EXOTEK RACING®

VADER SPRINT

1/10 RADIO CONTROL KIT

REQUIRED TO COMPLETE

- 1:10 scale electric motor
- 48 pitch spur and pinion
- Electronic speed control
- Low profile 1/10 touring car steering servo
- 7.4v “shorty” hard case battery
- Battery charger
- 2-channel surface radio system
- Buggy/oval wheels and tires
- Gfrp or Custom Works sprint body and cage set
- Polycarbonate-specific spray paint for body

REQUIRED TOOLS

- Blue Thread Locker
- Hex Wrenches - 1.5, 2.0, 2.5mm
- Hobby Knife
- Calipers or a precision ruler
- Body Scissors
- Reamer/Hole Punch
- Ride Height Gauge
- 4mm Turnbuckle Wrench
- 5.5mm and 7mm Wrench
- Needle Nose Pliers
- Soldering Iron
- Camber Gauge

SPECIAL NOTES

- Do not saturate screws with threadlocker!
  Pro Tip: Place several drops on a plastic bag and simply dip the tip of the screw into the threadlocker. A little threadlocker goes a long way.
- Do not overtighten hardware.
- Only use quality machined hex wrenches. Do not use allen keys, etc.

NOTES:

Note: Internal drive ratio is 3.05.
FDR= Spur / pinion x 3.05

BAG 1

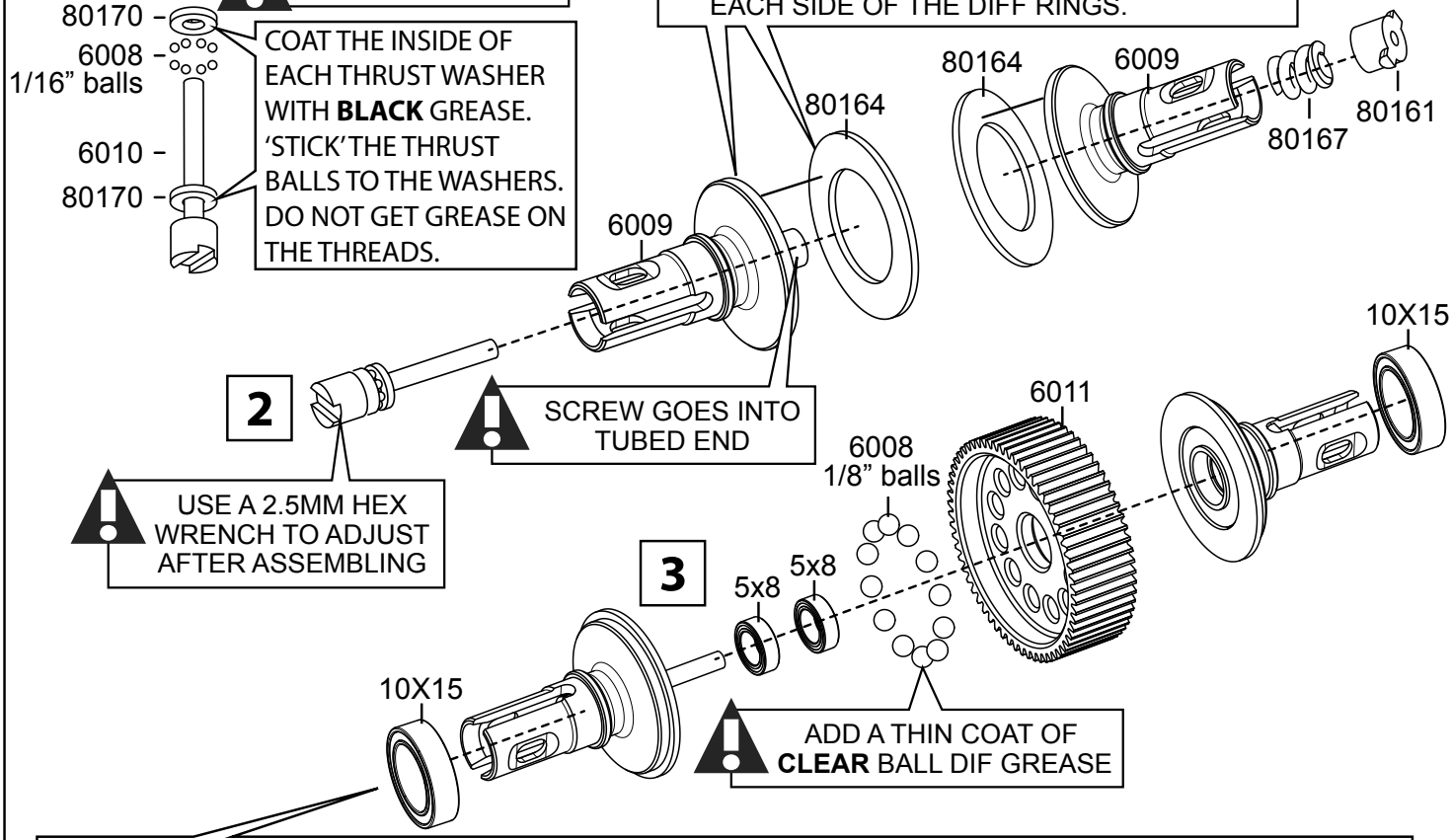
1

USE 8 BALLS

80170 –
6008 – 1/16" balls
6010 –
80170 –

COAT THE INSIDE OF EACH THRUST WASHER WITH **BLACK** GREASE. 'STICK' THE THRUST BALLS TO THE WASHERS. DO NOT GET GREASE ON THE THREADS.

CLEAN THE RINGS AND DIFF HALVES WITH MOTOR SPRAY. WIPE DRY AND THEN APPLY A THIN COAT OF **CLEAR** DIFF GREASE ON EACH SIDE OF THE DIFF RINGS.



2

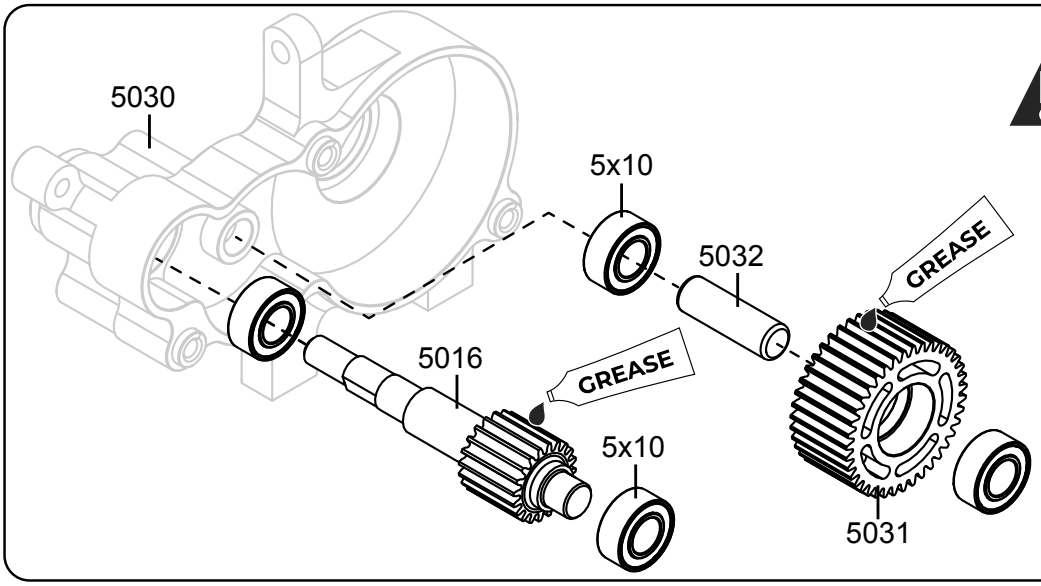
USE A 2.5MM HEX WRENCH TO ADJUST AFTER ASSEMBLING

SCREW GOES INTO TUBED END

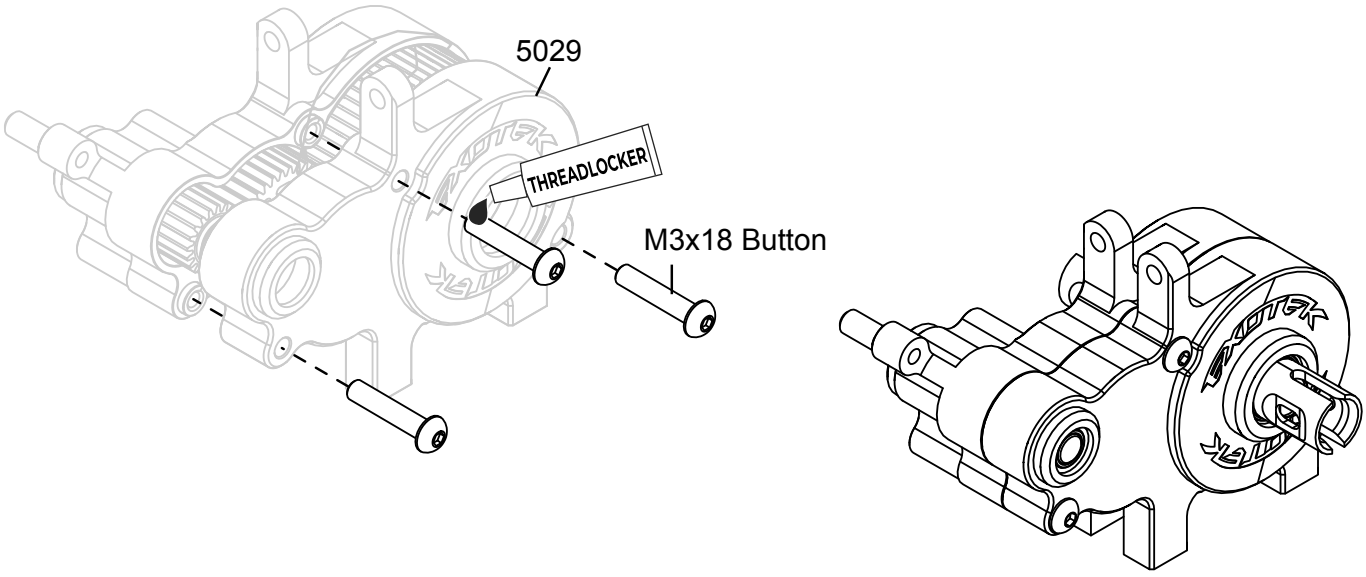
3

ADD A THIN COAT OF **CLEAR** BALL DIF GREASE

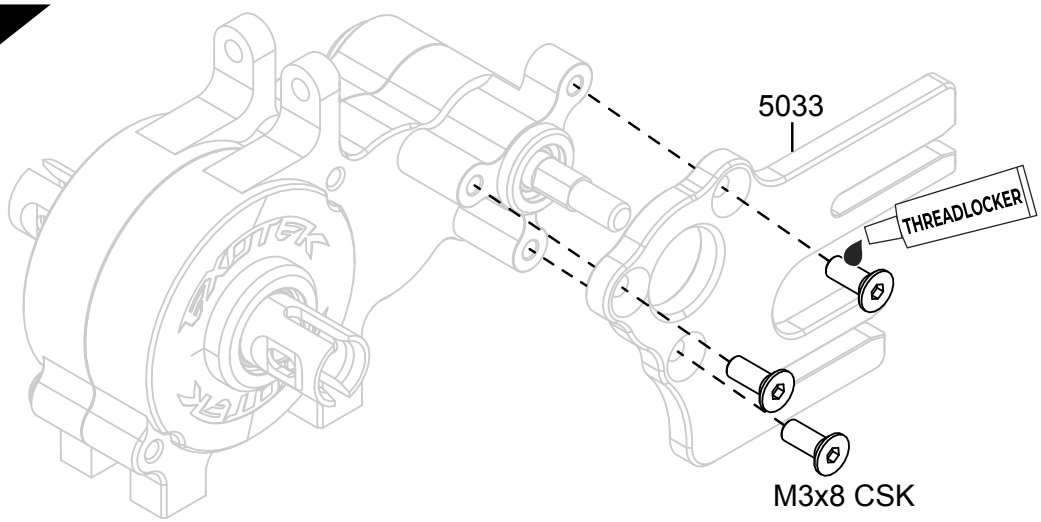
As you tighten the diff bolt, you will notice the T-nut 80161 moving closer to the bottom of the outdrive slot. This compresses the spring behind the T-nut. The spring should be completely compressed at the time the T-nut reaches the end of the slot. Caution-Do not overtighten the bolt! Pay close attention to the feeling when the spring is completely compressed. When you feel the spring completely compressed, loosen the diff bolt 1/8" of a turn. Your diff should now operate smoothly but with resistance as the outdrives move in opposite directions. After you have driven the car once, re-check the diff setting.

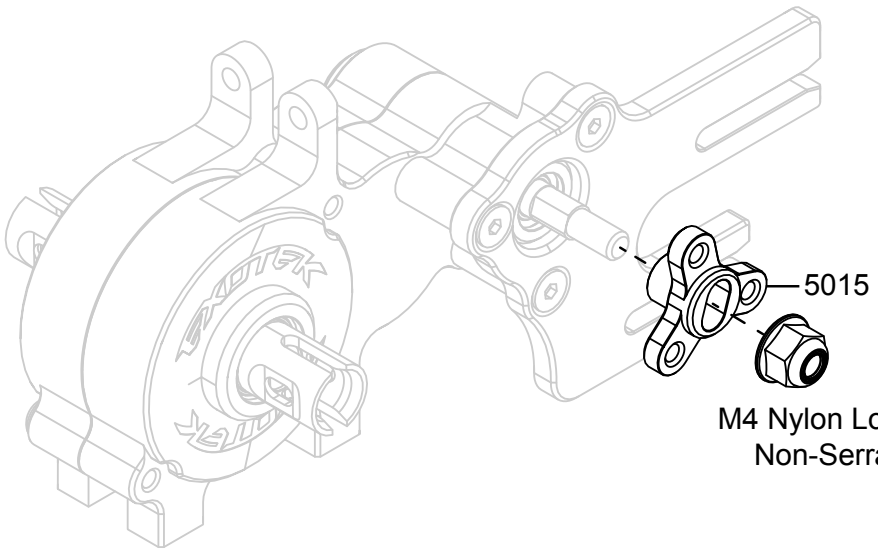


IMPORTANT:
PERIODIC CLEANING AND GREASING OF THE GEARS ARE REQUIRED TO PROLONG THE LIFE OF YOUR TRANSMISSION GEARS. WE SUGGEST DOING THIS AFTER EACH RACE WEEKEND.

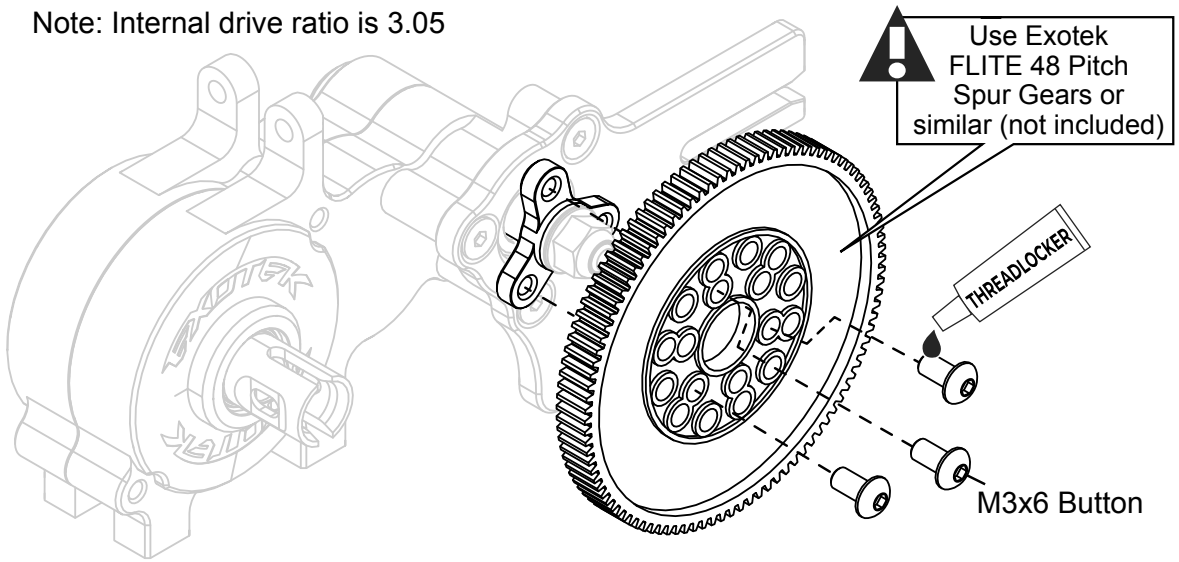

5029
THREADLOCKER
M3x18 Button

BAG 2

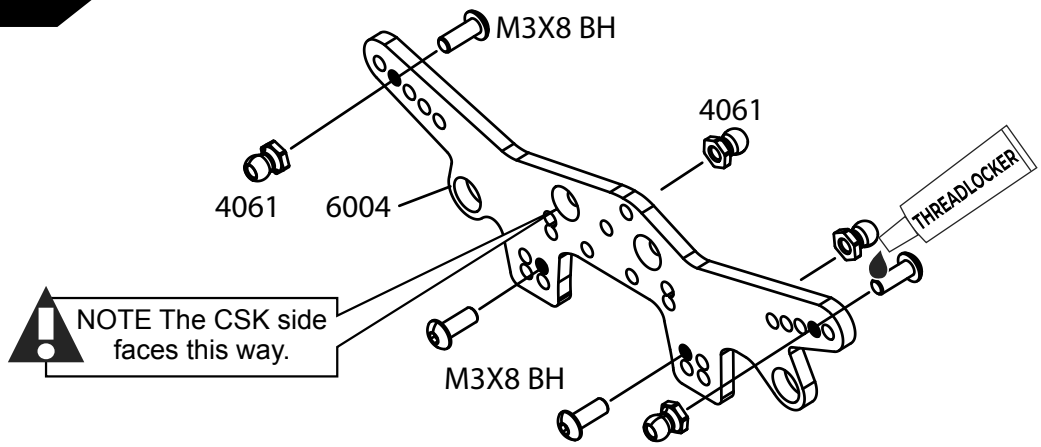

5033
THREADLOCKER
M3x8 CSK

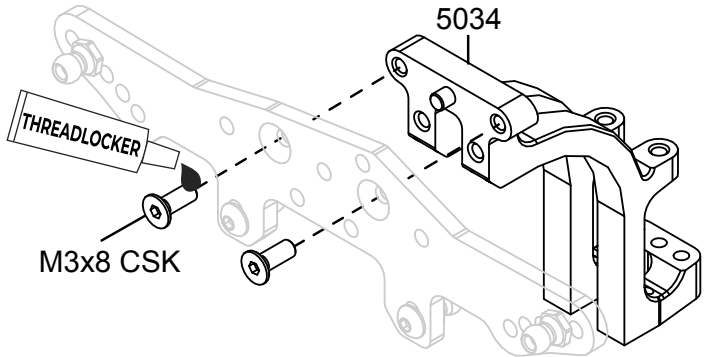

5015
M4 Nylon Lock Nut
Non-Serrated

Note: Internal drive ratio is 3.05

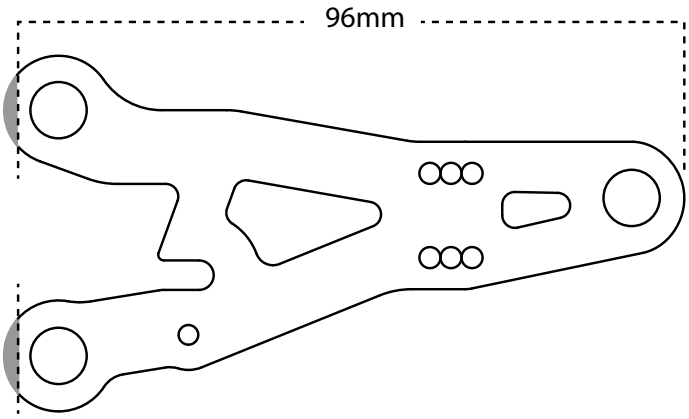


BAG 3



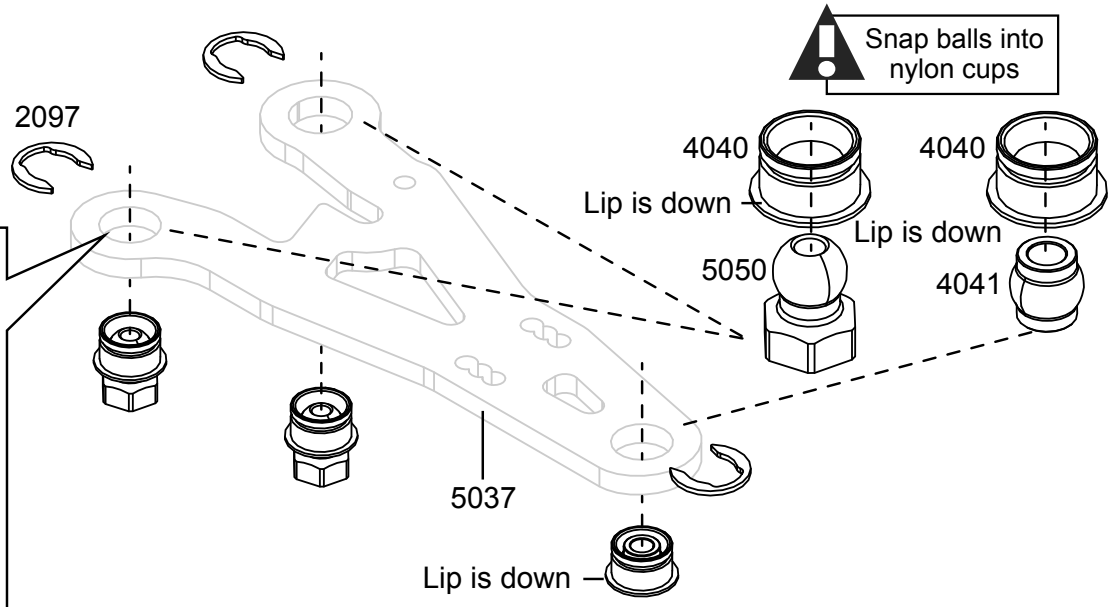


REAR ARMS ONLY (2X)

