 MM (2) | 35 7212 | LOWER INNER PIVOT PIN F+R (2) |
| 35 2004 | XB808*11 DIFF BULKHEAD BLOCK SET FRONT/REAR | 90 1303 | HEX SCREW SB M3x3 (10) |
| 35 2314 | COMPOSITE ECCENTRIC BUSHINGS (2) | 90 1305 | HEX SCREW SB M3x5 (10) |
| 35 2460 | PIVOT BALL 5.8 (10) | 90 1312 | HEX SCREW SB M3x12 (10) |
| 35 2470 | BALL JOINT 5.8 (8) | 90 1408 | HEX SCREW SB M4x8 (10) |
| 35 3114 | XB808 COMPOSITE REAR LOWER SUSPENSION ARM | 90 2318 | HEX SCREW SH M3x18 (10) |
| 35 3304 | XB808 ALU REAR LOWER SUSP HOLDERS SET- SQUARE ADJ. ROLL-CENTER | 90 3308 | HEX SCREW SFH M3x8 (10) |
| 35 3371 | XB808 SET OF COMPOSITE LOWER ARM SHIMS | 90 9372 | SCREW PHILLIPS SS 3.5x22 (10) |
| 35 3484 | XB808 REAR ANTI-ROLL BAR 2.4MM | 90 9395 | SCREW PHILLIPS SS 3.5x45 (10) |

3. REAR SUSPENSION

All possible mounting alternatives of eccentric bushings

Composite eccentric bushings

Initial position

Initial position

Eccentric bushings have two different offsets from the center.

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

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

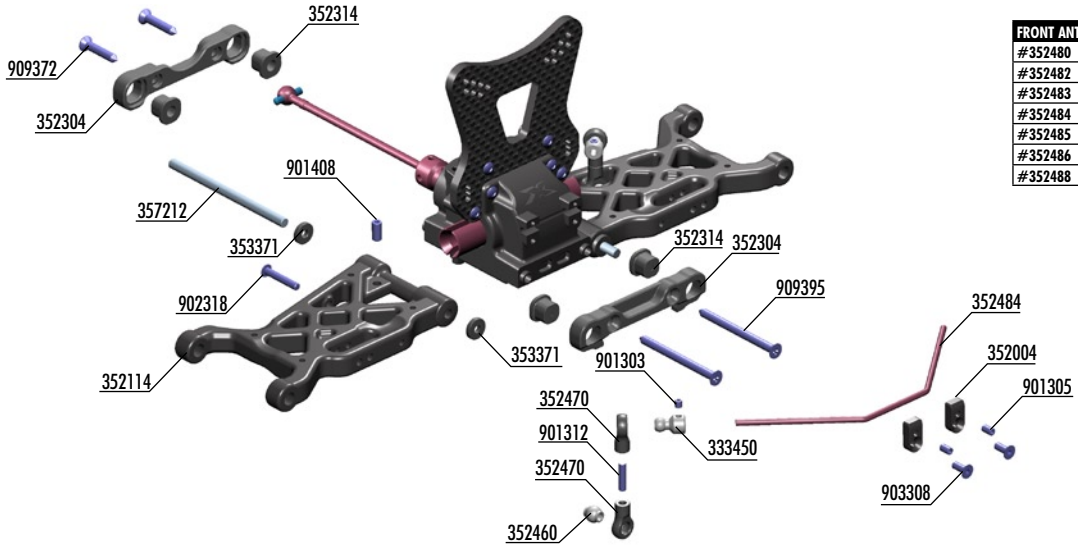
ANTI-SQUAT			ROLL-CENTER			TRACK WIDTH			TOE-IN		
RR	RF	(°)	RR	RF	(mm)	RR	RF	(mm)	RR	RF	(°)
		=3°			=0mm			=308			=3°
		=4°			=1mm			=306			=4°
		=2°			=-1mm			=310			=2°
		=4°									=2°
		=3°									=3°
		=5°									=1°
		=2°									=4°
		=3°									=5°
		=1°									=3°

