



# **NT48** 2.0

**BUILDING  
INSTRUCTIONS**

# Introduction



Thank you for purchasing the Tekno RC NT48 2.0 1/8th 4WD competition nitro truggy kit. We are always working on new projects, so please check our website regularly at [www.teknorc.com](http://www.teknorc.com) or visit us on Facebook at [www.facebook.com/teknorc](http://www.facebook.com/teknorc) for all the latest news, parts, and kits.

Take your time! When you work your way through these building instructions, keep an eye out for the following important indicators below:

- **RED TEXT** - *This indicates important areas of the build process that should be observed.*



## Thread Lock icons

*Thread lock is always used when a screw is inserted into any metal part. (Included with kit)*



## Grease icons

*Grease is usually used on areas with movement and for sealing. (Included with kit)*

- **YOUTUBE** - *We also have many useful build videos on Youtube, so be sure to check these out!*  
<https://www.youtube.com/c/teknorc>

## Additional equipment and parts needed:

- Paint for body
- .21 nitro engine, tuned pipe, manifold and glow plug
- High torque steering & brake servos (at least 300 oz/in)
- RX battery, switch and harness
- 1/8th scale truggy tires, wheels & CA glue (or premounts)
- Fuel bottle, fuel, 1/8th buggy starter box and glow ignitor

## Tools needed:

- Hex drivers 1.5mm, 2.0mm, 2.5mm
- Nut drivers 5.0mm, 5.5mm, 7.0mm
- Hobby knife
- Needle-nose pliers
- Shock tool (TKR1115) OR adjustable (Crescent) wrench (for shock assembly)
- 17mm Wheel Wrench (TKR1116)
- 4mm turnbuckle wrench (TKR1103) - 5.5/7.0 two sided wrench (TKR1119)

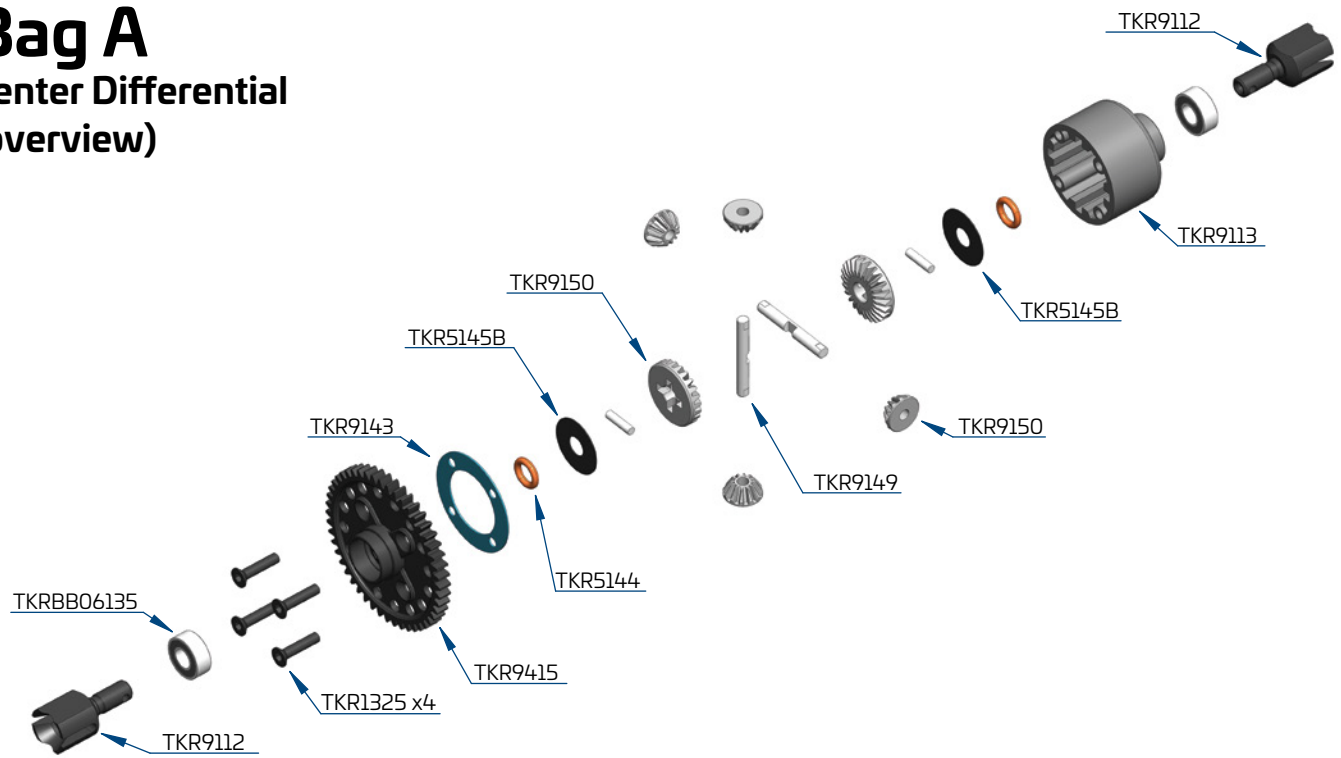
**Disclaimer:** Tekno RC is not responsible or liable for any property or personal damage, loss, or injury incurred as a result of using this product. This kit is meant for use by persons 14 years of age or older and in the strict confines of a legally permitted RC track or facility.

**Warnings:** Always double-check that your radio gear is working properly before operating vehicle. Never operate the vehicle indoors (unless the RC track is an indoor facility). Use caution while operating vehicle so as not to collide with people who may be turn marshalling or who might otherwise not be aware that a fast moving RC vehicle is in the vicinity.

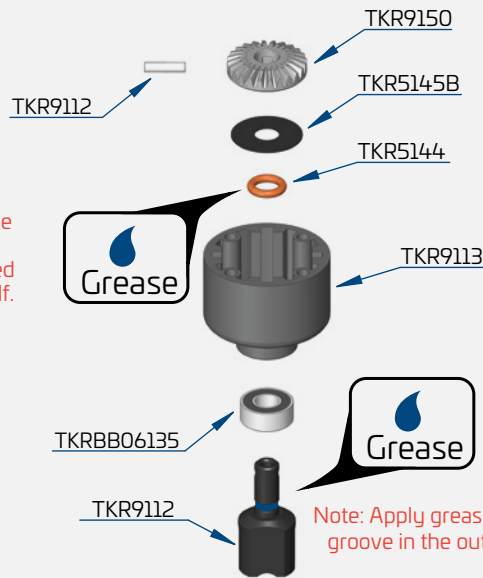
**Warranty:** We warrant that the parts included in this kit are free from defects. If you find a defective part in your kit, please contact us at [info@teknorc.com](mailto:info@teknorc.com) and we will help to resolve the issue. If you modify any part prior to contacting us, the warranty claim will be void. We do not warranty parts that may be broken during operation of the vehicle or otherwise. Refer to the end of this instruction manual for a listing of spare/replacement and option parts. All spare parts and other info are available on our website ([www.teknorc.com](http://www.teknorc.com)) and through our network of domestic and international dealers and distributors.

# Bag A

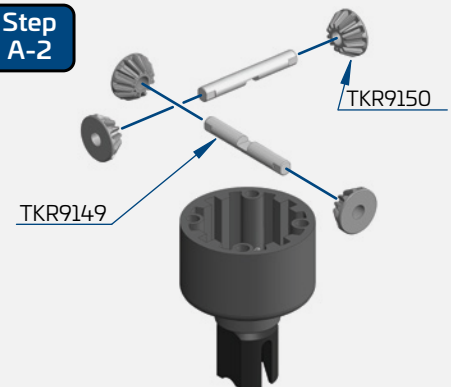
## Center Differential (overview)



### Step A-1

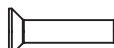



### Step A-2




### Step A-4



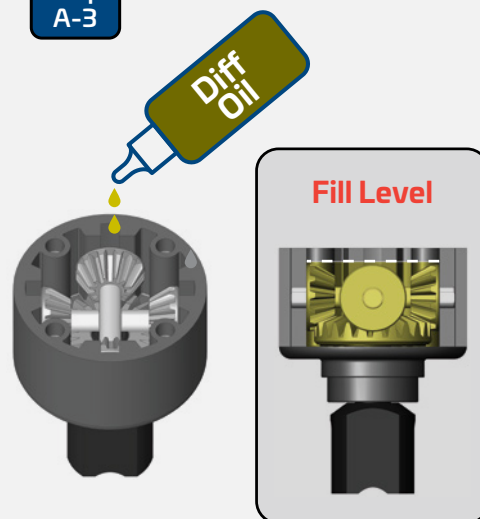
 x4  
TKR1325  
M3x14mm Flat Head Screw

 x2  
TKR5144  
Differential O-rings

 x2  
TKR5145B  
Differential Shims (6x17mm)

 x2  
TKRBB06135  
Ball Bearing (6x13x5)

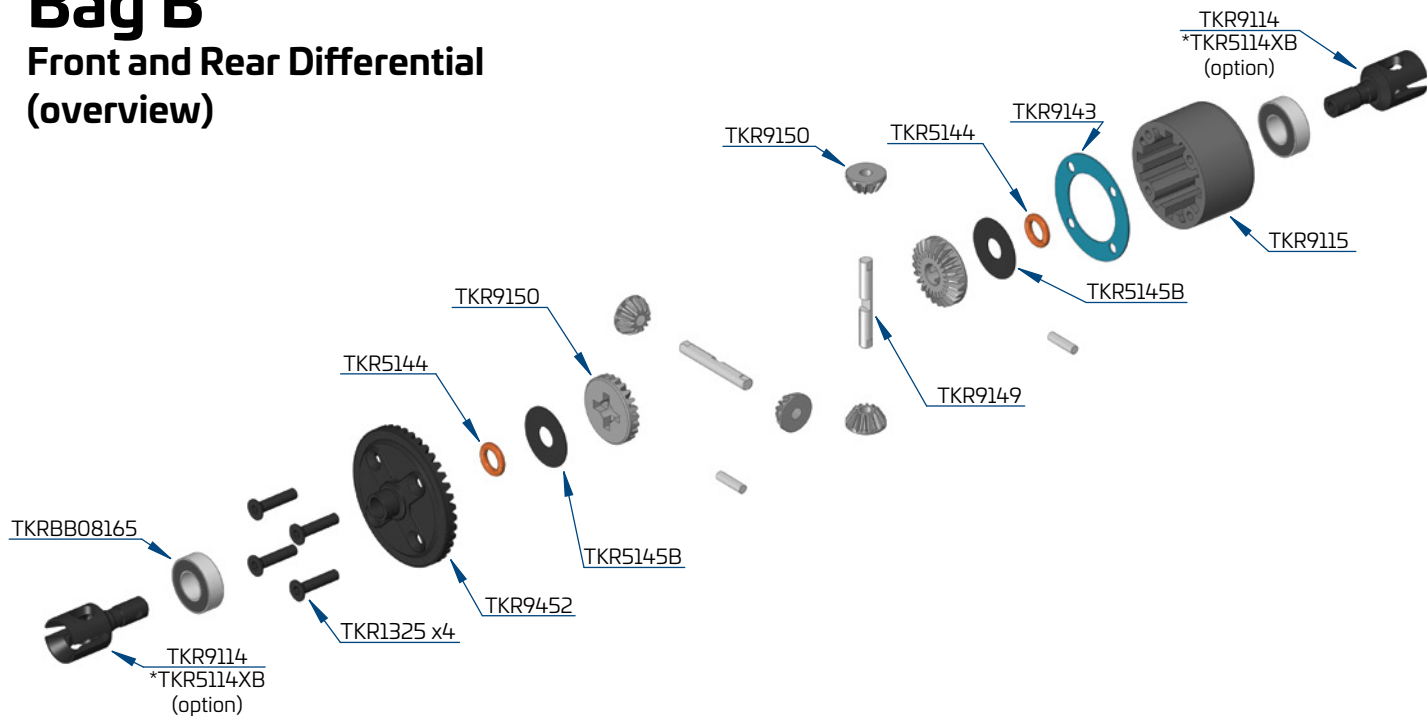
### Step A-3



Fill with 20,000 CST oil to  
1mm below full  
DO NOT OVER FILL

# Bag B

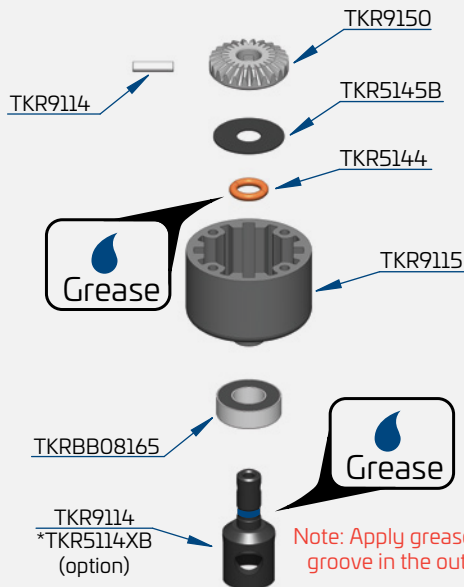
## Front and Rear Differential (overview)



### Step B-1

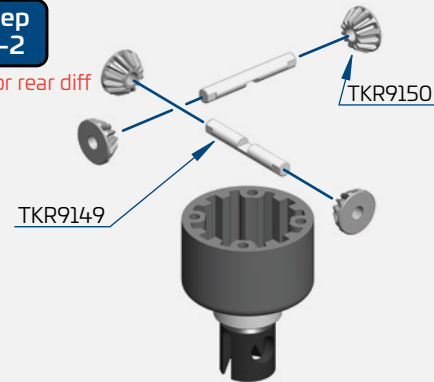
Repeat for rear diff

Note: Apply grease to the recess inside TKR9115, where the o-ring is placed as well as the o-ring itself.



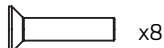
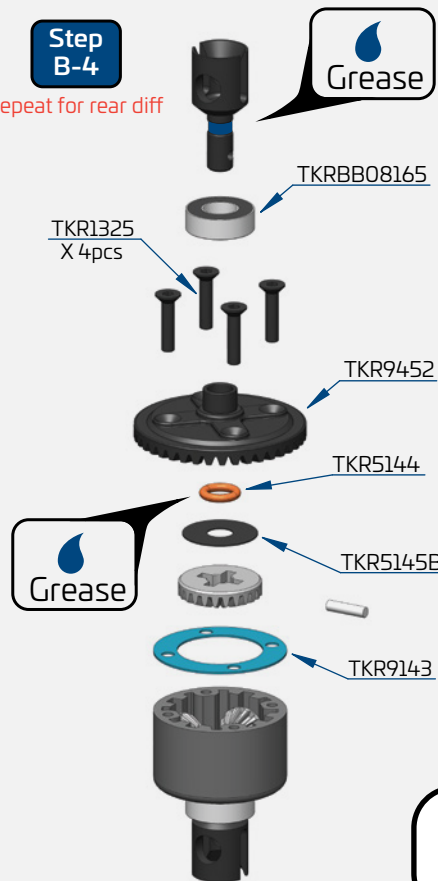
### Step B-2

Repeat for rear diff



### Step B-4

Repeat for rear diff



x8  
TKR1325  
M3x14mm Flat Head Screw



x4  
TKR5144  
Differential O-rings



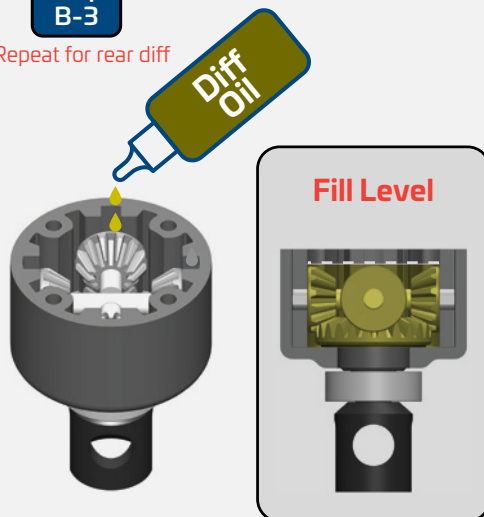
x4  
TKR5145B  
Differential Shims (6x17mm)



x4  
TKRBB08165  
Ball Bearing (8x16x5)

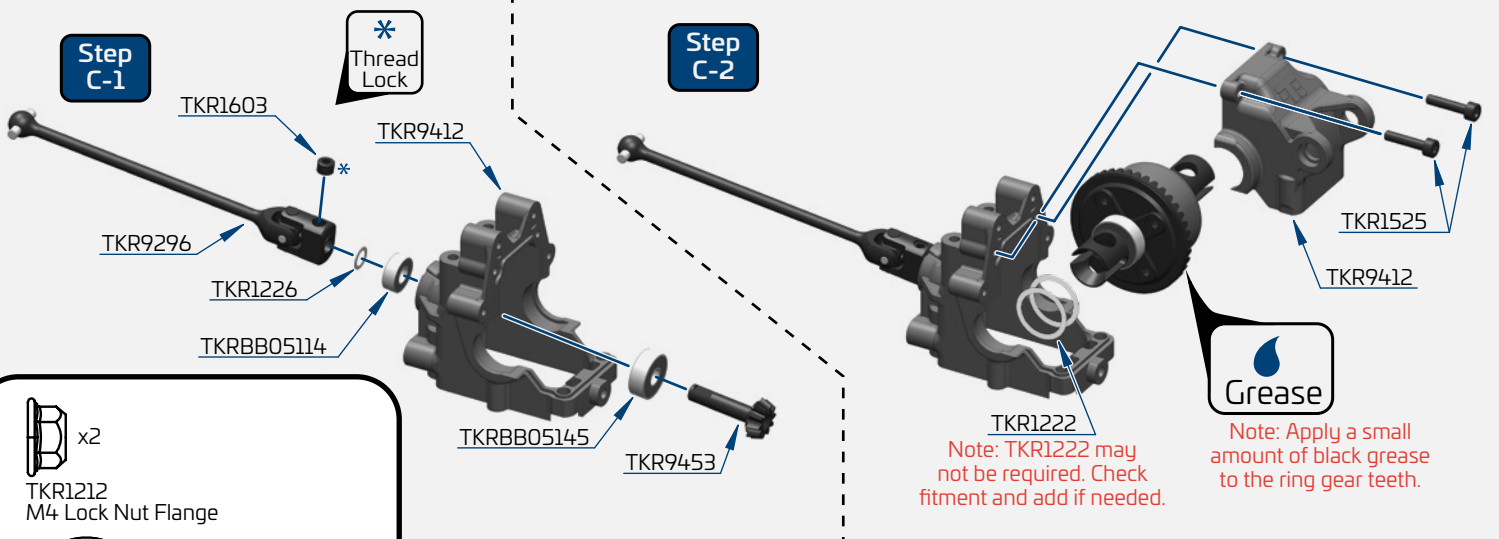
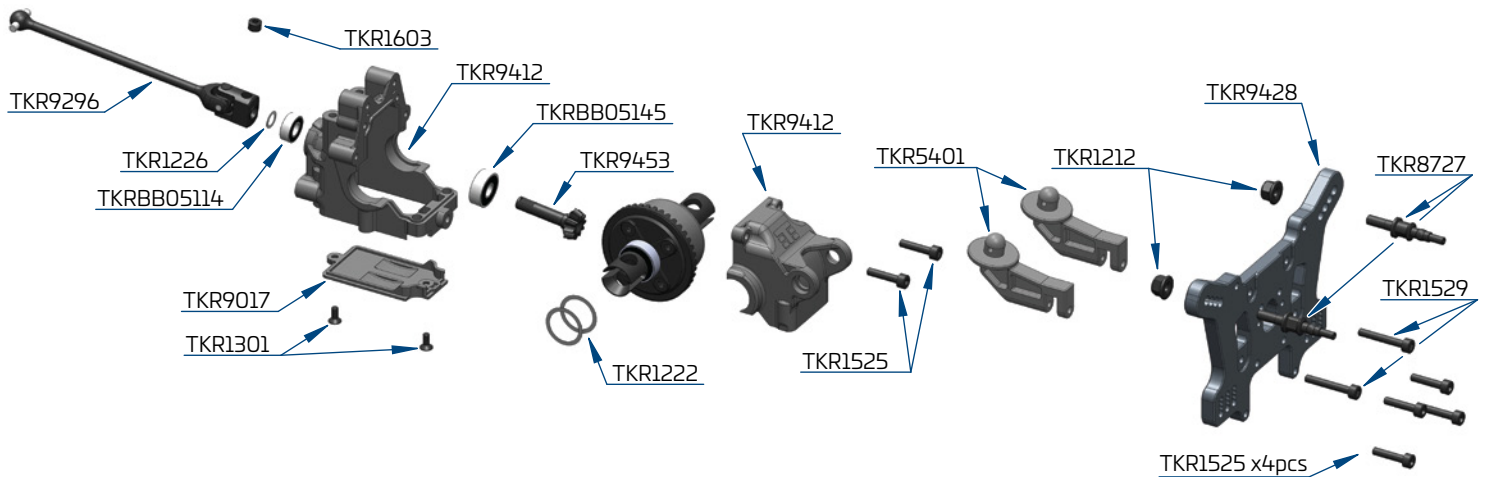
### Step B-3





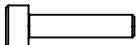
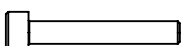



Repeat for rear diff

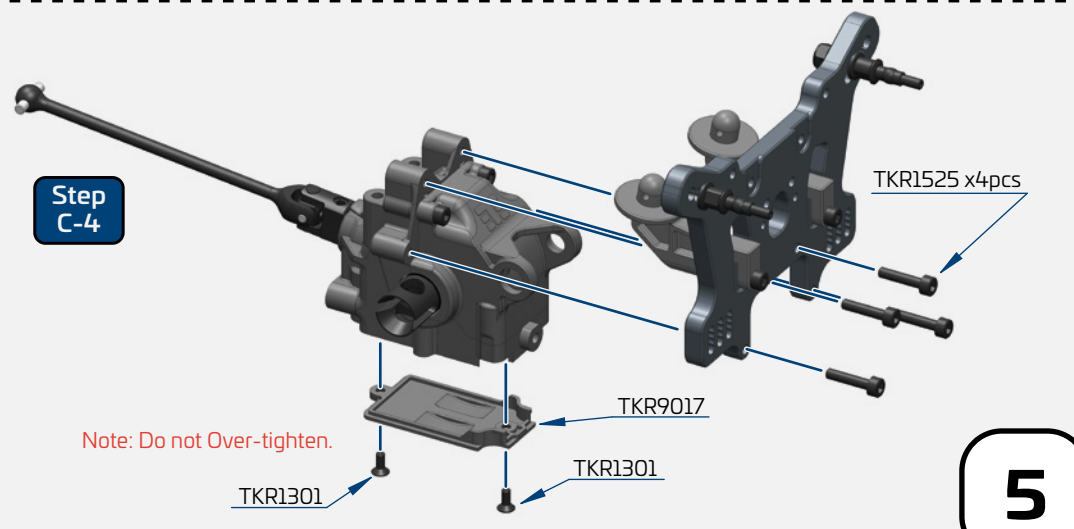
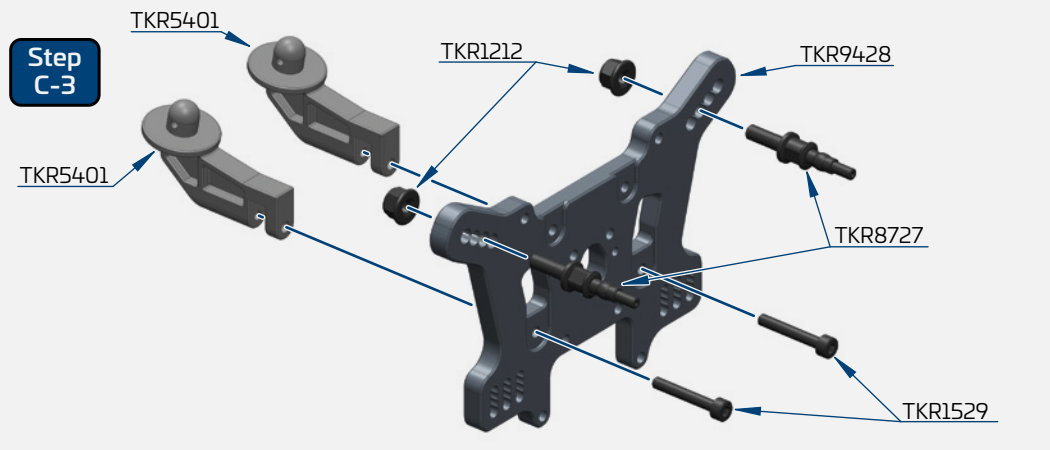


Fill with #20,000 CST oil FRONT  
Fill with #10,000 CST oil REAR  
to 1mm below full  
DO NOT OVER FILL

# Bag C Front Gearbox (overview)

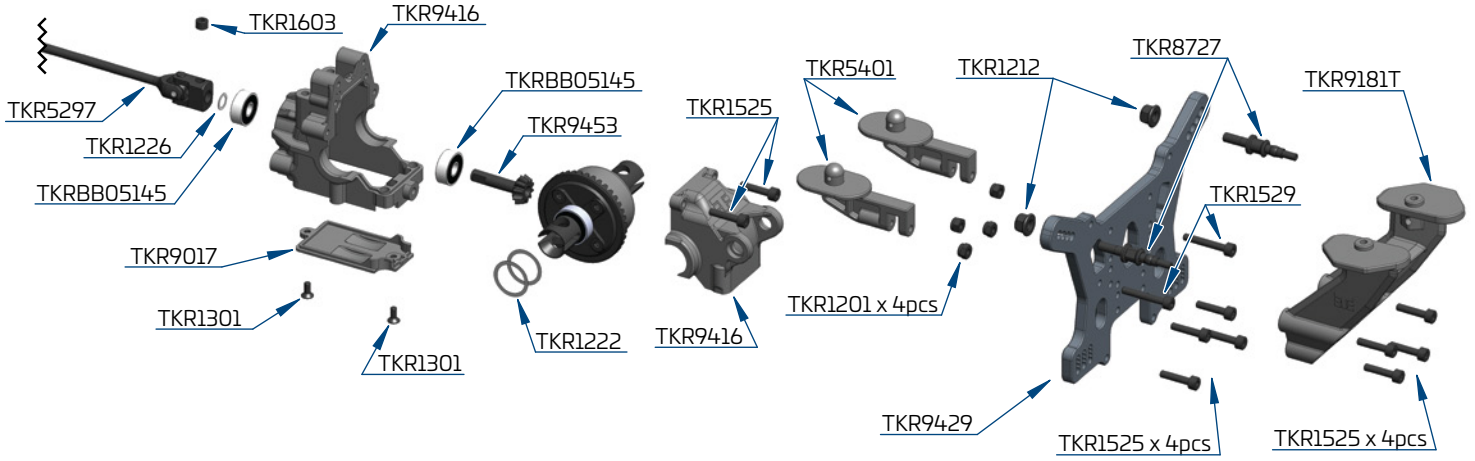


-  x2  
TKR1212  
M4 Lock Nut Flange
-  x2  
TKR1222  
13x16x.1mm Shim
-  x1  
TKR1226  
M5x7x.2mm Shim
-  x2  
TKR1301  
M2.5x6mm Flat Head Screw
-  x6  
TKR1525  
M3x14mm Cap Head Screw
-  x2  
TKR1529  
M3x20mm Cap Head Screw
-  x1  
TKR1603  
M5x4mm Set Screw
-  x1  
TKRBB05114  
Ball Bearing (5x11x4)
-  x1  
TKRBB05145  
Ball Bearing (5x14x5)

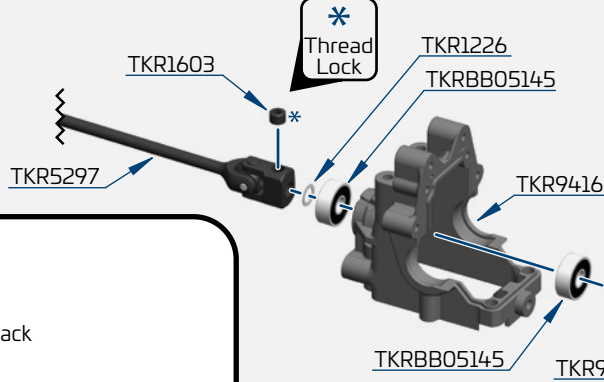


Note: Do not Over-tighten.

