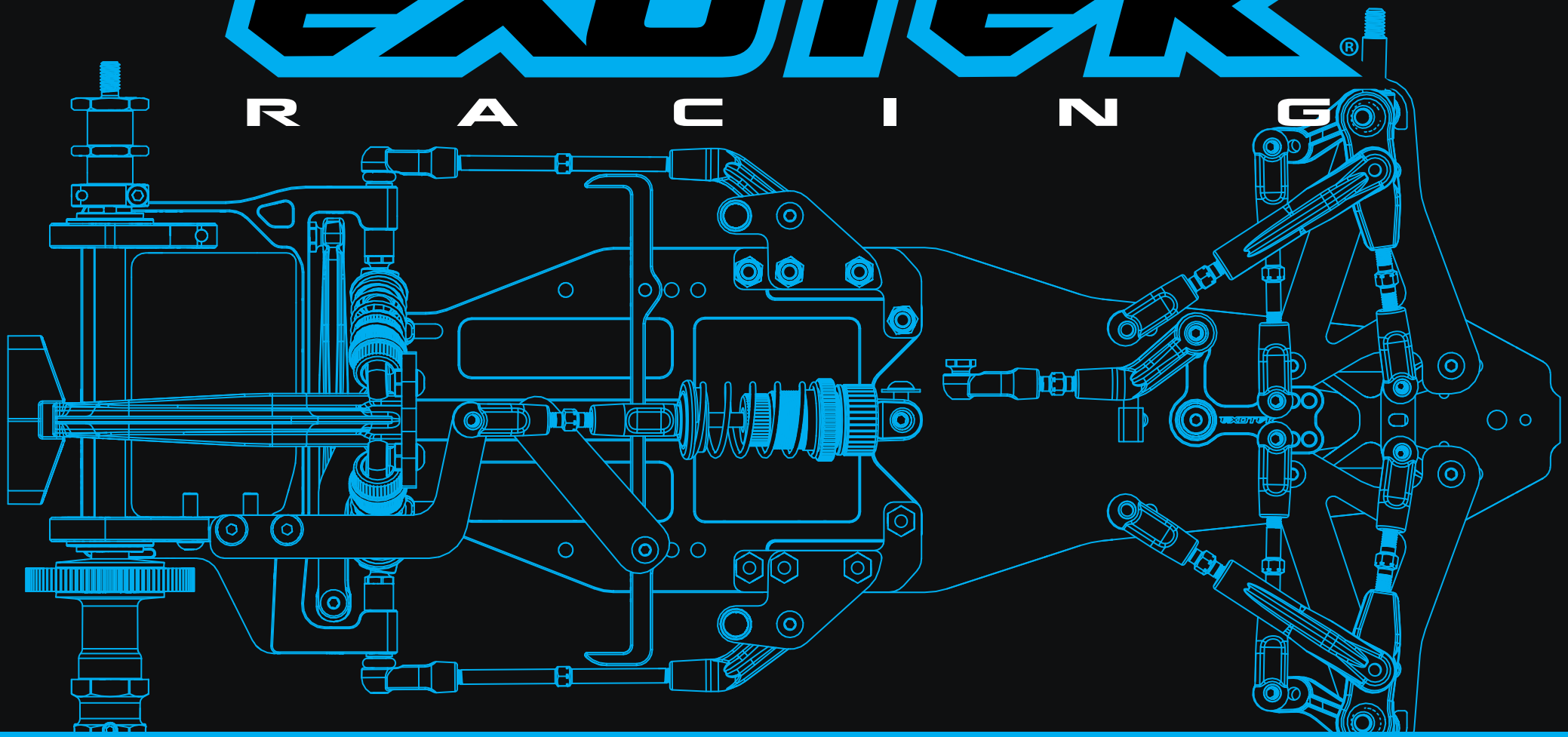
EXOTEK®

RACING



F1 ULTRA

1/10 ULTRA PERFORMANCE RADIO CONTROL KIT

INTRODUCTION

Thank you for purchasing the Exotek Racing F1ULTRA race kit. This has been a passion project we've been working on for many years and also our very first car kit release. After years of adding innovation to other car kits we've figured it was time to release our own kit incorporating cutting edge patented chassis technology with high quality components and features you've grown to expect from Exotek. Importantly we didn't just redesign a 1/12 chassis to be an F1 car, we have designed the F1ULTRA to be an F1 chassis from the ground up. You will appreciate the details we have designed in to maximize rubber tire grip as well as add extra durability that these very unique cars require.

We hope that the F1ULTRA brings you as much joy and success on track as it has brought us while testing this kit over the years!

KIT FEATURES

Your Exotek F1ULTRA is a cutting edge high-performance racing kit that features;

- 2.25mm hybrid graphite and 7075 alloy chassis for superior carpet and asphalt characteristics
- Patent pending 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 chassis mounted rear wing mount system included, for improved rear grip
- 1 Piece 7075 alloy rear pod plate- improved durability, adds rear traction and improves motor cooling
- High performance ball diff set with 1/4" carbon fiber axle and extra heavy duty oversized axle bearings.
- Heavy duty precision alloy steering crank comes standard and with multiple ackerman settings
- Heavy duty precision alloy front bulkhead comes standard for tweak free running and easy roll center changes
- Heavy duty extra long turnbuckle style side links provides reduced rear bump steer typical of shorter side links
- Double sprung top shock for improved forward bite
- Super narrow main chassis for improved cornering due to less chassis scrubbing
- Short and long wheelbase settings for large and small tracks
- 3 position battery tray allows positioning the battery forward or back for more front are rear weight bias

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

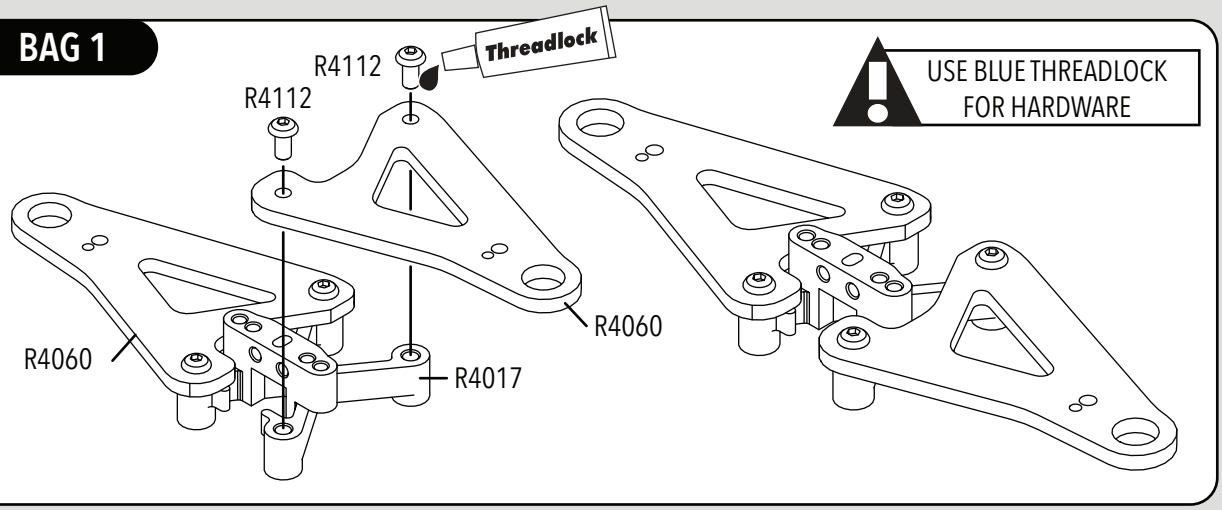
R4112
M3x6 BH (x4)

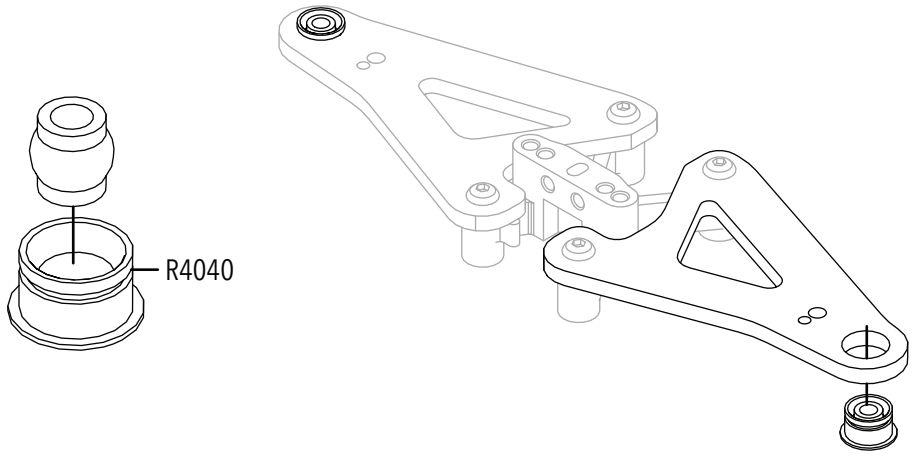
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(x2)

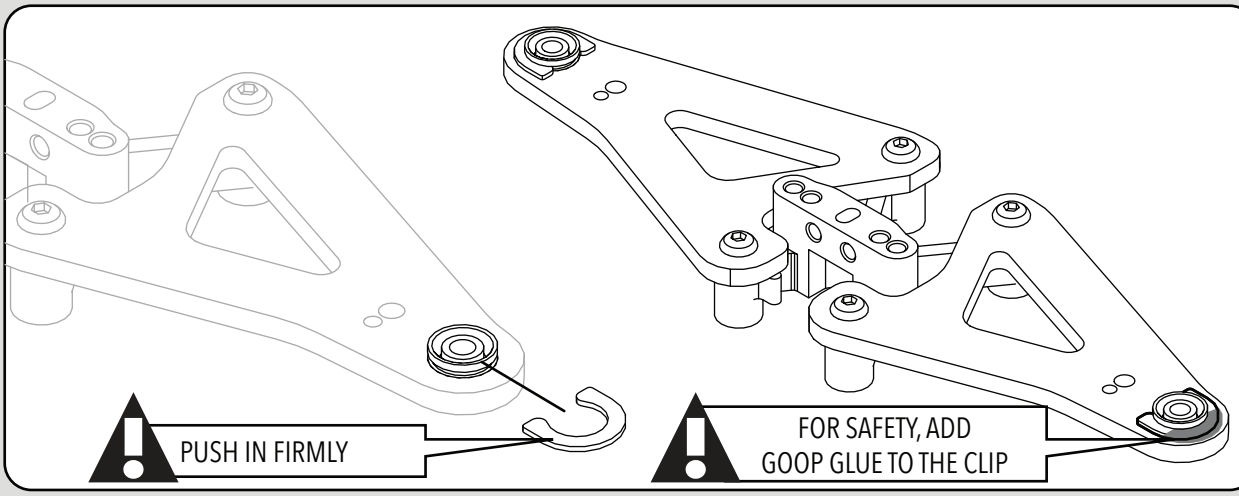
R4042
(2X)

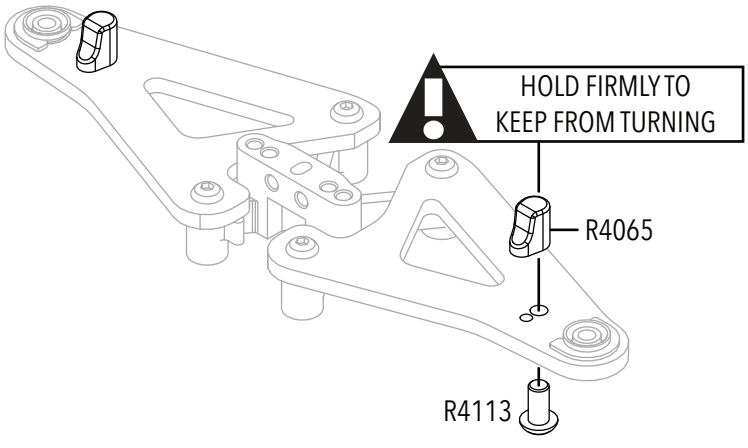
R4113
M3x8 BH (x2)

BAG 1









EXOTEK

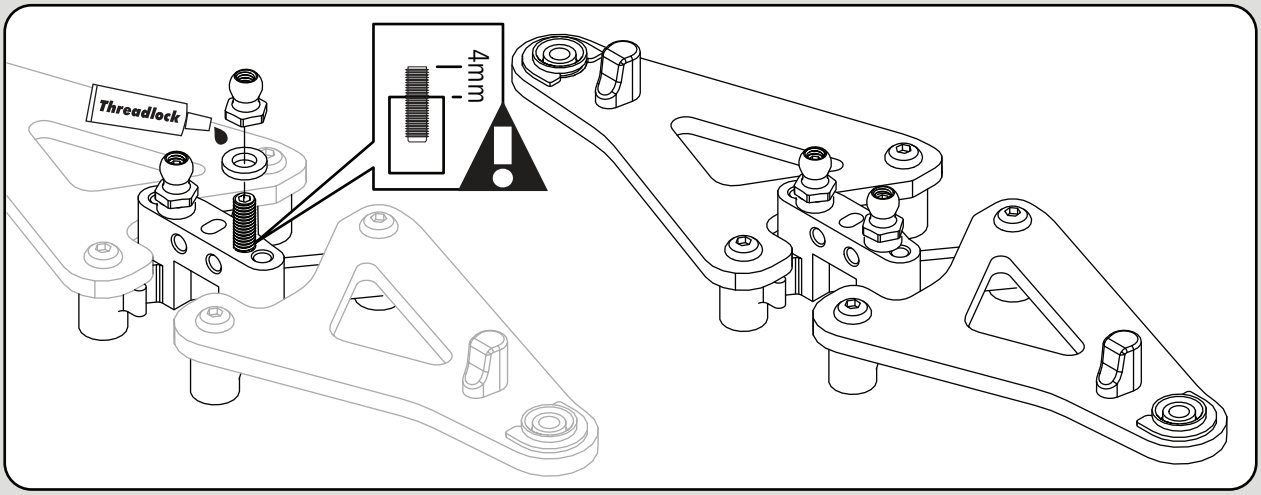
R4061
(x2)

R4014
1mm BLUE SPACER (x2)

R4103
M3x10 SET SCREW (x2)

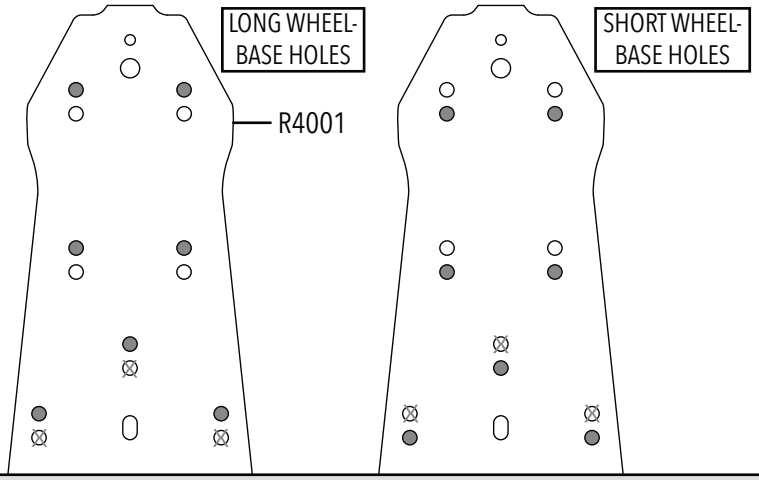
R4107
M3x8 CSK (x4)

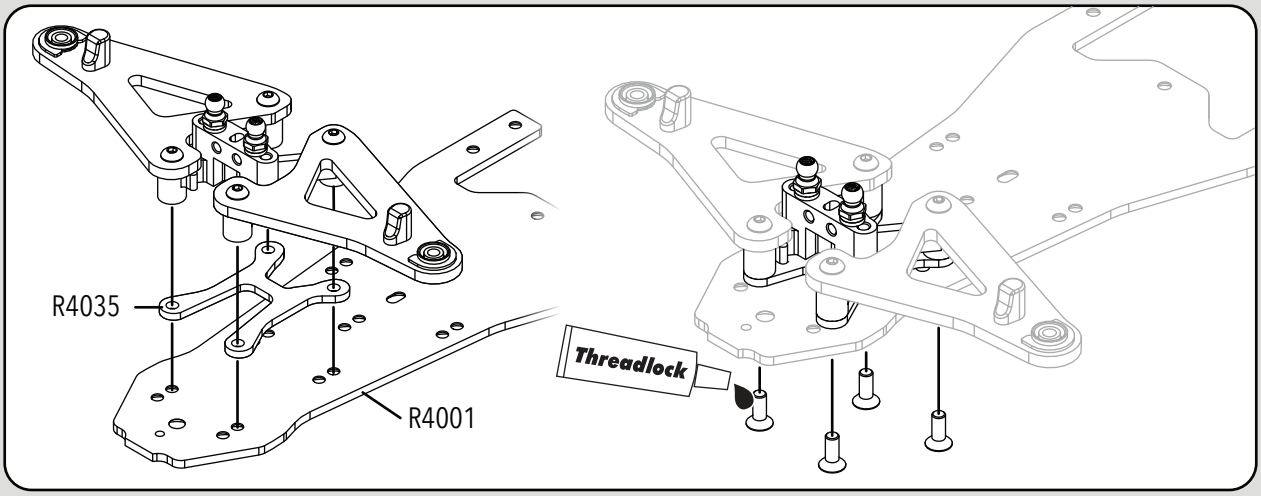
R4107
M3x8 CSK (x3)

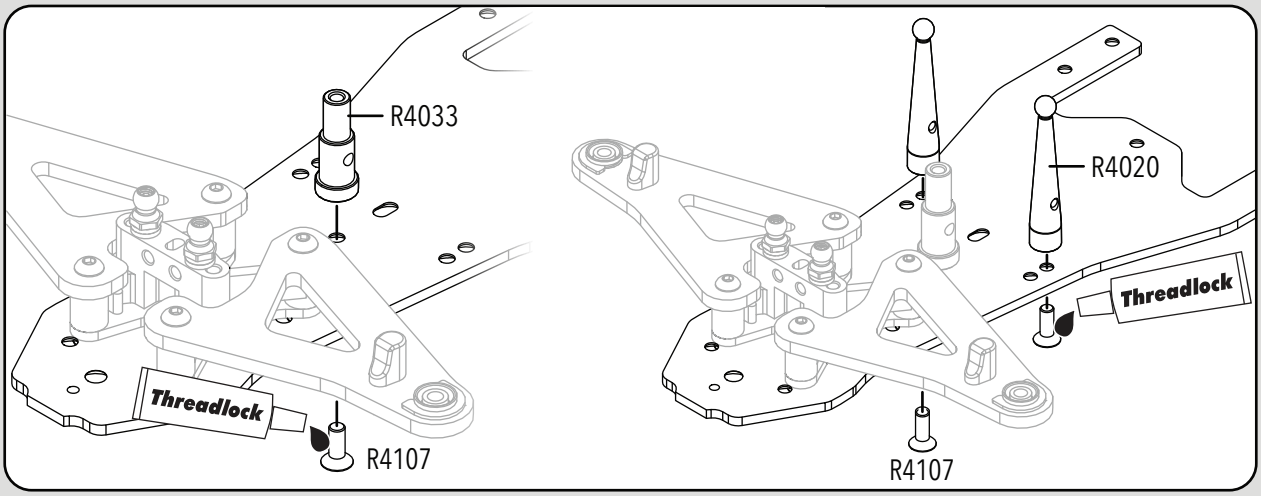


USE LONG WHEELBASE FOR LARGE TRACKS (OVER 12 SECOND LAP TIMES) AND SHORT WHEELBASE FOR SMALL TRACKS (UNDER 12 SECOND LAP TIMES).

DO NOT MIX PARTS WITH SHORT AND LONG WHEELBASE HOLES!







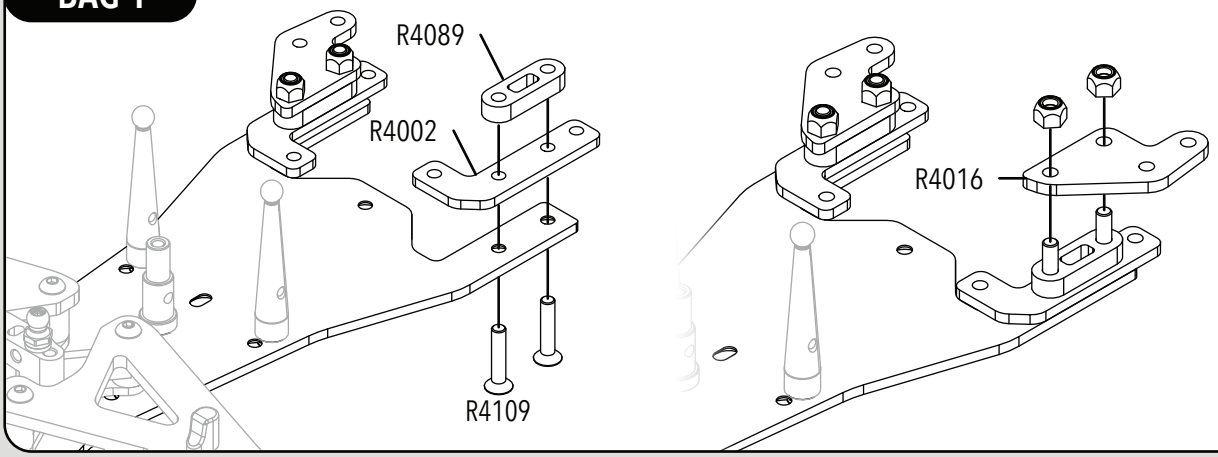
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M3x15 CSK (x4)

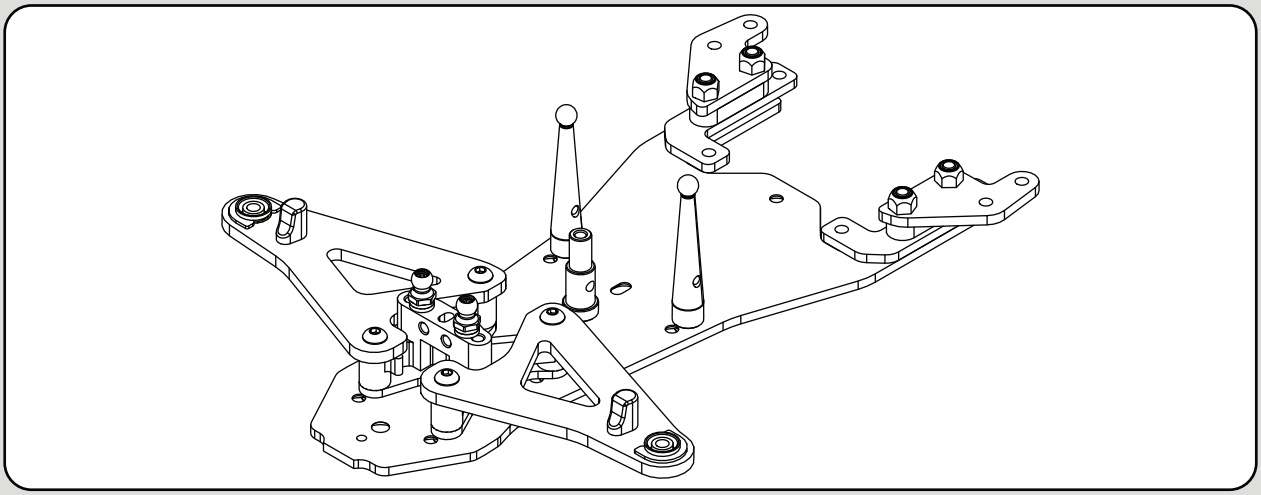
R4105
M3 LOCK NUT (x4)