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

Example: 0(RR) - 0 (RF) = 3°

0(RR) - 0.5 (RF) = 3.5°

0(RR) - 1 (RF) = 4°

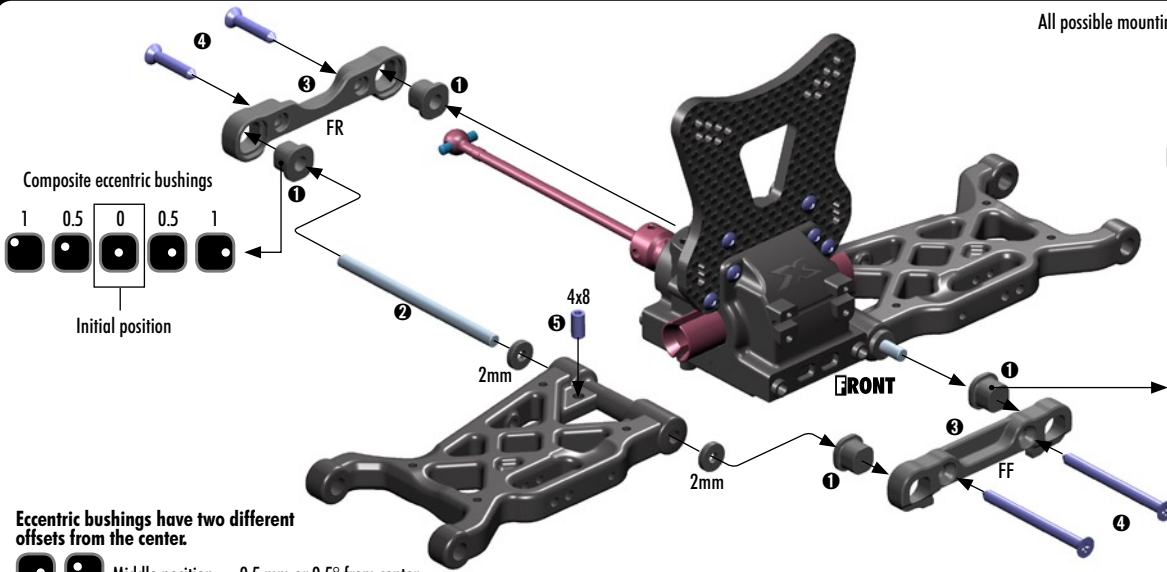


FRONT ANTI-ROLL BARS	
#352480	2.0mm (OPTION)
#352482	2.2mm (OPTION)
#352483	2.3mm (OPTION)
#352484	2.4mm (STANDARD)
#352485	2.5mm (OPTION)
#352486	2.6mm (OPTION)
#352488	2.8mm (OPTION)

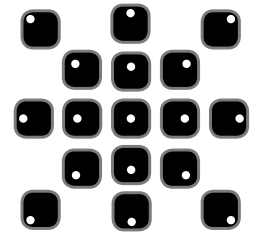
BAG

05

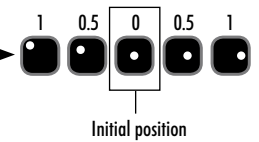
- | | | | |
|---------|--|---------|-------------------------------|
| 33 3450 | ANTI-ROLL BAR BALL JOINT 5.8 MM (2) | 90 1303 | HEX SCREW SB M3x3 (10) |
| 35 2004 | XB808'11 DIFF BULKHEAD BLOCK SET FRONT/REAR | 90 1305 | HEX SCREW SB M3x5 (10) |
| 35 2314 | COMPOSITE ECCENTRIC BUSHINGS (2) | 90 1312 | HEX SCREW SB M3x12 (10) |
| 35 2460 | PIVOT BALL 5.8 (10) | 90 1408 | HEX SCREW SB M4x8 (10) |
| 35 2470 | BALL JOINT 5.8 (8) | 90 2318 | HEX SCREW SH M3x18 (10) |
| 35 2114 | XB808 COMPOSITE FRONT LOWER SUSPENSION ARM | 90 3308 | HEX SCREW SFH M3x8 (10) |
| 35 2304 | XB808 ALU FRONT LOWER SUSP. HOLDERS SET- SQUARE ADJ. ROLL-CENTER | 90 9372 | SCREW PHILLIPS SS 3.5x22 (10) |
| 35 3371 | XB808 SET OF COMPOSITE LOWER ARM SHIMS | 90 9395 | SCREW PHILLIPS SS 3.5x45 (10) |
| 35 2484 | XB808 FRONT ANTI-ROLL BAR 2.4MM | | |
| 35 7212 | LOWER INNER PIVOT PIN F+R (2) | | |



All possible mounting alternatives of eccentric bushings



Composite eccentric bushings



Eccentric bushings have two different offsets from the center.

