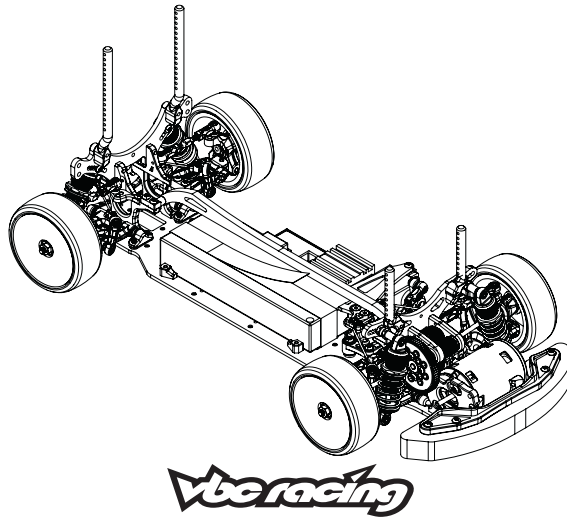


# COMPETITION GRADE HIGH PERFORMANCE RADIO CONTROL RACING CAR CHASSIS KIT



## INSTRUCTIONS MANUAL



Thank you for purchasing VBC Racing product.

### Things that we should remind you.

This VBC Racing kit is a high performance, racing grade car kit intended for experienced racers. The kit compose of VBC formulated composite materials, top quality full carbon fiber chassis and high grade 7075 material which will give you a competitive edge over the others.

Novice racer should seek advice from more experienced racer before assembly.

Always keep this instruction manual handy at all times for quick reference even after completing the assembly.

### Before your assembly, sand the chassis edges.

Sand the chassis edges with #600 sand paper and apply CA glue to the edges and counter sink holes.

### Need help or support.

If you need help or you would like to leave us a comment, please email to our support team: [support@vbc-racing.com](mailto:support@vbc-racing.com) or visit our web site [www.vbc-racing.com](http://www.vbc-racing.com)



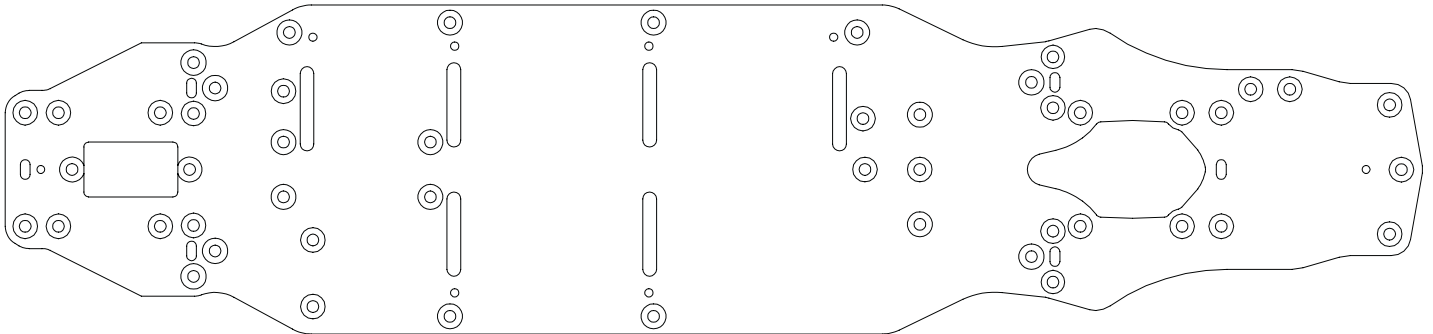
# 1

## Graphite Edges Protection Procedure

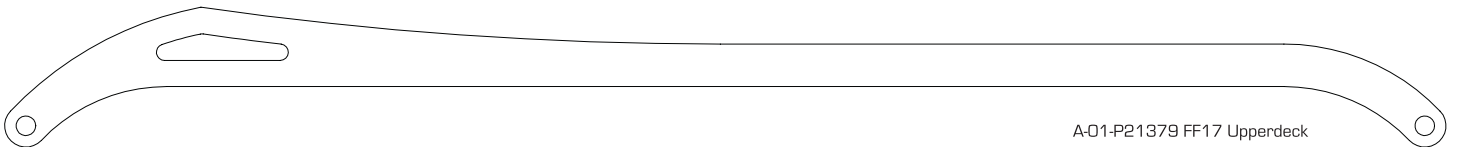


\*Not included in this kit

Sand the chassis edges with #600 sand paper(not included) and apply CA glue(not included) to the edges of the chassis.

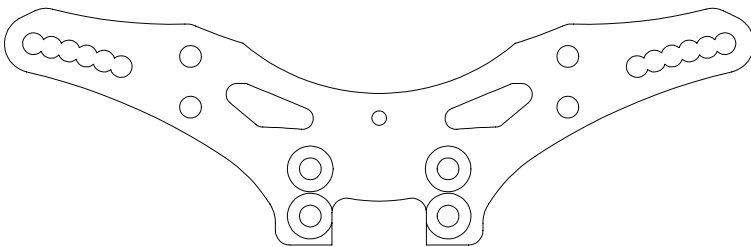


A-01-P21376 FF17 Graphite Main Chassis

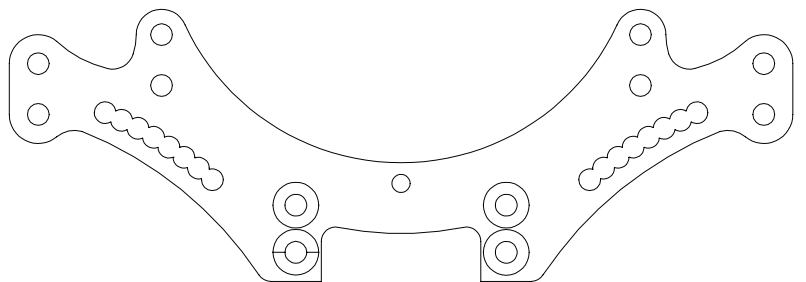


A-01-P21379 FF17 Upperdeck

Sand the below graphite edges with #600 sand paper and apply CA glue to the edges.



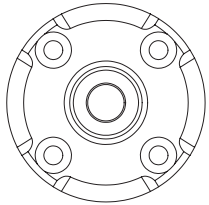
A-01-P21377 FF17 Graphite Front Shock Tower



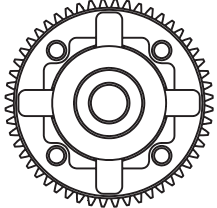
A-01-P21378 FF17 Graphite Rear Shock Tower

# 2

## Gear Differential Assembly



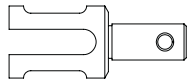
Firebolt Gear Diff Housing B-02-G60399 x 1



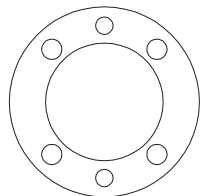
Firebolt Gear Diff 52T B-02-G60398 x 1



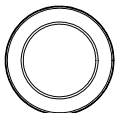
Diff Gear 18T A-03-VBC-0019 x 2



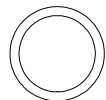
FF17 Heavy Duty Diff Cup C-02-G21337



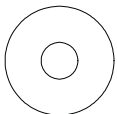
Seal Gasket B-03-VBC-0004 x 1



10x15 Ball Bearing C-02-BB-1510-B x 2



10x13x0.2mm Shim C-02-P30914 x 6



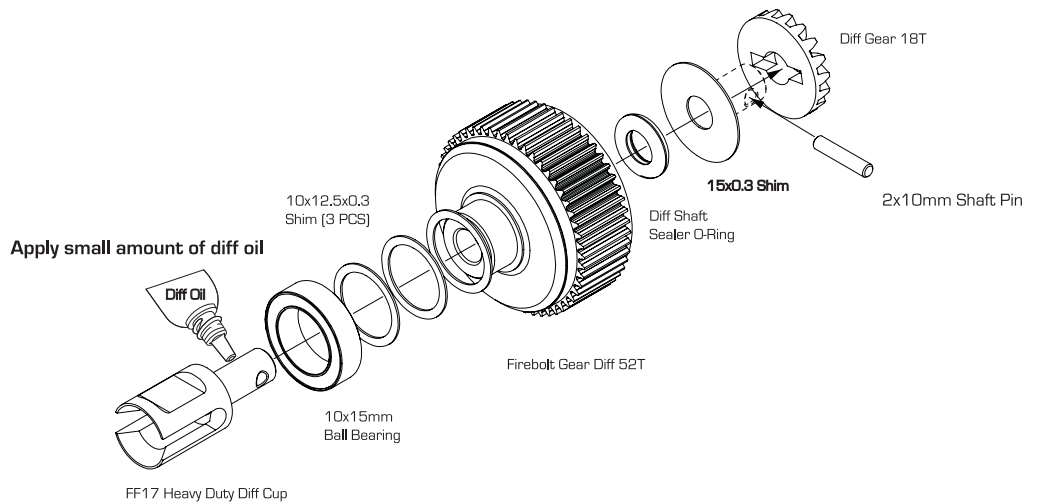
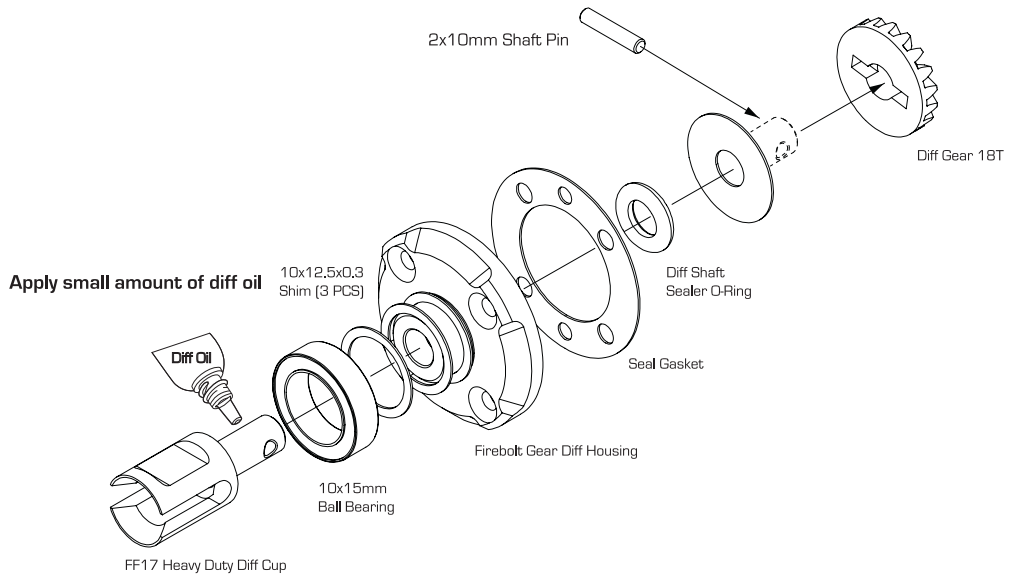
15x0.3 Shim B-02-VBC-0077 x 2



M2x10 Shaft Pin B-02-VBC-0020 x 2

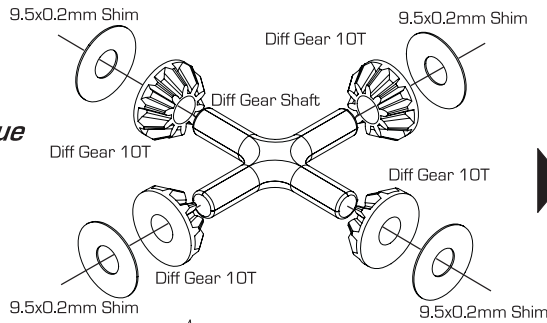
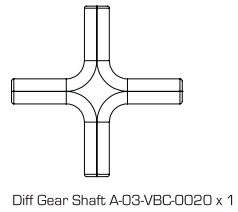
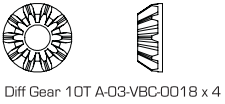


Diff Shaft Sealer O-Ring B-03-VBC-0006 x 2



# 2

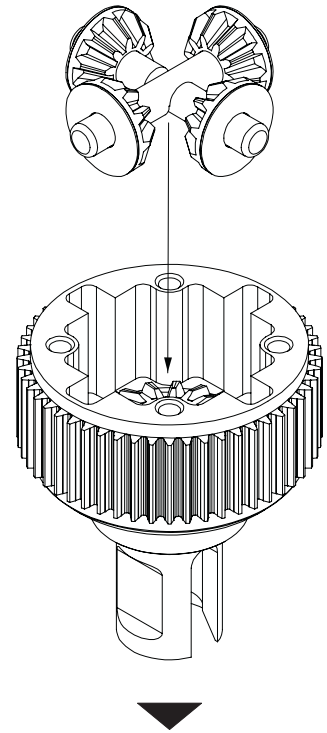
**Gear Diff Assembly Continue**



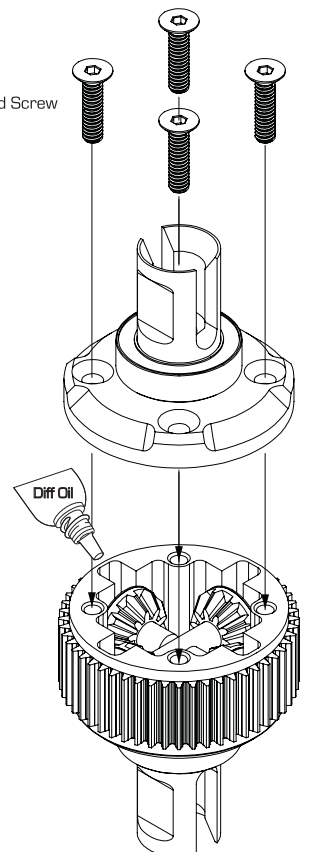
**OPTION PARTS** **Metal Bevel Gear Set D-06-VBC-0237**