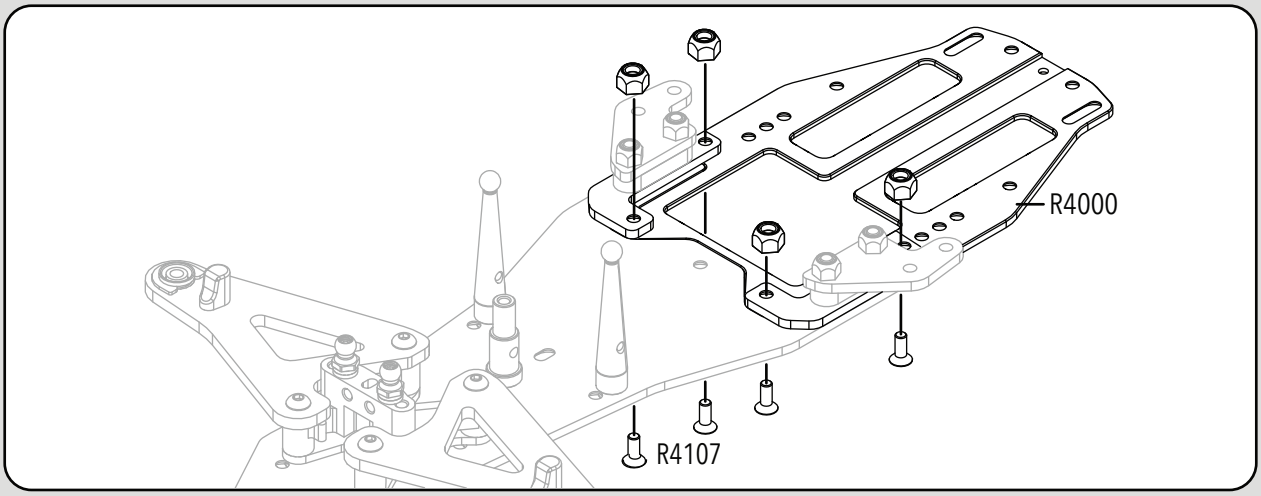
R4107
M3x8 CSK (x4)

R4105
M3 LOCK NUT (x4)

BAG 1

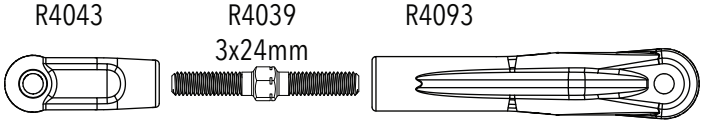


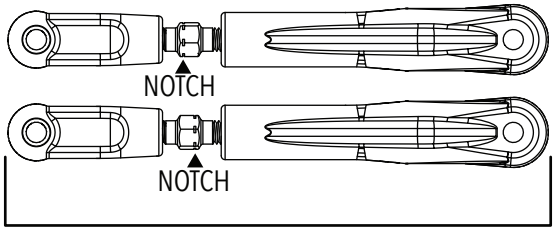




BAG 2

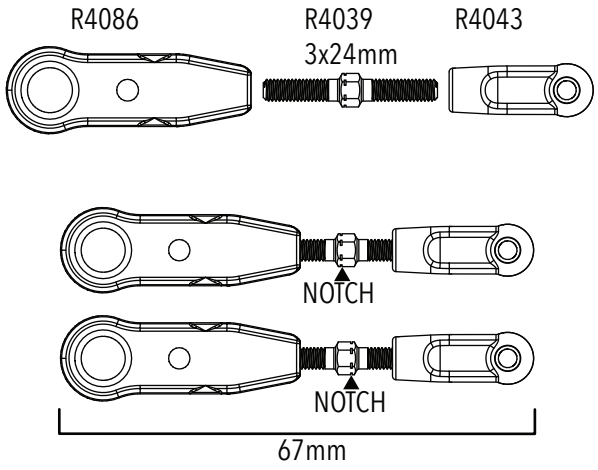
MAKE 2 SETS

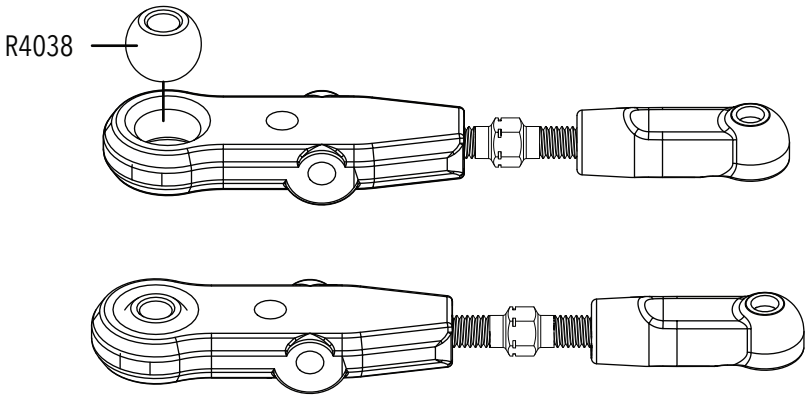




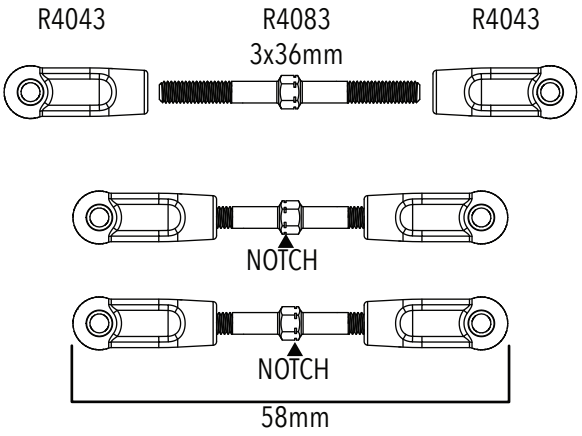
EXOTEK

MAKE 2 SETS

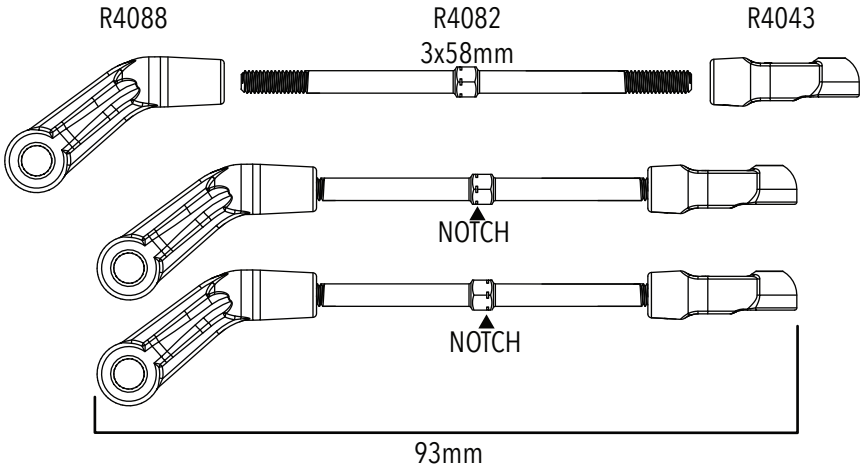


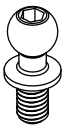


MAKE 2 SETS



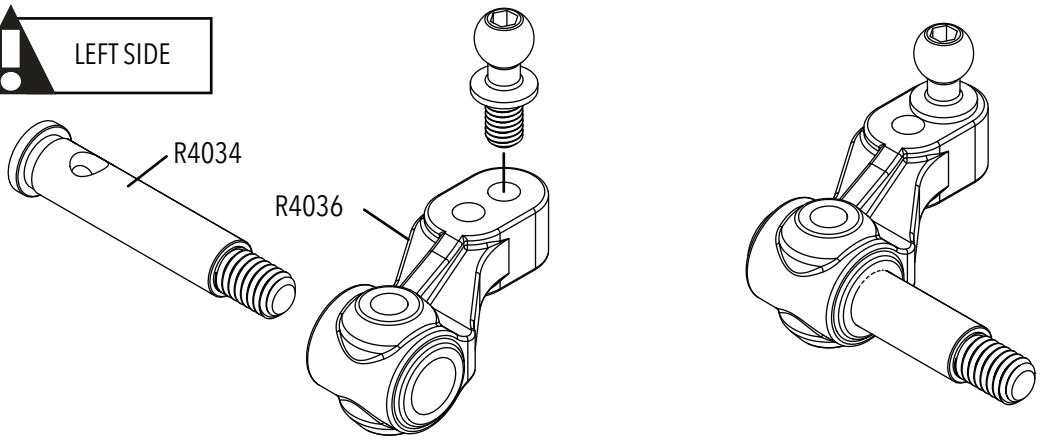
MAKE 2 SETS



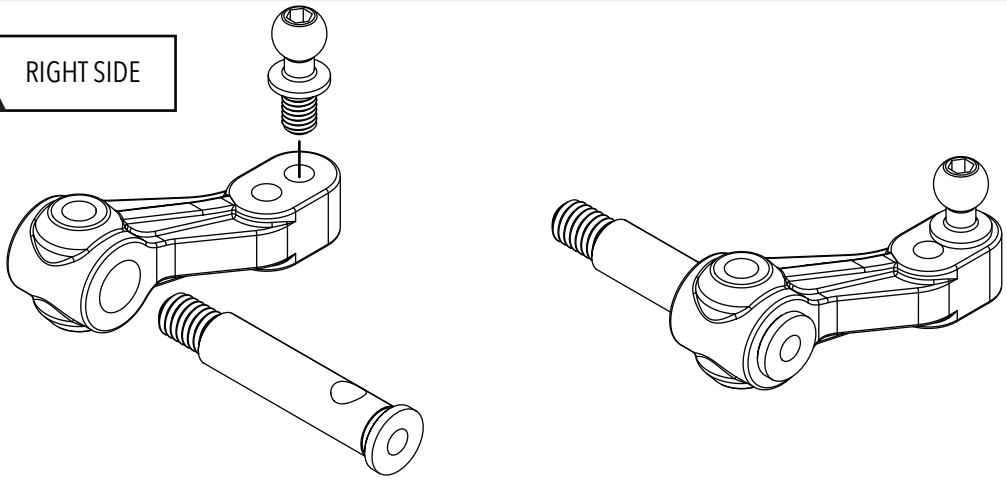


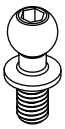
R4037
(x2)

LEFT SIDE

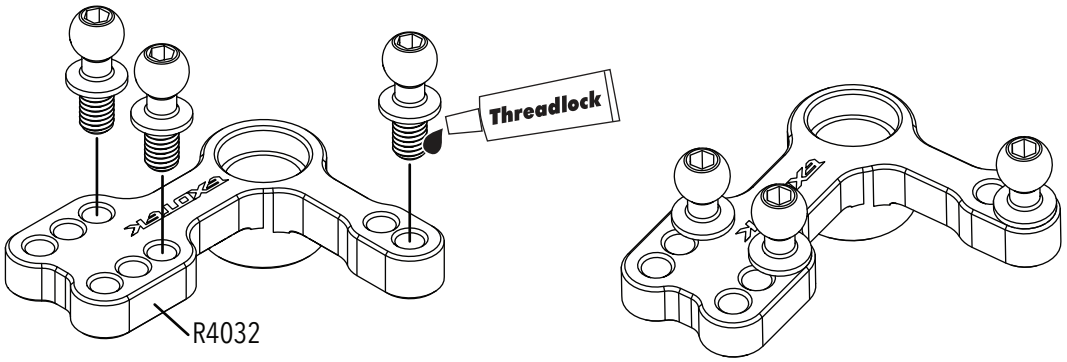


RIGHT SIDE

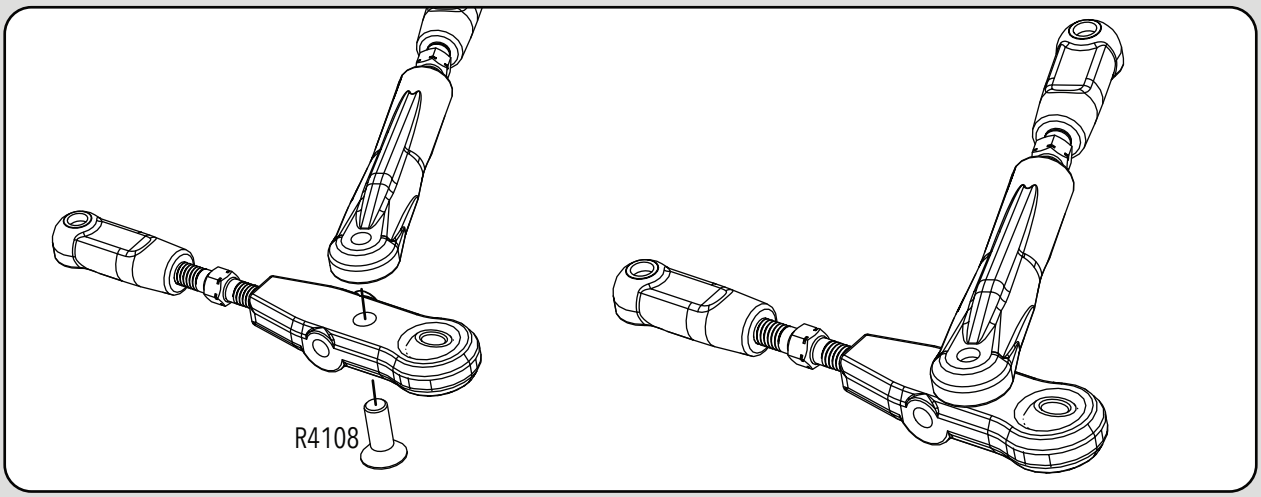




R4037
(x3)



R4108
M3x10 CSK (x2)

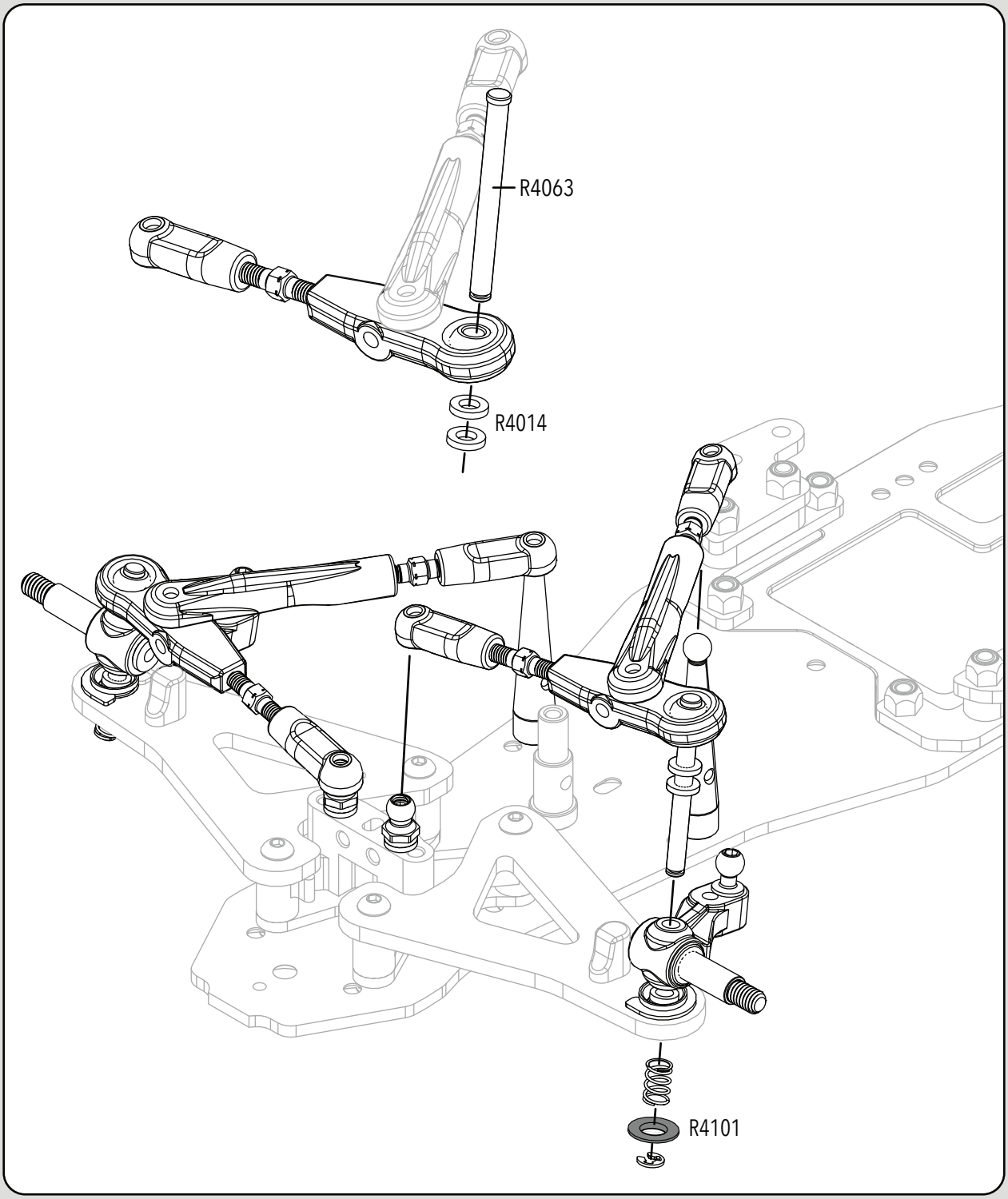


R4014
1mm BLUE SPACER (x4)

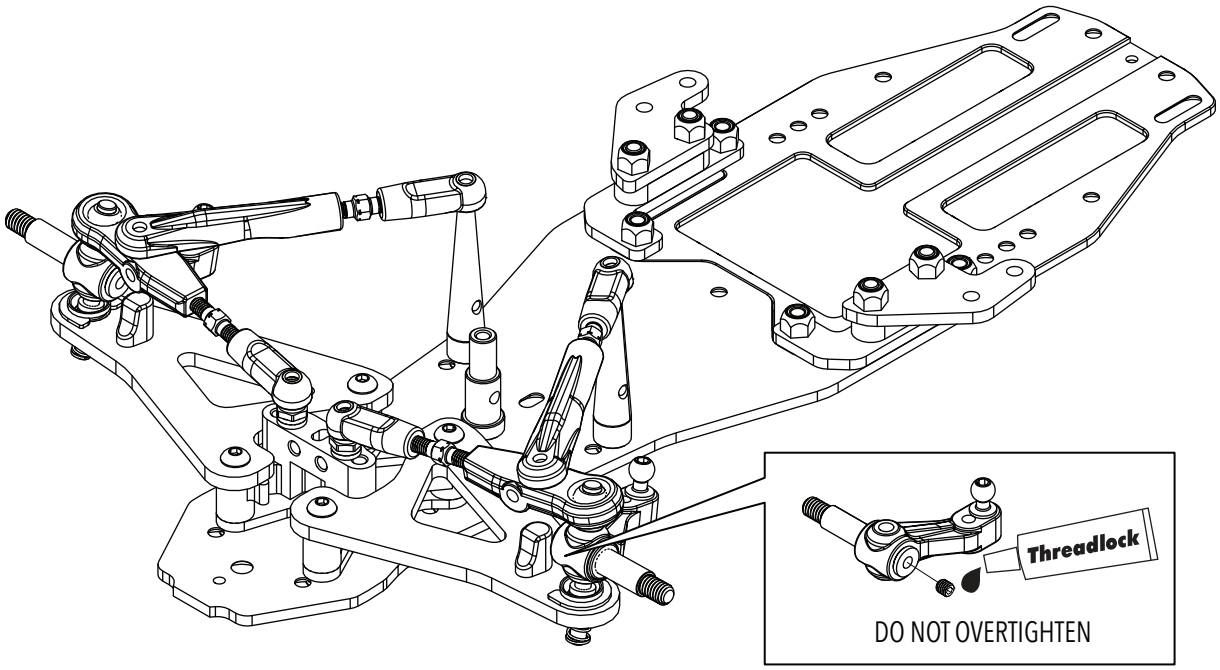
R4087
(x2)

R4101
.5 STEEL WASHER (x2)

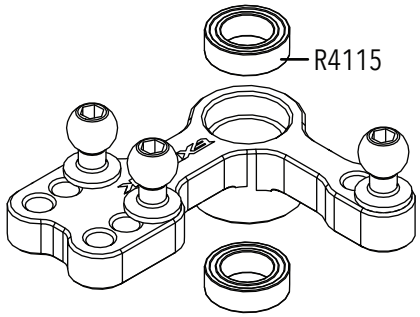
R4044
LARGE E-CLIP (x2)