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

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

KICK-UP		
FF	FR	(°)
		= 10°
		= 9°
		= 11°
		= 9°
		= 8°
		= 10°
		= 11°
		= 10°
		= 12°

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

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

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

Example:

- 0(FF) - 0(FR) = 10°

0.5(FF) - 0(FR) = 10.5°

1(FF) - 0(FR) = 11°

TOTAL CASTER = C-HUB CASTER + KICK UP

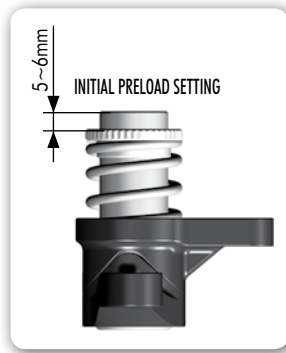
C-Hub Caster	KICK-UP				
	8°	9°	10°	11°	12°
10°	18°	19°	20°	21°	22°
12°	20°	21°	22°	23°	24°
14°	22°	23°	24°	25°	26°

Total caster is the angle that the C-hub is to the flat chassis bottom. Caster is affected not only by front kick-up but also by the C-hub caster. The combination of both represents the total caster angle. The XRAY XB808 includes a 10° caster block as stock, but 12° and 14° C-hub caster blocks can be purchased as options.

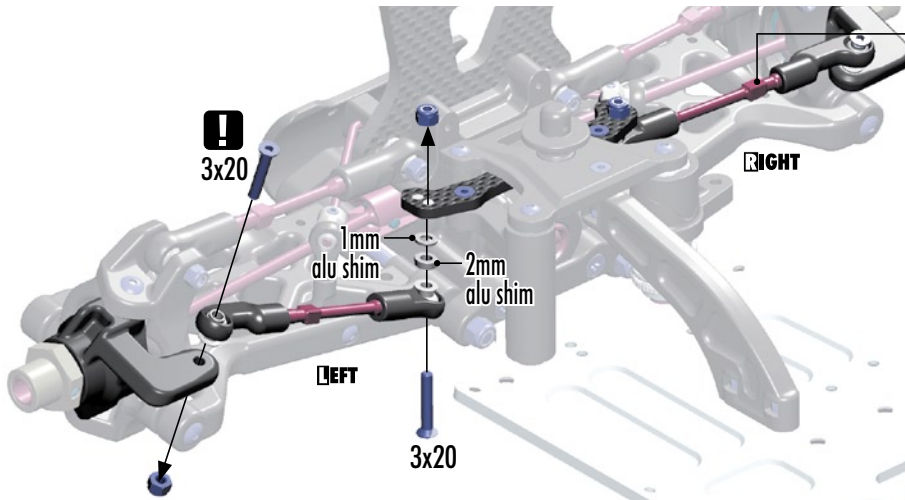
1 step



971120
O 12x1.6



2x



! NOTE ORIENTATION
Adjustment block towards outside

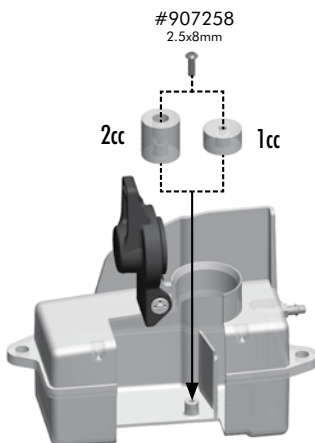
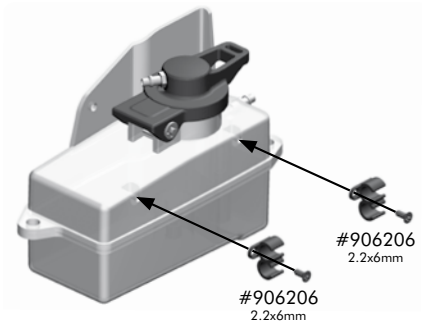
1 step

The new XRAY fuel tank — for all XB8 cars — has several new beneficial features.

The new included fuel tube holders may be connected to the tank by screws. These holders prevent the fuel tubes from moving around during racing and may prevent problems such as having the fuel tube contacting the flywheel.

