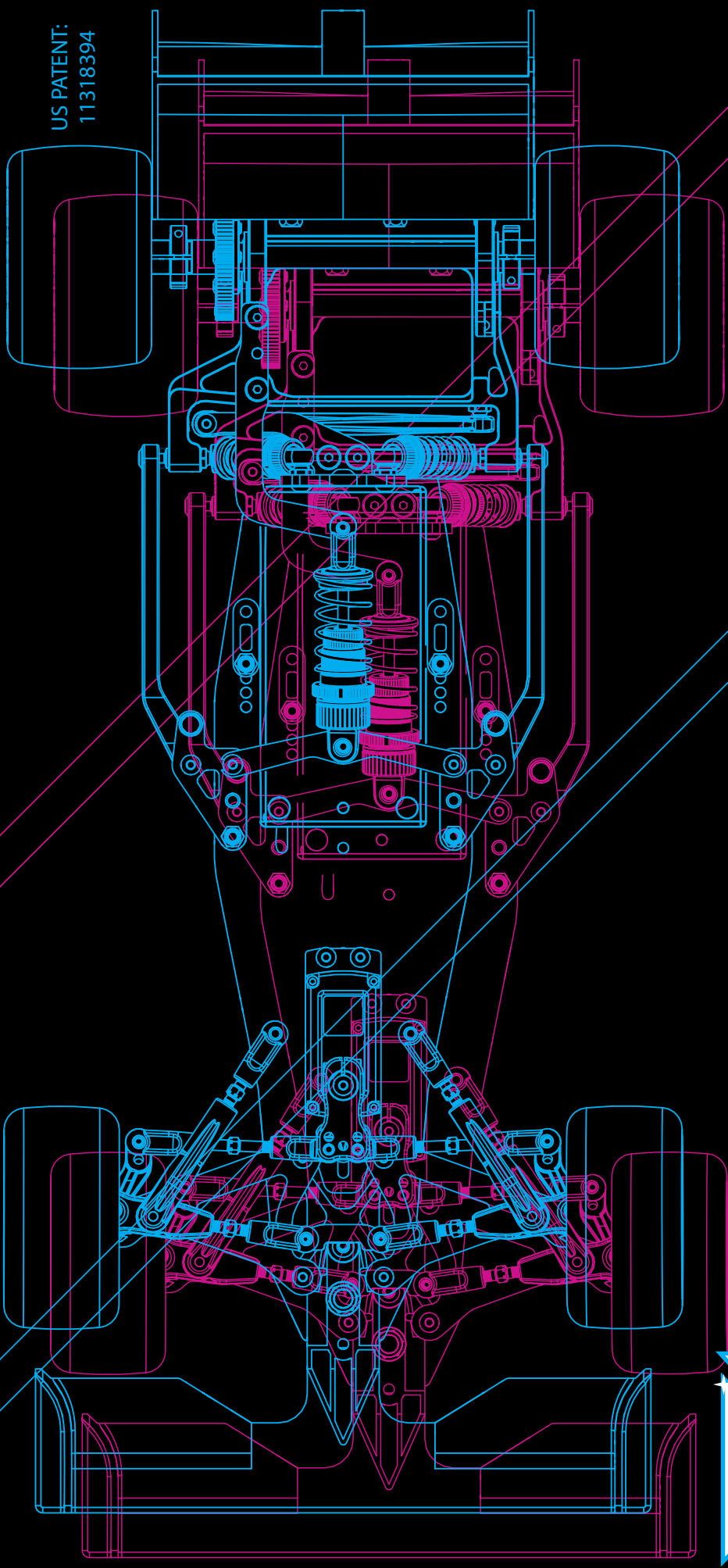


# EXORZ<sup>®</sup>

R  
A  
C  
I  
N  
G

US PATENT:  
11318394



# EXORZ<sup>®</sup>

1/10 ULTRA PERFORMANCE RADIO CONTROL KIT

## KIT FEATURES

Thank you for purchasing the Exotek Racing F1ULTRA R5 CW 'CARPET WORKS' race kit!

Your Exotek F1ULTRA R5 CW is a cutting edge high-performance racing kit that features:

- 2.7mm lightweight 1-piece chassis for superior asphalt characteristics.
- Patented floating pod rear suspension system for superior forward and side traction.
- No center rear pod ball pivot means much improved chassis roll for unmatched corner speeds.
- Adjustable camber and caster via turnbuckles for easy and exact set up with no clumsy inserts.
- 3 oil filled shocks with all machined bodies and internals for velvety smooth operation and proper sealing.
- Lightweight pod-mounted rear wing mount system included for improved rear carpet grip.
- 1-piece 7075 alloy rear pod plate - improved durability, adds rear traction and improves motor cooling.
- High performance spool axle set with 1/4" carbon fiber axle and extra heavy duty oversized axle bearings.
- Simplified direct steering-to-servo design for reduced play, reduced parts count and precise steering feel.
- Heavy duty precision alloy front bulkhead comes standard for tweak-free running and easy roll center changes.
- New heavy duty 1-piece extra long side links provides reduced rear bump steer typical of shorter side links.
- Centrally mounted 'inline' battery position for carpet racing.
- Super narrow main chassis for improved cornering due to less chassis scrubbing.
- Extra stiff chassis for reduced rear shock mount flexing.
- Low profile lipo strap and post set.
- Shorter 30mm caster post for less reactive caster .
- Integrated 30mm fan mount on the left pod.
- New motor mount with upper and lower motor attachment for less motor flexing.
- New easy grip/ easy removal custom e-clips on the front suspension pins.
- New 1 piece front suspension pins for less play.
- New direct servo horn and alloy servo mounts.
- New wider and lighter rear pod set for extra motor sensor wire clearance.
- New 1-piece nylon lightweight side links.
- New pinned side link mounts.
- New tighter fit front axle.
- New double bolt front wing mount.
- New lightweight 1-piece carbon chassis.

## REQUIRED TO COMPLETE

- 1:10 Scale Electric Motor
- Electronic Speed Control
- Steering Servo
- 3.7v-7.4v LiPo or 6.0v LiFe "Shorty" Battery
- Battery Charger
- 2-Channel Surface Radio System
- 1:10 Scale F1 Wheels and Rubber (or Foam) Tires
- 1:10 Scale Polycarbonate F1 Body
- Polycarbonate-Specific Spray Paint for Body
- Servo Tape (3M brand is best)

## REQUIRED TOOLS

- High grade machined hex wrenches - 1.5, 2.0
- Nut wrench- 5.5, 7.0
- 4mm turnbuckle wrench
- Hobby knife
- Calipers or a precision ruler
- Silicone glue (goop)
- Body scissors
- Reamer/hole punch
- Long-style ride height gauge
- Needle nose pliers

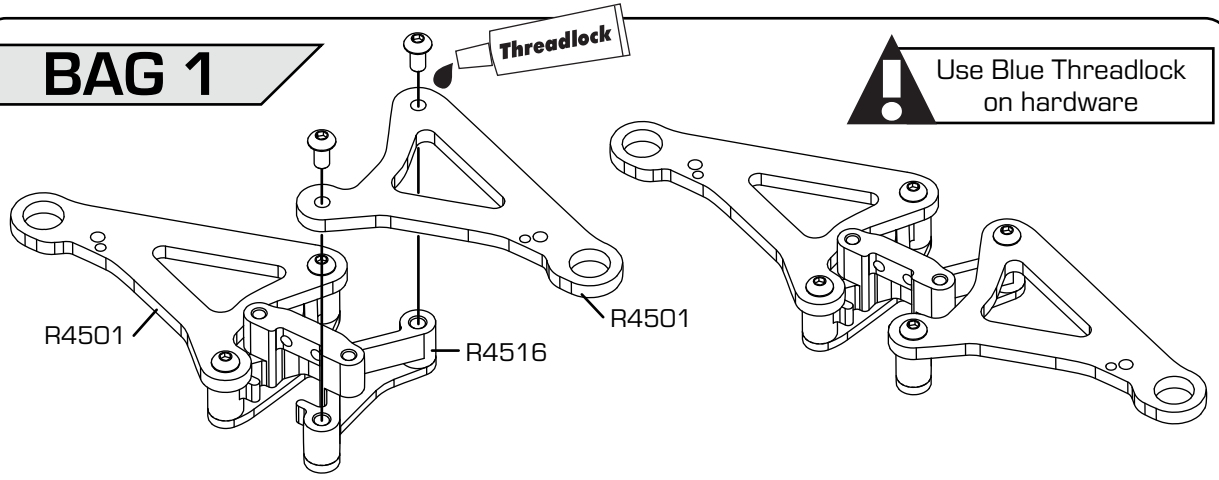


M3x6 BHCS (x4)

# BAG 1

Threadlock

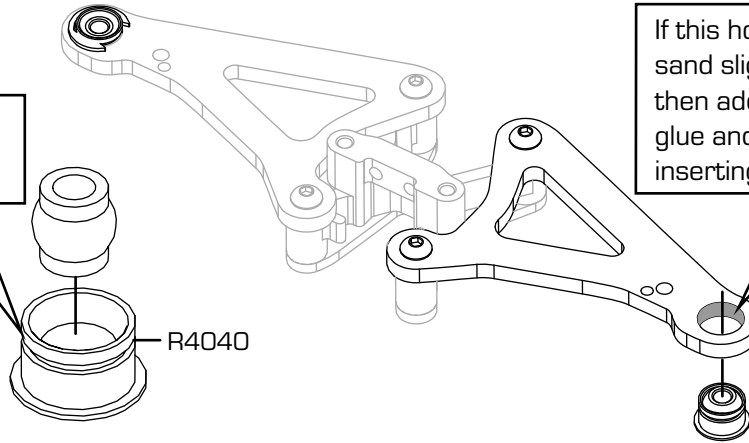
**!** Use Blue Threadlock on hardware



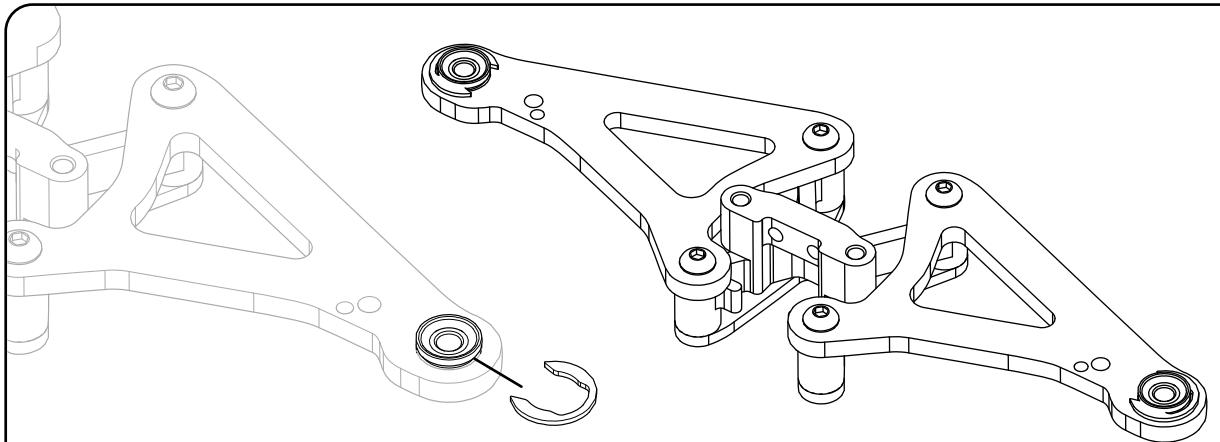
R4041  
Pivot Ball (x2)

**!** Note  
Narrow  
End

If this hole is too tight then sand slightly. If it is too loose then add a light coat of CA glue and let it dry before inserting the pivot cup.

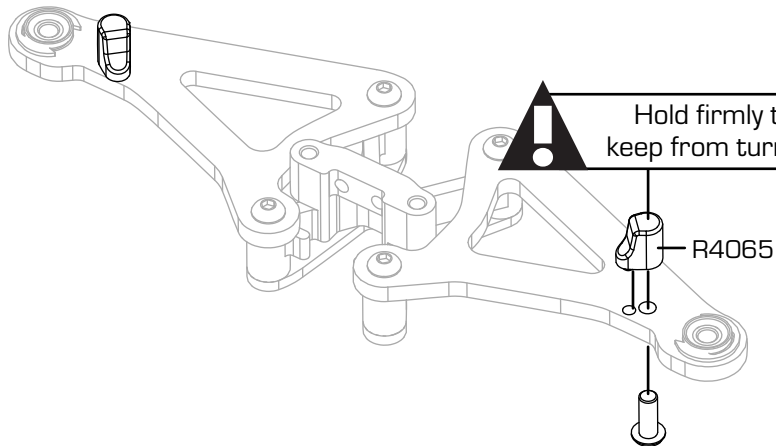


2097  
Suspension Clip (2X)



M3x8 BHCS (x2)

**!** Hold firmly to  
keep from turning



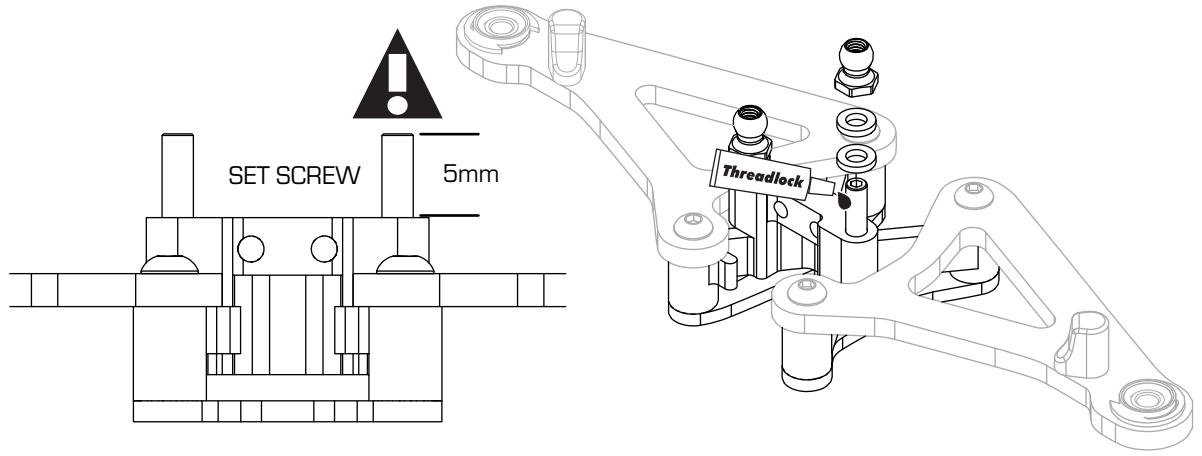


R4061  
Ball Nut (x2)

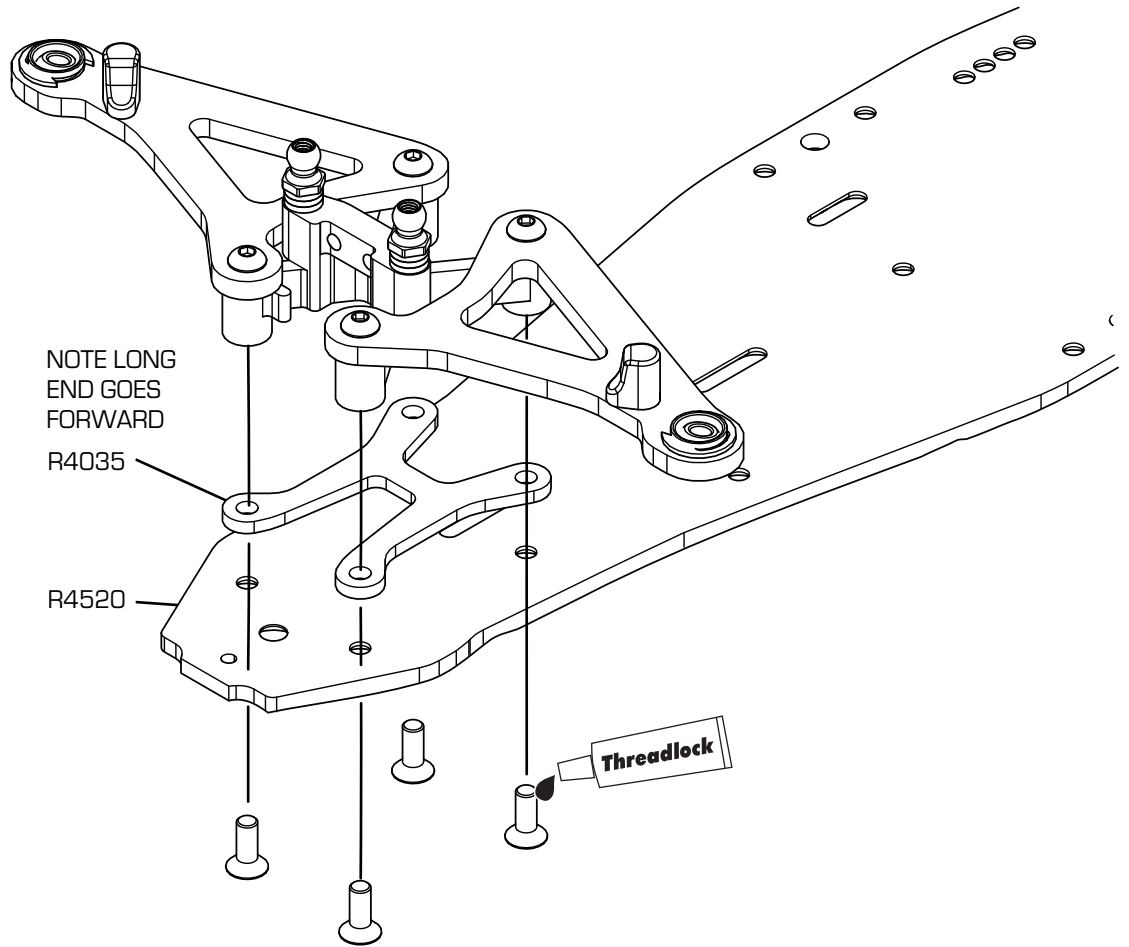


R4114  
1mm Blue Spacer (x4)