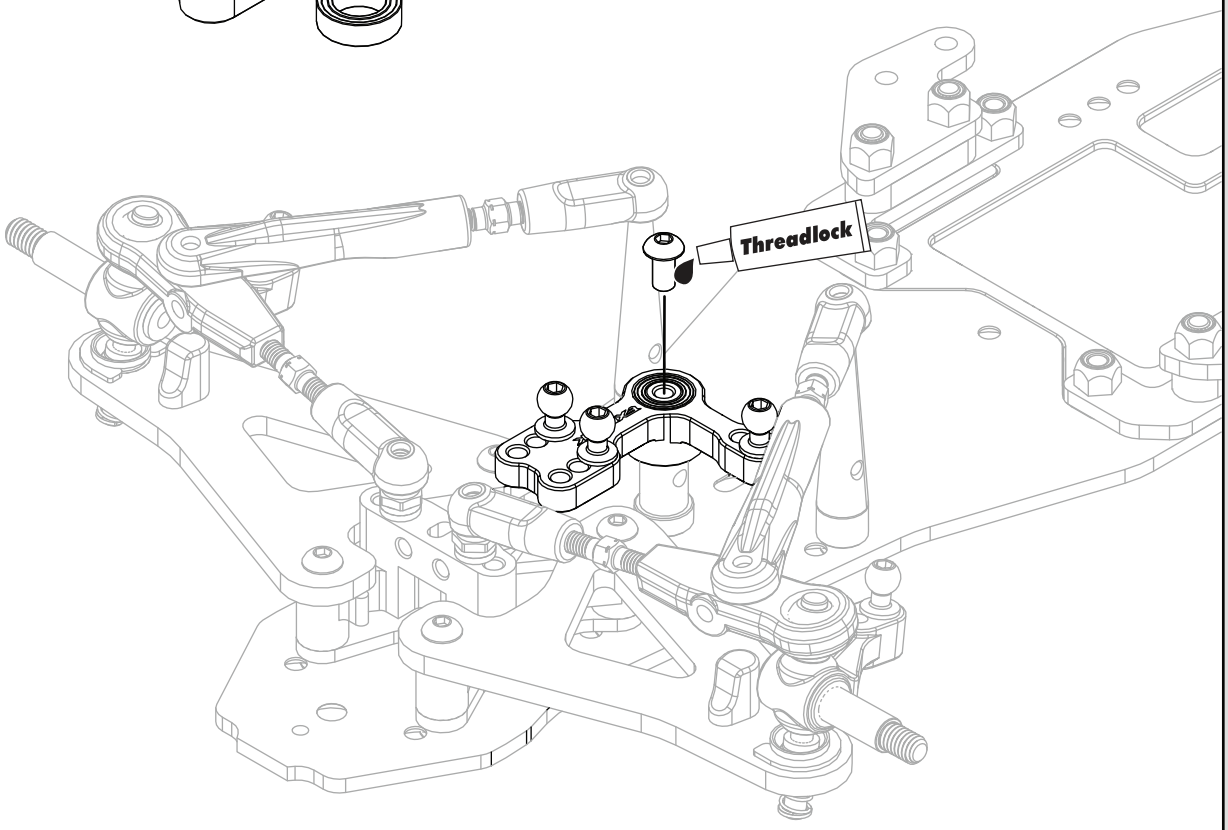


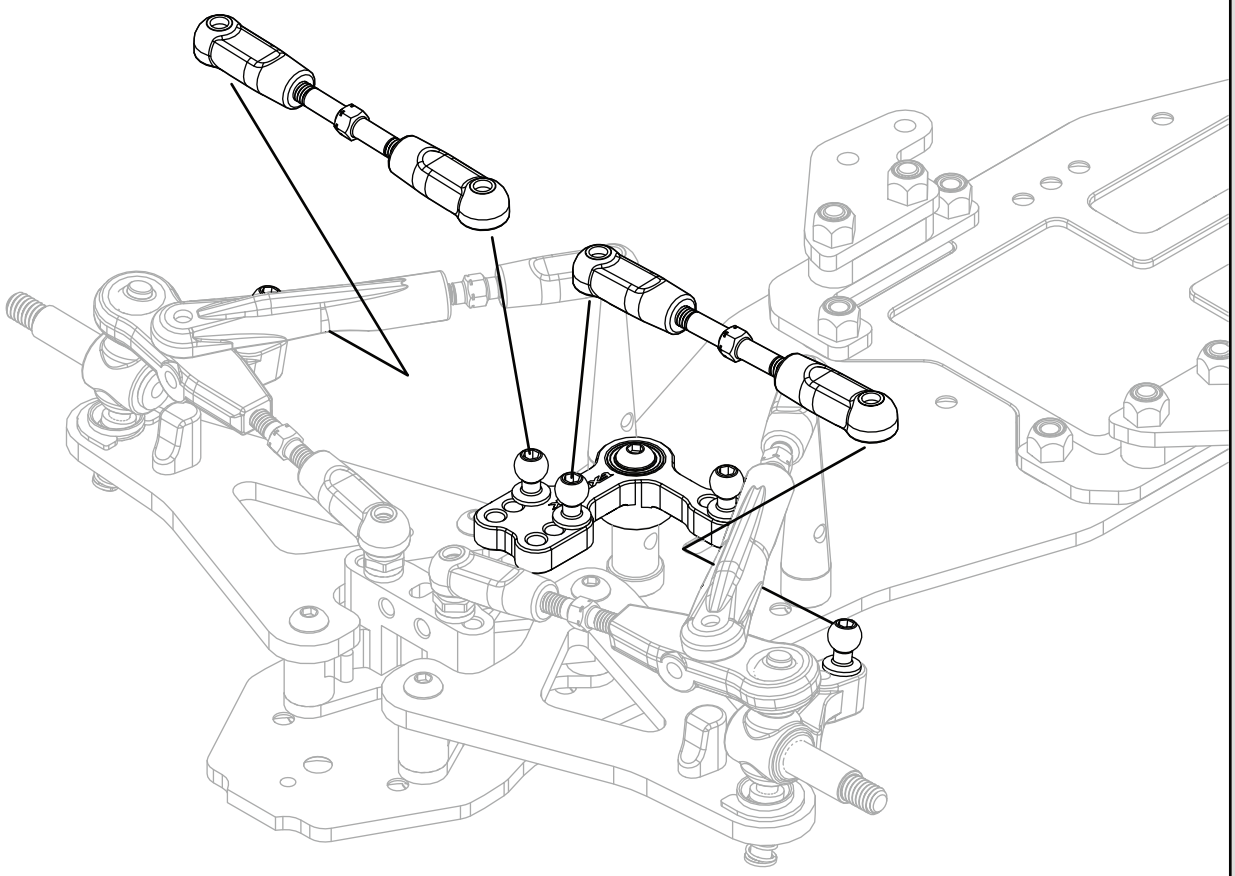
R4127
M3x4 SET SCREW (x2)

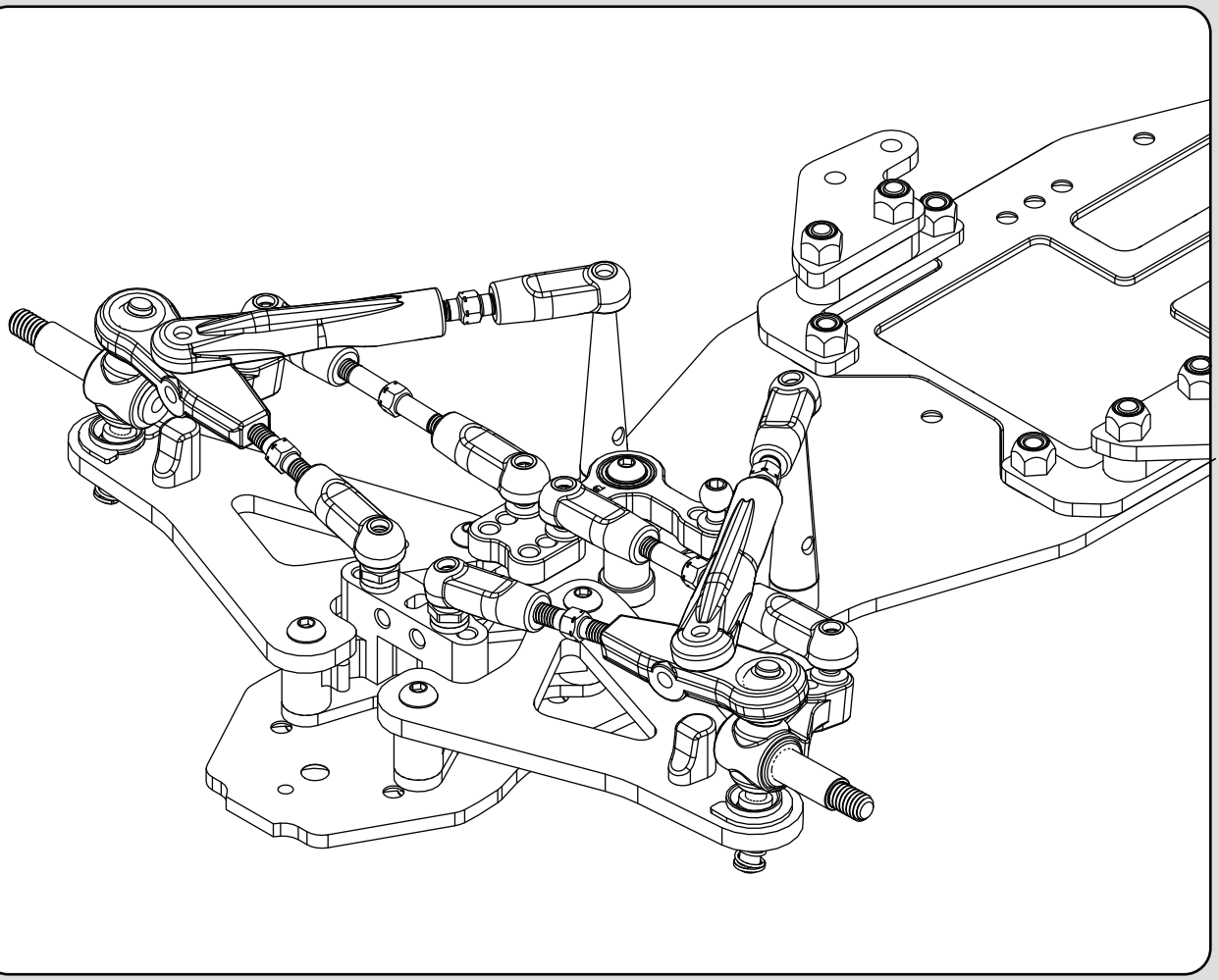


R4112
M3x6 BH (x1)

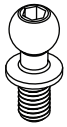








R4103
M3x10 SET SCREW (x1)



R4037
(x2)

R4102
M3x14 SET SCREW (x2)



R4061
(x1)

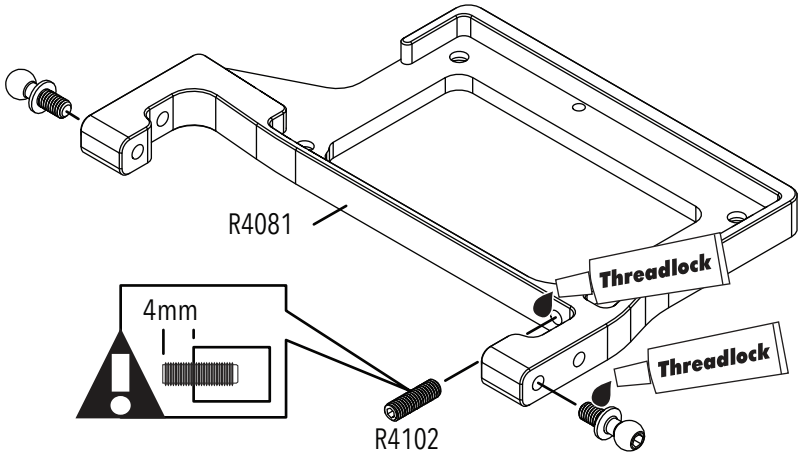


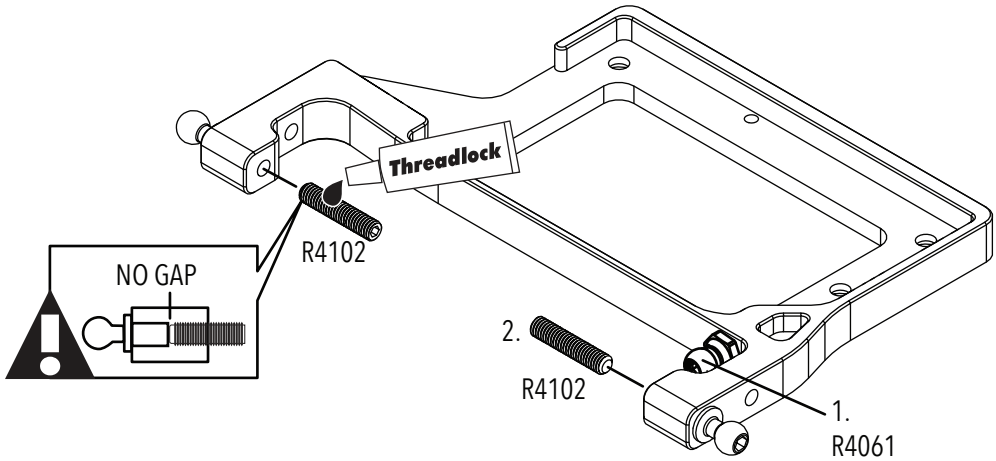
R4061
(x2)

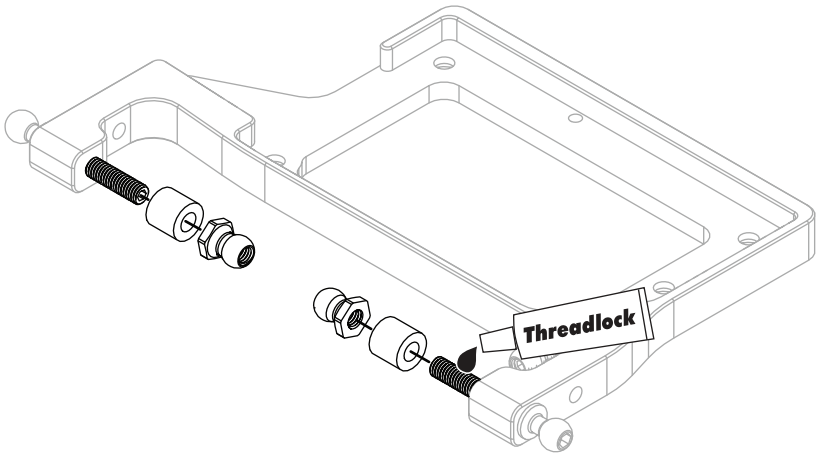


R4028
(x2)

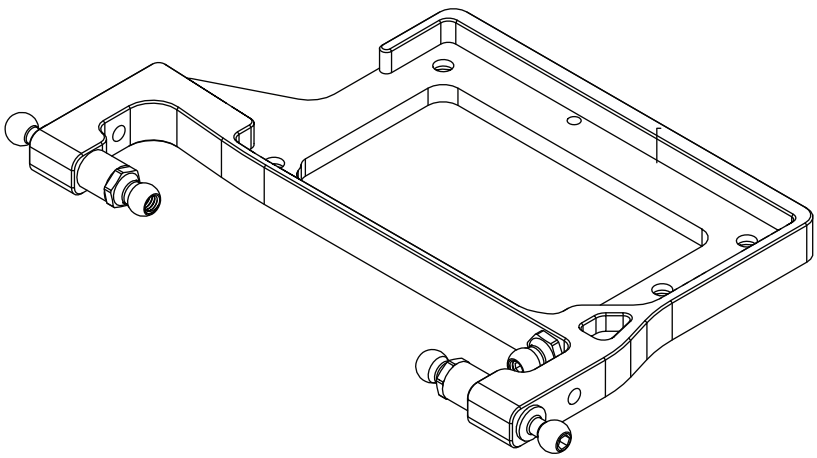
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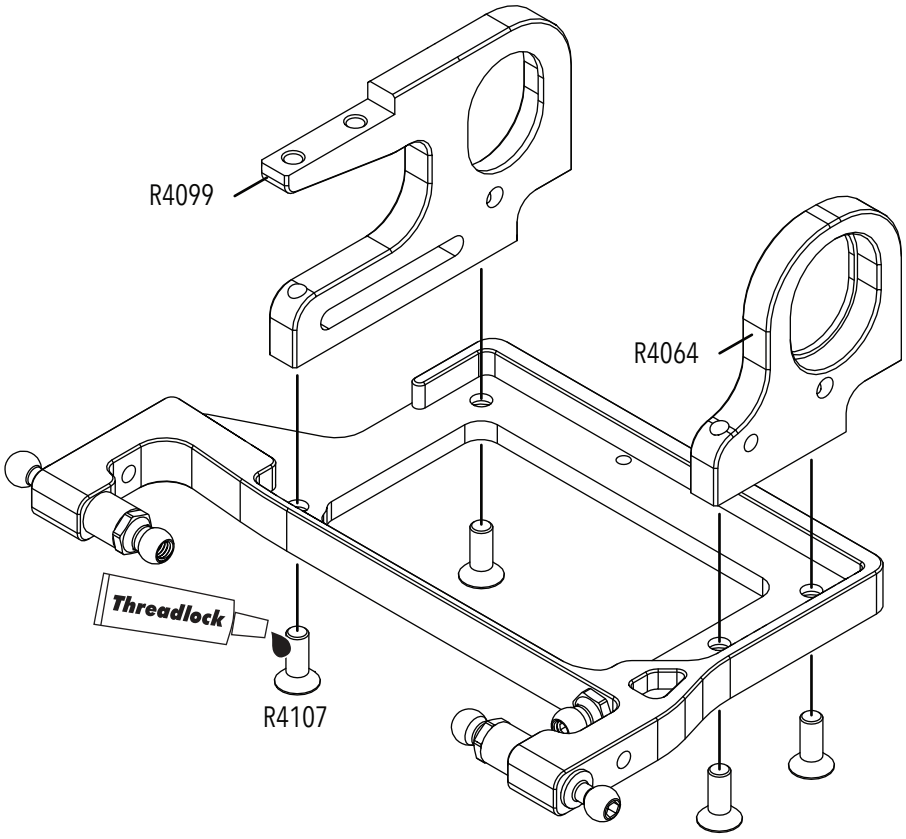




BAG 2



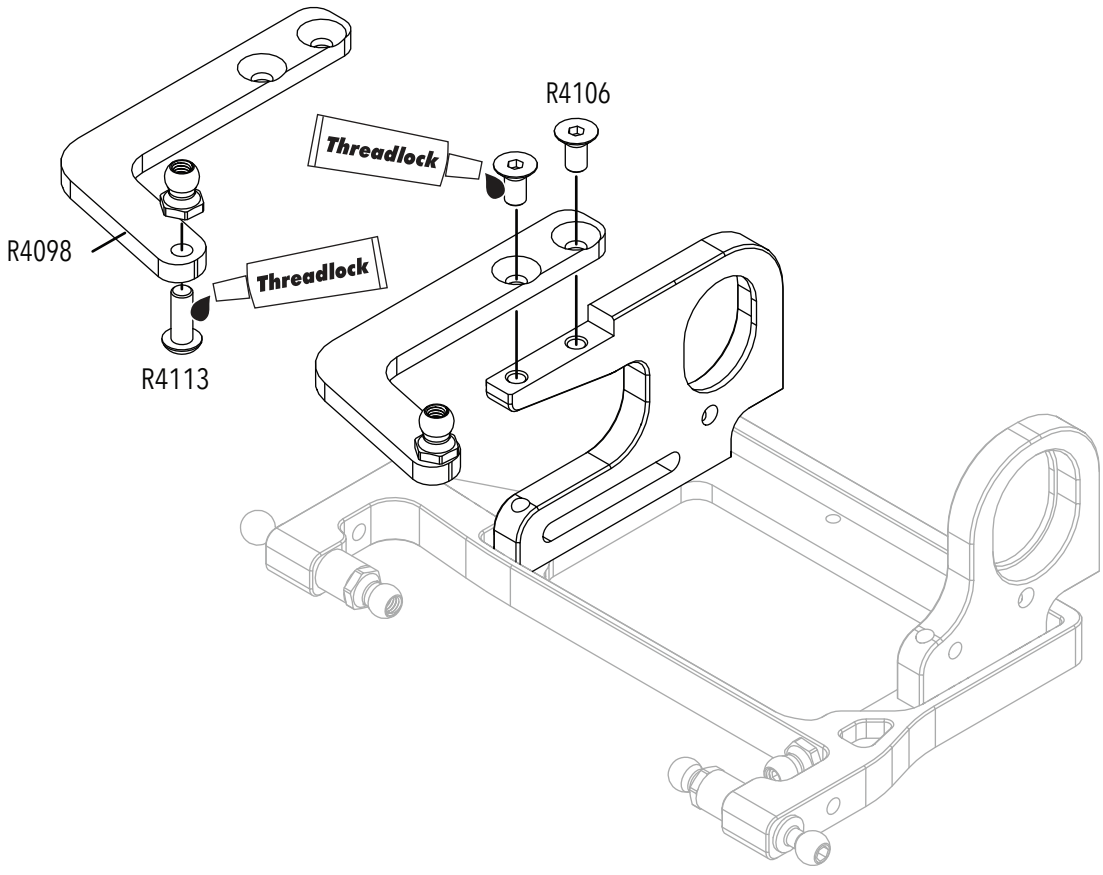
R4107
M3x8 CSK (x4)

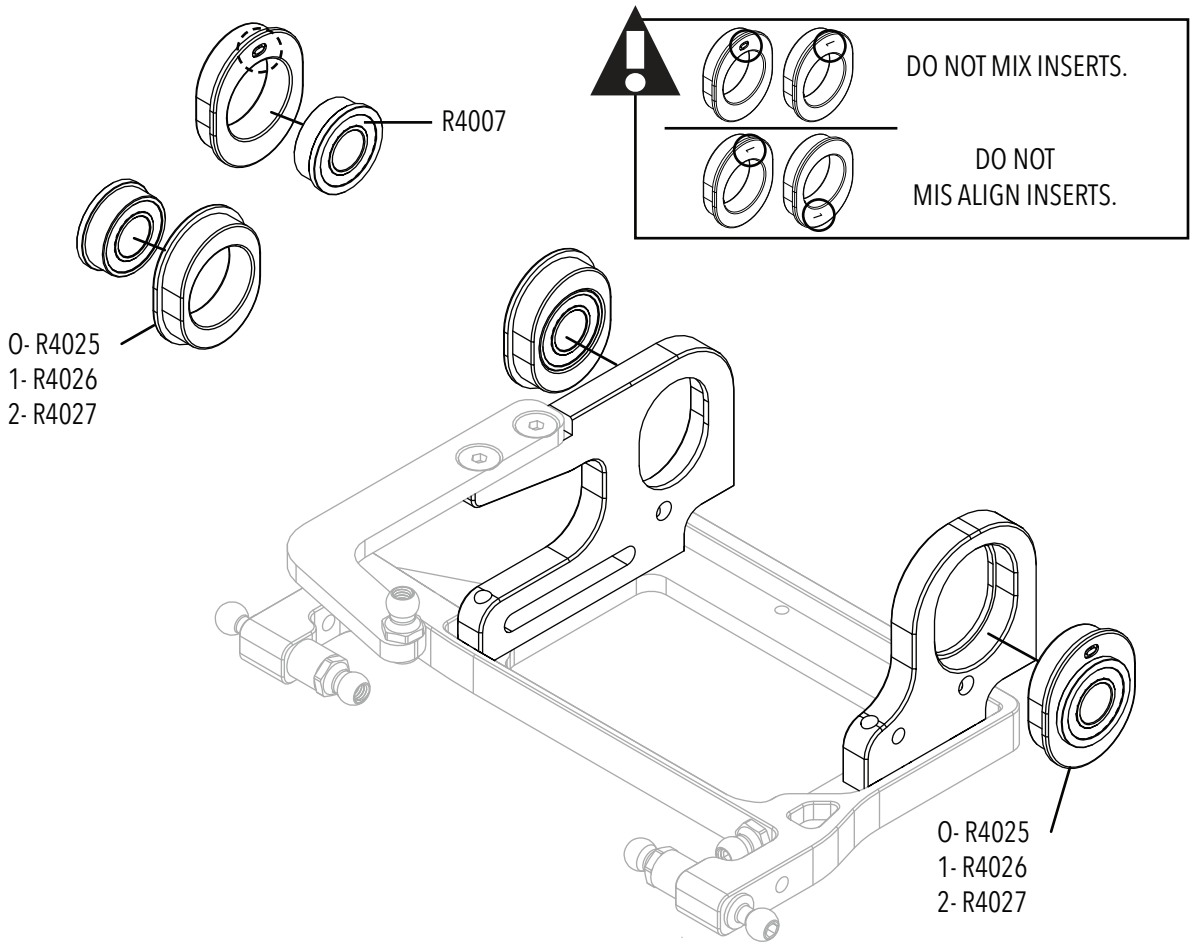


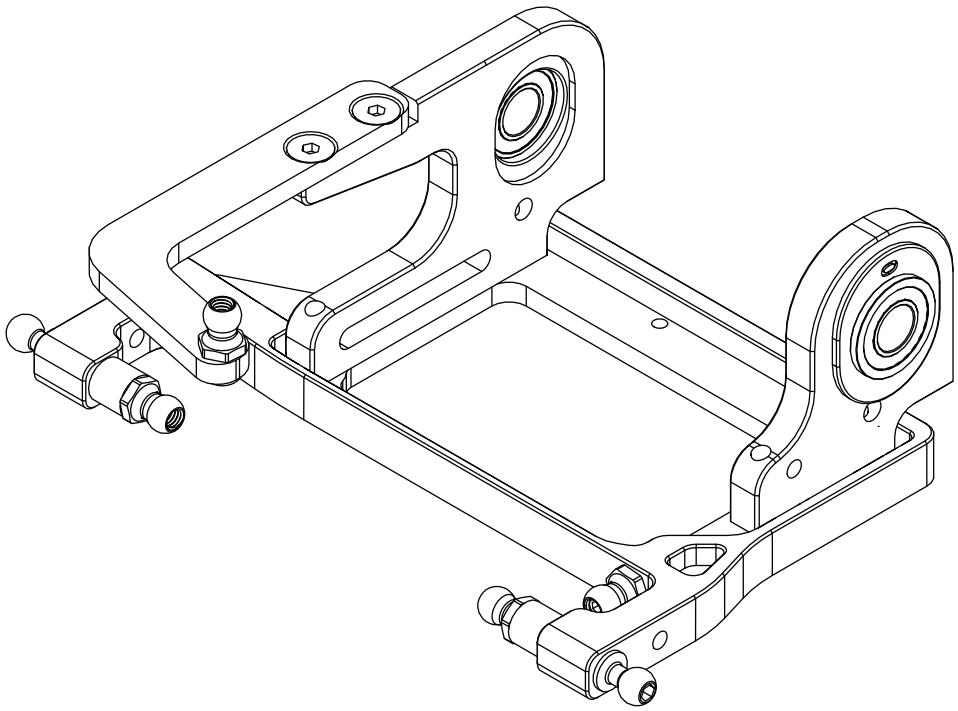
R4106
M3x6 CSK (x2)