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

Tube holders are easily connected to the fuel tank by screws. The main advantage of this system is that the holders will never fall down as could happen when the glue is used.



2CC FUEL TANK INSERT

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



NOTE ORIENTATION



1CC FUEL TANK INSERT

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



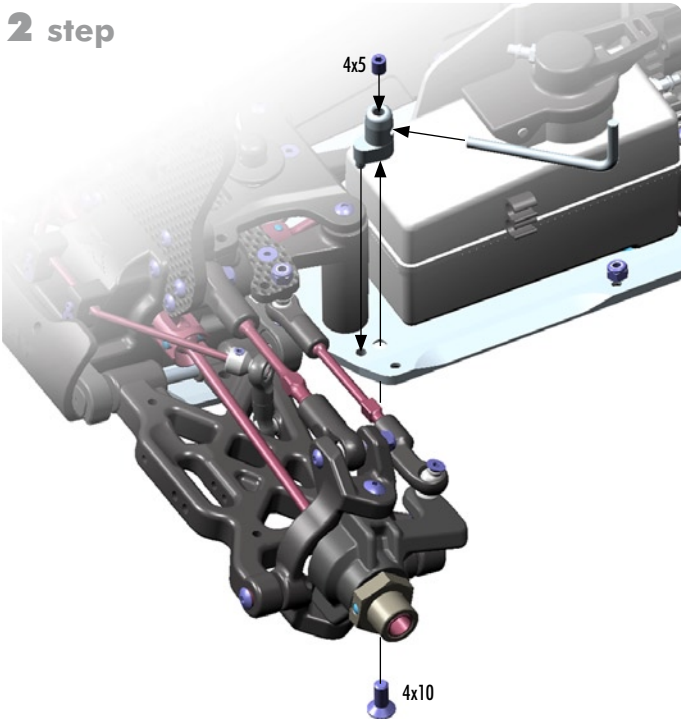
NOTE ORIENTATION

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

9. FUEL TANK & ENGINE

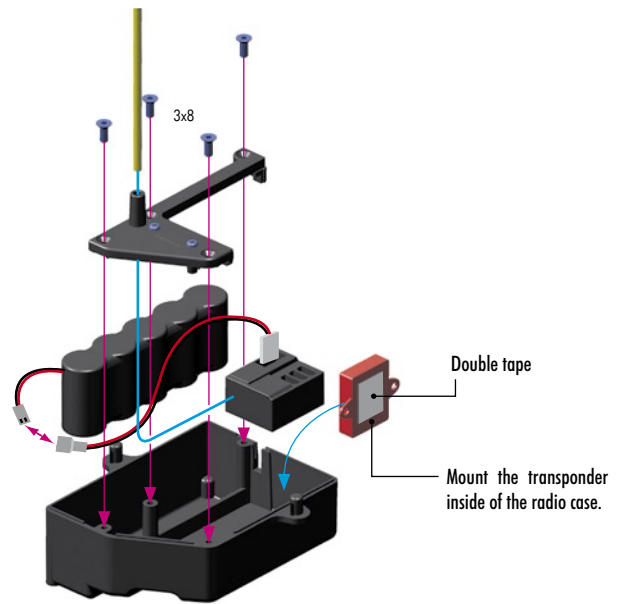
PAGE 27 / STEP 3

2 step



10. RADIO CASE

PAGE 29 / STEP 1



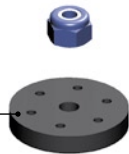
11. SHOCK ABSORBERS

PAGE 30 /

STEP 1

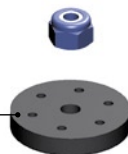
2x

1.4mm pistons



2x

1.3mm pistons



BAG

11.1

FRONT SHOCK

(SHORT)