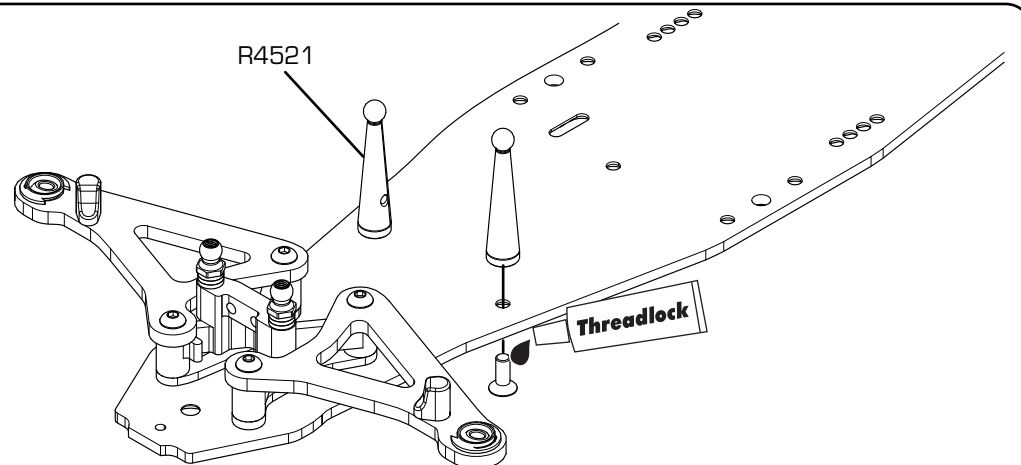
R4103  
M3x10 Set Screw (x2)



M3x8 FHCS (x4)



M3x8 FHCS (x2)

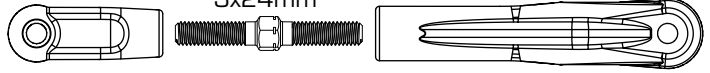


# BAG 2

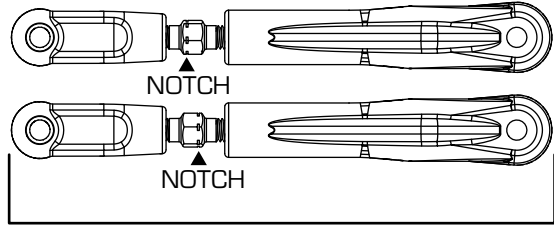
R4043

R4039  
3x24mm

R4093



**!** Make 2 Sets

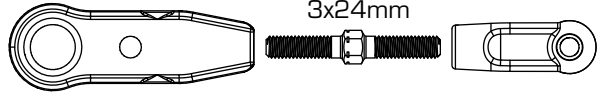


69mm

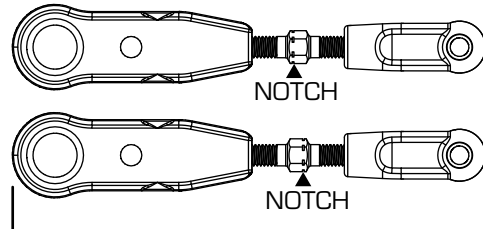
R4086

R4039  
3x24mm

R4043



**!** Make 2 Sets



64mm

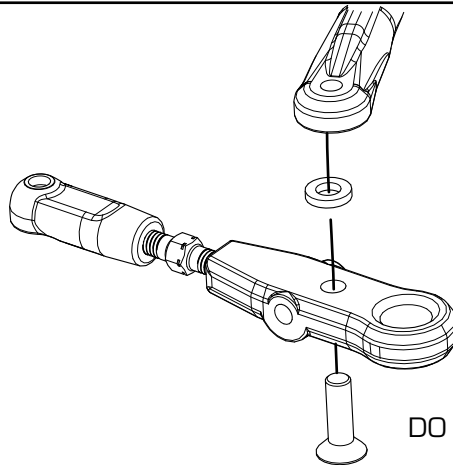


M3x10 FHCS (x2)

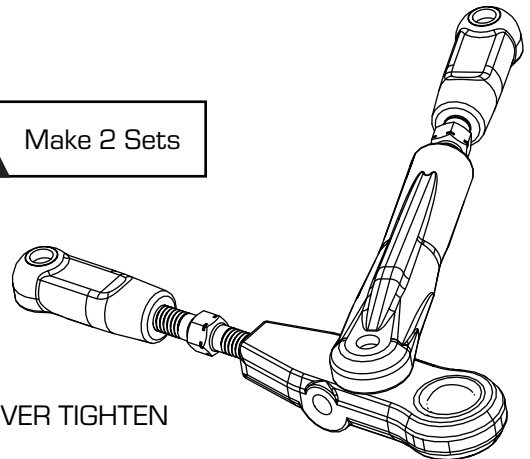


R4114

1mm Blue Spacer (x2)



**!** Make 2 Sets

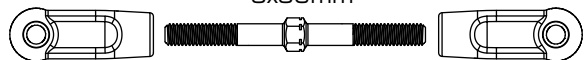


DO NOT OVER TIGHTEN

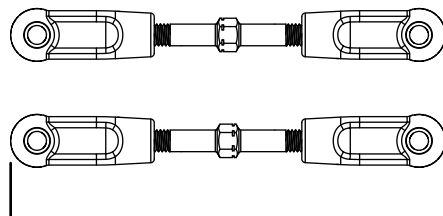
R4043

R4083  
3x36mm

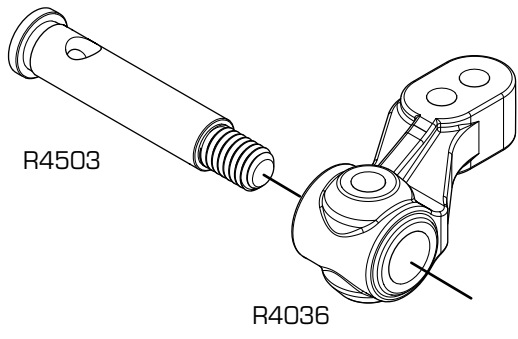
R4043



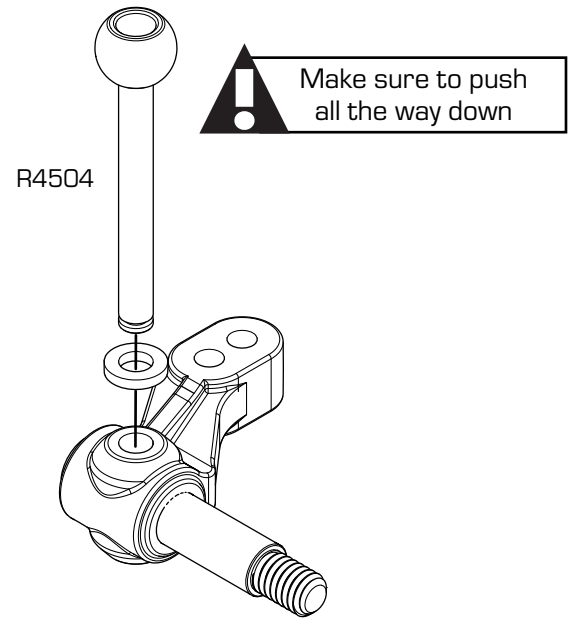
**!** Make 2 Sets

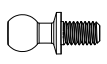



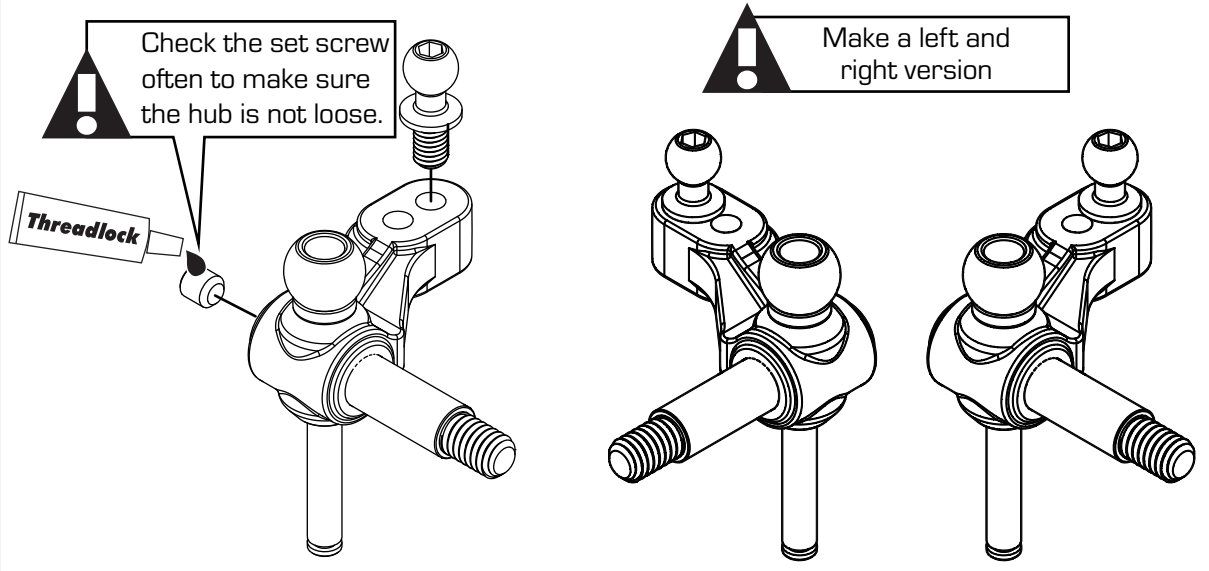
59mm



-  R4519  
1mm Silver Shim (x2)



-  R4037  
Ball Stud (x2)
-  M3x3 Set Screw (x2)





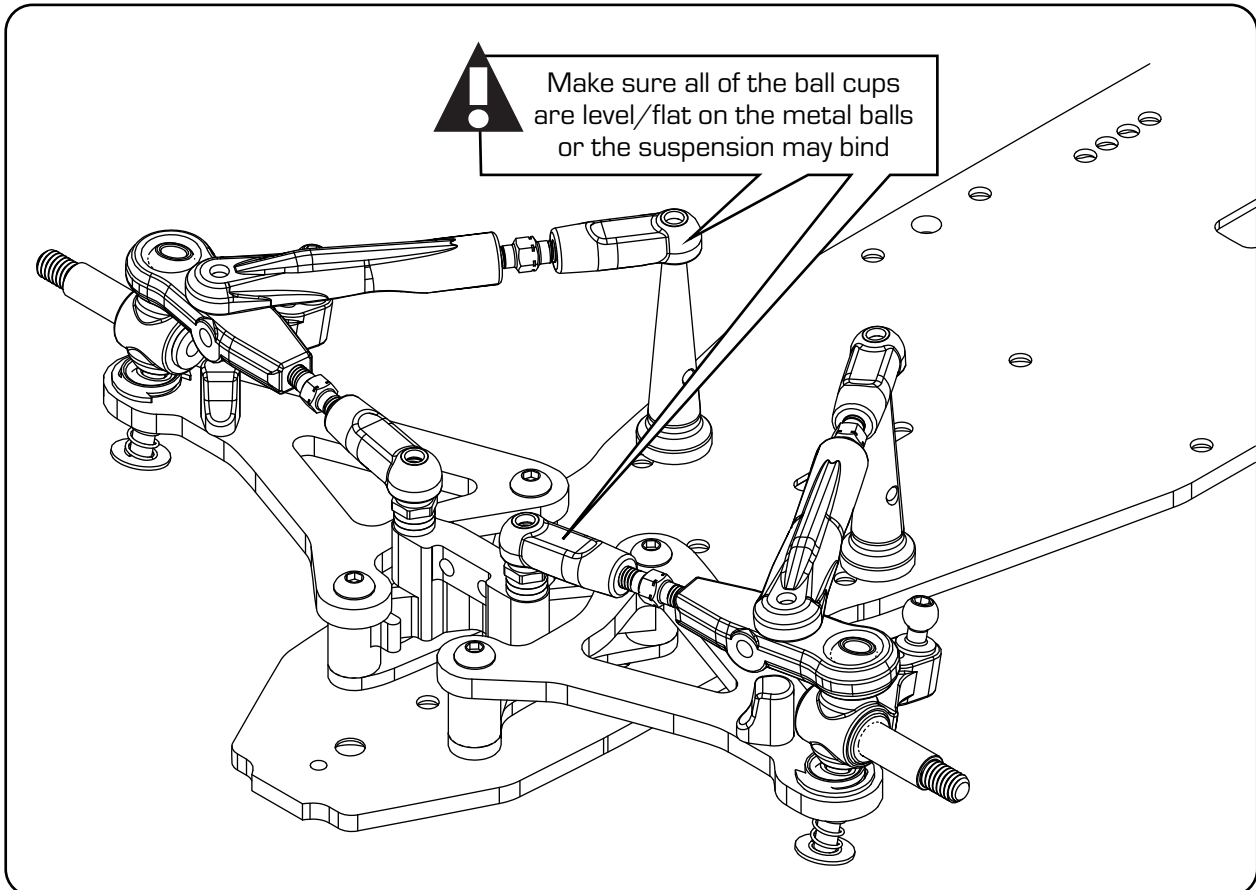
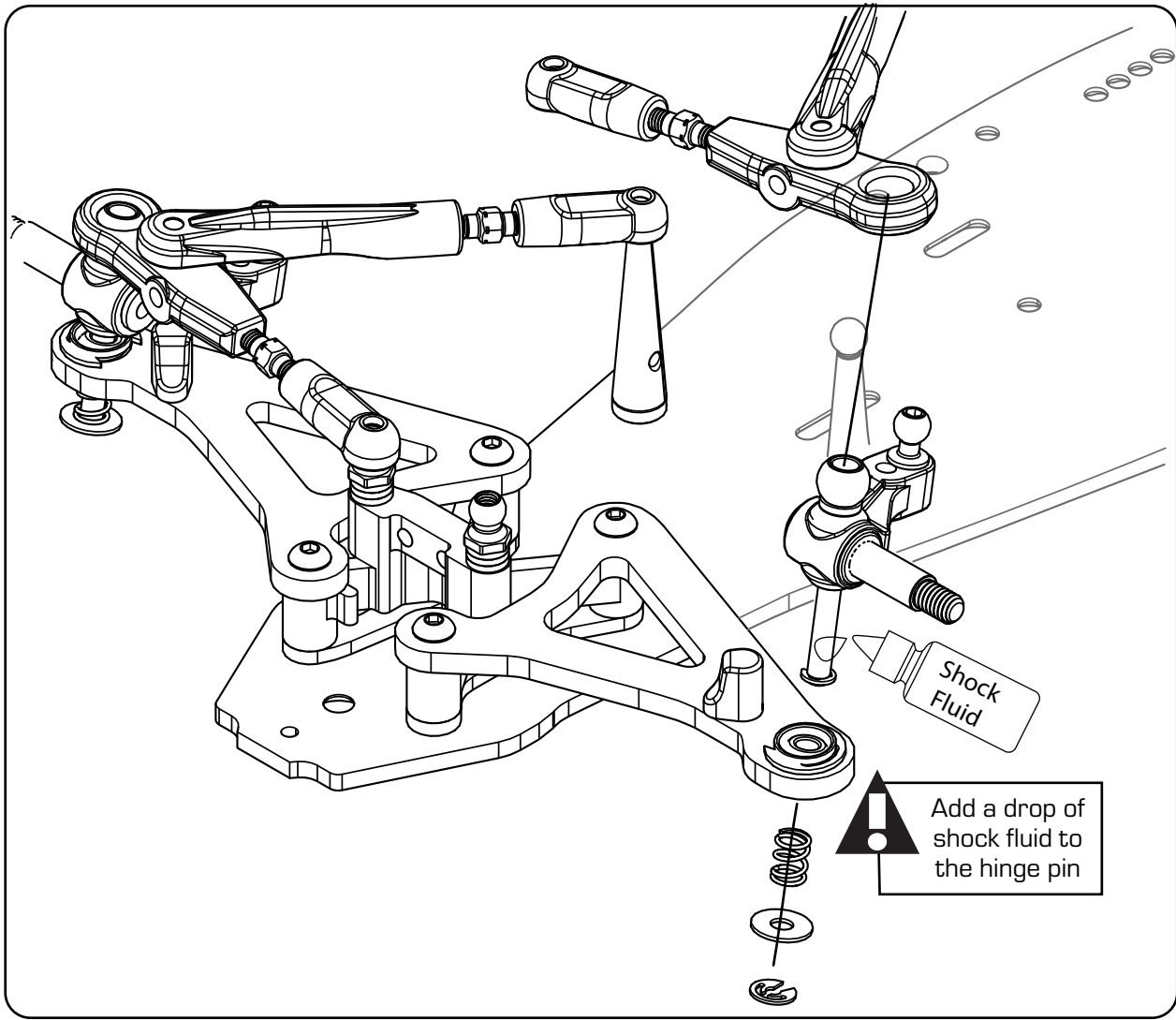
R4101  
Thin Steel Shim (x2)



2265  
COPPER SPRINGS



R4505  
Spring E-Clip (x2)