R4061
(x1)

R4113
M3x8 BH (x1)




R4007
DO NOT MIX INSERTS.
DO NOT
MIS ALIGN INSERTS.
0- R4025
1- R4026
2- R4027
0- R4025
1- R4026
2- R4027

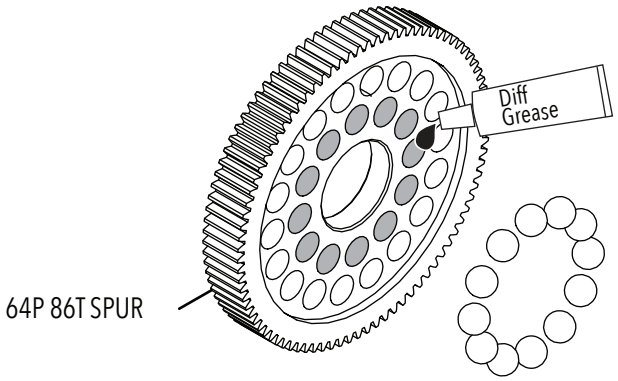


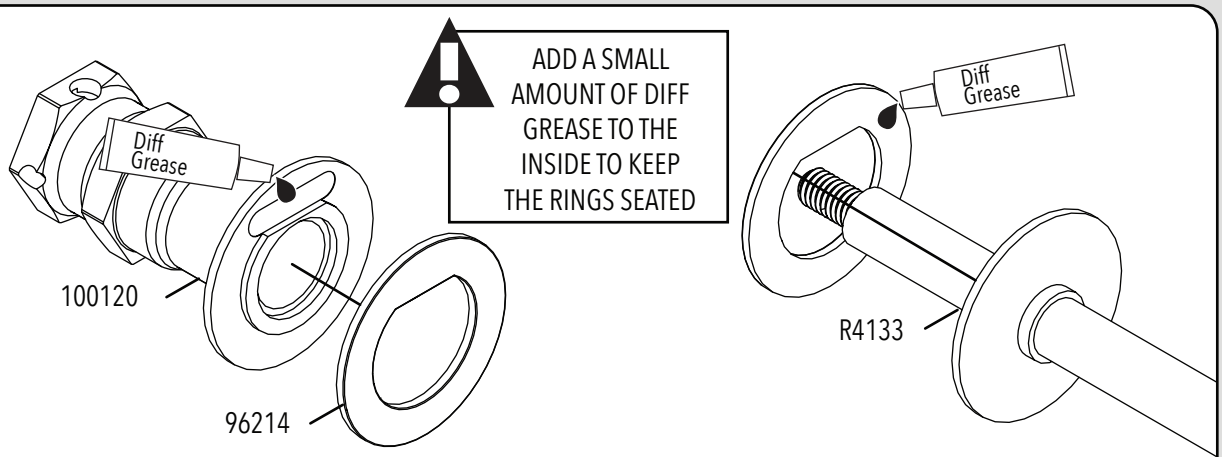
96109
1/8 DIFF BALL (x12)

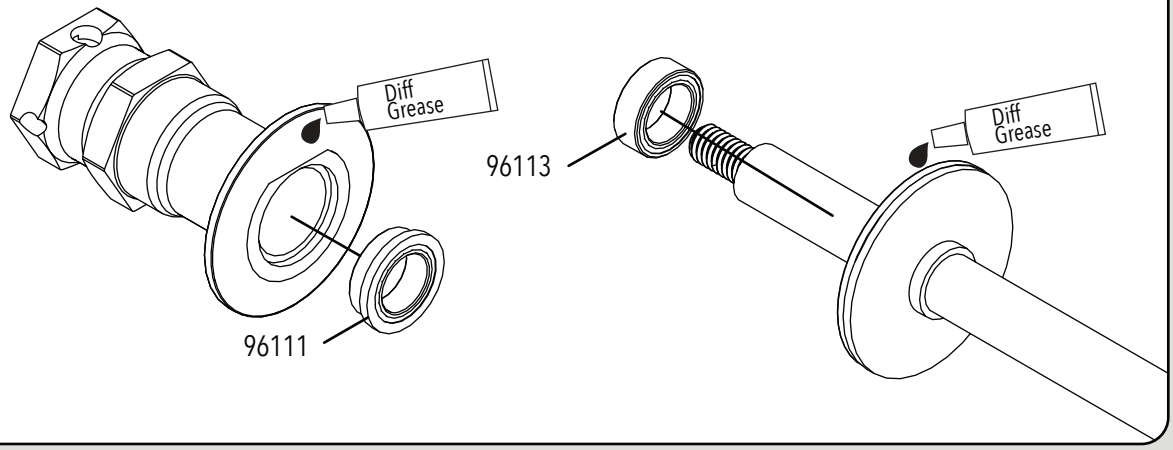
96113
1/4 BEARING

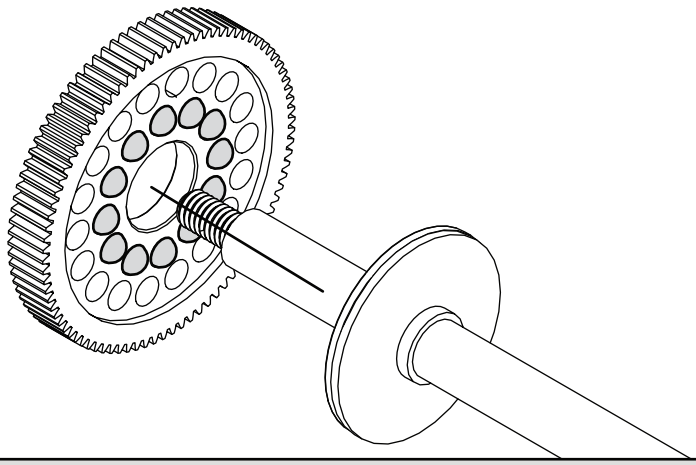
96111
1/4 FLANGED BEARING

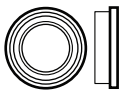
BAG 4



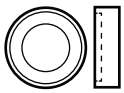




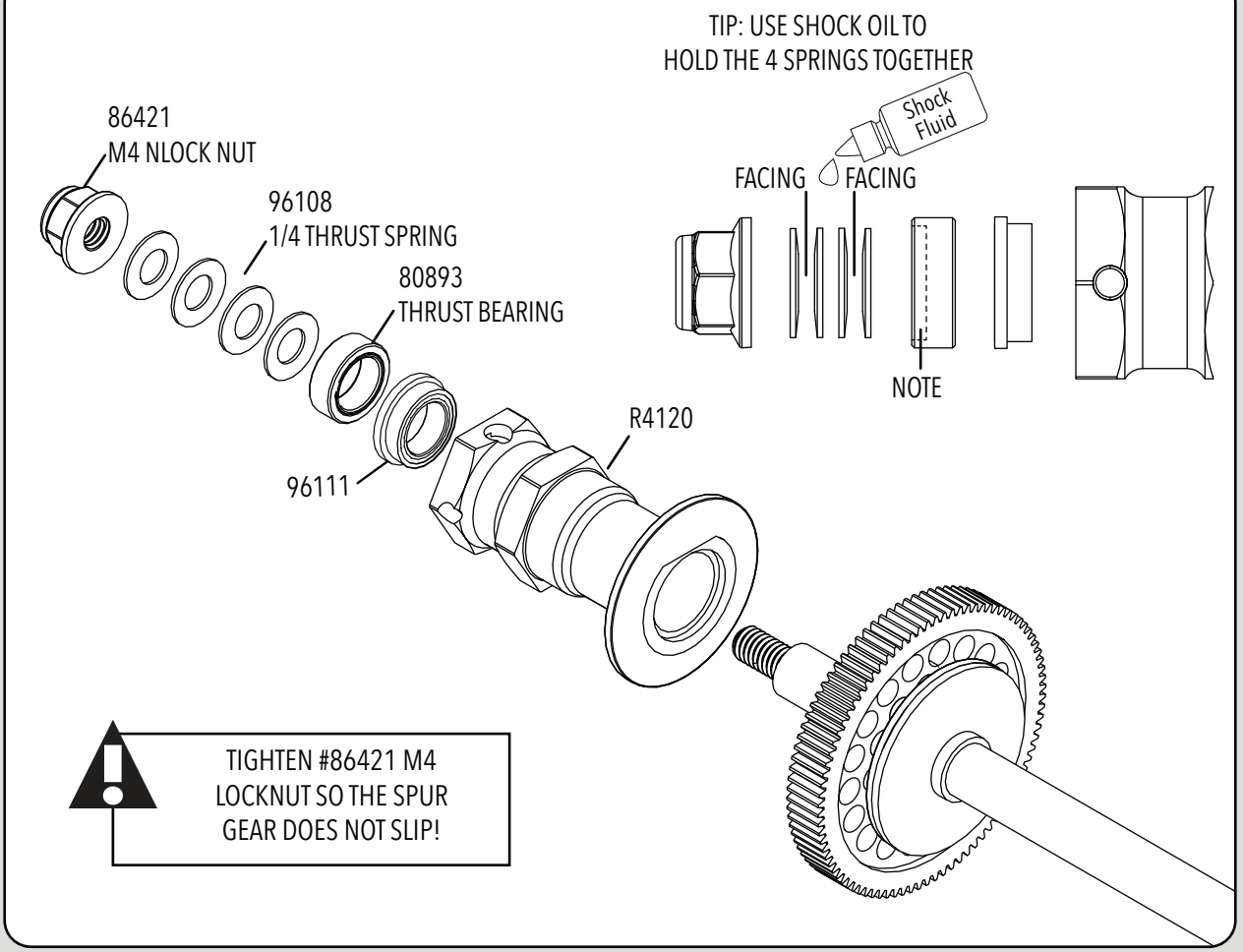




96111
1/4 FLANGED BEARING

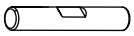


80893
THRUST BEARING

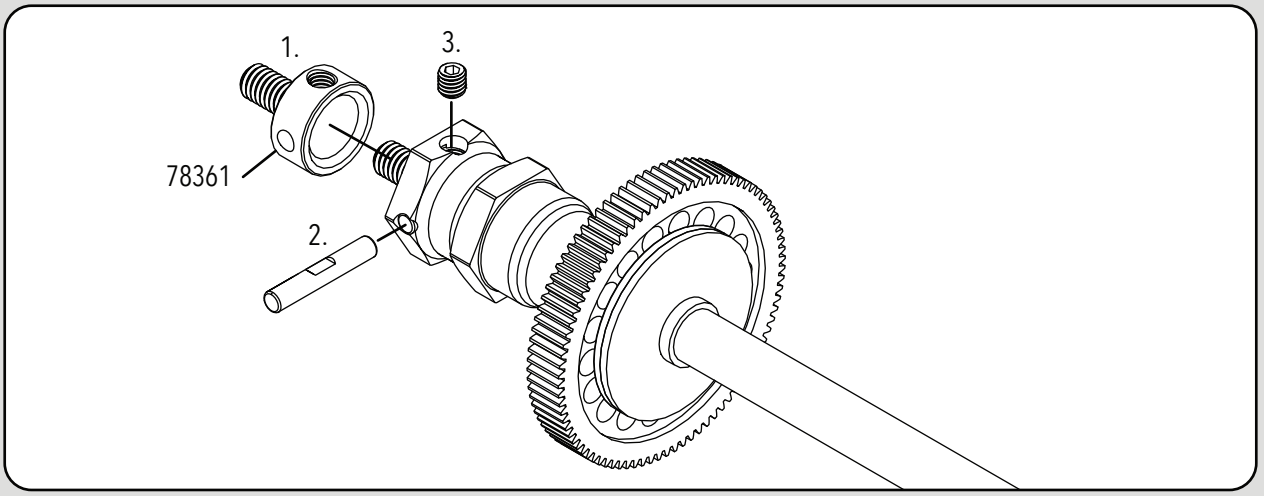




84370
M3x3 SET SCREW (x1)

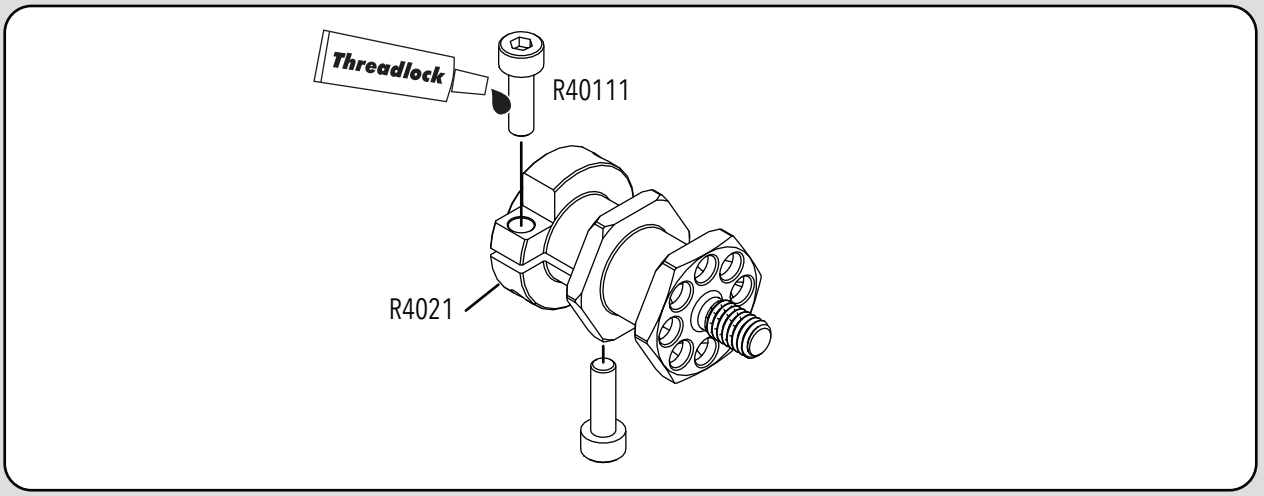


80530
CROSS PIN

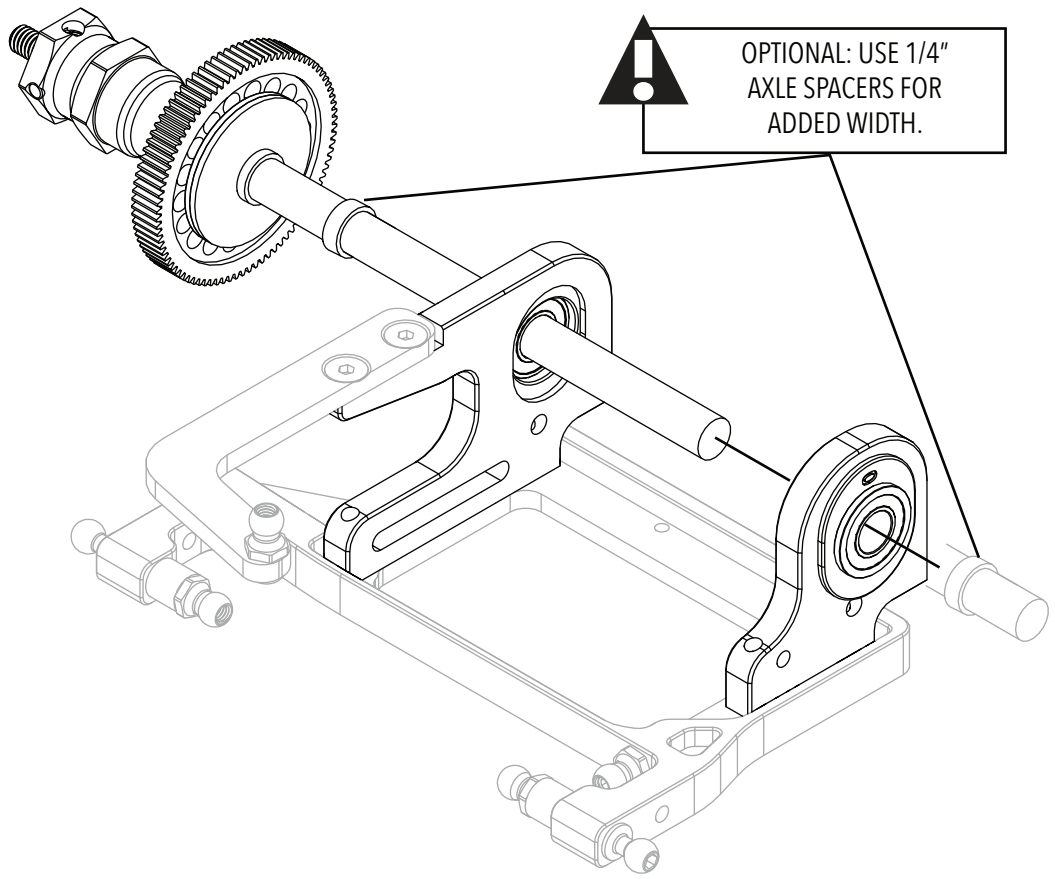


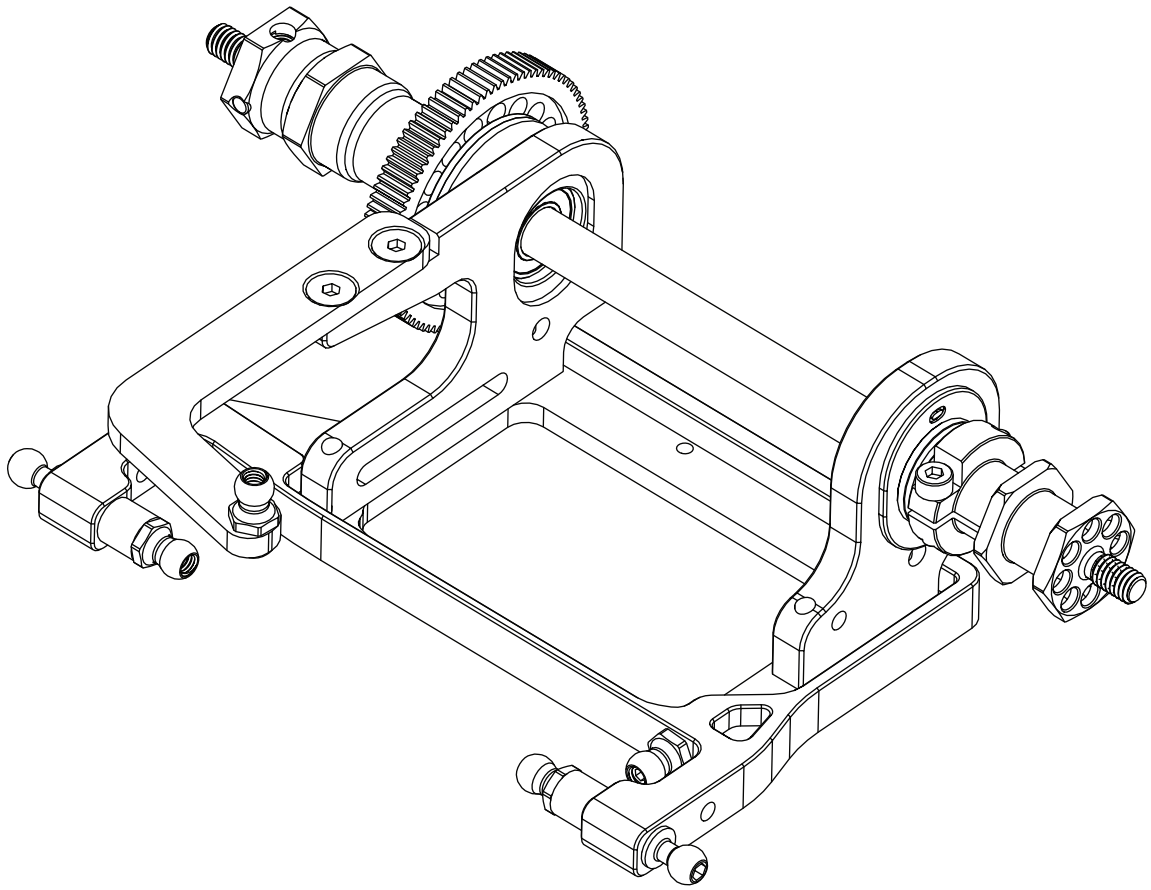


R40111
M2.5x8 SOCKET (x2)



R4122





R4061
(x1)

R4116
2.5mm SPACER (x1)

R4114
M3x10 BH (X1)

R4106
M3x6 CSK (x2)

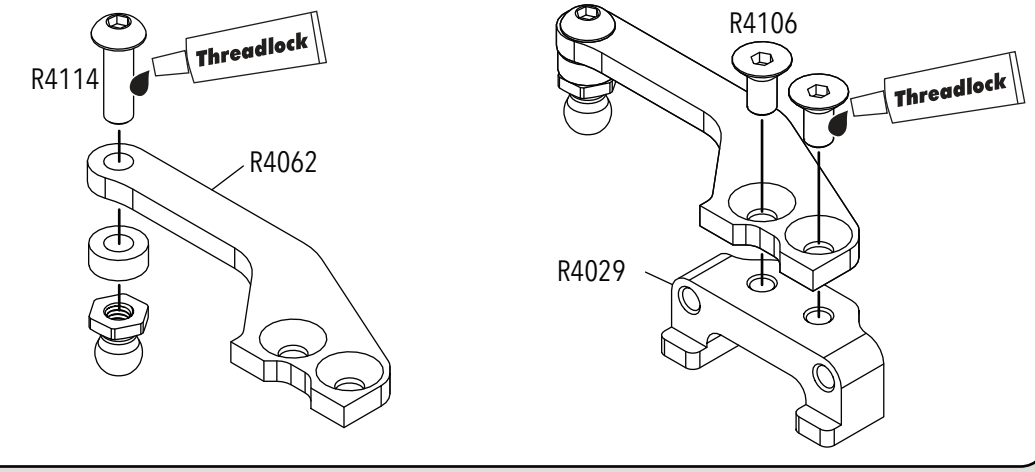
R4061
2X

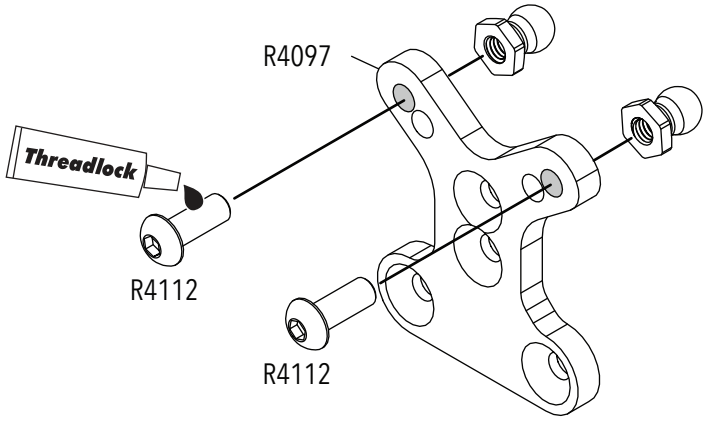
R4112
M3x6 BH (x2)