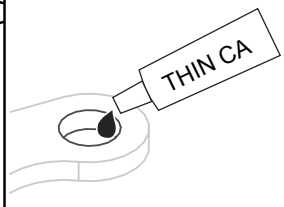


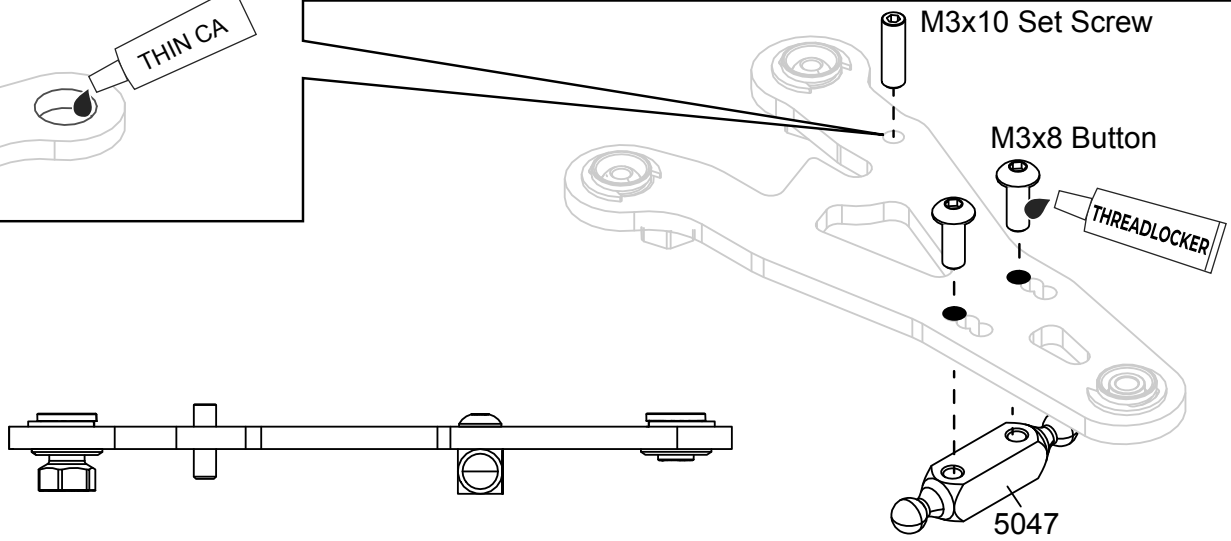
For the 2 rear arms- sand or file these arm sections for gear box clearance.

BAG 4
REAR ARMS

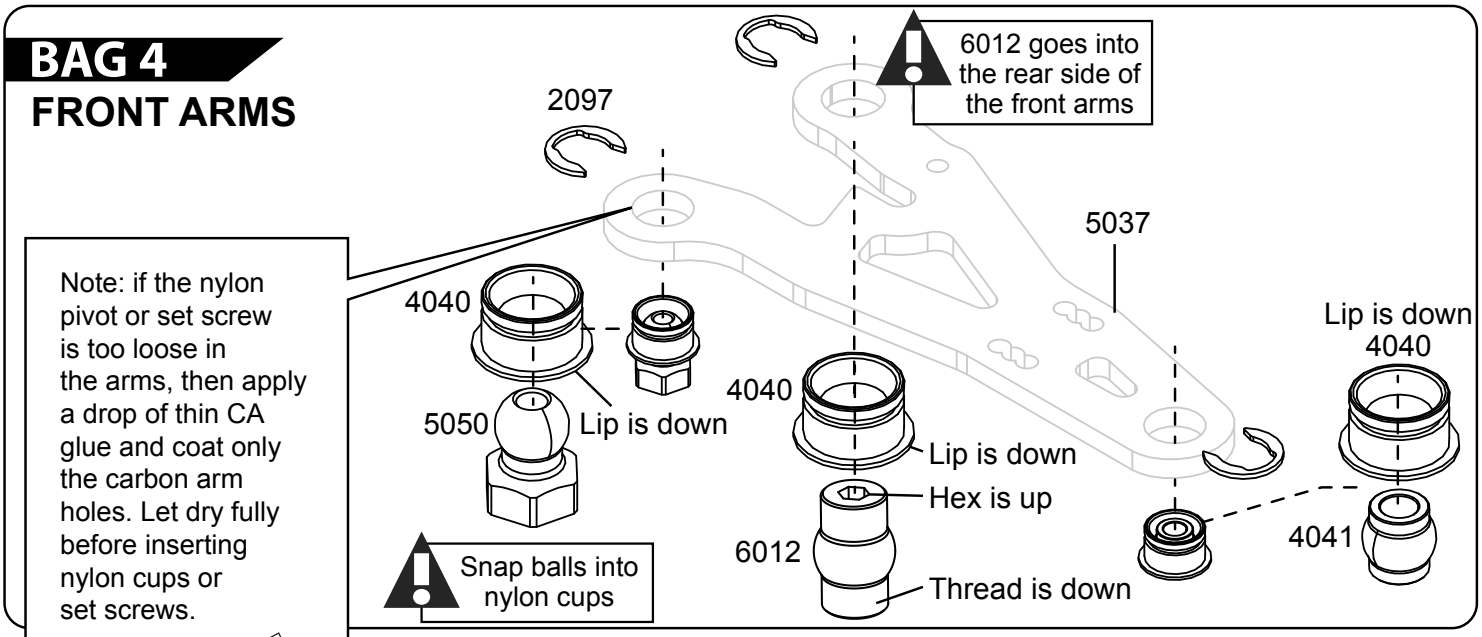


Note: if the nylon pivot or set screw is too loose in the arms, then apply a drop of thin CA glue and coat only the carbon arm holes. Let dry fully before inserting nylon cups or set screws.





BAG 4
FRONT ARMS



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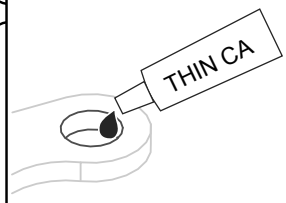
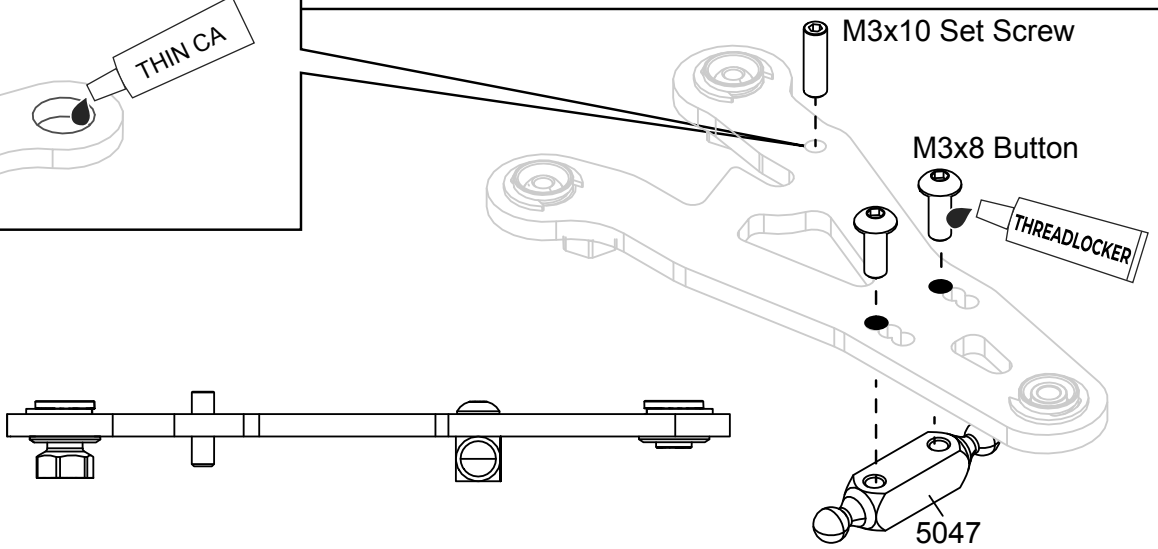
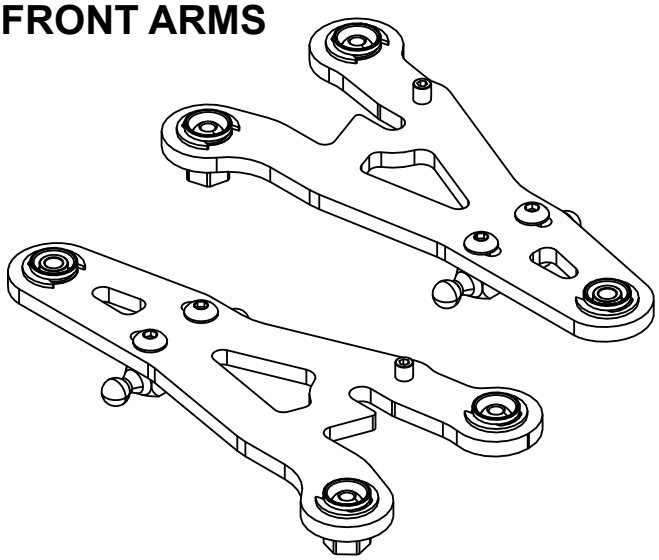
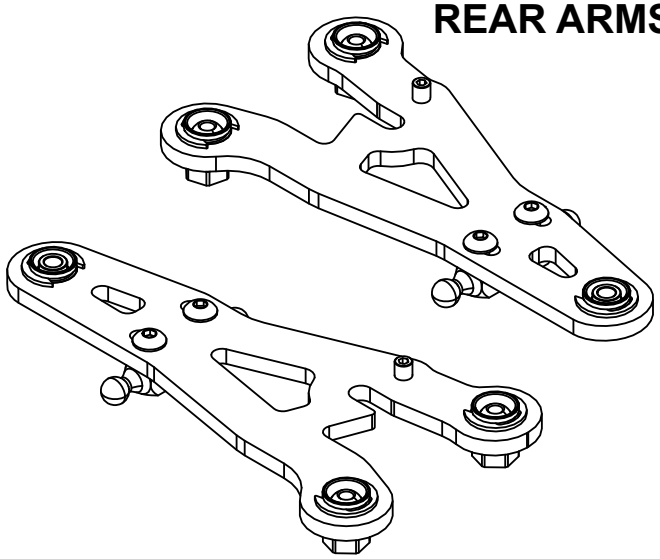




FRONT ARMS



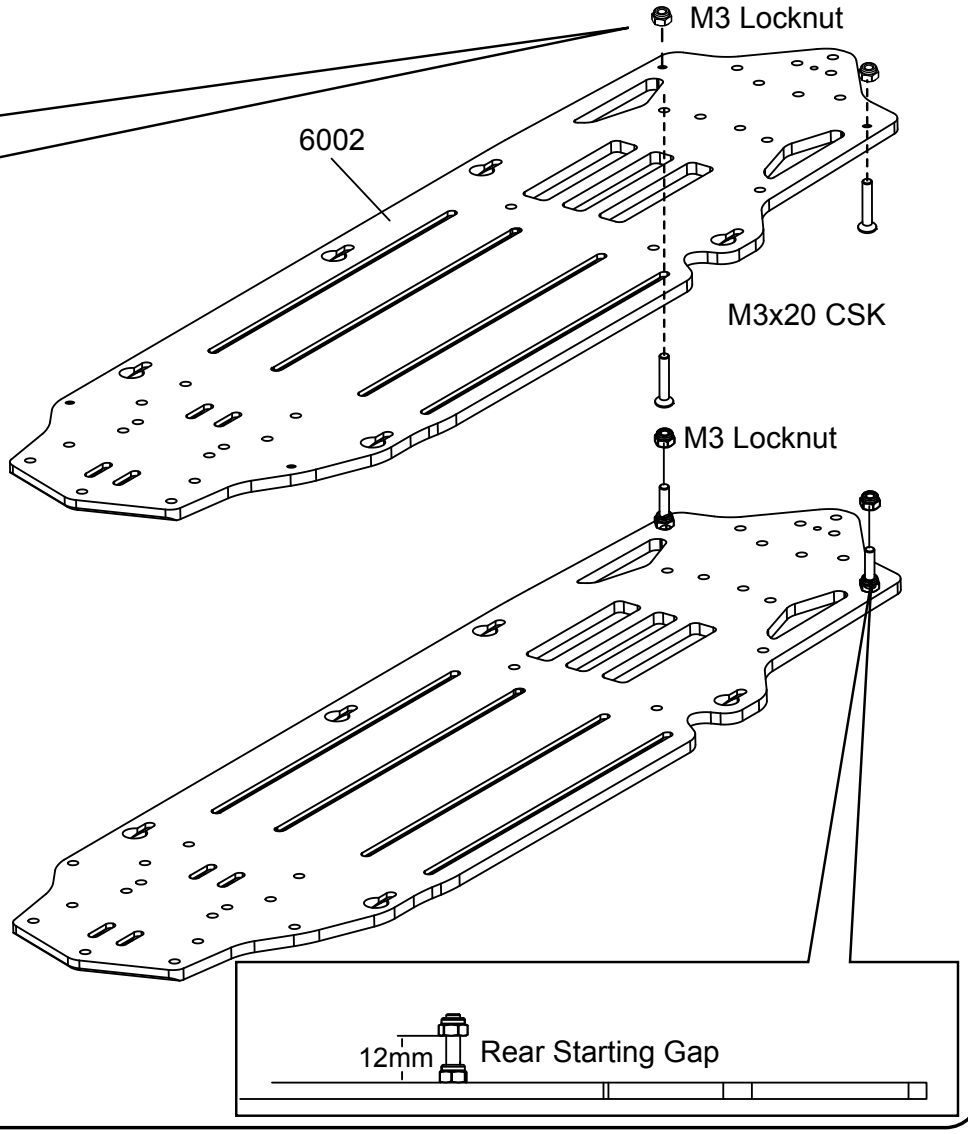
REAR ARMS



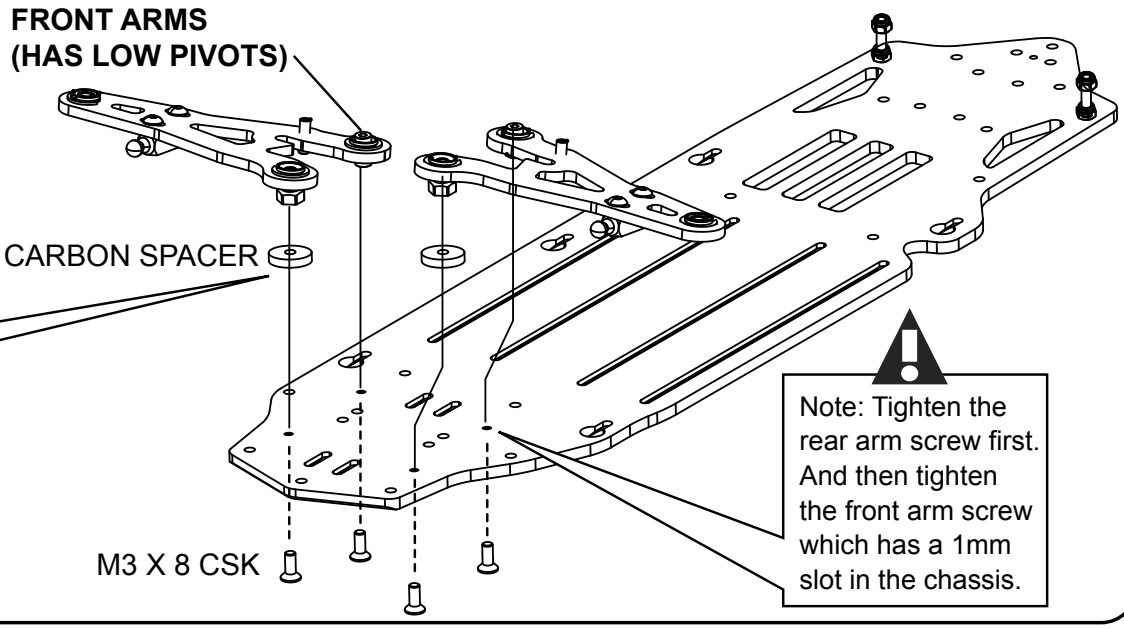
BAG 5

Note: Optional up travel hardware. Use up travel limiters to control how far up the rear suspension travels and thus prevents the chassis from bottoming out as the chassis rolls.

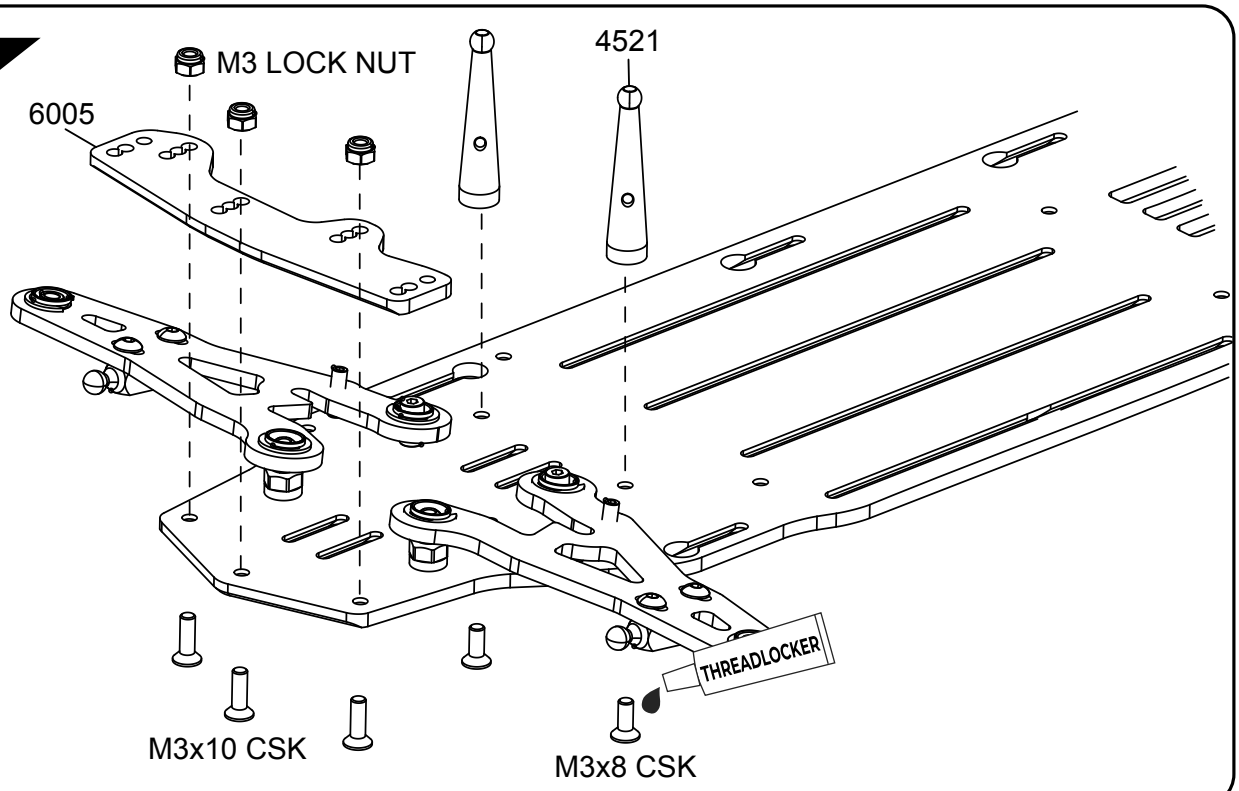
Note: Up Stops. Do not use up stop nuts if unsure of how to set it. Never use up stops to set your ride height. Up stops are only used to control how far up the arms can go. Great for stopping the chassis from rubbing the ground as the chassis rolls at high speed.



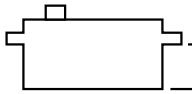
Note: Use metal shims on top of the carbon spacers as shown in the 2 front screws to increase or reduce the kick up. Too many spacers could bind the suspension so be careful with that.