BAG

11.2

REAR SHOCK

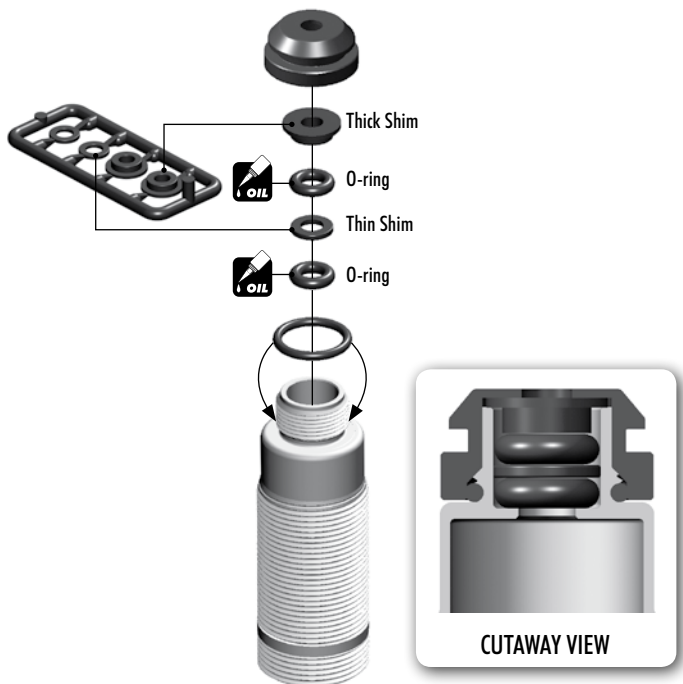
(LONG)



2x FRONT SHOCKS (SHORT)

2x REAR SHOCKS (LONG)

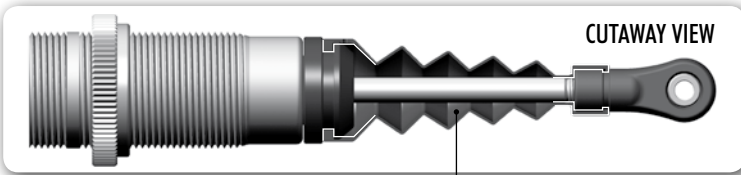
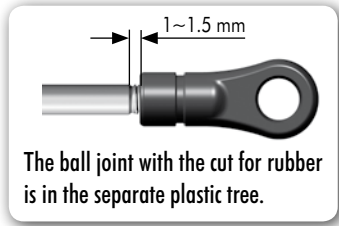
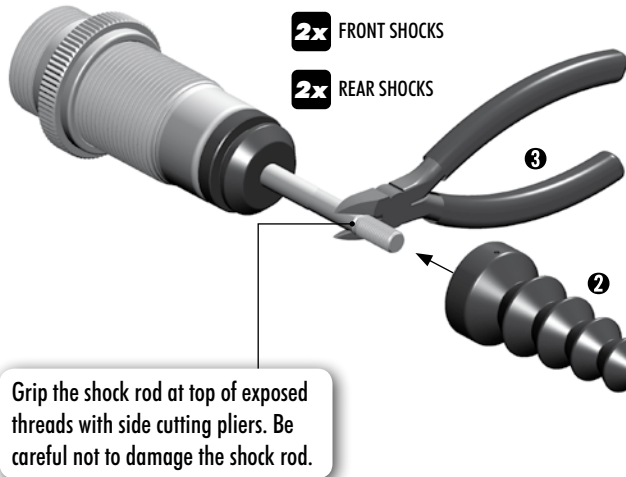
There are two different thickness shims, use them as shown. Use the same procedure when building both front and rear shocks.



971034
O 3.4x2



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



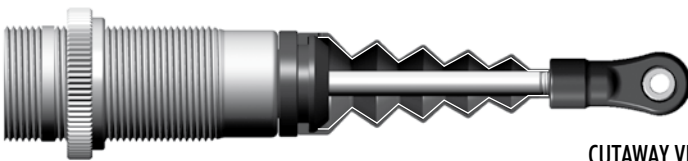
TIP TECH TIP FOR FOLDING SHOCK BOOT WITH BALL WITHOUT CUT FOR SHOCK BOOT



For better durability, mainly for front shocks, you can use #358014 ball joint without cut for shock boot. If you decide to use this ball joint, you need to modify the shock boot.



Cut the shock boot in this area, so the end of the rubber will be at the end of the shock shaft.



DEFAULT SHOCK REBOUND SETTING

0% (LOW REBOUND)

2x FRONT (SHORT)
Oil 600cSt

2x REAR (LONG)
Oil 400cSt



1
Extend the shock shaft completely. Fill the shock body with the shock oil. For the FRONT shocks (short) use 600cSt oil. For the REAR shocks (long) use 400cSt oil.

OIL Apply air filter oil and follow the engine instructions to service the air filter.