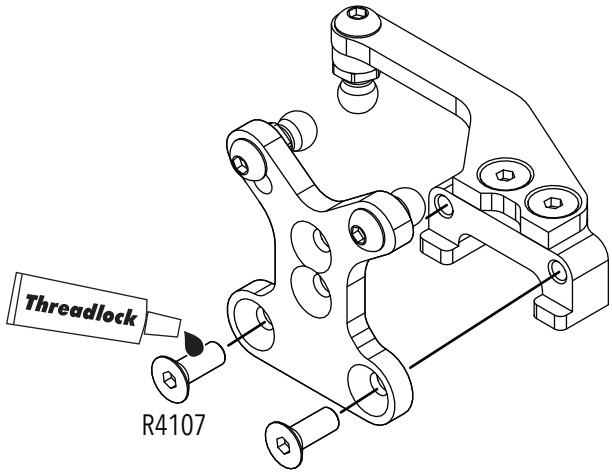
R4107
M3x8 CSK (x2)

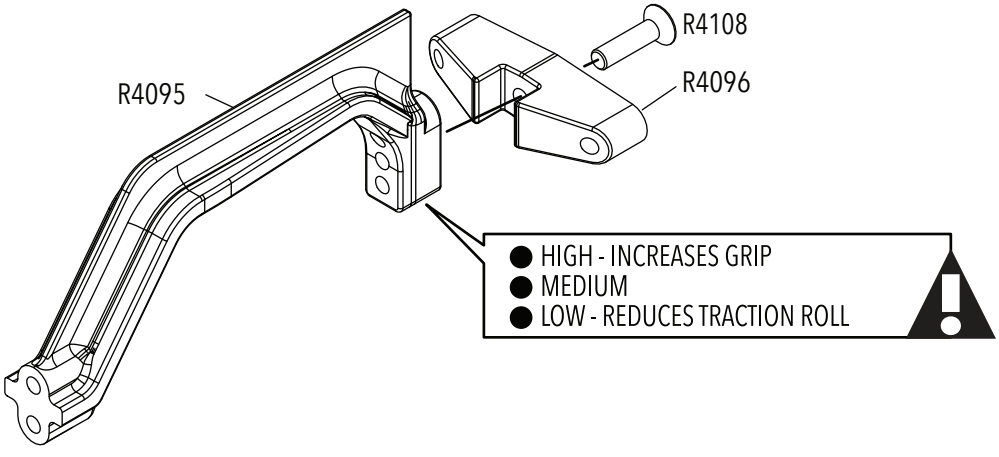
R4108
M3x10 CSK (x1)

BAG 5









EXOTEK



R4108
M3x10 CSK (x2)



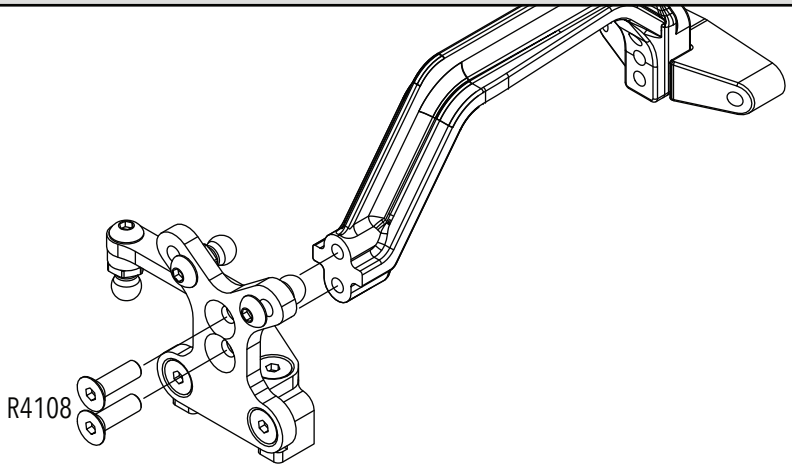
R4061
(x2)

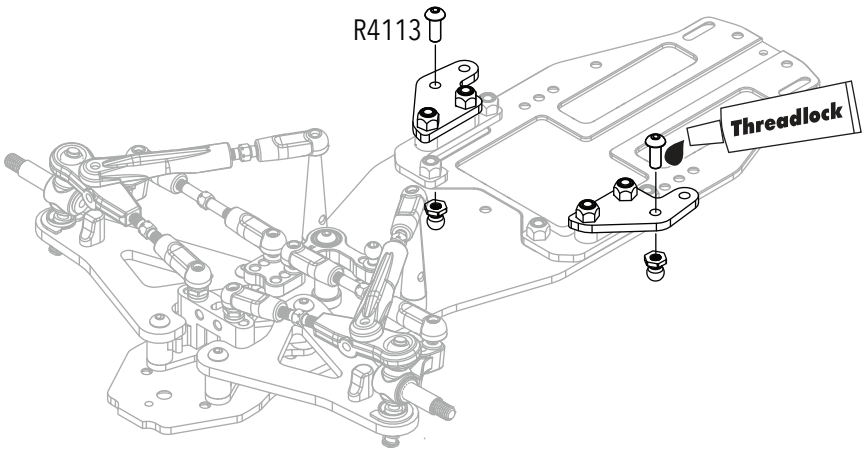


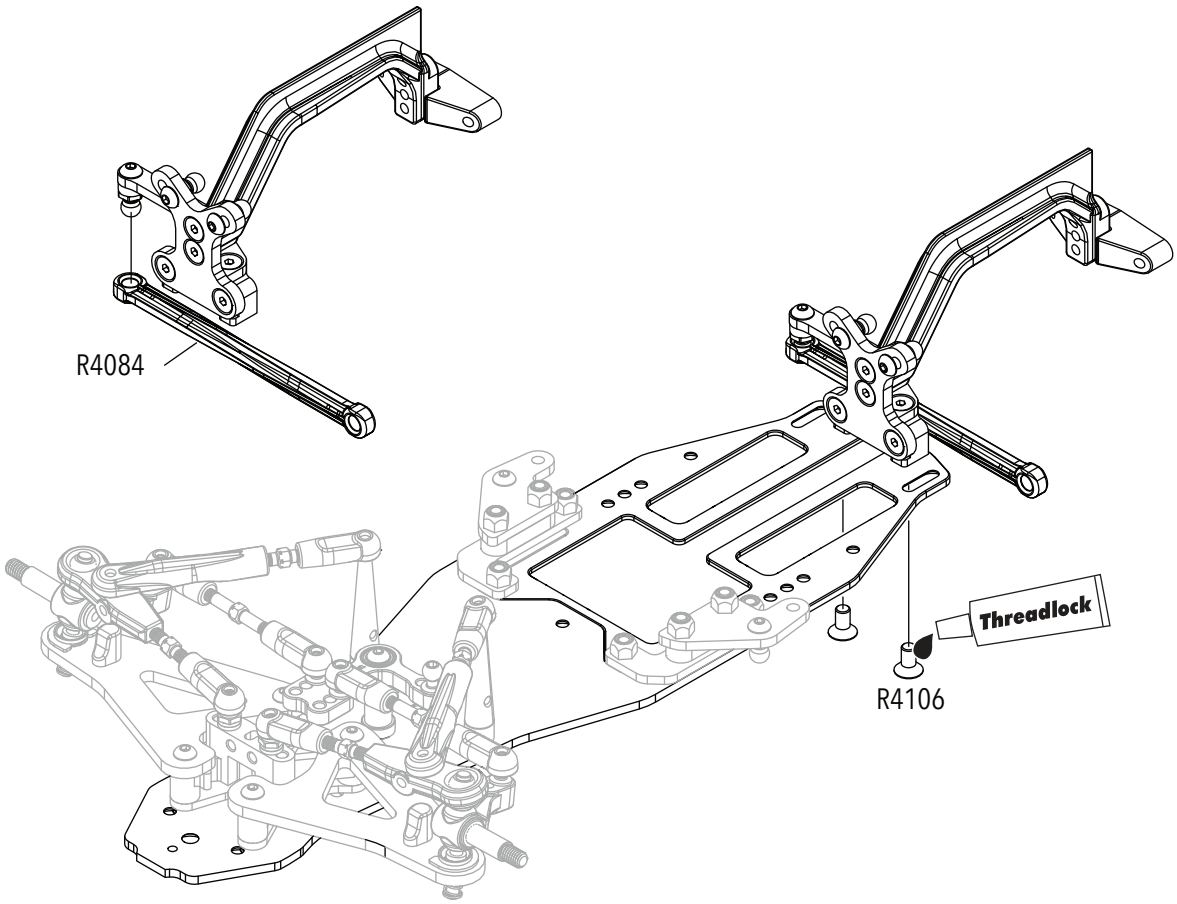
R4113
M3x8 BH (x2)



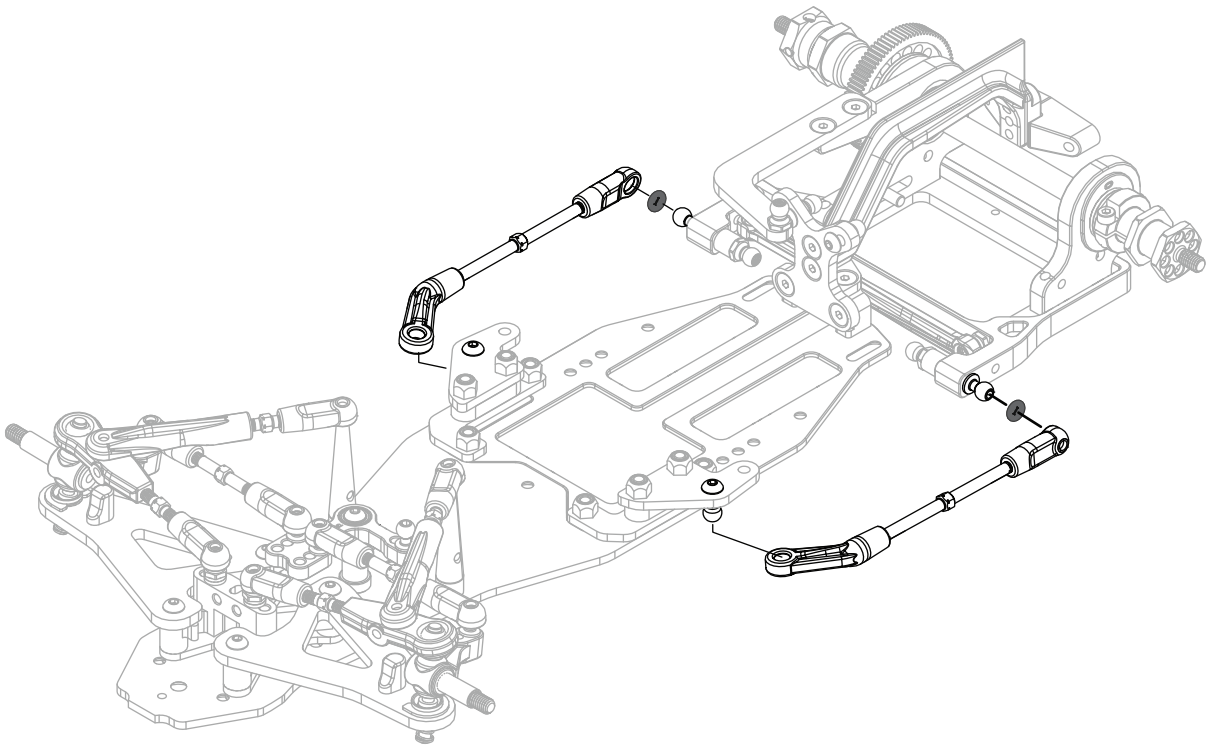
R4106
M3x6 CSK (x2)







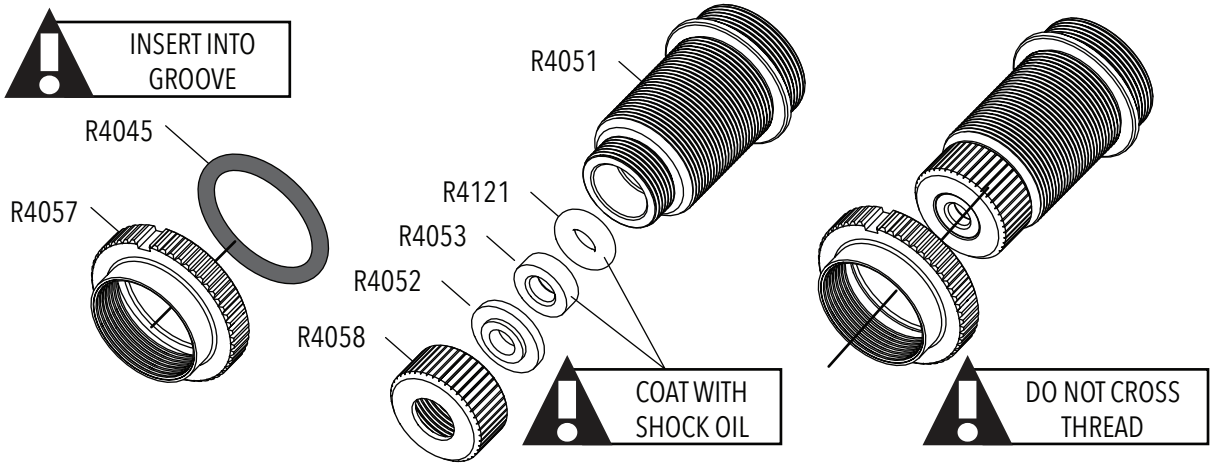
R4046
BLACK O-RING (x2)



SHOCK BAG

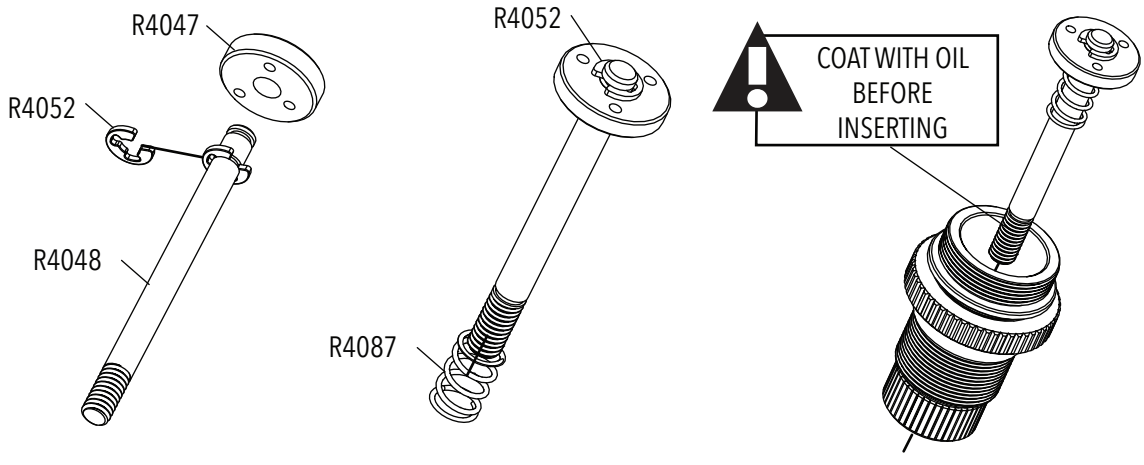
MAKE 1 LARGE SHOCK

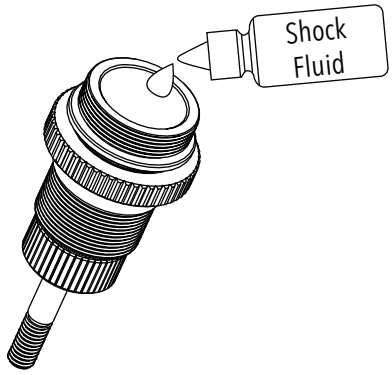
R4121
LARGE BOX O-RING
(x1)



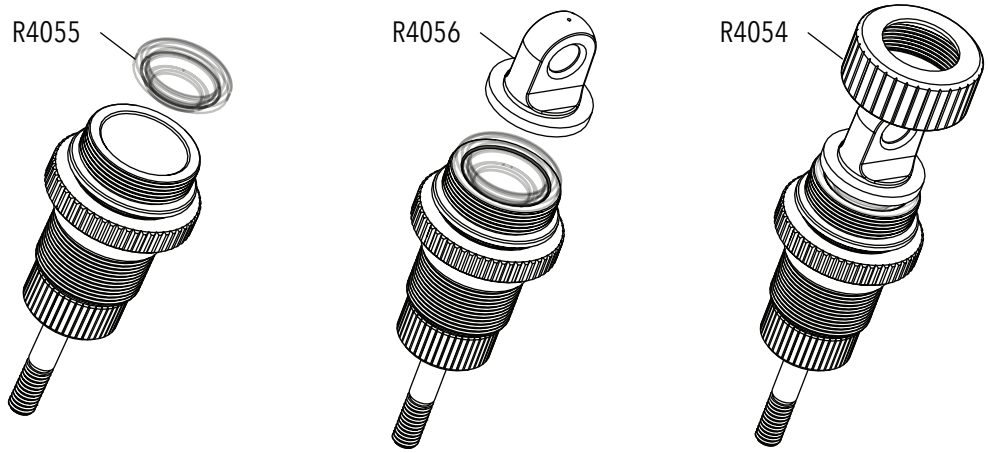
R4044
2X LARGE E-CLIP

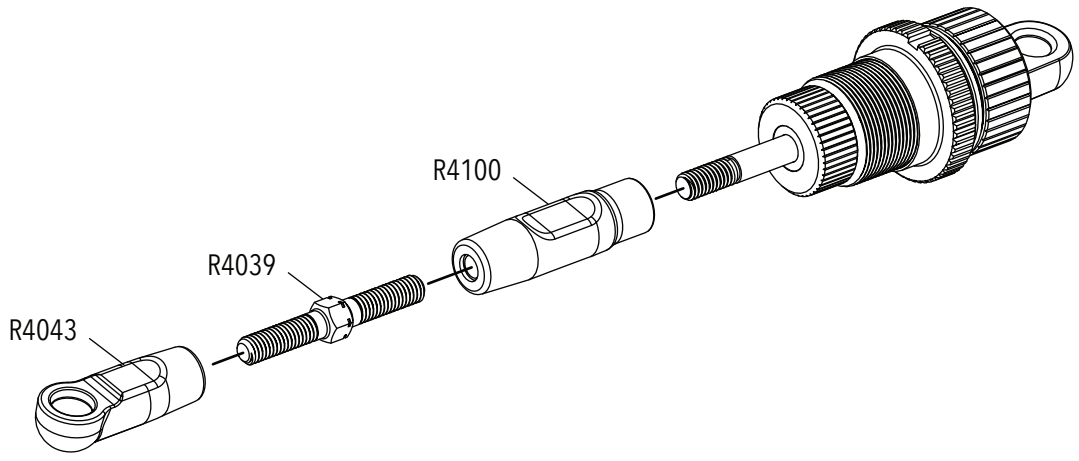
R4087

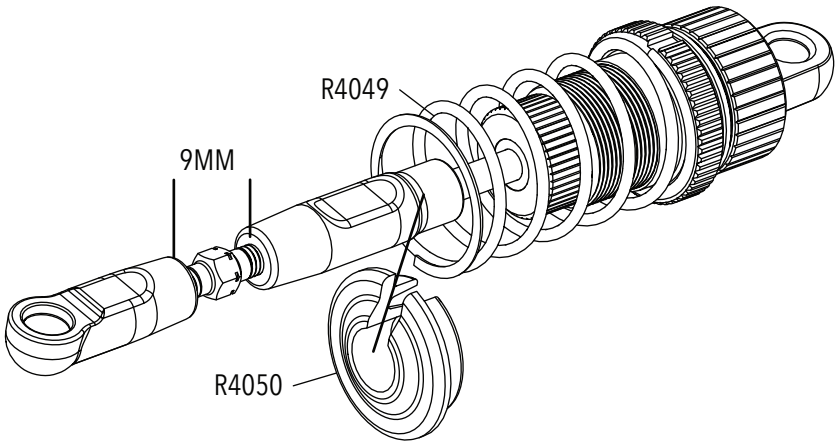


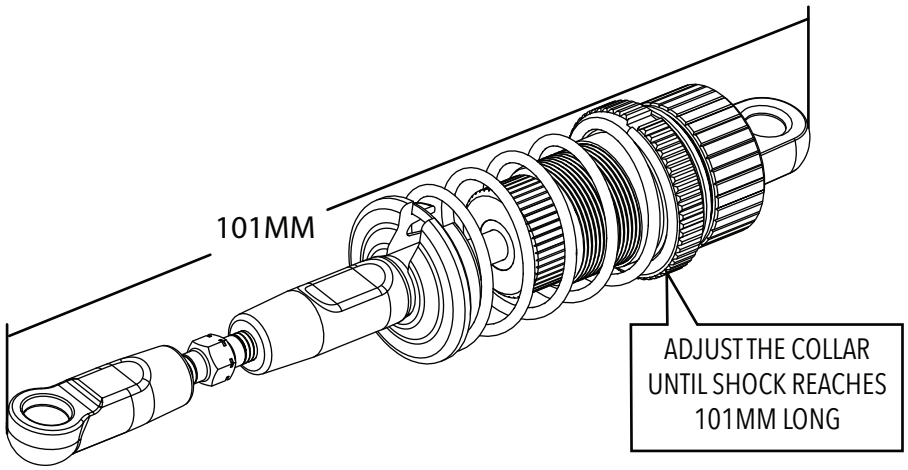


WITH THE SHAFT EXTENDED 25%, PLACE BLADDER ON THE TOP OF THE SHOCK BODY, DISPLACING THE EXTRA OIL. WHILE MAINTAINING PRESSURE ON THE BLADDER AGAINST THE SHOCK BODY, CAREFULLY LIFT ONE SIDE OF THE BLADDER TO ALLOW ANY EXTRA OIL TO ESCAPE. PLACE STOCK CAP ON TOP OF BLADDER AND SECURE IT BY THREADING THE ALUMINUM CAP RETAINER ONTO THE SHOCK BODY.