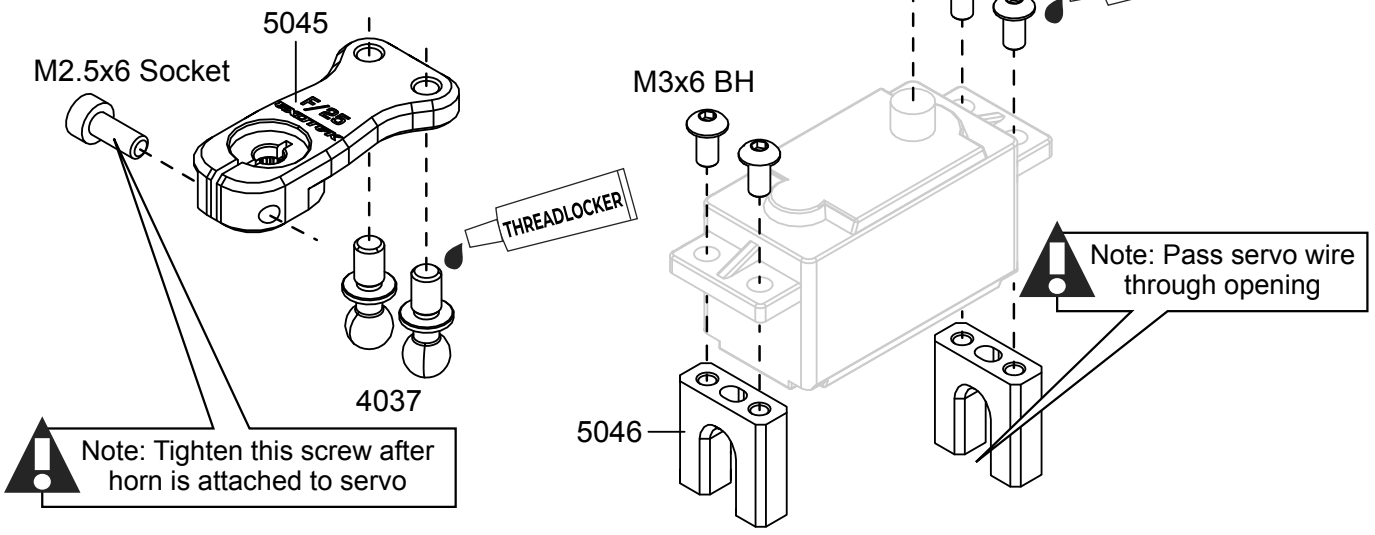
BAG 5



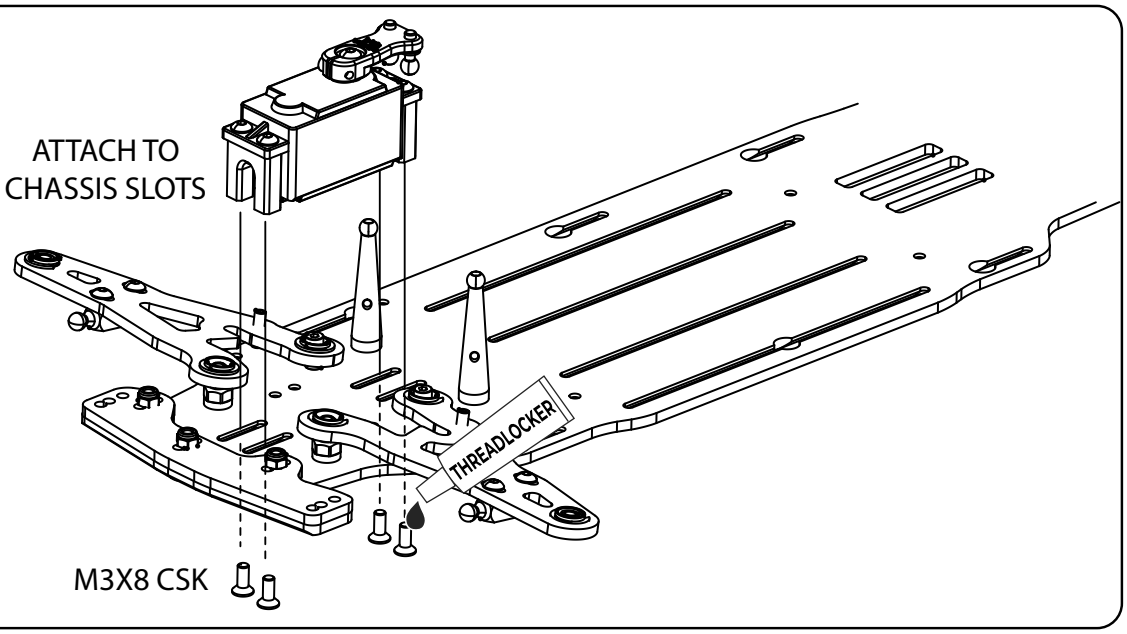
Note: Must use a 1/10 25 spline low profile TC servo ie Savox or Hitec. etc.

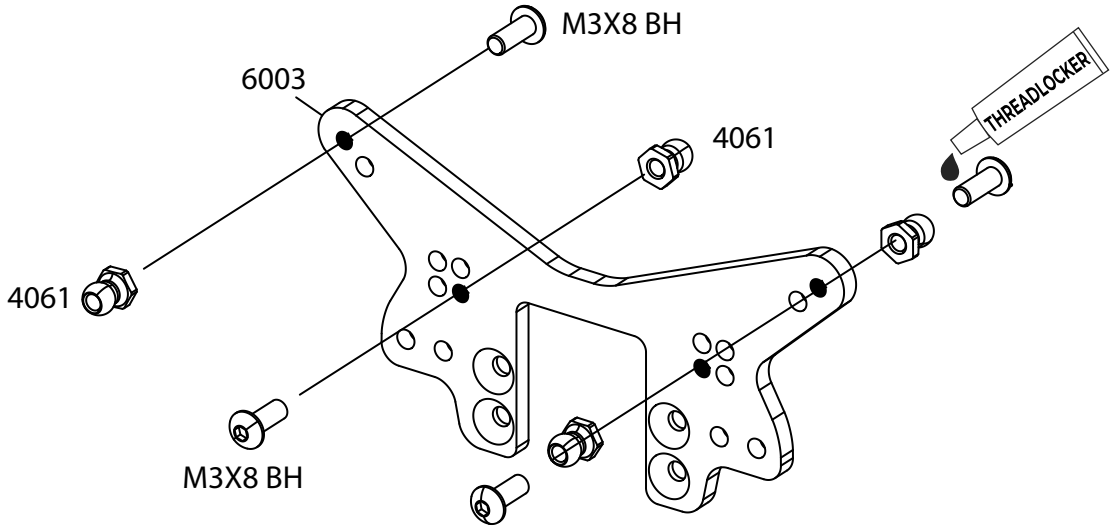


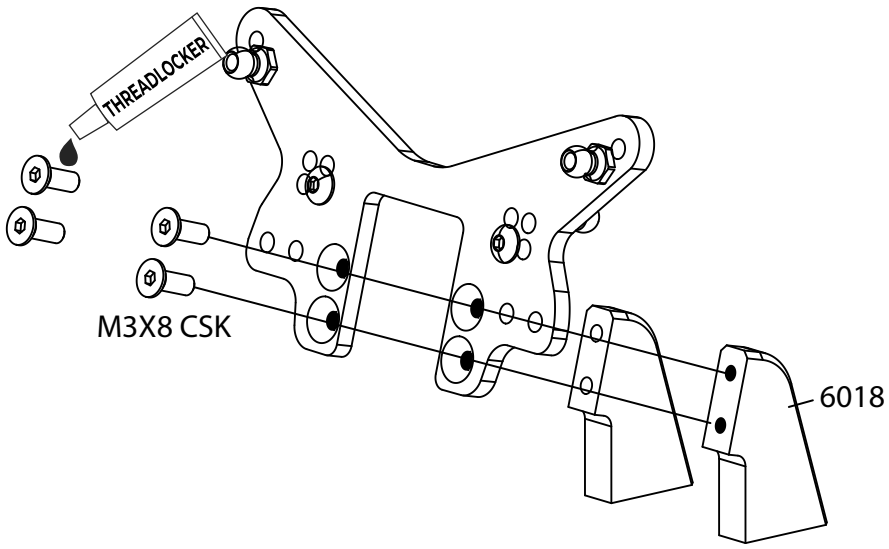
Off Road servos will not fit.



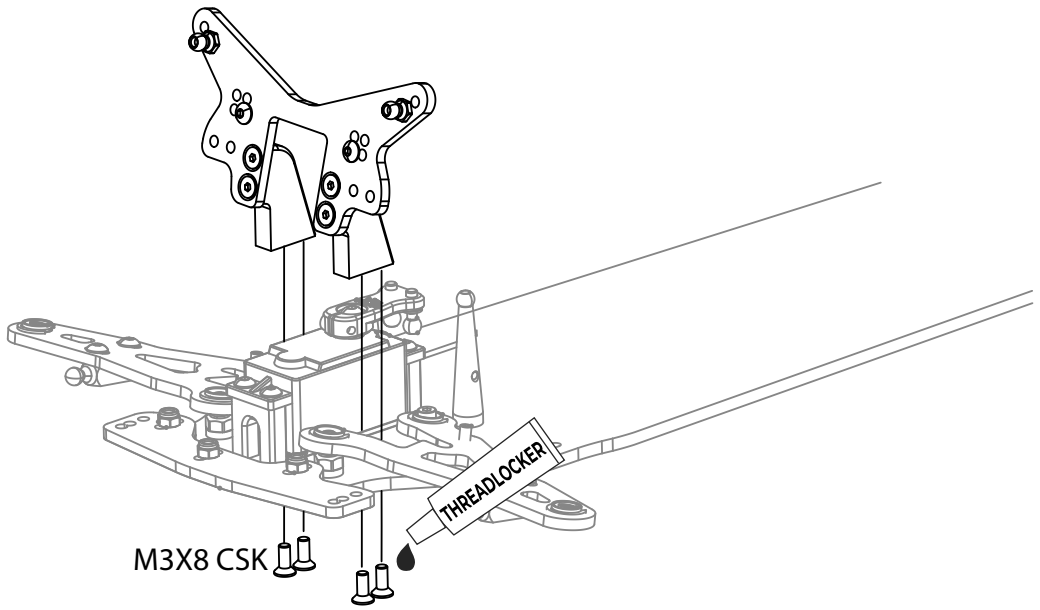
BAG 5

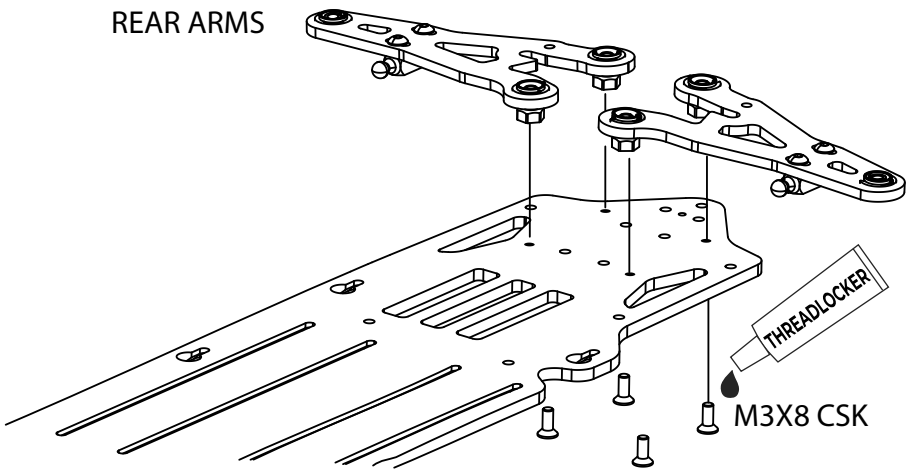

ATTACH TO
CHASSIS SLOTS
THREADLOCKER
M3X8 CSK

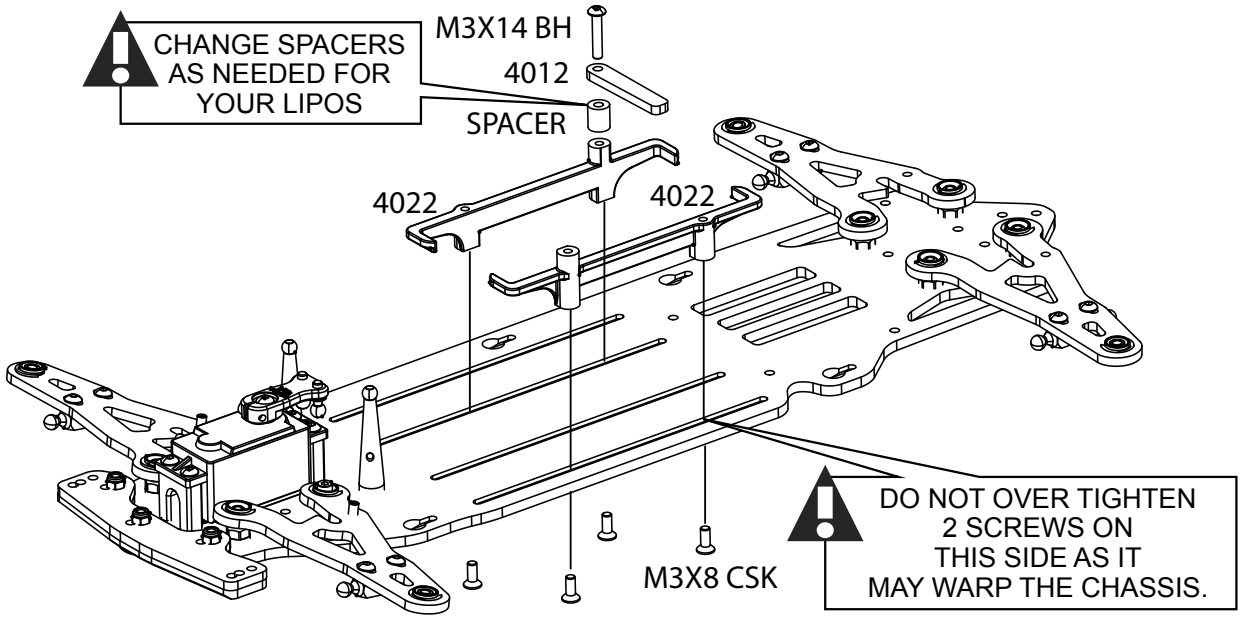

M3X8 BH
6003
4061
THREADLOCKER
4061
M3X8 BH


THREADLOCKER
M3X8 CSK
6018

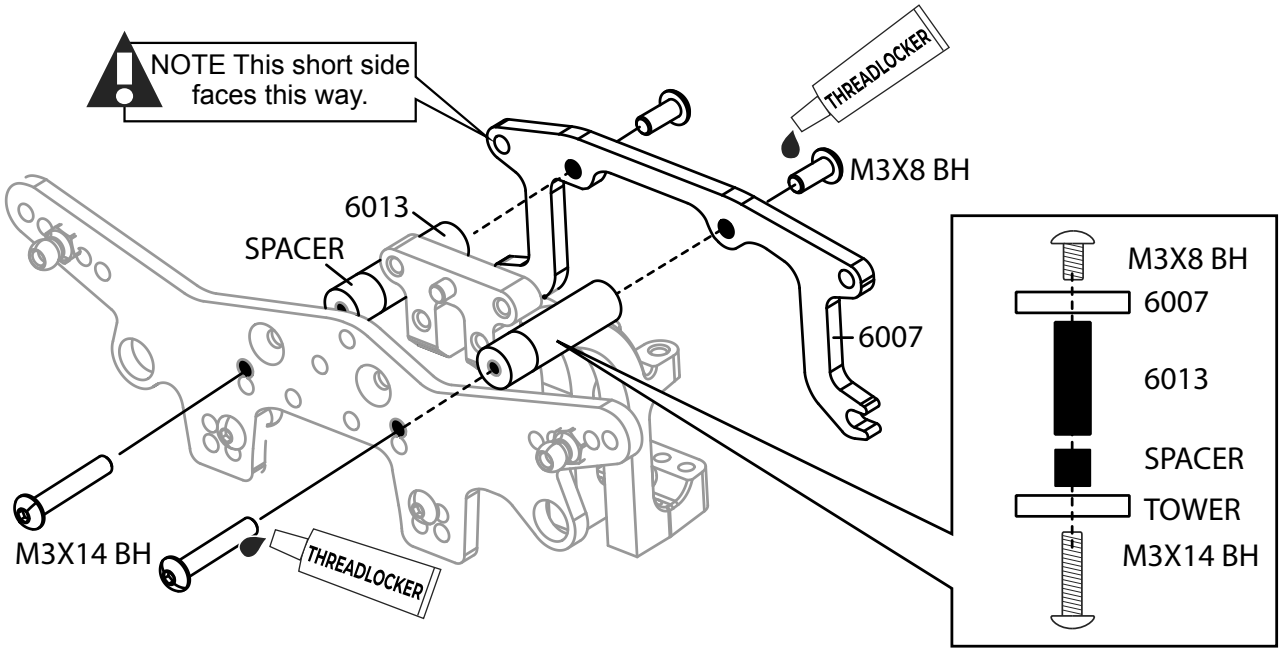
BAG 5

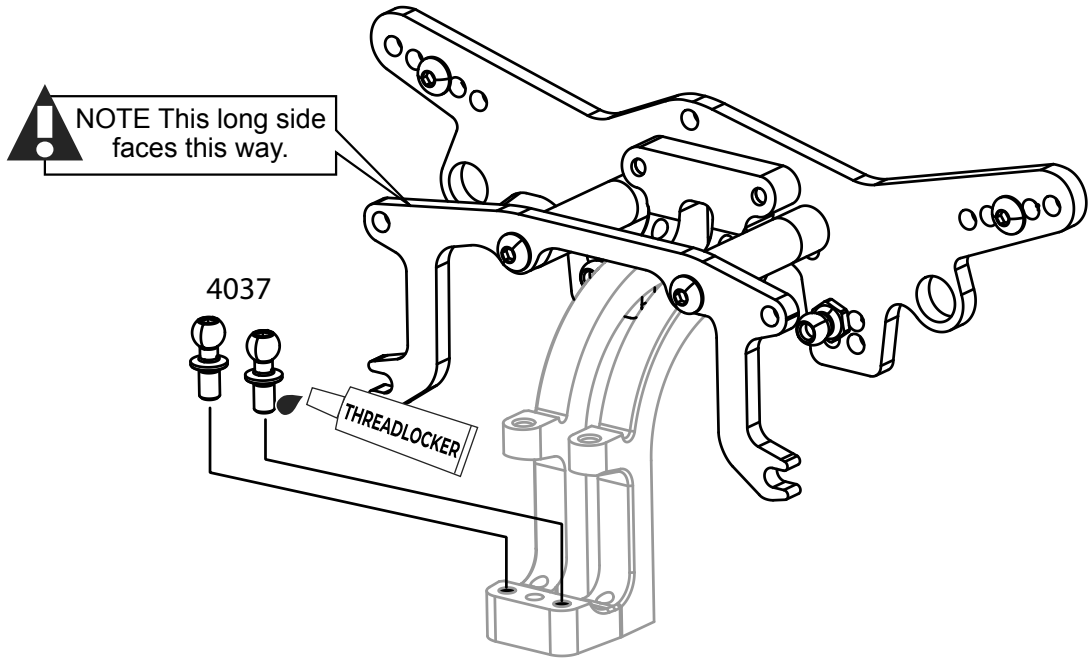

THREADLOCKER
M3X8 CSK


REAR ARMS
THREADLOCKER
M3X8 CSK

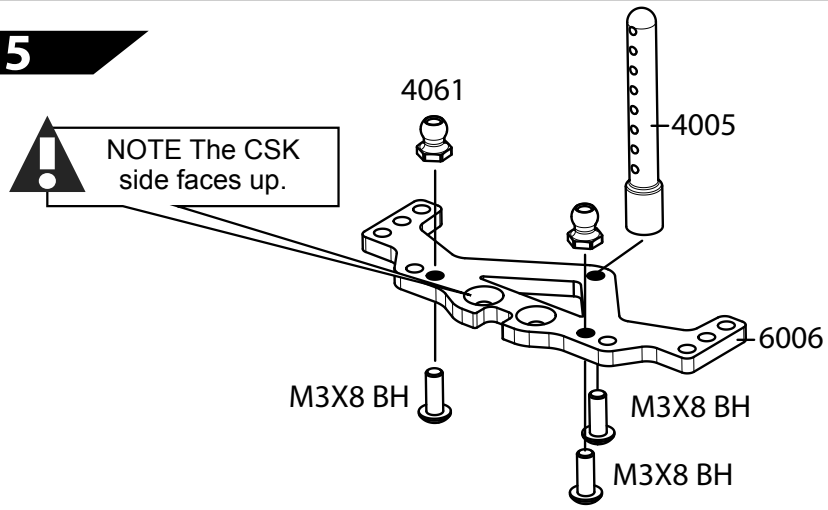

CHANGE SPACERS AS NEEDED FOR YOUR LIPOS
M3X14 BH
4012
SPACER
4022
4022
M3X8 CSK
DO NOT OVER TIGHTEN 2 SCREWS ON THIS SIDE AS IT MAY WARP THE CHASSIS.