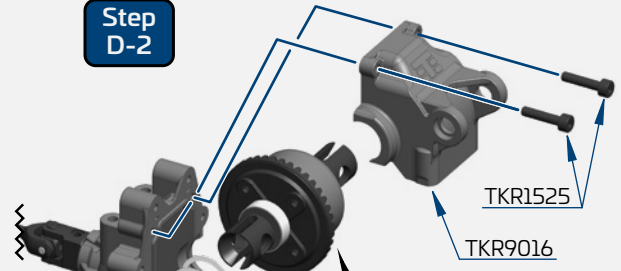
# Bag D Rear Gearbox (overview)



## Step D-1



## Step D-2



Note: TKR1222 may not be required. Check fitment and add if needed.  
 Note: Apply a small amount of black grease to the ring gear teeth.

x4  
TKR1201  
M3 Locknut Black

x2  
TKR1212  
M4 Lock Nut Flange

x2  
TKR1222  
13x16x.1mm Shim

x1  
TKR1226  
M5x7x.2mm Shim

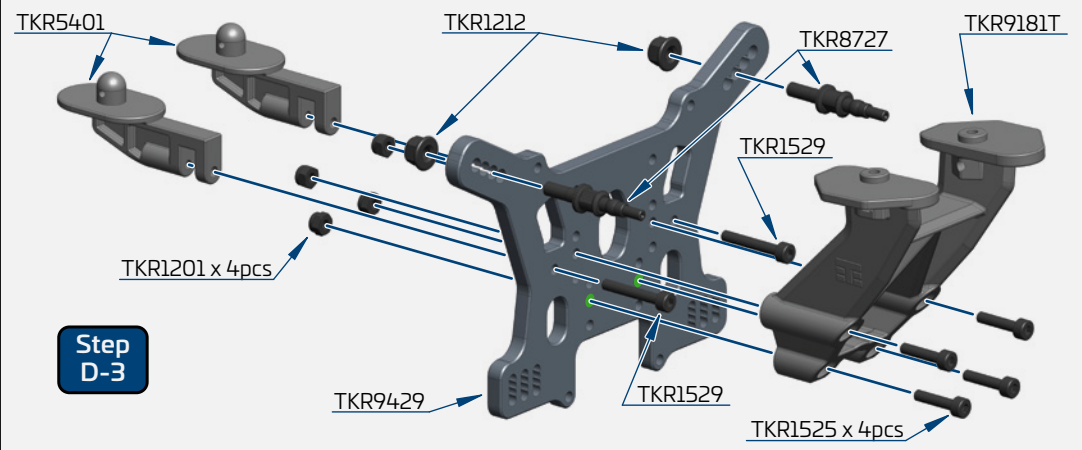
x2  
TKR1301  
M2.5x6mm Flat Head Screw

x10  
TKR1525  
M3x14mm Cap Head Screw

x2  
TKR1529  
M3x20mm Cap Head Screw

x1  
TKR1603  
M5x4mm Set Screw

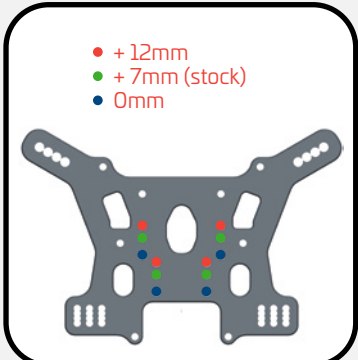
x2  
TKRBB05145  
Ball Bearing (5x14x5)



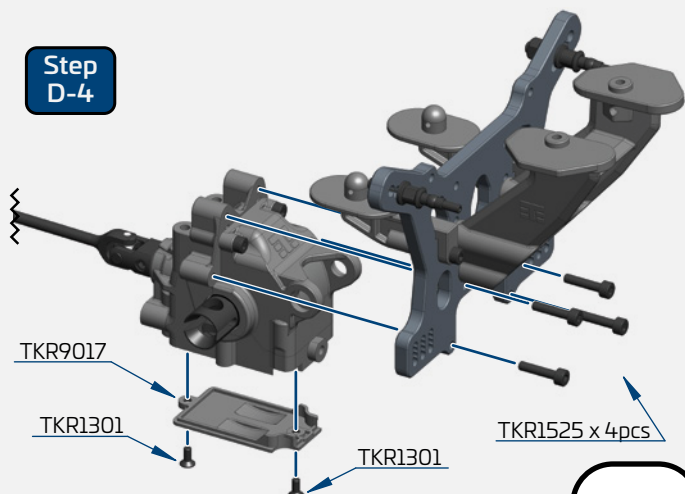
## Step D-3

Note: Wing mount height is now adjustable by moving it up or down on the tower.

Note: Stock position is + 7mm.



## Step D-4

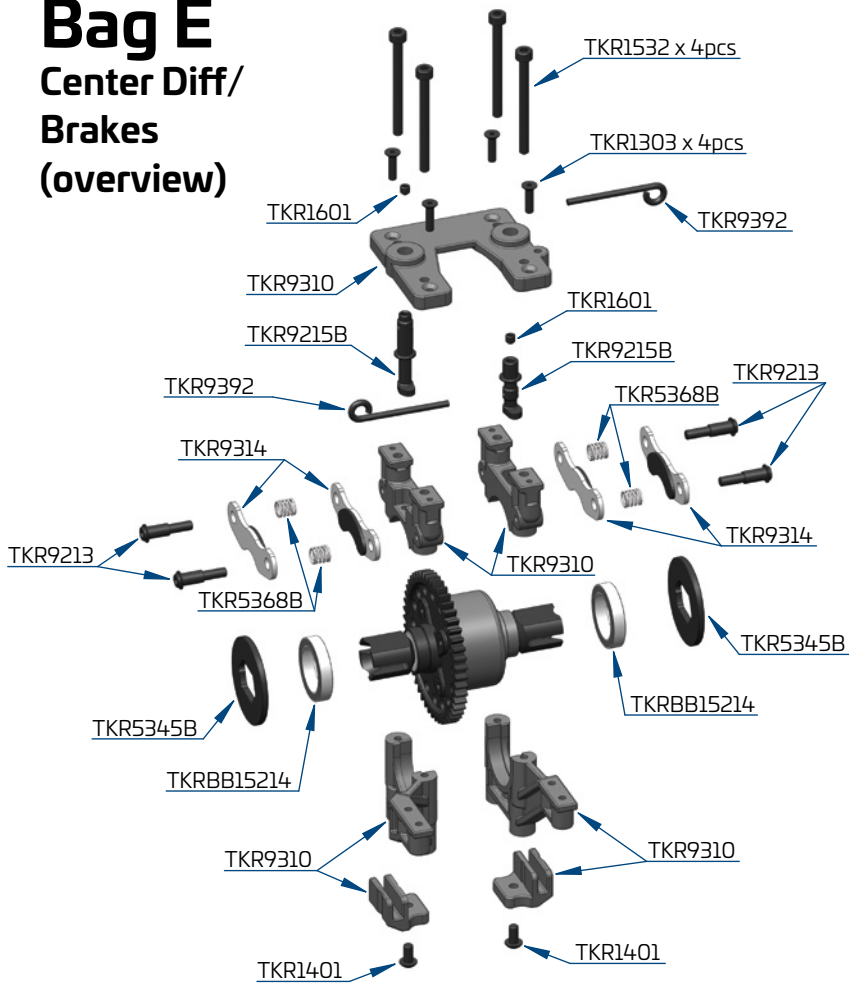


Note: Do not Over-tighten.

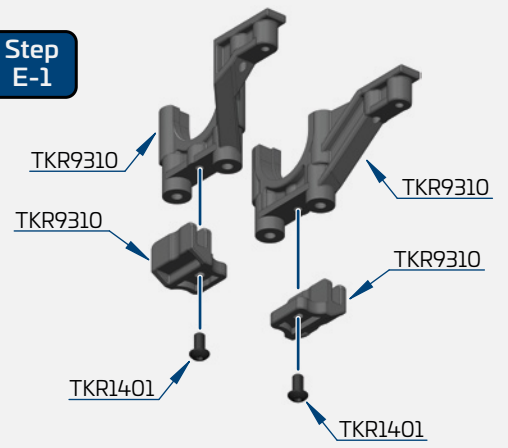
# Bag E

## Center Diff/ Brakes

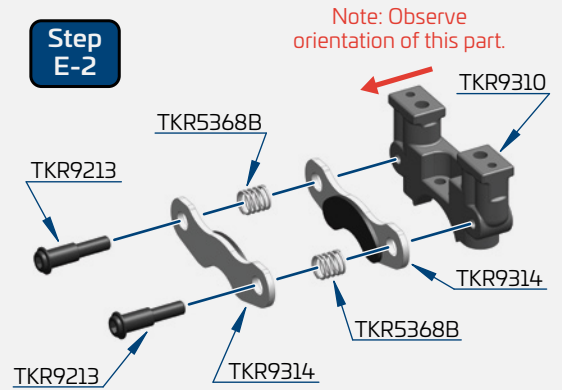
### (overview)



### Step E-1

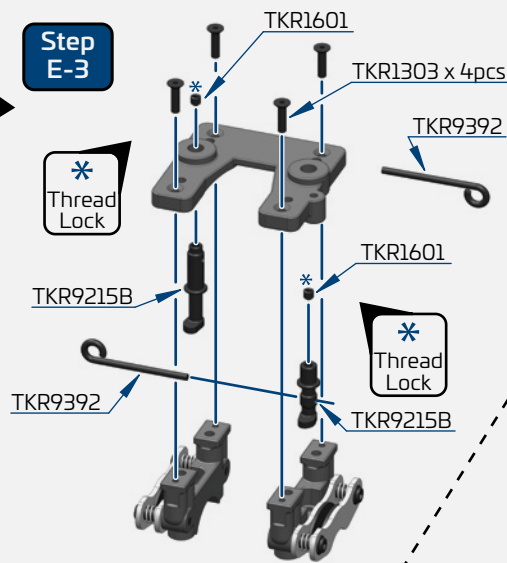


### Step E-2

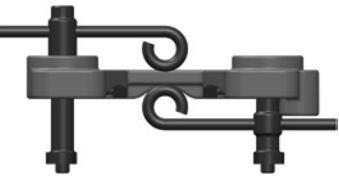
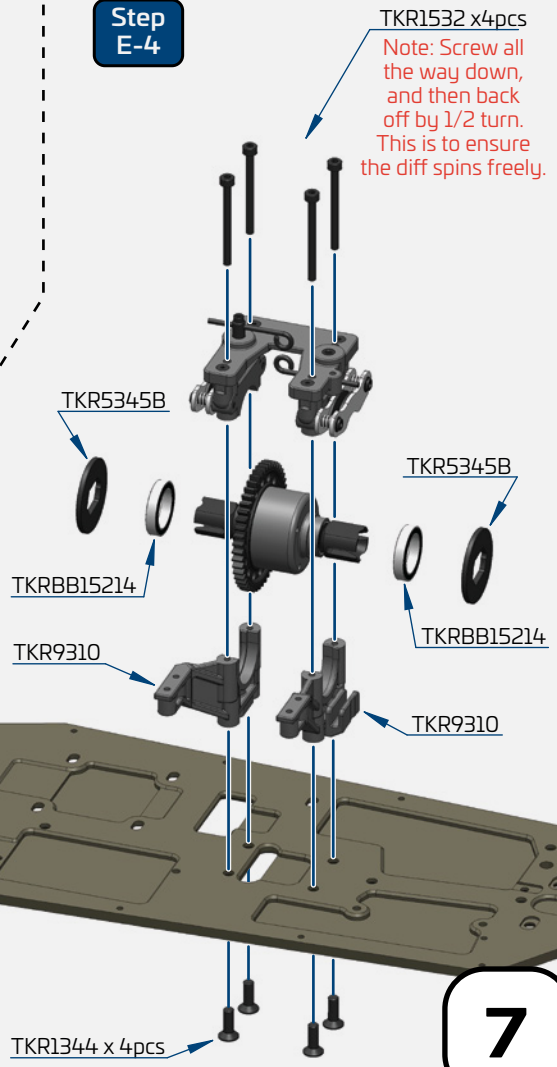


Note: Make two of these assemblies.

### Step E-3



### Step E-4



Note: Align levers as shown here.

x4  
TKR1303  
M2.5x10mm Flat Head Screw

x4  
TKR1344  
M4x12mm Flat Head Screw

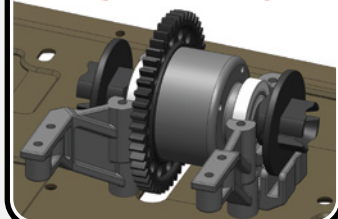
x2  
TKR1401  
M3x6mm Button Head Screw

x4  
TKR1532  
M3x35mm Cap Head Screw

x2  
TKR1601  
M3x4mm Set Screw

x2  
TKRBB15214  
Ball Bearing (15x21x4)

Note: Align brake discs in guides.



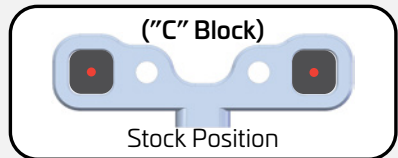
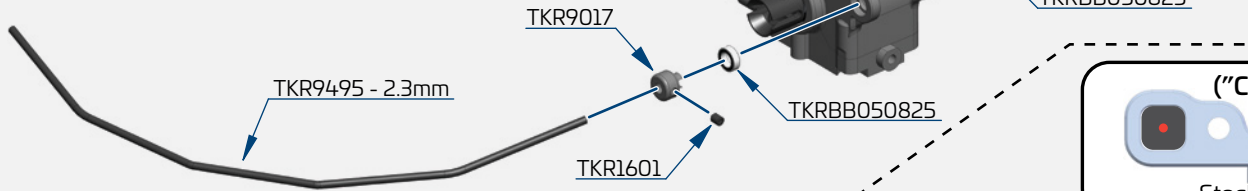
TKR1344 x 4pcs

# Bag F

## Rear End Assembly

### Step F-1

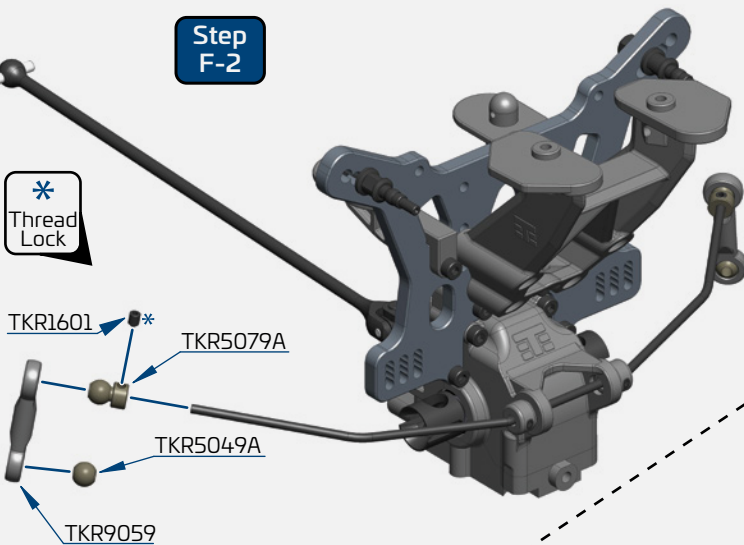
Optional Sway Bars  
(sold separately)  
\*TKR9494 - 1.6, 1.7, 1.8, 1.9, 2.0mm  
\*TKR9495 - 2.1, 2.2, 2.3, 2.4, 2.5mm  
\*TKR9496 - 2.6, 2.7, 2.8, 2.9, 3.0mm



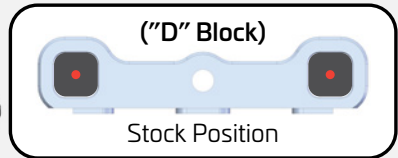
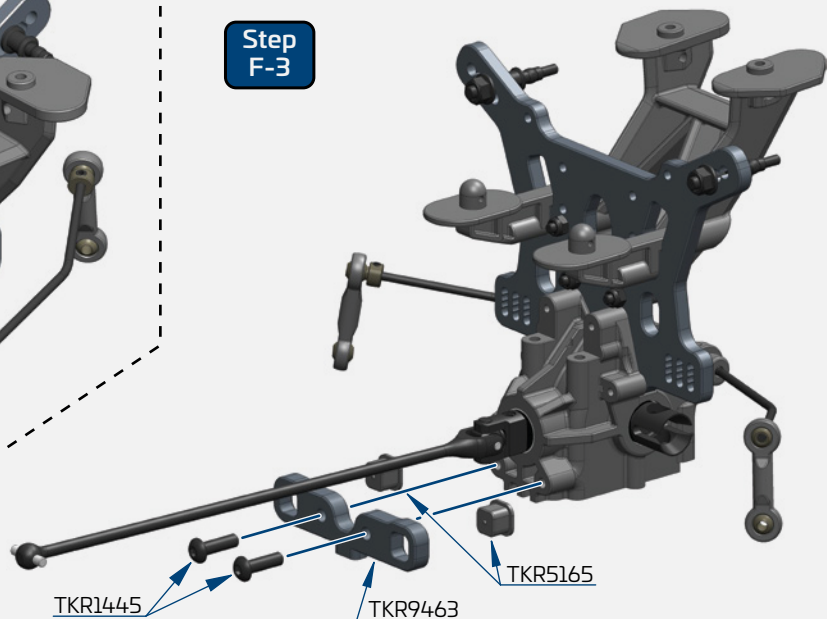
Note: With center dot inserts,  
Anti-Squat = 1.5°

### Step F-2

\* Thread Lock

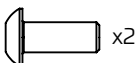
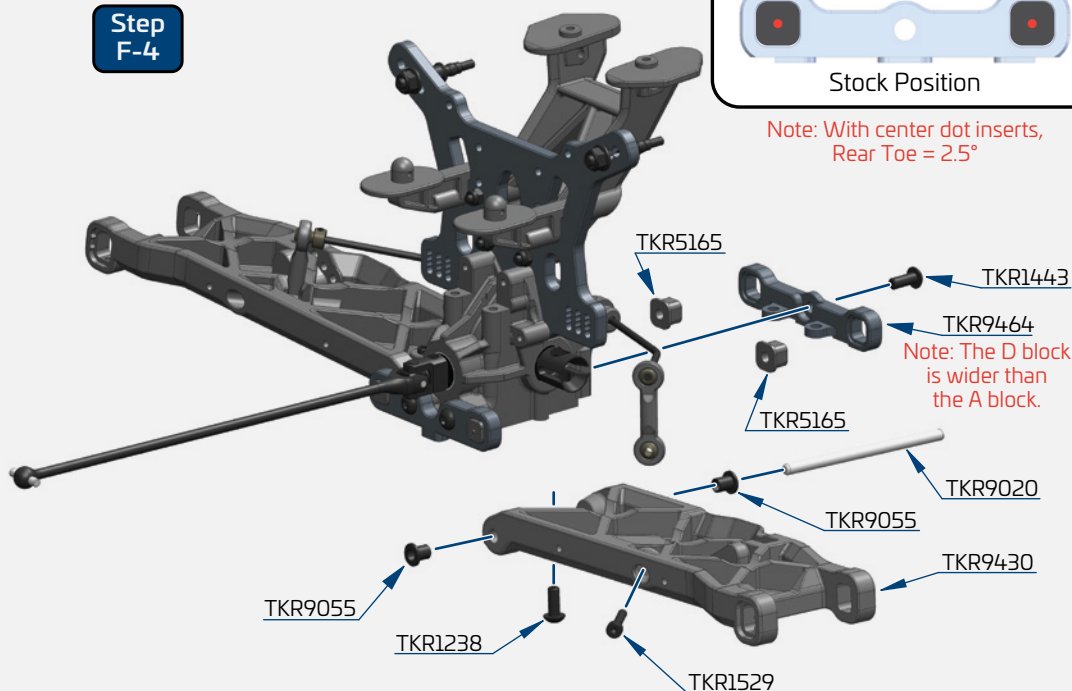


### Step F-3

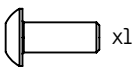


Note: With center dot inserts,  
Rear Toe = 2.5°

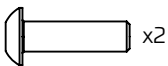
### Step F-4



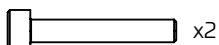
TKR1238  
M4x10mm Droop Screw



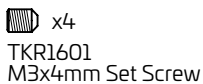
TKR1443  
M4x10mm Button Head Screw



TKR1445  
M4x14mm Button Head Screw



TKR1529  
M3x20mm Cap Head Screw



TKR1601  
M3x4mm Set Screw



TKRBB050825  
Ball Bearing (5x8x2.5)

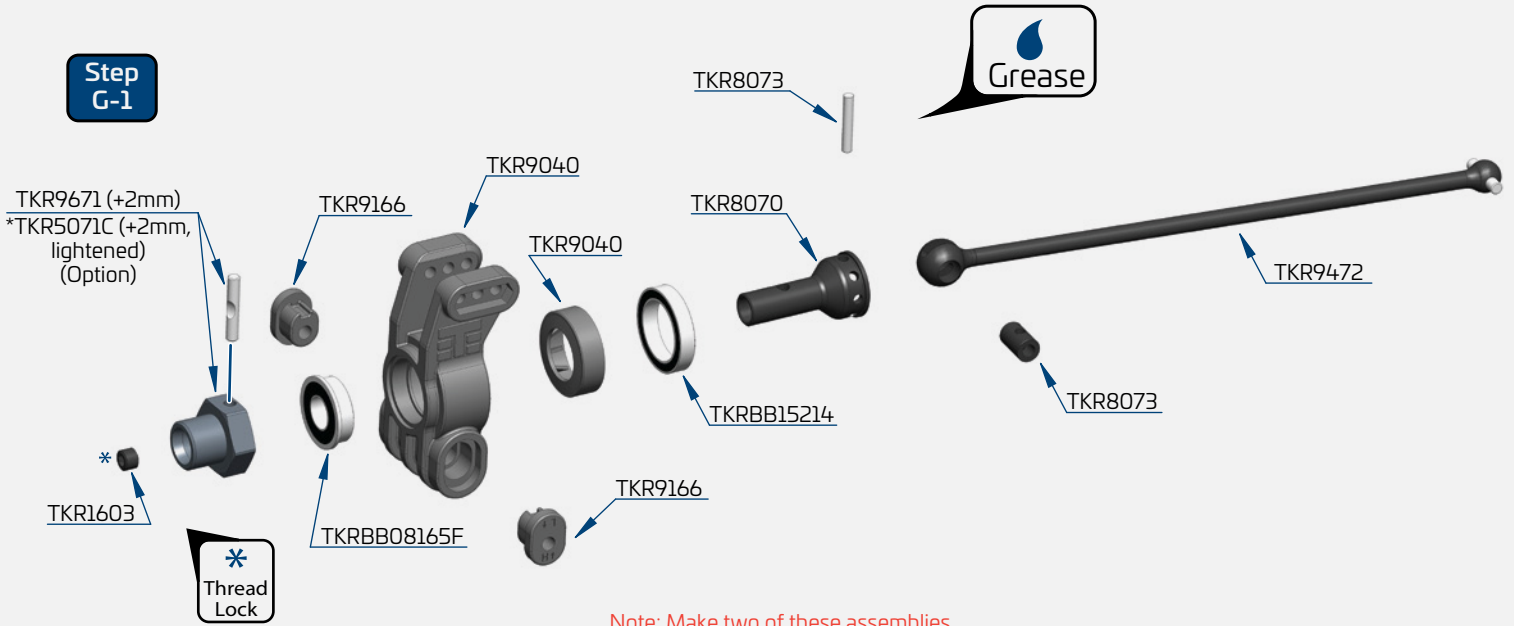




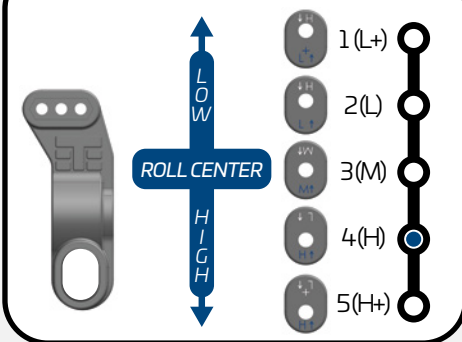
# Bag G

## Rear Hub/Camber Link

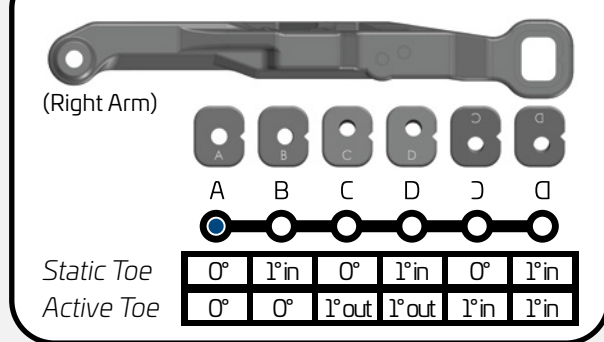
Step  
G-1



### HUB INSERTS



### ARM INSERTS

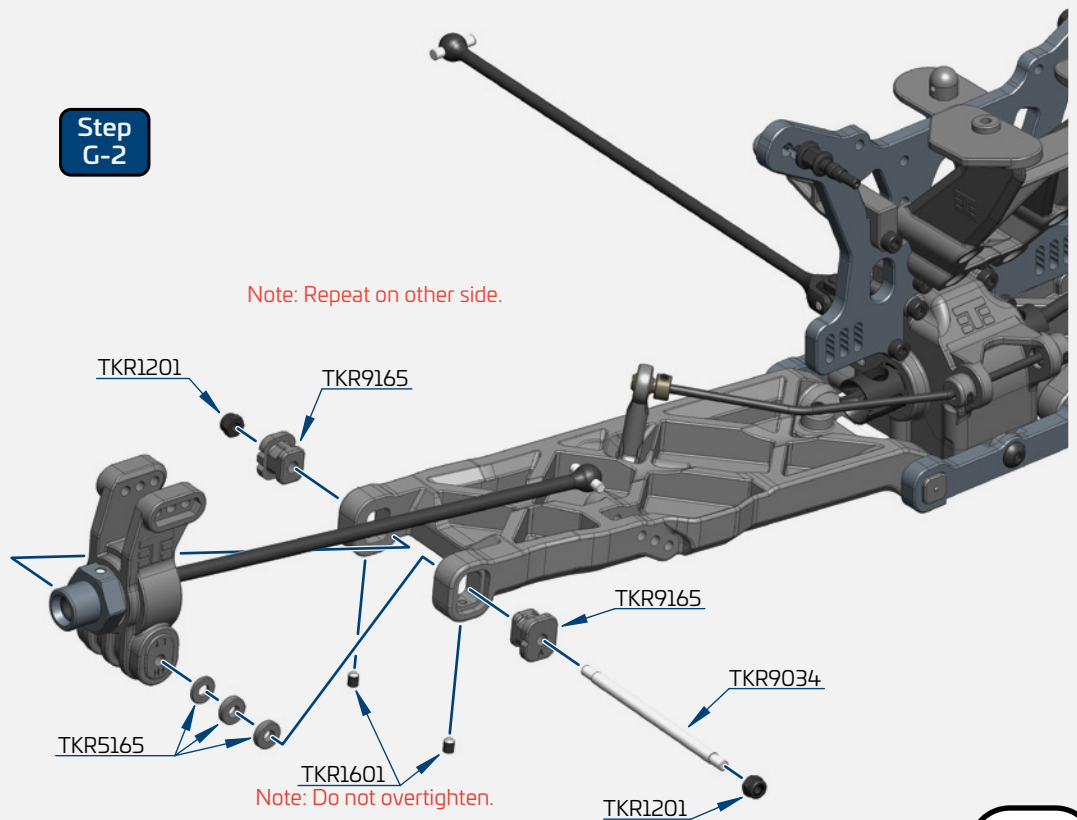


- x4  
TKR1201  
M3 Locknut Black
- x4  
TKR1601  
M3x4mm Set Screw
- x2  
TKR1603  
M5x4mm Set Screw