# BAG 3



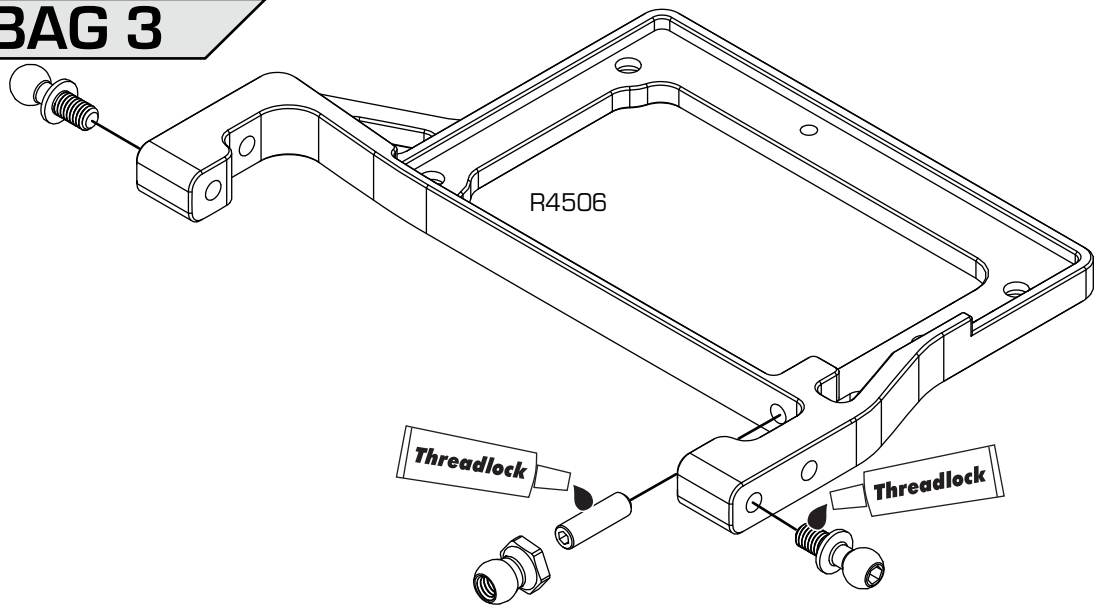
R4037  
Ball Stud (x2)



R4061  
Ball Nut



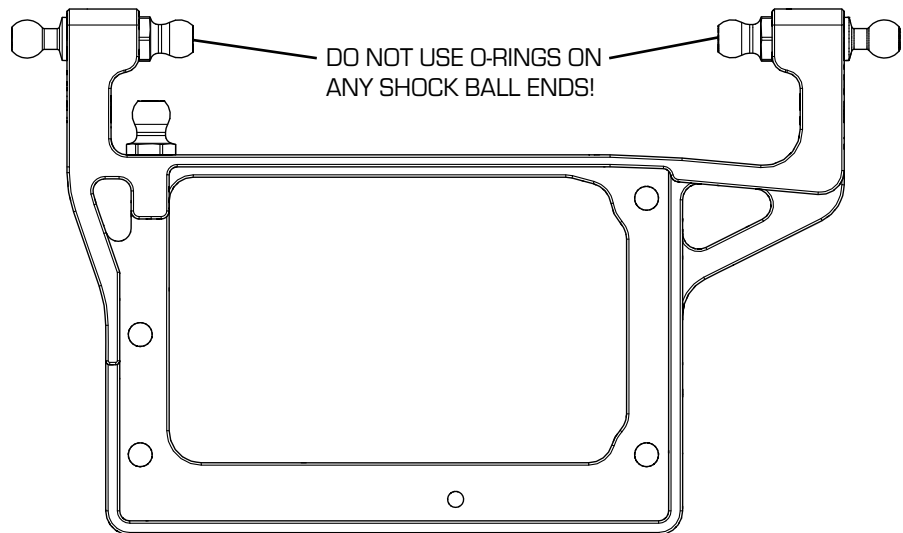
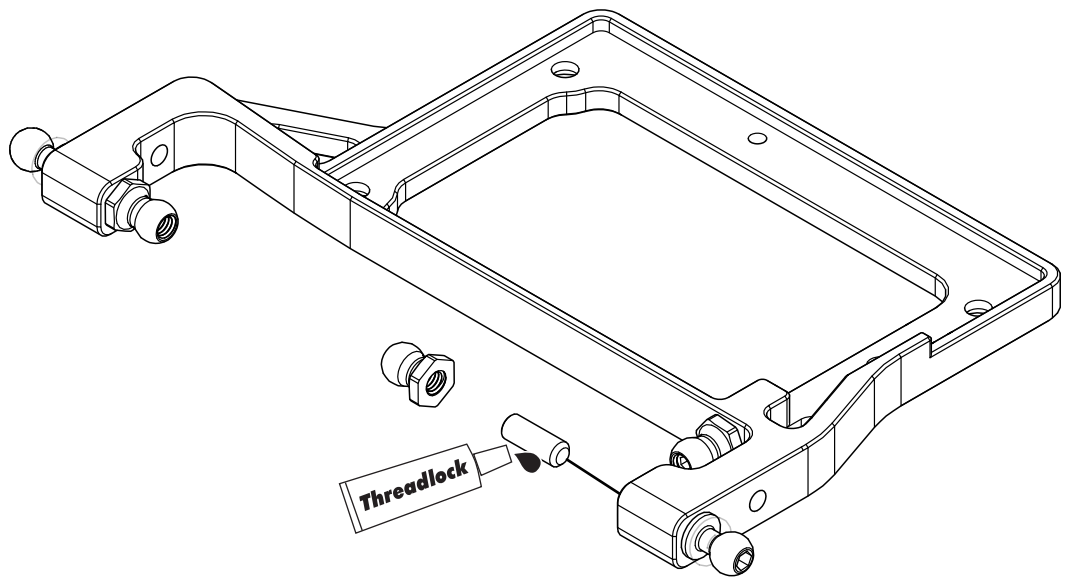
M3x8 Set Screw



R4061  
Ball Nut (x2)



M3x8 Set Screw (2)



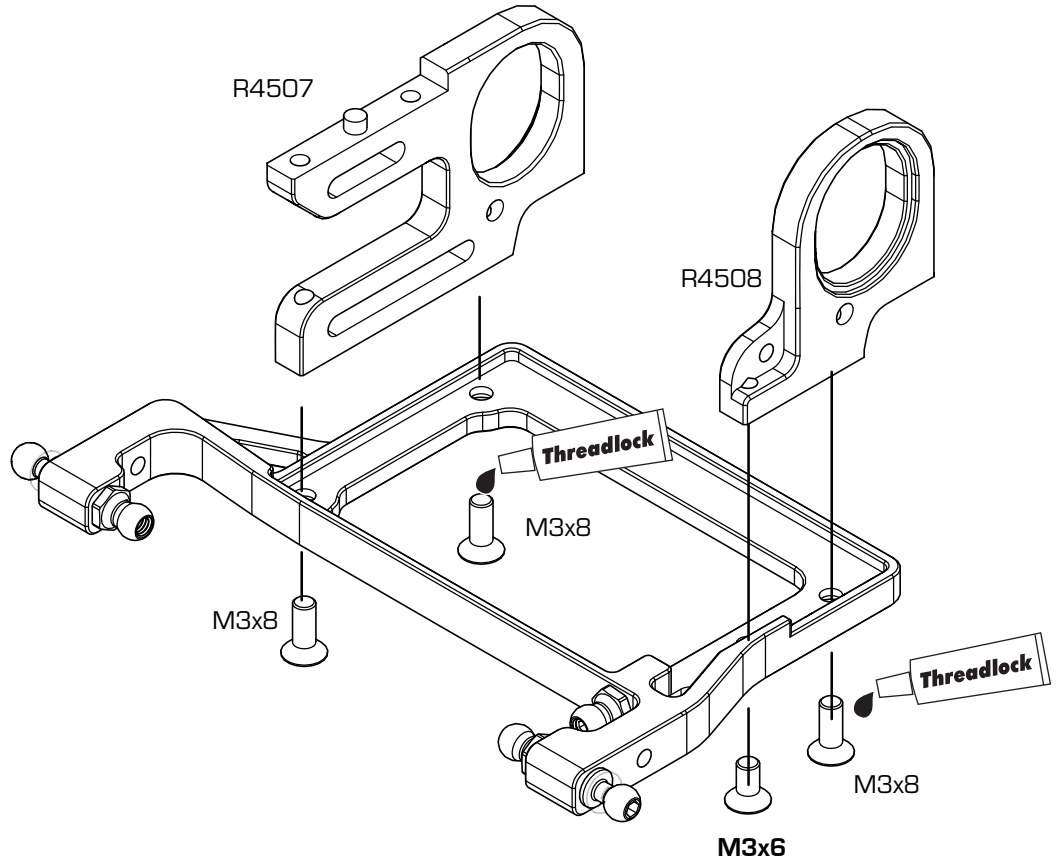




M3x6 FHCS



M3x8 FHCS (x3)



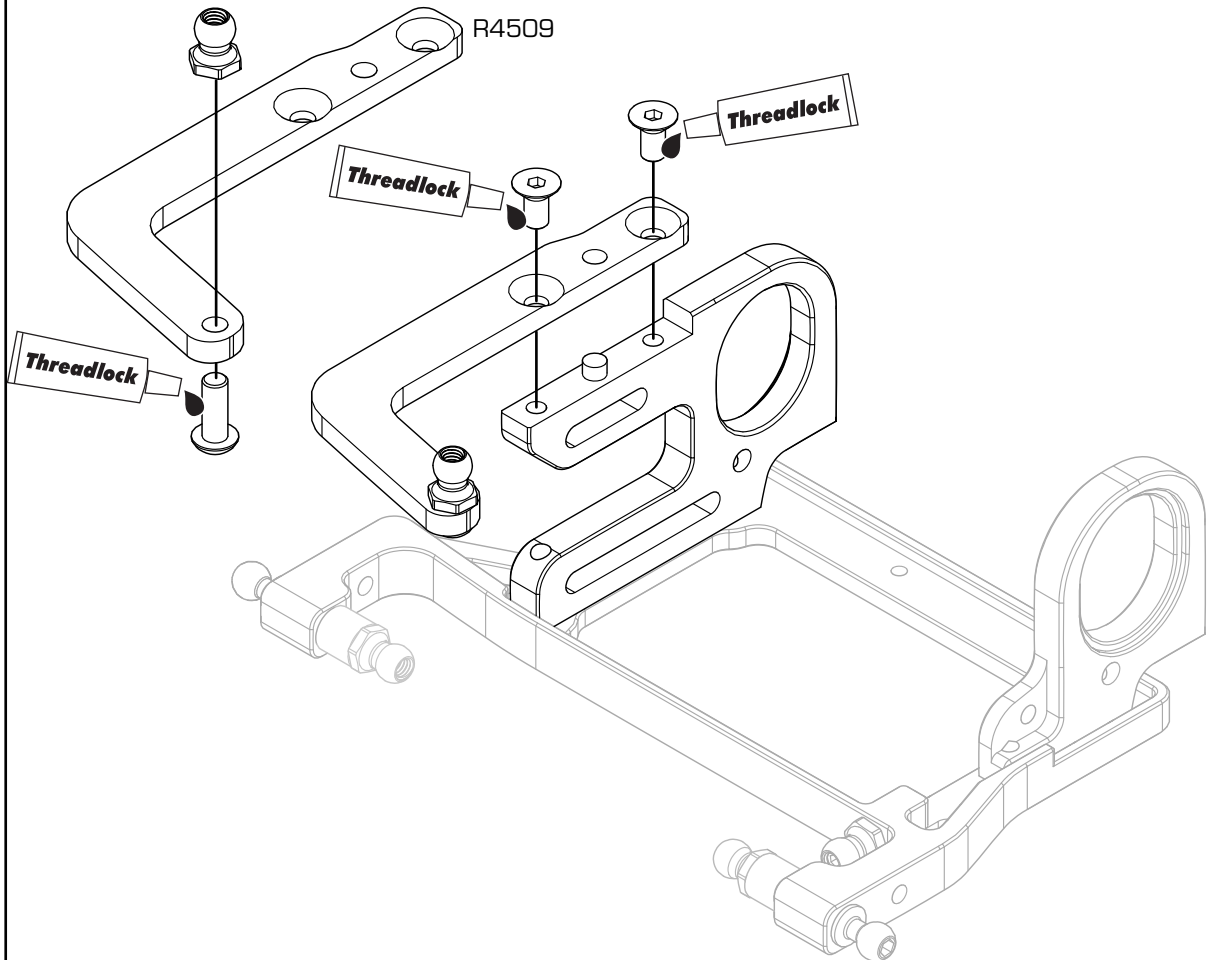
M3x6 FHCS (x2)

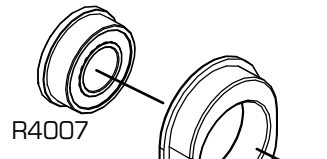



M3x6 BHCS




R4061  
Ball Nut

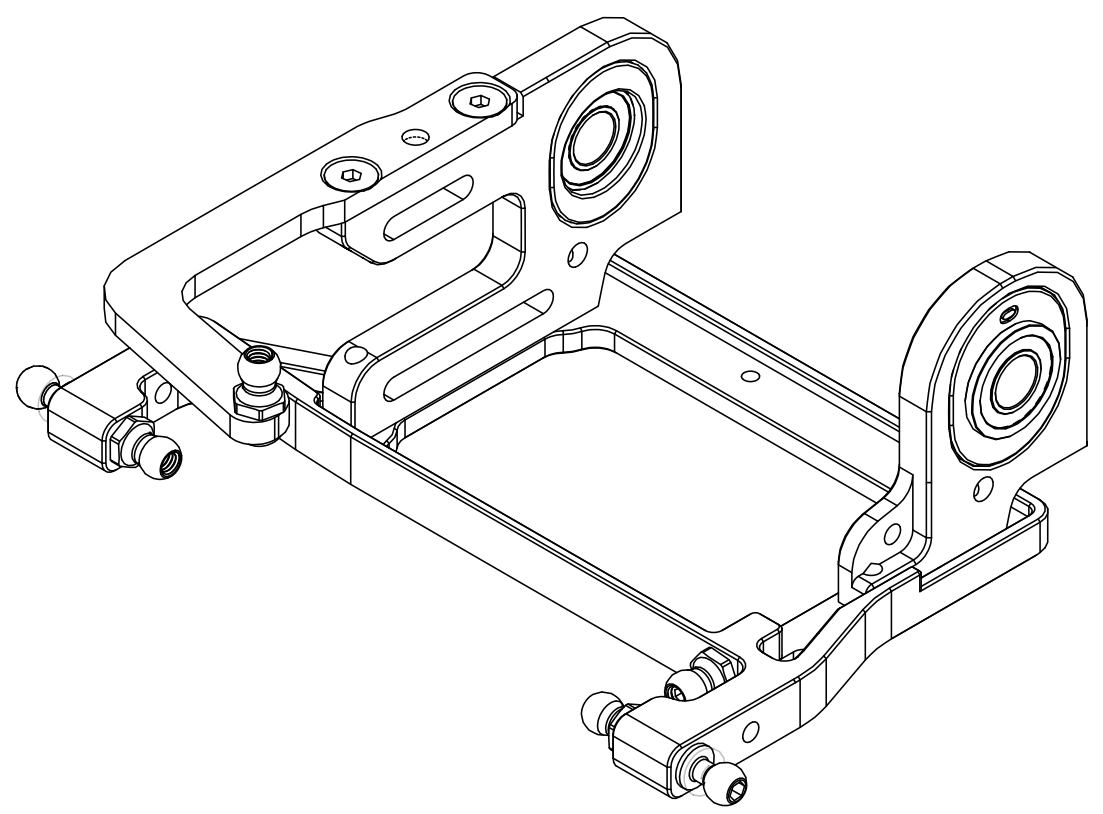
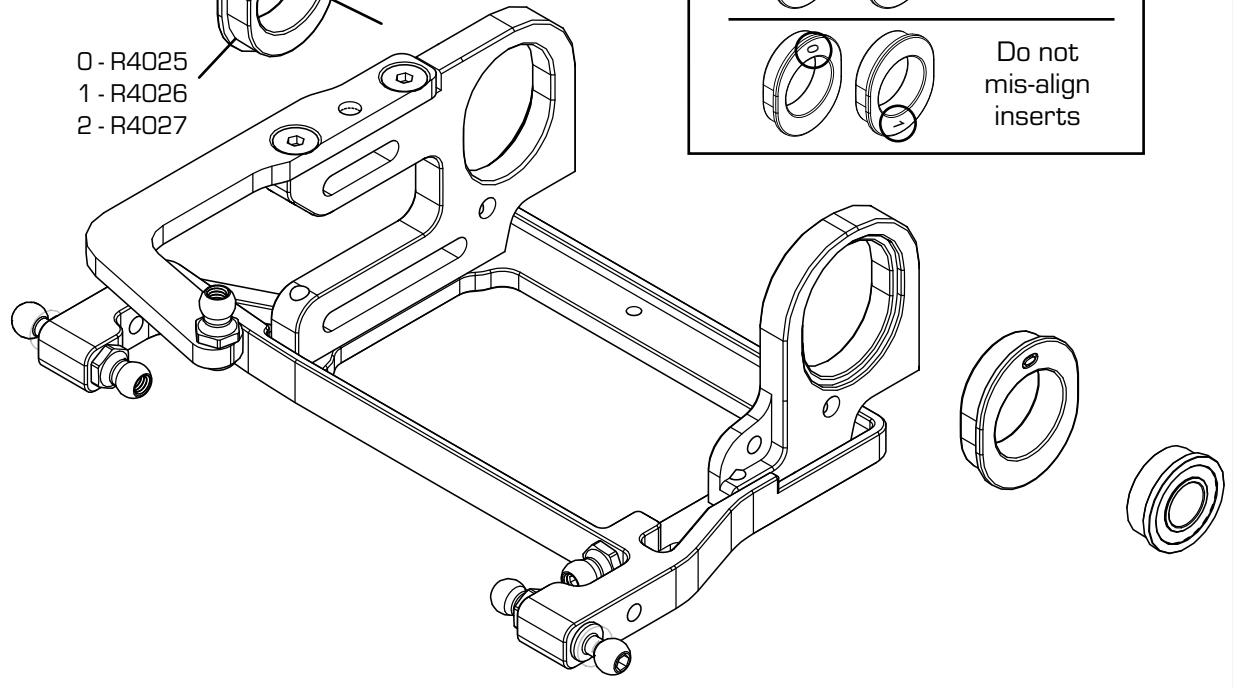