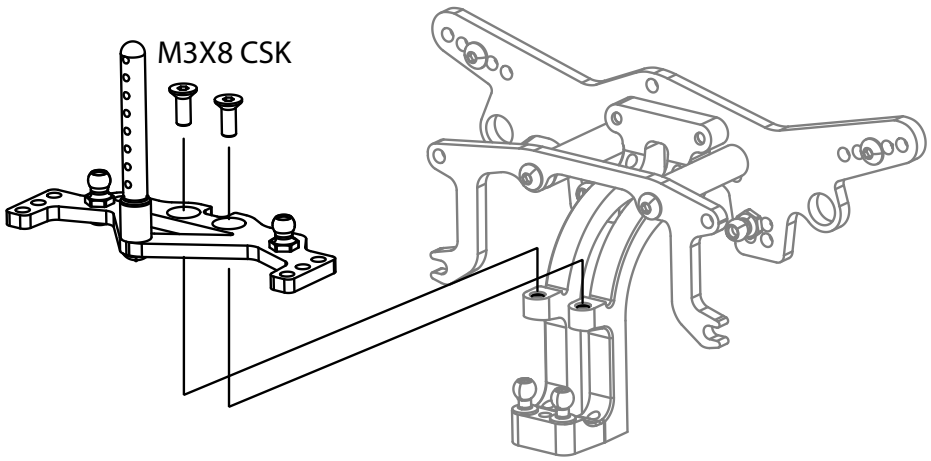
BAG 5

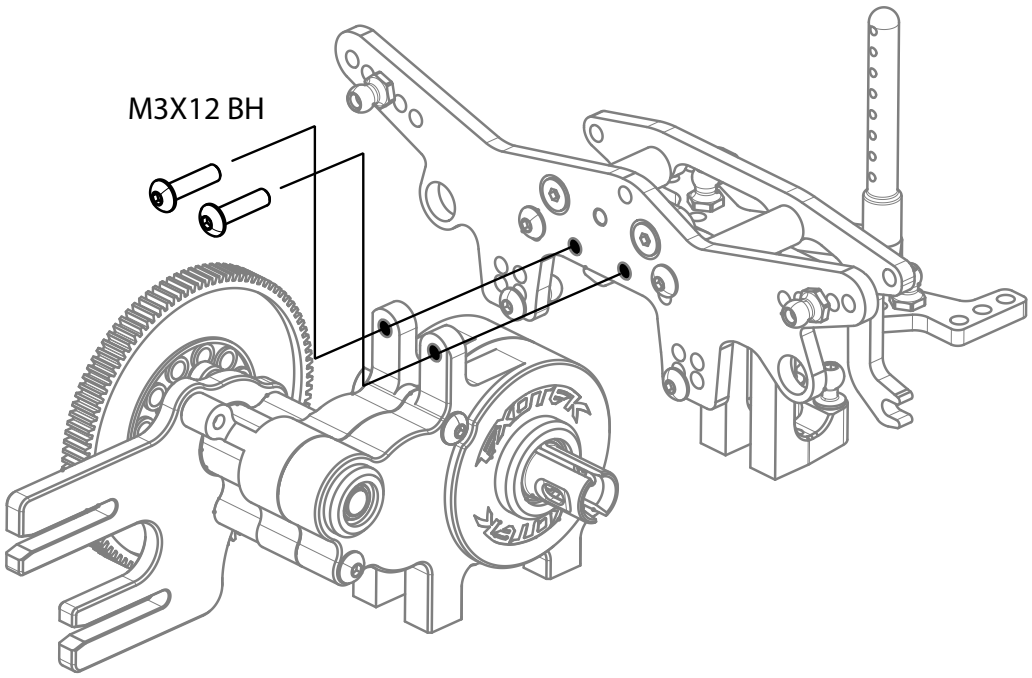

NOTE This short side faces this way.
THREADLOCKER
M3X8 BH
6013
SPACER
6007
M3X14 BH
THREADLOCKER
M3X8 BH
6007
6013
SPACER
TOWER
M3X14 BH