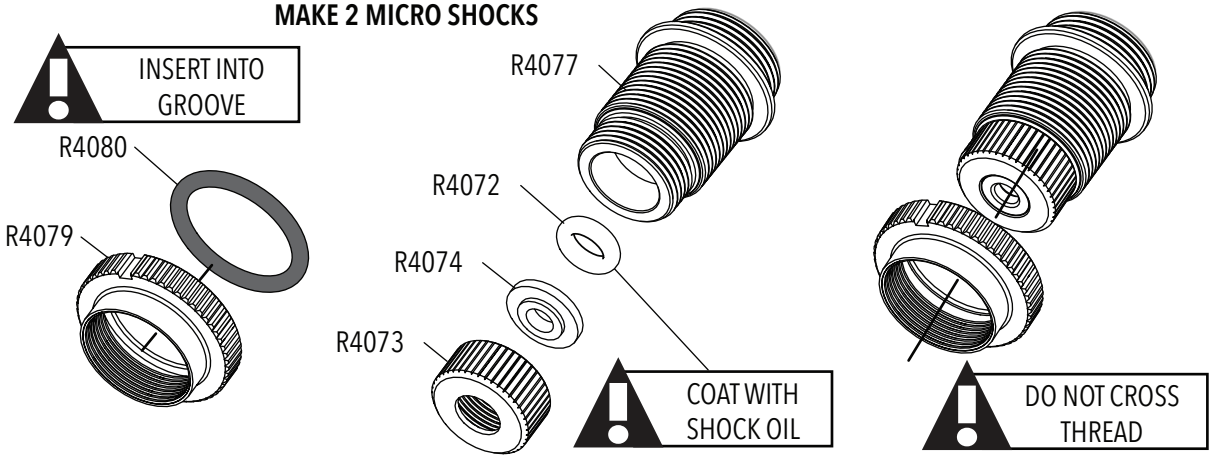




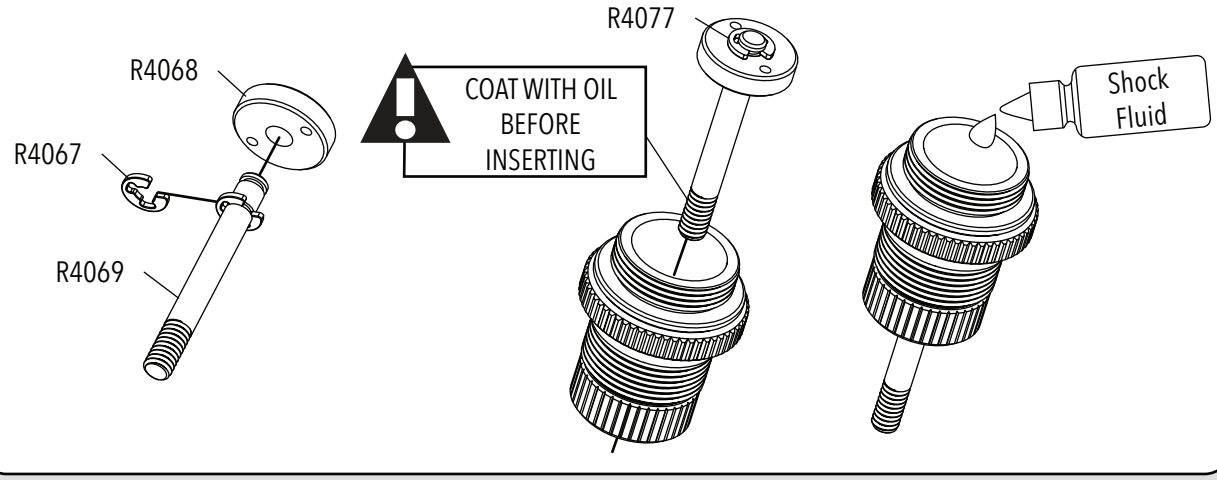


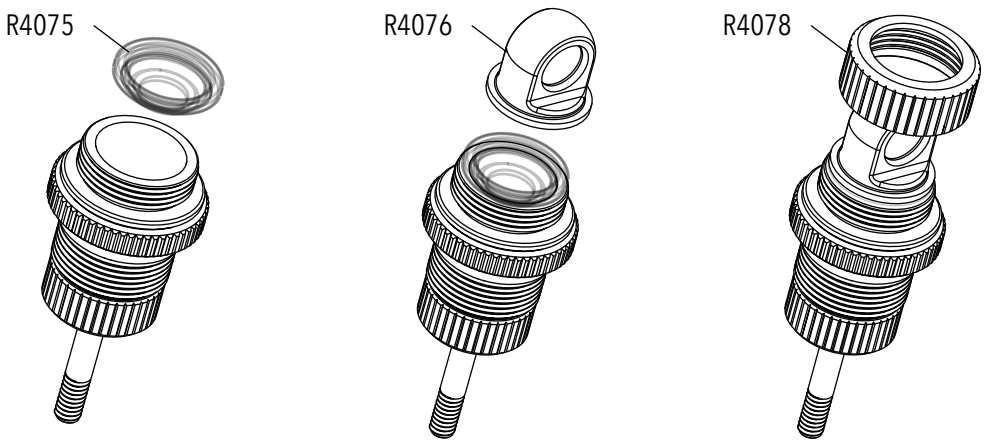
R4072
CLEAR SMALL O-RING
(X2)

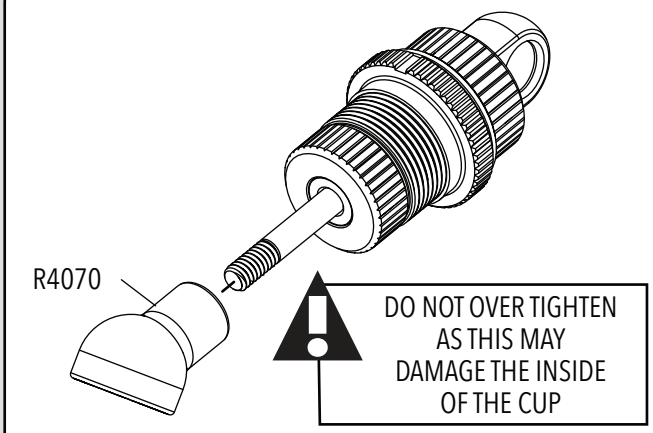
MAKE 2 MICRO SHOCKS

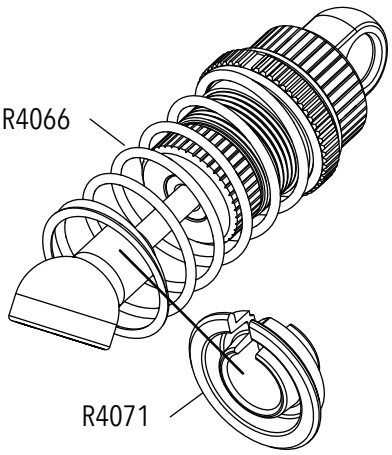


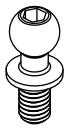
R4067
4x SMALL E-CLIP









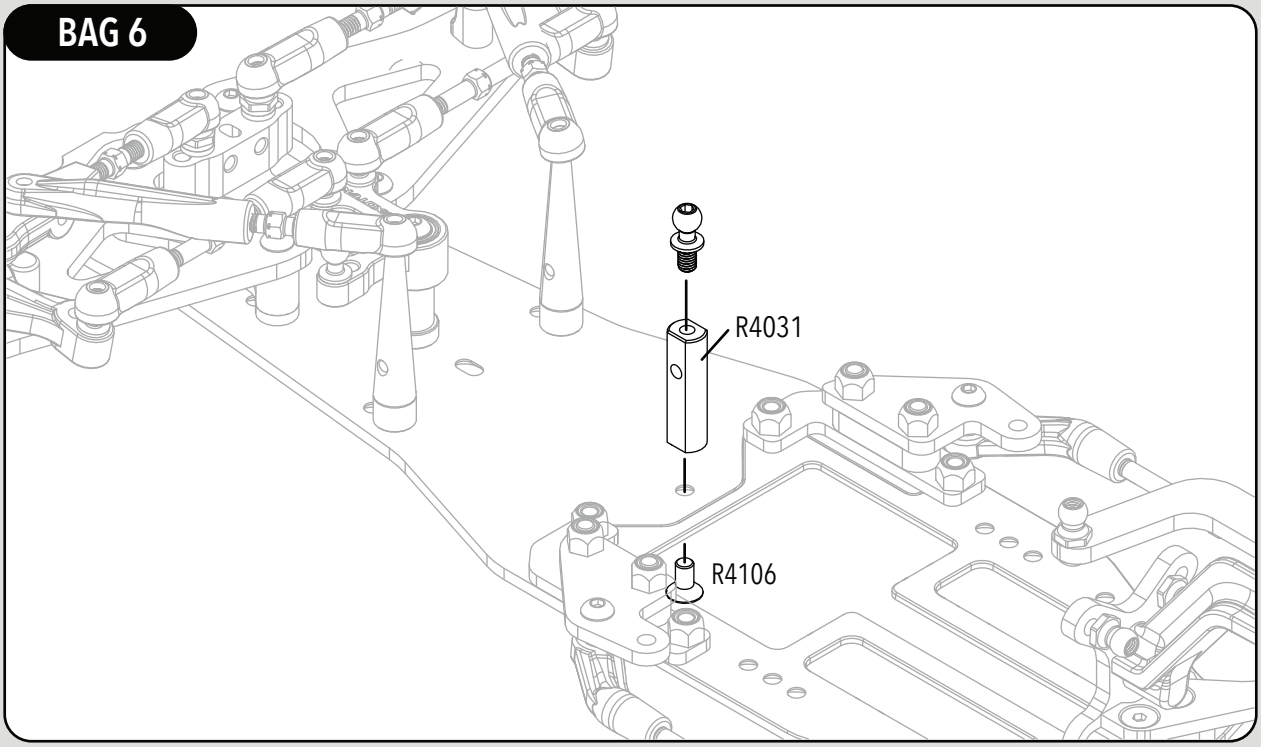


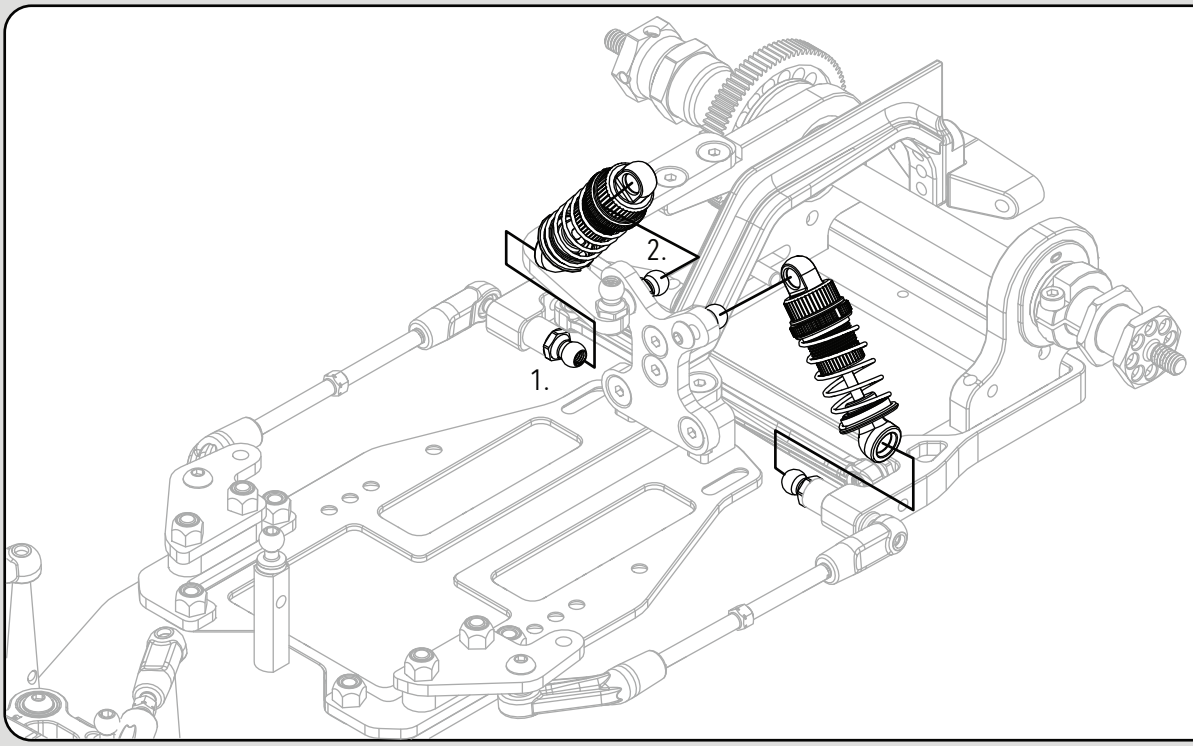
R4037
(X1)

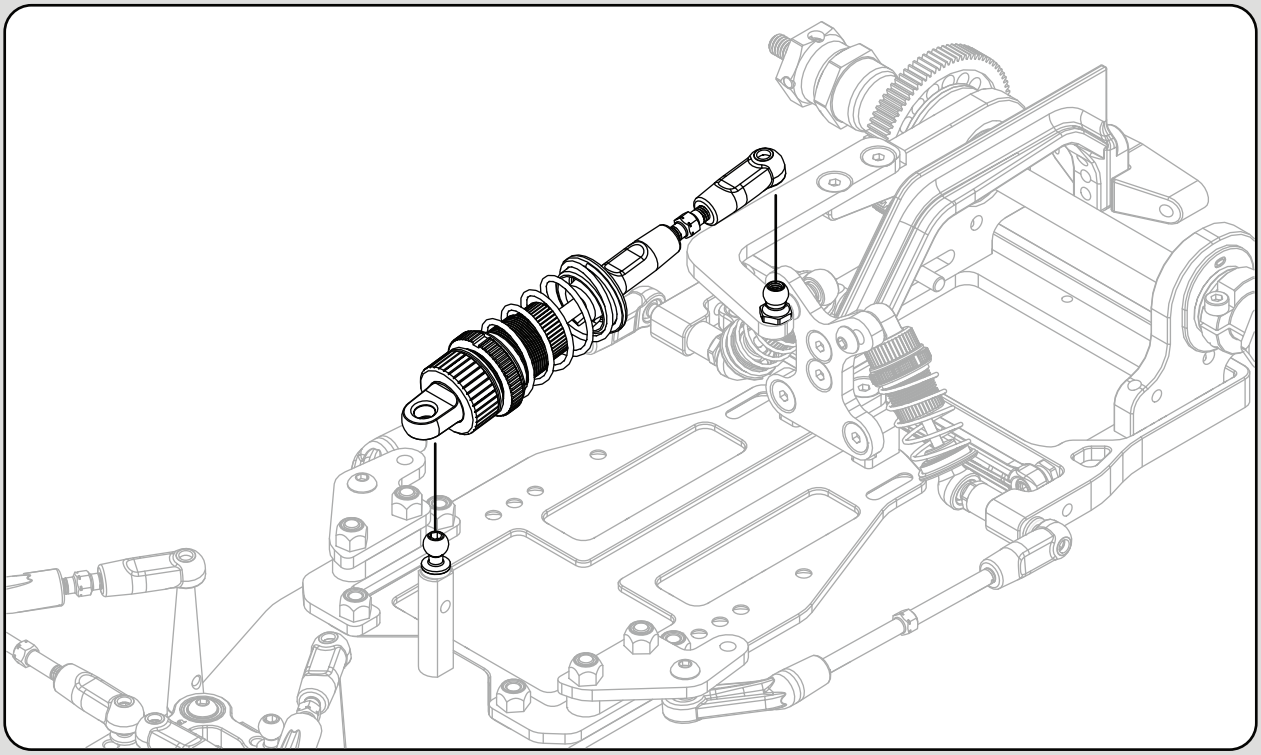


R4106
M3x6 CSK (x1)

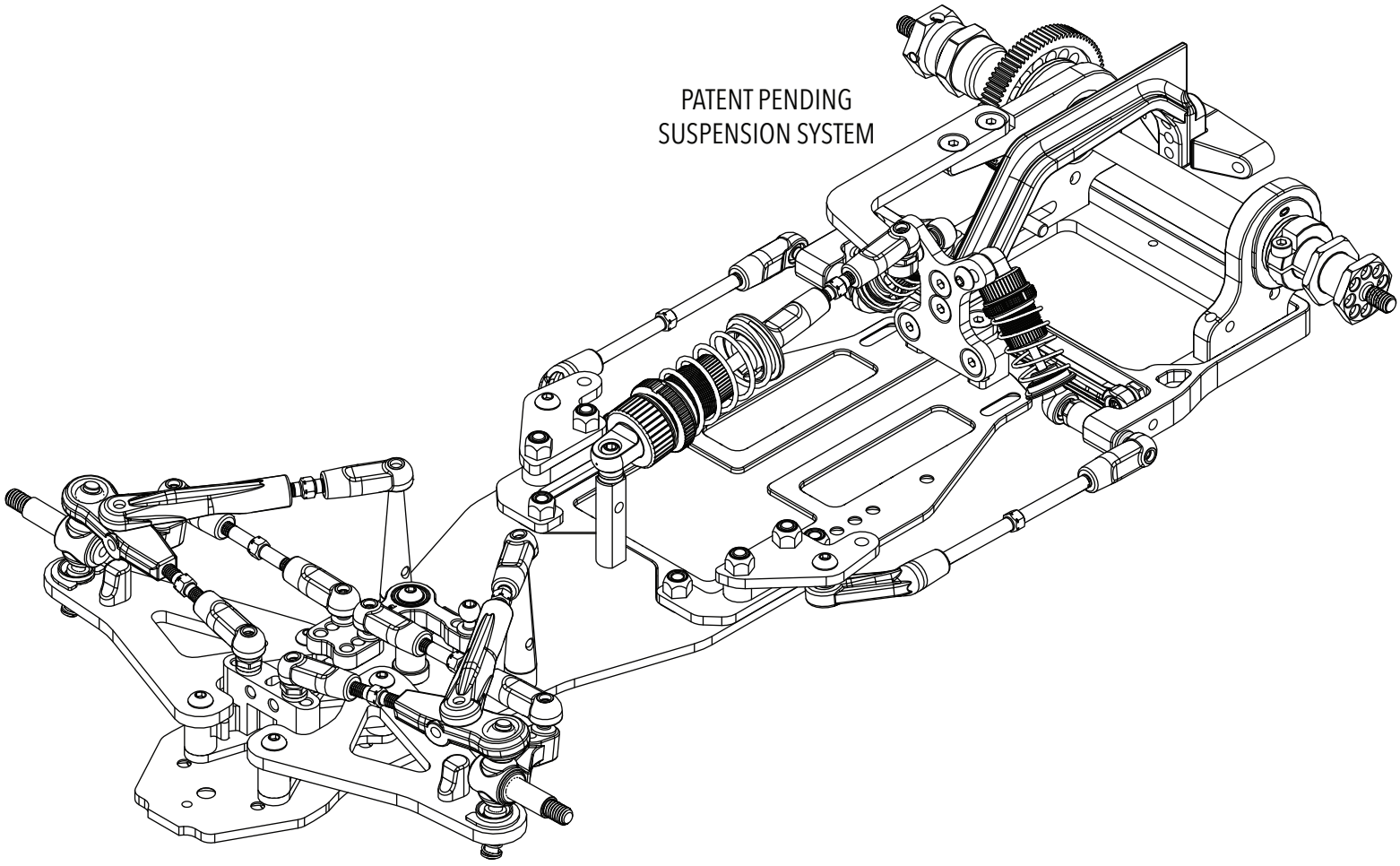
BAG 6







PATENT PENDING
SUSPENSION SYSTEM

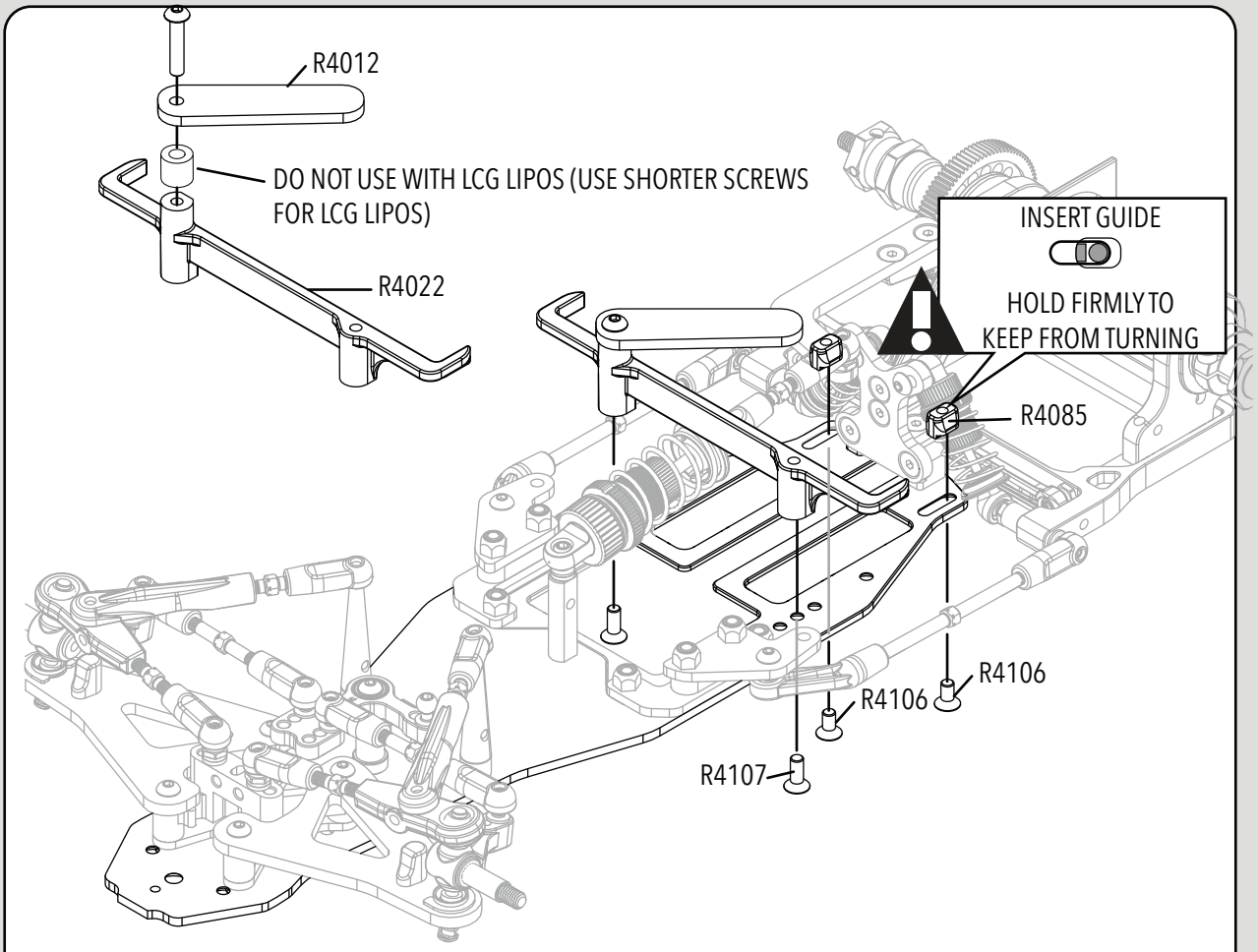


R4126
M3x 14 BH (x1)

R4028
(x1) BLUE SPACER

R4106
M3x6 CSK (x2)

R4107
M3x8 CSK (x2)

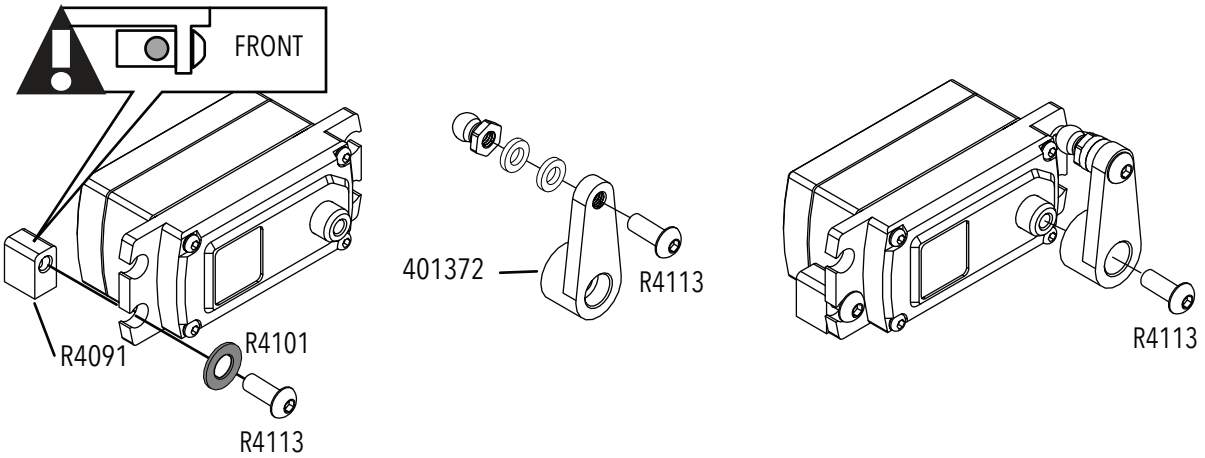


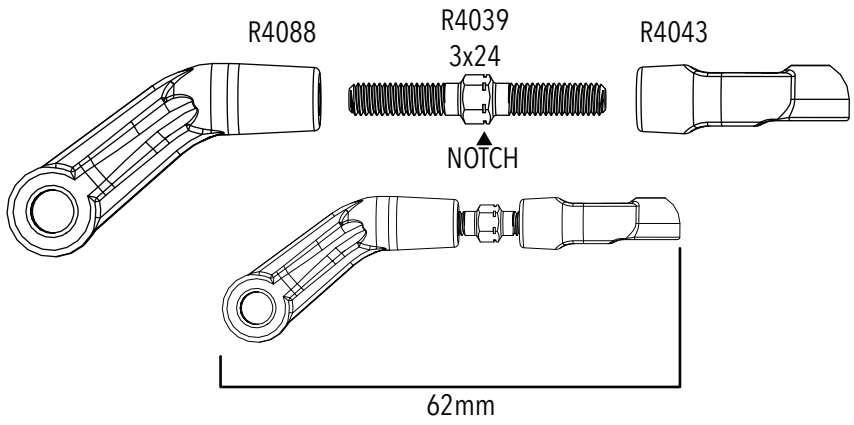
R4061
(x1)