Firebolt GearDiff Bevel Gear 10T B-02-G60780 x 4

Firebolt GearDiff Bevel Gear 18T B-02-G60799 x 2



M2.6x10mm Flathead Screw

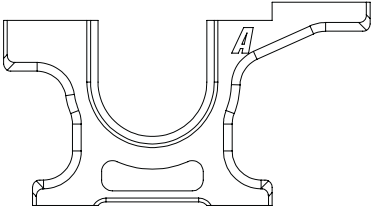


**TIP** Gear Differentials

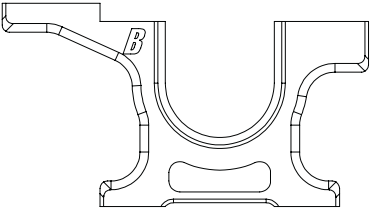
Traction	Low	Medium	High
	300K CST		500K CST

# 3

## Front Bulkhead And Center Suspension Mount Assembly



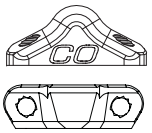
Lower Bulkhead (A) B-02-VBC-2007 x 2



Lower Bulkhead (B) B-02-VBC-2008 x 2



Center Suspension Mount Shim (1mm) x 4  
A-01-VBC-0038



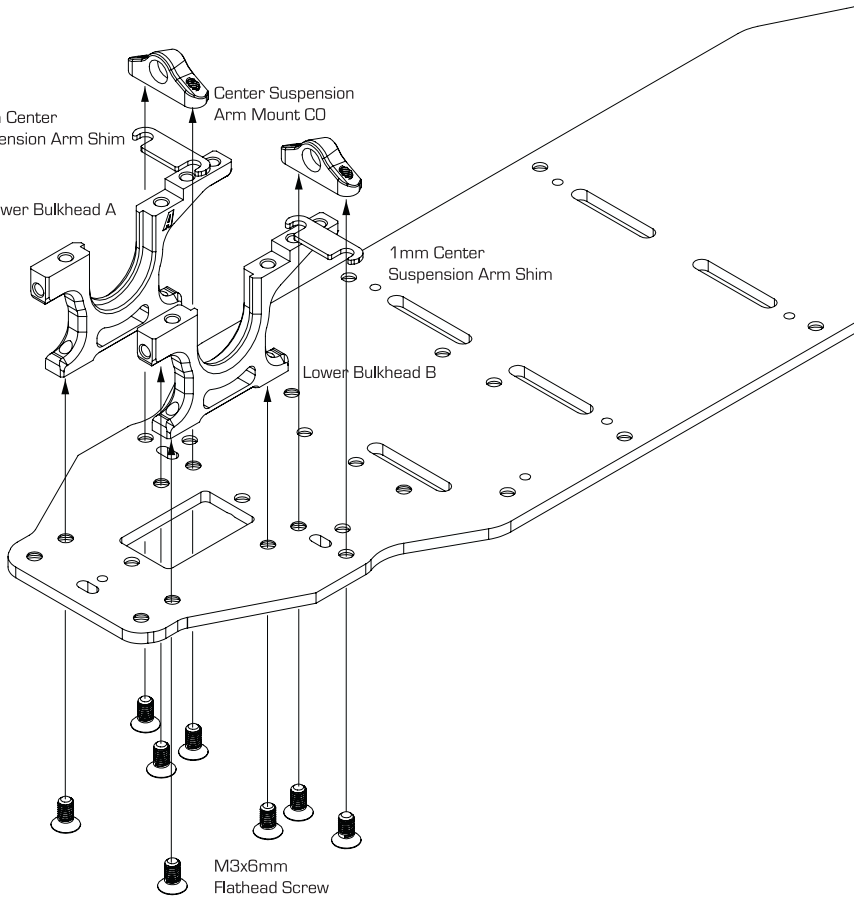
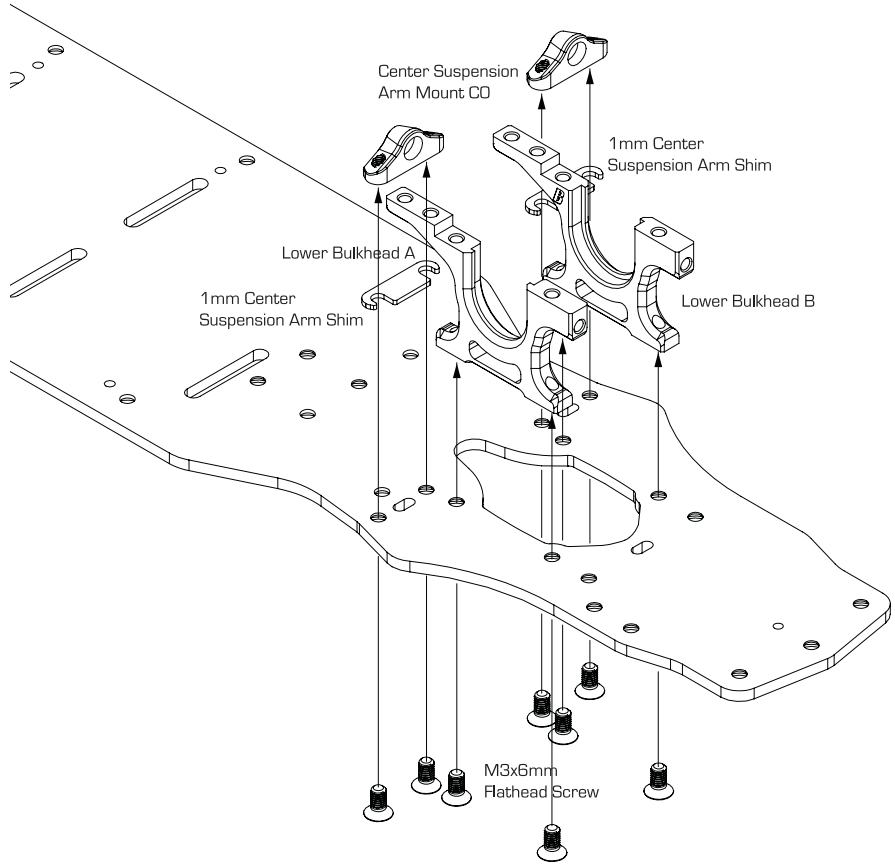
Center Suspension Mount x 4  
B-02-VBC-0062



M3x6 Flathead C-02-SC-F0306 x 16

# 4

## Rear Bulkhead And Center Suspension Mount Assembly



# 5

## Steering System Assembly

Ball Connector (5mm Length) B-02-VBC-3021 x 2

5x8 Ball Bearing C-02-BB-0805-B x 4

3x6 Ball Bearing C-02-BB-0603 x 2

Ball Connector (7.5mm Length) B-02-VBC-3022 x 1

D09 POM Steering Stopper A-03-P31176 x 1

D09 Steering Bridge B-02-P31171 x 1

D09 Steering Arm B-02-P31172 x 2

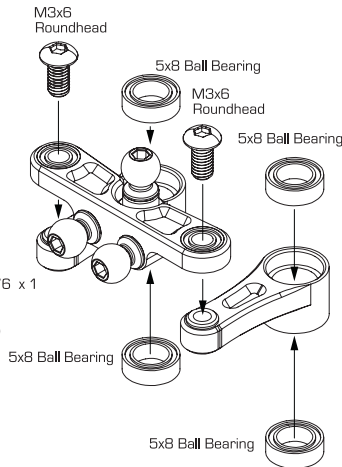
M3x6 Roundhead C-02-SC-R0306 x 2

M3x42mm Turnbuckle B-02-VBC-0037 x 2

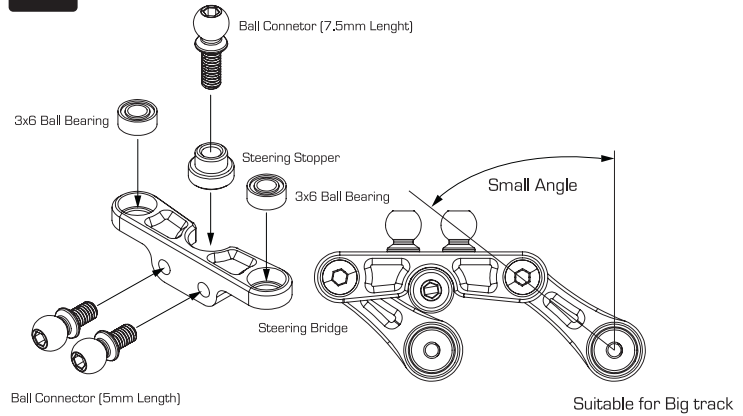
Turnbuckle Cup A-03-VBC-0039 x 4

M3x6 Flathead Screw C-02-SC-F0306 x 2

D09 Steering Chassis Mounted Post B02G31338 x 2

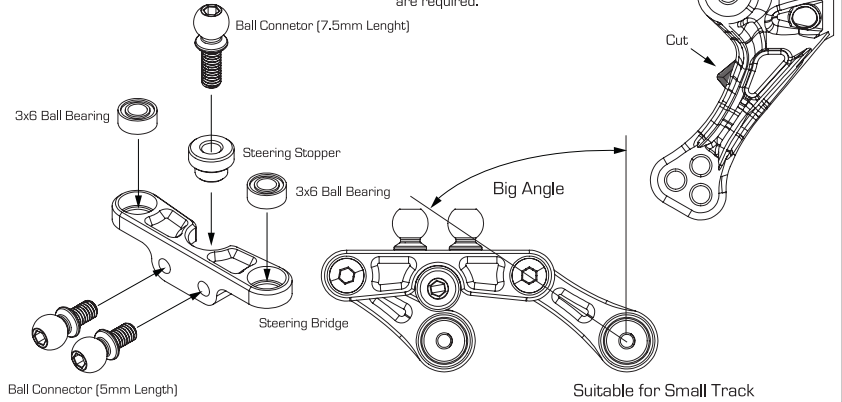


**TIP** Default Steering Angle Setup (27Deg)



**TIP** Steering Angle Setup (31Deg)

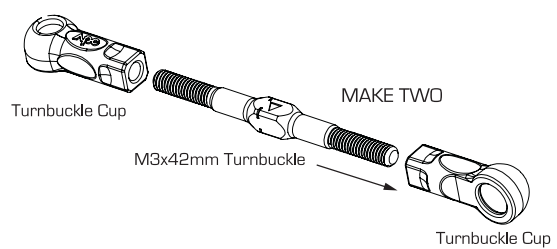
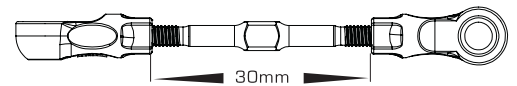
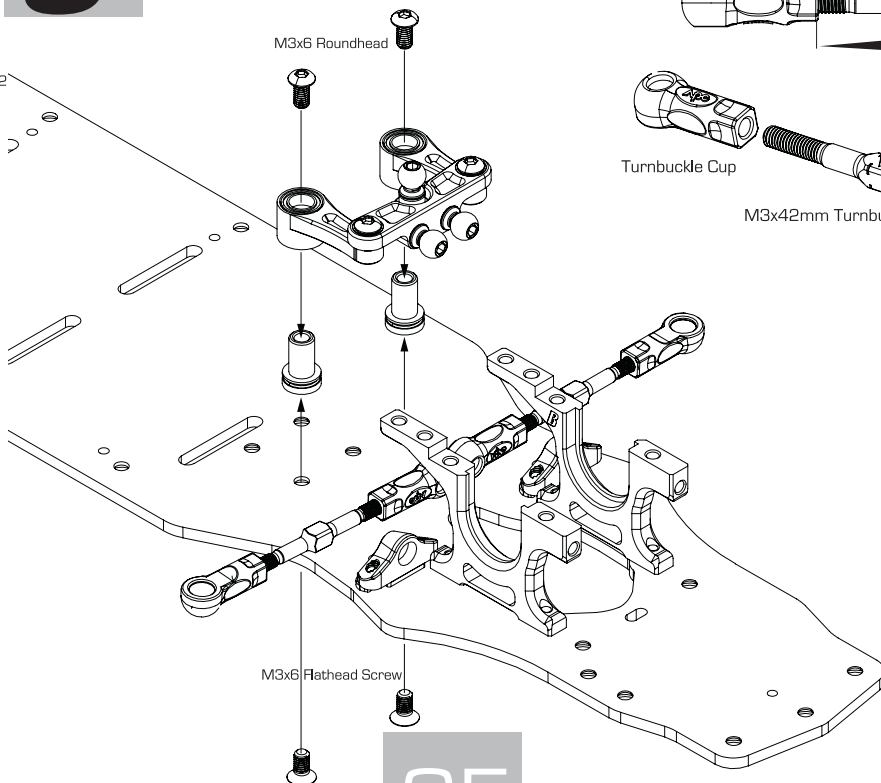
Steering Knuckles have an inbuilt steering angle limiter for use with big tracks, cut the limiter off when using the car in small track and where large steering angles are required.