- x2  
TKRBB08165F  
Flanged Ball Bearing (8x16x5)

- x2  
TKRBB15214  
Ball Bearing (15x21x4)

Step  
G-2



# Bag G

## Rear Camber Links

Step G-3

Left

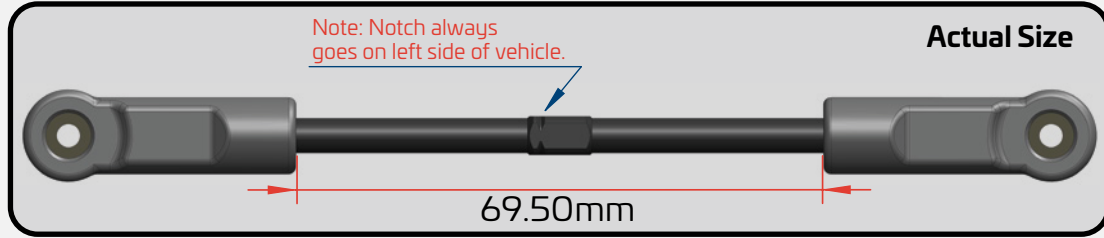


Right

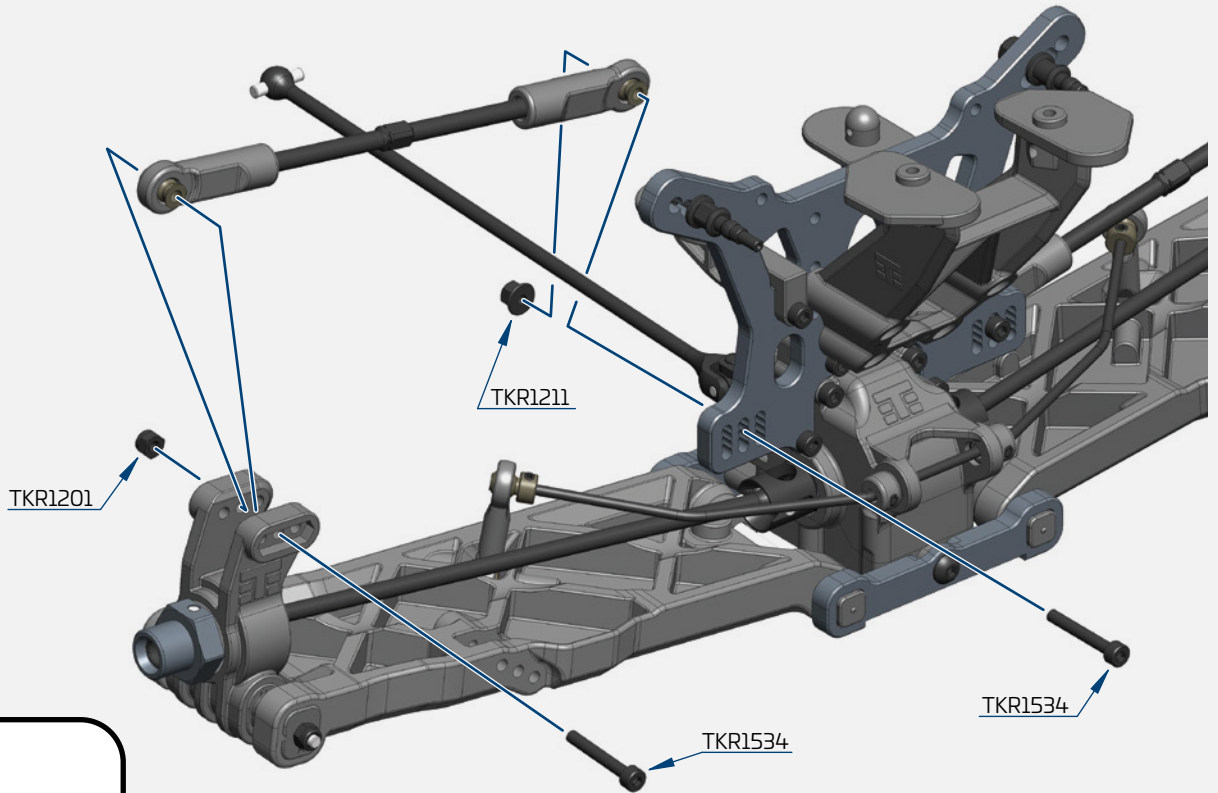



Build Tip: Use some grease or Chapstick on the threads to help prevent "pop-off" when adjustments are being made.


Build Note: Hold the turnbuckle stationary with pliers and push the rod end hard onto the turnbuckle while turning at the same time. Keep in mind that one end of the turnbuckle has normal threads and the other has reverse threads. Start the rod end straight and it will thread on straight.

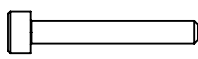


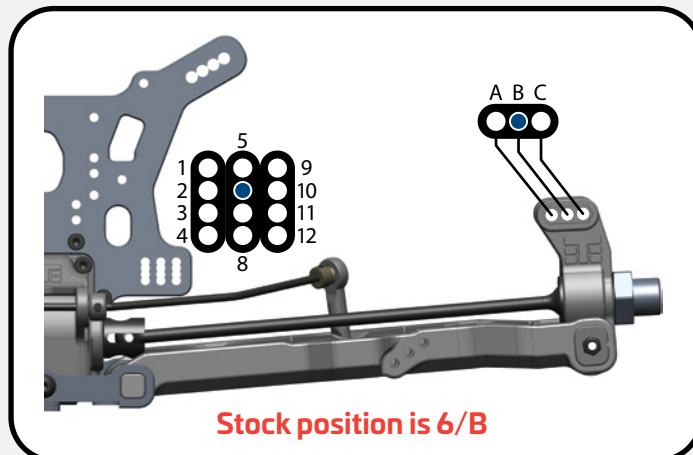
Step G-4



 x2  
TKR1201  
M3 Locknut Black

 x2  
TKR121  
M3 Lock Nut Flange Black

 x4  
TKR1534  
M3x22mm Cap Head Screw

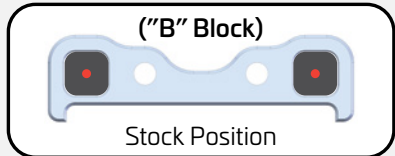
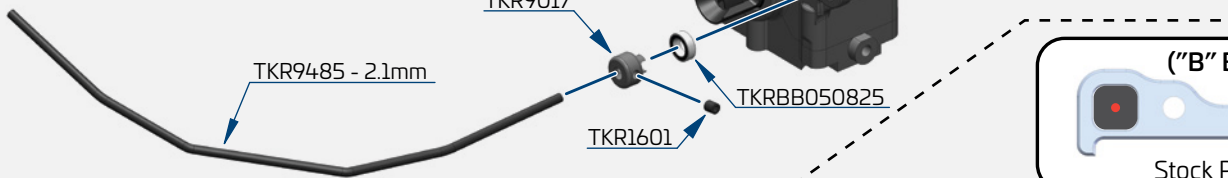


# Bag H

## Front End Assembly

### Step H-1

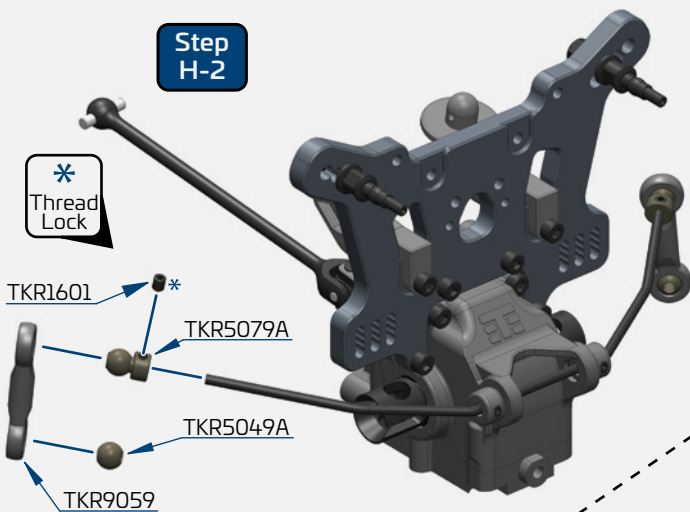
Optional Sway Bars  
(sold separately)  
\*TKR9484 - 1.6, 1.7, 1.8, 1.9, 2.0mm  
\*TKR9485 - 2.1, 2.2, 2.3, 2.4, 2.5mm  
\*TKR9486 - 2.6, 2.7, 2.8, 2.9, 3.0mm



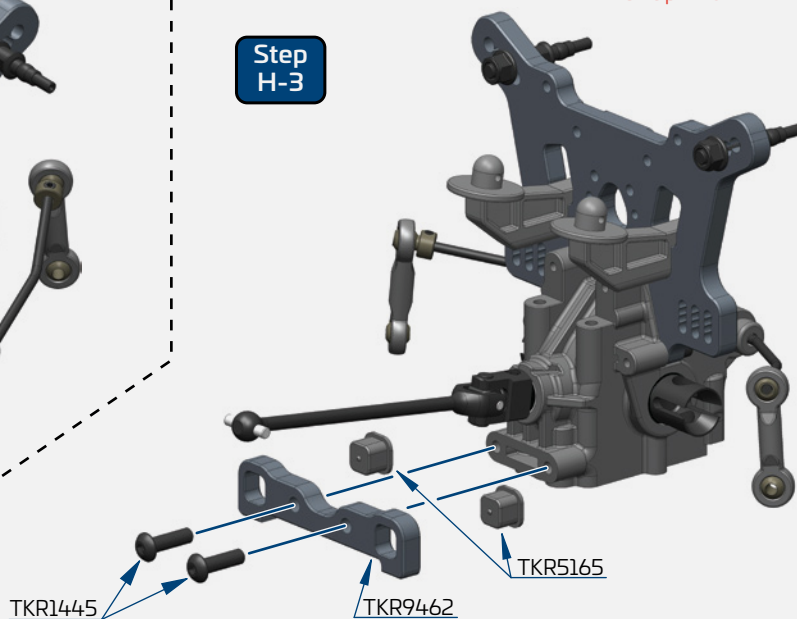
Note: With center dot inserts,  
Kick Up = 10°

### Step H-2

\*  
Thread  
Lock



### Step H-3



### Step H-4

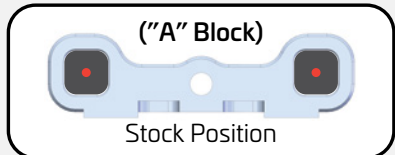
x2  
TKR1238  
M4x10mm Droop Screw

x3  
TKR1445  
M4x14mm Button Head Screw

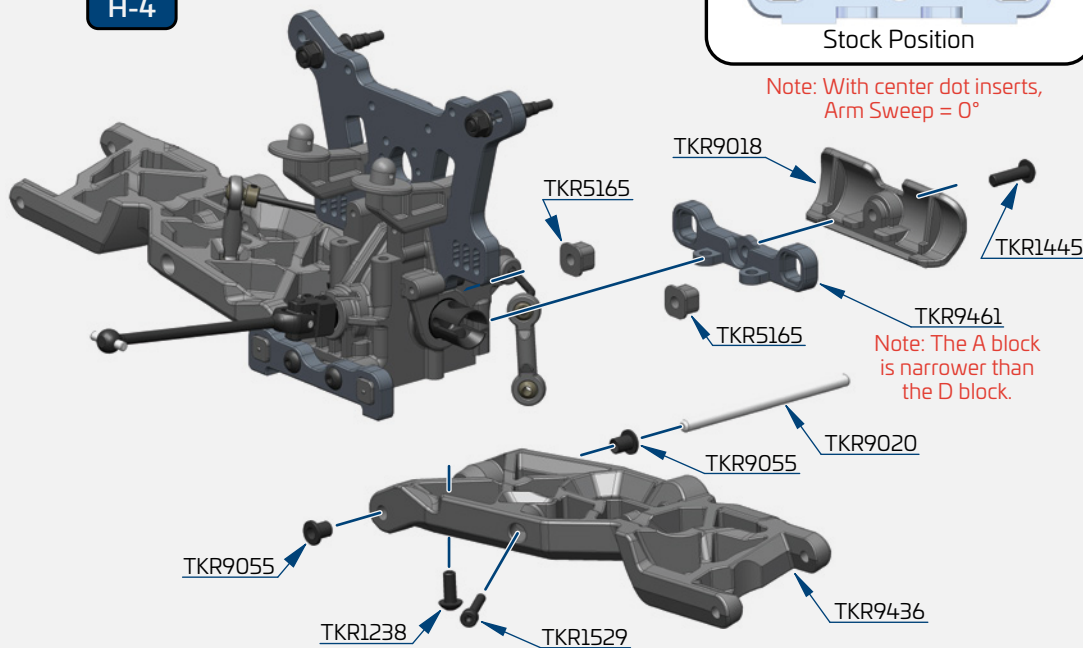
x2  
TKR1529  
M3x20mm Cap Head Screw

x4  
TKR1601  
M3x4mm Set Screw

x2  
TKRBB050825  
Ball Bearing (5x8x2.5)



Note: With center dot inserts,  
Arm Sweep = 0°



Note: The A block  
is narrower than the  
D block.



# Bag I

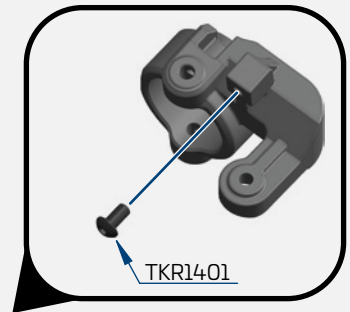
## Front CVA / Spindle & Carrier Assembly

Step I-1

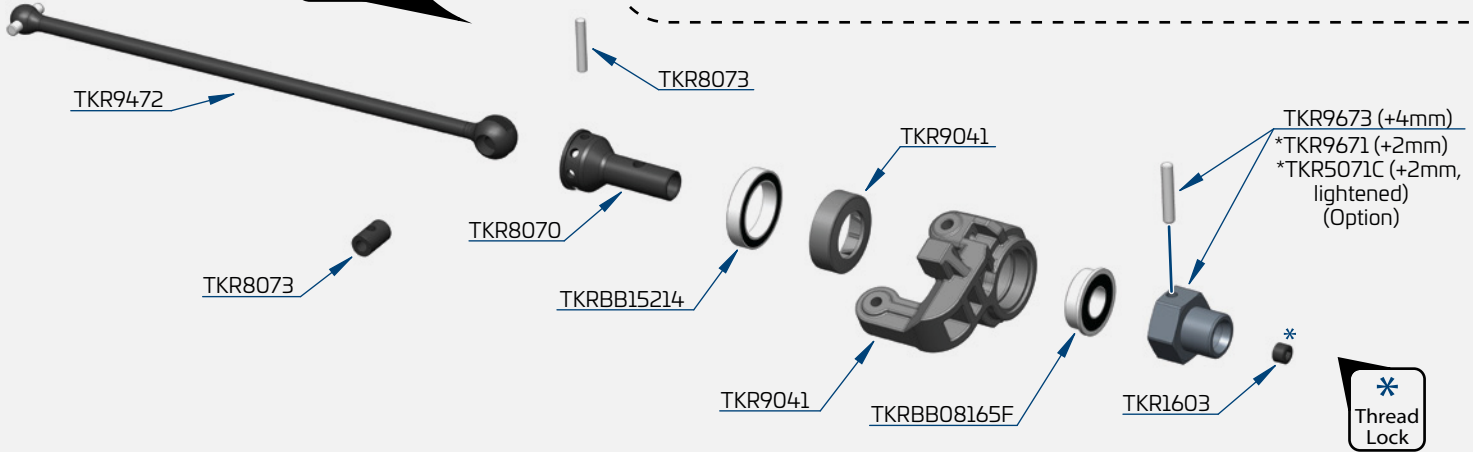
**DO NOT SKIP THIS STEP!**

Note: These are steering stop screws. They provide a mechanical limit to the steering throw and make the car easier to drive by improving the consistency of the steering.

Note: If you are just getting started in racing or are bashing in the backyard, we highly recommend installing the screw. If you are an experienced racer, feel free to skip this step.

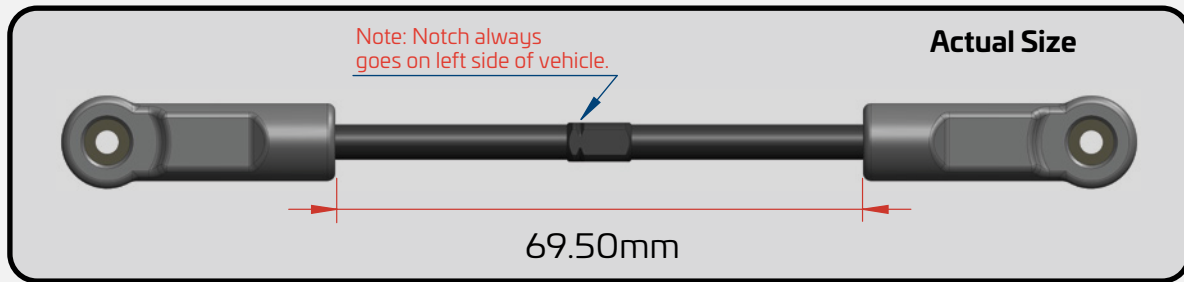


Step I-2



Note: Make left and right side assemblies.

Step I-3



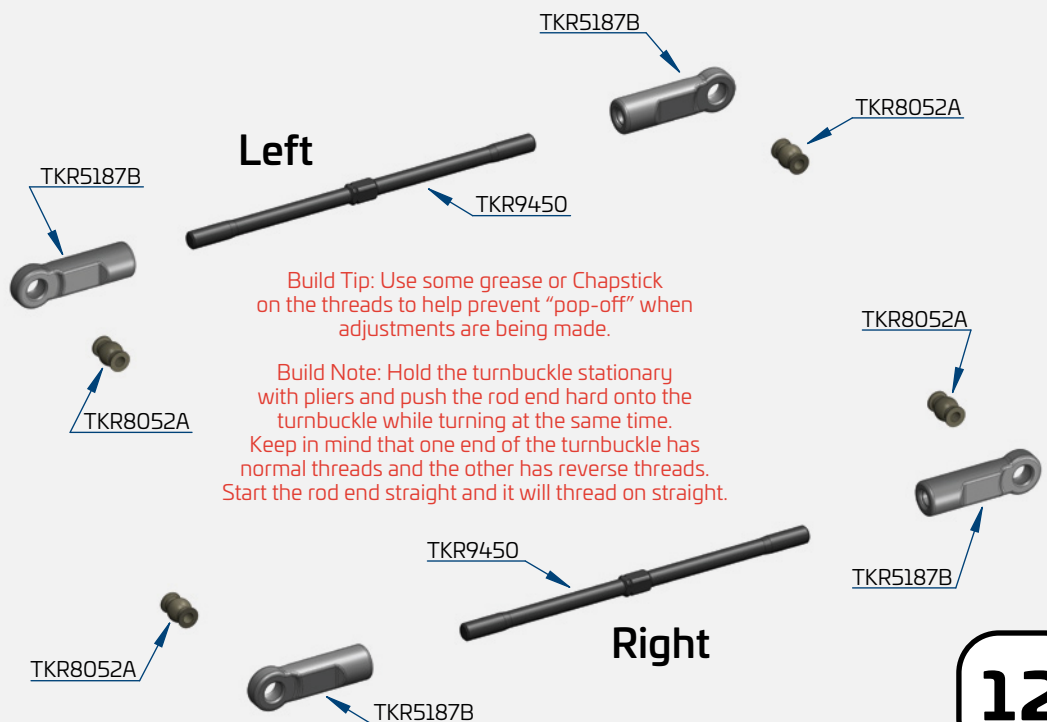
## Front Camber Links

x2  
TKR1401  
M3x6mm Button Head Screw

x2  
TKR1603  
M5x4mm Set Screw

x2  
TKRBB08165F  
Flanged Ball Bearing (8x16x5)

x2  
TKRBB15214  
Ball Bearing (15x21x4)



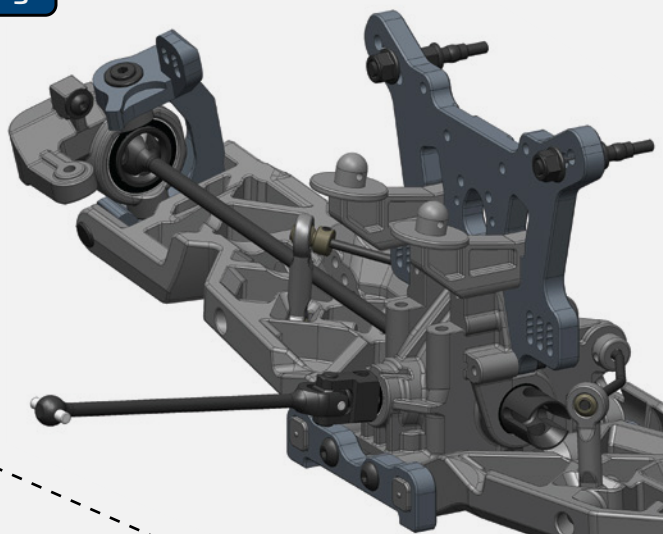
Build Tip: Use some grease or Chapstick on the threads to help prevent "pop-off" when adjustments are being made.

Build Note: Hold the turnbuckle stationary with pliers and push the rod end hard onto the turnbuckle while turning at the same time. Keep in mind that one end of the turnbuckle has normal threads and the other has reverse threads. Start the rod end straight and it will thread on straight.