R4014
1mm BLUE SPACER (x2)

R4113
M3x8 BH (x3)

R4101
.5 STEEL WASHER







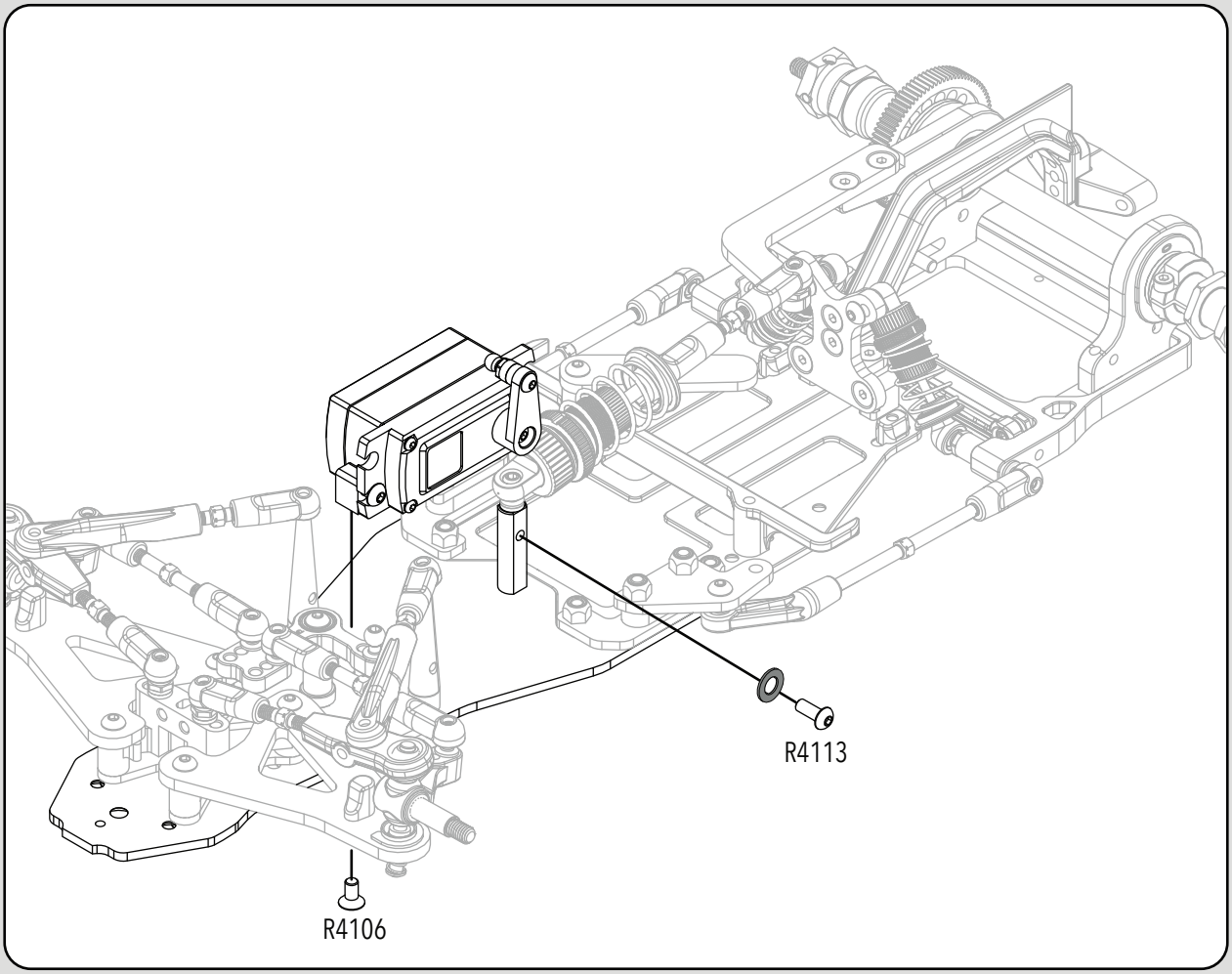
R4113
M3x8 BH (x1)

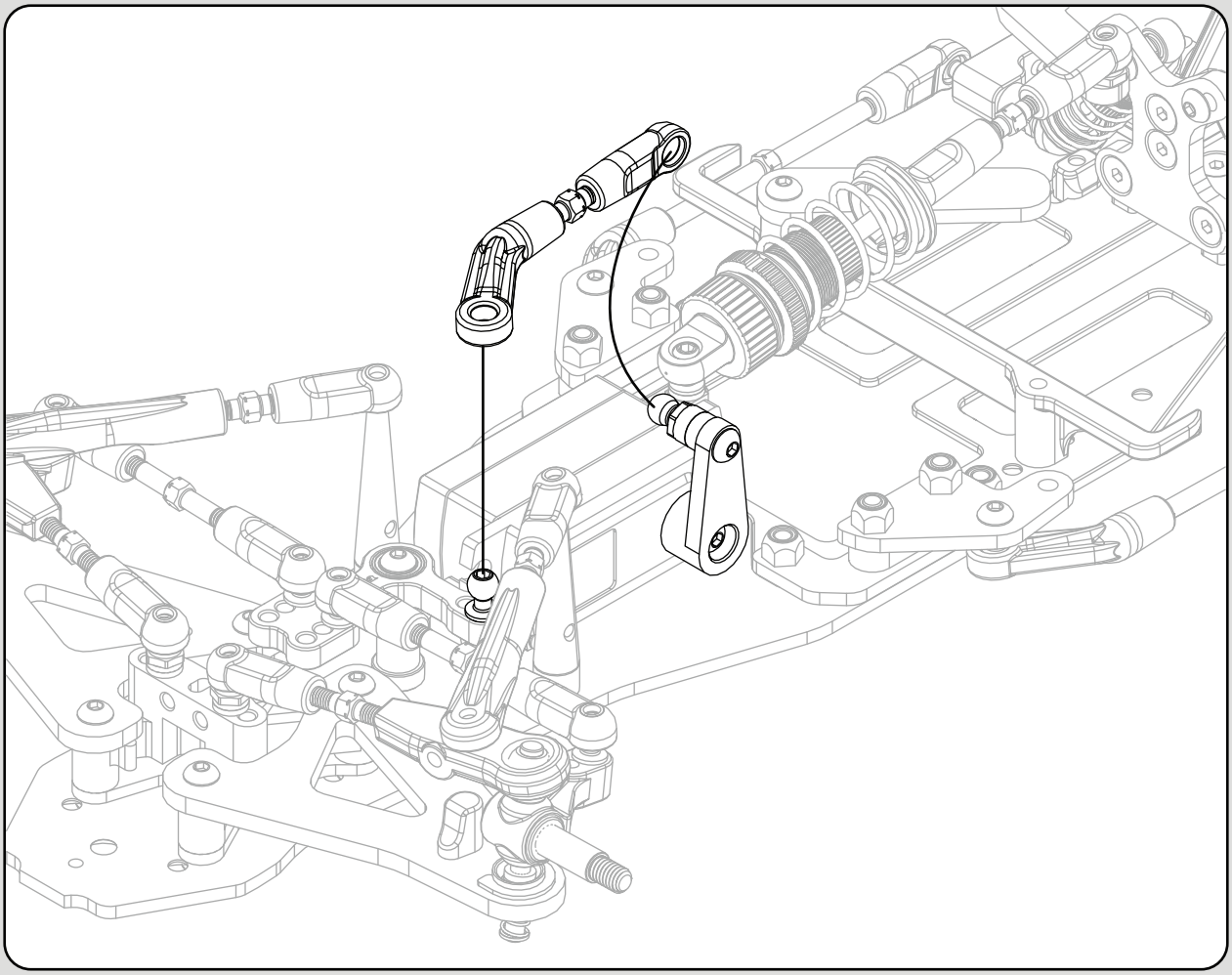


R4106
M3x6 CSK (x1)



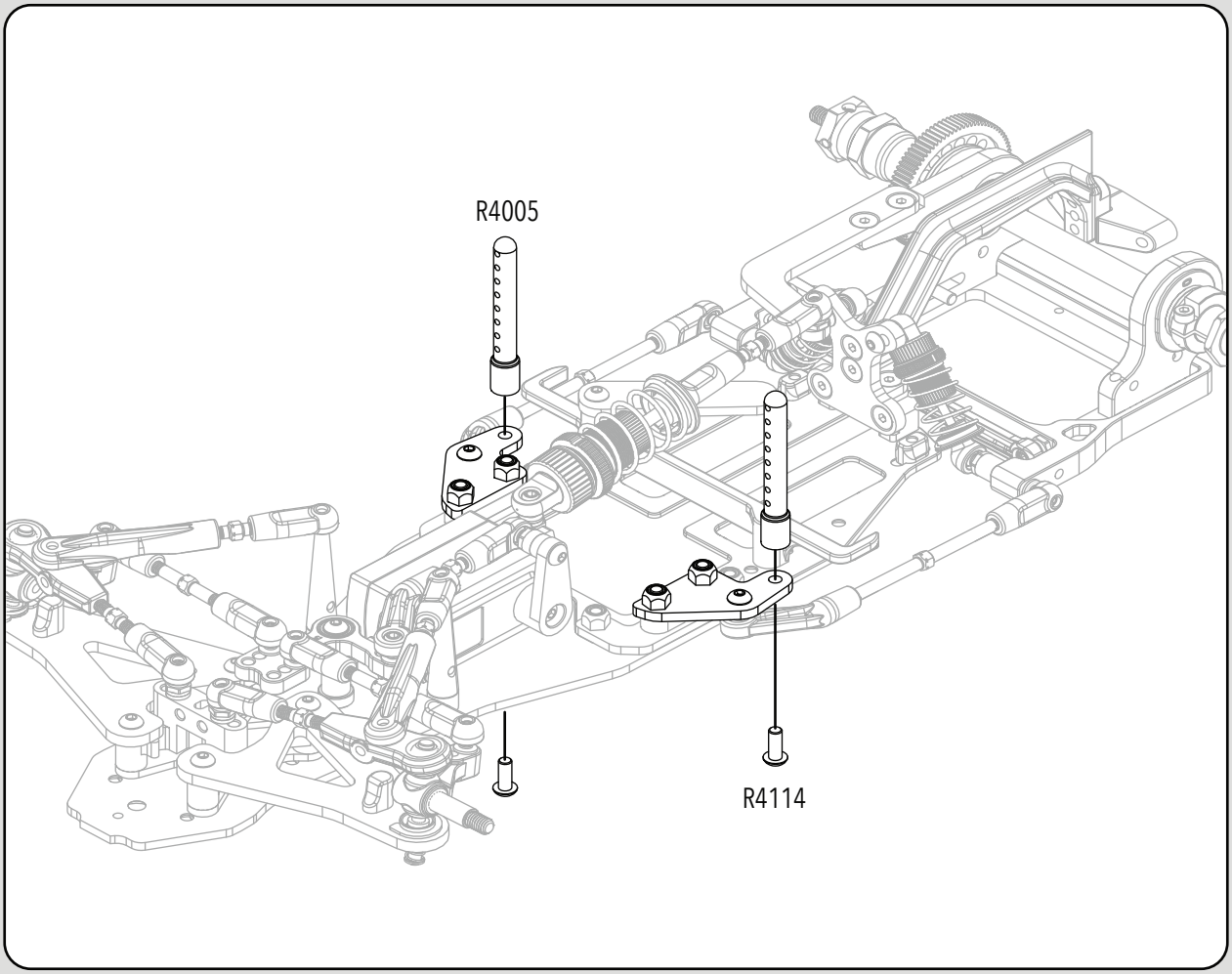
R4101
.5 STEEL WASHER

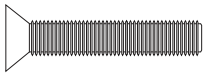






R4114
M3x 10 (x2)

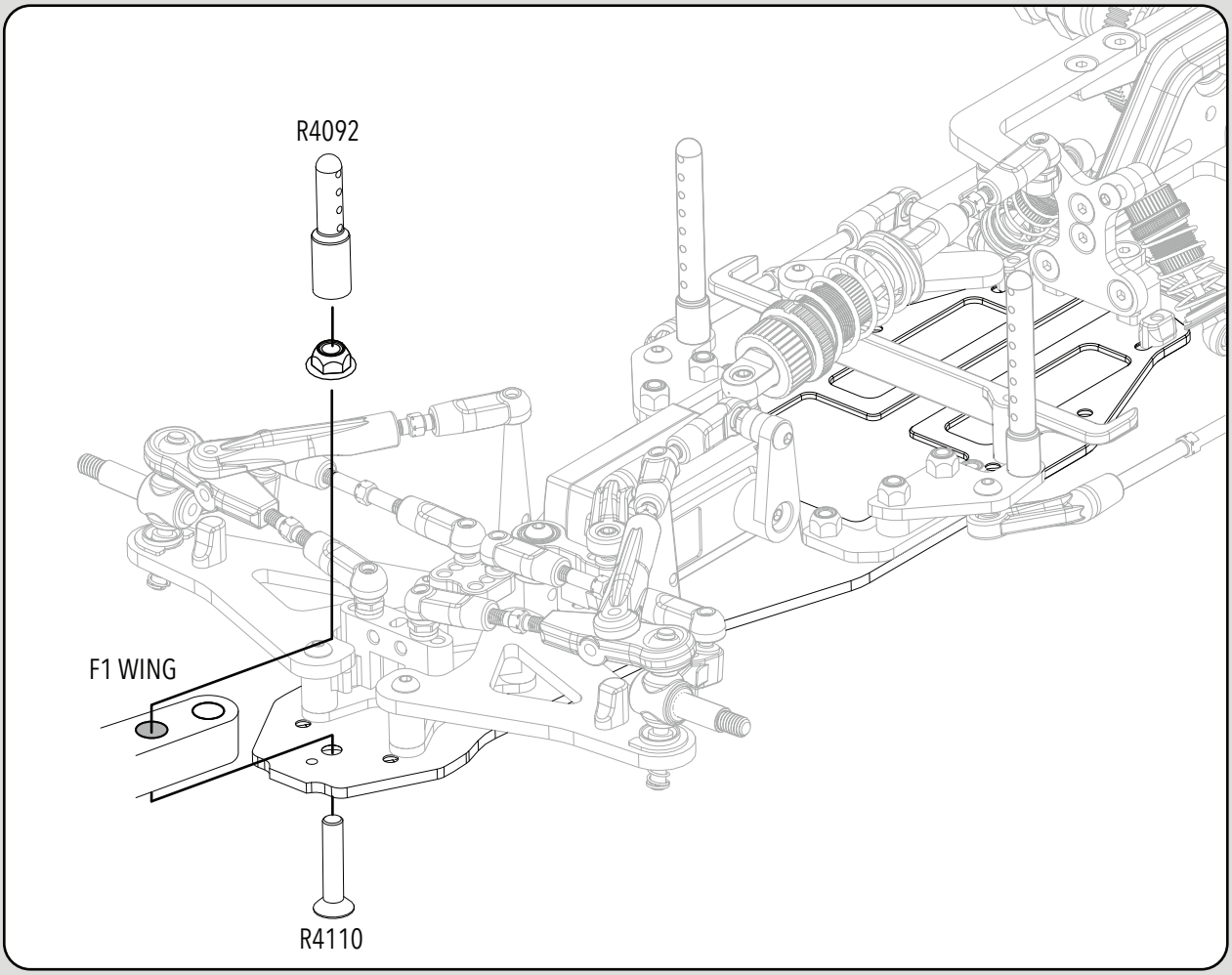




R4110
M4x26mm CSK (x1)



86421
M4 Locknut (x1)





R4113
M3x8 BH (x2)



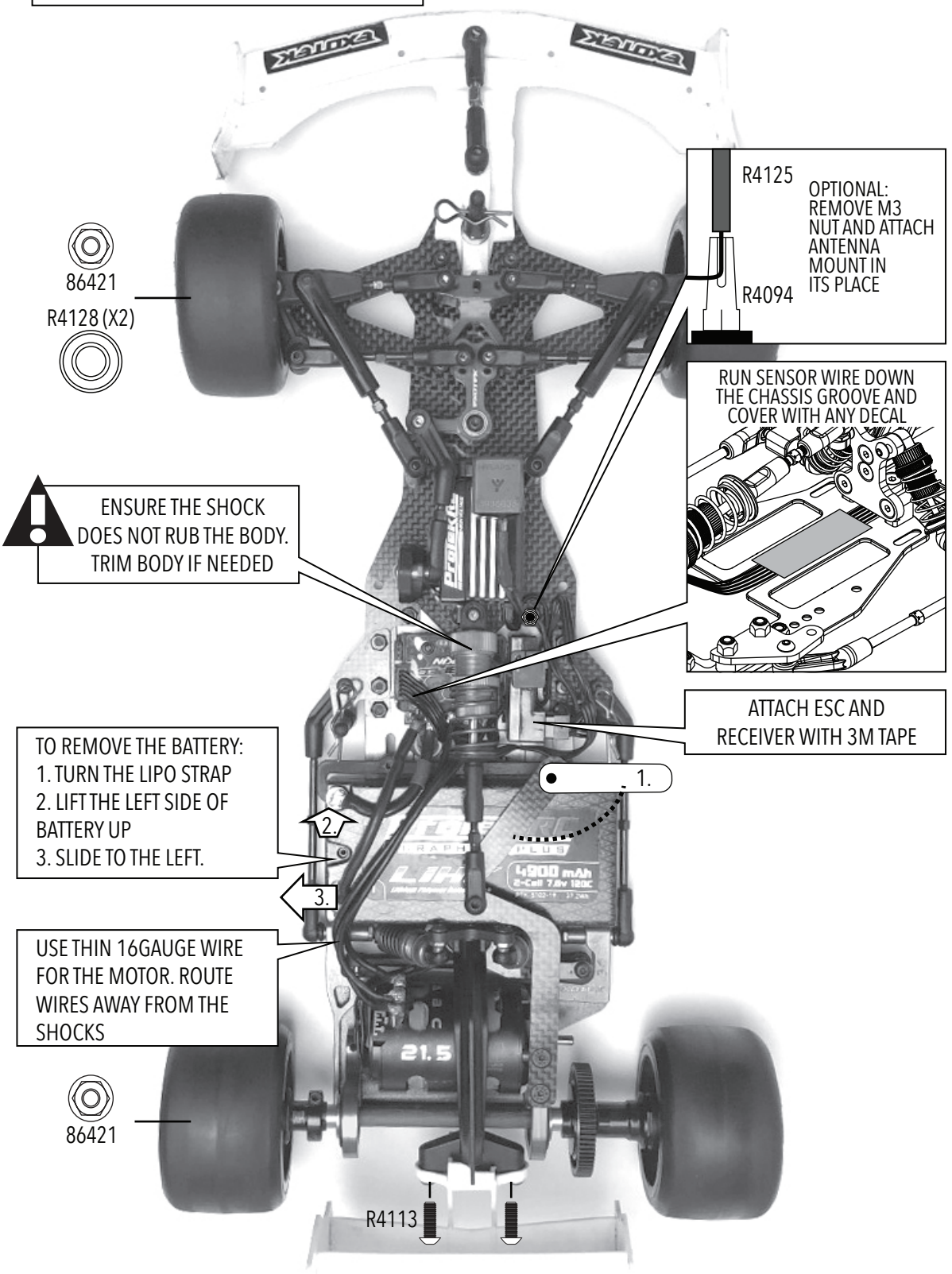
86421
M4 Locknut (x4)



R4128
5x10mm BEARING (X4)

SUGGESTED LAYOUT OF YOUR ELECTRONICS

BODY SELECTION MOST NEWER BODIES (2017 AND NEWER) BY BITTY, MONTECH, PROTOFORM ETC WILL WORK WITH THE F1ULTRA



THANK YOU FOR YOUR SUPPORT!

EXOTEK®

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REAR RIDE HEIGHT

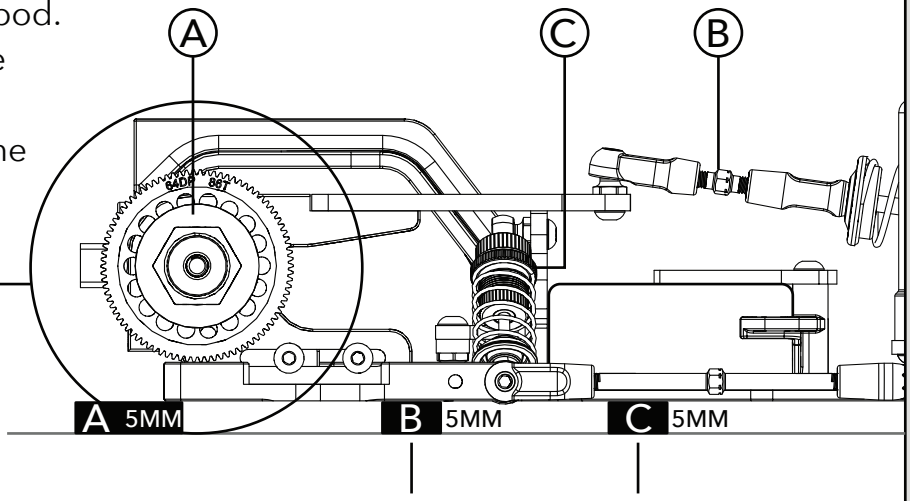
Using a long on road ride height gauge, measure the 3 locations shown here in this order;

Ⓐ Rear pod height (ie 5mm). Measure the pod.

Ⓑ Center link height (ie 5mm). Measure the front of the pod.

Ⓒ 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;

Ⓐ Change bearing cams for height A

Ⓑ Adjust the top shock turnbuckle for height B (longer link raises the B setting)

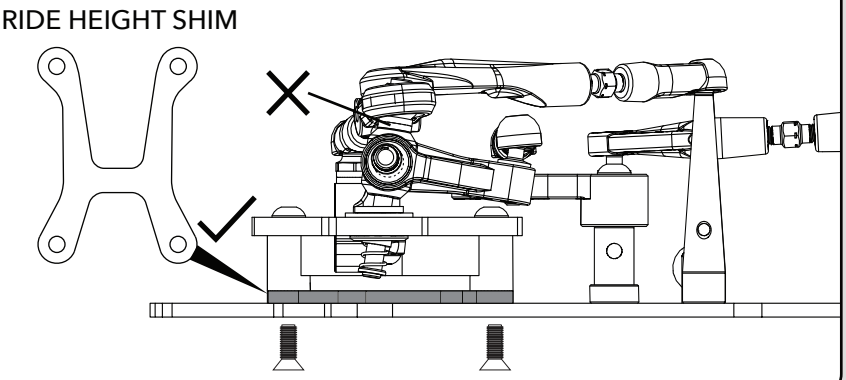
Ⓒ Adjust the 2 micro shock collars for height C (lowering the collars raises the rear chassis).