# 6

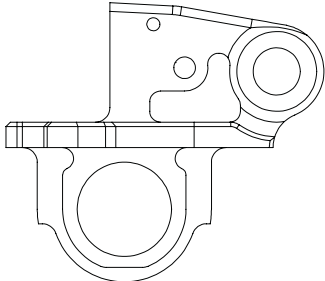
M3x6 Flathead Screw C-02-SC-F0306 x 2

D09 Steering Chassis Mounted Post B02G31338 x 2

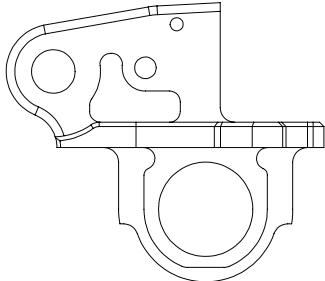


# 7

## Transmission Assembly



FF17 Front Gear Box (A) B-02-P2141



FF17 Front Gear Box (A) B-02-VBC-2024 x 1



Ball Connector (5mm Length) B-02-VBC-3021 x 2



Suspension Arm Spacer T2 A-03-VBC-0052 x 2



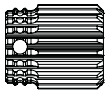
M2x10 Shaft Pin B-02-VBC-0020 x 1



Center Drive Shaft B-02-VBC-2017 x 1



Axle Lock Spring B-02-VBC-0027 x 2



20T Aluminium Top Shaft Gear B-02-P21340 x 1



4x10x3mm Bearing C-02-P21404 x 1



5x10x3mm Bearing C-02-BB-1005-30 x 1



27T Aluminium Idler Gear B-02-P21339 x 1



Gear Spacer B-02-P21342 x 1

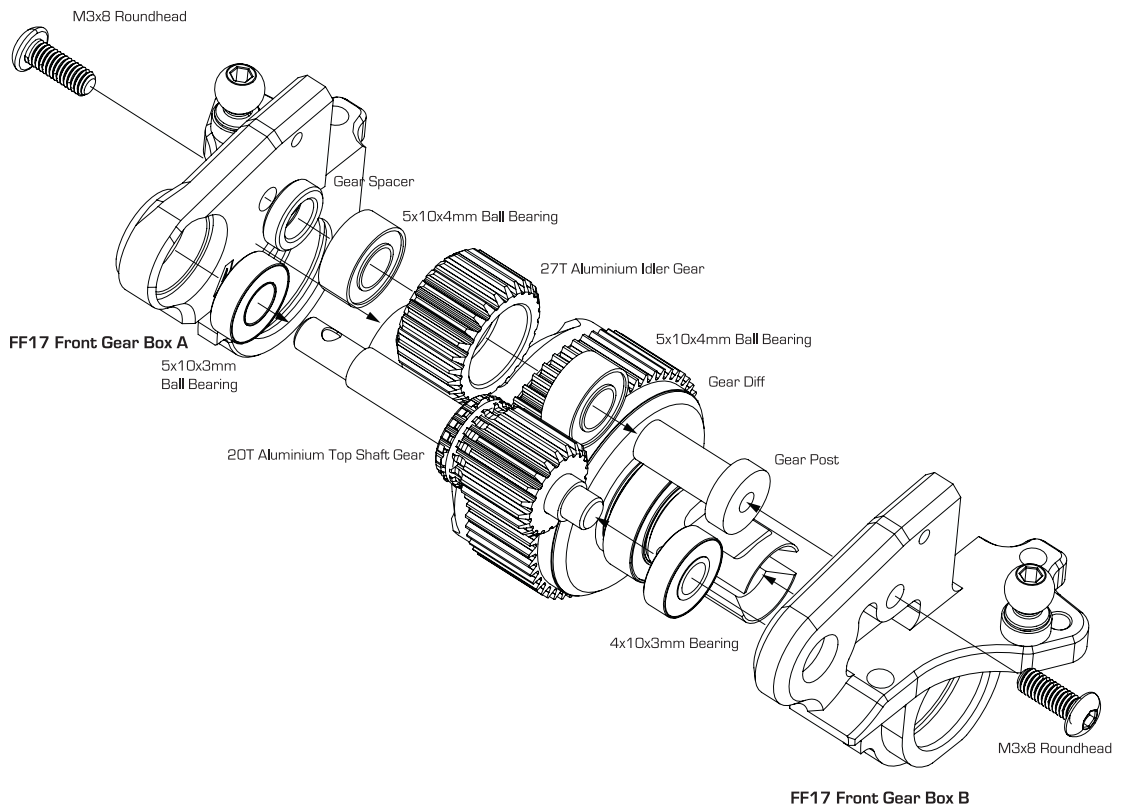
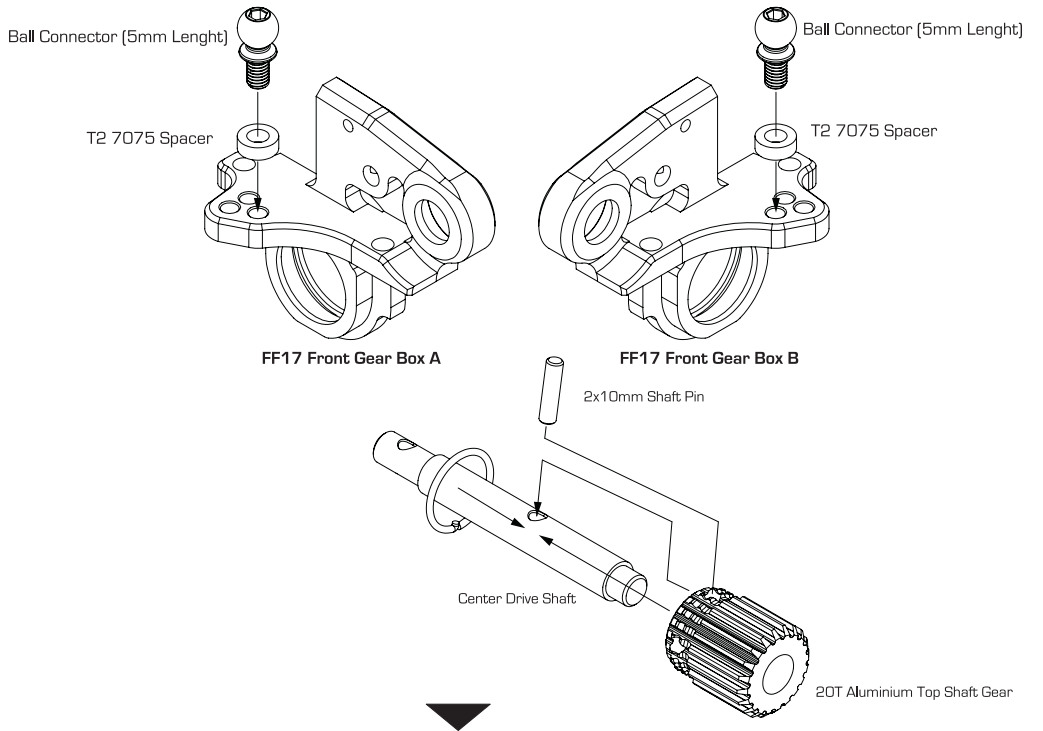


5x10mm Ball Bearings C-02-BB-1005-P x 2



Gear Post B-02-P21341 x 1

M3x8 Roundhead C-02-SC-R0308 x 2



# 8

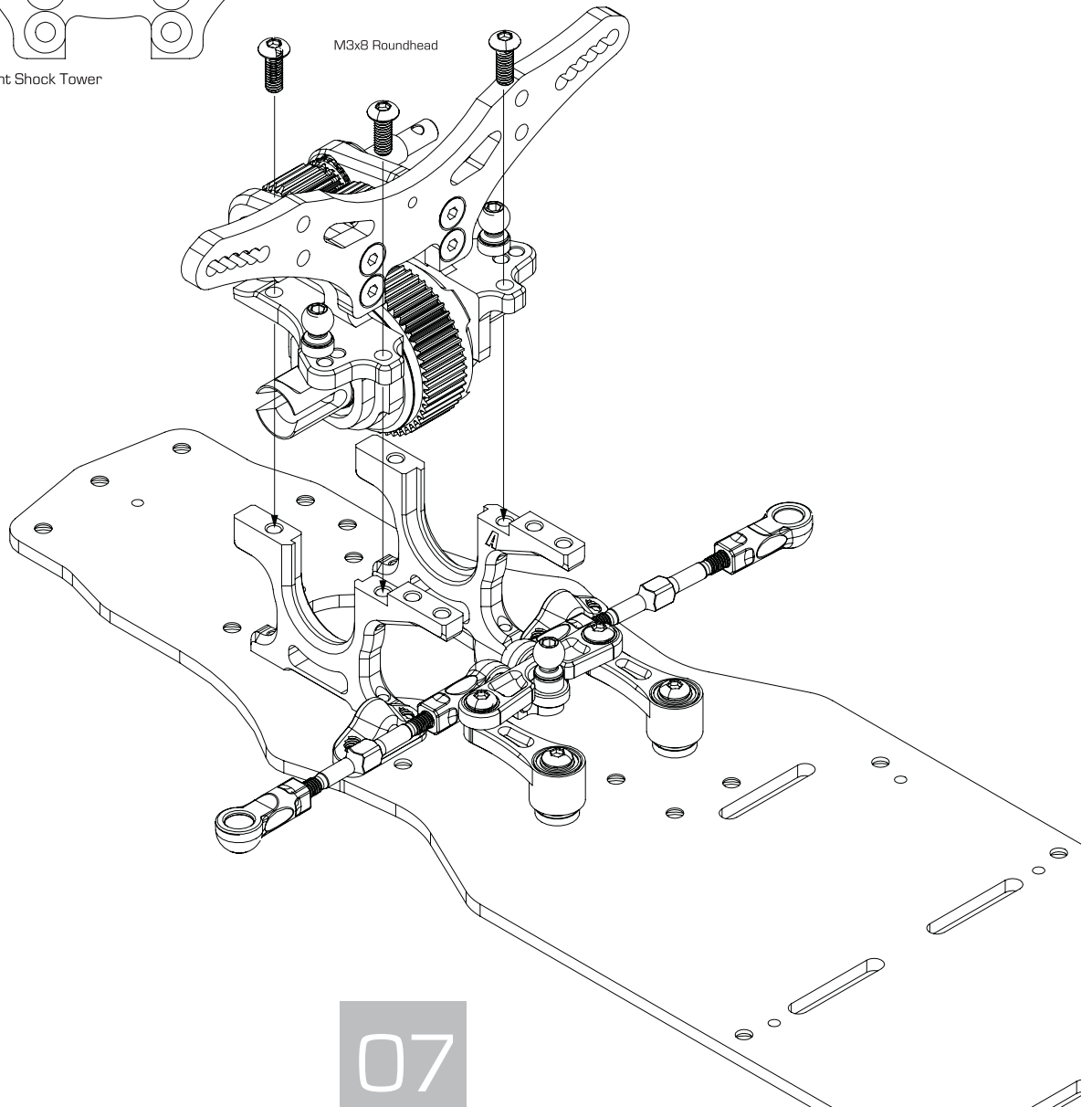
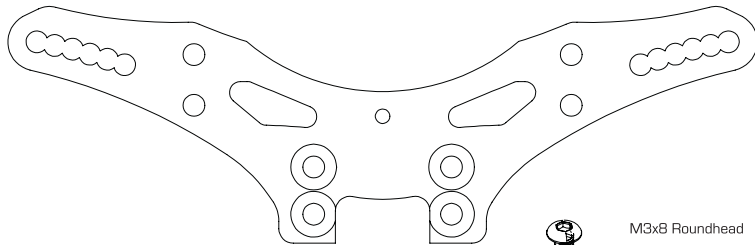
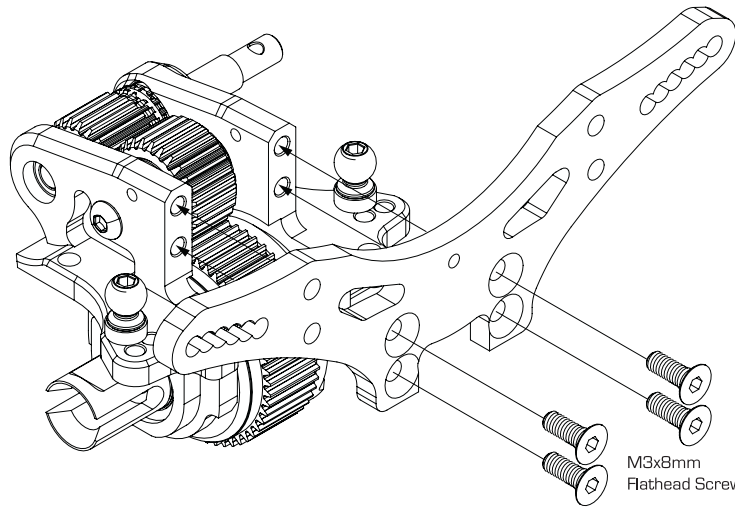
## Front Damper Stay Assembly