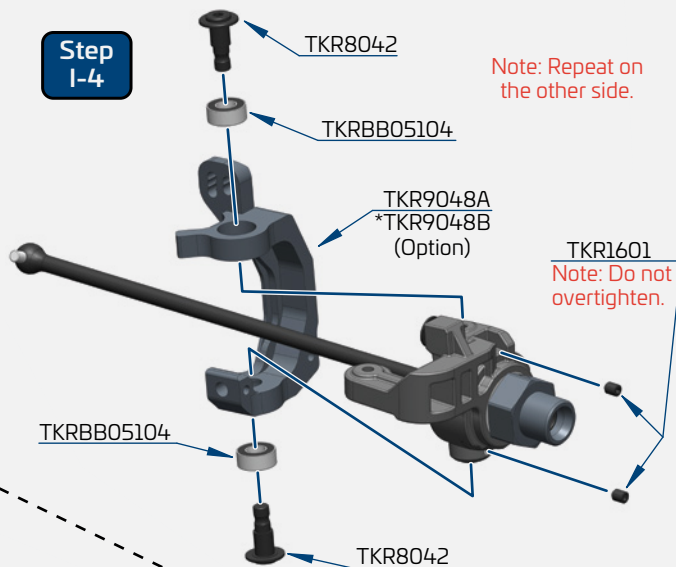
# Bag I

## Front Camber Links

Step  
1-5

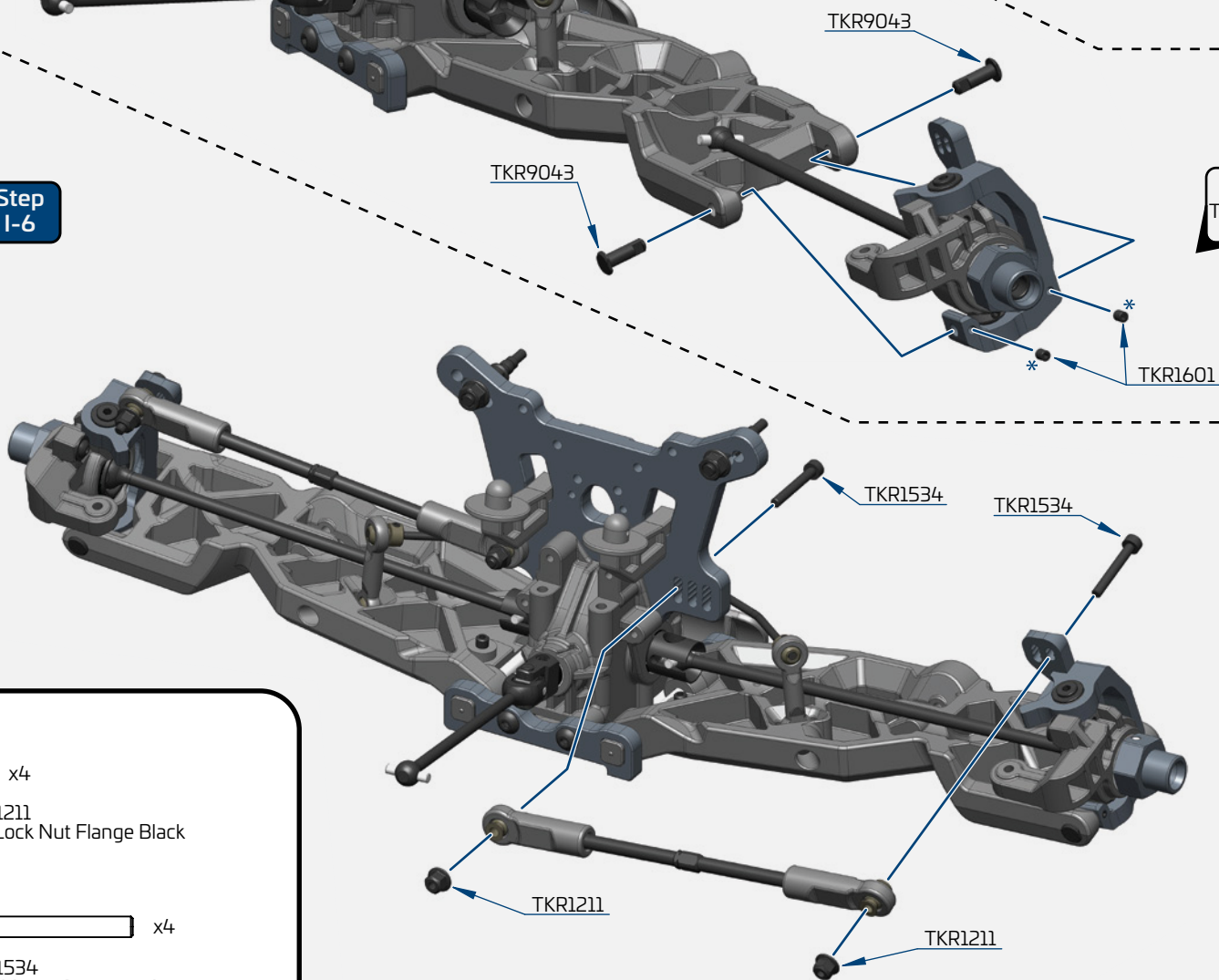


Step  
1-4



Note: Repeat on the other side.

Step  
1-6

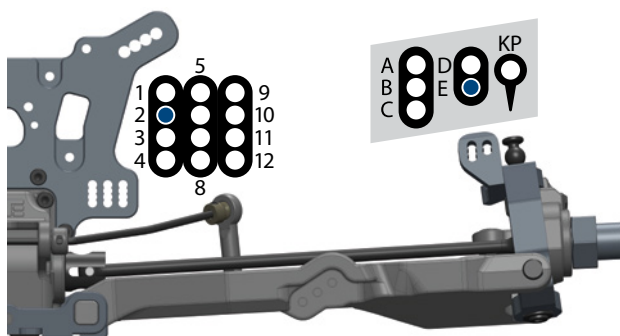


x4  
TKR1211  
M3 Lock Nut Flange Black

x4  
TKR1534  
M3x22mm Cap Head Screw

x8  
TKR1601  
M3x4mm Set Screw

x4  
TKRBB05104  
Ball Bearing (5x10x4)

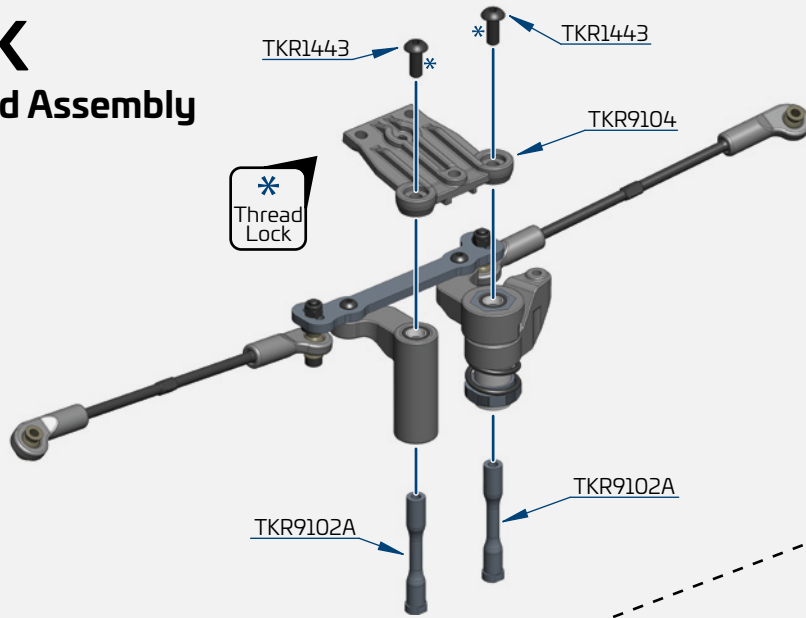




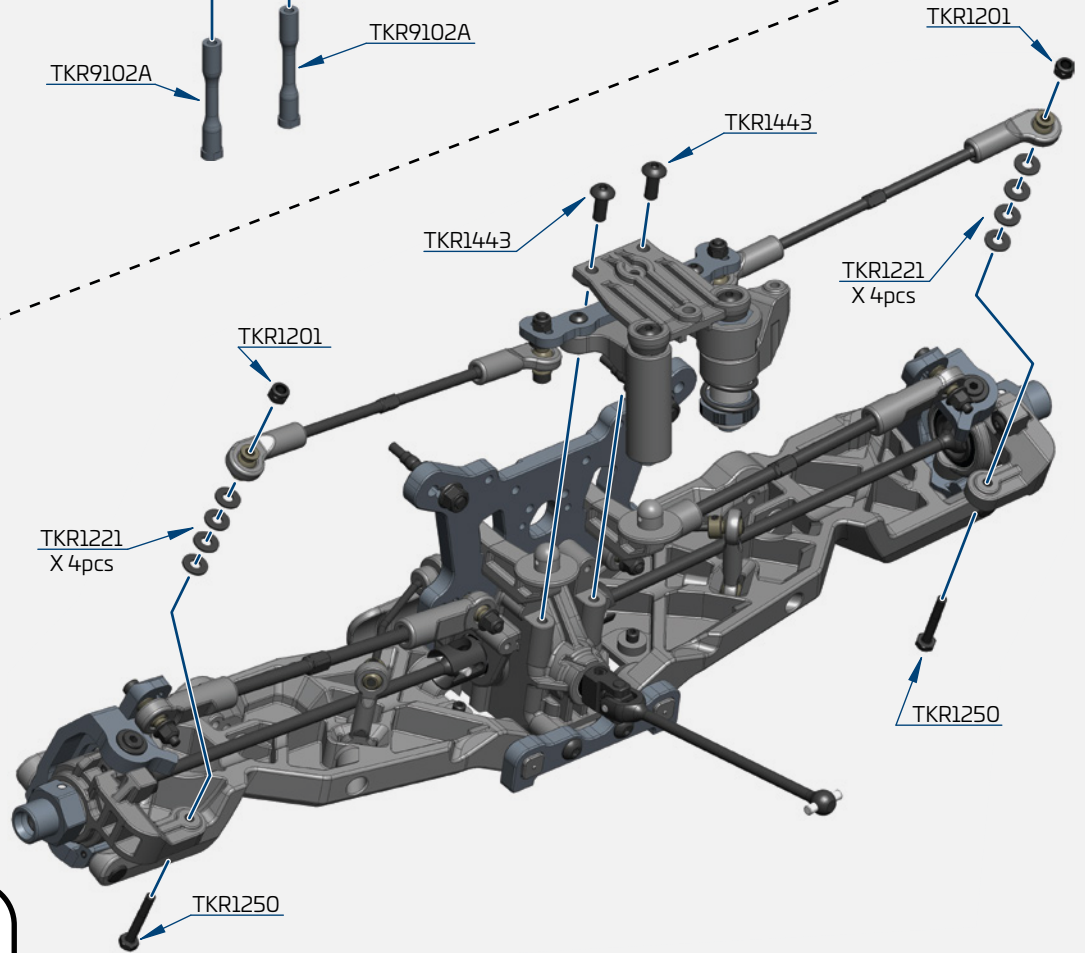
# Bag K

## Front End Assembly

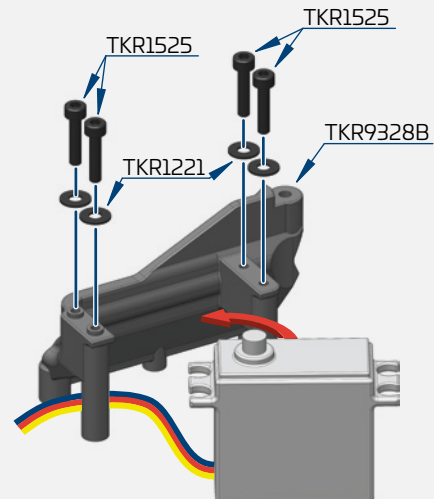
Step  
K-1



Step  
K-2



Step  
K-3



Note: Servo (not included).

Note: We recommend using a servo with at least 300 oz/in torque.

x2  
TKR1201  
M3 Lock Nut Black

x12  
TKR1221  
M3x8mm Washer

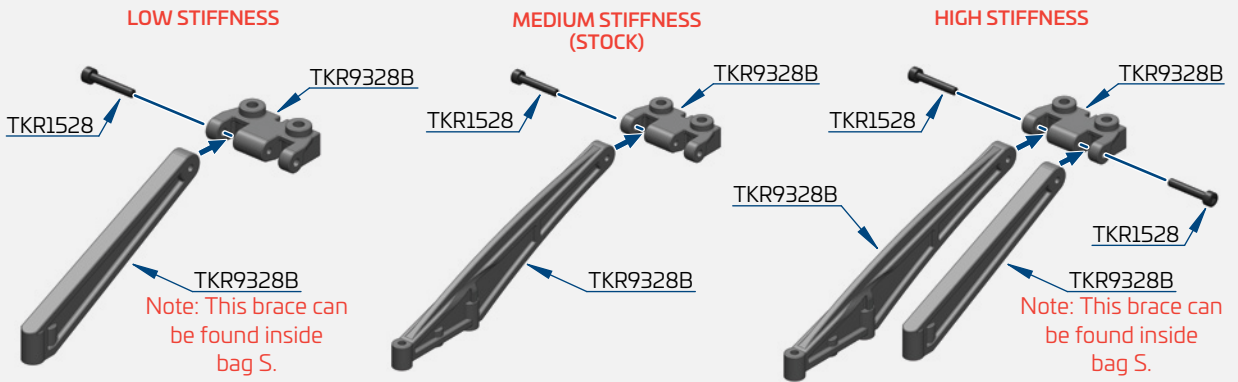
x2  
TKR1250  
M3 Steering Link Screw

x4  
TKR1443  
M4x10mm Button Head Screw

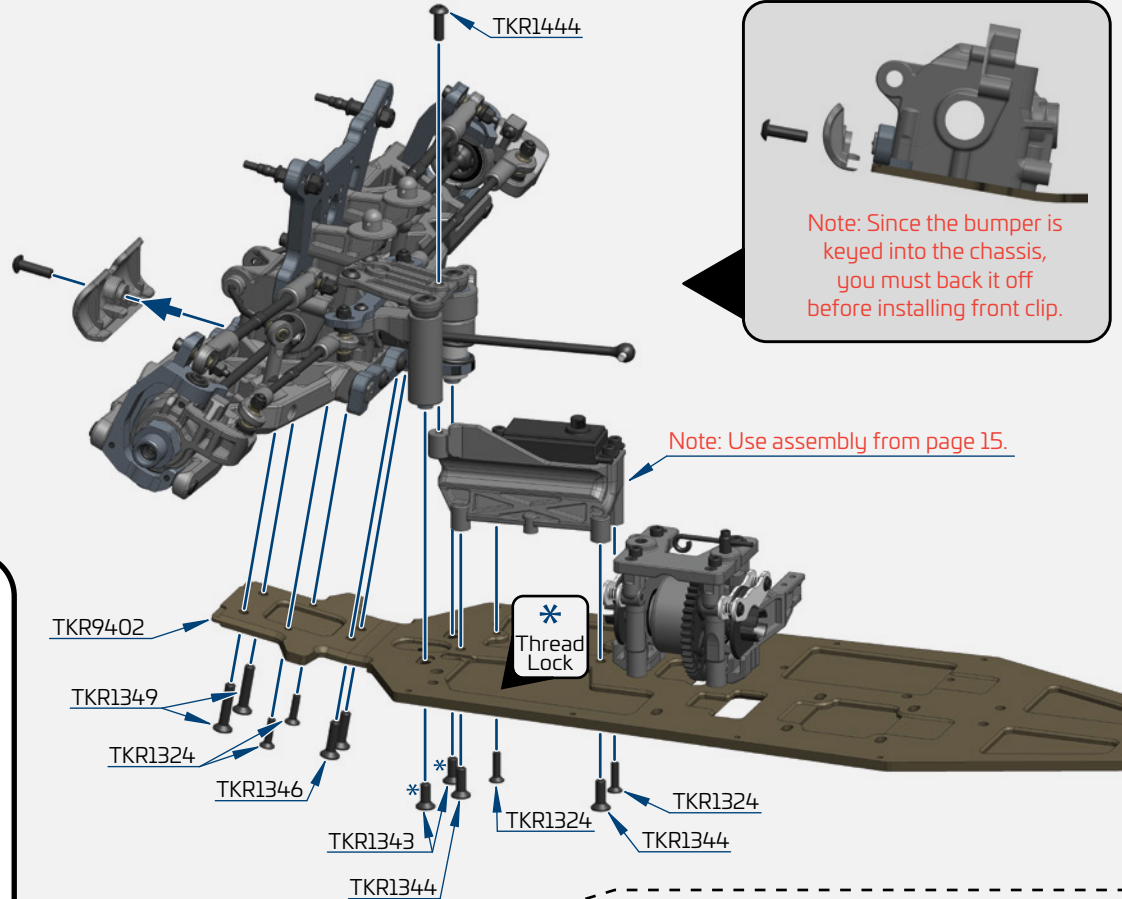
x10  
TKR1525  
M3x14mm Cap Head Screw

# Bag K Front/Rear Assembly

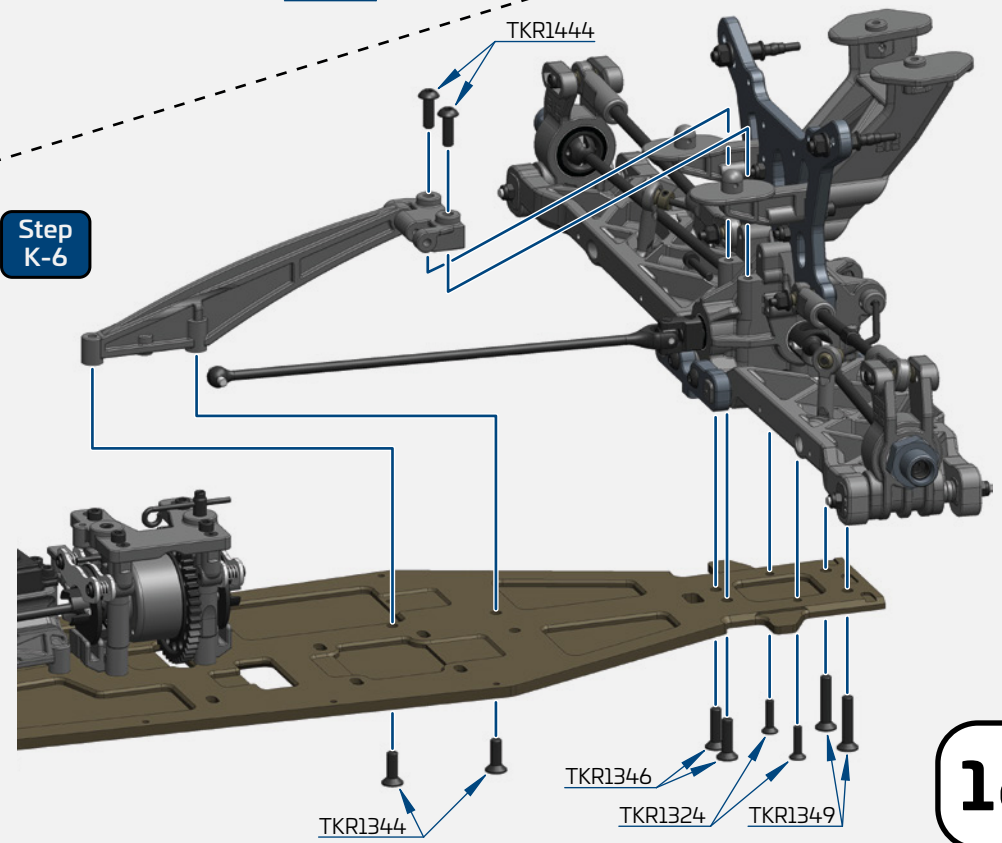
Step  
K-4



Step  
K-5



Step  
K-6



x6  
TKR1324  
M3x12mm Flat Head Screw

x2  
TKR1343  
M4x10mm Flat Head Screw

x4  
TKR1344  
M4x12mm Flat Head Screw

x4  
TKR1346  
M4x15mm Flat Head Screw

x4  
TKR1349  
M4x20mm Flat Head Screw

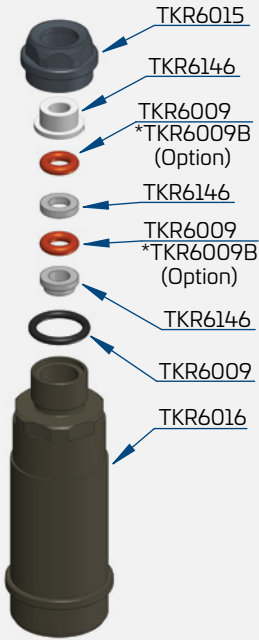
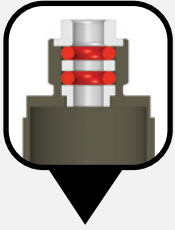
x3  
TKR1444  
M4x12mm Button Head Screw

x1  
TKR1528  
M3x18mm Cap Head Screw



# Bag L Front Shock Assembly

## Step L-1



## Step L-2



Note: Use green slime or oil on shock shaft threads AND O-rings to prevent tearing and leaking.

Note: Shock boots must be installed BEFORE attaching rod end.

## Step L-3

Refer to filling instructions on page 19 during this step.



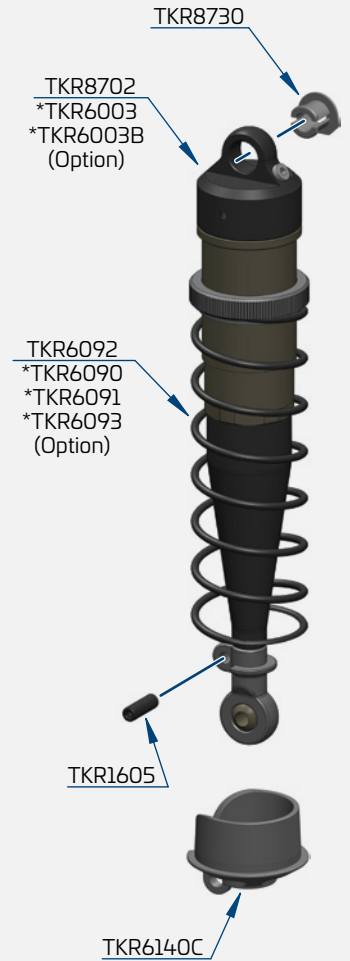
Note: The kit supplied oil is a great starting point when the ambient temperature is ~75° F.

If it is cooler you may need to use thinner oil. Likewise, if it is warmer you may need to use thicker oil.

Use #700 CST oil FRONT



## Step L-4



x2  
TKR1200  
M2.5 Lock Nut Zinc

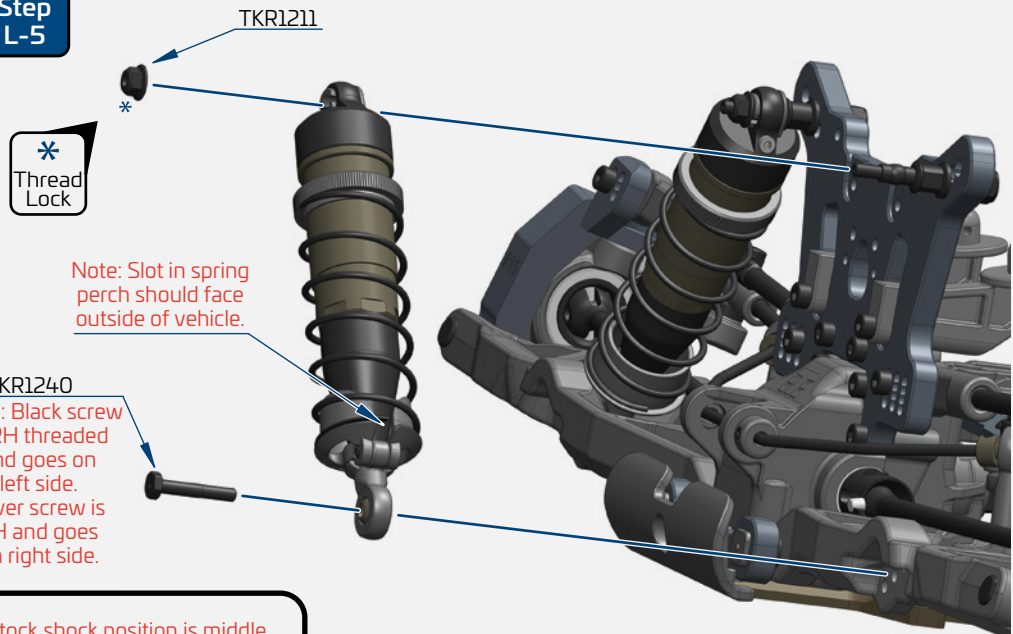
x2  
TKR1211  
M3 Lock Nut Flange Black

x2  
TKR1240  
M3x18mm Shock Mnt Screw

x2  
TKR1248  
M2x4mm Emulsion Screw

x2  
TKR1605  
M3x10mm Set Screw

## Step L-5



Note: Slot in spring perch should face outside of vehicle.

TKR1240  
Note: Black screw is RH threaded and goes on left side. Silver screw is LH and goes on right side.

● Stock shock position is middle hole on the arm, and second from inside on the tower

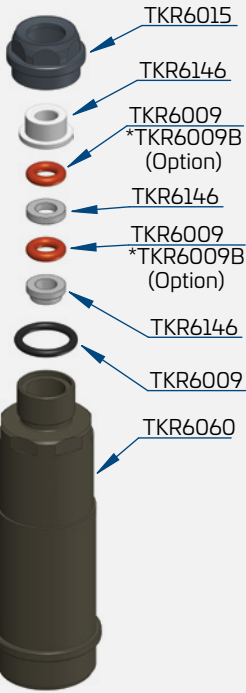
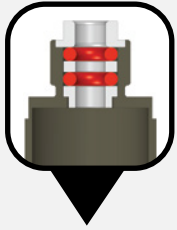
● Stock front ride height is 32mm

● Shock length (droop) is 117mm

# Bag M

## Rear Shock Assembly

### Step M-1



### Step M-2



Note: Use green slime or oil on shock shaft threads AND O-rings to prevent tearing and leaking.

### Step M-3

Refer to filling instructions on page 19 during this step.



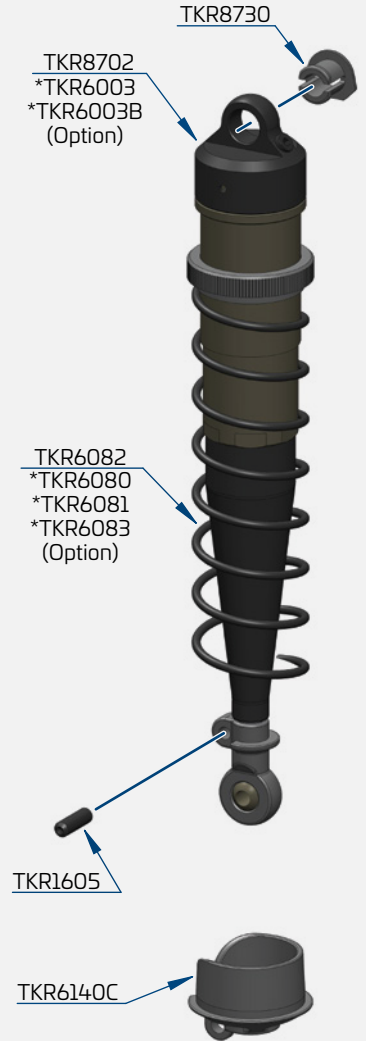
Note: The kit supplied oil is a great starting point when the ambient temperature is ~75° F.