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

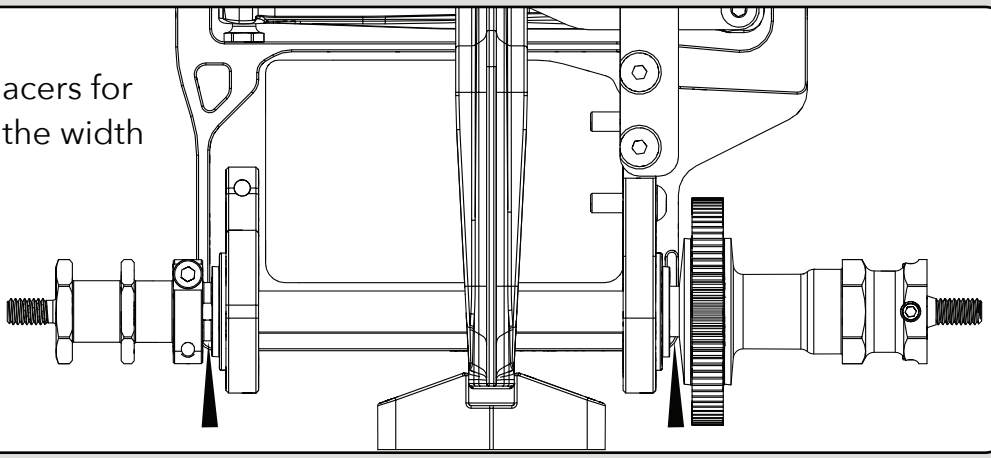
Change the front ride height by changing the bulkhead plate thickness (Exotek Options) **or using 3mm metal shims**. Change m3 screws as needed for proper length and durability.

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.



REAR TRACK WIDTH

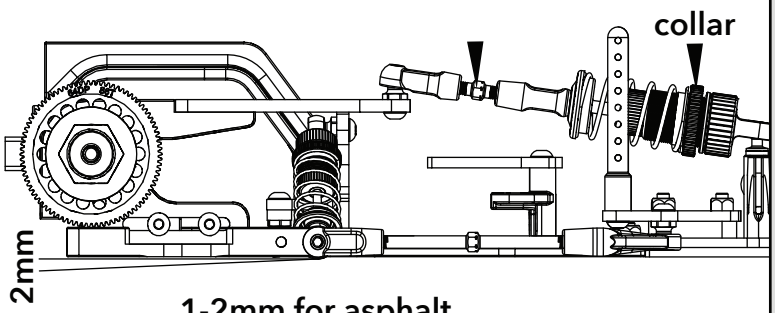
Widen the rear wheels using axle spacers for more rear grip and stability. Narrow the width for more steering.



REAR DROOP

More rear droop actually helps with forward bite. More droop means the pod and motor rotates instead of spinning the tires. Less droop creates more on power steering. To increase droop adjust the shock collar towards the shaft and **shorten** the turnbuckle length in the same amount ie 1 turn of collar equals 1 turn of turnbuckle. This will maintain the same ride height but **recheck ride height after adjusting droop.**

Refer to step 21 for proper shock lengths.

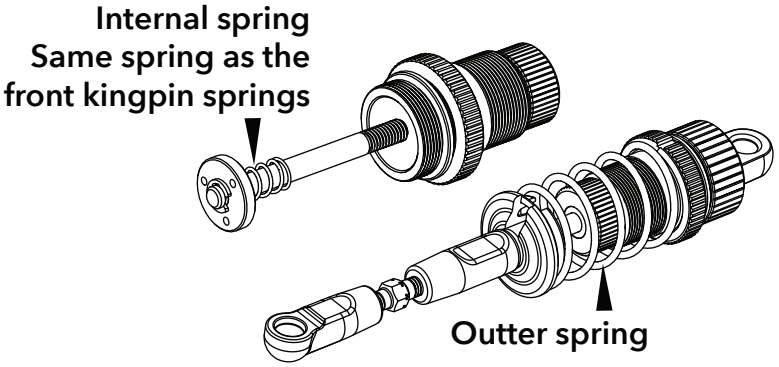


1-2mm for asphalt

0-1mm for carpet

CLUTCH TOP SHOCK

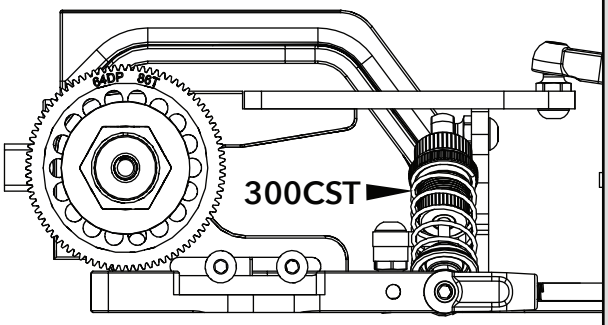
The internal top shock spring controls the forward bite. Use a soft spring for more forward bite and a hard spring for less bite.
The outter spring controls track bumps and braking stability. Softer outter springs are needed for bumpy tracks while harder springs may be suited for smoother tracks.



MICRO SHOCKS

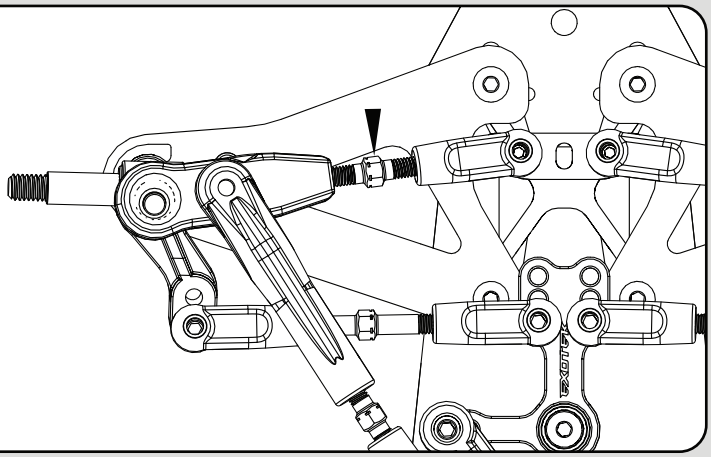
The side micro shocks control the side roll, dampening and center ride height. Softer springs yields the best rear traction but you must raise the ride height for the extra roll (5mm etc). If you require lower ride heights then you must use firmer micro springs.

SPRING CHART
BLACK- SOFT
YELLOW- MEDIUM
BLUE- HARD



CAMBER

The F1ultra has the easiest to adjust camber anywhere. 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° and adjust as needed depending on overall tire grip.



CASTER

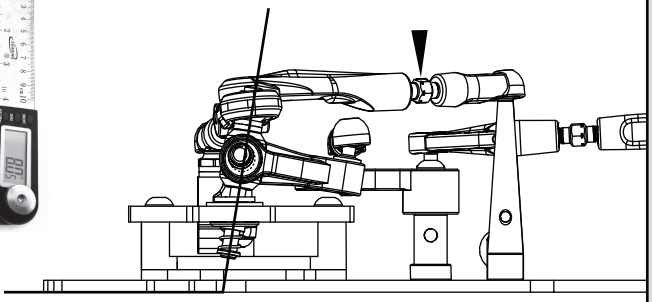
Adjusting caster on the F1ultra is equally just as easy. Simply adjust the trailing arm link and measure it using an adjustable camber gauge.
We suggest less angle (-5°) for tight low speed tracks and increased angles (-8°) for large high speed tracks. **Also readjust camber after setting the caster.**



DIGITAL PROTRACTOR FROM EBAY.COM



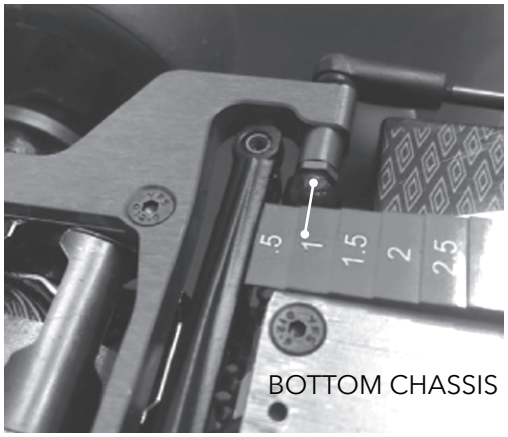
RC CAMBER GAUGE



SOME SMART PHONES CAN MEASURE ANGLES AS WELL

MICRO SHOCK DROOP

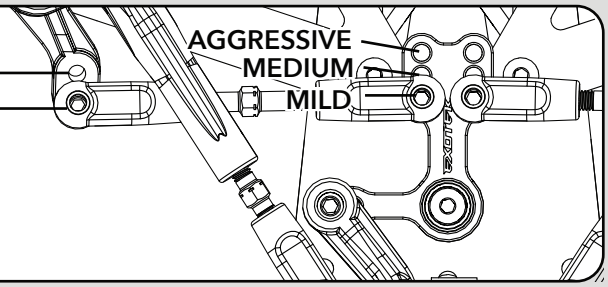
To measure micro shock droop set ride height gauge on the chassis and measure the shock end. We set it between 0-1mm and leave it. Smooth tracks require less droop here. **Do not overtighten the cup or damage to the cup can cause it too bind on the ball end.**



BOTTOM CHASSIS

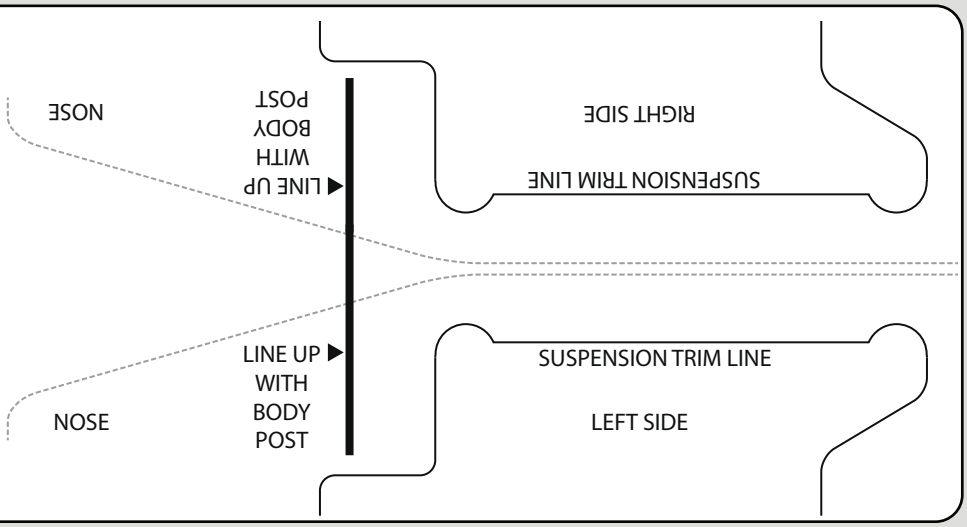
STEERING

Select the link angle for desired steering response. We always select **mild** settings and adjust with softer or firmer front tires. 'SPEC' tires can be adjusted as shown here.



BODY TRIM GUIDE

Photocopy the trim guide here and tape and then marker the outlines to help with proper trimming and fitment of the front of the body.



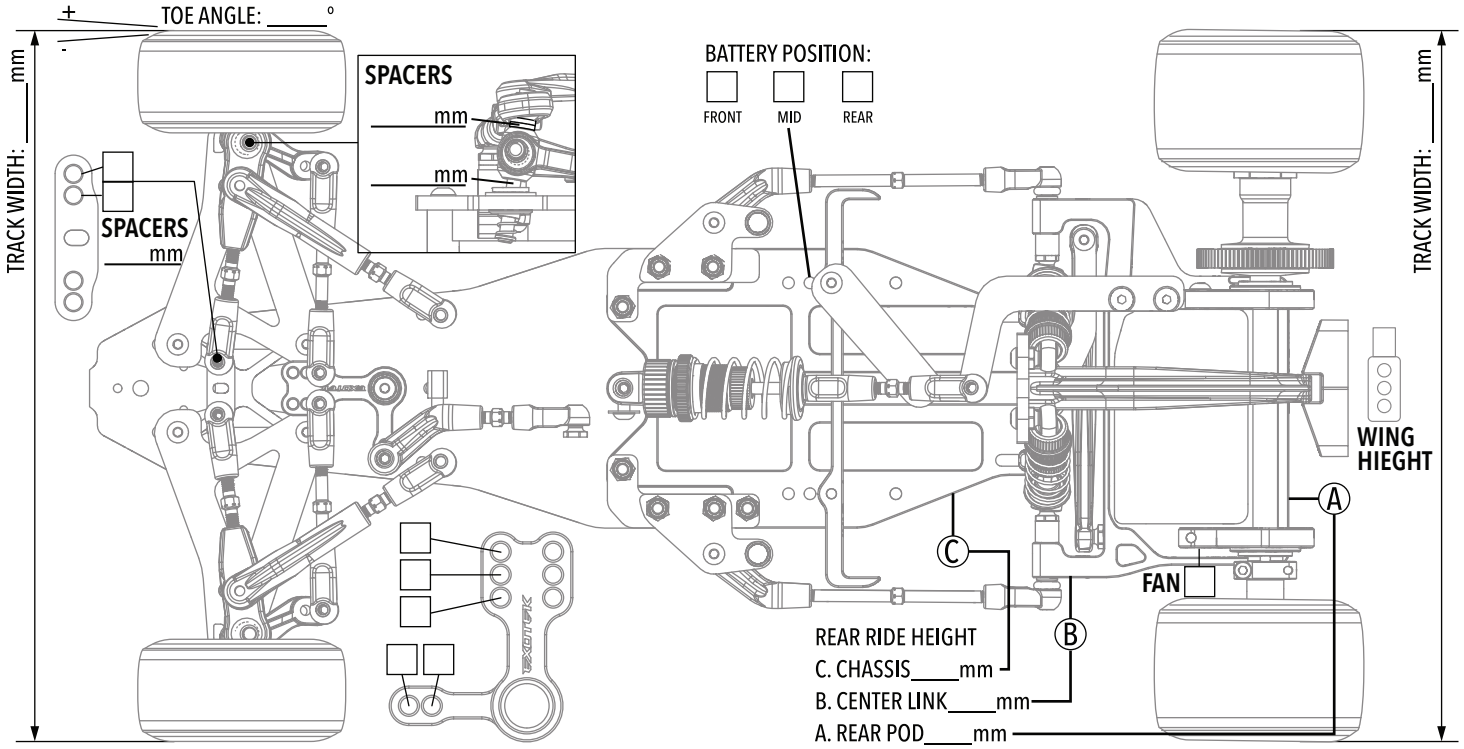
SETUP SHEET

F1 ULTRA

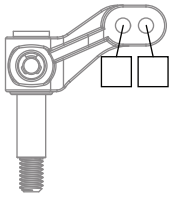
NAME: _____ DATE: _____ TRACK: _____

AIR TEMP: _____° TRACK TEMP: _____° TRACK SURFACE: ☐ CARPET ☐ ASPHALT TRACTION: ☐ LOW ☐ MEDIUM ☐ HIGH

QUALIFYING POSITION: _____ FINISHING POSITION: _____ FAST LAP: _____



FRONT



CAMBER: _____°

CASTER: _____°

DROOP: _____mm

BUMPSTEER: _____mm

RIDE HEIGHT: _____mm

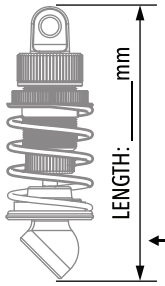
SPRING: _____

LUBE: _____

FRONT WING: _____

ADDITIONAL WEIGHT: _____

SHOCKS



CENTER SHOCK →

PISTON: _____hole(s)

OIL: ____wt

OUTTER SPRING: _____

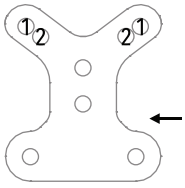
INNER SPRING_____

← SIDE SHOCK

PISTON: _____hole(s)

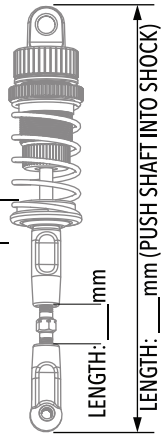
OIL: ____wt

SPRING: _____



← SIDE SHOCK POSITION

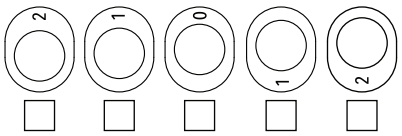
OUTSIDE - 1 ☐ INSIDE - 2 ☐



REAR

MICRO SHOCK DROOP: _____mm

RIDE HEIGHT INSERT:



DIFFERENTIAL:

BALL: ☐

GEAR: ☐ FLUID: _____wt

REAR SHAFT: _____

REAR WING: _____

ADDITIONAL WEIGHT: _____

BODY: _____

SERVO: _____

MOTOR: _____

GEARING - PINION: _____ SPUR: _____

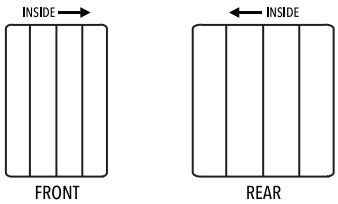
ESC: _____

BATTERY: _____

TIRES: _____ _____

ADDITIVE: _____

ADDITIVE TIMING: _____



COMMENTS

_____

_____

_____

_____

_____

_____

_____

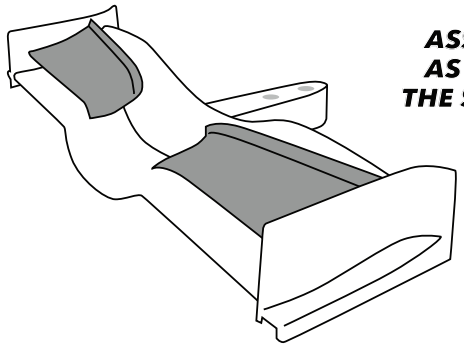
EXOTEK

EXOTEK
RACING
IRVINE, CA USA

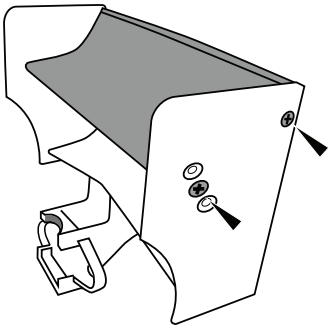
UPDATE SHEET

Please note these latest updates to the instruction manual to help properly assemble your F1ultra Kit.

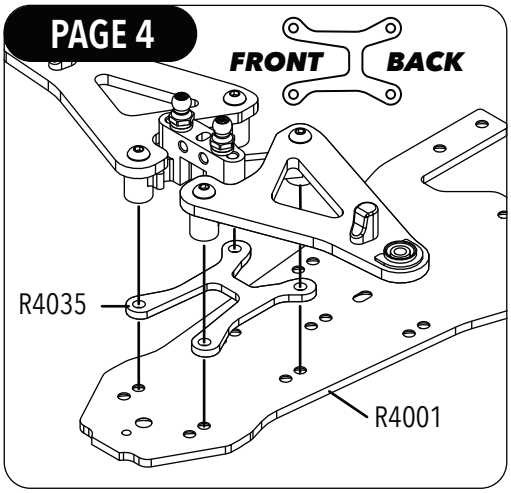
WINGS



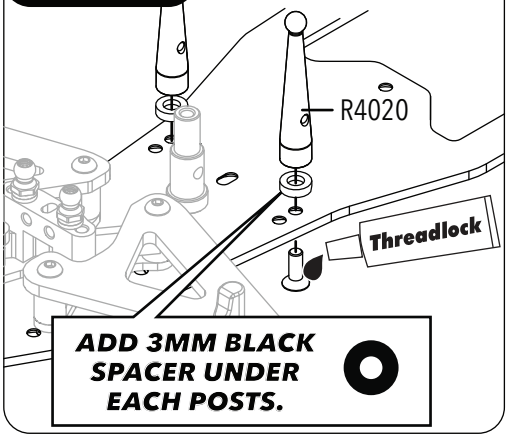
ASSEMBLE WINGS AS SHOWN USING THE SUPPLIED SILVER SCREWS.



PAGE 4

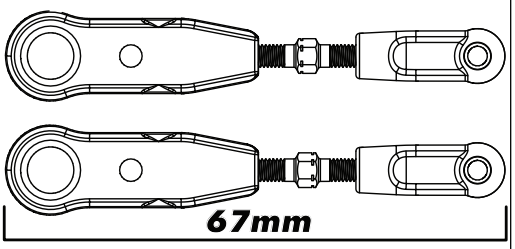


PAGE 4



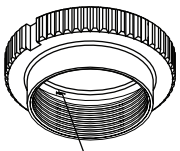
ADD 3MM BLACK SPACER UNDER EACH POSTS.

PAGE 6



PAGE 19

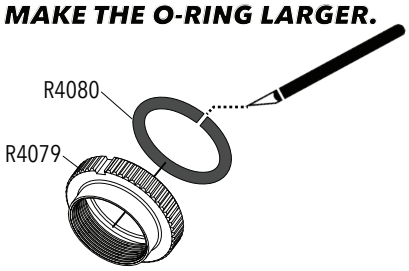
DOUBLE CHECK INSIDE THE COLLARS THAT THE O-RING GROOVES HAS NO ALLOY DEBRIS.



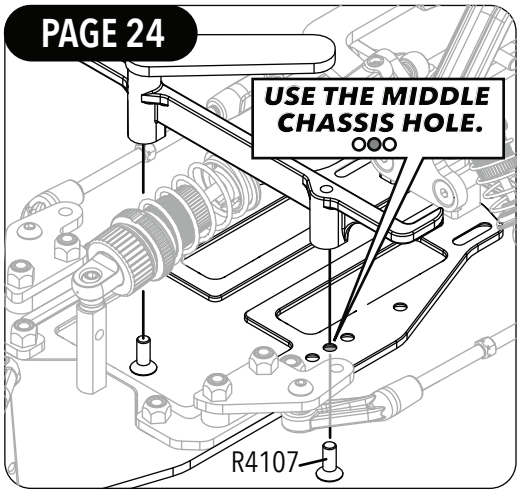
PICK OUT ANY LOOSE DEBRIS.

PAGE 21

IF YOU HAVE DIFFICULTY SCREWING ON THE COLLAR TO THE SHOCK, SIMPLY CUT THE O-RING HERE TO MAKE THE O-RING LARGER.

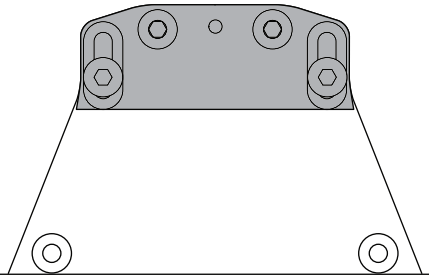


PAGE 24



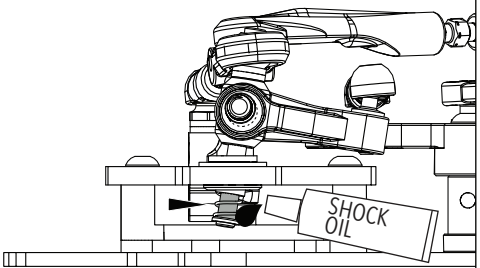
PAGE 27

FOR ASPHALT TRACKS ADD SMALL PIECE OF CHASSIS PROTECTIVE FILM TO REAR OF THE CHASSIS TO PROTECT THE FINISH.



PAGE 27

REMOVE FRONT SPRING AND ADD SMALL AMOUNT OF SHOCK OIL ON THE EXPOSED STEERING PIN.



PAGE 27

CUT NOTCH IN REAR WING BASE TO CLEAR THE WING MOUNT.