M3x8 Flathead C-02-SC-F0308 x 4



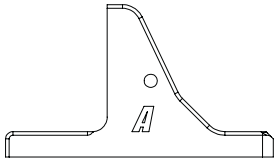
M3x8 Roundhead C-02-SC-R0308 x 3



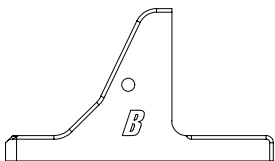


# 9

## Upper Bulkhead And Rear Damper Stay Assembly



Rear Upper Bulkhead Set (A)  
B-02-VBC-2025 x 1



Rear Upper Bulkhead Set (B)  
B-02-VBC-2026 x 1

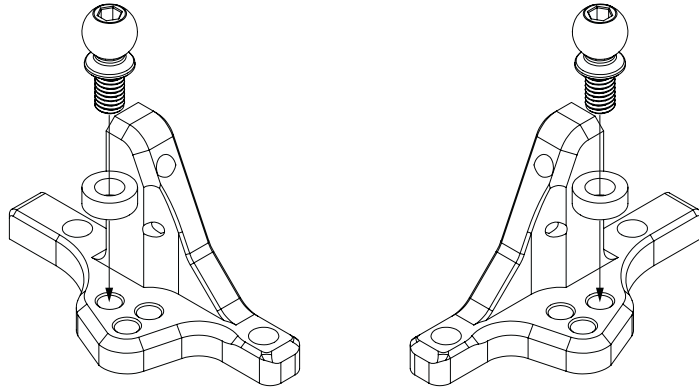


T2 7075 Spacer (Red) B-02-P30890 x 2



Ball Connector (5mm Length) B-02-VBC-3021 x 2

### Upper Bulkhead Assembly

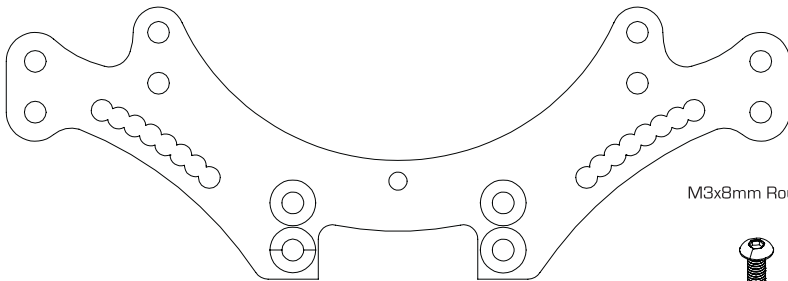


Upper Bulkhead B

Upper Bulkhead A



### Rear Damper Stay Assembly



FF17 Graphite Rear Shock Tower A-01-P21378 x 1

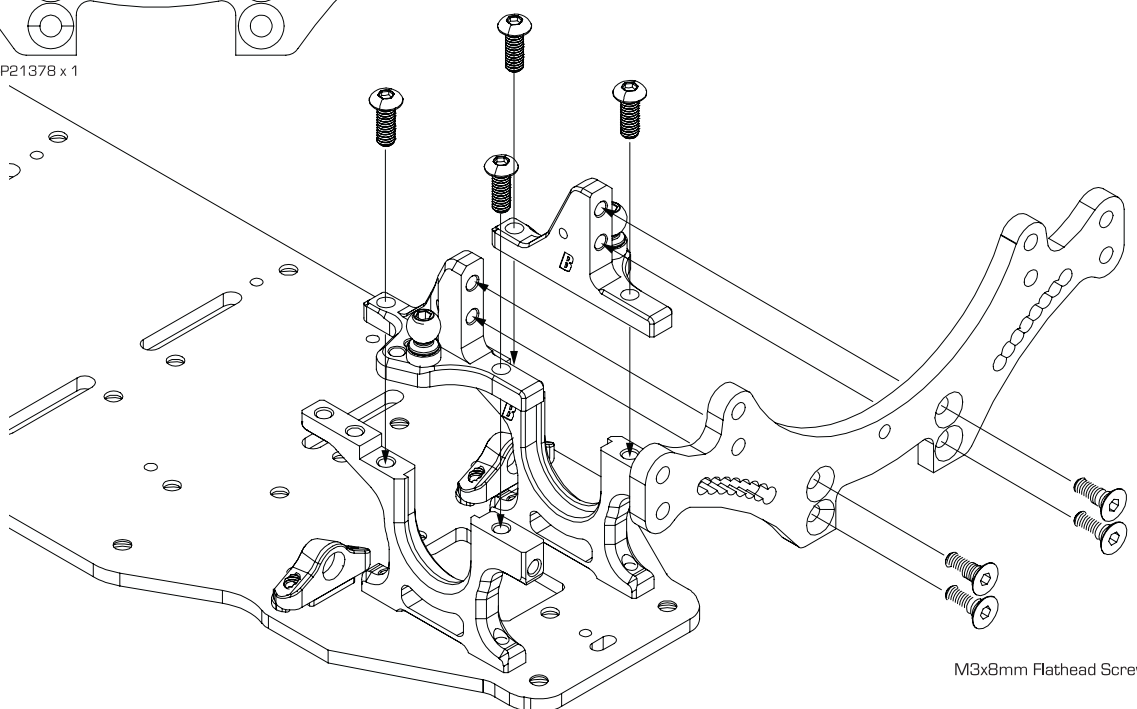
M3x8mm Roundhead Screw



M3x8 Flathead C-02-SC-F0308 x 4



M3x8 Roundhead C-02-SC-R0308 x 4

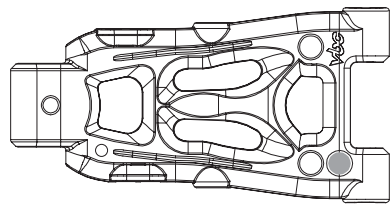


M3x8mm Flathead Screw

# 10

## Rear Suspension Arm Assembly

- Ball Connector B-02-VBC-0045 x 4
- M3x10 Set Screw C-02-SC-SS-0310 x 4
- M4x10 Set Screw C-02-SC-SS-0410 x 4



R Suspension Arm Composite X Silver A-03-P30896 x 2

- Suspension Arm Spacer T2 Composite A-03-VBC-0052 x 2

- Suspension Arm Spacer T1 Composite A-03-VBC-0051 x 4

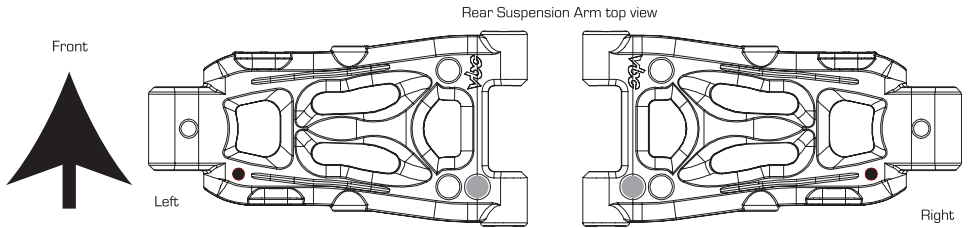
- Suspension Arm Pin B-02-VBC-0029 x 2

- Arm Pin Pivot Ball B-02-VBC-0035 x 4

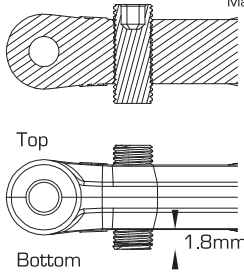
- 1mm Suspension Shim A-01-VBC-0037 x 1

- M3x6 Flat Head Screw C-02-SC-F0306 x 2

- E30 Suspension Mount B-02-VBC-0061-30 x 1



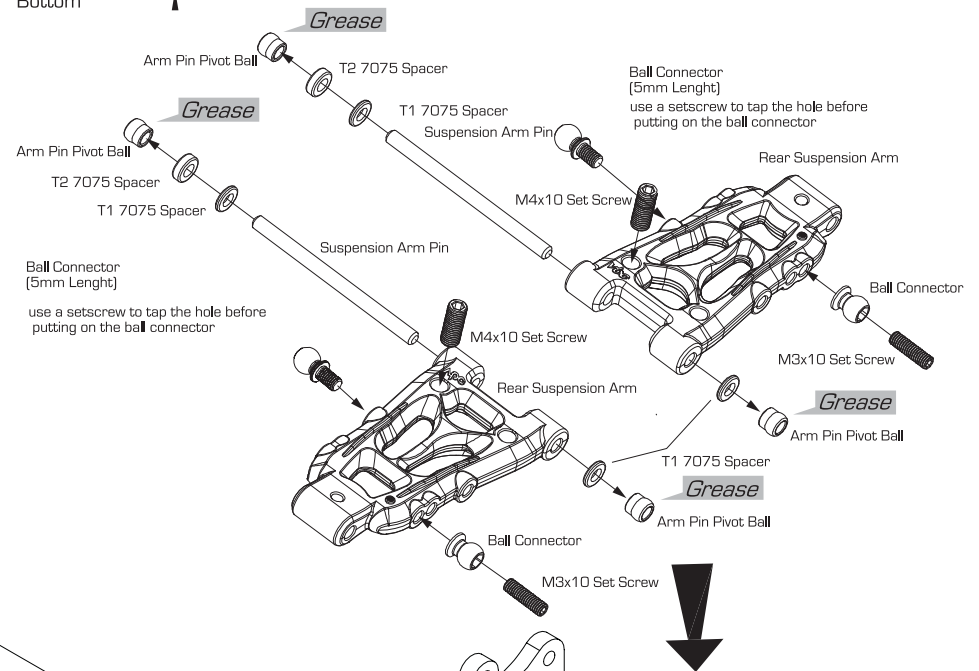
Make sure the black markings are in the same direction on the left and right suspension arms



Insert M4x10 Set Screw from the top of the suspension arm for adjusting down stop. Initial setting is 1.8mm measuring from the bottom part of the arm for both sides.

**TIP** Suspension Arm Composite Compound Chart

Silver A-03-G30896	Gold A-03-P30930	Red A-03-G31300
Medium	Hard	Ultra Hard



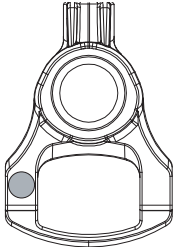
After installing the rear arms, make sure the arms can move freely

# 09

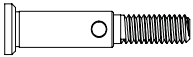
*Rear Suspension Upright Assembly*

**11**

*Rear Suspension Arm Assembly*



R 2-hole Upright Composite X Sliver A-03-P31327 x 2



Rear Wheel Axle B-02-VBC-2027 x 2



5x10mm Ball Bearings C-02-BB-1005-B x 4



Ball Connector (7.5mm Length) B-02-VBC-3022 x 2



T2 7075 Spacer B-02-VBC-0019-20 x 2



Lightweight Offset Hex Wheel Hub B-02-P30887 x 2



M3x3 Set Screw C-02-SC-SS-0303



M2x10 Shaft Pin B-02-VBC-0020 x 2



M3x32mm Turnbuckle B-02-VBC-0036 x 2



Turnbuckle Cup A-03-VBC-0039 x 4



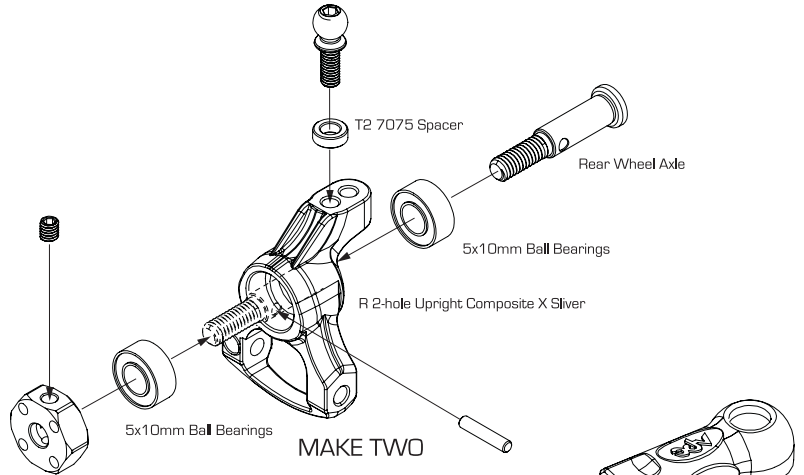
M3x23 Upright Pin B-02-VBC-0032 x 2



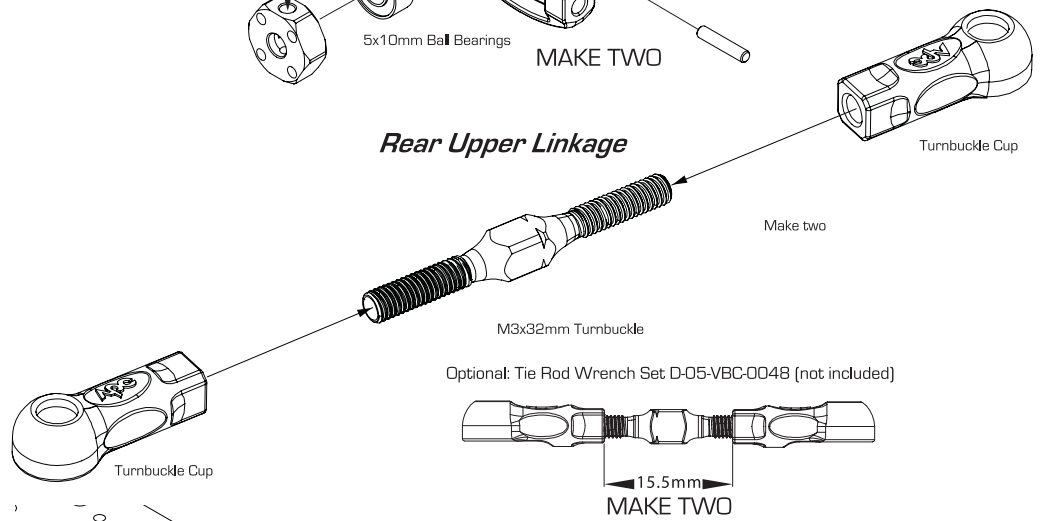
3x5x0.3mm Shim B-02-VBC-0101 x 2



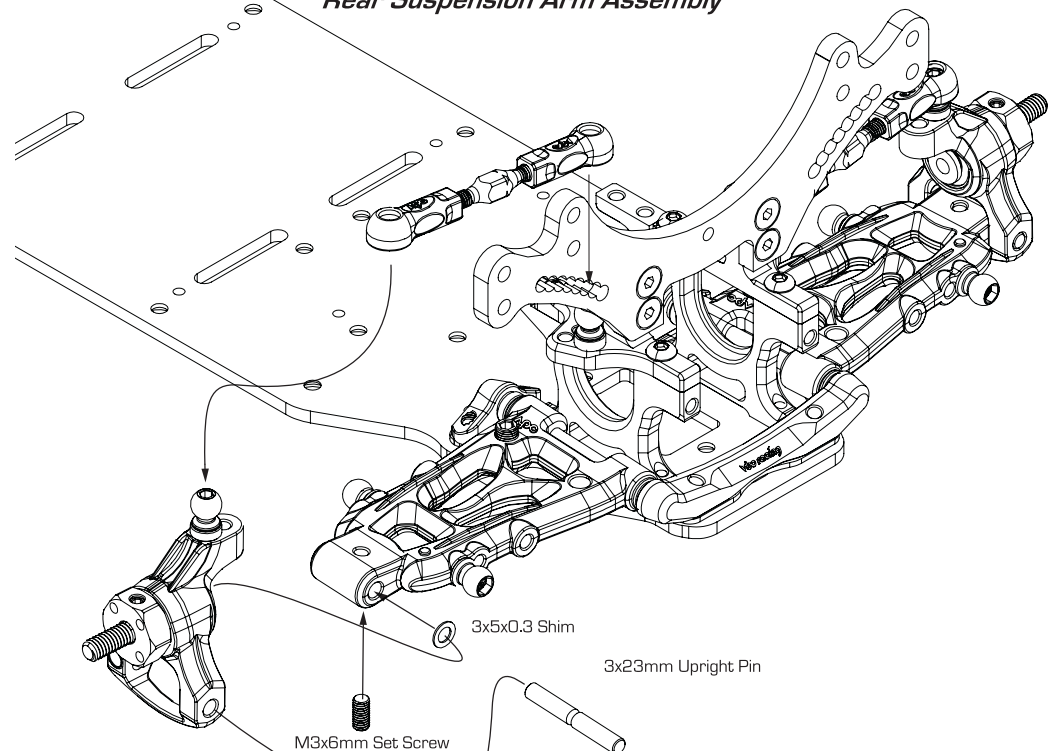
M3x6 Set Screw C-02-SC-SS-0306 x 2



*Rear Upper Linkage*



*Rear Suspension Arm Assembly*

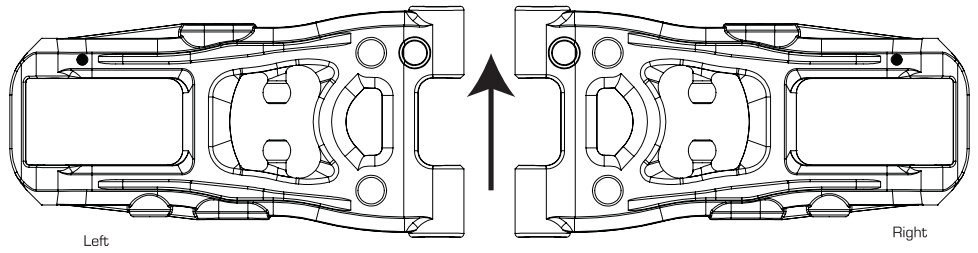


**10**

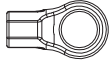
Front Suspension Arms top view

# 12

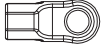
## Front Suspension Arm Assembly



Make sure the black markings are in the same direction on the left and right suspension arms