If it is cooler you may need to use thinner oil. Likewise, if it is warmer you may need to use thicker oil.



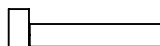


Use #600 CST oil REAR



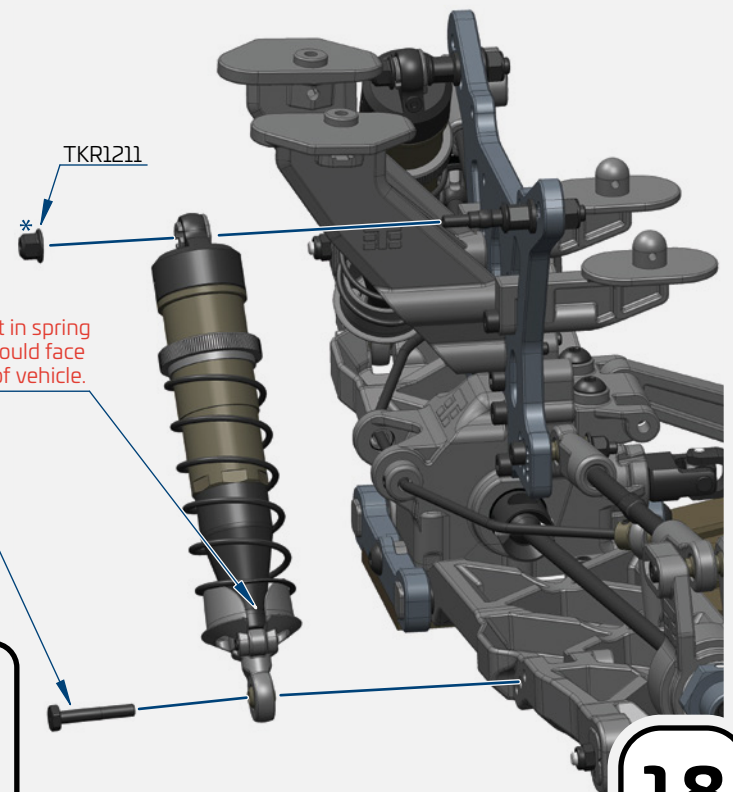
### Step M-4



### Step M-5

-  x2  
TKR1200  
M2.5 Lock Nut Zinc
-  x2  
TKR1211  
M3 Lock Nut Flange Black
-  x2  
TKR1240  
M3x18mm Shock Mnt Screw
-  x2  
TKR1248  
M2x4mm Emulsion Screw
-  x2  
TKR1605  
M3x10mm Set Screw

\*  
Thread Lock



Note: Slot in spring perch should face outside of vehicle.

TKR1240  
Note: Black screw is RH threaded and goes on right side. Silver screw is LH threaded and goes on left side.

- Stock shock position is middle hole on the arm, and second from the inside on the tower
- Stock rear ride height is 36mm
- Shock length (droop) is 134mm

# Shock Filling Instructions

## For both front and rear shocks

We've found it's easiest to complete steps 1-4 on each shock before moving on to step 5. By the time you've finished step 4 on the last shock, the first one will be ready for step 5.

**Step 1.** Prepare caps by inserting bladders. Also at this time, install the small TKR8725 o-rings onto the TKR1248 screws. **Do not** install the TKR1248 rebound screw into the shock cap during this step.

**Step 2.** Extend the shock shaft all the way down. Fill the shock with oil until the body is approximately 90% full.

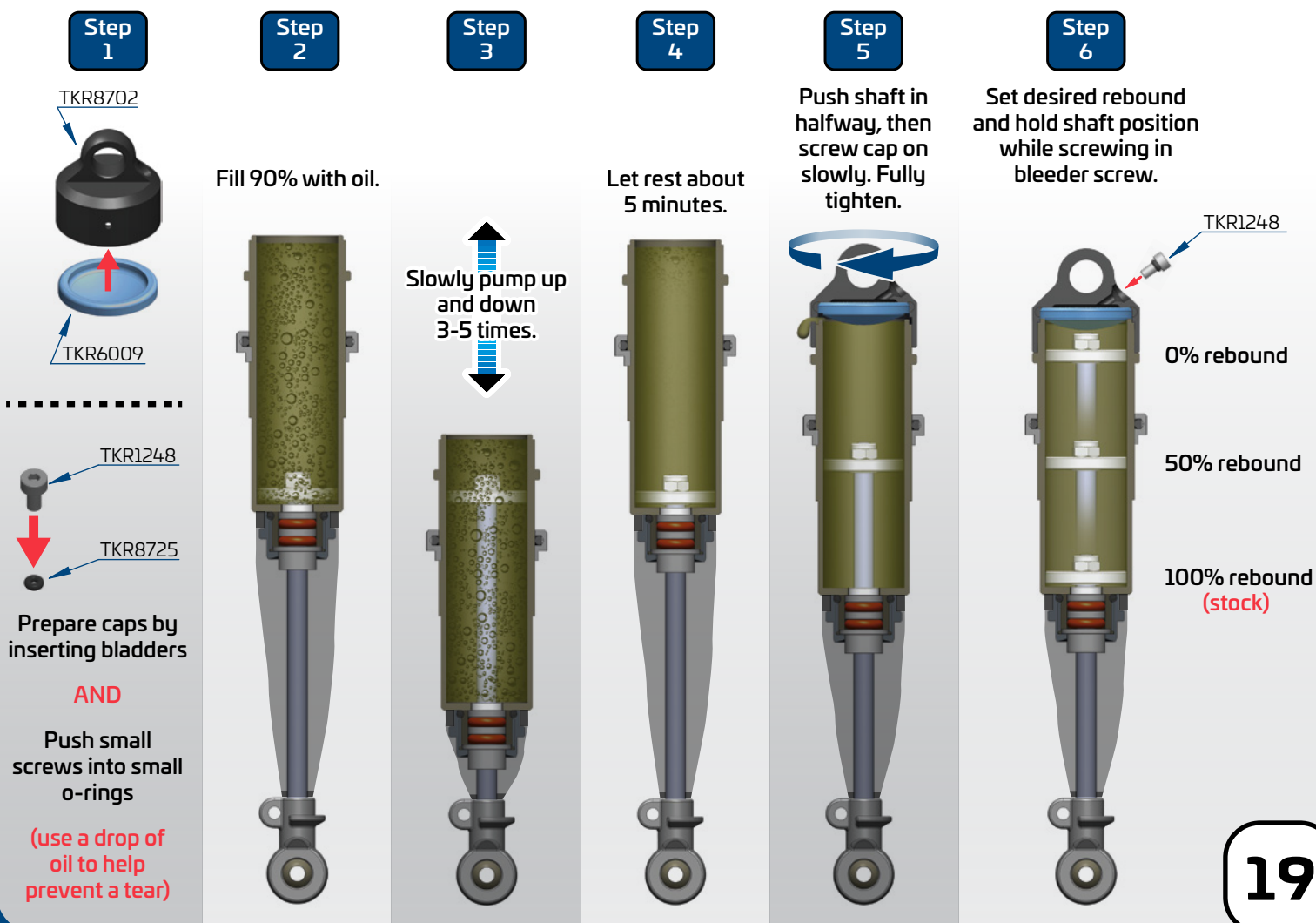
**Step 3.** Slowly pump the shock shaft up and down 3-5 times to release air bubbles from underneath the piston.

**Step 4.** Let the shock rest vertically with the shock shaft fully extended for five minutes or until all the air bubbles have released. After the air has escaped, top off the shock with oil (about 1-2mm below the top). If you overfill the shock, it won't hurt performance, it will just spill out and make a little bit of a mess.

**Step 5A.** Push the shock shaft into the shock body about halfway (about 1" or 25mm of the shaft exposed) to set a **base** rebound. Pushing the shaft in further will decrease the base rebound and pulling the shaft out more will increase it. Be careful to not position the shaft too far out or too far in because it will hydrolock or suck the bladder into the body during use. **Final** rebound will be set in Step 6.

**Step 5B.** Place the cap on the shock and slowly screw down about half way. Oil will start to ooze out of the bleeder hole on the side of the shock cap. Hold the cap and continue to fully secure it by **slowly** turning the shock body. The shock will continue to bleed oil. Wipe excess oil from the shock once the cap is fully tightened down. Use TKR1115 and TKR1116 to fully tighten your shocks. Hand tight may result in leaky shocks.

**Step 6.** Set your final rebound by holding the shock shaft in the desired position and installing the small rebound screw assembly. Fully extending the shock shaft and installing the screw will produce the maximum amount of rebound. Fully pushing the shaft into the shock body and installing the screw will produce the minimum amount of rebound. You can now tune your rebound quickly by repeating this step.

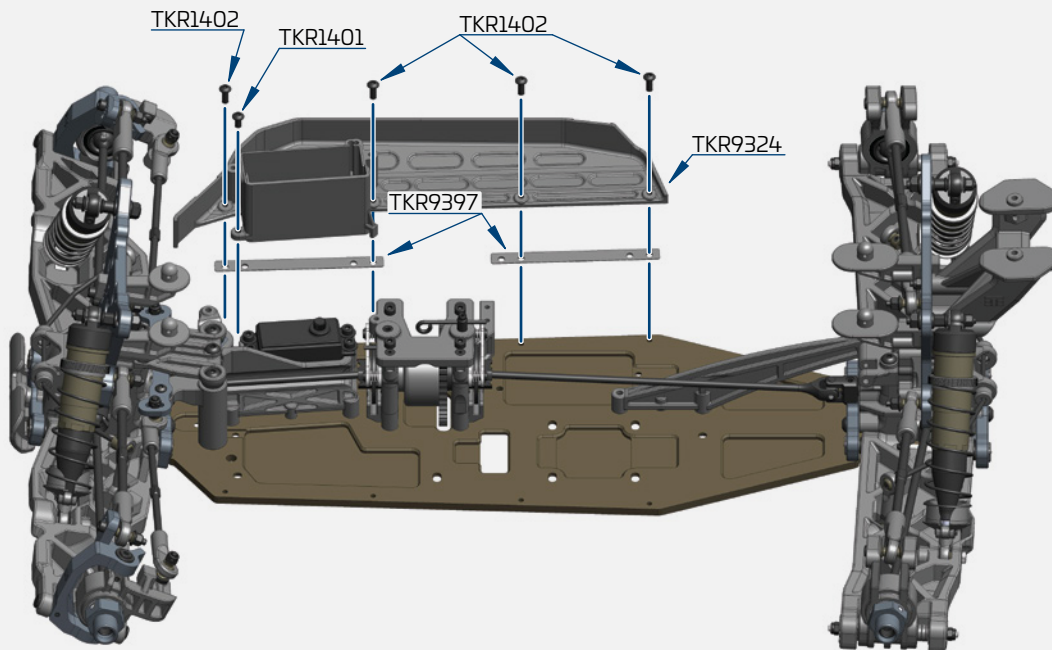


# Bag N

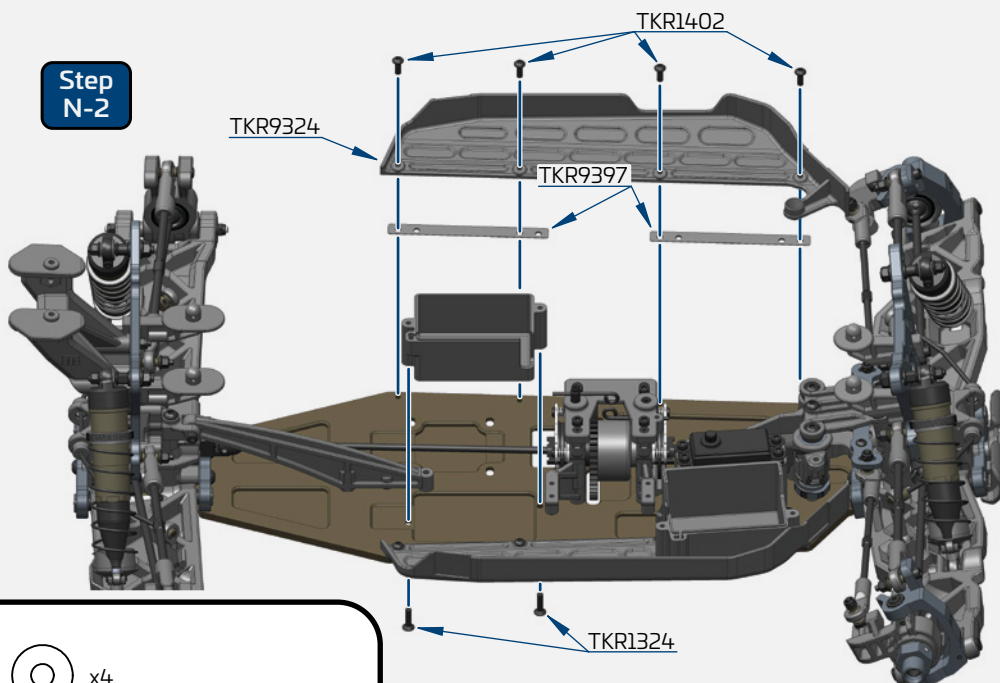
## Mud Guard

### Radio Tray install

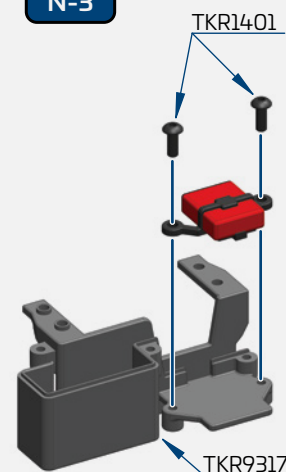
Step  
N-1



Step  
N-2





Step  
N-3




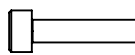
Note: Transponder  
(not included)

 x4  
TKR1221  
M3x8mm Washer

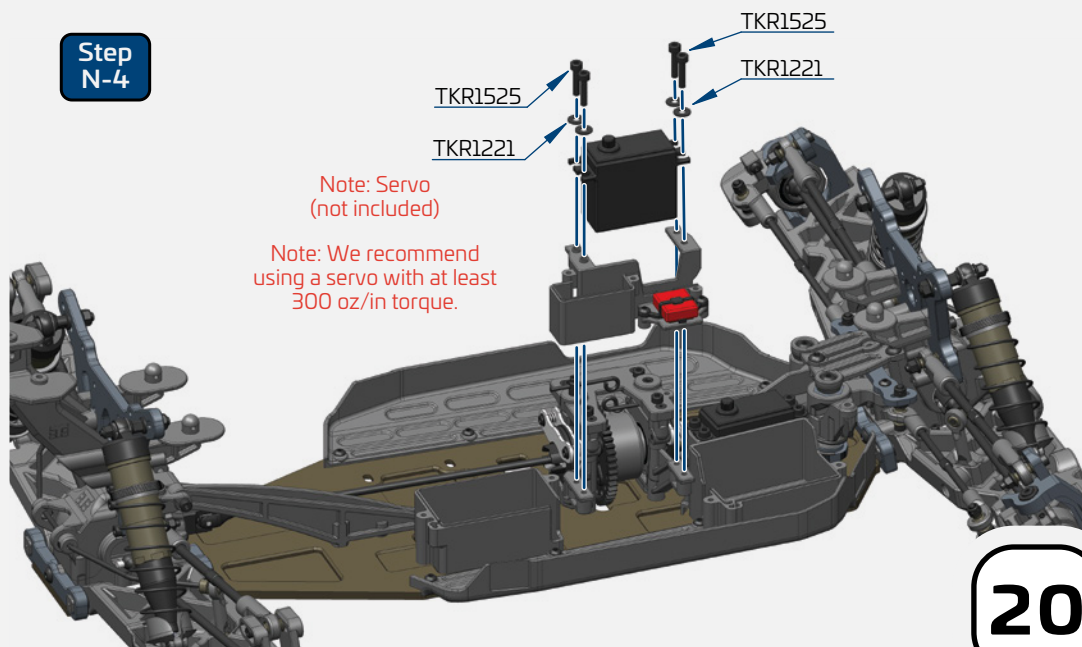
 x2  
TKR1324  
M3x12mm Flat Head Screw

 x3  
TKR1401  
M3x6mm Button Head Screw

 x8  
TKR1402  
M3x8mm Button Head Screw

 x4  
TKR1525  
M3x14mm Cap Head Screw

Step  
N-4

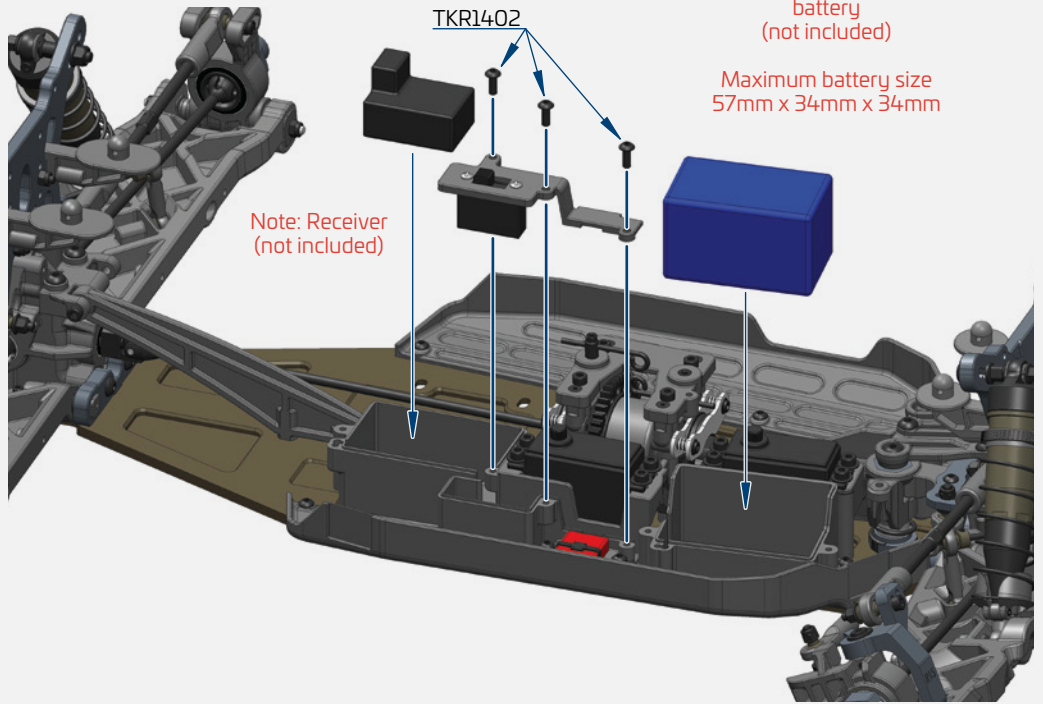
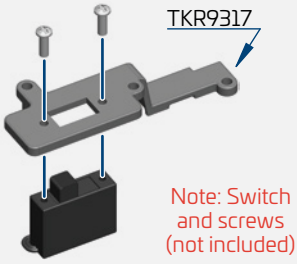


Note: Servo  
(not included)

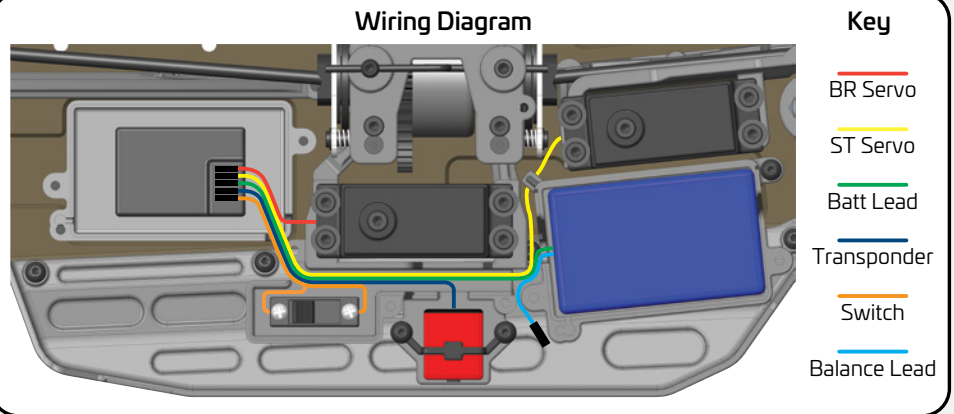
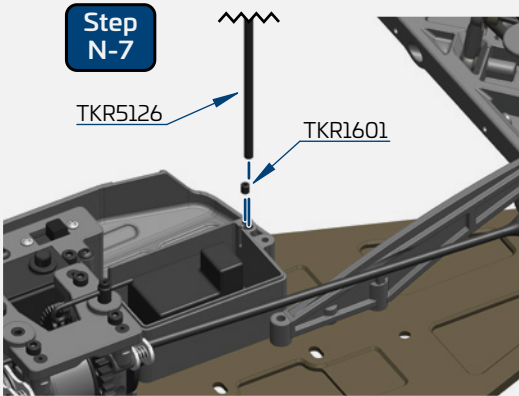
Note: We recommend  
using a servo with at least  
300 oz/in torque.

# Bag N Mud Guard/Radio Tray install

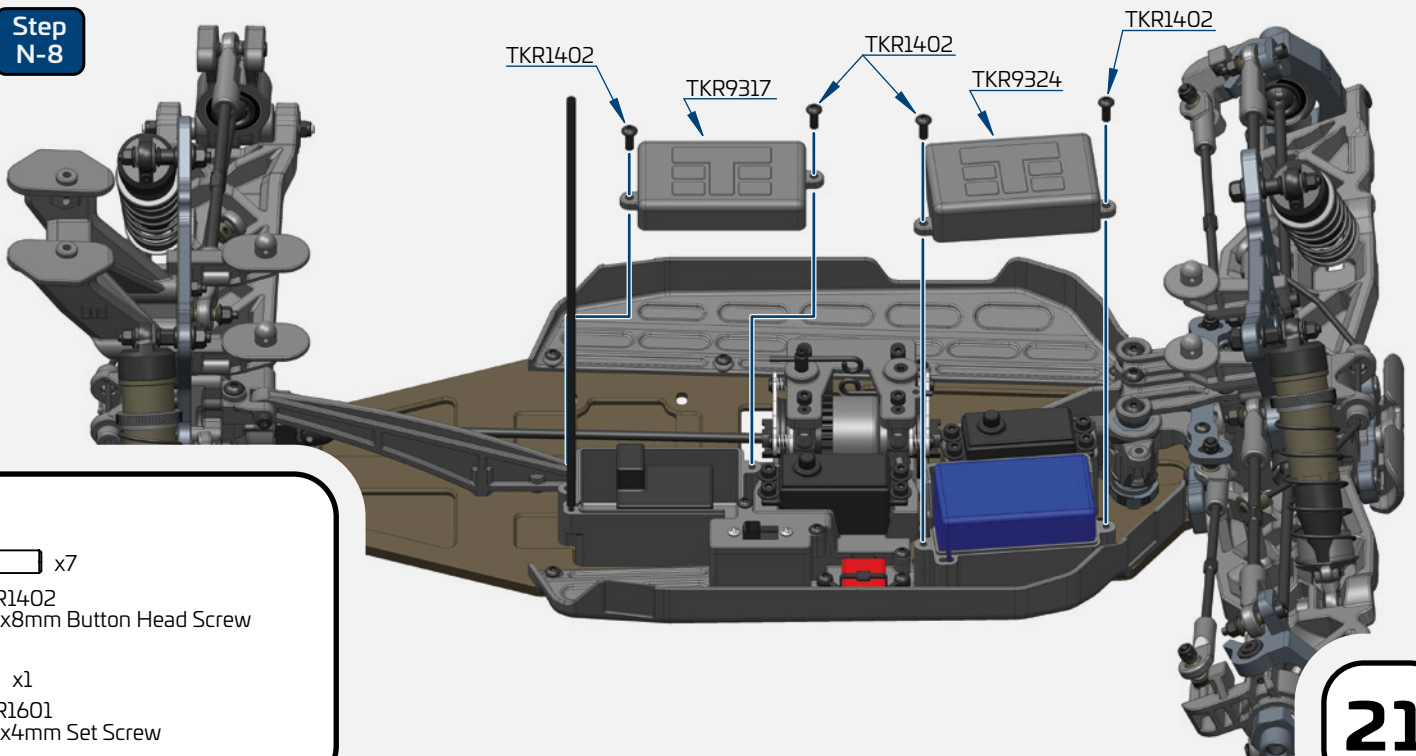
Step N-5



Step N-6



Step N-8



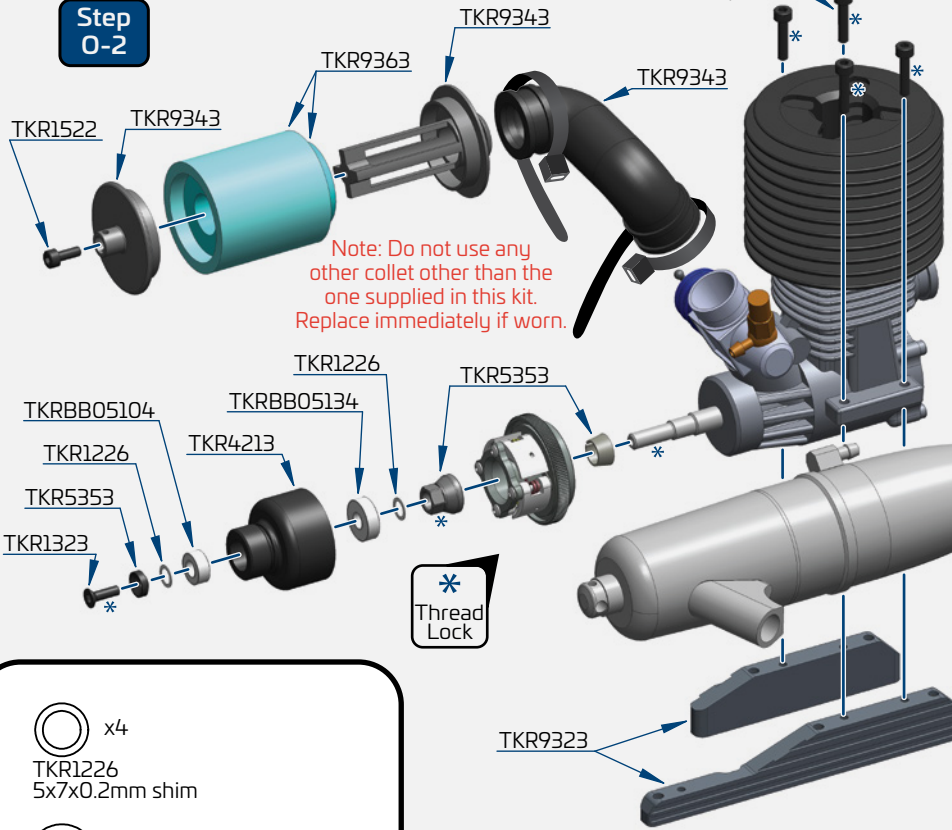
x7  
TKR1402  
M3x8mm Button Head Screw

x1  
TKR1601  
M3x4mm Set Screw

# Bag 0

## Air Filter/Clutch

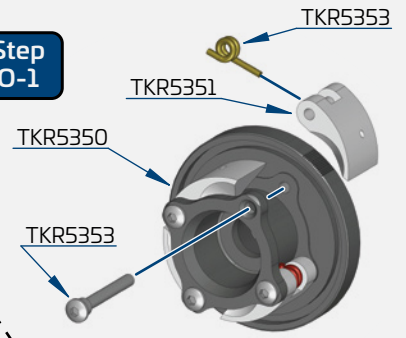
Step 0-2



Note: Do not use any other collet other than the one supplied in this kit. Replace immediately if worn.