 Do not mix inserts

---

 Do not mis-align inserts



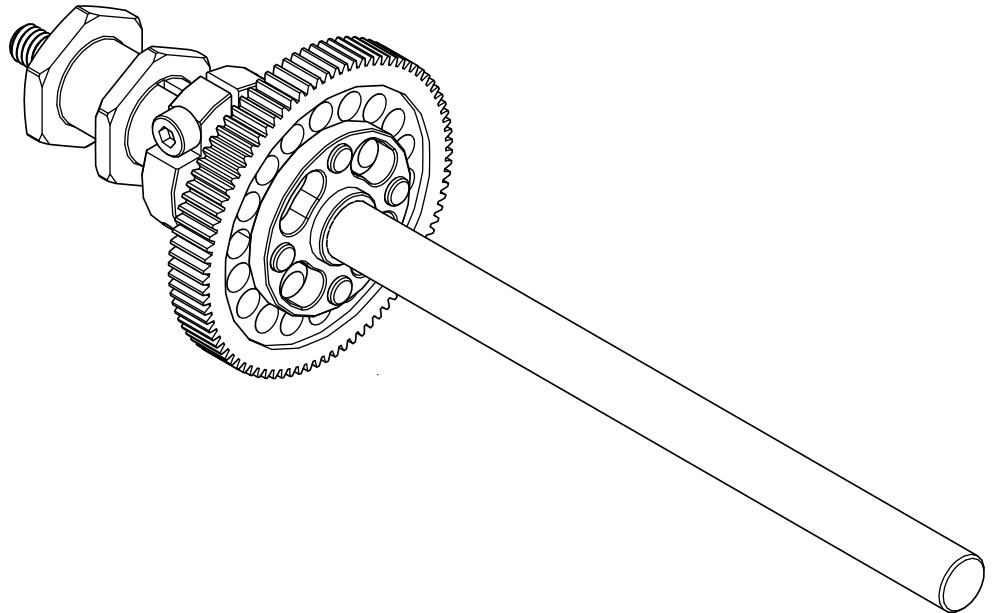
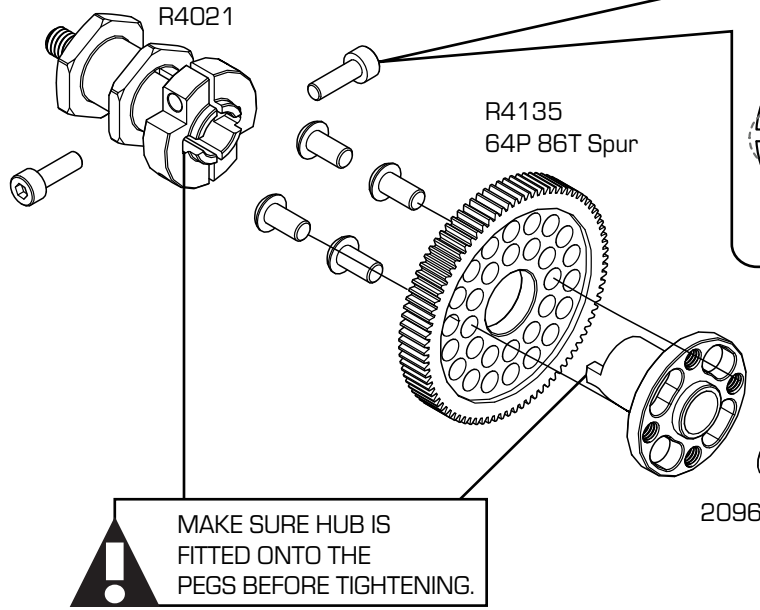


M3x6 BHCS (x4)



M2.5x8 SHCS (x2)

## BAG 4



# OPTIONAL BALL DIFF INSTRUCTIONS (NOT INCLUDED)

INSERT DIFF BALLS  
R4135  
64P 86T Spur

Diff Grease

96109  
1/8 Diff Balls (x12)

Diff Grease

4510

96214

96111  
1/4 Flanged Bearing

Diff Grease

! Add a small amount of diff grease to the inside to keep the rings seated

Diff Grease

96113  
1/4 Bearing

1995

Diff Grease

! Apply a thin layer of grease

Diff Grease

M4 NLock Nut

96108  
1/4 Thrust Spring

96111 1/4 Flanged Bearing (x2)

96111

! Tip: Use shock oil to hold the 4 springs together.

Shock Fluid

Facing Facing

96111

! Tighten #86421 M4 Lock nut so the spur gear slips slightly. DO NOT OVERTIGHTEN!

Threadlock

3. M3x3 Set Screw

R4510C

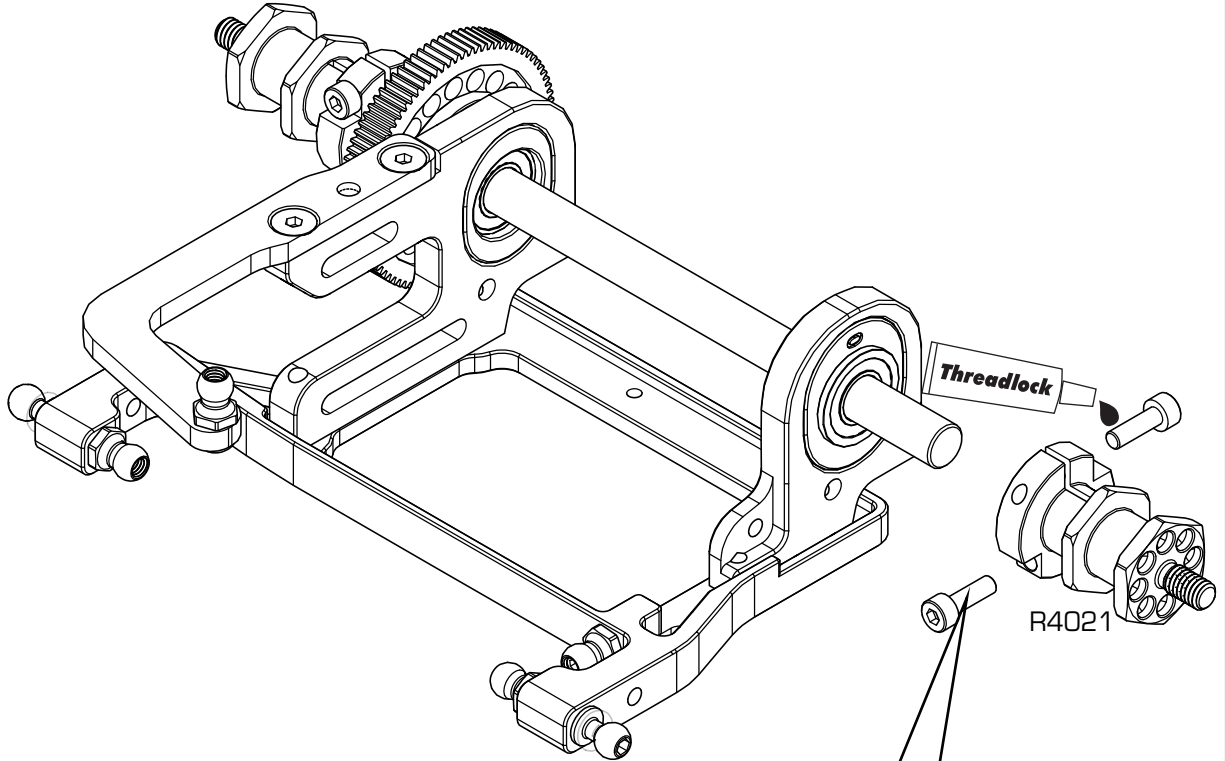
1.

80530  
Cross Pin

2.

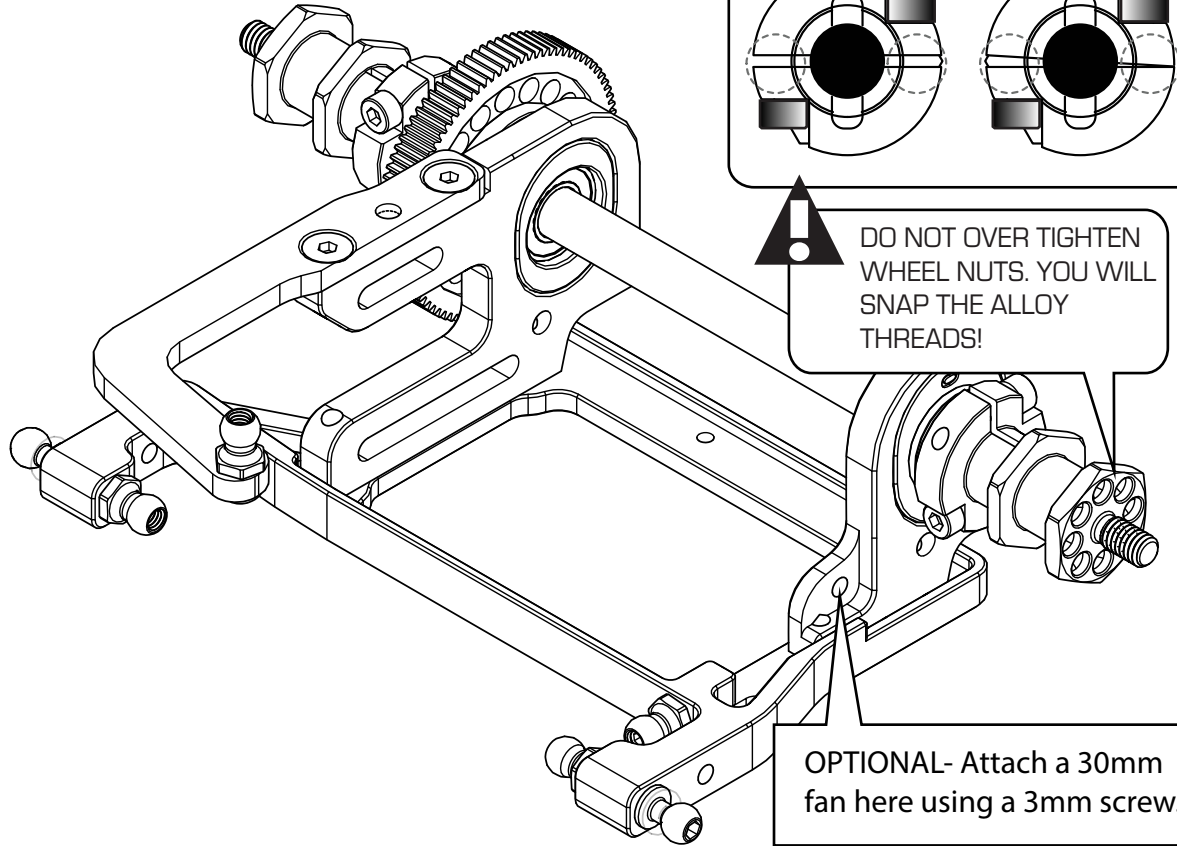


M2.5x8 SHCS (x2)



⚠️ Tighten the 2 hub screws evenly or you may crack the hub

⚠️ DO NOT OVER TIGHTEN WHEEL NUTS. YOU WILL SNAP THE ALLOY THREADS!



OPTIONAL- Attach a 30mm fan here using a 3mm screw.

# BAG 5



R4061  
Ball Nut



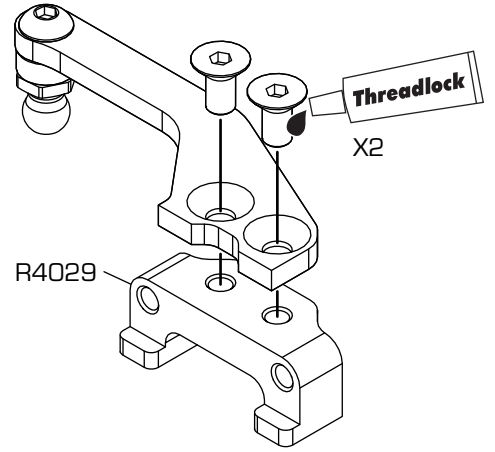
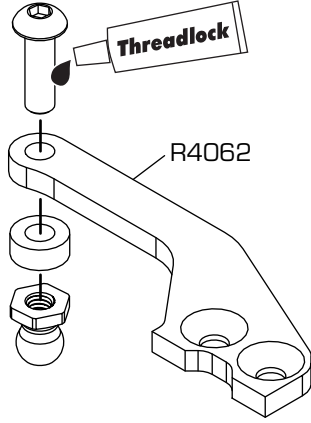
R4116  
3mm Spacer



M3x10 BHCS



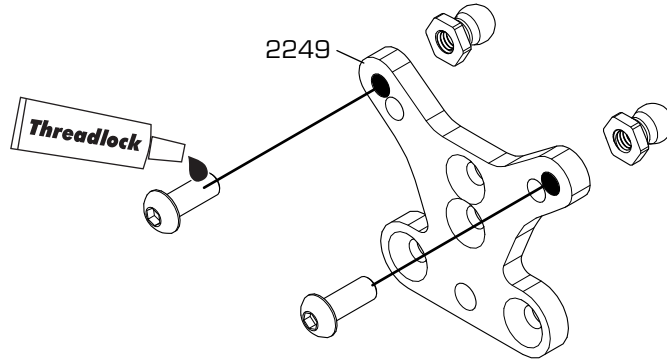
M3x6 FHCS (x2)



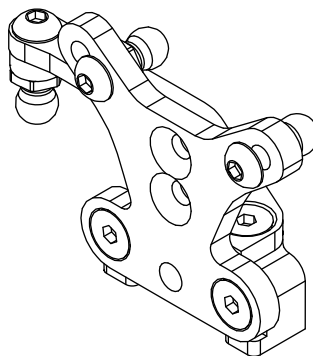
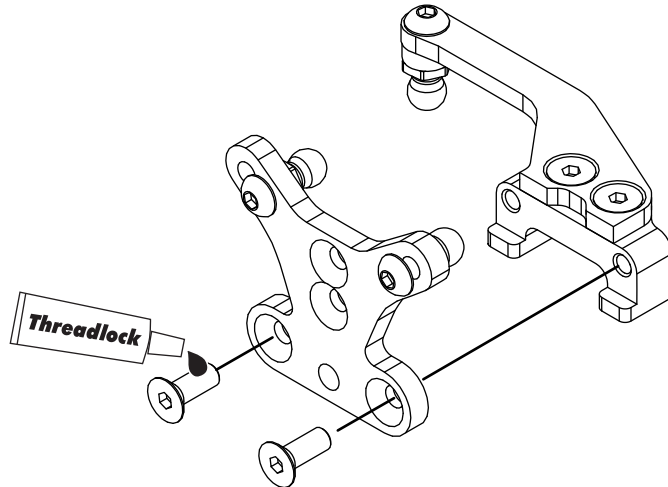
R4061  
Ball Nut (2)



M3x6 BHCS (x2)



M3x8 FHCS (x2)

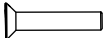
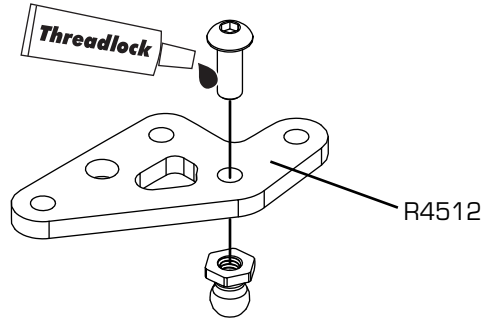




M3x8 BHCS (x2)



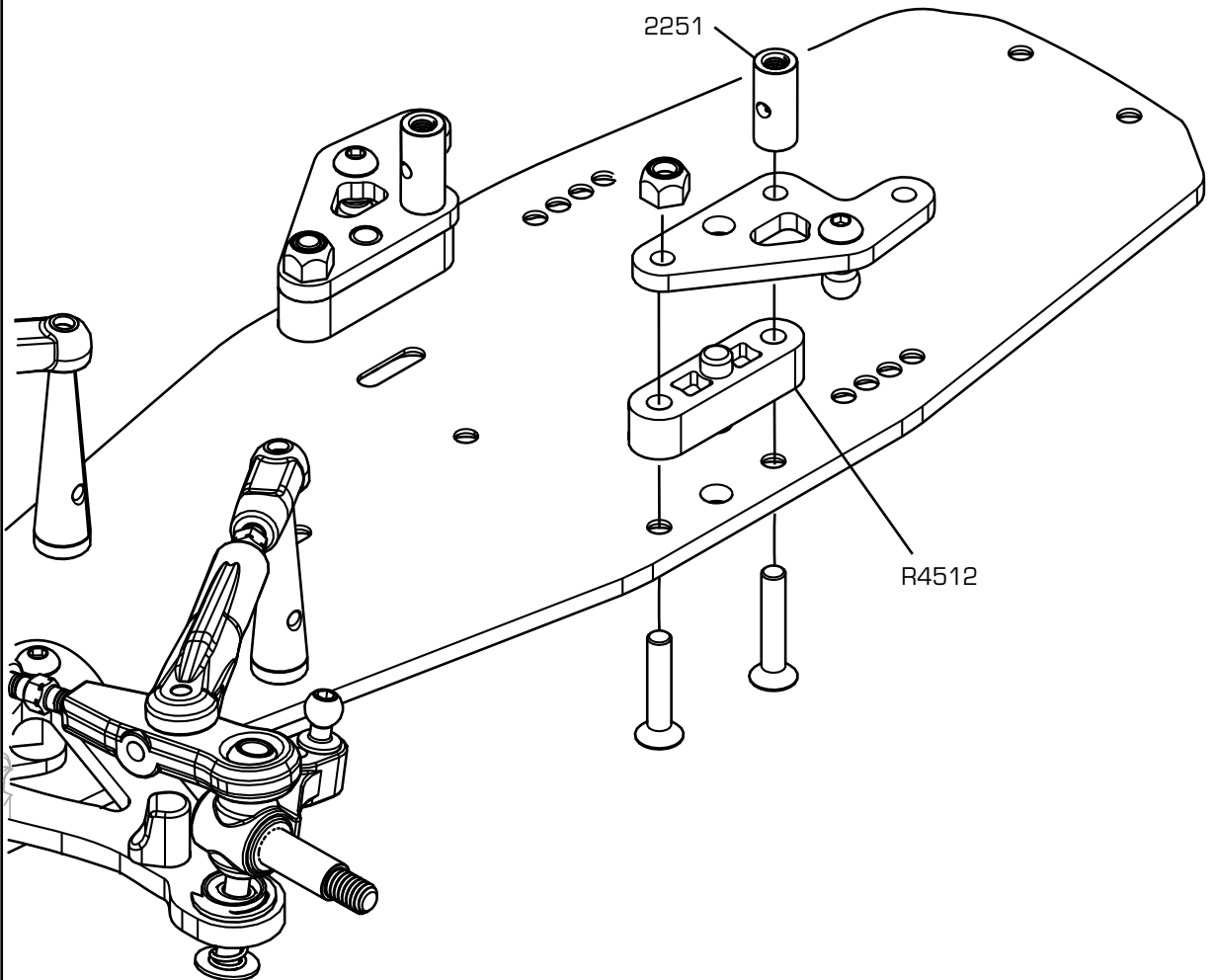
R4061  
Ball Nut (2)