Turnbuckle Cup Open Type L A-03-VBC-0041 x 2



Turnbuckle Cup Open Type S A-03-VBC-0040 x 2



Suspension Arm Spacer T1 A-03-VBC-0051 x 2



Suspension Arm Spacer T2 A-03-VBC-0052 x 2



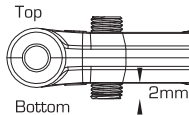
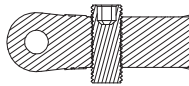
Arm Pin Pivot Ball B-02-VBC-0035 x 4



Suspension Arm Pin B-02-VBC-0029 x 2

**TIP** Suspension Arm Composite Compound Chart

F Suspension Arm Composite X Silver A-03-P30899	F Suspension Arm Composite X Gold A-03-P30929	F Suspension Arm Composite X Red A-03-G31299
Medium	Hard	Ultra-Hard

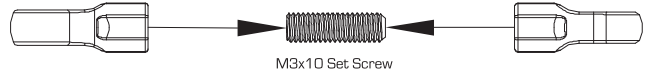


Insert M4x10 set screw from the top of the suspension arm for adjusting down stop. Initial setting is 2mm measuring from the bottom part of the arm for both sides.

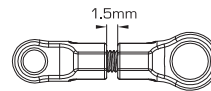
## Front Anti-Roll Bar Connector

Ball Connector Open Type S

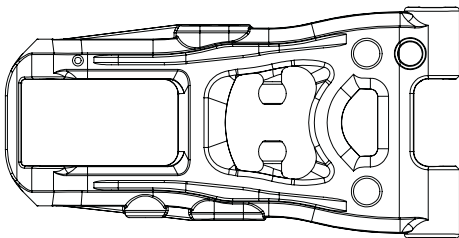
Ball Connector Open Type L



M3x10 Set Screw



MAKE TWO



F Suspension Arm Composite X Silver A-03-P30899



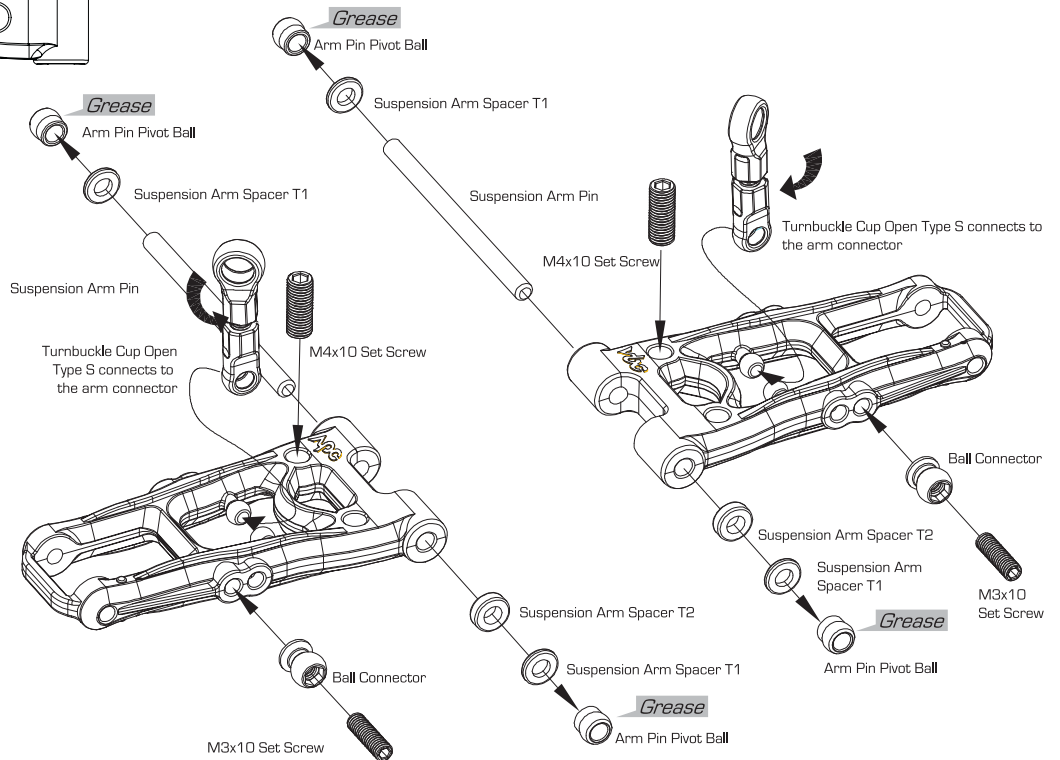
Ball Connector B-02-VBC-0045 x 2



M3x10 Set Screw C-02-SC-SS-0310 x 4



M4x10 Set Screw C-02-SC-SS-0410 x 2

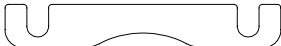


# 13

## Front Suspension Arm Assembly



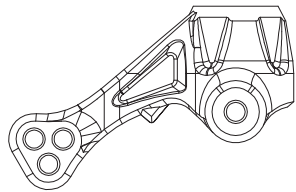
F00 Suspension Mount B-02-VBC-0060-00 x 1



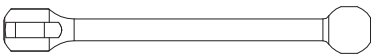
1mm Suspension Shim A-01-VBC-0037 x 1



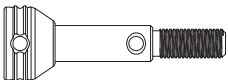
M3x6 Flat Head Screw C-02-SC-F0306 x 2



Steering Block Composite X Sliver A-03-P30898 x 2



Inner Axle B-02-VBC-0024 x 2



Wheel Axle B-02-VBC-0025 x 2



Axle Joint B-02-VBC-0026 x 2



Axle Lock Spring B-02-VBC-0027 x 2



5x10mm Ball Bearing C-02-BB-1005-B x 4



M2x12 Shaft Pin B-02-VBC-0022 x 2



M2x10 Shaft Pin B-02-VBC-0020 x 2



Shaft End Shoe A-03-VBC-0038 x 2



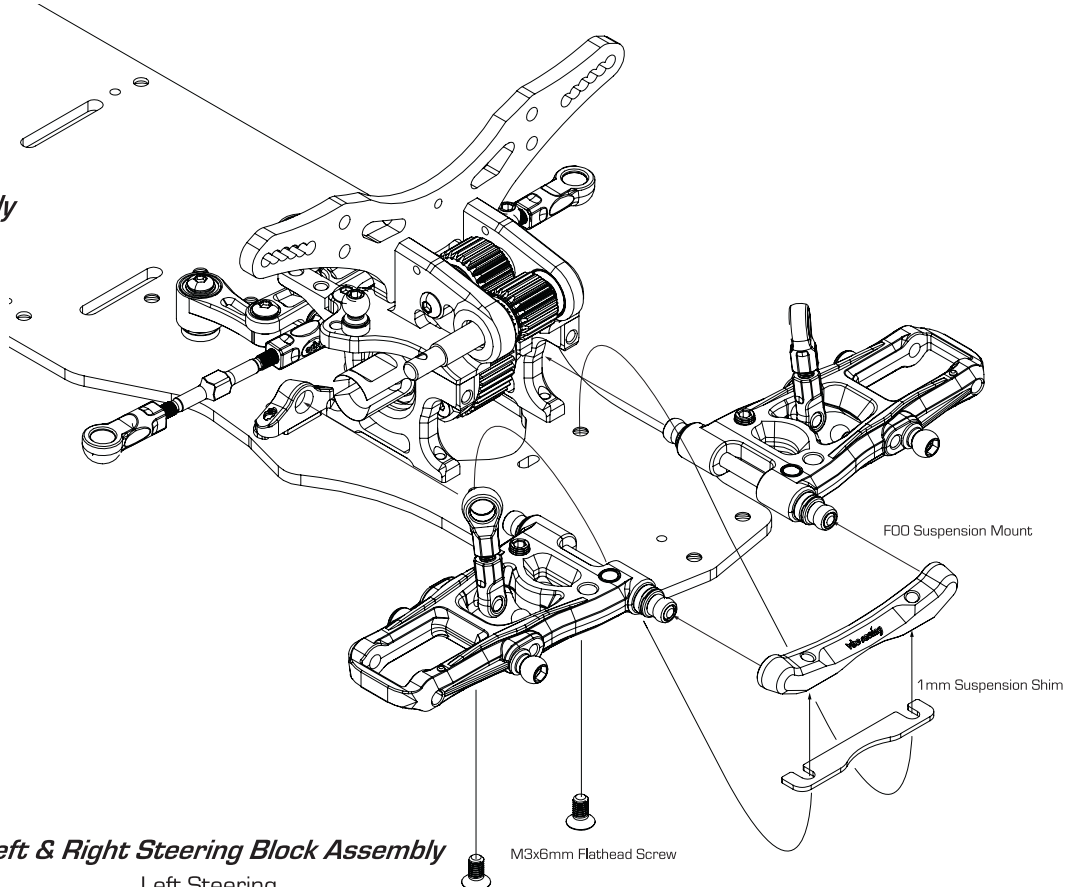
M3x2 Set Screw C-02-SC-SS-0302 x 2



Lightweight O Offset Hex Wheel Hub B-02-P30887 x 2

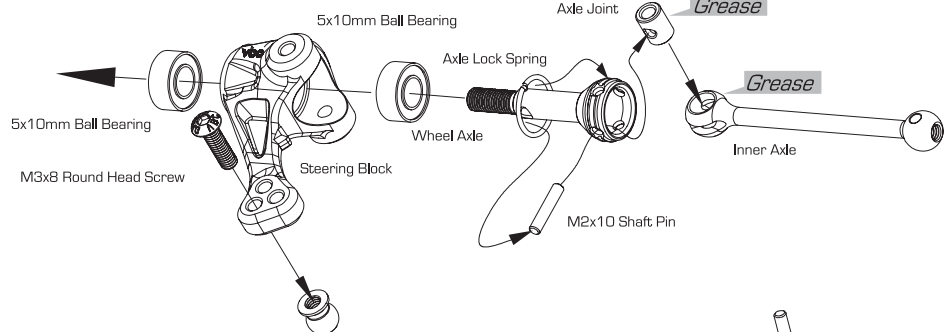


M3x3 Set Screw C-02-SC-SS-0303

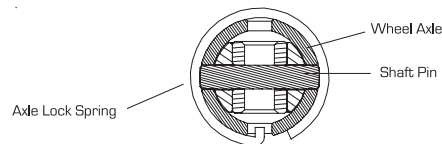


## Left & Right Steering Block Assembly

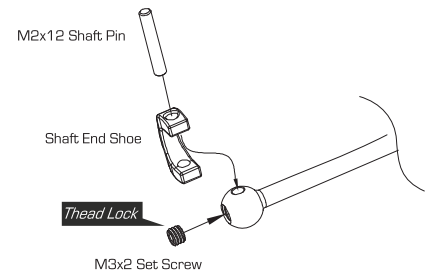
### Left Steering



### Joint cross section



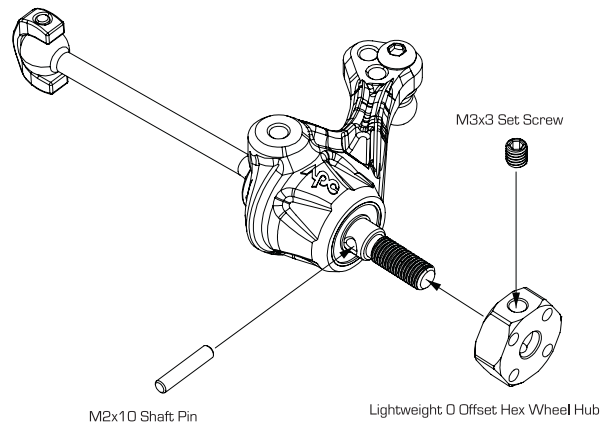
Make sure the Axle Lock Spring is place correctly onto the Wheel Axle