NOTE This long side faces this way.
4037
THREADLOCKER

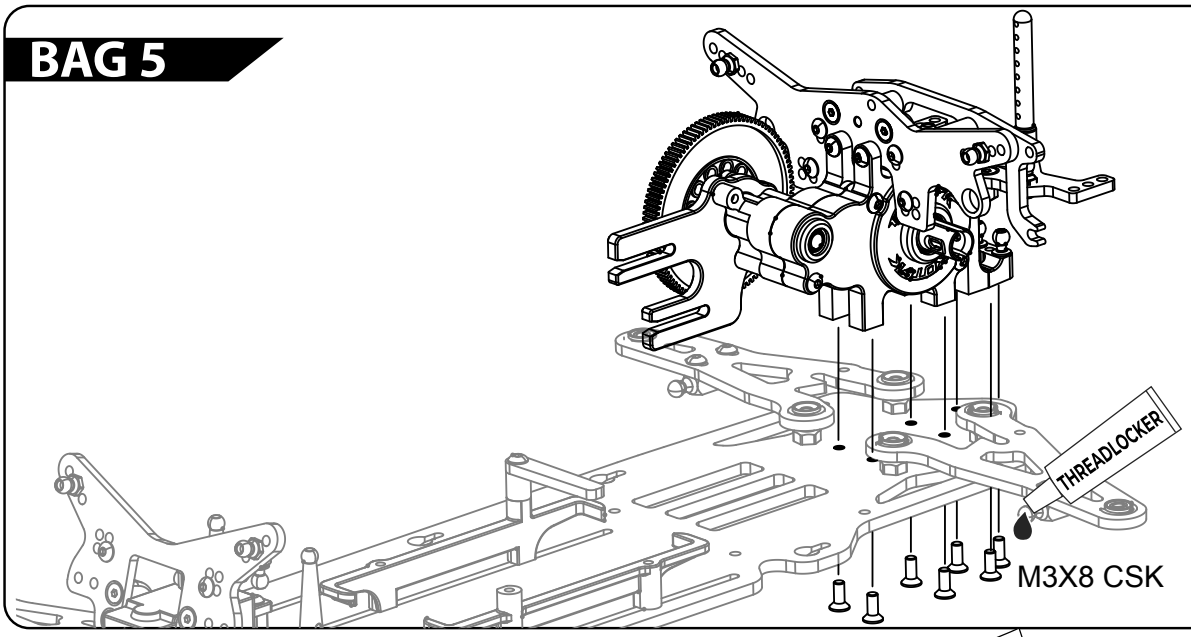
BAG 5


4061
4005
NOTE The CSK side faces up.
6006
M3X8 BH
M3X8 BH
M3X8 BH


M3X8 CSK

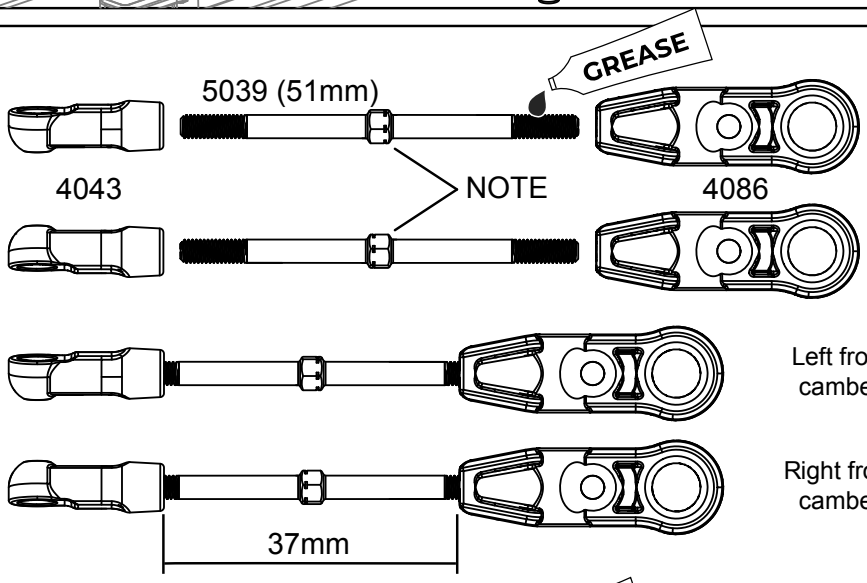

M3X12 BH

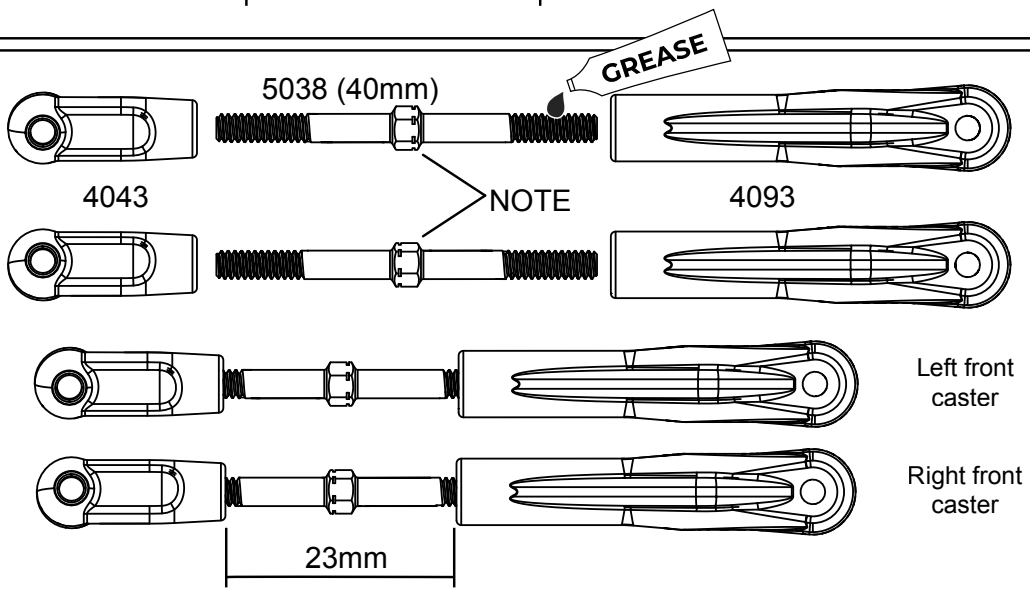
BAG 5



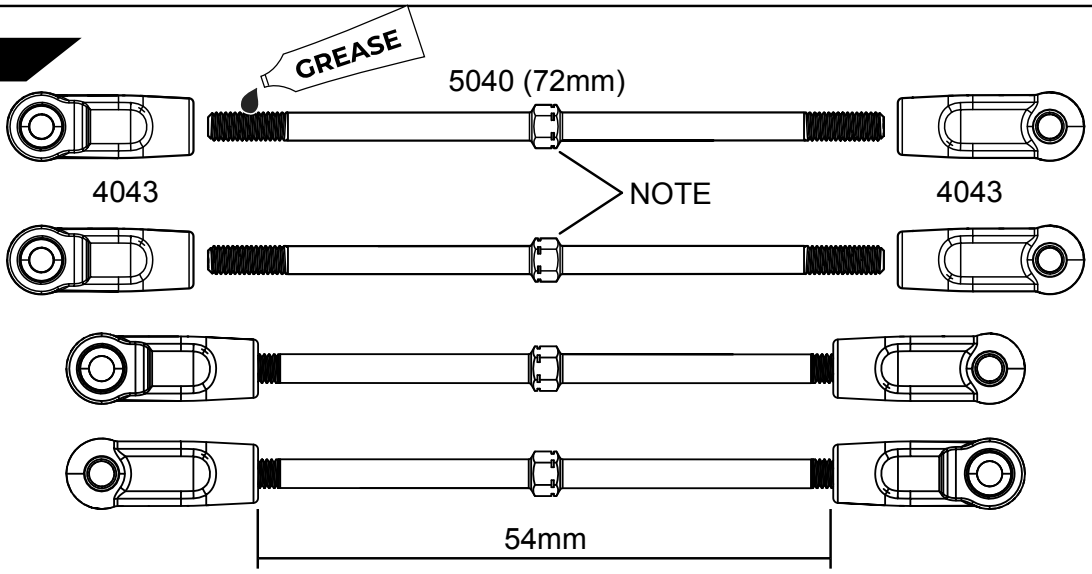
BAG 6

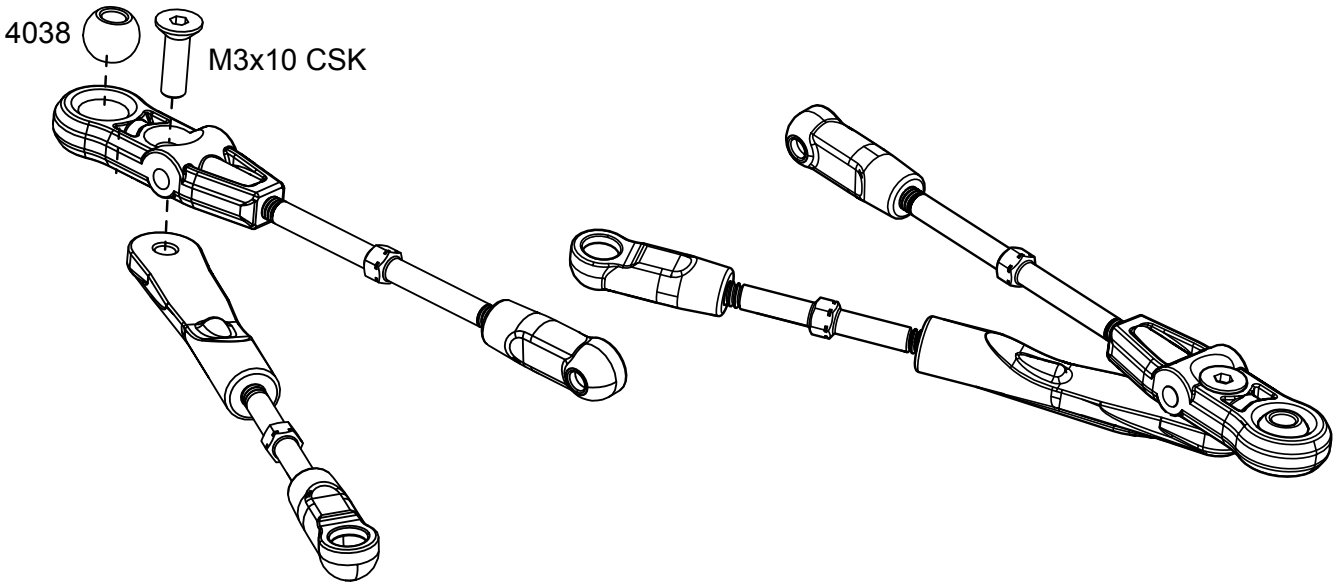
FRONT LINKS

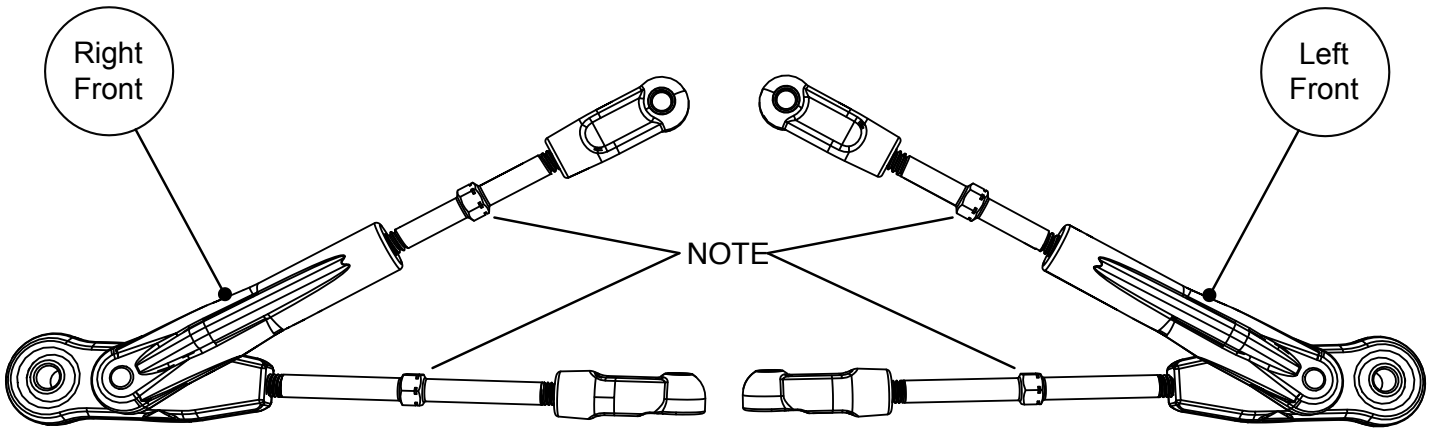




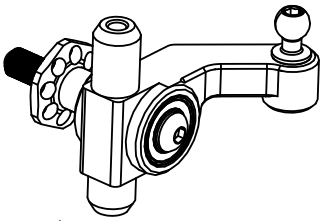
BAG 6


GREASE
5040 (72mm)
4043
NOTE
4043
54mm

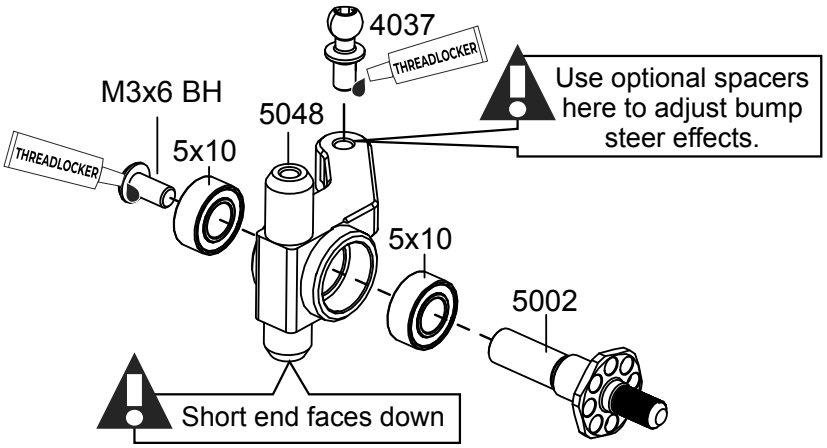

4038
M3x10 CSK

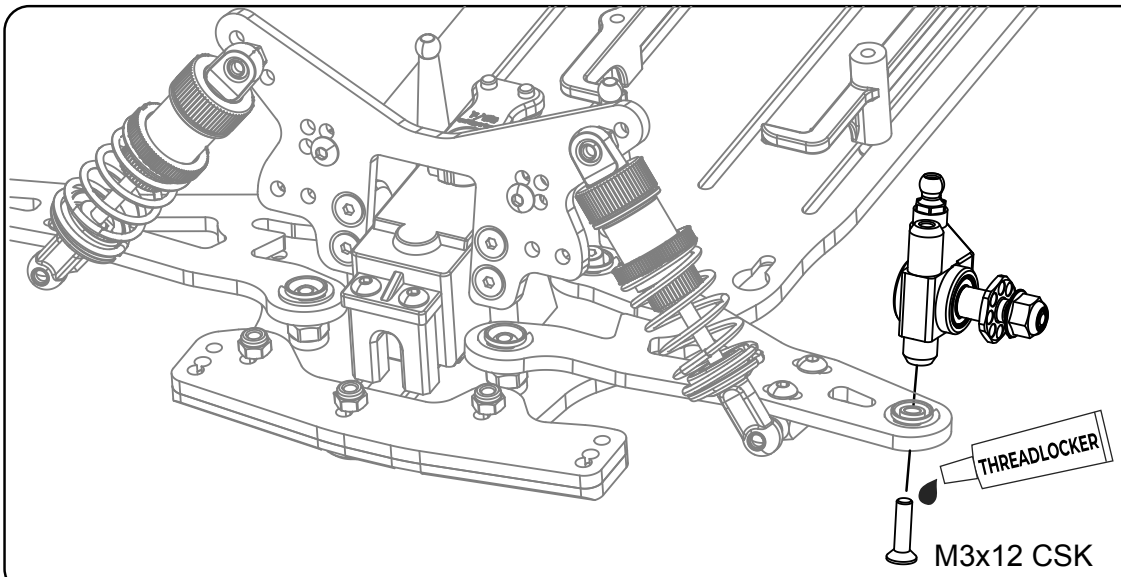

Right
Front
Left
Front
NOTE

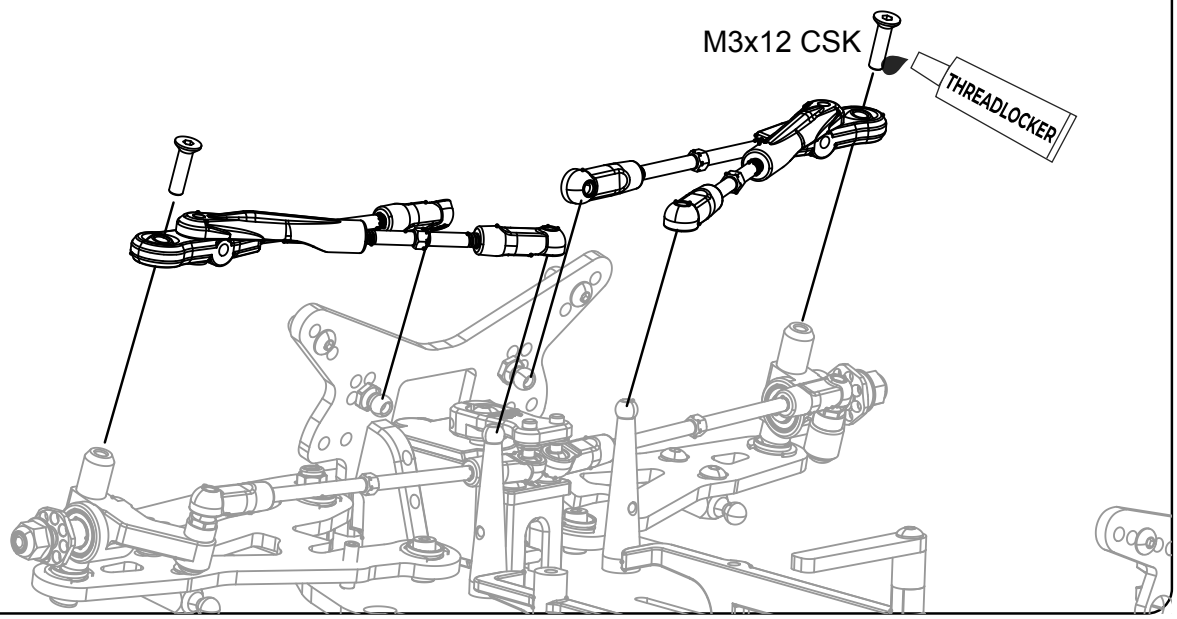
BAG 7

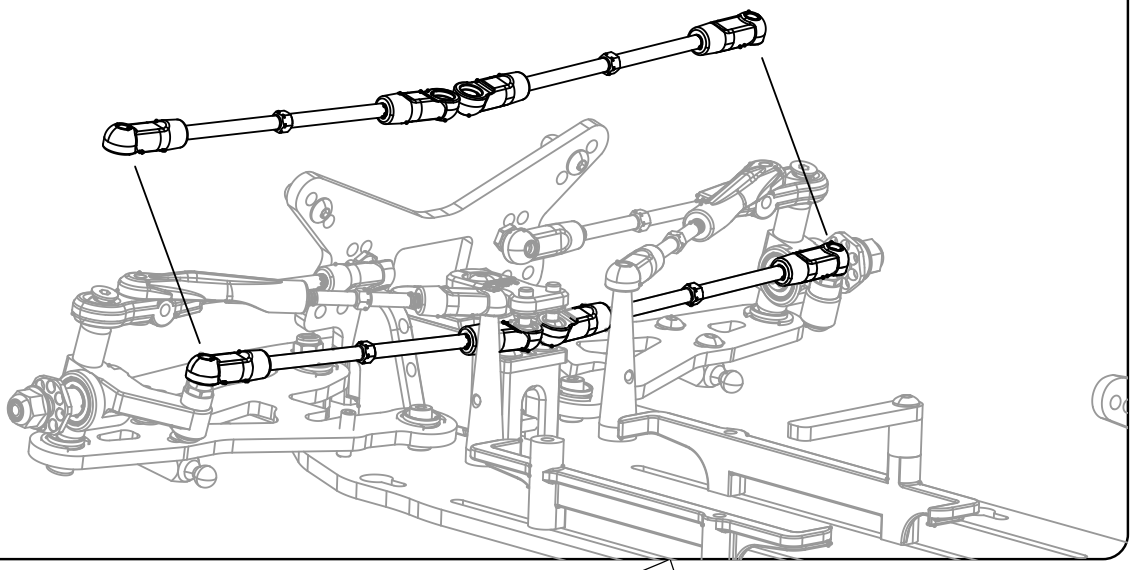


Repeat steps here for the right steering hub

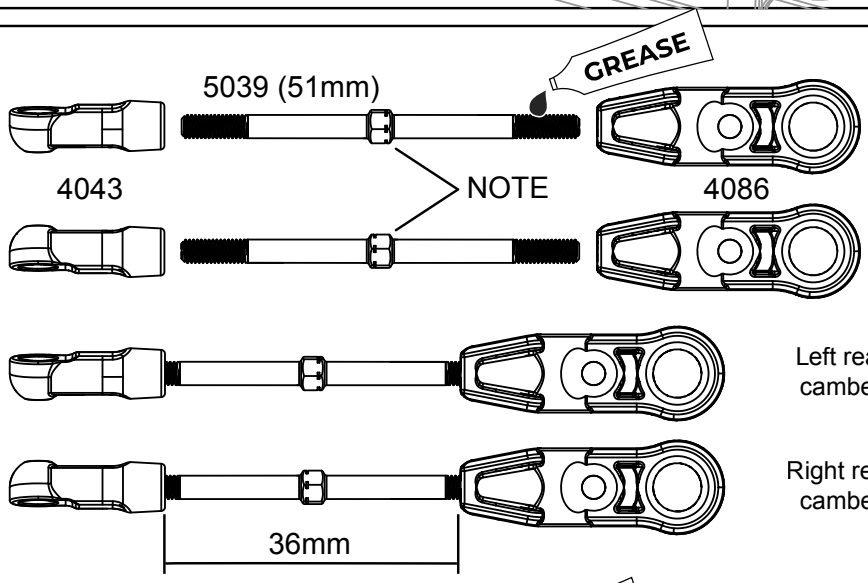


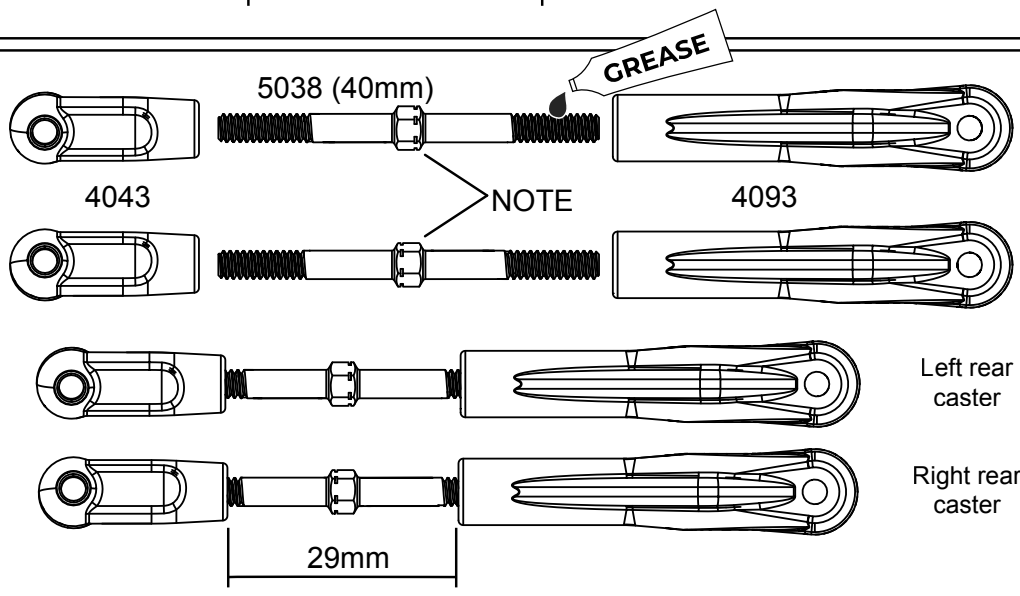




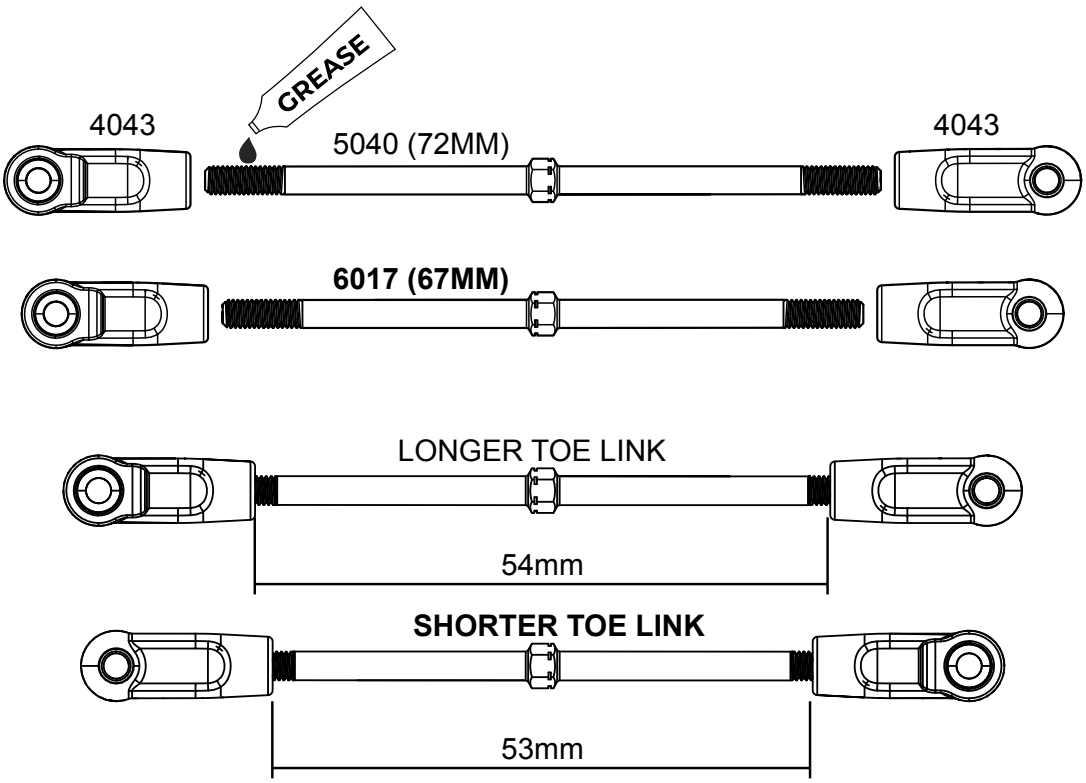


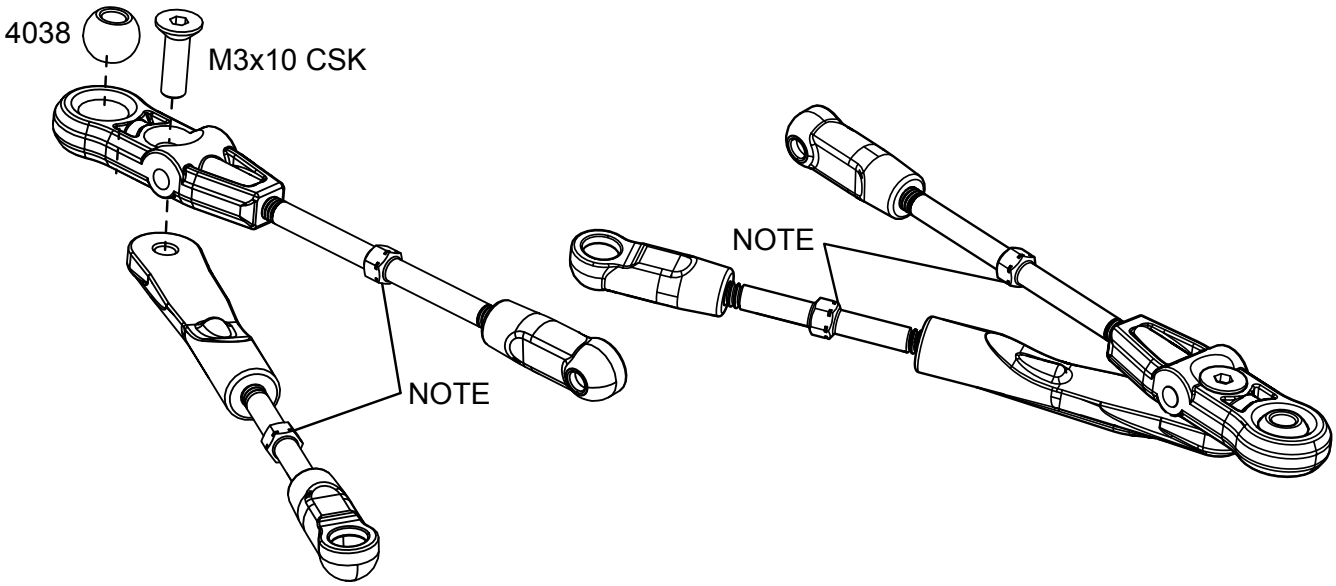
BAG 8
REAR LINKS



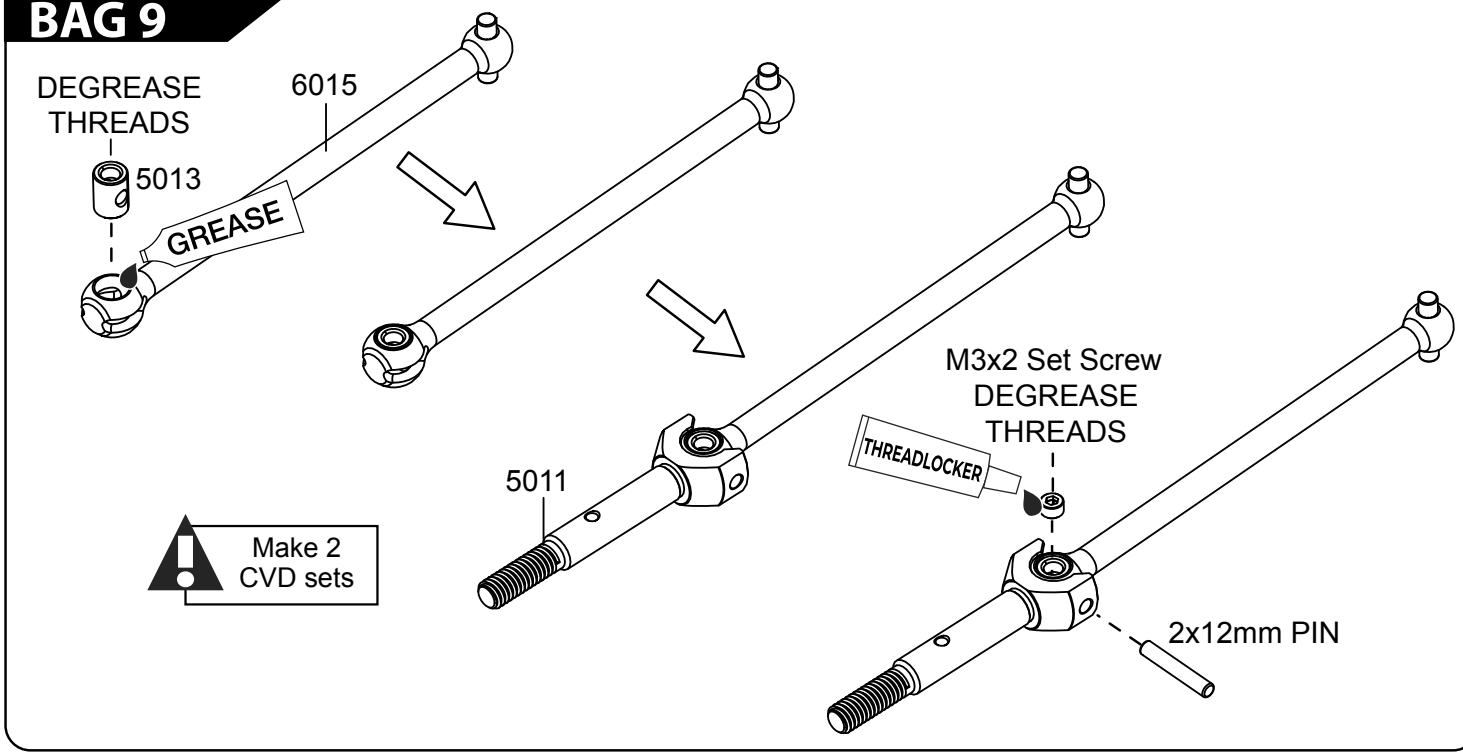


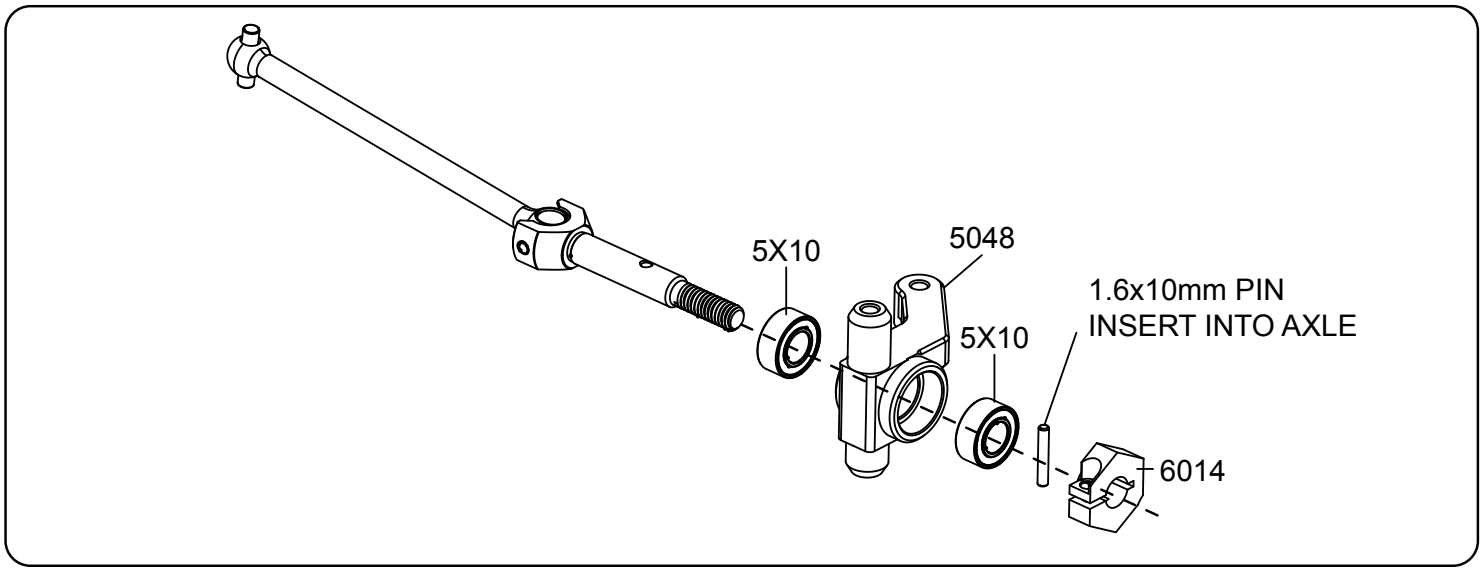
BAG 8

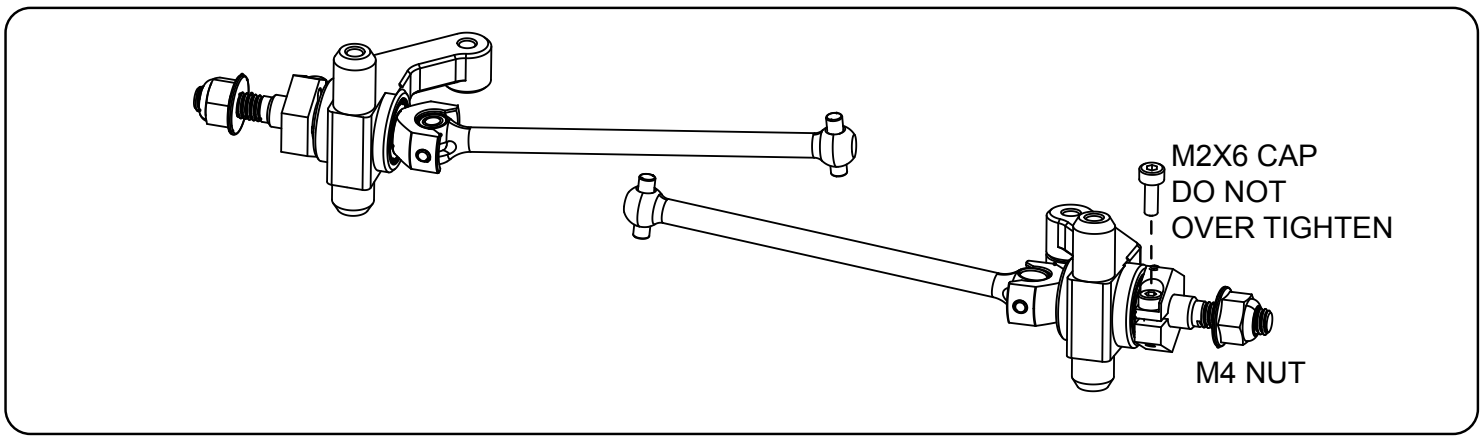

GREASE
4043
5040 (72MM)
4043
6017 (67MM)
LONGER TOE LINK
54mm
SHORTER TOE LINK
53mm


4038
M3x10 CSK
NOTE
NOTE

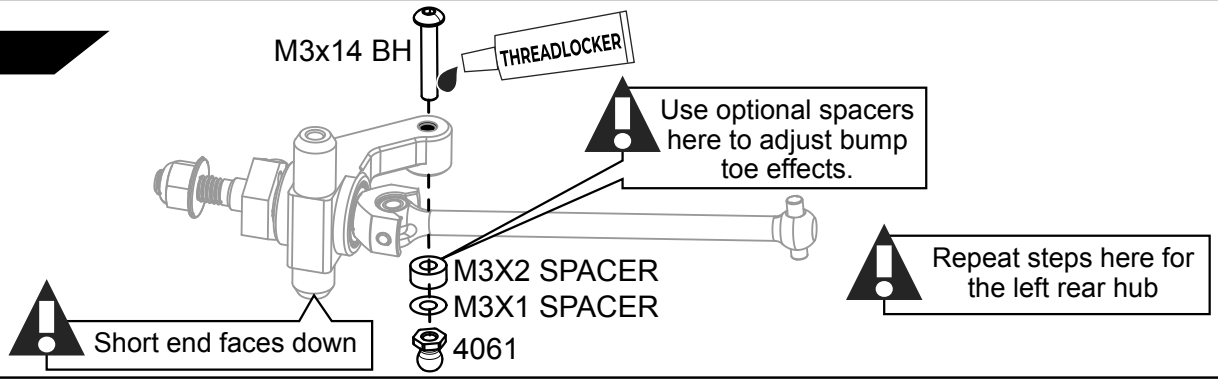
BAG 9

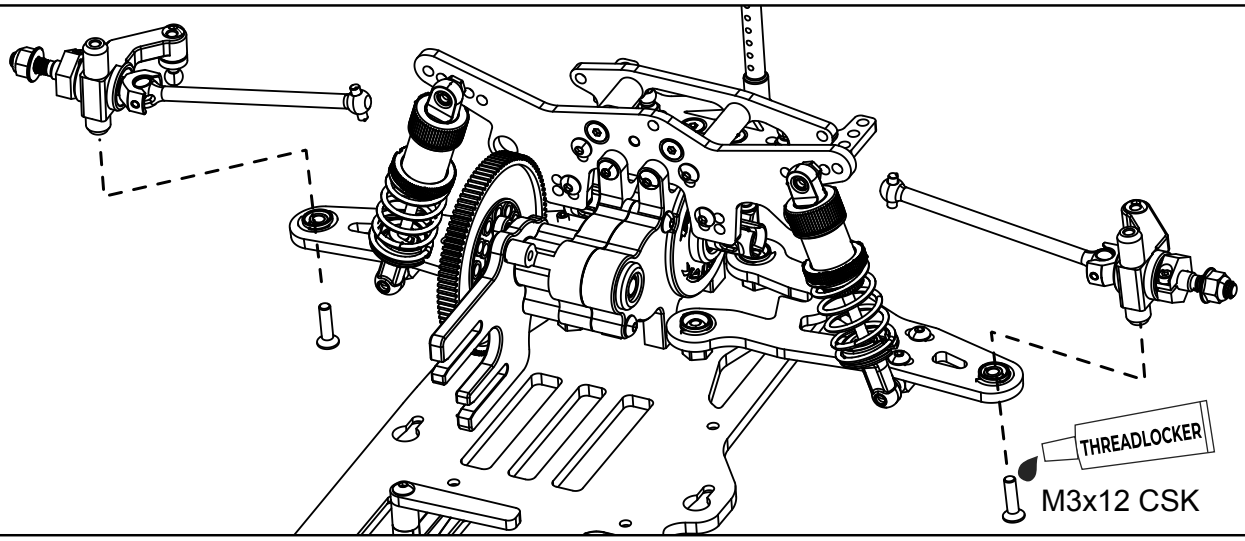

DEGREASE THREADS
6015
5013
GREASE
5011
Make 2 CVD sets
M3x2 Set Screw
DEGREASE THREADS
THREADLOCKER
2x12mm PIN

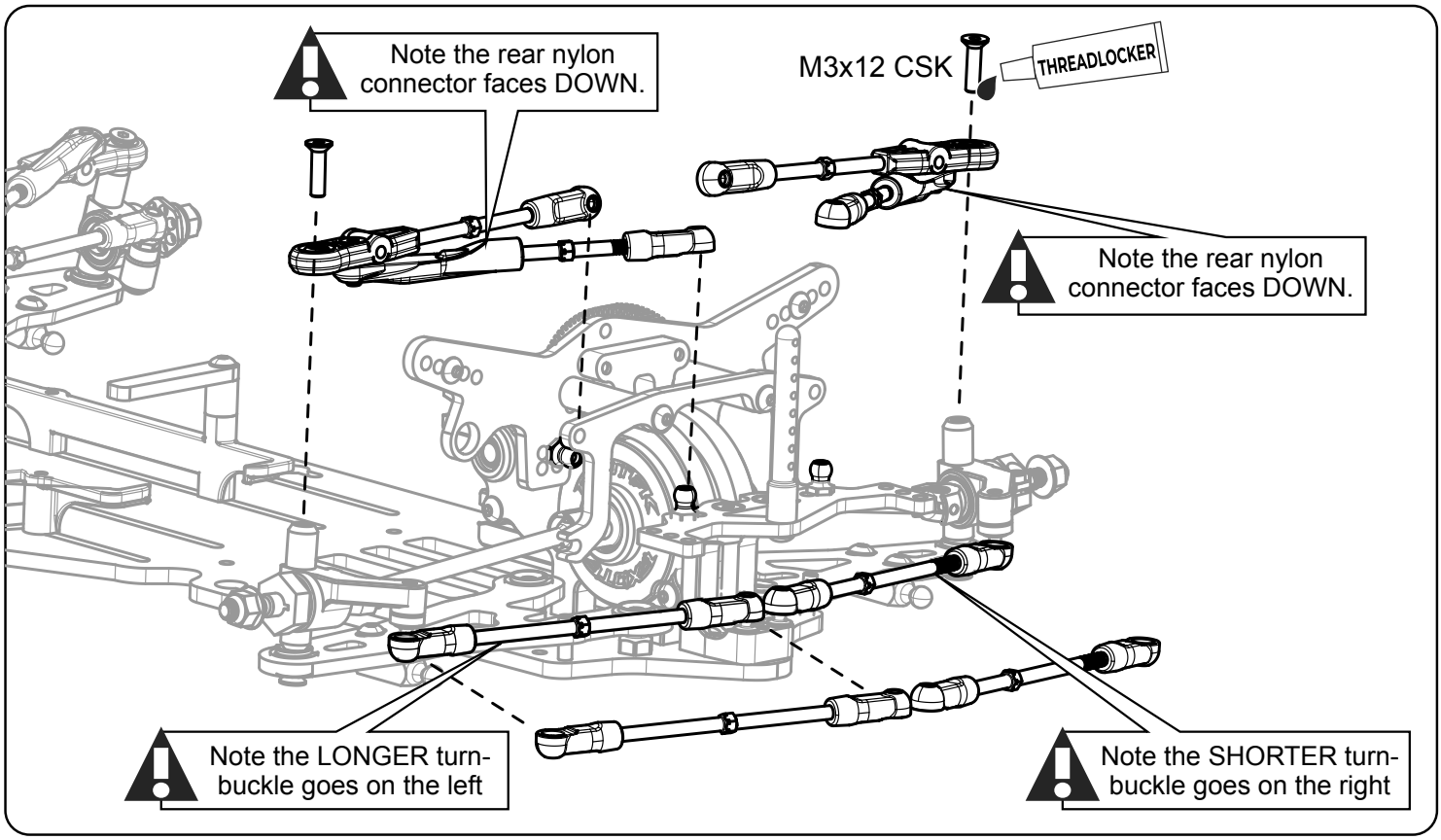

5X10
5048
5X10
1.6x10mm PIN
INSERT INTO AXLE