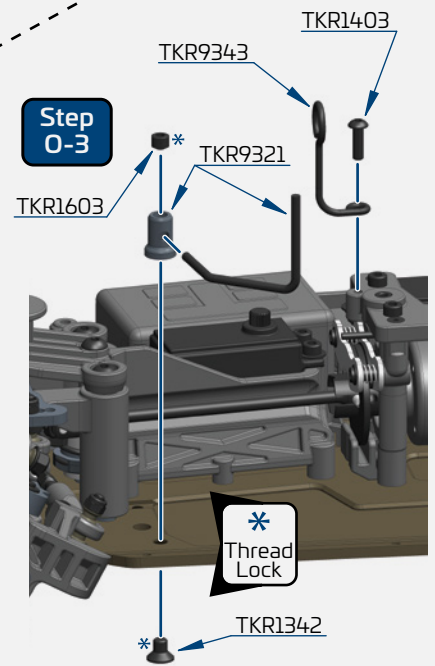
Note: Engine (not included).

Step 0-1



Note: Pipe & Manifold (not included).

Step 0-3



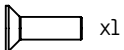
Note: Your kit contains (2x) 1.0mm (gold), and (2x) 1.1mm (red). The stock setting is to use (2x) 1.0mm springs on opposing shoes and then use (2x) 1.1mm springs on the other shoes. If the track is very high bite you can use optional part TKR5353 (4x) 1.1mm springs for more 'pop'. However, we strongly recommend trying the stock setting first and adjusting from there.



x4  
TKR1226  
5x7x0.2mm shim



x5  
TKR1228  
M4 Countersunk Washer



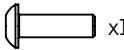
x1  
TKR1323  
M3x10mm Flat Head Screw



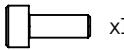
x1  
TKR1342  
M4x8mm Flat Head Screw



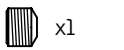
x5  
TKR1343  
M4x10mm Flat Head Screw



x1  
TKR1403  
M3x10mm Button Head Screw



x1  
TKR1522  
M3x8mm Cap Head Screw



x1  
TKR1603  
M5x4mm Set Screw

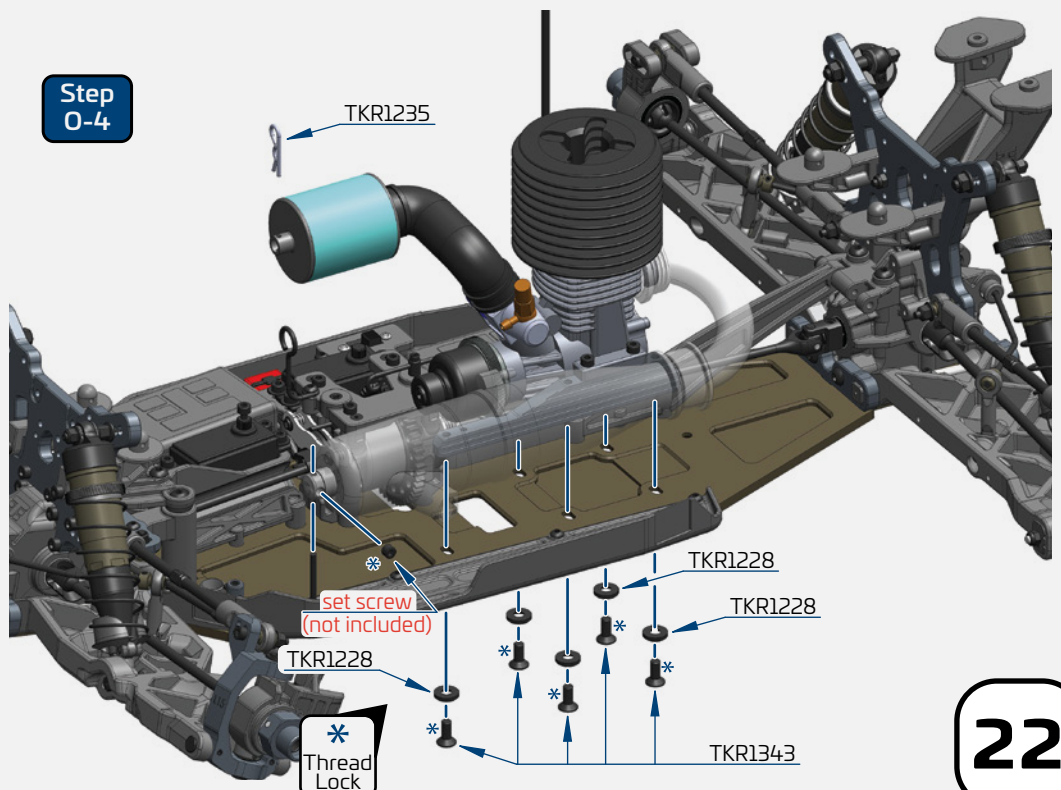


x1  
TKRBB05104  
Ball Bearing (5x10x4)



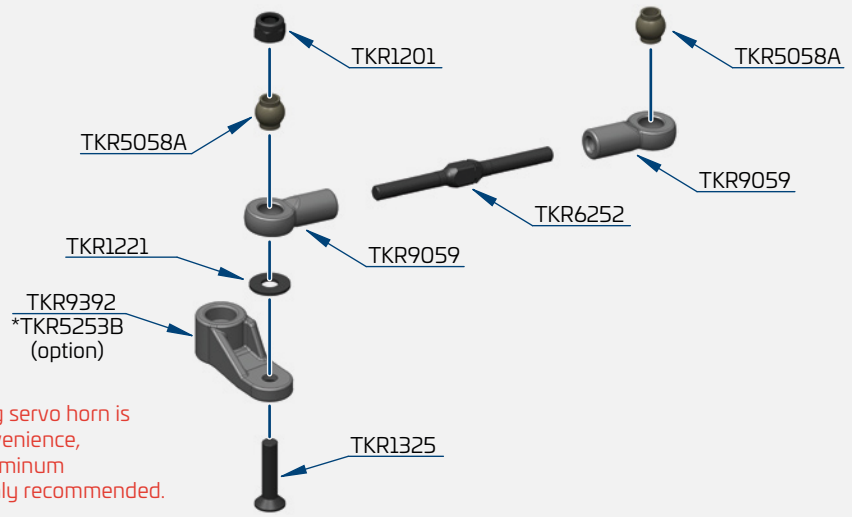
x1  
TKRBB05134  
Ball Bearing (5x13x4)

Step 0-4



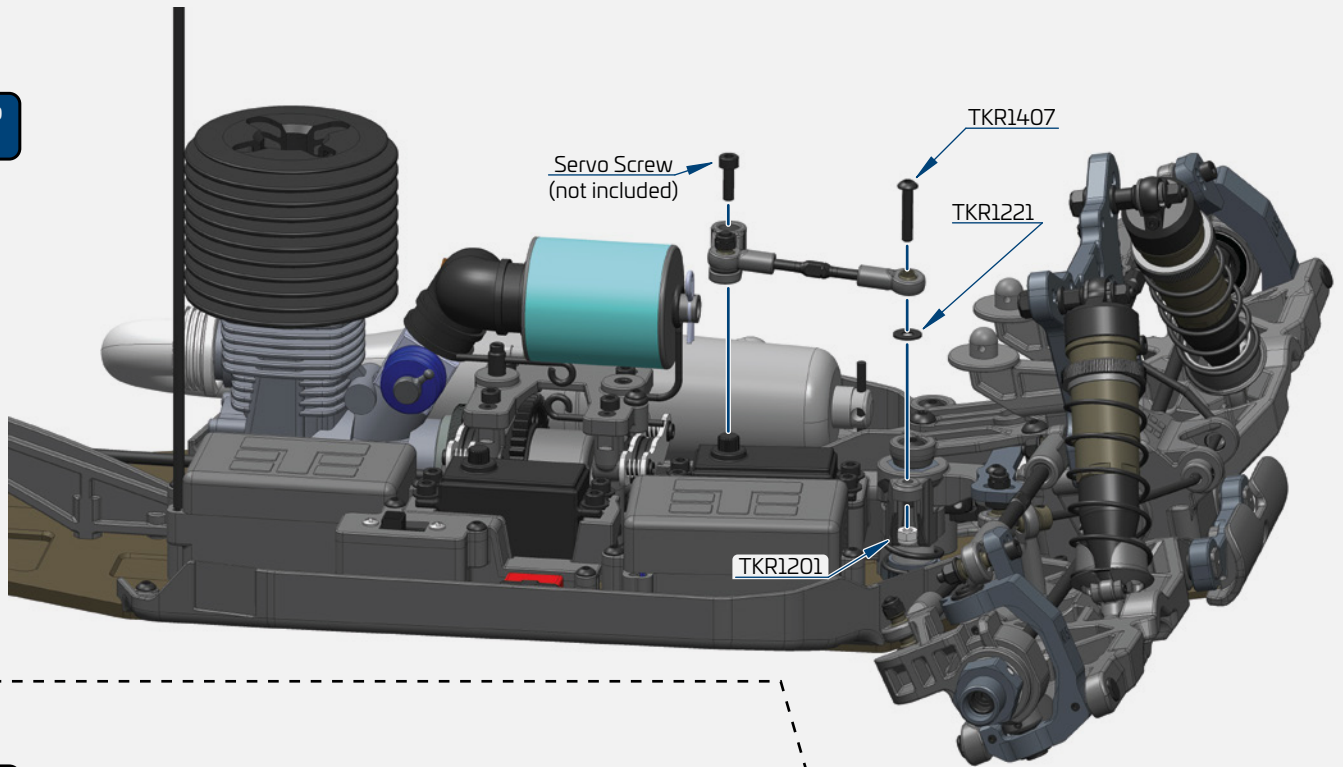
# Bag P

## Steering Linkage




Step  
P-1


Note: A plastic steering servo horn is provided for convenience, however an aluminum steering servo horn is highly recommended.

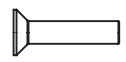


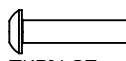
Step  
P-2

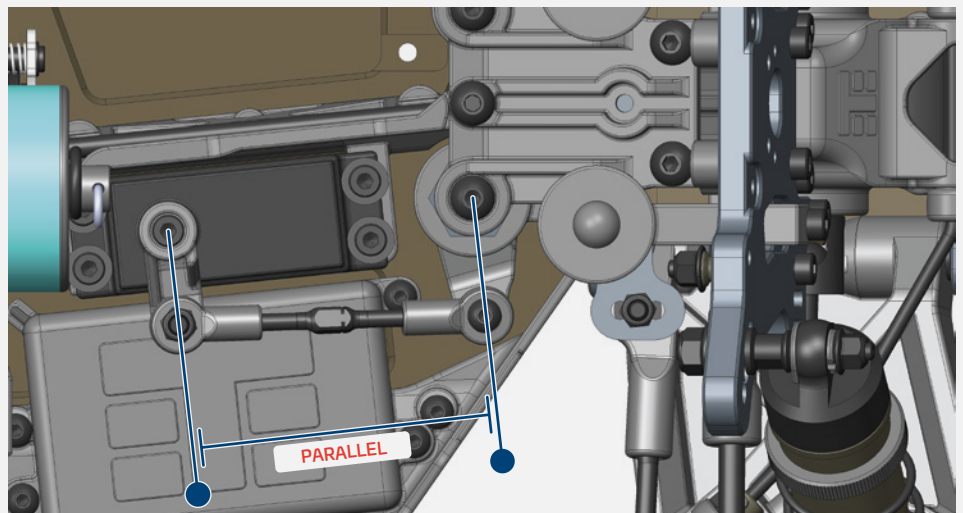
Step  
P-3

 x2  
TKR1201  
M3 Lock Nut Black

 x2  
TKR1221  
M3x8mm Washer

 x1  
TKR1325  
M3x14mm Flat Head Screw

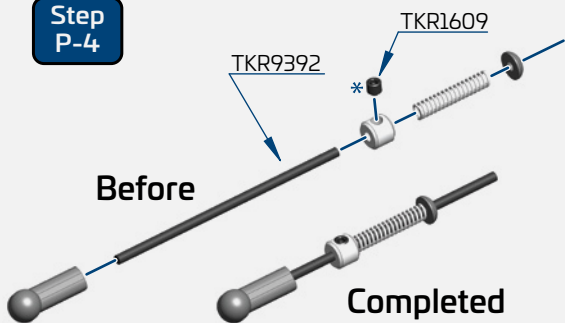
 x1  
TKR1407  
M3x16mm Button Head Screw



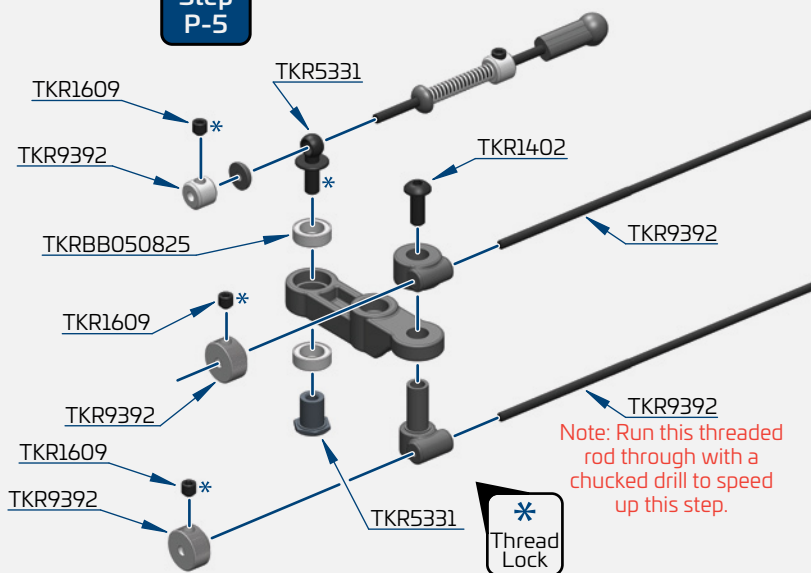
Note: Offset servo arm so it is parallel with the connecting arm at neutral or zero servo position.

# Bag P Brake Linkage

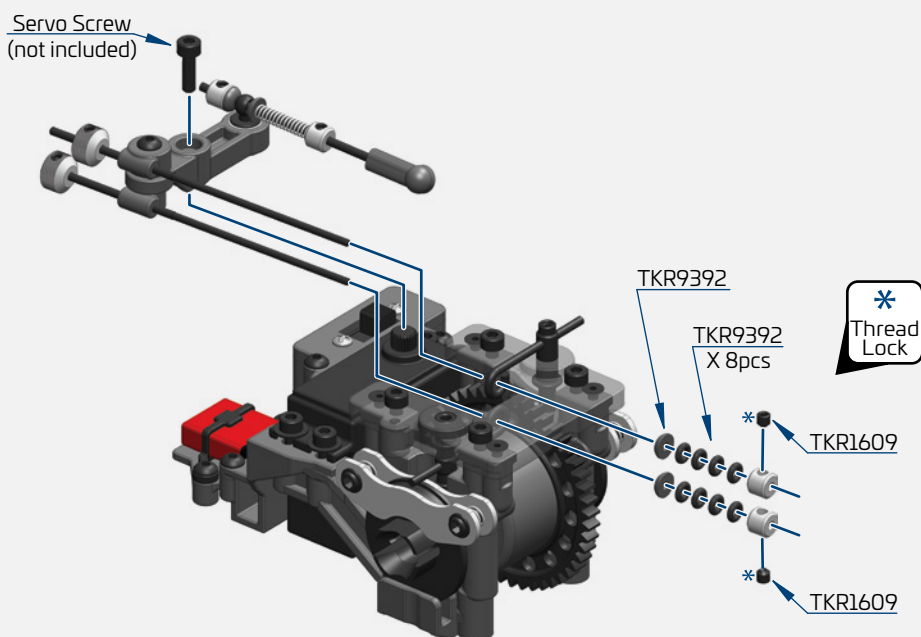
Step  
P-4



Step  
P-5



Step  
P-6

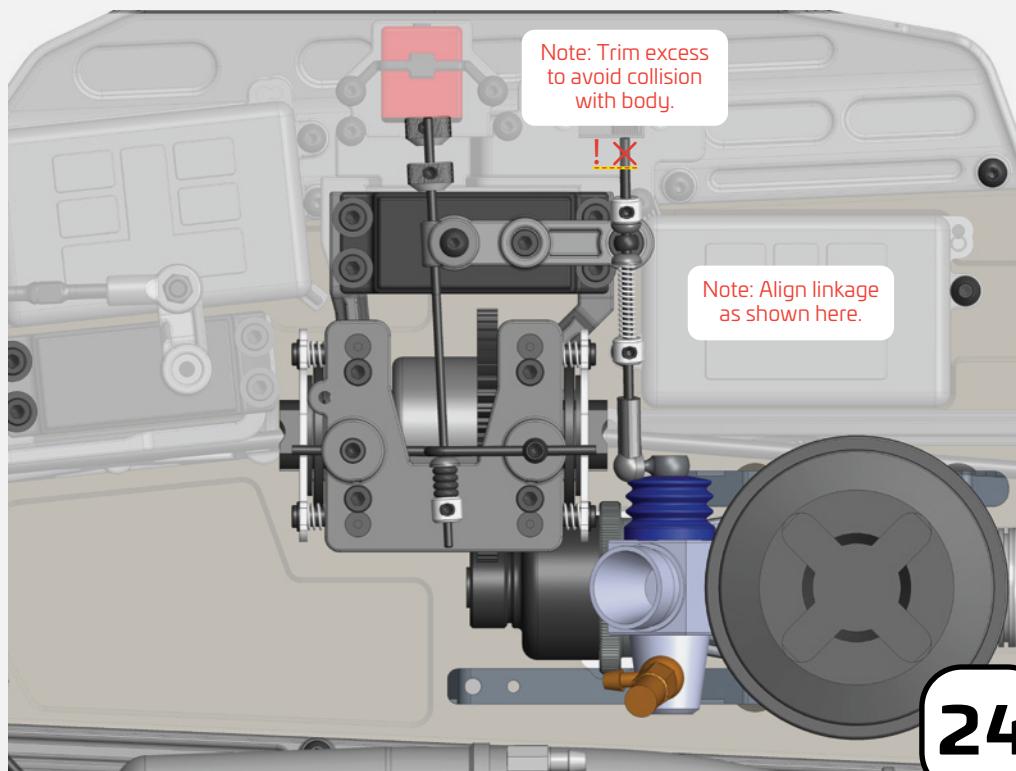


Step  
P-6

x1  
TKR1402  
M3x8mm Button Head Screw

x6  
TKR1609  
M3x3mm Set Screw

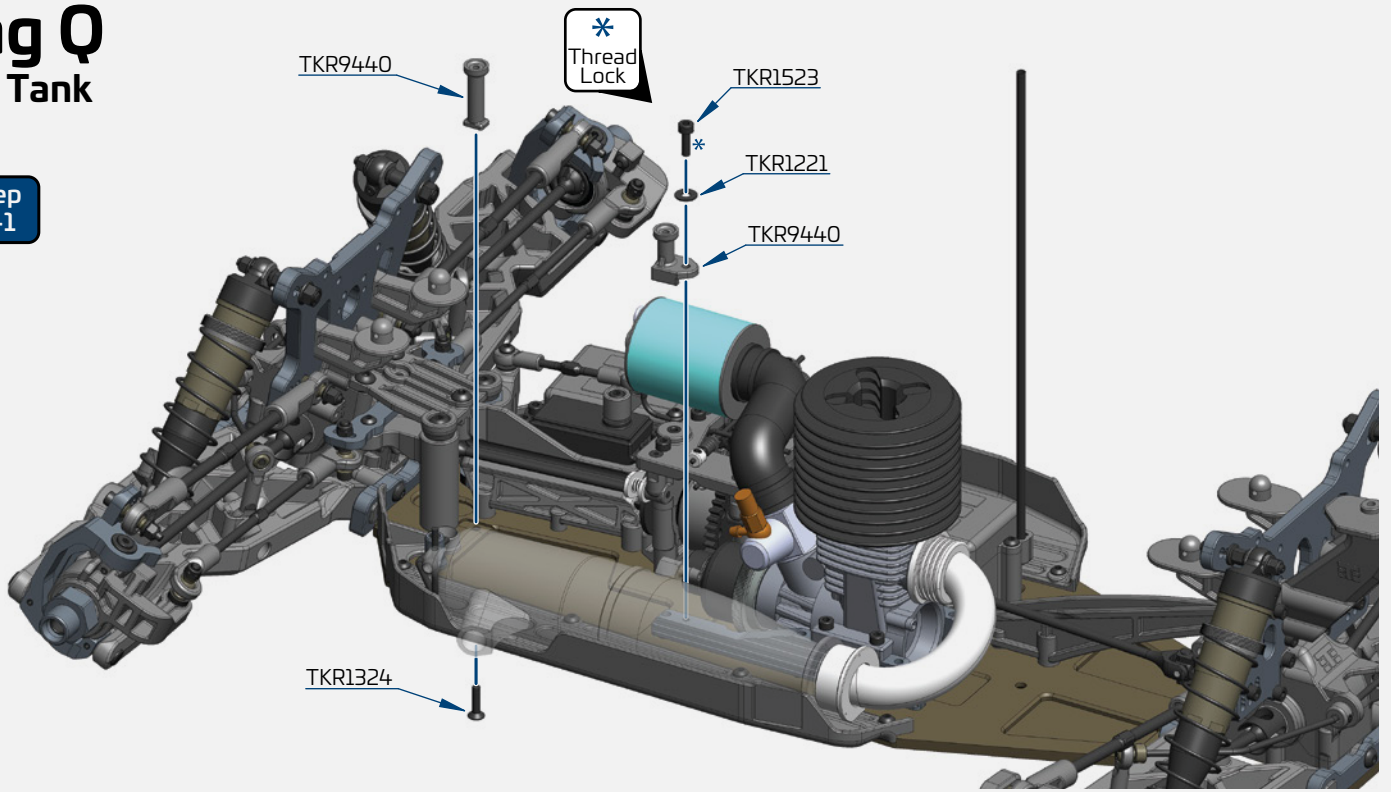
x2  
TKRBB050825  
Ball Bearing (5x8x2.5)



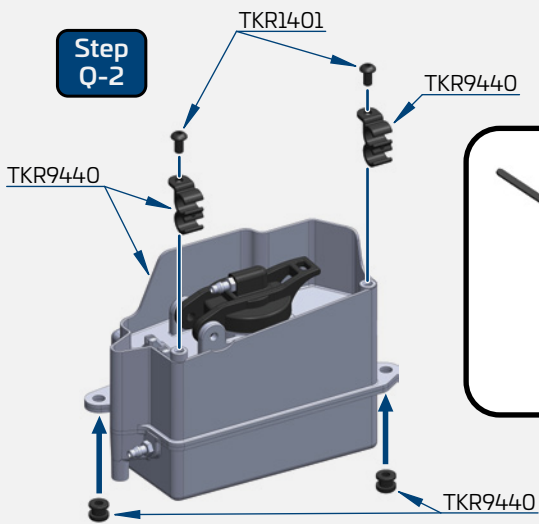


# Bag Q Fuel Tank

Step  
Q-1



Step  
Q-2



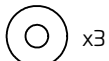
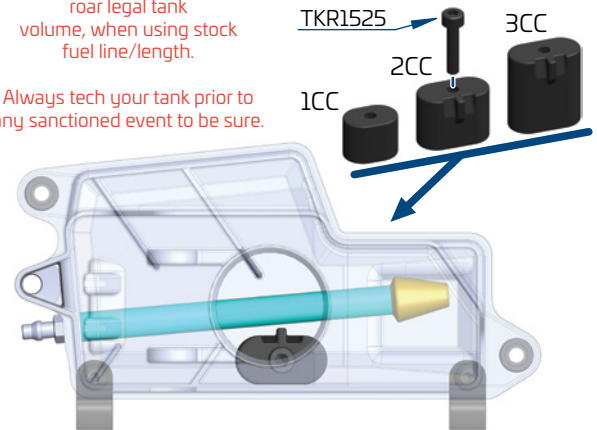
Note: Instal zip-tie as shown.

Note: Squeeze the grommets into place.

## Volume Compensator

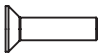
Note: Use the 2CC insert for rear legal tank volume, when using stock fuel line/length.

Always tech your tank prior to any sanctioned event to be sure.