Ball Connector B-02-VBC-0045 x 2



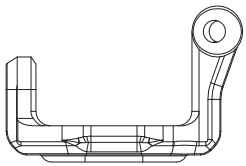
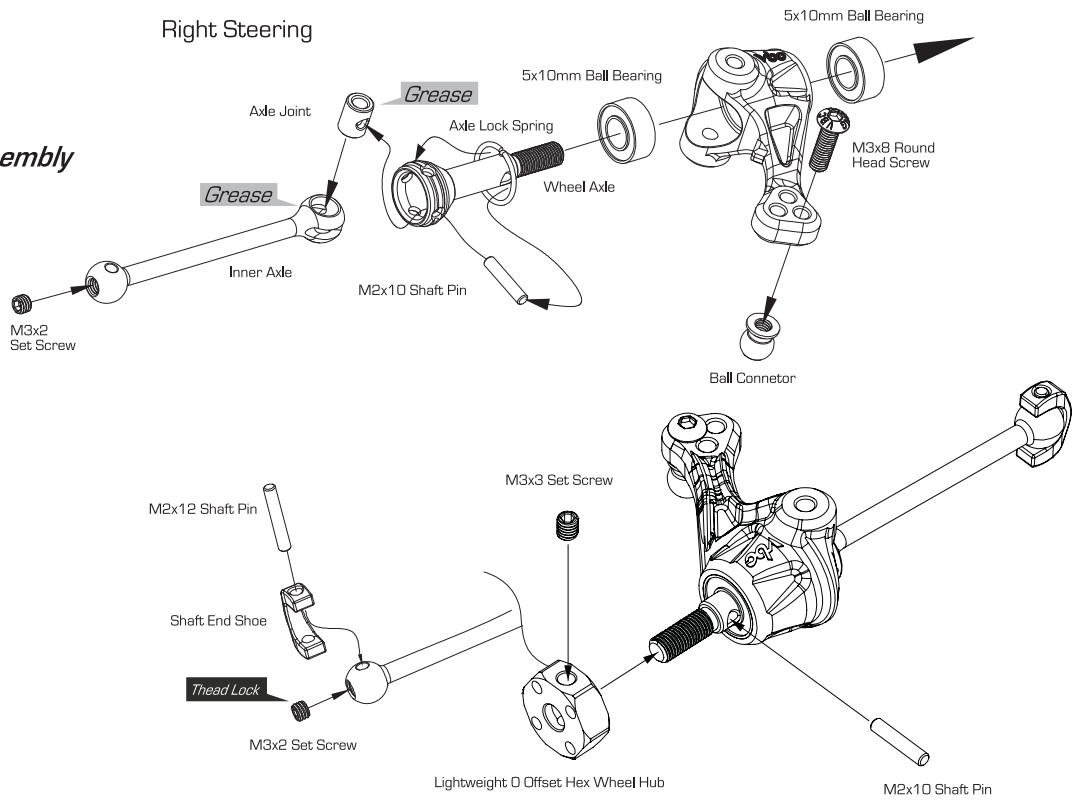
M3x8 Round Head Screw C-02-SC-R0308 x 2



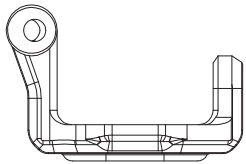
# 12

# 13

## Front Suspension Arm Assembly



R C-Hub Composite X Sliver A-03-P30900 x 1



L C-Hub Composite X Sliver A-03-P30901x 1



Steering Swivel Tube B-02-VBC-0033 x 4



Ball Connector B-02-VBC-0045 x 2

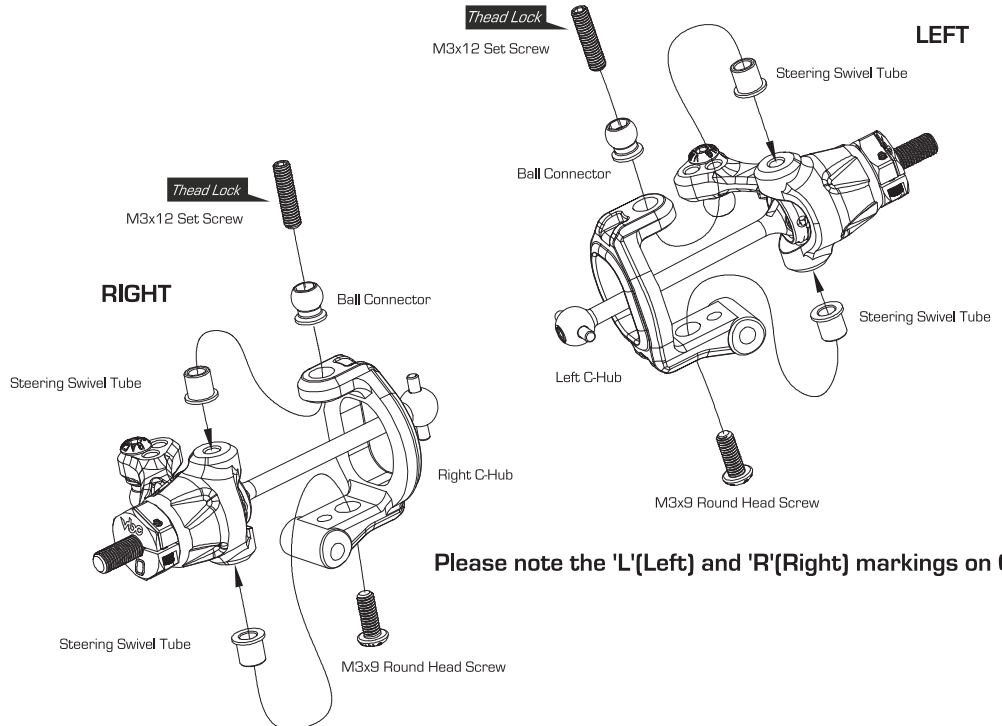


M3x12 Set Screw C-02-SC-SS-0312 x 2



M3x9 Round Head Screw C-02-SC-R0308 x 2

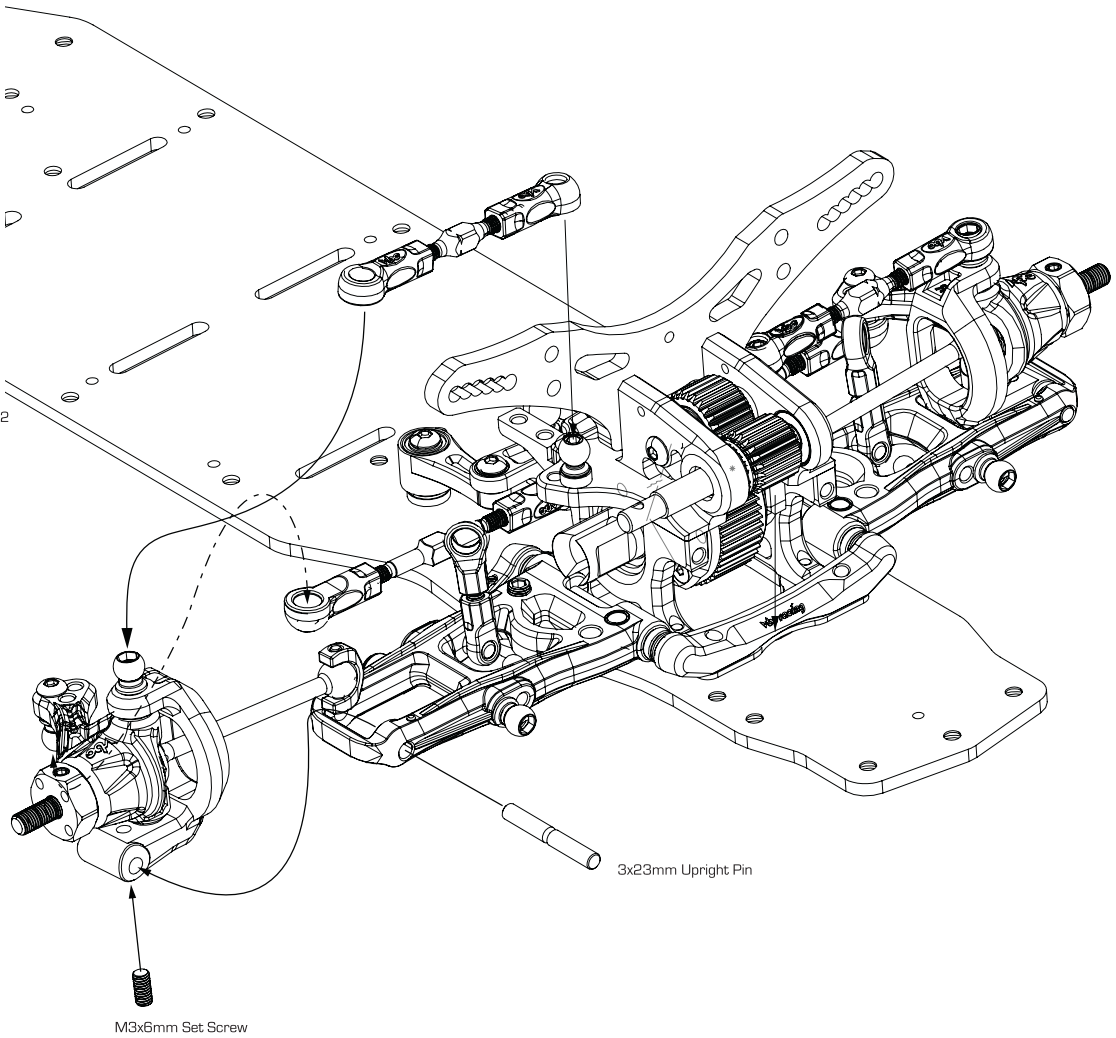
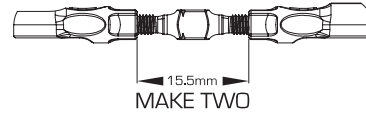
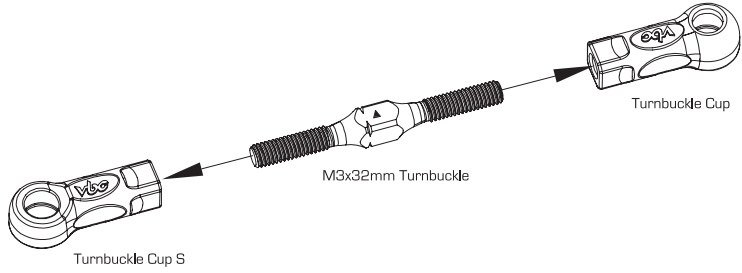
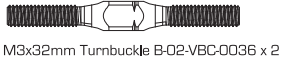
## Left & Right C-Hub Assembly



Please note the 'L'(Left) and 'R'(Right) markings on C-Hubs

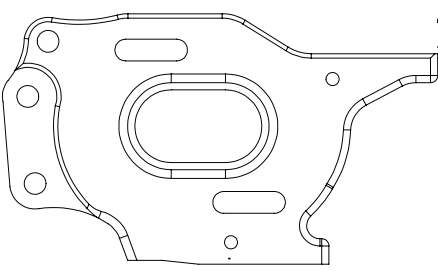
# 14

## Front Suspension Arm Assembly

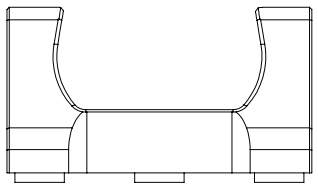


# 15

## Motor Mount Assembly



Motor Mount B-02-VBC-2029 x 1



Alum Front Bumper Mount B-02-VBC-2031 x 1



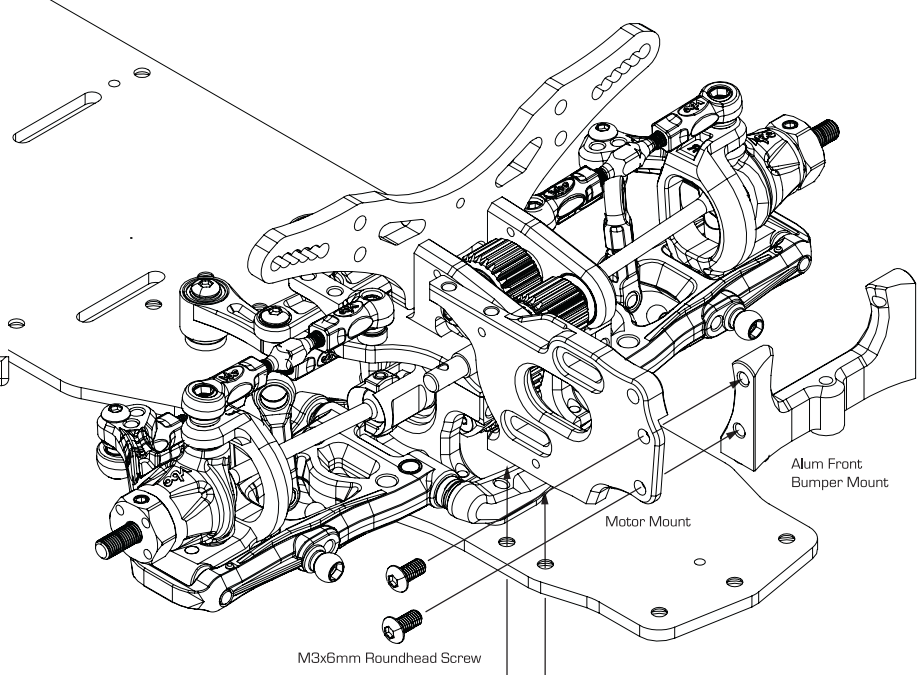
M3x6 Flathead C-02-SC-F0306 x 2



M3x6 Roundhead C-02-SC-R0306 x 2



M3x10 Roundhead C-02-SC-R0310 x 4



Alum Front Bumper Mount

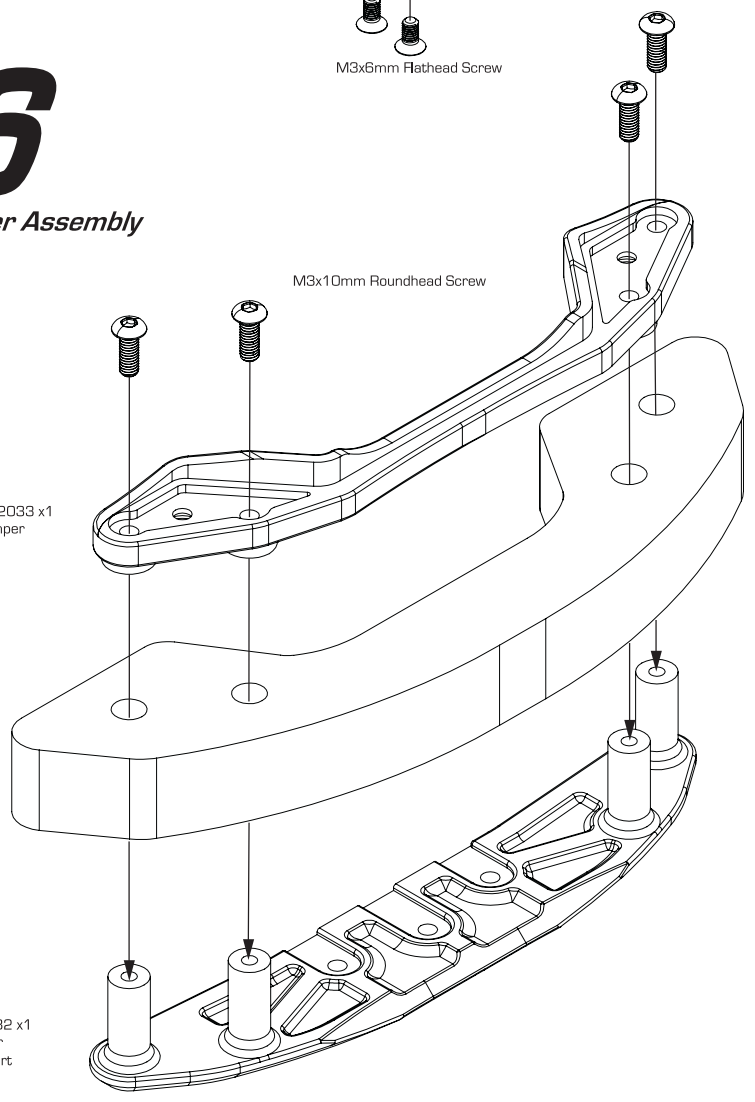
Motor Mount

M3x6mm Roundhead Screw

M3x6mm Hathead Screw

# 16

## Front Bumper Assembly



M3x10mm Roundhead Screw

A-03-VBC-2033 x1 Front Bumper Top Plate

B-03-VBC-2036 x1 Front Foam Bumper (Lightweight)