6014


M2X6 CAP
DO NOT
OVER TIGHTEN
M4 NUT

BAG 9

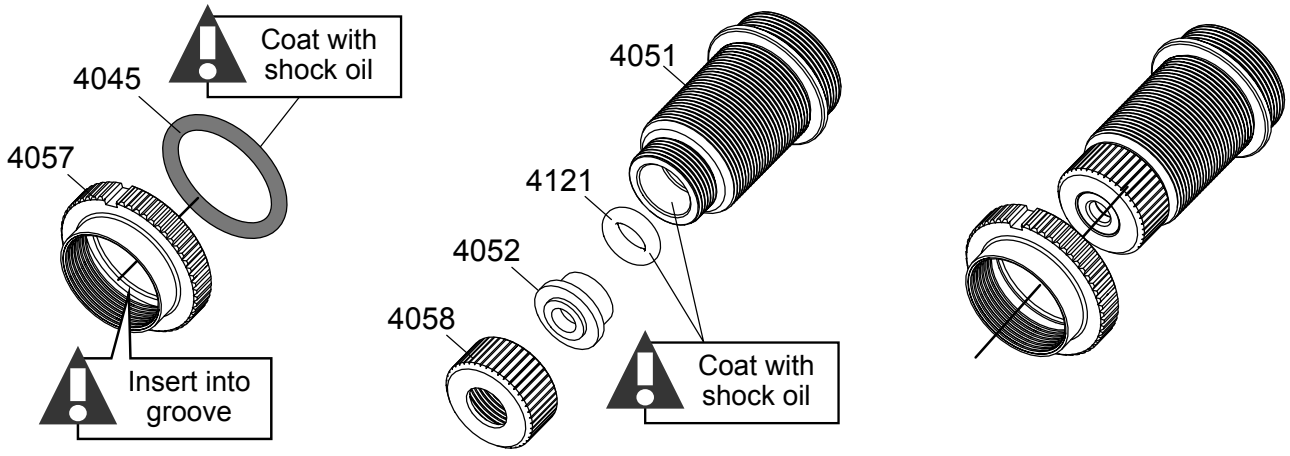

M3x14 BH
THREADLOCKER
Use optional spacers here to adjust bump toe effects.
Repeat steps here for the left rear hub
M3X2 SPACER
M3X1 SPACER
4061
Short end faces down

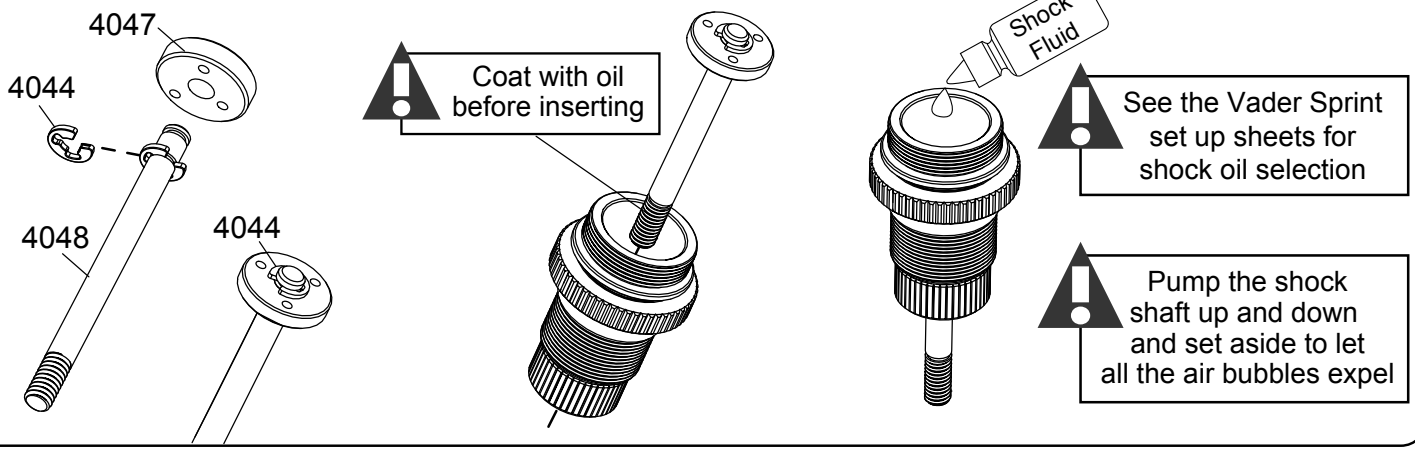

THREADLOCKER
M3x12 CSK


Note the rear nylon connector faces DOWN.
M3x12 CSK
THREADLOCKER
Note the rear nylon connector faces DOWN.
Note the LONGER turn-buckle goes on the left
Note the SHORTER turn-buckle goes on the right

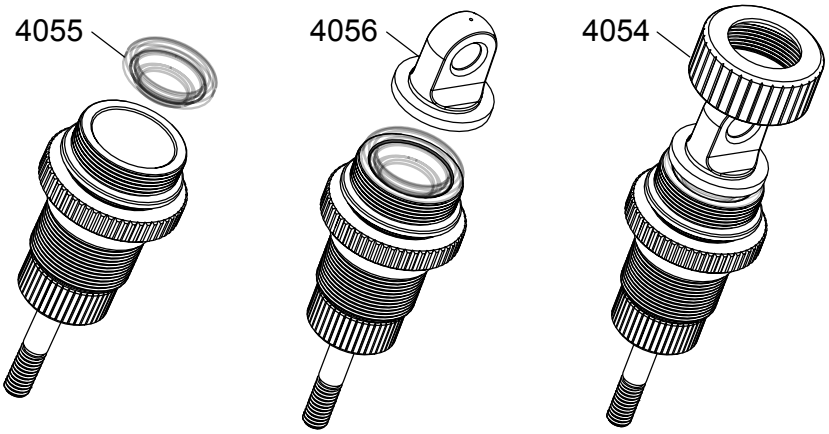
SHOCK BAG

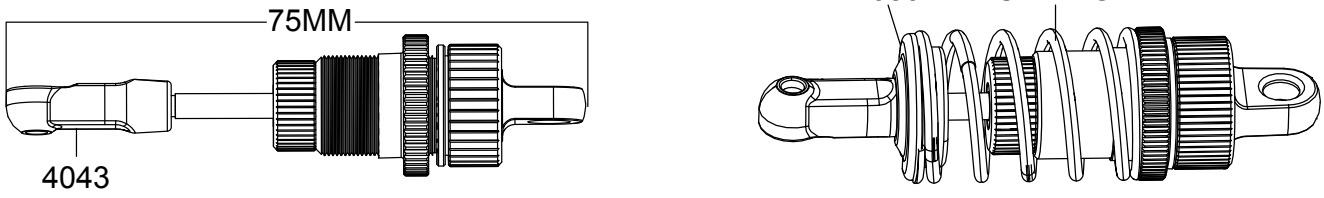
MAKE 4 SHOCKS

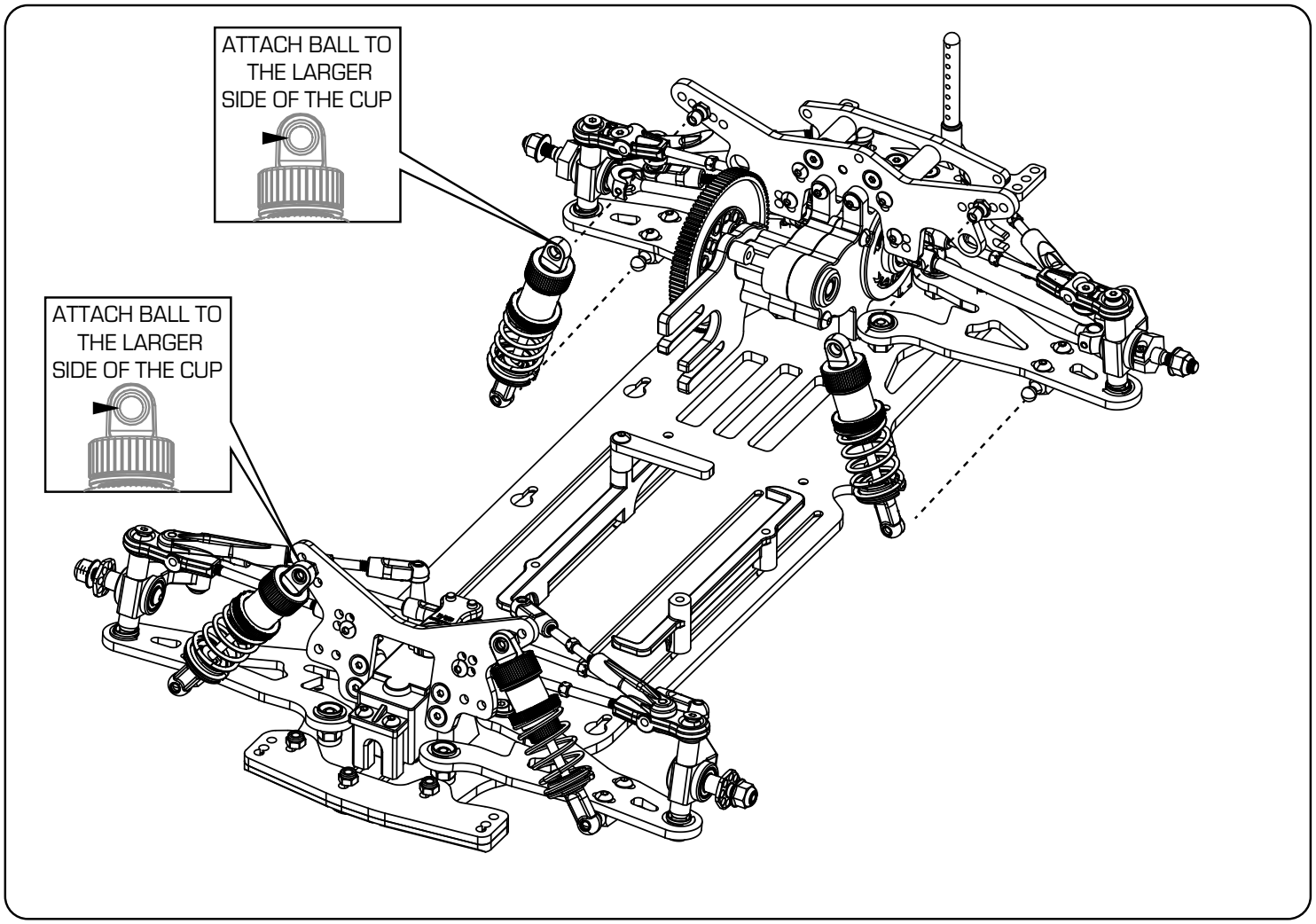


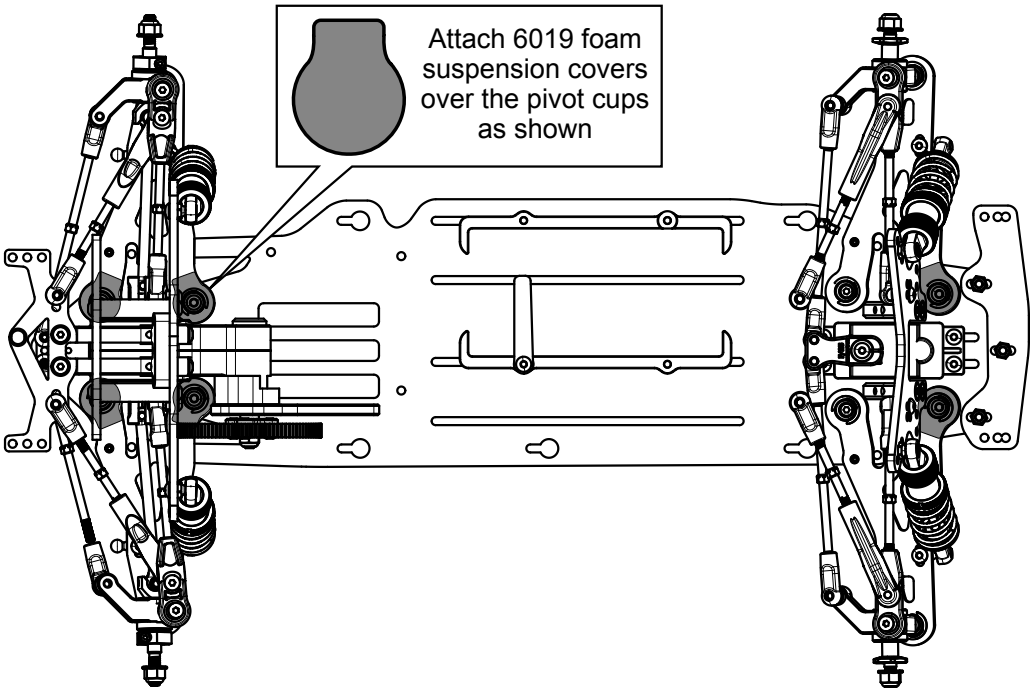


With the shaft extended out 75%, place the bladder on the top of the shock body, displacing the extra oil. While maintaining pressure on the bladder against the shock body, carefully lift one side of the bladder to allow any extra oil to escape. Place the shock cap on top of the bladder and secure it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






ATTACH BALL TO THE LARGER SIDE OF THE CUP
ATTACH BALL TO THE LARGER SIDE OF THE CUP


Attach 6019 foam suspension covers over the pivot cups as shown

SPRINT BODY INSTALL

BODY KITS ARE NOT INCLUDED

You must choose between the GFRP / Quasi Speed sprint cage #QS-1011 OR Custom Works sprint cage #CSW3430, not included. Select a matching sprint body set for eachcage as well. We prefer the Quasi Speed cage as it is the lightest.