M3x15 FHCS (x2)

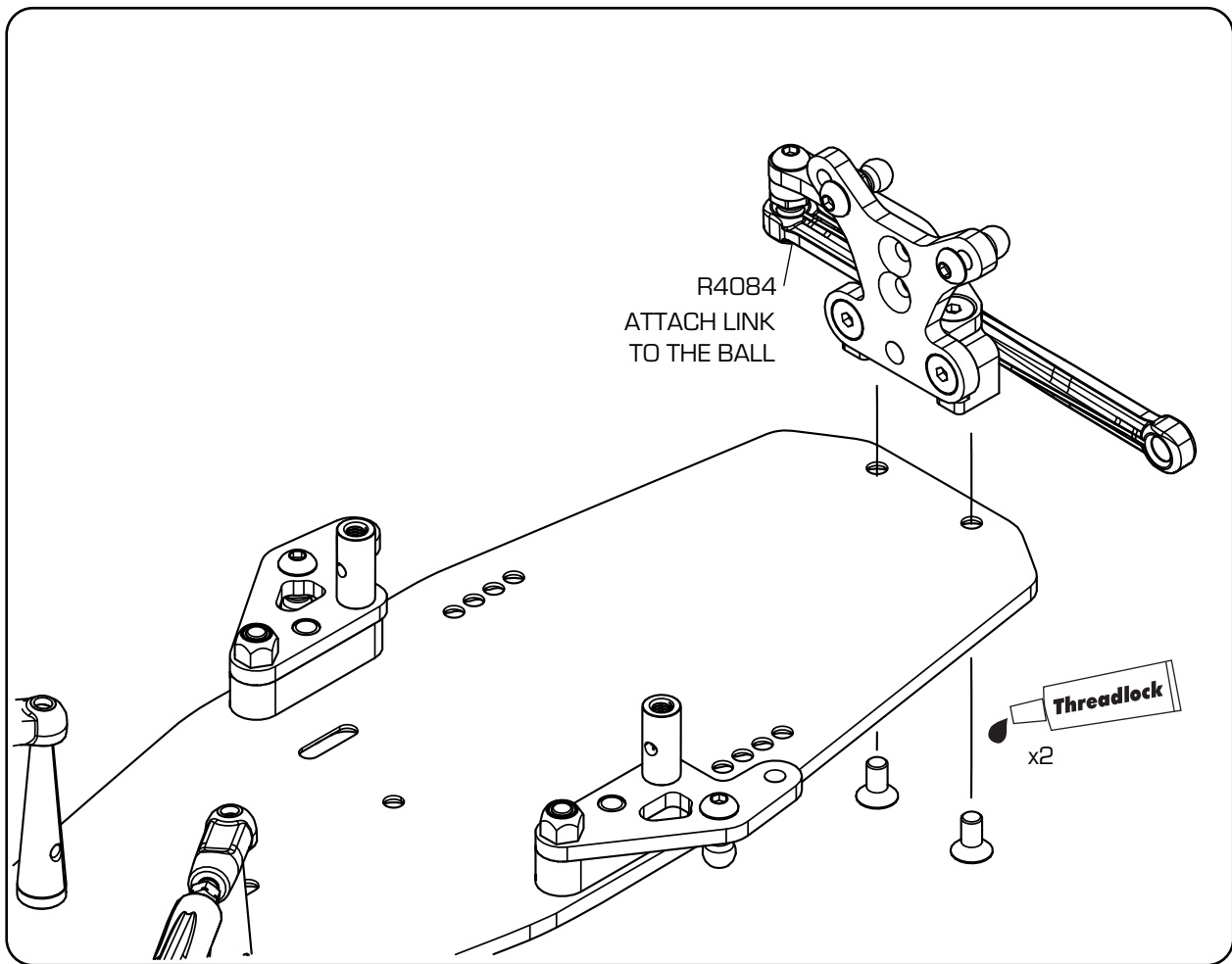


M3 Lock Nut (x2)

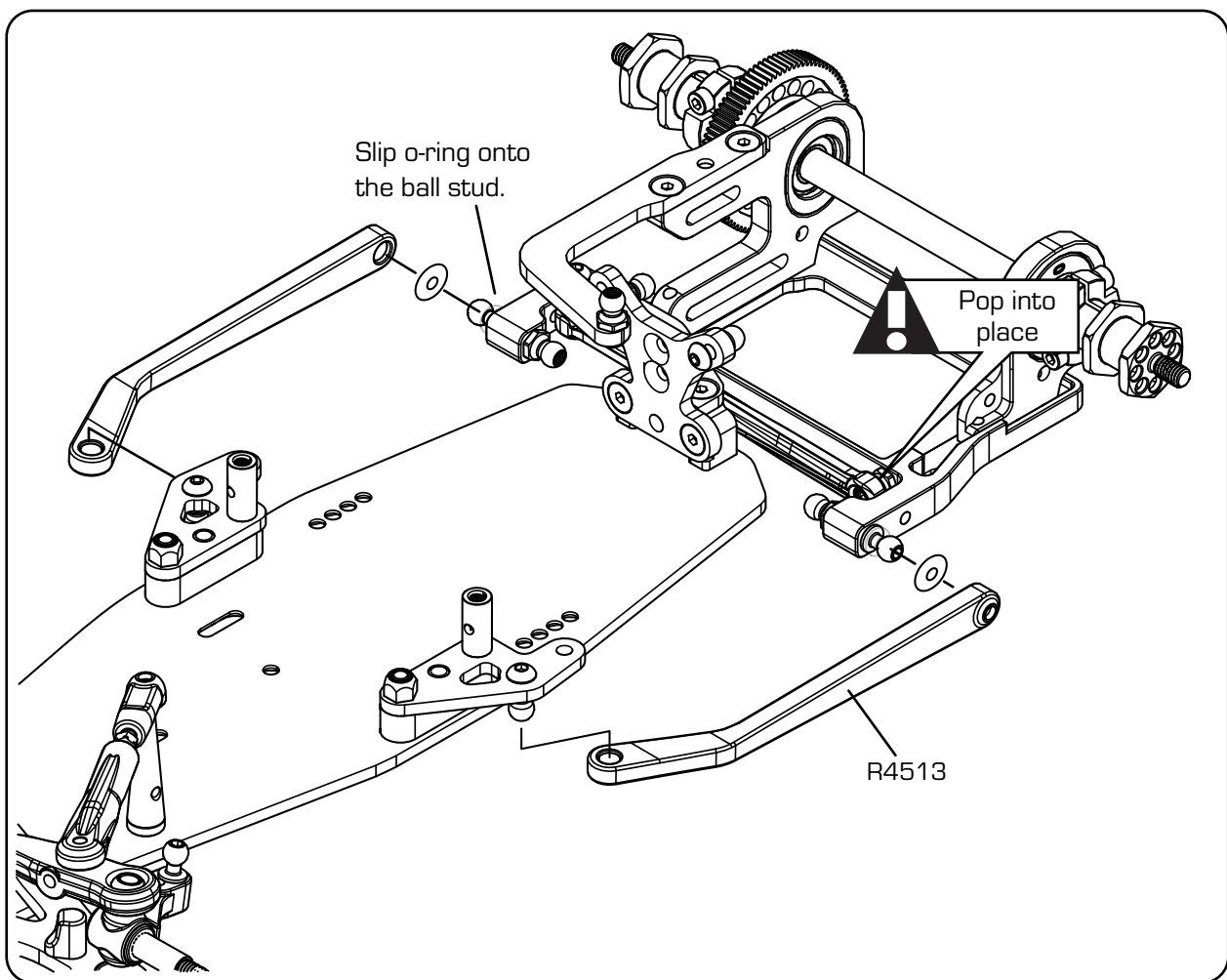




M3x6 FHCS (x2)



M3 O-RING (X2)



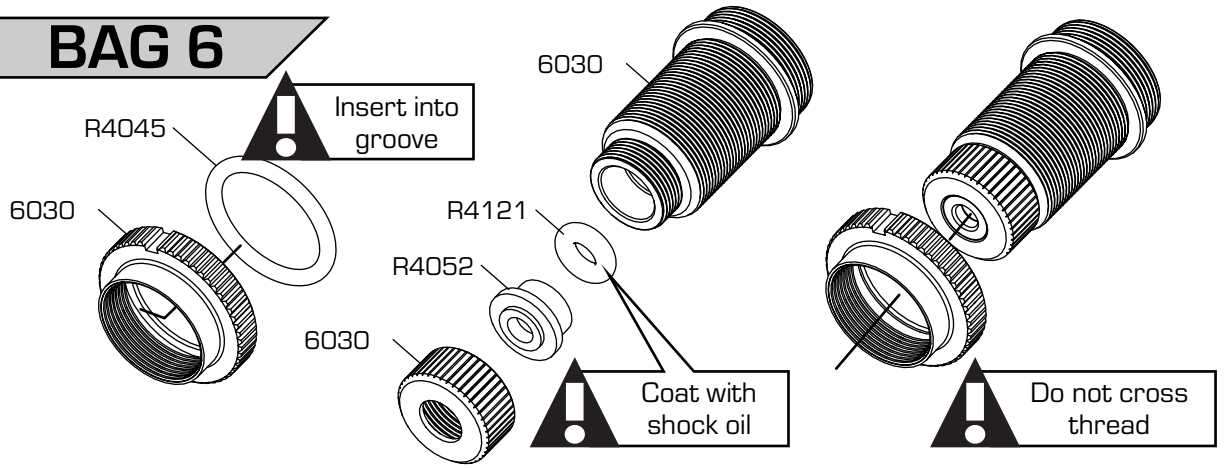


TOP SHOCK (x1)

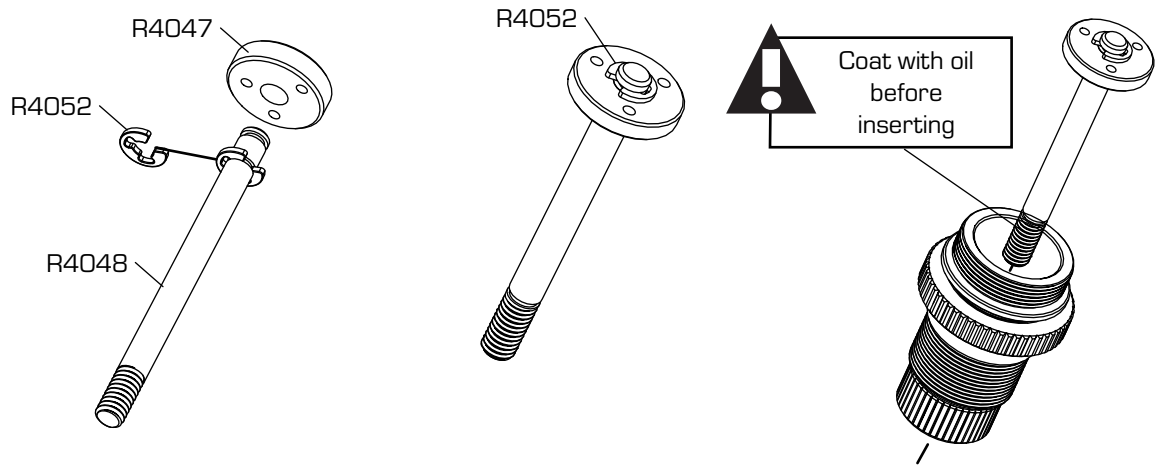


R4121  
Large X-Ring

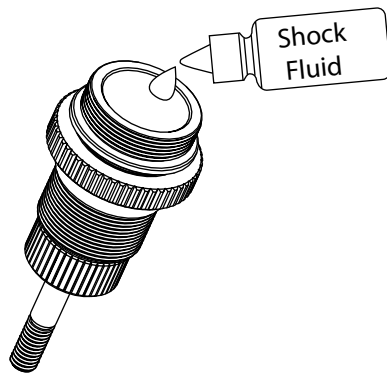
**BAG 6**



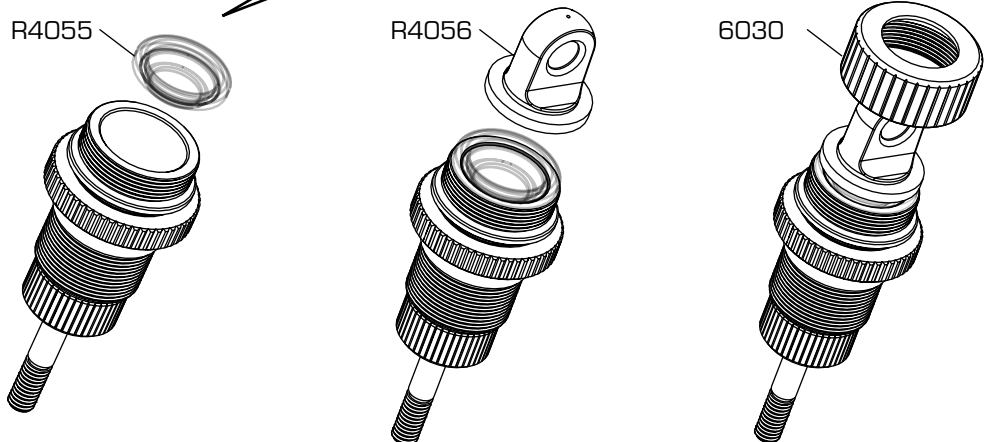
R4044  
Large E-Clip (x2)

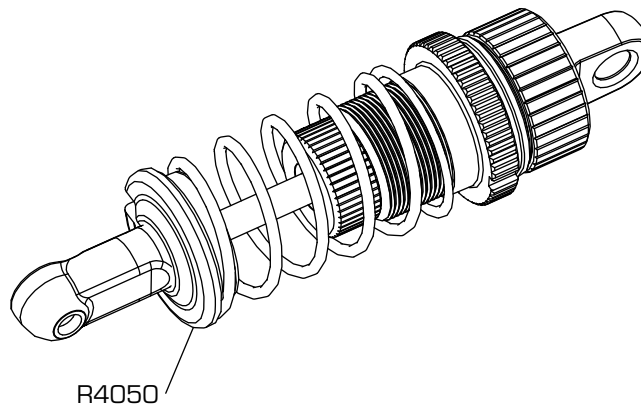
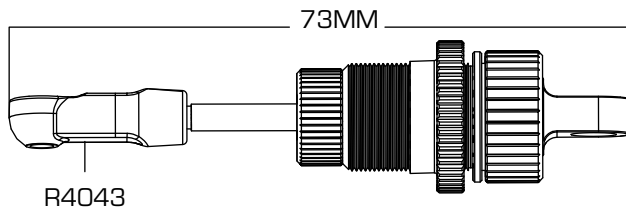


1. Fill to the top with shock oil. Work piston up and down  
And wait a few minutes for the bubbles to work out.




2. With the shaft extended 75%, place the bladder on top of the shock body, displacing the extra oil. While maintaining pressure on the bladder against the shock body, carefully lift one side of the bladder to allow any extra oil to escape. Place shock cap on top of the bladder and secure it by threading on the aluminum cap retainer onto the shock body.