A-03-VBC-2032 x1 Front Bumper Bottom Support

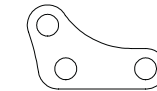


# 16

## Front Bumper Assembly



M3x8 Flathead C-02-SC-F0306 x 3



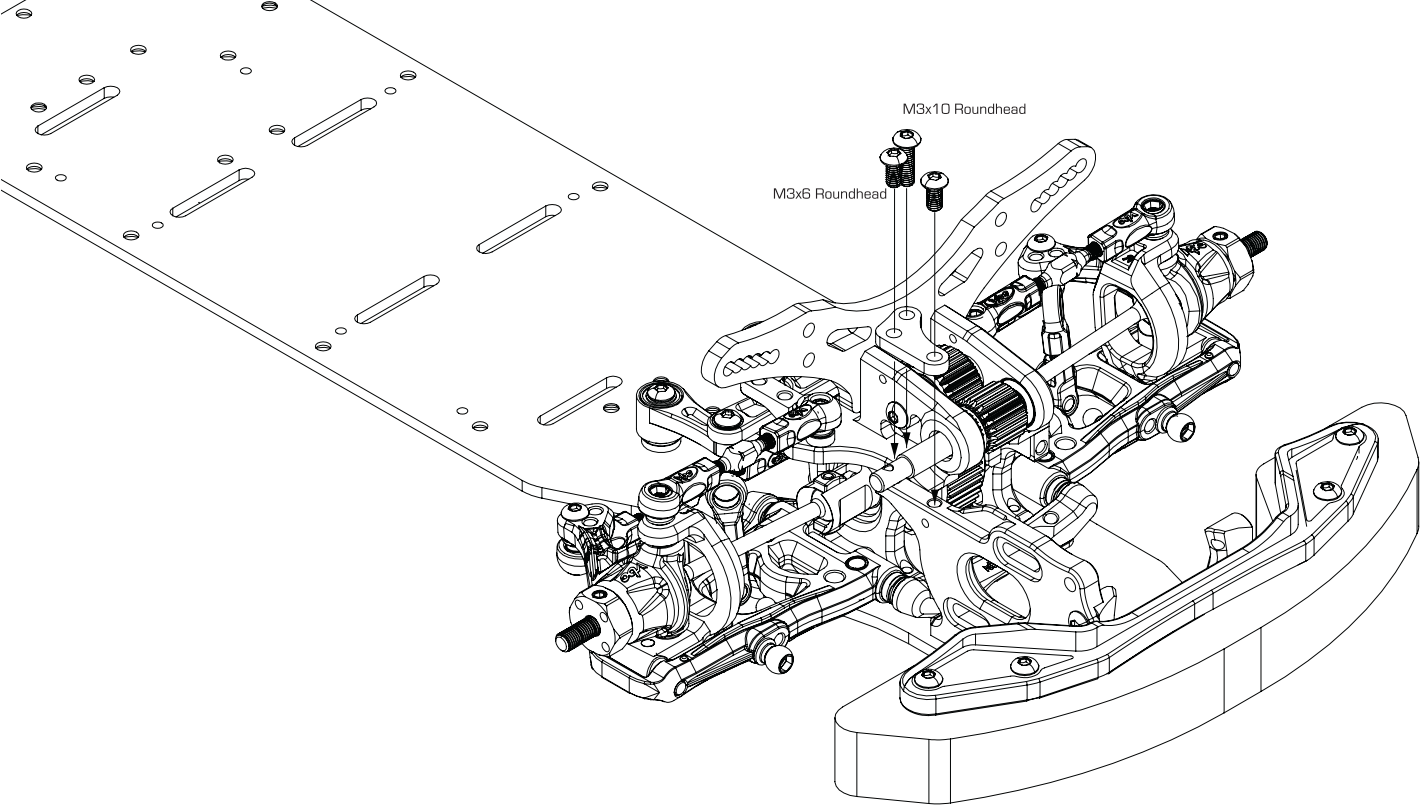
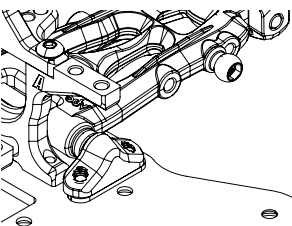
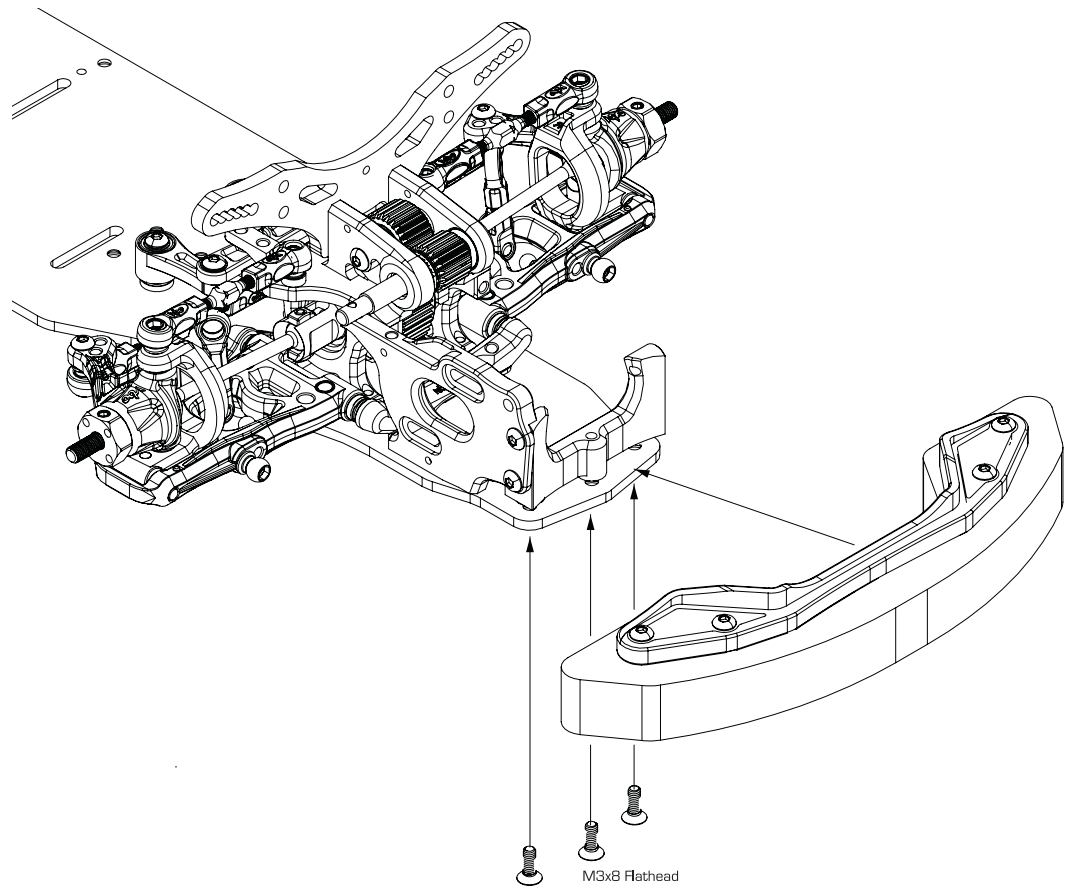
Graphite Motor Mount Support  
B-02-VBC-2030 x 1



M3x10 Roundhead C-02-SC-R0310 x 1

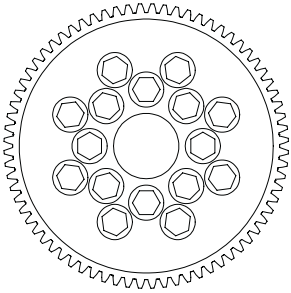


M3x6 Roundhead C-02-SC-R0306 x 2

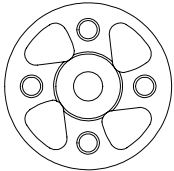


# 17

## Spur Gear Assembly



Kawada 48Pitch Spur Gear 76T  
G02-P-20612 x 1



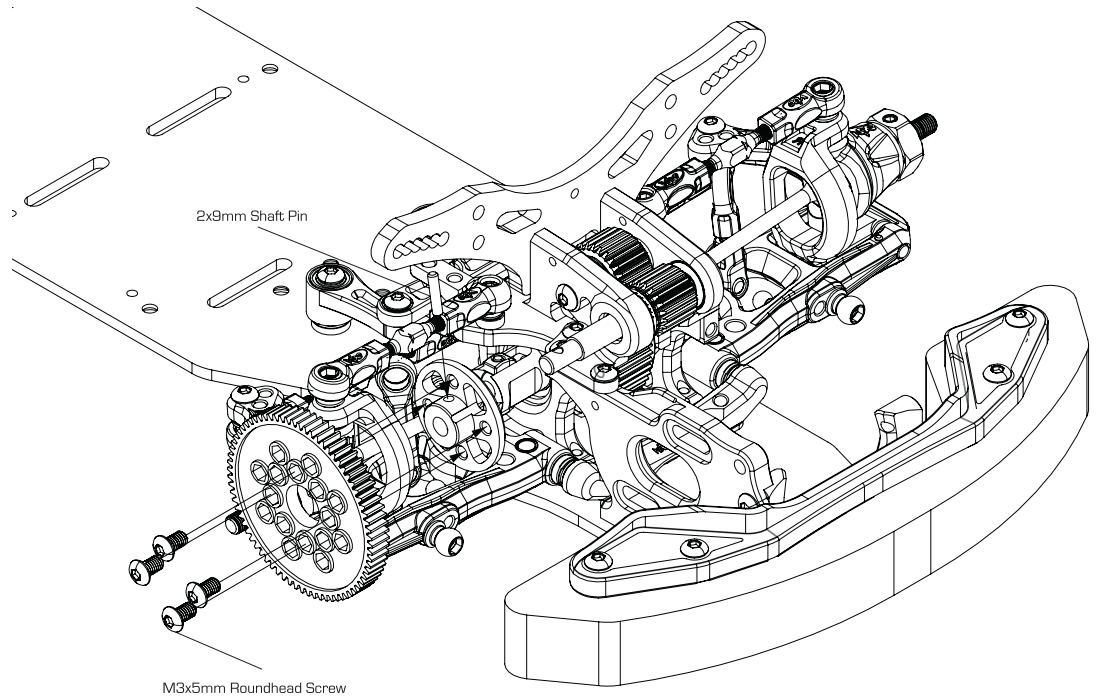
Alum Spur Gear Adaptor B-02-VBC-2037 x 1