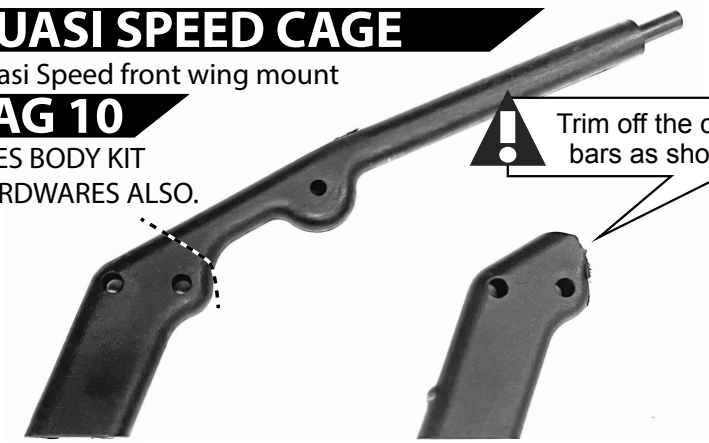
Before painting, trim and cut holes in all body parts and dry assemble for proper fit. Refer to the original manufacturer instructions for remaining body parts.

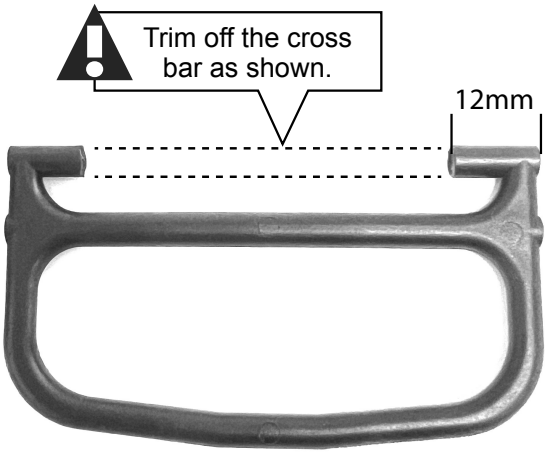
QUASI SPEED CAGE

Quasi Speed front wing mount

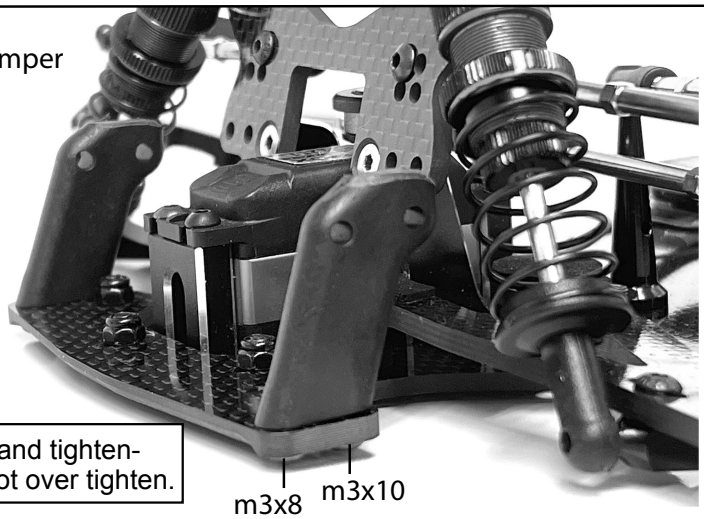
BAG 10

USES BODY KIT HARDWARES ALSO.

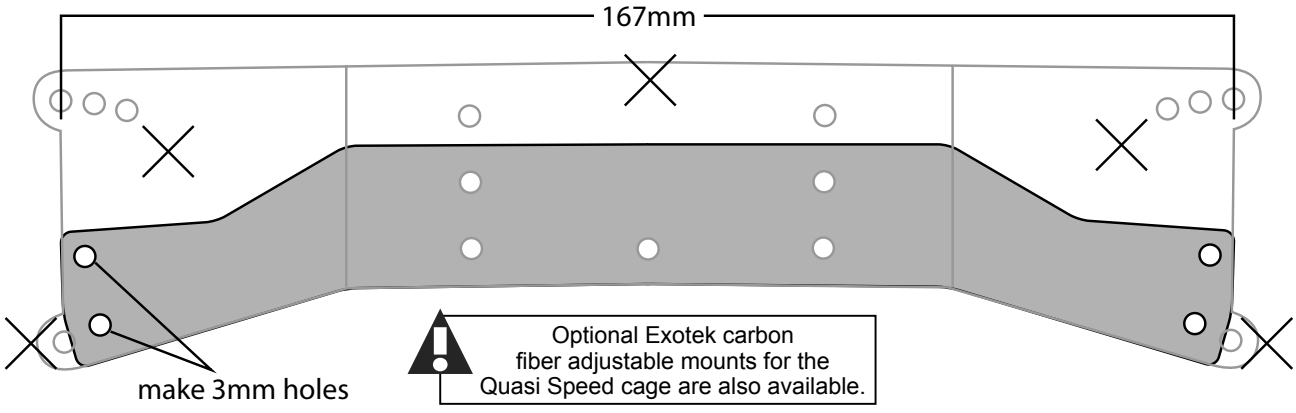




Attach 2 mounts to the bumper

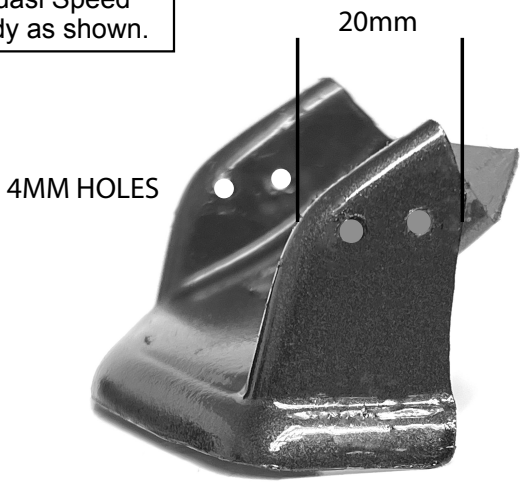


Quasi Speed front wing mount sheet. Trim off excess as shown.



Before painting, trim and cut holes in all body parts and dry assemble for proper fit. Refer to the original manufacturer instructions for remaining body parts.

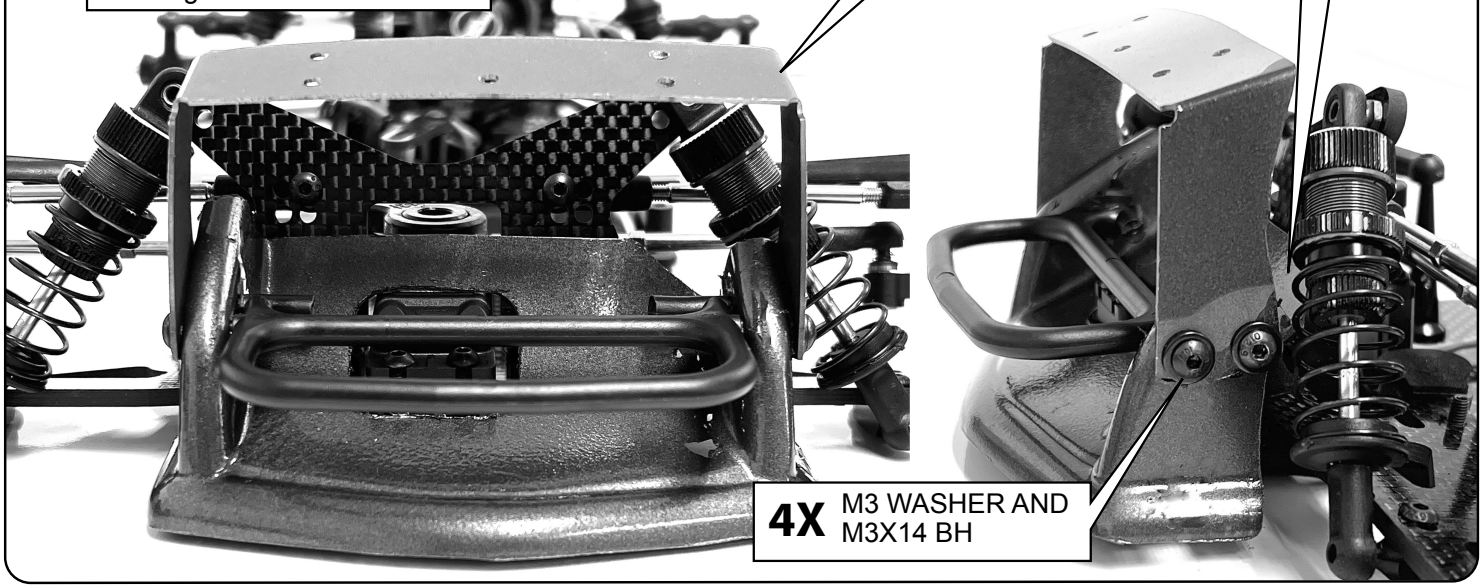
Trim Quasi Speed nose body as shown.



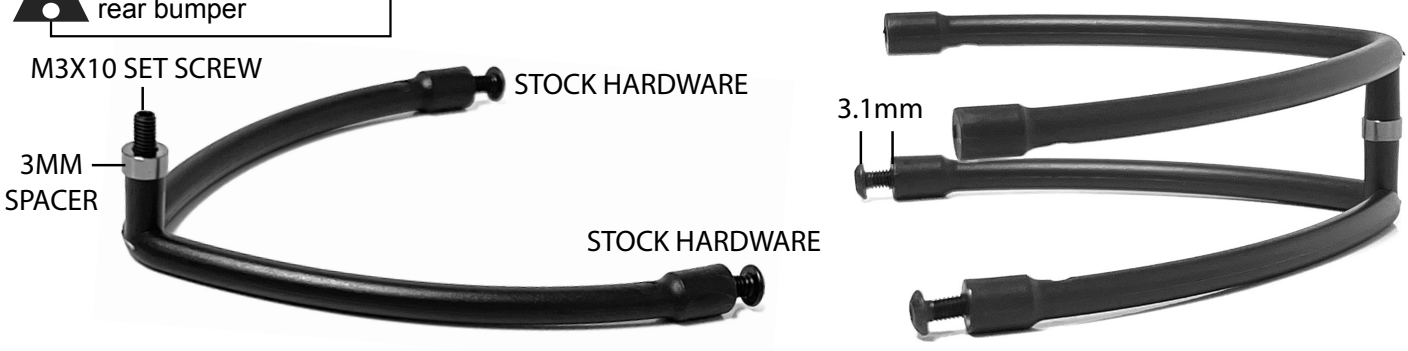
Assemble Quasi Speed wing mount and bumper using 4 screws and washers

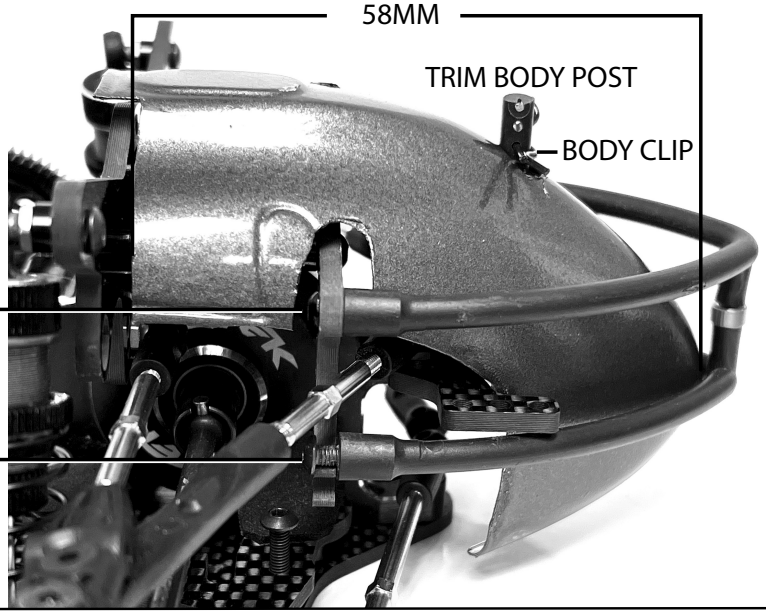
OPTIONAL Carbon wing mount available

Make sure body does not rub the shocks

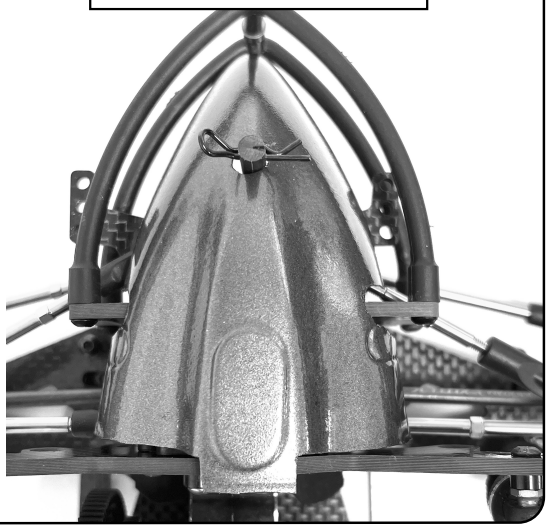


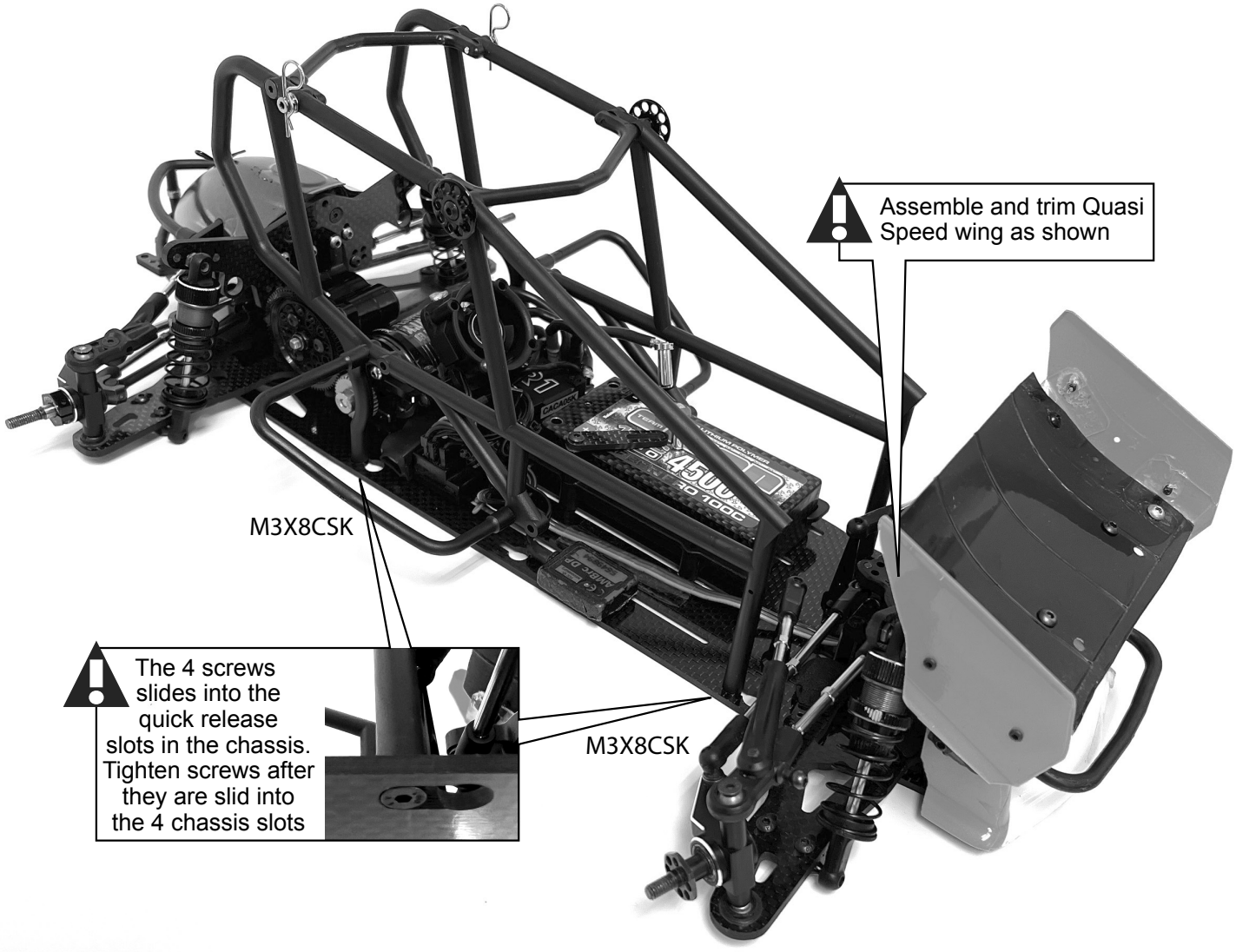
Assemble Quasi Speed rear bumper





Trim Quasi Speed tank as shown.



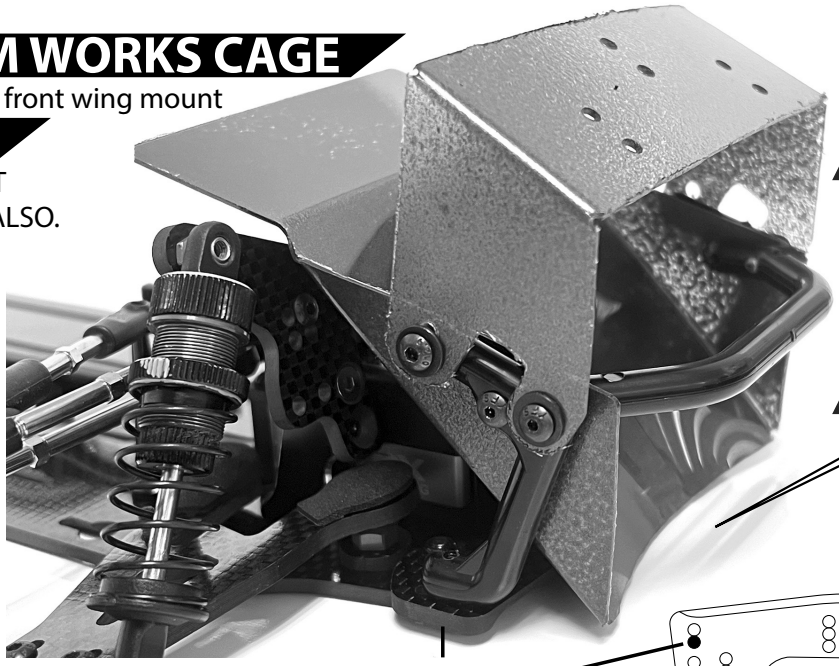


CUSTOM WORKS CAGE

Custom Works front wing mount

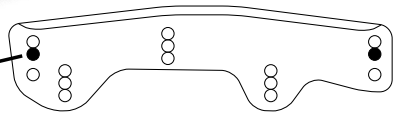
BAG 10

USES BODY KIT HARDWARES ALSO.