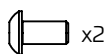
x3

TKR1221  
M3x8mm Washer



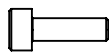
x1

TKR1324  
M3x12mm Flat Head Screw



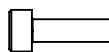
x2

TKR1401  
M3x6mm Button Head Screw



x1

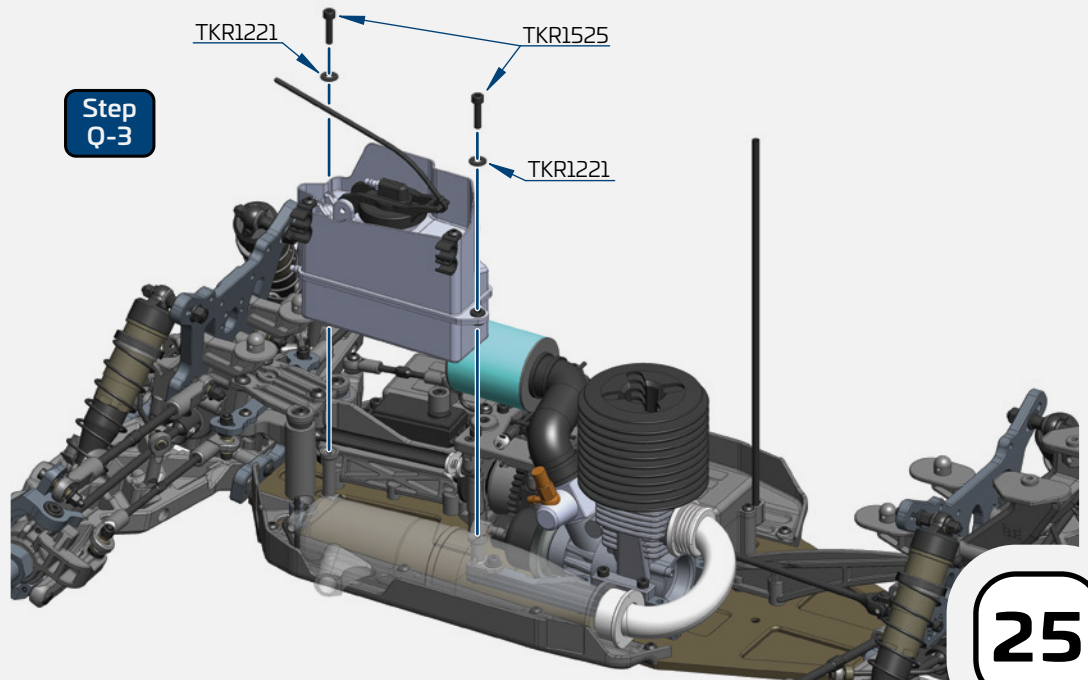
TKR1523  
M3x10mm Cap Head Screw



x3

TKR1525  
M3x14mm Cap Head Screw

Step  
Q-3

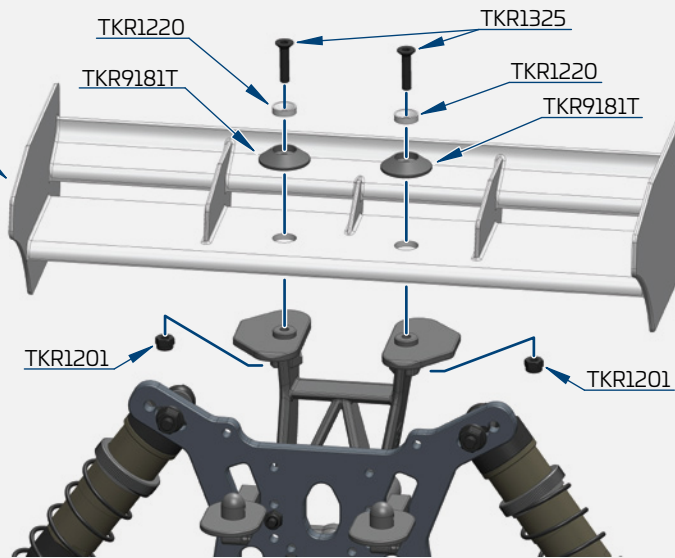


# Bag R

## Final Assembly

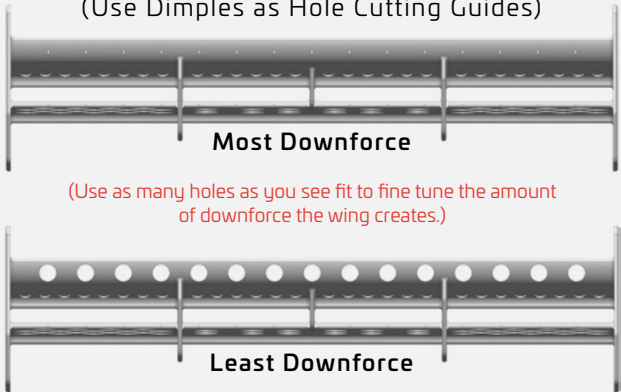
Step R-1

TKR8292W  
\*TKR8292K  
\*TKR8292Y (Option)

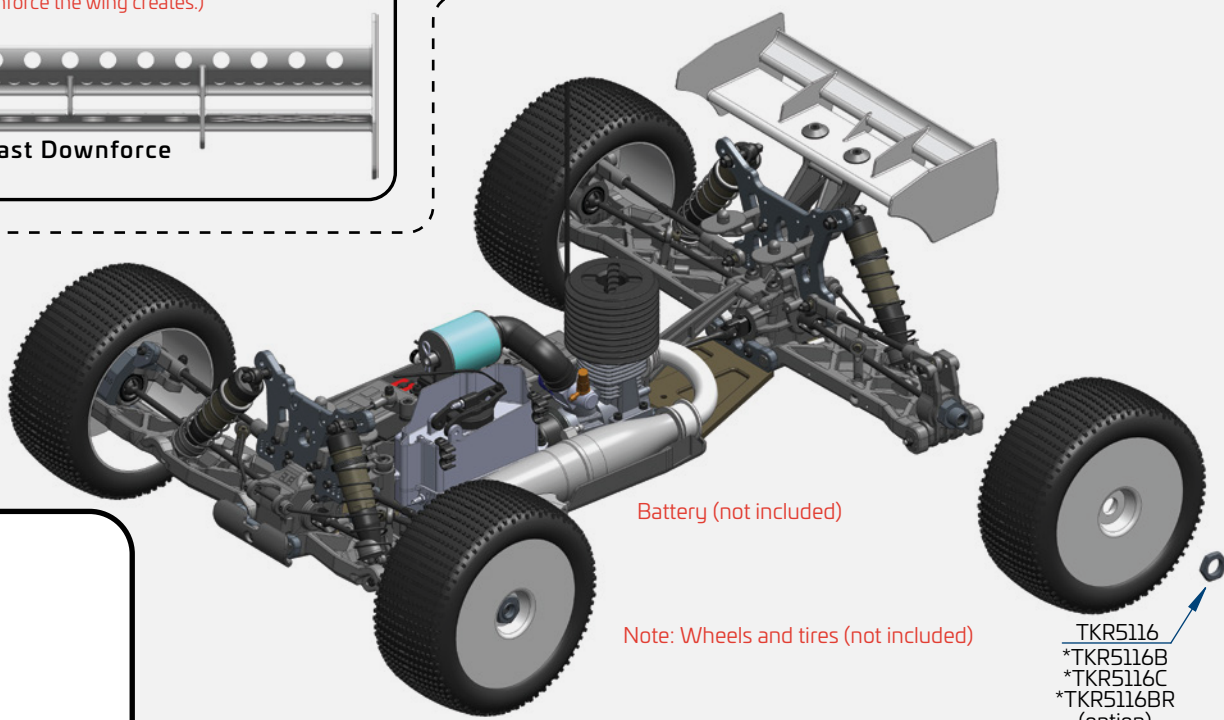


### Wing Hole Options

(Use Dimples as Hole Cutting Guides)



Step R-2



x2  
TKR1201  
M3 Lock Nut Black

x2  
TKR1220  
M3 Countersunk Washer

x2  
TKR1221  
M3x8mm Washer

x2  
TKR1325  
M3x14mm Flat Head Screw

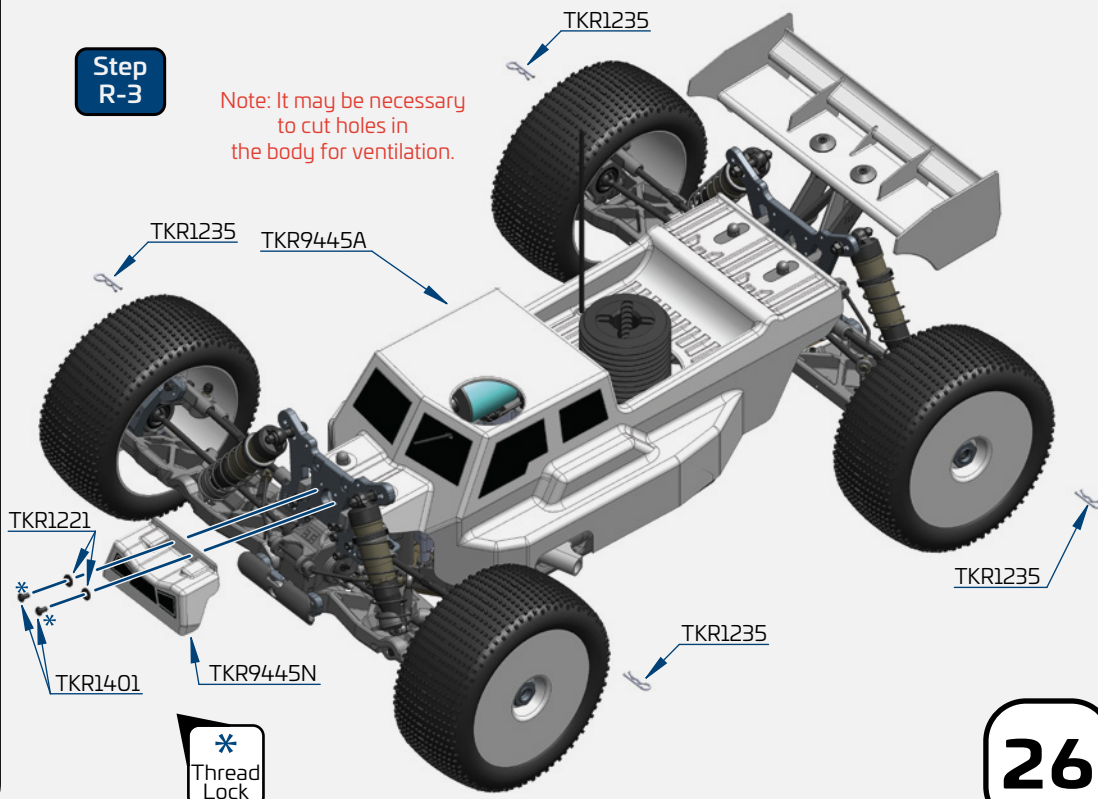
x2  
TKR1401  
M3x6mm Button Head Screw

x4  
TKR1235  
Body Clip

x4  
TKR5116  
Wheel Nut

Step R-3

Note: It may be necessary to cut holes in the body for ventilation.



\*  
Thread Lock

# TKR9400 - NT48 2.0 4WD Nitro 1/8th Scale Competition Truggy Kit

## Parts List

TKR4213 - Clutch Bell (13t)  
TKR5049A - Pivot Balls (6.8mm, no flng, sway bar, shck ends, almmn, 4pcs)  
TKR5058A - Pivot Balls (5.8mm, no flange, brake/steering link, aluminum, 4pcs)  
TKR5079A - Stabilizer Balls (6.8mm, sway bars, aluminum, 4pcs)  
TKR5101X - Servo Saver Spring (HD, EB48, SCT410, NB48)  
TKR5103 - Servo Saver Post (aluminum, gun metal ano)  
TKR5116 - Wheel Nuts (17mm, serrated, gun metal ano, M12x1.0, 4pcs)  
TKR5122 - Steering Rack Bushings (aluminum, gun metal ano, 2pcs)  
TKR5126 - Antenna tube (universal, w/ caps, 5pcs)  
TKR5165 - V2 Hinge Pin Inserts, Wheelbase Shims (EB/NB/ET/NT/SCT)  
TKR5187B - Rod Ends (hard, 6.8mm, EB/NB/ET/NT48, 8pcs)  
TKR5230 - Steering Linkage (M3x18mm threaded rod, 10pcs)  
TKR5231 - Servo Saver Nut and Spring  
TKR5297 - Universal Driveshaft (center, rear)  
TKR5331 - Throttle Pivot Ball Assembly (CNC, NB48, NT48)  
TKR5345B - Brake Disc (steel, NB/NT, revised, 1pc)  
TKR5350 - Flywheel (4-shoe)  
TKR5351 - Clutch Shoes (7075, 4pcs, NB48, NT48)  
TKR5353 - Clutch Springs and Hardware Set (NB48, NT48)  
TKR5368B - Brake Post Spring (revised, xtra stiffy, 4pcs)  
TKR5401 - Body Mount Set (ET/NT)  
TKR6252 - Turnbuckle (M3 thread, 40mm length, 2pcs)  
TKR8042 - Kingpin Shoulder Screws (EB/NB48, 4pcs)  
TKR8052A - Pivot Balls (6.8mm, camber, str links, almmn, centered, 4pcs)  
TKR8070 - Stub Axles (hardened steel, 2pcs)  
TKR8073 - CV Rebuild Kit (front/rear, for 2 axles)  
TKR8100B - Ackerman Plate (7075, EB/NB48 2.0)  
TKR8292W - Lightweight Wing (ROAR/IFMAR legal, white)  
TKR9017 - Sway Bar and Bulkhead Acc (2.0)  
TKR9018 - Front Bumper (2.0, 2pcs)  
TKR9020 - Hinge Pins (inner, front/rear)  
TKR9034 - Hinge Pins (outer, rear, 2.0, 2pcs)  
TKR9040 - Rear Hubs and Bearing Spacers (L/R, 2.0)  
TKR9041 - Spindles and Bearing Spacers (L/R, 2.0)  
TKR9043 - Spindle Carrier Hinge Pins (steel, 2.0, 4pcs)  
TKR9048A - Spindle Carriers (revised, L/R, aluminum, 15 degree, 2.0)  
TKR9055 - Hinge Pin Bushings (8pcs)  
TKR9059 - Rod End Set (brake/steering/sway bar linkage, 2.0)  
TKR9102A - Steering Posts (aluminum, gun metal ano)  
TKR9104 - Bell Cranks and Top Plate (2.0)  
TKR9165 - Rear Arm Hinge Pin Inserts (2.0)  
TKR9166 - Rear Hub Roll Center Inserts (2.0)  
TKR9181T - Tall Wing Mount and Body Mounts (2.0)  
TKR9213 - Brake Posts (steel, 4pcs)  
TKR9215B - Brake Cam Set (revised, F/R, steel)  
TKR9296 - Universal Driveshaft (center, front, 87.5mm, NB/NT 2.0)  
TKR9310 - Split Center Diff Mount (NB/NT48 2.0)  
TKR9314 - Metallic Brake Pads (2pcs, NB/NT48 2.0)  
TKR9317 - Radio Box and Throttle Servo Mount (NB/NT48 2.0)  
TKR9321 - Exhaust Wire Mount Set (CNC, NB/NT48 2.0)  
TKR9323 - Engine Mounts (CNC, 7075, NB/NT48 2.0)  
TKR9324 - Mud Guard and Battery Box Set (L/R, NB/NT48 2.0)  
TKR9328B - Chassis Brace Set (revised, NB/NT48 2.0)  
TKR9343 - Air Filter Set (hose, filter, housing, NB/NT48 2.0)  
TKR9363 - Air Filter Foams (inner, outer, pre-oiled, 3pcs each, NB/NT48 2.0)  
TKR9392 - Throttle Brake Linkage (NB/NT48 2.0)  
TKR9397 - Mudguard Adapters (L/R, NT48 2.0)  
TKR9402 - Chassis (7075, hard anodized, NT48 2.0)  
TKR9412 - Gearbox (front, ET/NT 2.0)  
TKR9416 - Gearbox (rear, ET/NT 2.0)  
TKR9423 - Turnbuckle (M4 thread, 100mm length, 4mm adjustment, 2pcs)  
TKR9428 - Shock Tower (front, 7075 CNC, GM ano, ET/NT48 2.0)  
TKR9429 - Shock Tower (rear, 7075 CNC, GM ano, ET/NT48 2.0)  
TKR9430 - Suspension Arms (rear, 2pcs, ET/NT48 2.0)  
TKR9436 - Suspension Arms (front, 2pcs, ET/NT48 2.0)  
TKR9440 - Fuel Tank and Accessories (NT48 2.0, ROAR legal)  
TKR9445A - Body (NT48 2.0, w/ window mask)  
TKR9445N - Headlights / Nose Cone (ET/NT48 2.0)  
TKR9446 - Decal Sheet (NT48 2.0)  
TKR9450 - Turnbuckle (M5 thread, 108mm length, 5mm adjustment, 2pcs)  
TKR9461 - Hinge Pin Brace (CNC, 7075, ET/NT48 2.0, A Block)  
TKR9462 - Hinge Pin Brace (CNC, 7075, ET/NT48 2.0, B Block)  
TKR9463 - Hinge Pin Brace (CNC, 7075, ET/NT48 2.0, C Block)  
TKR9464 - Hinge Pin Brace (CNC, 7075, ET/NT48 2.0, D Block)  
TKR9472 - Driveshafts (F/R, hardened steel, ET/NT48 2.0, 2pcs)  
TKR9485 - Sway Bar Set (FRONT, 2.1, 2.2, 2.3, 2.4, 2.5, ET/NT48 2.0)  
TKR9495 - Sway Bar Set (REAR, 2.1, 2.2, 2.3, 2.4, 2.5, ET/NT48 2.0)  
TKR9671 - Wheel Hubs (+2mm offset, 17mm, gun metal ano, w/pins, 2pcs)  
TKR9673 - Wheel Hubs (+4mm offset, 17mm, gun metal ano, w/pins, 2pcs)

## Shocks List

TKR6009 - Shock O-Ring and Bladder Set (for 2 shocks)  
TKR6013 - Shock Adjustment Nuts (aluminum, gun metal ano, 2pcs)  
TKR6015 - Shock Cartridge Caps (aluminum, gun metal ano, 2pcs)  
TKR6016 - Shock Body (rear, aluminum, hard ano, 2pcs)  
TKR6017 - Shock Shafts (rear, steel, 2pcs)  
TKR6060 - Shock Body (rear, x-long, aluminum, hard ano, 2pcs)  
TKR6061 - Shock Shafts (rear, x-long, steel, 2pcs)  
TKR6082 - Shock Spring Set (1.6 x 9.5T, 95mm, yellow, 4.48 lb/in)  
TKR6092 - Shock Spring Set (1.6 x 8.0T, 80mm, yellow, 5.60 lb/in)  
TKR6140C - Locking Shock Rod End and Spring Perch Set (revised, EB/NB/ET/NT/SCT)  
TKR6144 - Shock Boots (long length, EB/NB, 2pcs)  
TKR6145 - Shock Boots (XL length, rear ET/NT, 2pcs)  
TKR6146 - Shock Cartridge Set (CNC, Delrin, EB/NB/ET/NT/SCT)  
TKR6180 - Shock Piston (CNC, flat/flat, 4x1.2 + 4x1.3)  
TKR8702 - Shock Caps (7075, emulsion/vented/standard, black ano, 2pcs)  
TKR8725 - Emulsion O-ring Set (4x cap seals, 8x emulsion o-rings, for 16mm shocks)  
TKR8727 - Shock Standoffs (2pcs, requires TKR8730)  
TKR8730 - Shock Cap Bushings (4pcs, requires TKR8727)

## Bearings List

TKRBB050825 - Ball Bearing (5x8x2.5mm, 4pcs)  
TKRBB05104 - Ball Bearing (5x10x4, 4pcs)  
TKRBB05114 - Ball Bearing (5x11x4, 4pcs)  
TKRBB05134 - Ball Bearing (5x13x4, 4pcs)  
TKRBB05145 - Ball Bearing (5x14x5, shielded, 4pcs)  
TKRBB06103 - Ball Bearing (6x10x3, 4pcs)  
TKRBB08165 - Ball Bearing (8x16x5, 4pcs)  
TKRBB08165F - Ball Bearing (8X16x5mm, flanged, shielded, 4pcs)  
TKRBB15214 - Ball Bearing (15x21x4, shielded, 4pcs)

## Differential List

TKR5144 - Differential O-Rings (6pcs)  
TKR5145B - Differential Shims (revised, 6x17mm, 6pcs)  
TKR9112 - Differential Outdrives (center, NB/NT48 2.0, 2pcs)  
TKR9113 - Differential Case (center, NB/NT48 2.0)  
TKR9114 - Differential Outdrives (F/R NB/NT48 2.0, F/C/R EB/ET48 2.0, 2pcs)  
TKR9115 - Differential Case (F/R NB/NT48 2.0, F/C/R EB/ET48 2.0)  
TKR9143 - Differential Seals (2.0, 3pcs)  
TKR9149 - Differential Cross Pins (2.0, 6pcs)  
TKR9150 - Differential Gear Set (internal gears only, 2.0)  
TKR9415 - Spur Gear (48t, steel, CNC, lightened, NB/NT 2.0)  
TKR9452 - Differential Ring Gear (40t, F/R, CNC, ET/NT48 2.0, use with TKR9453)  
TKR9453 - Diff Pinion (9t, F/R, CNC, ET/NT48 2.0, use with TKR9452)

## Hardware List

TKR1200 - M2.5 Locknuts (zinc finish, 10pcs)  
TKR1201 - M3 Locknuts (black, 10pcs)  
TKR1211 - M3 Locknuts (flanged, black, 10pcs)  
TKR1212 - M4 Locknuts (flanged, black, serrated, 10pcs)  
TKR1220 - M3 Countersunk Washers (aluminum, natural, 10pcs)  
TKR1221 - M3x8mm Washer (black, 10pcs)  
TKR1222 - 13x16x.1mm Diff Shims (10pcs)  
TKR1226 - 5x7x.2mm shims (10pcs)  
TKR1228 - M4 Countersunk Washer (black, 10pcs)  
TKR1235 - Body Clips (10pcs)  
TKR1238 - Droop Adjustment Screws (M4x10mm, 8pcs)  
TKR1240 - Lower Shock Mount Screws (2 CW thread, 2 CCW thread, EB/NB/SCT)  
TKR1248 - M2x4mm Cap Head Screws (black, 10pcs)  
TKR1250 - Steering Link Screws (black, steel, 2pcs)  
TKR1301 - M2.5x6mm Flat Head Screws (black, 10pcs)  
TKR1303 - M2.5x10mm Flat Head Screws (black, 10pcs)  
TKR1322 - M3x8mm Flat Head Screws (black, 10pcs)  
TKR1323 - M3x10mm Flat Head Screws (black, 10pcs)  
TKR1324 - M3x12mm Flat Head Screws (black, 10pcs)  
TKR1325 - M3x14mm Flat Head Screws (black, 10pcs)  
TKR1342 - M4x8mm Flat Head Screws (black, 10pcs)  
TKR1343 - M4x10mm Flat Head Screws (black, 10pcs)  
TKR1344 - M4x12mm Flat Head Screws (black, 10pcs)  
TKR1346 - M4x15mm Flat Head Screws (black, 10pcs)  
TKR1349 - M4x20mm Flat Head Screws (black, 10pcs)  
TKR1401 - M3x6mm Button Head Screws (black, 10pcs)  
TKR1402 - M3x8mm Button Head Screws (black, 10pcs)  
TKR1403 - M3x10mm Button Head Screws (black, 10pcs)  
TKR1407 - M3x16mm Button Head Screws (black, 10pcs)  
TKR1443 - M4x10mm Button Head Screws (black, 10pcs)  
TKR1444 - M4x12mm Button Head Screws (black, 10pcs)  
TKR1445 - M4x14mm Button Head Screws (black, 10pcs)  
TKR1522 - M3x8mm Cap Head Screws (black, 10pcs)  
TKR1523 - M3x10mm Cap Head Screws (black, 10pcs)  
TKR1525 - M3x14mm Cap Head Screws (black, 10pcs)  
TKR1528 - M3x18mm Cap Head Screws (black, 10pcs)  
TKR1529 - M3x20mm Cap Head Screws (black, 10pcs)  
TKR1532 - M3x35mm Cap Head Screws (black, 10pcs)  
TKR1534 - M3x22mm Cap Head Screws (black, 10pcs)  
TKR1601 - M3x4mm Set Screws (black, 10pcs)  
TKR1603 - M5x4mm Set Screws (black, 10pcs)  
TKR1605 - M3x10mm Set Screws (black, 10pcs)  
TKR1609 - M3x3mm Set Screws (black, 10pcs)

## Option Parts

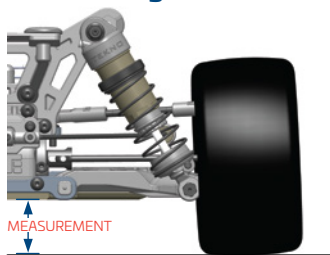
TKR1103 - Turnbuckle Wrench (4mm, 5mm, hardened steel)  
TKR1111 - XT Tuning Screwdriver (adjustable length, 4mm shank)  
TKR1115 - Pivot Ball and Shock Multi-tool (aluminum)  
TKR1116 - 17mm Wheel Wrench, Shock Cap Tool  
TKR1119 - 5.5mm / 7.0mm Wrench (hardened steel)  
TKR5114XB - Differential Outdrives (front/rear, revised, lightened)  
TKR5253B - Aluminum Servo Horn (25t spline, M3 clamp, double hole arm)  
TKR6003 - Shock Caps (aluminum, gun metal ano, 2pcs, EB48)  
TKR6003B - Shock Caps (aluminum, non-vented top, 2pcs)  
TKR6009B - Shock O-Ring Set (16pcs)  
TKR6017T - Shock Shafts w/ TiNi coating (rear, steel, 2pcs)  
TKR6061T - Shock Shafts w/ TiNi coating (rear, x-long, steel, 2pcs)  
TKR6080 - Shock Spring Set (1.6 x 10.5T, 95mm, pink, 3.96 lb/in)  
TKR6081 - Shock Spring Set (1.6 x 10.0T, 95mm, green, 4.20 lb/in)  
TKR6083 - Shock Spring Set (1.6 x 9.0T, 95mm, orange, 4.80 lb/in)  
TKR6090 - Shock Spring Set (1.6 x 9.0T, 80mm, pink, 4.80 lb/in)  
TKR6091 - Shock Spring Set (1.6 x 8.5T, 80mm, green, 5.17 lb/in)  
TKR6093 - Shock Spring Set (1.6 x 7.5T, 80mm, orange, 6.11 lb/in)  
TKR6160 - Shock Piston Blanks (CNC, flat/tapered, 16 dimples)  
TKR6163 - Shock Piston Blanks (CNC, flat/flat, 16 dimples)  
TKR8292Y - Lightweight Wing (ROAR/IFMAR legal, yellow)  
TKR8292K - Lightweight Wing (ROAR/IFMAR legal, black)  
TKR9048B - Spindle Carriers (revised, L/R, aluminum, 18 degree, 2.0)  
TKR9077 - Brass Weight (15g, NB/NT48 2.0)  
TKR9078 - Brass Weight (30g, NB/NT48 2.0)  
TKR9451 - Turnbuckle (M5 thread, 95mm length, 5mm adjustment, 2pcs)  
TKR9484 - Sway Bar Set (FRONT, 1.6, 1.7, 1.8, 1.9, 2.0, ET/NT48 2.0)  
TKR9486 - Sway Bar Set (FRONT, 2.6, 2.7, 2.8, 2.9, 3.0, ET/NT48 2.0)  
TKR9494 - Sway Bar Set (REAR, 1.6, 1.7, 1.8, 1.9, 2.0, ET/NT48 2.0)  
TKR9496 - Sway Bar Set (REAR, 2.6, 2.7, 2.8, 2.9, 3.0, ET/NT48 2.0)

# Setup Information

The purpose of making adjustments is to make the car go faster around the track, or to make it more controllable, or both if possible. A vehicle that's easier to drive should produce lower, more consistent lap times. It will also inspire more confidence in the driver, which is always good when nerves start getting the best of you.