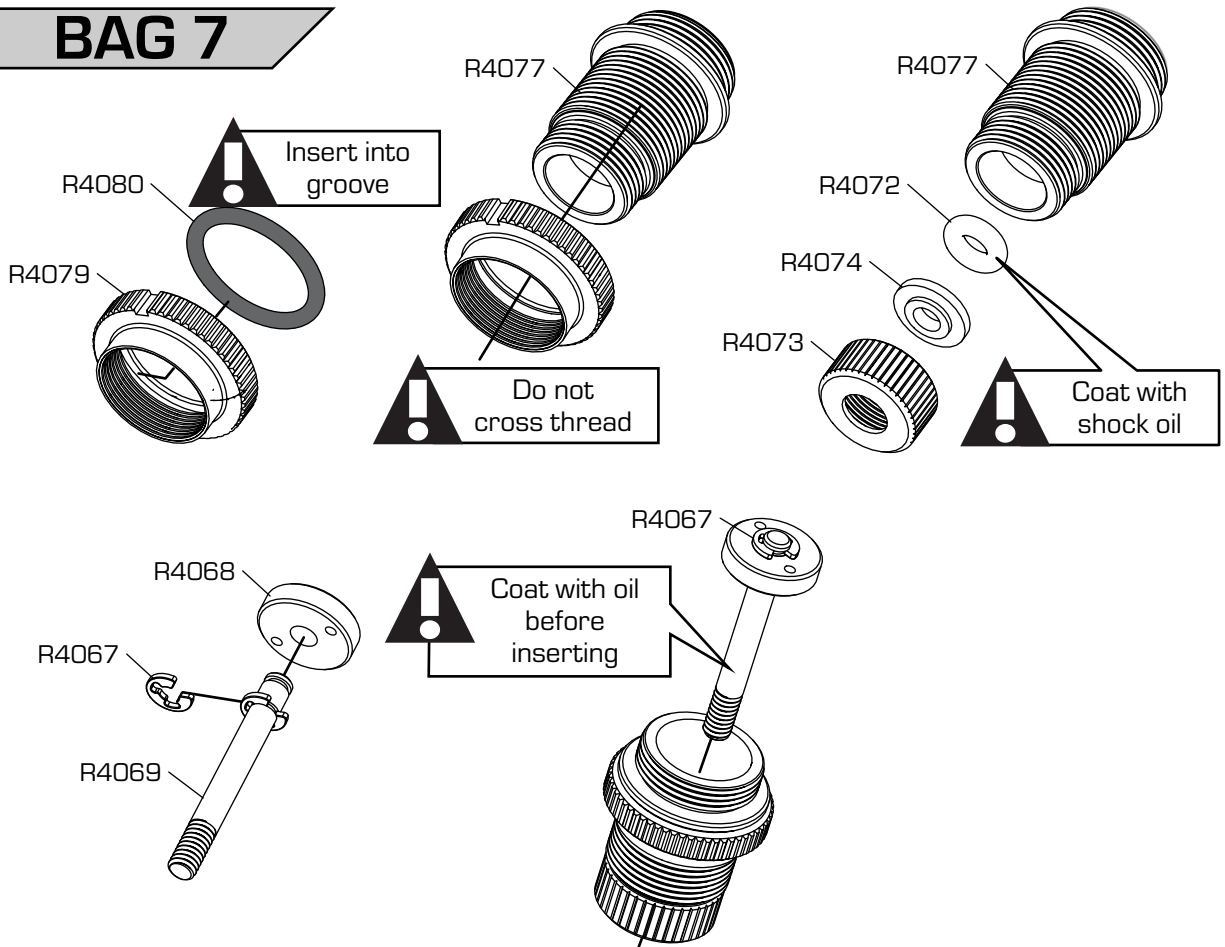




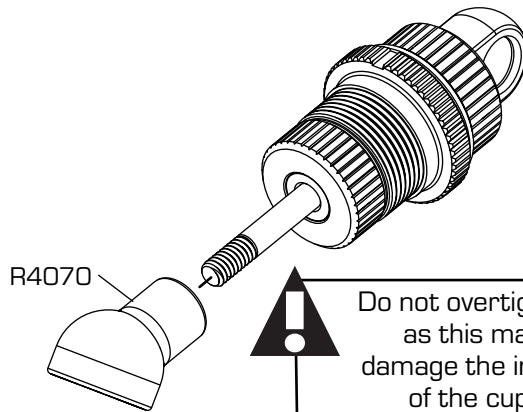
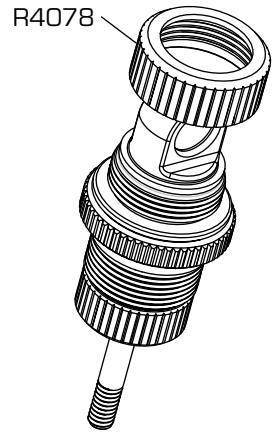
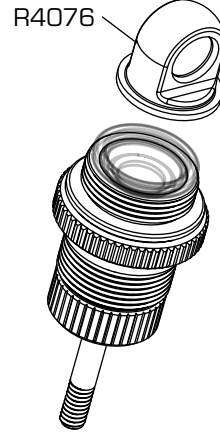
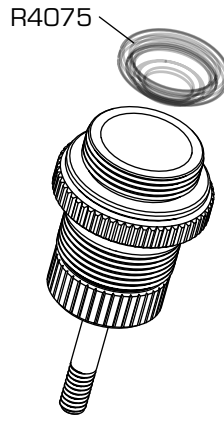
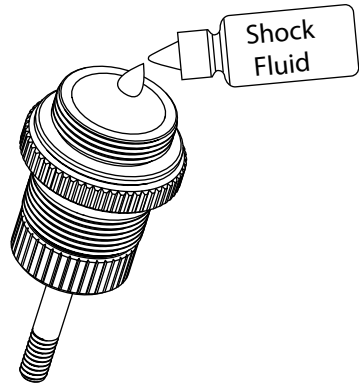
MICRO SHOCK x2

-  R4072  
Micro O-Rings (x2)  
Orange
-  R4067  
Micro E-Clip (x4)

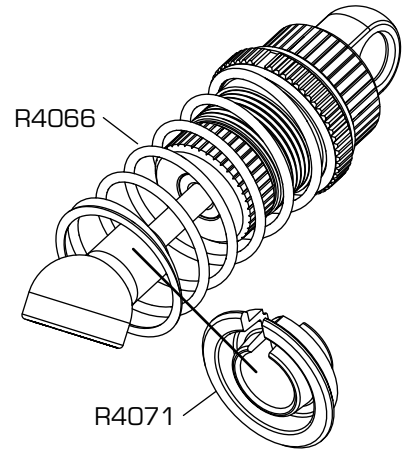
### BAG 7



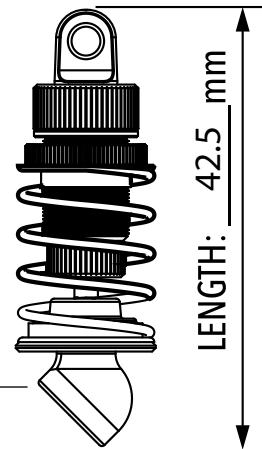
Repeat the oil filling instructions from page 17



Do not overtighten as this may damage the inside of the cup.



Fully extended shock length.  
Adjust threaded cup as needed.





R4114  
1mm Blue Spacer (1)



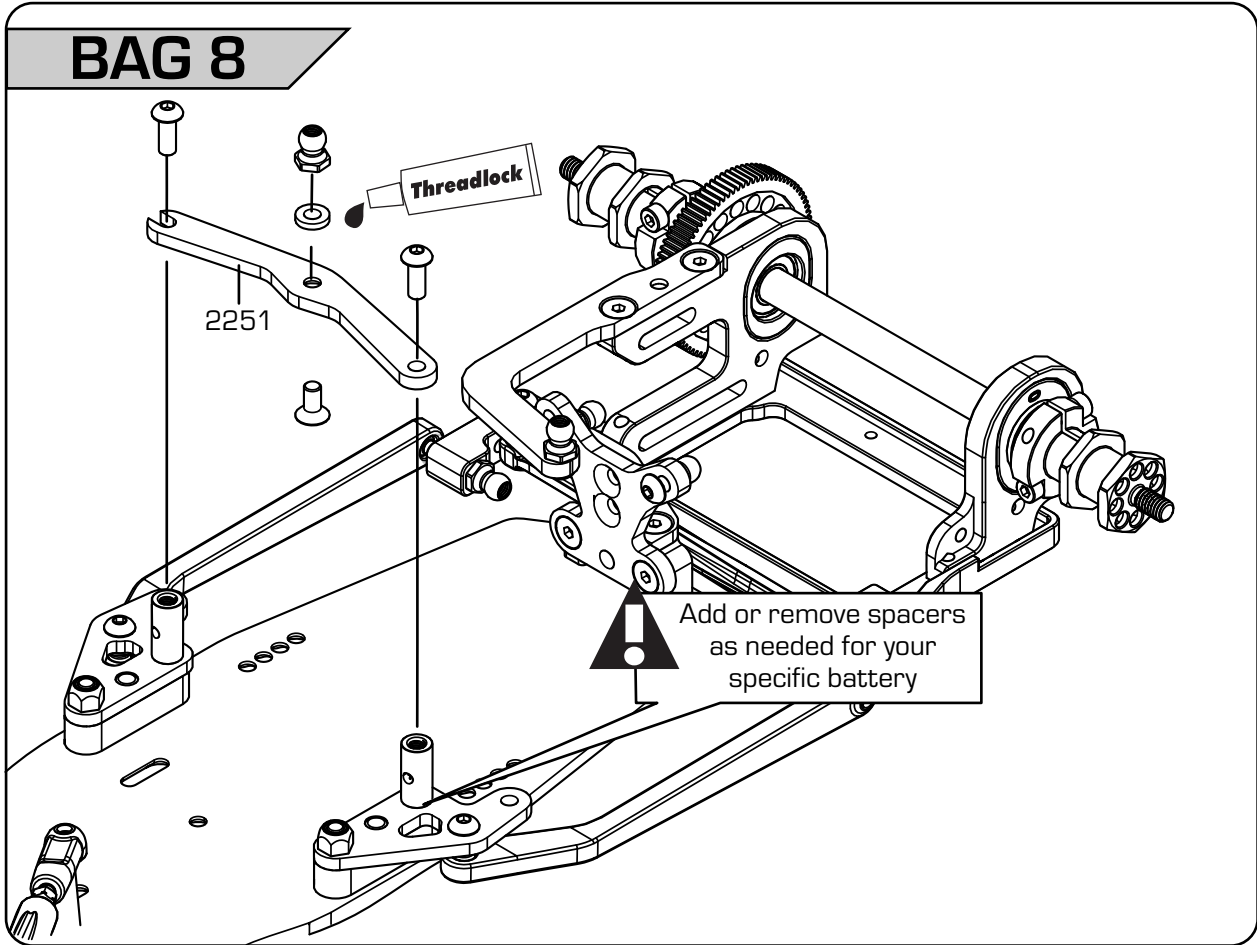
M3x6 BHCS (x2)



M3x6 FHCS (x1)



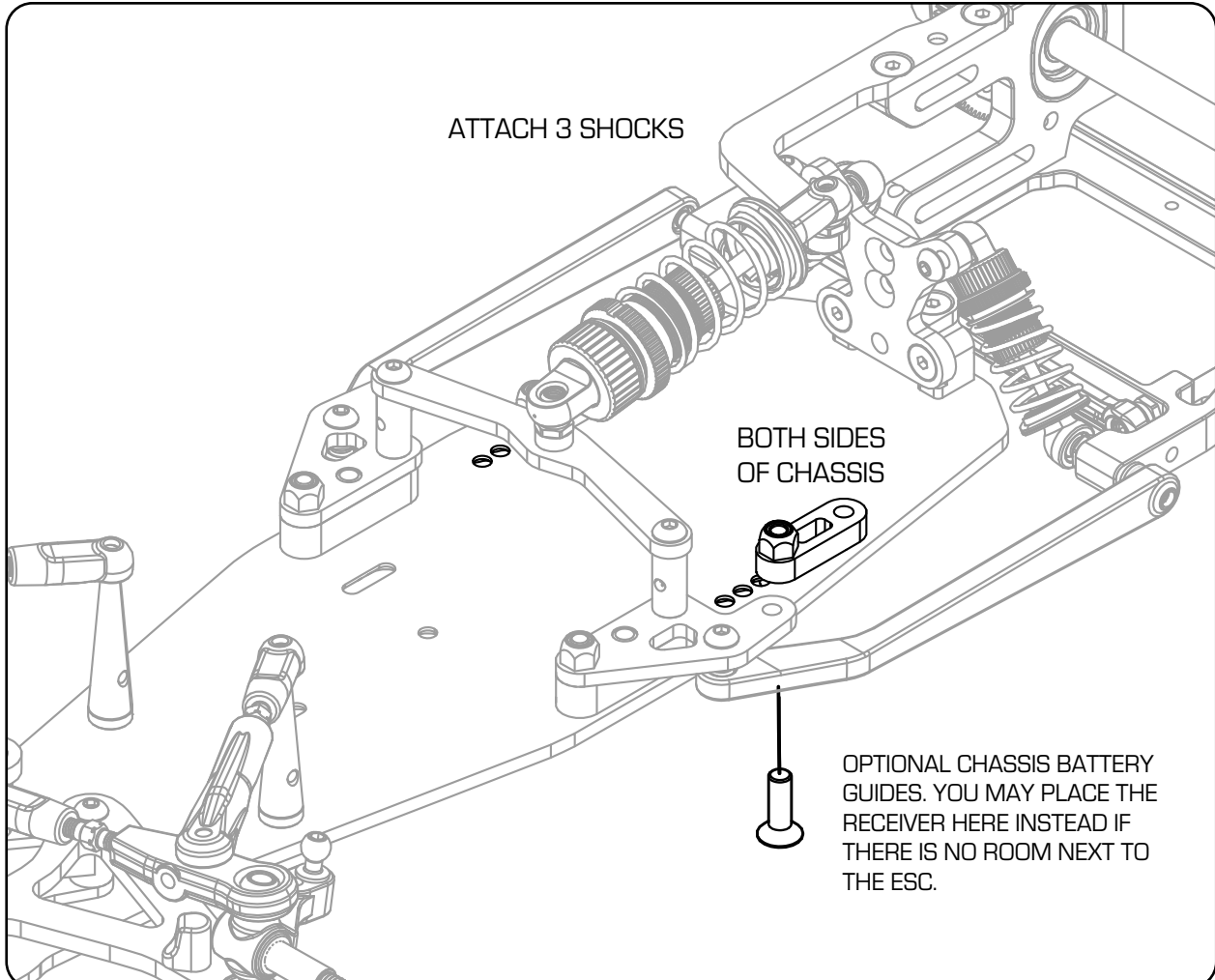
R4061  
Ball Nut (1)



M3x10 FHCS (x2)



M3 Lock Nut (x2)

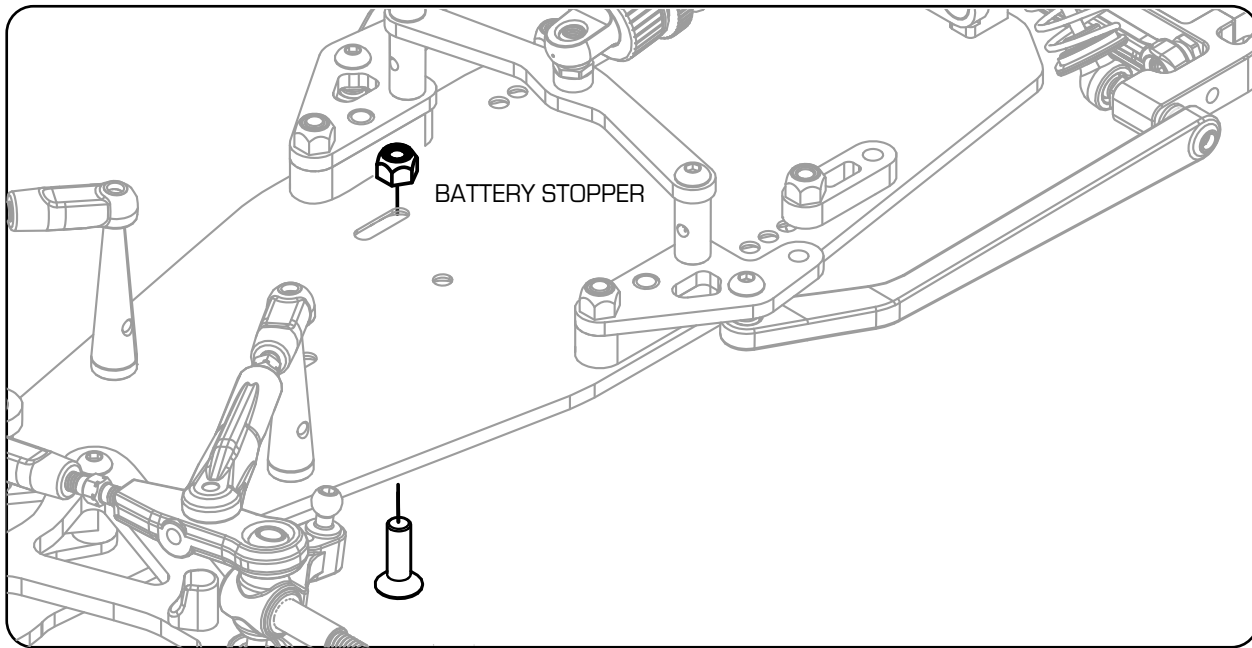




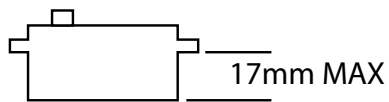
M3x8 FHCS (x2)



M3 Lock Nut (x2)



Note: Must use a 1/10  
25 spline low profile TC servo  
ie Savox or Hitec. etc.



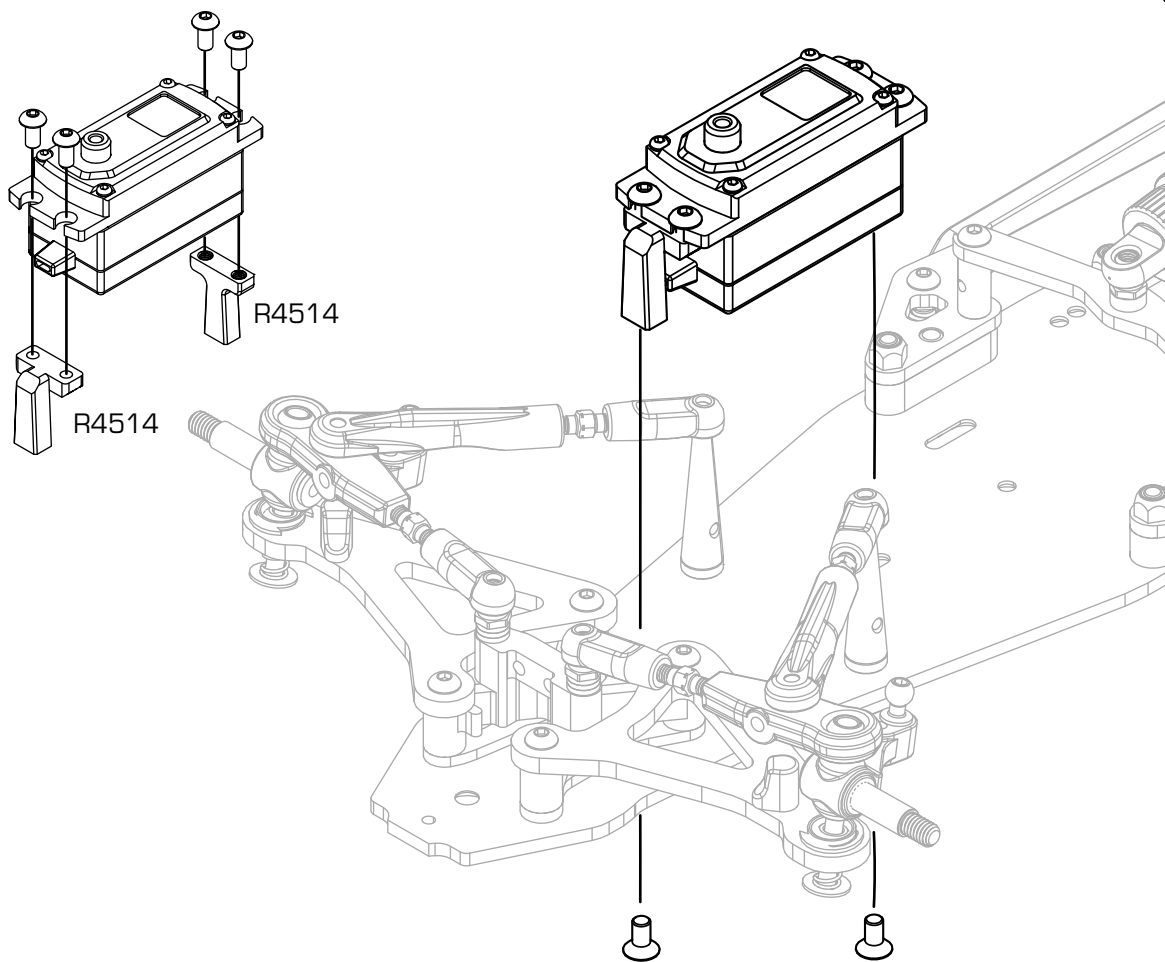
17mm MAX  
Off Road servos will not fit.