Assemble Custom Works wing mount and bumper using body kit 4/40 screws

Trim lower body as needed



M3X8 BH

Assemble Custom Works rear bumper

M3X10 SET SCREW

STOCK 4/40 HARDWARE

3MM SPACER

3.1mm

STOCK 4/40 HARDWARE

58MM

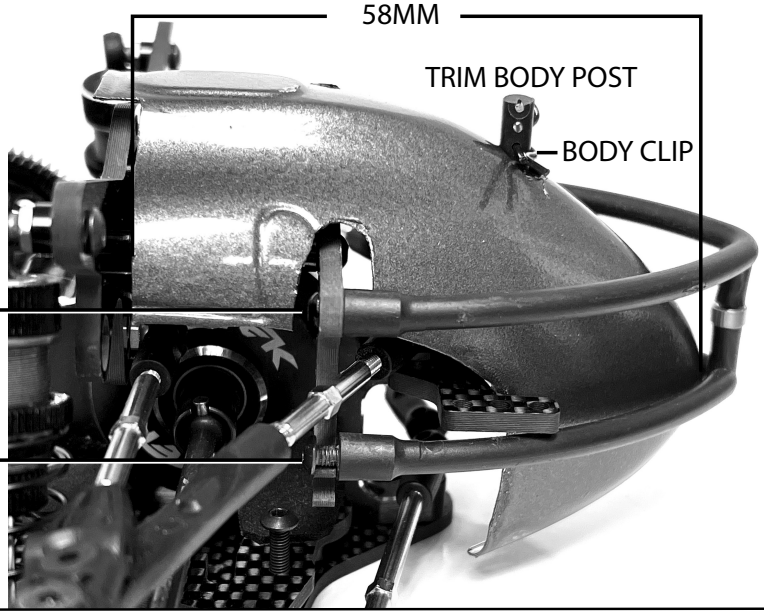
TRIM BODY POST

BODY CLIP

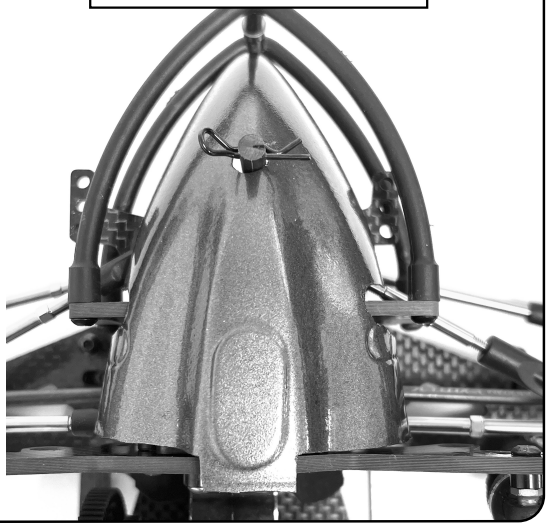
USE BALL SOCKET WRENCH

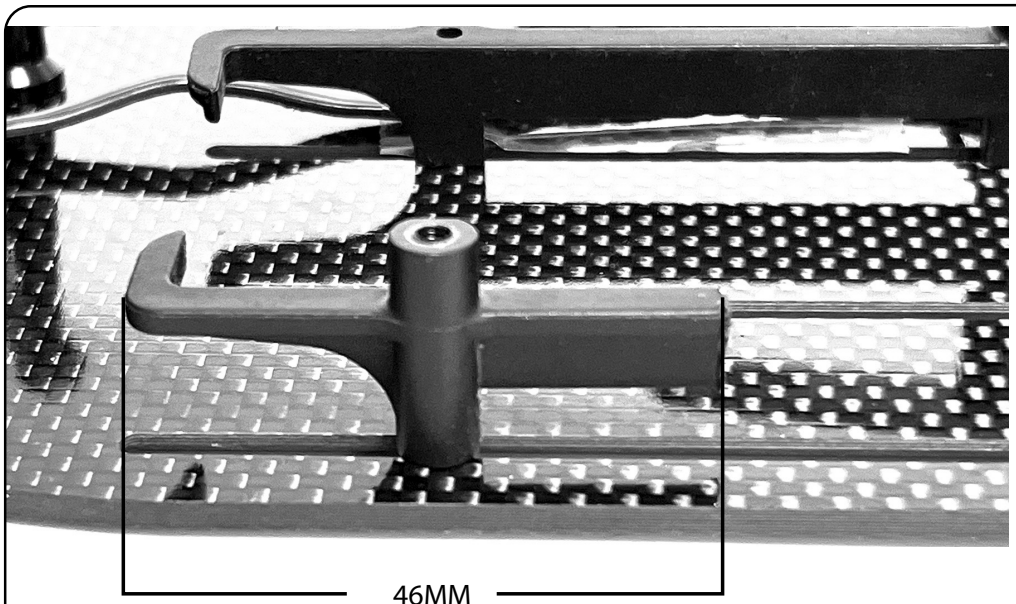
STOCK 4/40

SCREW SLIDES IN



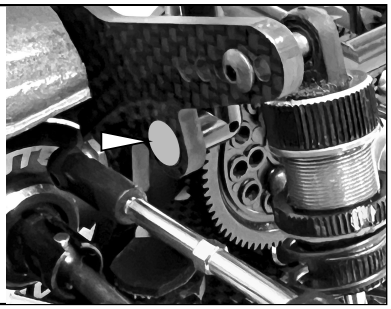
Trim Custom Works tank as shown.



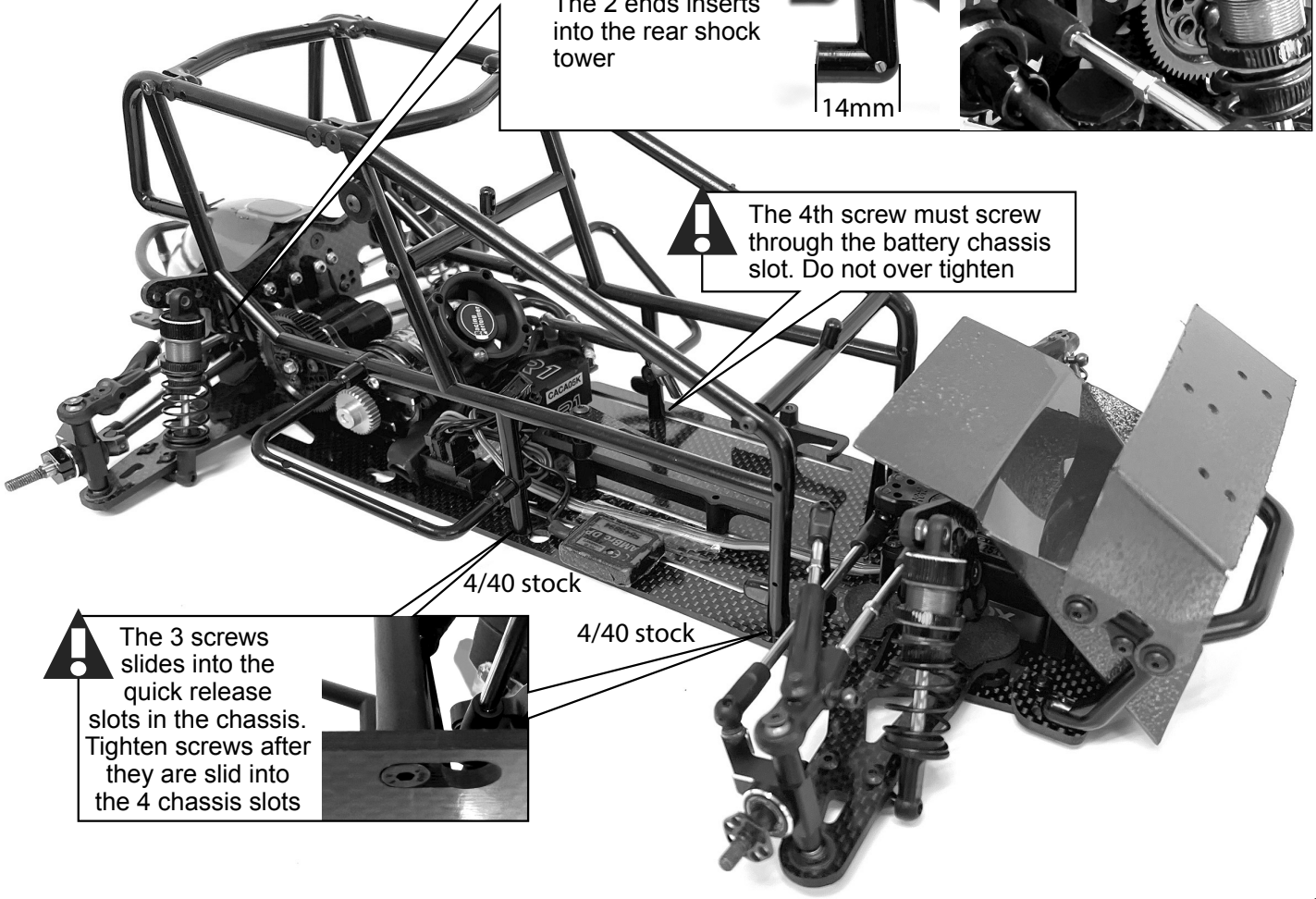


Only For Custom Works cages- cut the left battery cup and only use the front portion as shown for proper cage clearance.

Trim rear of cage as shown for turnbuckle clearance. The 2 ends inserts into the rear shock tower



The 4th screw must screw through the battery chassis slot. Do not over tighten



The 3 screws slides into the quick release slots in the chassis. Tighten screws after they are slid into the 4 chassis slots

SUGGESTED LAYOUT

OPTION PARTS

EXOTEK 2279 VADER
GEAR DIFF SET

EXOTEK 5041 VADER
WIDE HEX SETS

EXOTEK OPTION SPRINGS
2289 PINK SPRING 13x31mm 4.5lb
2290 RED SPRING 13x26mm 5lb
2291 YELLOW SPRING 13x25mm 6lb
2292 ORANGE SPRING 13x25mm 7lb
2293 BLUE SPRING 13x25mm 8lb

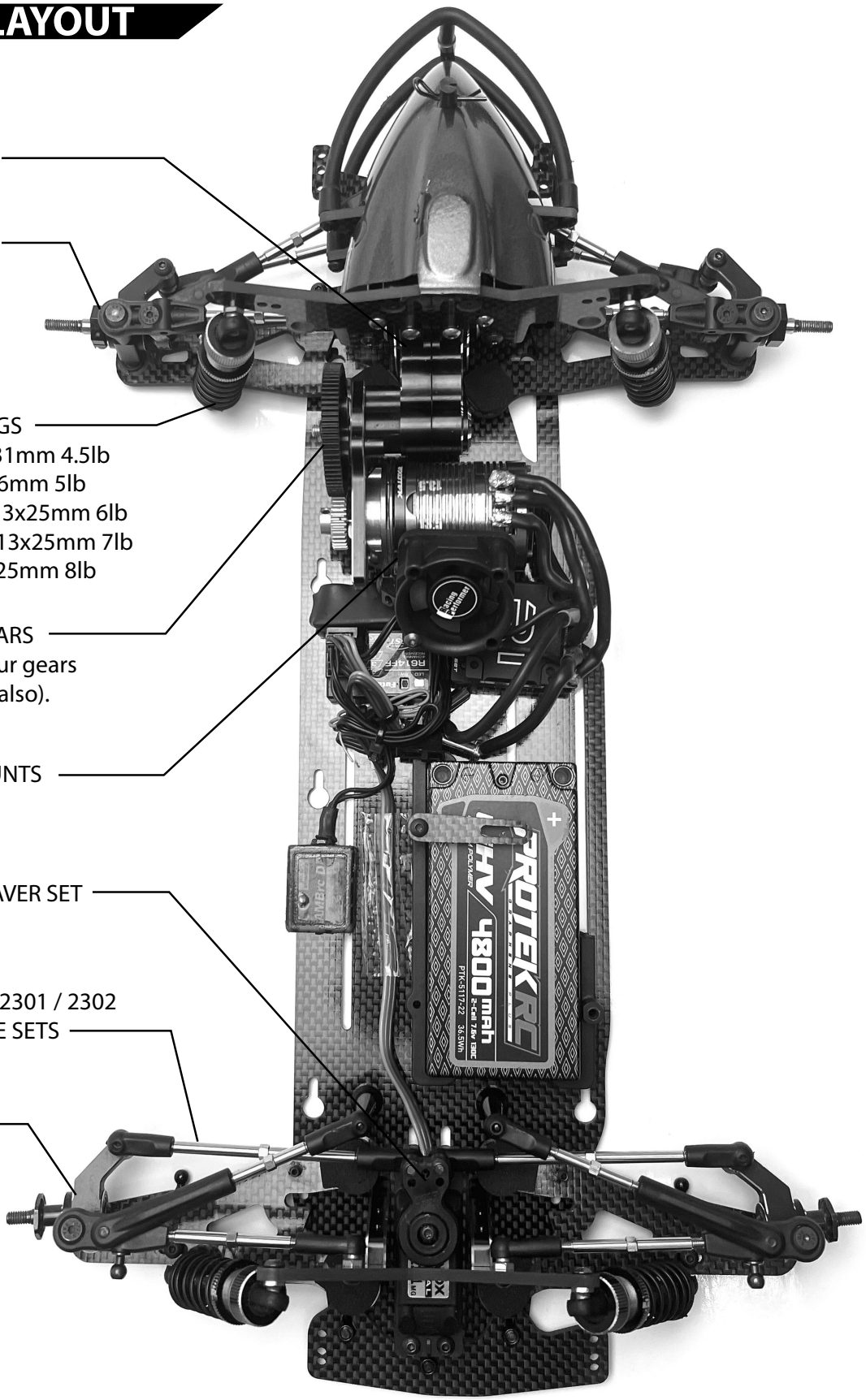
EXOTEK FLITE SPUR GEARS
(Kimbrough pan car spur gears
or similar may be used also).

EXOTEK 1718 FAN MOUNTS

EXOTEK 2283 SERVO SAVER SET

EXOTEK VADER SPRINT 2301 / 2302
TITANIUM TURNBUCKLE SETS

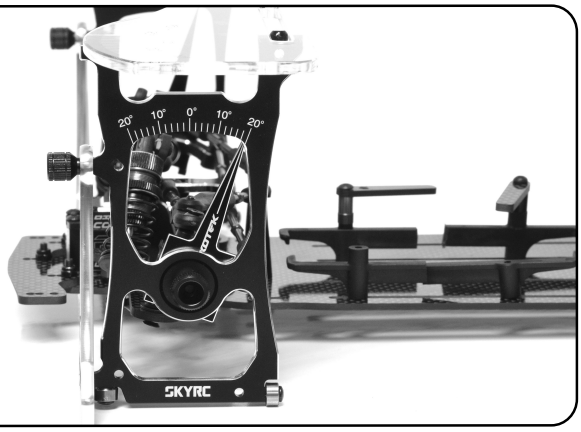
EXOTEK 2204 HYBRID
CERAMIC BEARINGS



PRO TIPS

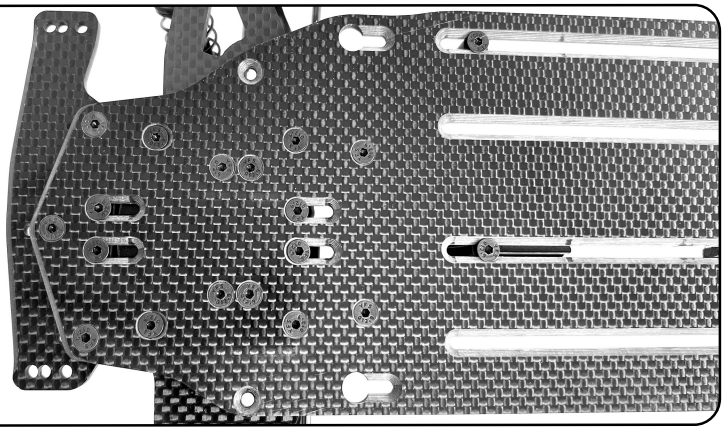
CASTER DOODLES

Use Caster Doodles #2200 and 1/10 off road set up stations (SkyRC, Hudy etc)(NOT TC style) to help set your caster, camber and toe angles for both the front and rear end of the Vader Sprint.



ACKERMAN SETTING

To adjust the ackerman, simply slide the servo forward or back in the chassis.
Sliding the servo towards the rear creates more ackerman.
Sliding the servo towards the front creates less ackerman.
More ackerman generally has less steering and makes the car more stable. Less ackerman makes the car have more aggressive handling and steering.

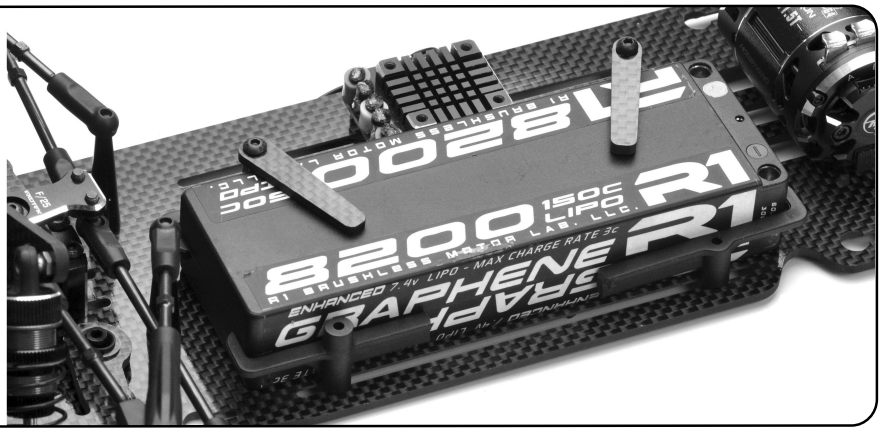


BATTERY CUPS

Splitting of the cups as shown will allow the use of standard long batteries but will still allow you to use shorty packs as well by simply sliding the cups back closer.
Add the optional lipo tab.

FULL SIZE BATTERY

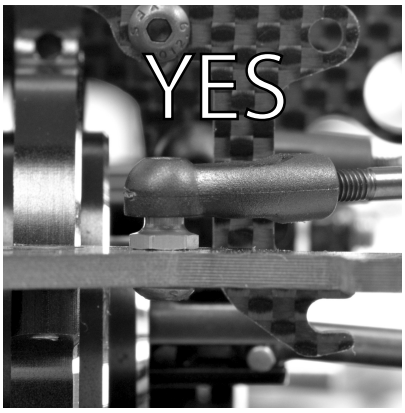
Splitting the right side battery cup and moving the esc allows you to run a full size lipo as shown.
Add the optional lipo tab.

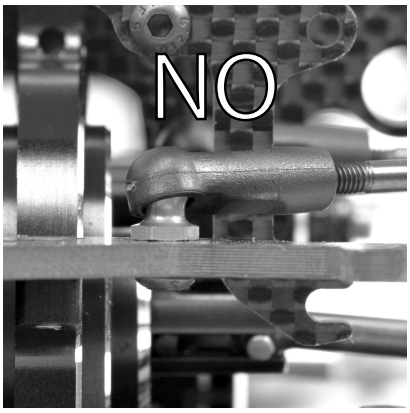


PRO TIPS

CUPS

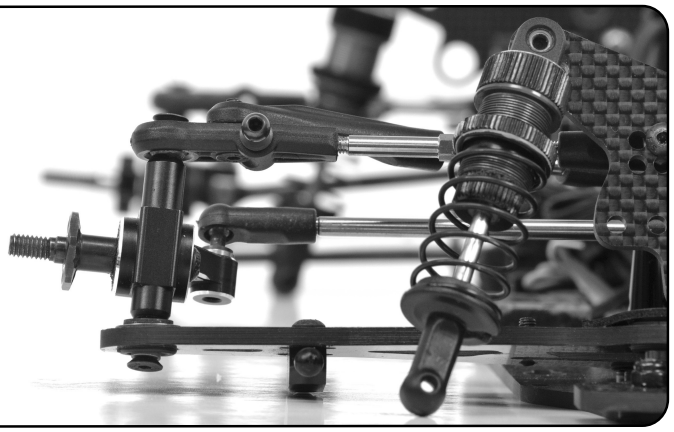
It's important that the cups are position level with the metal balls otherwise binding of the suspension will occur





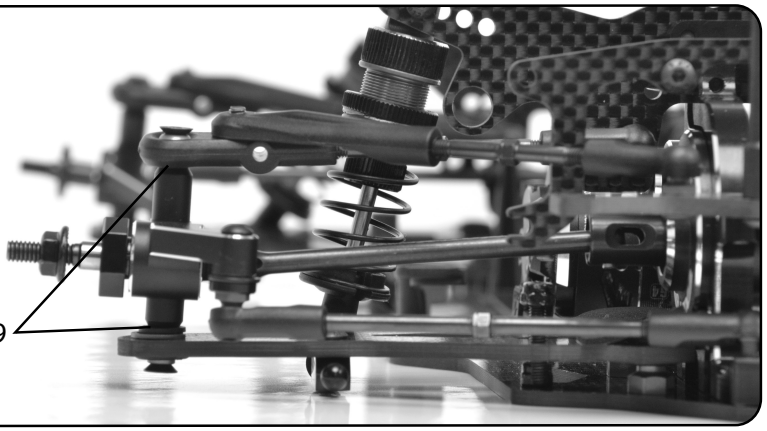
SUSPENSION

Before the big race be sure to check the movement of the suspension. Make sure it moves freely by removing the shock from each arm and then articulating the suspension up and down. Check for any binding points especially with the ball cups as noted in the tip above.



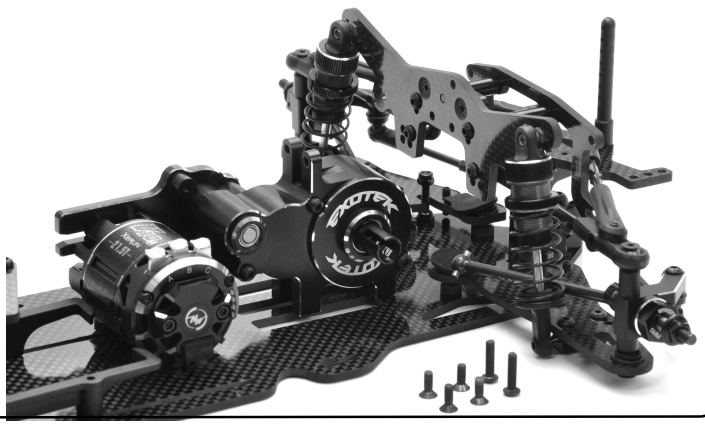
ROLL CENTERS

Roll centers can be adjusted either by spacers under the arms or hubs or via the shock tower mounts.
Be careful when using large diameter spacers under the hubs as that will bind the suspension movement.



GEARBOX

The gear box can be removed without touching and changing any of your rear suspension settings by simply removing the 6 gearbox screws and sliding the motor and gear box forward.



EXOTEK
RACING