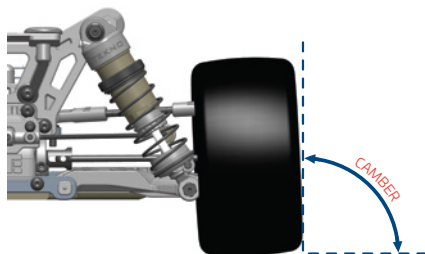
Before you start thinking about changing your car's setup, consider these two things: First, is the vehicle in perfect working order? Be sure that all of the suspension components operate freely without excessive play, and that it isn't tweaked. Binding and worn out parts will result in poor performance and inconsistent handling. Second, always consider tires before making other adjustments. Time spent trying to get the vehicle to work with the wrong tires mounted will be wasted time. Without the right tires, even a great setup won't be a winning setup.

## Ride Height



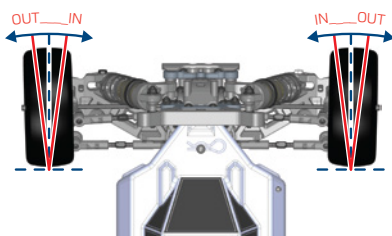
Ride height is the distance from the bottom of the chassis to the running surface. Ride height should only be checked and adjusted when your vehicle is ready to run (i.e. with fuel tank full/body on). Ride height is the first adjustment to be made and should be set with a ride height measurement tool. Measurements should be taken from the flat parts of the chassis, front and rear. Be sure to measure the front ride height at a point before the kick up in the chassis starts. To measure ride height, first make sure the suspension is completely free, then simultaneously compress the front and rear all the way down and let the vehicle settle. Take your measurement from that position. Use the shock spring adjustment collars to raise or lower the ride height to your desired setting. 32mm front and 36mm rear is a good starting point.

## Camber



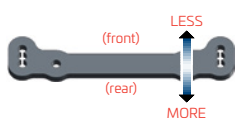
Static camber affects the car's side to side traction. More negative camber front and rear quickens rotation in corners. Less negative camber will make the vehicle easier to drive but you may give up some responsiveness (i.e. steering). To set your static camber have your vehicle at ride height (see above) and adjust the camber links until desired angle is achieved. Please note that a large adjustment of front camber will affect front toe and you may have to readjust the toe and then re-check front camber again. A good starting measurement for camber is 2-3 degrees in the front and 2-3 degrees in the rear.

## Front Toe



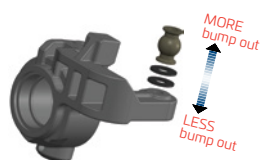
Front toe is used to describe the angle in which the front wheels point when looking down at them from the top of a vehicle. You will always use some amount of toe out. Toe-out will affect how your vehicle enters and exits corners. More toe out will result in more off-power steering and less on-power steering and less toe out will have the opposite results. To set your front toe, have your vehicle at ride height (see above) and adjust the steering links until desired angle is achieved. Please note that a large adjustment of front toe will affect front camber and you may have to readjust the camber and then re-check front toe again. A good starting point is approximately 0.5-1 degree of toe out per side.

## Ackermann Effect



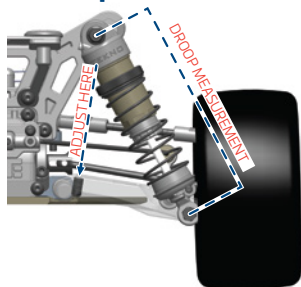
Think of Ackermann as active toe when the steering moves from left to right. More ackermann effect makes more toe out at full turn and produces more steering off-power. Less ackermann effect makes less toe out at full turn and produces more steering on-power. A good starting point is the middle hole on the plate.

## Bumpsteer



Think of bump steer as active toe when the suspension compresses or rebounds. To adjust bump steer you have to change the angle of the steering link. This is accomplished by adding or removing washers under the ball stud on the steering spindles. Anytime you change camber link locations, front arm pills, front arm spacers, or Ackermann you will need to check and possibly adjust your bumpsteer. It's best to start with zero bumpsteer or slight bump out.

## Droop



Droop is the measured amount of down travel in the suspension. It is measured from the shock mounting points while the vehicle is up on a stand allowing the arms to hang freely and is adjusted by turning the droop screw located in the suspension arms front/rear. This screw limits the suspension travel by providing a stopping point against the chassis. Left and right sides should always be equal, however the front and rear of the vehicle can have different values. Droop affects all aspects of chassis performance, including braking, acceleration, jumping, traction, and bump handling. A good starting droop measurement is 117mm front, and 134mm rear.

# Setup Information

(continued)

## Differentials

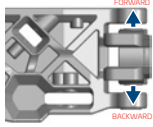


**Front:** Changing front diff oil affects overall steering response. Thinner can increase off-power steering but the vehicle may be twitchy and harder to drive. Thicker can increase on power steering and stability. We recommend 20k in the front diff.

**Center:** Changing center diff oil affects the front-to-rear drive balance. Thicker will reduce off-power steering and on-power rear traction but increases on-power steering and acceleration if traction is available. Thinner will increase off-power steering and on-power rear traction but reduce on-power steering and acceleration. We recommend 20k in the center diff.

**Rear:** Thinner rear diff oil increases off-power steering and reduces traction into a corner. It also reduces on-power steering and increases traction out of a corner. Going too thin will make your vehicle inconsistent, however. Thicker rear oil will have opposite effects, and once again, going too thick will make the vehicle inconsistent. We recommend 10k in the rear diff.

## Wheelbase Adjustments

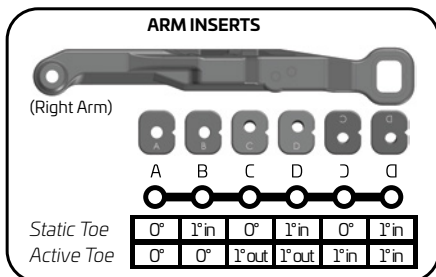


Changes to wheelbase can affect the overall handling of your vehicle, since it adjusts the distribution of weight on the wheels as well as the angle of the driveshafts. Shortening the wheelbase at the rear will give you more steering into a turn and off power, less steering out of a turn and on power. Lengthening the wheelbase at the rear will yield the opposite results. In general a longer wheelbase is better on open and/or bumpy tracks and a shorter wheelbase is better on tighter technical tracks.

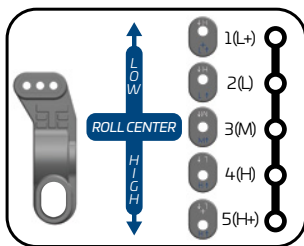
## Active Toe

Active rear toe is essentially bump steer for the rear suspension. It affects the vehicle anytime it is accelerating, cornering, braking, jumping, or going through bumps. There are two types of active toe, in or out depending on which direction the active toe inserts are installed. When using active toe in (C or D arm inserts upside down), the rear tires will "toe in" more during suspension compression and "toe out" during suspension droop. The opposite happens when using active toe out (C or D arm inserts right side up). When using the **active toe in** setting, the vehicle will be more locked in during acceleration at the rear end and possibly have a push during corner exit. It will have more rear grip through the corner, but possibly not as fast through the corner. It will be looser in the rear under braking and possibly have more steering, but will hold it's line off of jumps better, although may have too much rear traction during the landing. It will accelerate through bumps better, but could catch ruts more easily. When using the **active toe out** setting, the vehicle will be looser during acceleration and have more steering, but will have less rear grip

through the corner. It will have more overall speed, but will have less steering under braking, and will be less precise during jump takeoff, although it will be more forgiving during jump landing. It will be very smooth and forgiving through the bumps but will lack some grip. If you are using the inserts that also add 1 degree of static toe in (D arm inserts), You may want to remove 1 degree of toe in from the hinge pin blocks, to achieve the same overall amount of static toe in. When doing this, you will remove some angle from the rear driveshafts. This will create similar results as the **active toe out** inserts (better in bumps, quicker cornering, etc.), but to a lesser degree.



## Hub Inserts

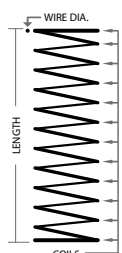


By changing the rear hub inserts you can alter the rear roll center of the vehicle. These hub inserts will also affect axle height, uptravel, and downtravel (droop) values. It is important to note that with any hub insert change you will have to check and possibly change other settings on the car. When running a higher roll center (higher number inserts) you will need to limit your uptravel with o-rings on the shock shaft, outside of the shock body and possibly increase the amount of droop you're running. When running a lower roll center (lower number inserts) you will need to remove o-rings from the shock shaft to increase up travel, and may need to decrease the amount of droop you're running. When changing the inserts the rear camber link location on the tower will also need to be adjusted to maintain your current link to arm angle. When going to a lower roll center (lower number insert) you will need to move the camber link down on the tower. When going to a higher roll center (higher number insert) you will need to move the link up on the tower. A lower number insert will provide more roll and typically give more off power

rear traction and less on power rear traction. The car will change directions more slowly, roll deeper into turns, and can be more forgiving off power or under braking but more aggressive under acceleration. A higher number insert will provide less roll and typically give less off power rear traction and more on power rear traction. The car will change directions more quickly and can be more aggressive off power or under braking but more forgiving under acceleration.

## Springs

Softer springs will increase traction through the turns by allowing more roll, slow down the responsiveness of the vehicle, and can be better in the



PART#/COLOR	SIDE	WIRE DIA.	COILS	LENGTH	RATE
TKR6080	Rear	1.6	10.5	90mm	3.96
TKR6081	Rear	1.6	10.0	90mm	4.20
TKR6082	Rear	1.6	9.5	90mm	4.48
TKR6083	Rear	1.6	9.0	90mm	4.80
TKR6090	Front	1.6	9.0	80mm	4.80
TKR6091	Front	1.6	8.5	80mm	5.17
TKR6092	Front	1.6	8.0	80mm	5.60
TKR6093	Front	1.6	7.5	80mm	6.11

bumps. Stiffer springs will increase corner speed if traction is available and will also tend to jump and land better. Once you find a set of springs you like you will typically only change them for tracks with dramatically different conditions.

## Pistons



Pistons with smaller holes work well for smoother tracks with large jumps and pistons with larger holes work well for rougher tracks with less jumps. Smaller hole pistons will typically use thinner oil than larger hole pistons. Shock oil is also affected by the ambient temperature so a change in viscosity might be necessary with a change of 5°C or ~10°F.

## Sway Bars



Sway bars are used to adjust a vehicle's lateral grip by resisting chassis roll. A thicker bar decreases roll more than a thinner bar will. More roll means more grip and less roll means less grip. The front sway bar affects mainly off-power steering at corner entry. The rear sway bar affects mainly on-power steering and stability in mid-corner and at corner exit.

Name: Box Stock

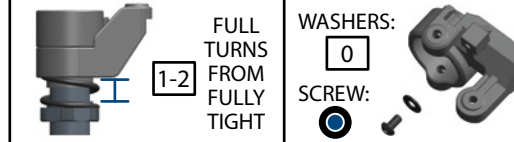
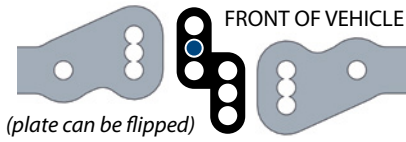
Date: \_\_\_\_\_

Event: \_\_\_\_\_

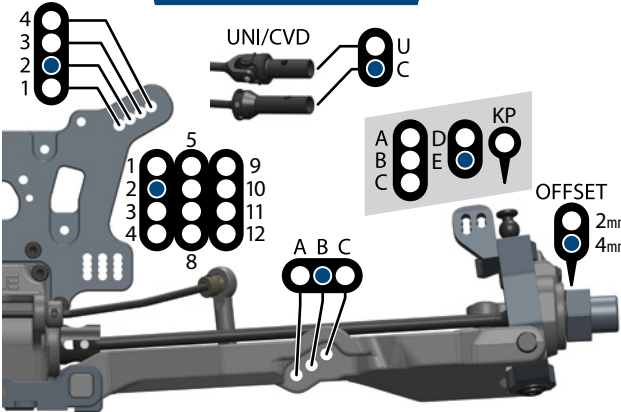
Track: INDOOR  OUTDOOR  Size: SMALL  MEDIUM  LARGE  Traction: LOW  MEDIUM  HIGH

Surface: SMOOTH  BUMPY  RUTTED  Type: LOOSE / LOAMY  HARD PACKED  BLUE GROOVE  CLAY  ASTRO

Bumpsteer/Ackerman/Servo Saver/Steering Stop: \_\_\_\_\_ Condition: DUSTY  DRY  WET  MUDDY



## Front End:



## Suspension:

RIDE HEIGHT: 32 CAMBER: -2°

CASTER BLOCK: 15° SWEEP: 0°

KICK UP: 10° TOE: 1° out

SWAY BAR: 2.1mm DROOP: 117mm

## Shocks:

OIL: 700 CST BRAND: Kit

PISTON: 4x1.2 + 4x1.3 SPRING: TKR6092

REBOUND: 100% BUILD: bladder

## Differential Oil:

FRONT	CENTER	REAR
20k	/	20k / 10k

## Drivetrain:

CLUTCH / SPUR:	13 / 48	(teeth)
CLUTCH SHOES:	Aluminum	
CLUTCH SPRINGS:	2x Green / 2x Gold	
BRAKE BIAS %:	60 (front)	40 (rear)

## Equipment:

ENGINE / PIPE:	/	
FUEL / PLUG:	/	
RX BATTERY:	/	
	STEERING	THROTTLE / BRAKE
SERVOs:	300oz min	/ 300oz min

## Chassis Braces:

REAR-SHORT:	<input type="radio"/>	REAR-LONG:	<input checked="" type="radio"/>
-------------	-----------------------	------------	----------------------------------

## Tires / Wheels:

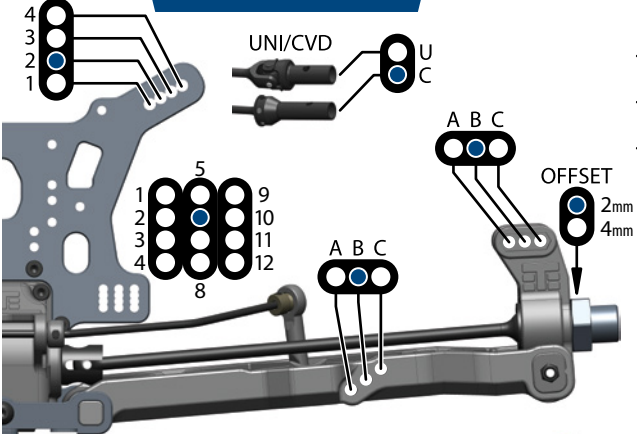
BRAND / TREAD:	/		
COMPOUND:	/		
INSERT:	/		
WHEEL:	/		
NOTES:	/		

## Body / Wing:

BODY MAKE:	stock				
WING MAKE:	stock				
WING MOUNT POSITION:	/				
STANDARD:	<input type="radio"/>	+7mm:	<input checked="" type="radio"/>	+12mm:	<input type="radio"/>

## Notes:

## Rear End:



## Suspension:

RIDE HEIGHT: 36 CAMBER: -3°

ANTI-SQUAT: 1.5° TOE: 2.5

SWAY BAR: 2.3mm DROOP: 134mm

## Shocks:

OIL: 600 CST BRAND: Kit

PISTON: 4x1.2 + 4x1.3 SPRING: TKR6082

REBOUND: 100% BUILD: bladder

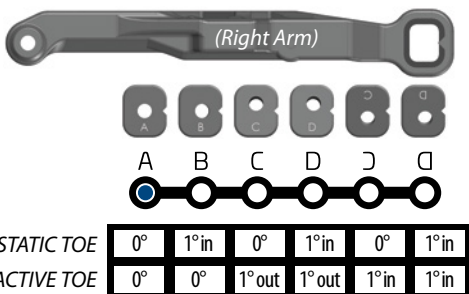
## "C" Block:

(Anti-Squat)  
(1.5° with center dot inserts)

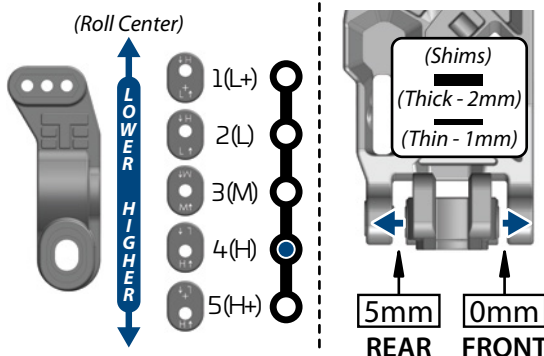
## "D" Block:

(Rear Toe)  
(2.5° with center dot inserts)

## Arm Inserts:



## Rear Hub / Wheelbase:





# Maintenance:

Performing regular maintenance will greatly improve your on track consistency and also extend the life of your vehicle. Going through critical areas of the vehicle regularly will also allow you to find possible issues before they become a problem that may cost you a race. Follow the guidelines below for maximum performance.

## Bearing Maintenance:

Bearings should always be smooth and free in order to perform their function. We recommend inspecting and cleaning each bearing on a regular basis. It will be necessary to break down parts of the vehicle in order to inspect them properly. The procedures below should be done every couple of weeks or prior to an important race.

1. Inspect the outer seals for any visible damage and check the rolling resistance of each bearing.
2. If any bearing does not spin freely, then take the following steps to clean them.
3. Spray the bearing with motor spray and spin it again to remove any debris trapped inside. Repeat if necessary. If the bearing does not start to spin freely after cleaning, then they may need to be replaced.
4. Allow the clean bearing to dry or blow into the bearing with compressed air to speed up the drying process.
5. Oil each bearing with a proper bearing lubricant. One or two drops is enough.

## Shock Maintenance:

When comparing the left and right shocks of the front end, they should feel identical. Same goes for the rears. The procedures below should be done every race day to make sure they are leak free and operating correctly.

1. After removing the shocks from the vehicle, remove the springs and inspect each shock for visible leaks (build up of debris at the bottom of the shock shaft or visible oil).
2. If the shock binds when pushing the shaft through its stroke, then the shaft may be bent and will need to be replaced.
3. If the shocks from left to right do not feel consistent when compared to each other, or have built up too much air inside (feel empty when pushing the shaft through its stroke), then you will need to rebuild them following the steps outlined on page 19 of this manual.

## Hinge Point & Drive Line Maintenance:

Checking the hinge points while the shocks are removed from the vehicle is the best time to inspect these parts. The other items to inspect are the camber links, steering links and drive shafts. Follow the steps below every couple of weeks in order to keep the vehicle performing at the maximum level.

1. With the shocks off the vehicle, check the movement of the arms, hubs, and spindle carriers. They should move freely. If there is a bind, then the inner or outer hinge pin may be bent and would need to be replaced. The arms should not have any play when twisted or moved in any direction against the hinge points. If there is excessive slop present, then the arms or hubs may be worn and will need to be replaced.
2. Remove the camber links, steering links and servo link from the vehicle. Check the movement of the spindles to see if they turn freely. If they don't, then check the kingpin shoulder screws to see if they are tightened down too far. Also, check for slop. If there is excessive slop present, then the spindle carriers may need to be replaced.
3. Check the steering rack to make sure it moves freely. If it binds, then the screws holding the Ackermann or the steering posts could be too tight. If they still bind, then check the bearings and follow the steps above to clean them.
4. After re-installing the camber links, steering links and servo link, check the movement of the rod ends on the ball studs. If they have excessive slop or are binding, then they may need to be replaced.
5. Check the drive shafts by rotating them. Look for any wobbles. If they are bent, replace them immediately.
6. With the drive shafts removed, check for slop in the CV area. If it is present, then reposition the CV pin to another fresh hole, re-lubricate and install back into the vehicle.

## Differential Maintenance:

Properly maintained differentials are essential for a smooth operating vehicle. Check all three diffs regularly to make sure they are filled and operating as designed.

1. Remove each diff and verify the differential action is happening and is smooth. If there is any notchy feel to them, follow the steps below to rebuild them.
2. Open the diff and pour out the oil. Remove the gears and pins to release the outdrives, then remove the seals. Inspect everything to make sure there are no damaged parts. If the seals are old or show any signs of degradation, replace them immediately. Re-lubricate the seals and outdrives, then rebuild the diff following the steps on page 3 and 4.



# Radio Information

Please read thoroughly

All Tekno RC vehicles are built out of the box with a neutral setup but are highly tunable to your individual driving needs. Before you start changing your setup on the car itself, it's best to ensure you're getting the best setup out of your radio. It's easy to forget that a lot of simple tuning can be done right from your controller. To help with this, we recommend that you are well informed about setting up your Steering End Points (EPA), Dual Rate (D/R), Exponential Curves, and Servo Speed.

Start by setting your steering EPA such that the vehicle can reach 'full lock' while on the ground. Be careful not to go too far with this setting as it may damage your servo. Drive the vehicle around the track. If you are turning into pipes or losing traction out of a corner, you probably have too much overall steering throw. The simplest way to reduce this is with Dual Rate. Reducing Dual Rate will turn down both the left and right side EPA proportionately without having to adjust the EPA settings independently. D/R is usually pre-assigned to one of the trim buttons on most mid-to-high level radios.

The next setting is 'Expo' or 'Curve'. Expo does not change your EPA or D/R, it simply turns the wheels less around center and ramps up to the end points as you reach full lock on the steering wheel. We would suggest starting at -10%. If your vehicle still feels "twitchy" around center, dial in more negative expo to continue smoothing everything out. If it starts to feel too numb around center, dial some out.

Another valuable and often overlooked radio adjustment is "Servo Speed". Servo Speed allows you to slow the steering servo down from the transmitter resulting in reduced twitchiness. We like to set this at around -10 to start. If you find that it's too lazy, increase the servo speed slightly and run a few more laps. Repeat as necessary until the steering response feels natural without delay.

After setting the servo speed you might find that you need to go back and adjust the expo setting. This is normal, it might take a few adjustments of each to achieve the proper steering "feel" to suit your driving style and track conditions.

The last setting to look at would be your brake end point or brake dual rate. Having brakes set correctly can gain you tenths on the track and improve your consistency. Set your brake dual rate to 80% and then set your end-point so that the brakes are just strong enough to not allow you to push your car forward on the bench during full braking. Once on the track, this might be too strong or too weak of a setting depending on the available traction. Start turning the brake dual rate up or down a few percentage points at a time until you achieve your desired "feel". Under maximum braking you'll want your tires to be as close as possible to locking up without them actually doing it. Keep in mind that this setting will change from track to track and even throughout the day as track conditions can vary. Don't forget that you can also use servo speed for your throttle and brake in the same way you did for the steering.

With these five settings, you should be able to make your vehicle more consistent and easier to drive, lap after lap, assuming the rest of the vehicle setup is close for your particular track. Of course there are many other factors and setup options to tune on your vehicle, but sometimes all you need is a small radio adjustment to keep you headed in the right direction.

---

---

---

---

---

---

---

---

---

---



## General Warranty Information

Parts covered by our general warranty have a 50% MSRP replacement cost if bent, broken, or even worn out. See below for items covered by this warranty. Once the part(s) along with the completed warranty form is received and warranty eligibility is verified, we will send you a coupon code via e-mail that brings your price for the exact same replacement part to 50% of MSRP from our website (shipping not included).

### Items covered by warranty:

Only individual vehicle parts are covered. For example, kits, engines, engine parts, tools, apparel, banners, and canopies are not covered by the general warranty. Also, discontinued parts, parts that are no longer in production or are not for sale on this website are not covered by the general warranty.

### Conditions:

- Shipping to Tekno RC or to you will not be included in the coupon. You will be responsible for shipping the part, along with the completed warranty form to the address listed below. You will also be responsible for the shipping cost of the replacement part.
- You **MUST** send the part(s) to the address listed below. Pictures of the part are not sufficient.
- A completed warranty form **MUST** be included with all parts sent.
- The discount cannot exceed 50% from MSRP. If you already receive a discount (Team/Military), you will receive a coupon that reduces your cost of the part to 50% of MSRP.
- Coupons are valid for 14 days from the date of creation. If you do not purchase a replacement within this time, the coupon offer and warranty are void.
- This offer is **ONLY** valid at [www.teknorc.com](http://www.teknorc.com).
- Please be sure all customs fees have been paid. Tekno RC will refuse receipt of a package with customs fees due.
- Terms and conditions may change at any time without notice. Warranty policy may change at any time without notice. All warranties are subject to review and may be refused or revoked at our sole discretion at any time without notice. If any conditions or instructions above are not met, the warranty will not be processed, and no notice is required from us that your warranty may not be processed.

**USA** Tekno RC  
10755 Scripps Poway Pkwy #598  
San Diego, CA 92131  
U.S.A

**INT** Tekno RC Europe  
PO Box 67259  
Melissia, Athens 15102  
Greece

Full Name:

Address:

City:

State:

Zip:

Country:

Email:

Phone:

Part #(s) in question:

Signature:

Date:



Tekno RC  
10755 Scripps Poway Pkwy #598  
San Diego CA 92131  
USA

[www.teknorc.com](http://www.teknorc.com)  
[info@teknorc.com](mailto:info@teknorc.com)

**NT48** 2.0