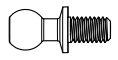


M3x6 BHCS (x4)



M3x6 FHCS (x2)





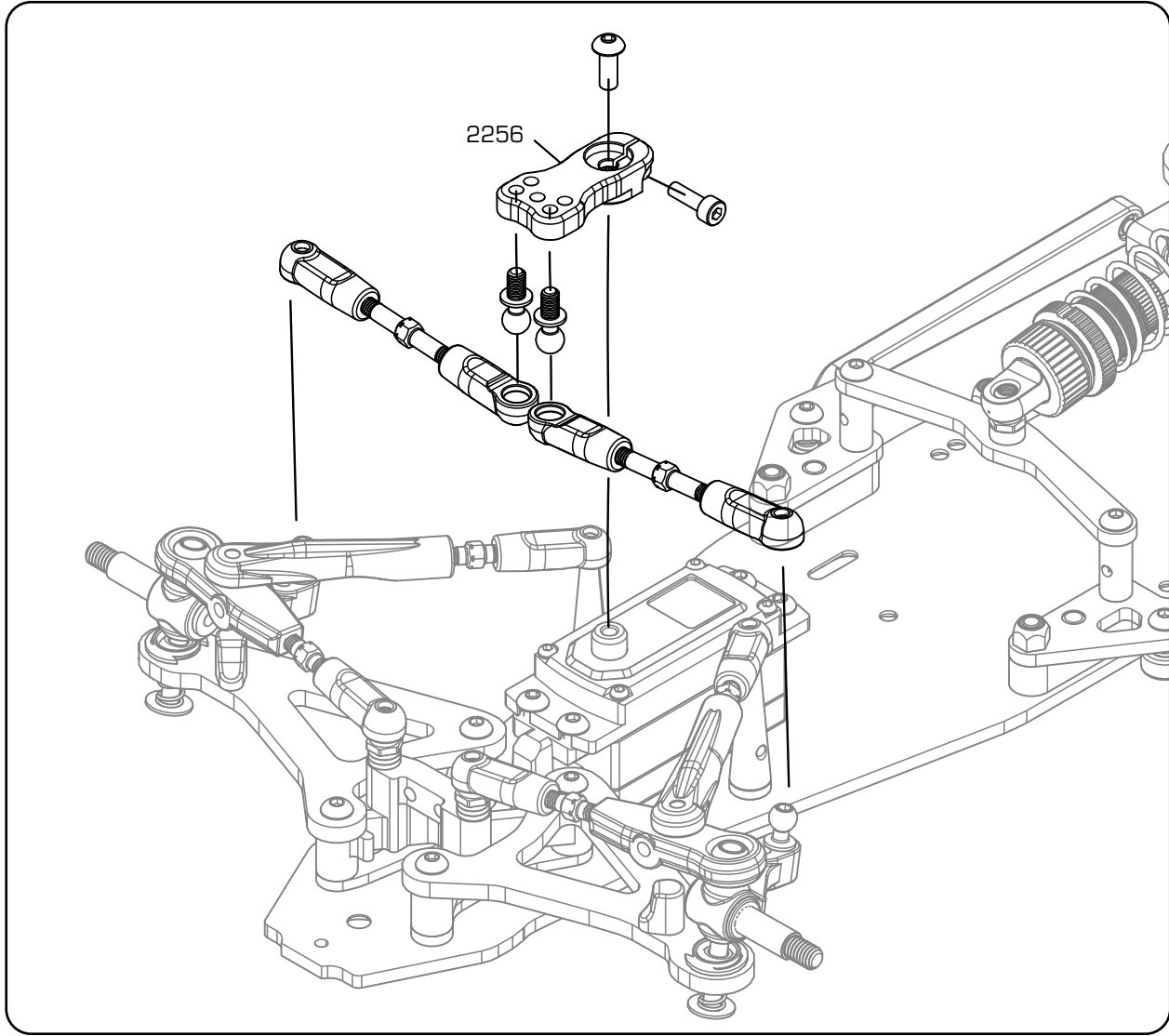
R4037  
Ball Stud (x2)



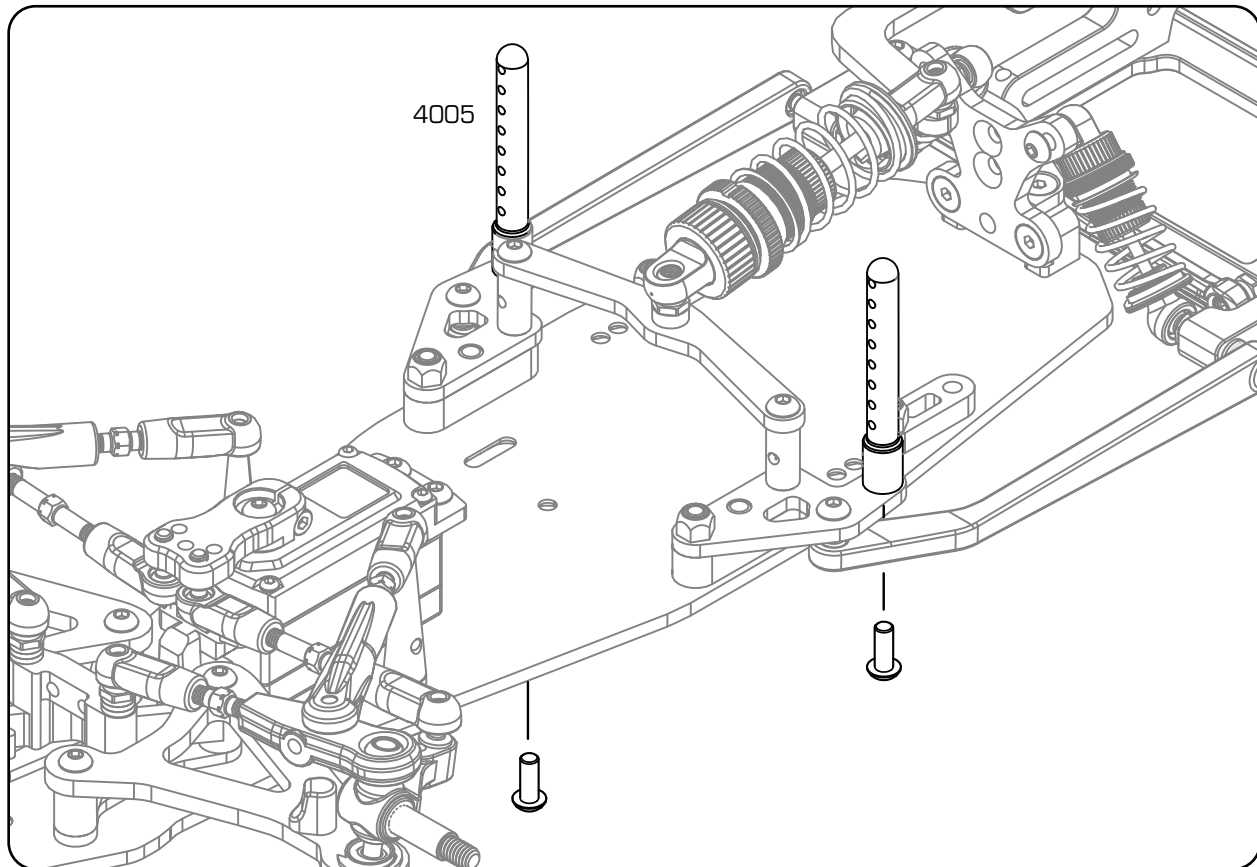
M3x8 BHCS (x2)

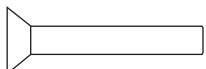


M2.5x8



M3x10 BHCS (x2)

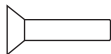




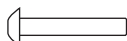
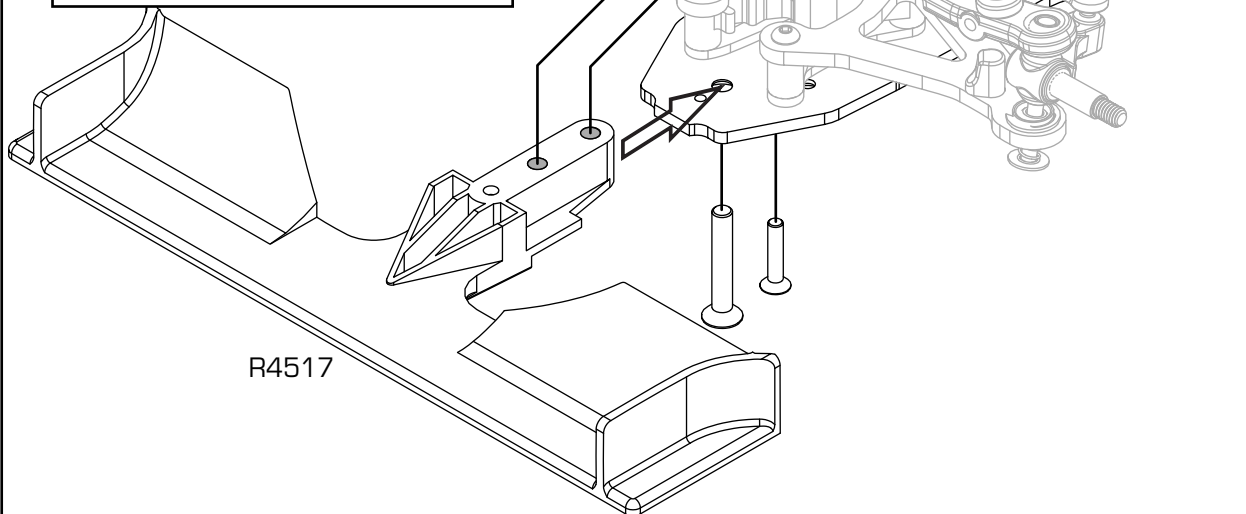
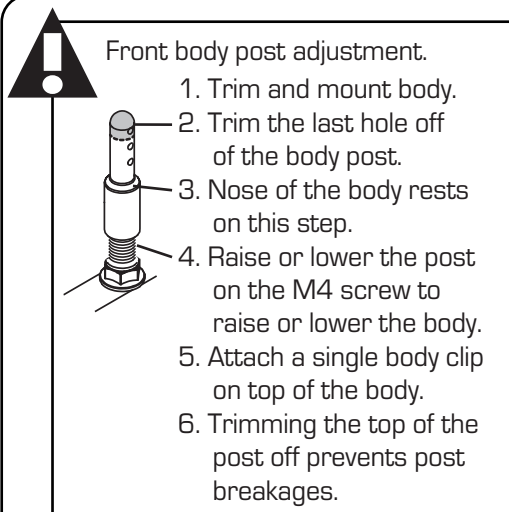
M4x26mm FHCS



M4 Locknut



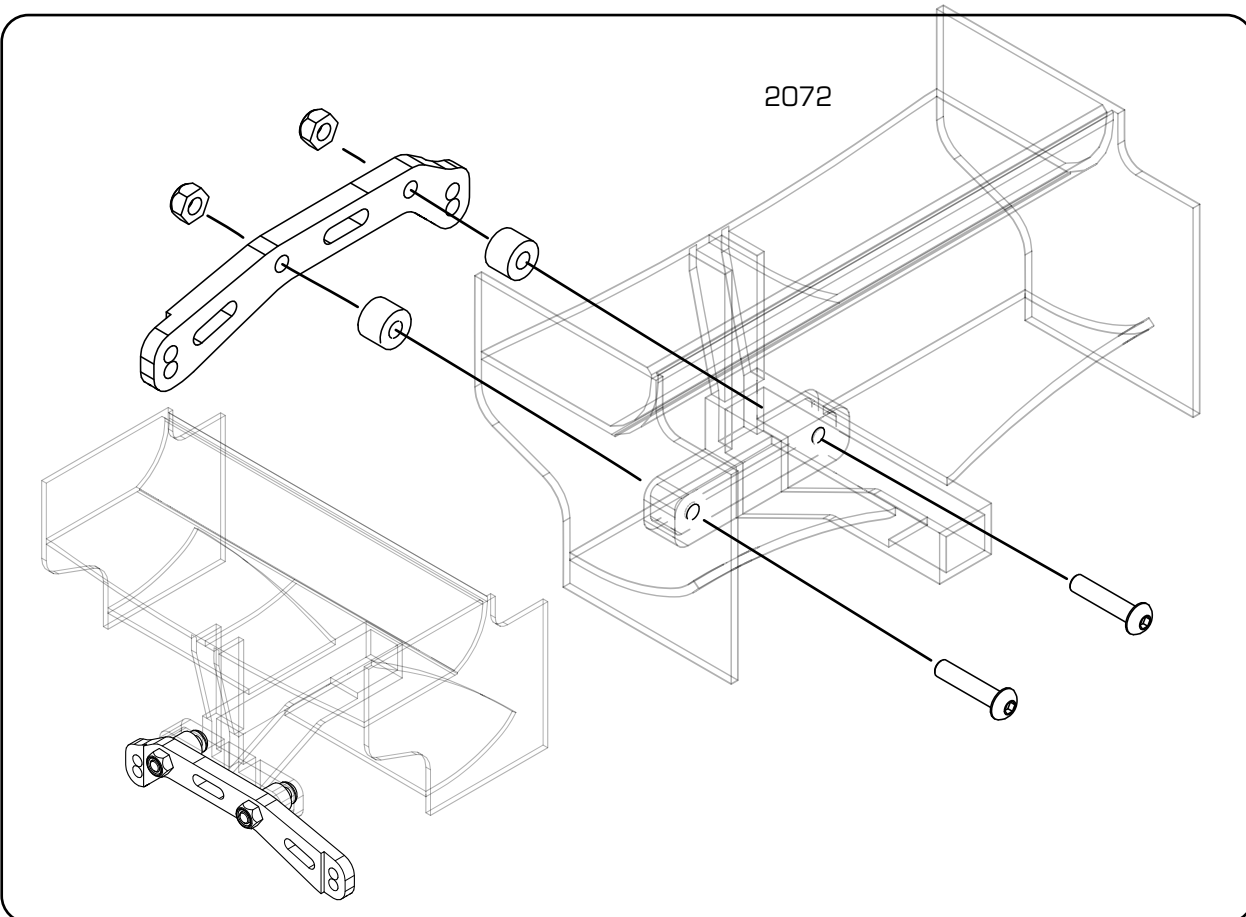
M3x10mm FHCS




M3x16 BHCS (2)

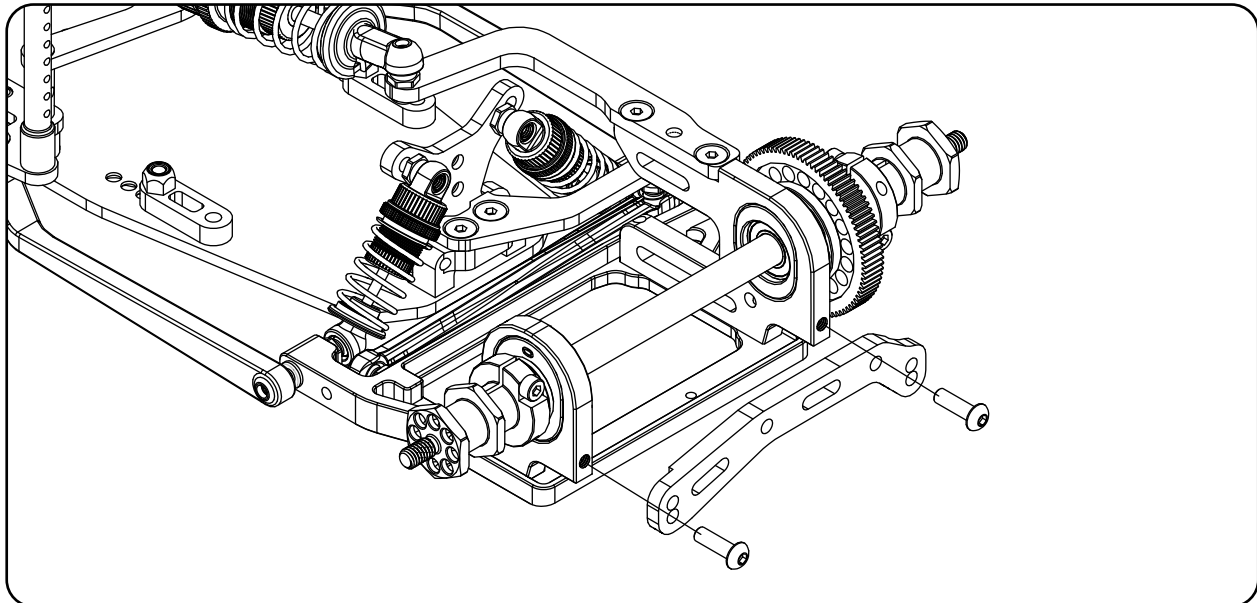



M3 Locknut (2)






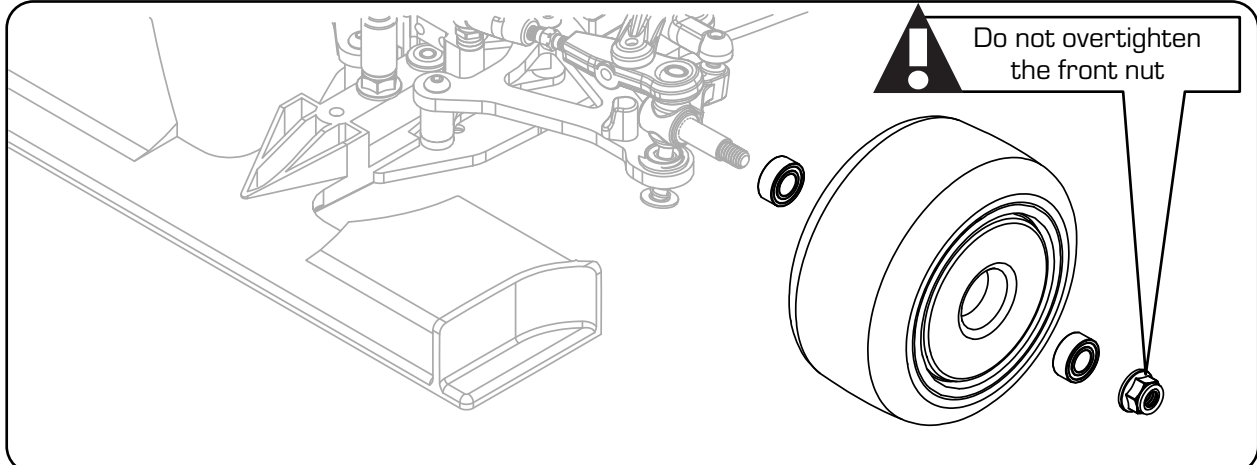

M3x8 BH (x2)

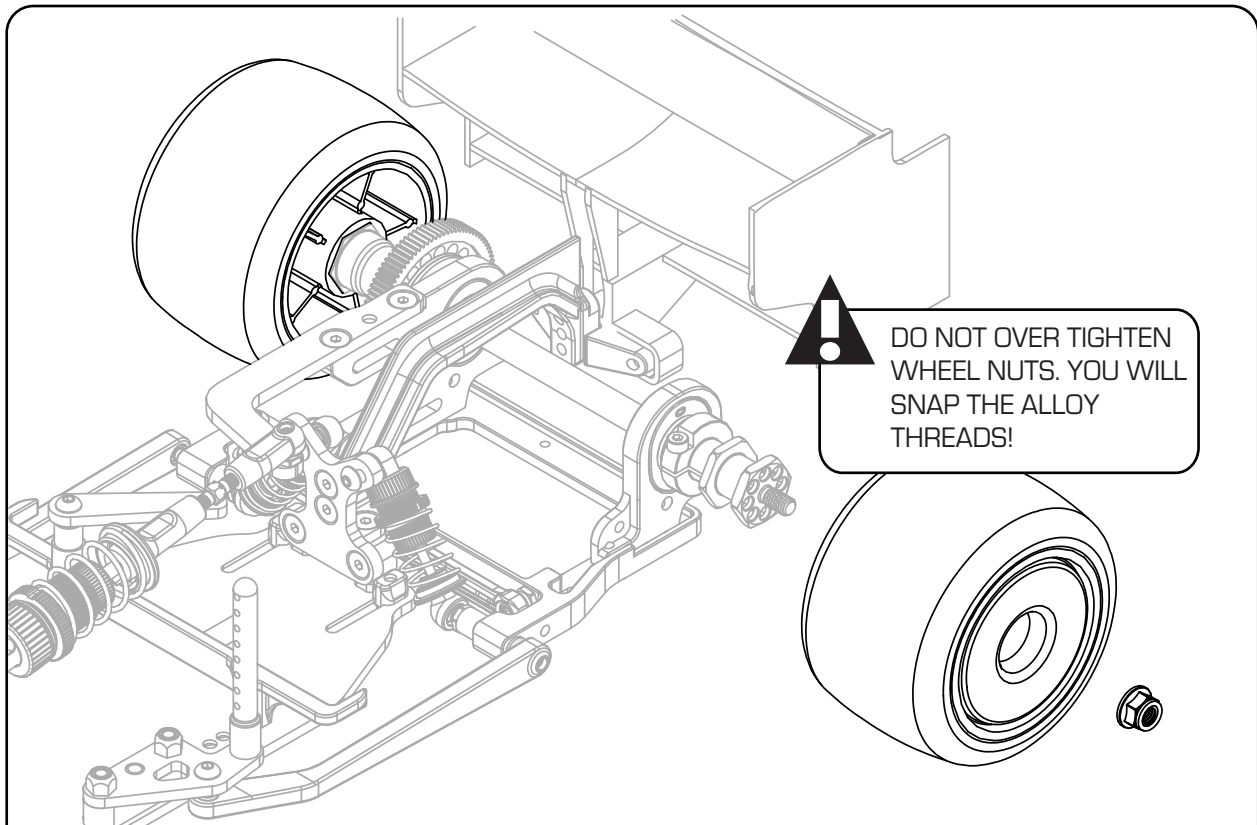
86421  
M4 Locknut (x2)



R4128  
5x10mm Bearing (X4)

86421  
M4 Locknut (x2)





SUGGESTED LAYOUT OF YOUR ELECTRONICS

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OPTIONAL  
2133 28X Belted Tires  
2119 33X Belted Tires  
2118 36X Belted Tires

OPTIONAL  
1713 Tuning Top Spring Set

! Ensure the shock does not rub the body. Trim body if needed.

OPTIONAL  
1965 Carbon Ride Height Spacers

OPTIONAL  
2063 Front Damper Set

OPTIONAL  
2194 38X Belted Tires  
2193 40X Belted Tires

OPTIONAL  
2157 Light Weight Ball Studs

OPTIONAL  
2255 HD PIVOT CUPS

OPTIONAL  
2062 Sway Bar Set

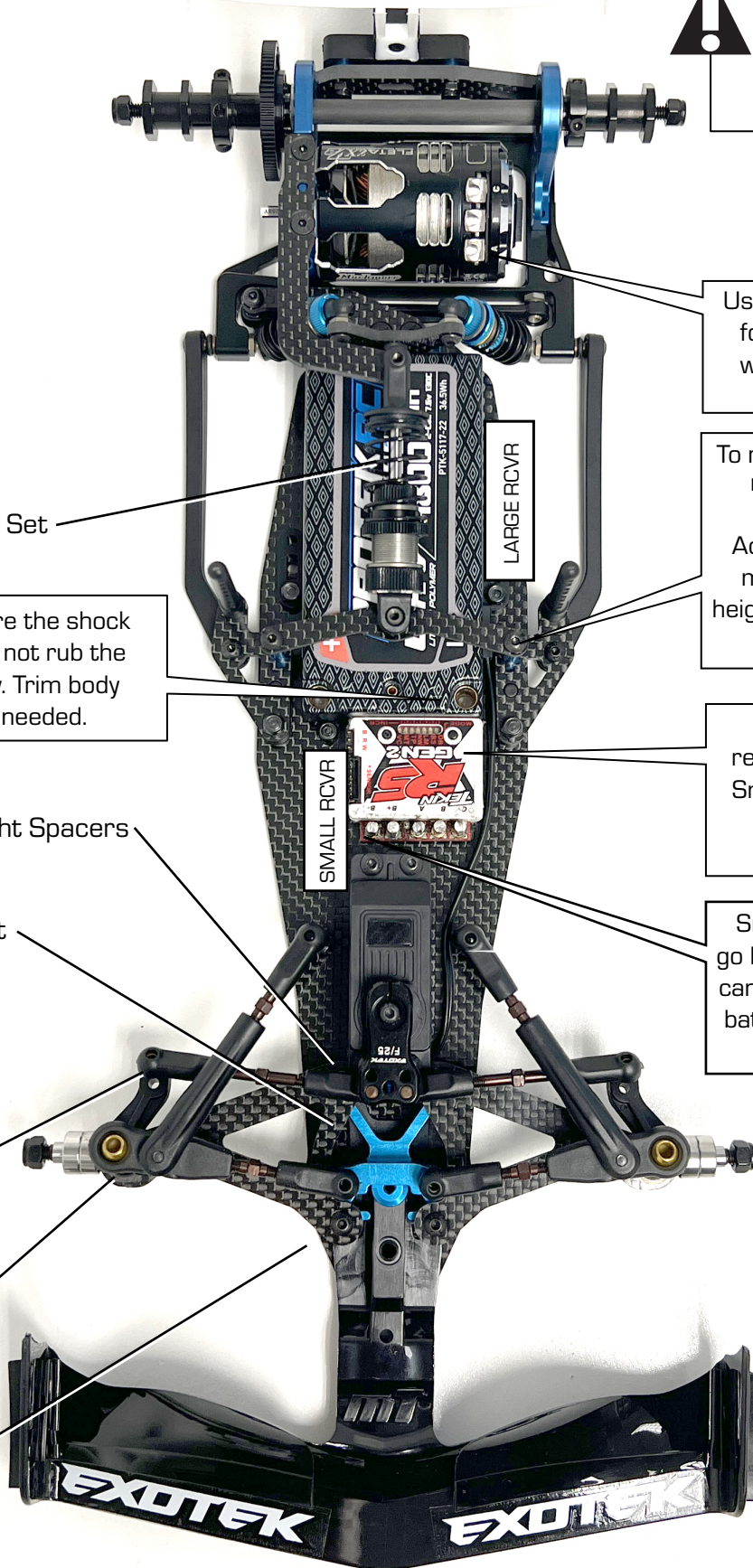
! Ensure fan does not rub the body. Trim body if needed.

Use thin 16-gauge wire for the motor. Route wires away from the shocks.

To remove the battery remove the top 2 screws. Adjust post length to match your battery height by using additional m3 spacers.

Attach ESC and receiver with 3M tape. Smaller ESC's with the fan removed are required.

Smaller receivers can go here. Larger receivers can fit in back next to the battery if your remove 1 lipo holder.



# SET UP TIPS

## REAR RIDE HEIGHT

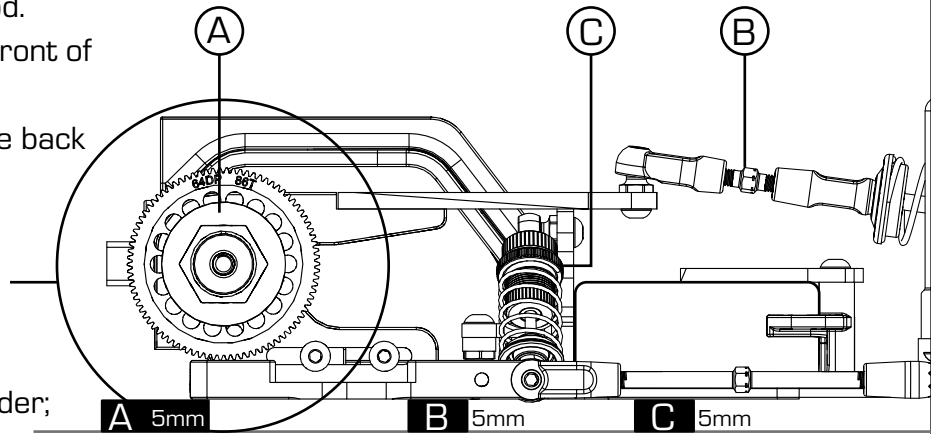
Using a long onroad ride height gauge, measure the 3 locations shown here in this order;

- A** Rear pod height (ie 5mm). Measure the pod.
- B** Center link height (ie 5mm). Measure the front of the pod.
- C** Rear chassis height (ie 5mm). Measure the back of the chassis.

NOTE- The wheels must be attached and battery installed.

To change the ride height, change it in this order;

- A** Change bearing cams for height A.
- B** Adjust the top shock length for height B (longer link raises the B setting).
- C** Adjust the 2 micro shock collars for height C (lowering the collars raises the rear chassis). This last setting is the most important to watch to keep from bottoming out.

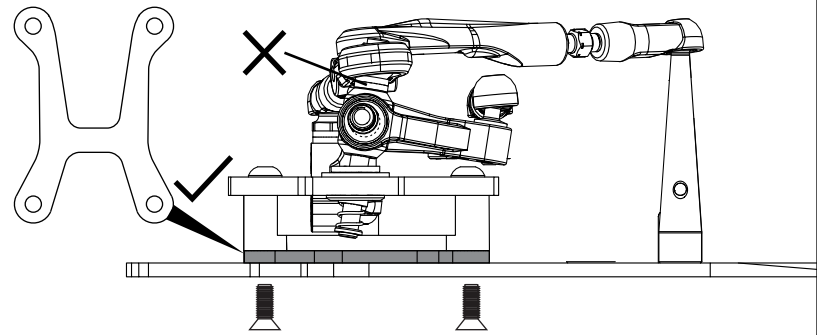


IMPORTANT- Insure you have enough ride height here or you may experience a car that is loose in corners due to the chassis scraping the ground at high speed.

## FRONT RIDE HEIGHT

Change the front ride height by changing the bulk-head plate thickness (Exotek Options). Change M3 screws as needed for proper length and durability. Do not change the steering knuckle shimming to change ride height as the pins may rub the wheels. You may need to add shims under the steering post for extreme low ride heights.

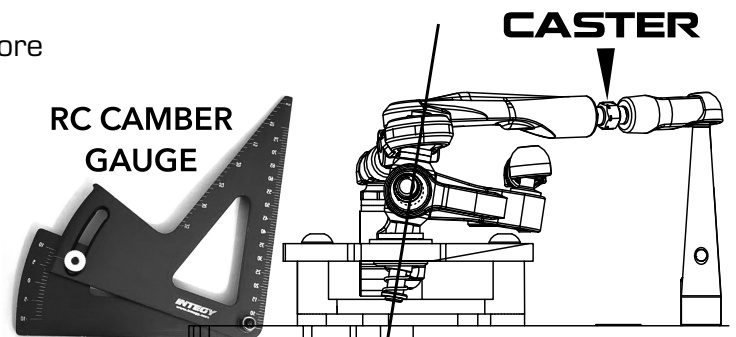
RIDE HEIGHT SHIM



## CASTER

Caster is changed via the trailing caster control arm. Simply adjust the length shown and measure the pin angle with a sideways camber gauge or for more accurate settings, use a 1/10 TC set up station (Hudy etc) with the **Exotek caster doodle #2021**. We suggest around -5° for tight tracks and -9° for large sweeping tracks.

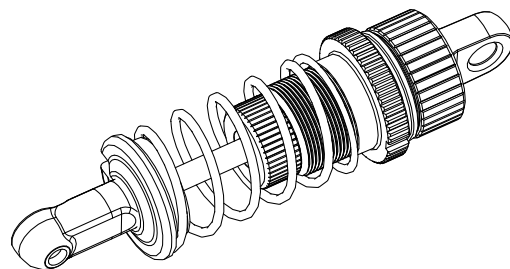
**Also readjust your camber after changing your caster.**



## TOP SHOCK

The outer spring controls track bumps and braking stability. Softer outer springs are needed for bumpy tracks while harder springs may be suited for smoother tracks.

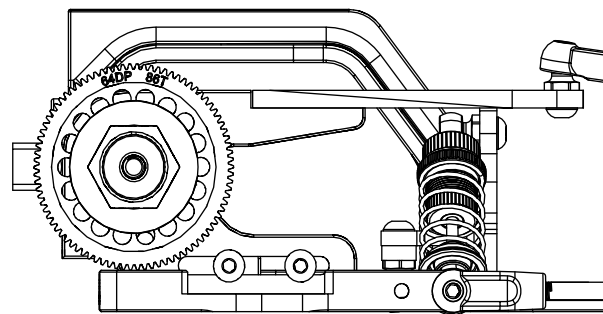
SPRING CHART  
 Red - Soft  
 Yellow - Medium  
 Blue - Hard



## MICRO SHOCKS

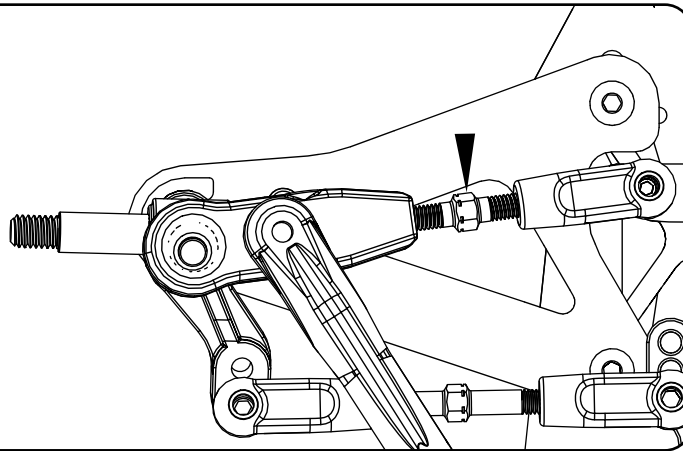
The side micro shocks control the side roll, dampening and center ride height. Softer springs yields the best rear traction but you must raise the ride height for the extra roll (5mm etc). If you require lower ride heights then you must use firmer micro springs.

SPRING CHART  
 Black - Soft  
 Yellow - Medium  
 Blue - Hard



## CAMBER

The F1ULTRA has the easiest to adjust camber of all F1's. Simply use a turnbuckle to adjust as needed. More negative camber (leaned in) will produce more overall steering and is the first thing we adjust when we want to increase or decrease steering. We start with  $-1^\circ$  and adjust as needed depending on overall tire grip.



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