2x9mm Shaft Pin B-02-VBC-2038 x 1

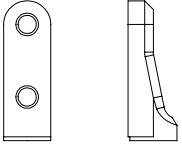


M3x5 Roundhead C-02-SC-R0305 x 4

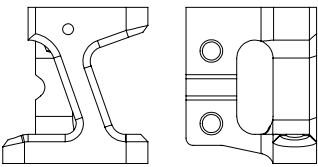


# 18

## Servo Assembly



Alum Servo Mount  
B-02-VBC-2042 x 1



Alum Center Servo Mount  
B-02-VBC-2041 x 1



M3x8 Roundhead C-02-SC-R0308 x 2



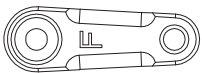
M3x6 Roundhead C-02-SC-R0306 x 2



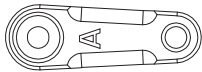
Ball Connector B-02-VBC-0045 x 1



Servo Spacer 1mm A-03-VBC-0032 x 1  
Servo Spacer 2mm A-03-VBC-0033 x 1



Servo Horn Type F (Futaba)  
A-03-VBC-0053 x 1

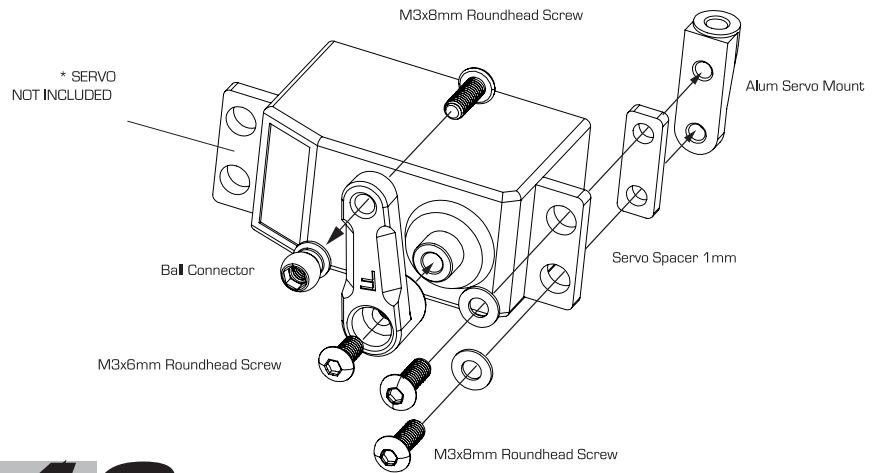


Servo Horn Type A (Sanwa/KO)  
A-03-VBC-0054 x 1



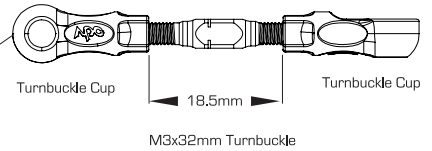
M3x6 Flathead Screw C-02-SC-F0306 x 2

Graphite Servo Mount Plate  
A-01-VBC-2043 x 1



# 19

## Servo Linkage Assembly

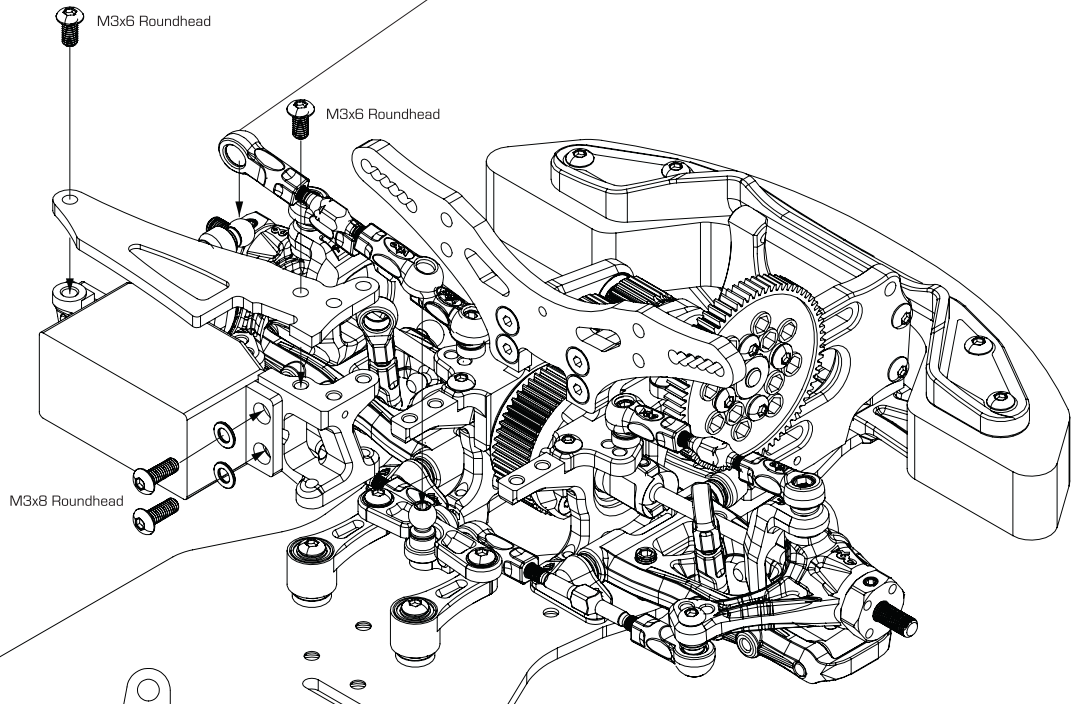


Turnbuckle Cup

18,5mm

Turnbuckle Cup

M3x32mm Turnbuckle



# 20

## Front And Rear Stabilizer Mount Assembly

Stabilizer Connector B-02-VBC-0047 x 4

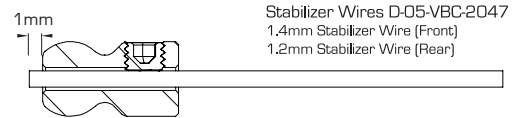
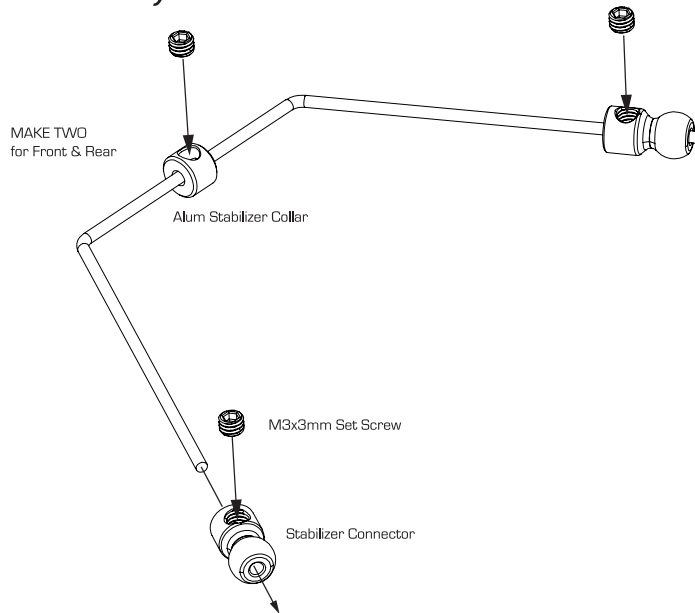
Stabilizer Collar B-02-VBC-2048 x 2

M3x3mm Set Screw C-02-SC-SS-0303 x 8

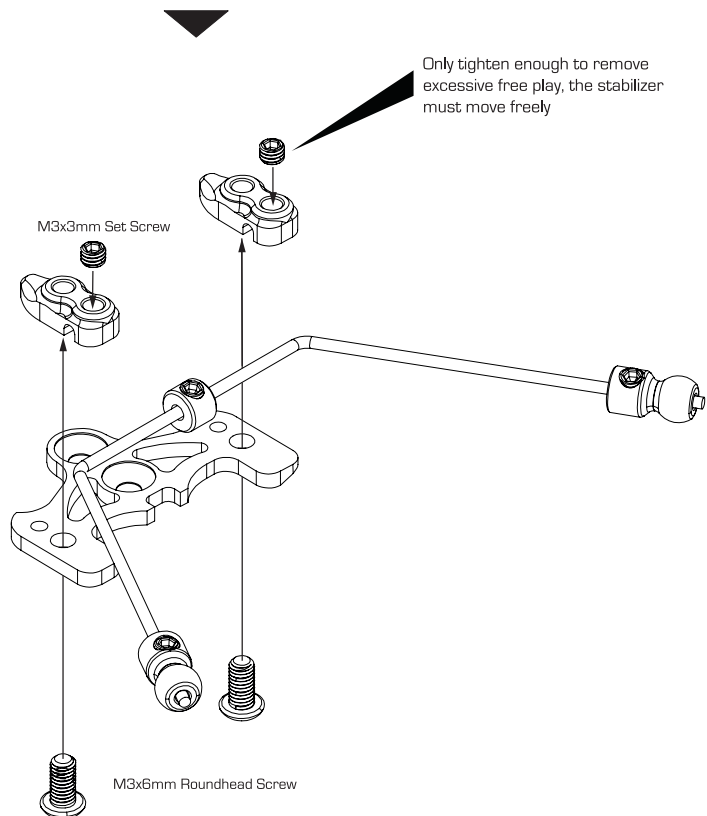
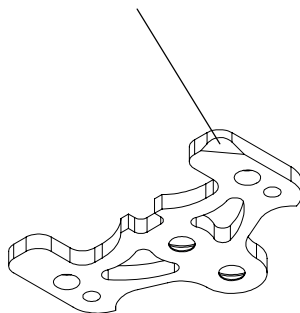
Graphite Stabilizer Mount Plate A-01-VBC-2050 x 1

Plastic Front Stabilizer Mount A-03-VBC-2051 x 2

M3x6 Roundhead Screw C-02-SC-R0306 x 2



In order to affect the servo linkage movement, please smooth cut the edge on bottom of plate

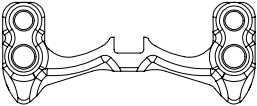


# 21

## Front And Rear Stabilizer Mount Assembly



M3x8 Flathead Screw C-02-SC-F0308 x 2



Plastic Rear Stabilizer Mount  
A-03-VBC-2052 x 1



M3x3mm Set Screw C-02-SC-SS-0303 x 2



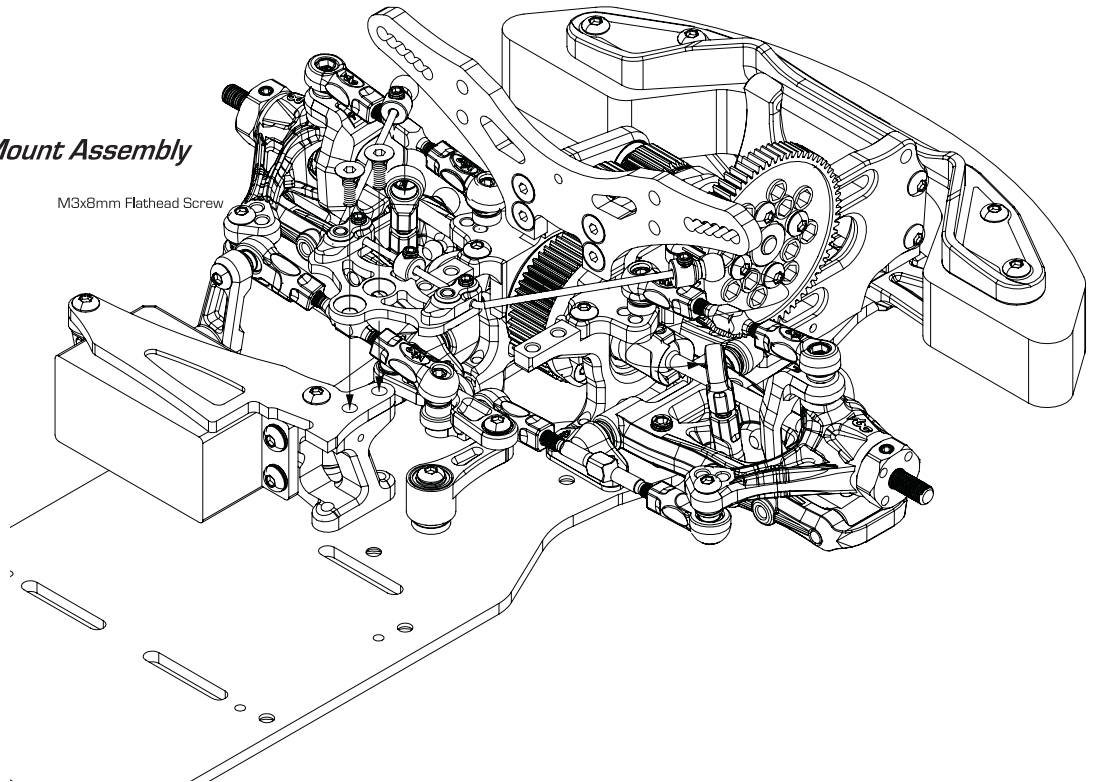
M3x8 Roundhead Screw C-02-SC-R0308 x 2



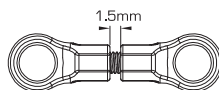
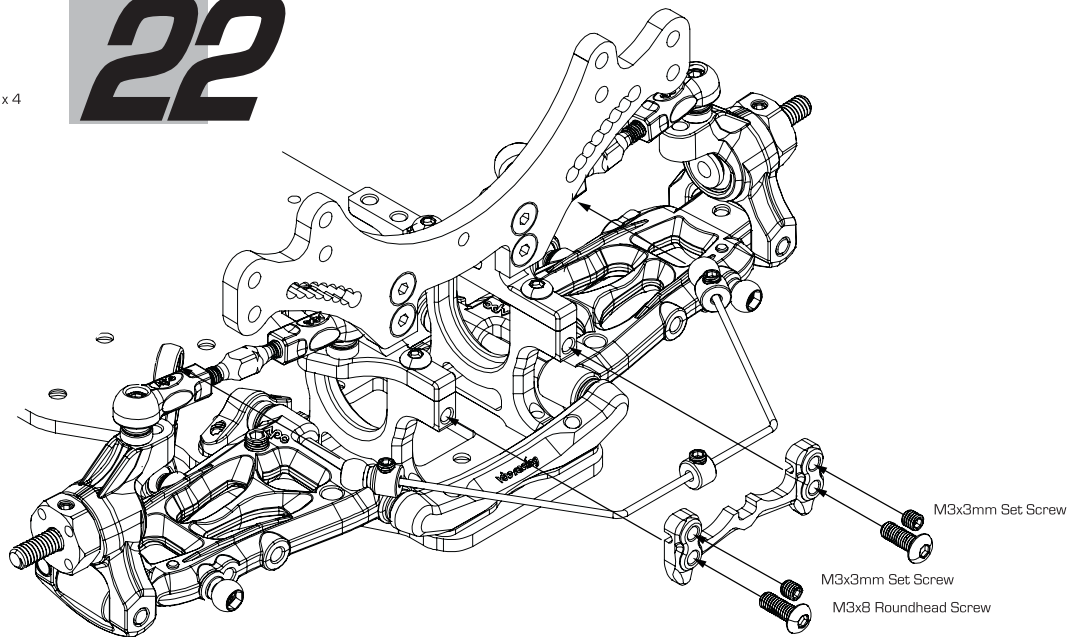
M3x10mm Set Screw C-02-SC-SS-0310 x 2



Turnbuckle Cup Open Type L A-03-VBC-0041 x 4



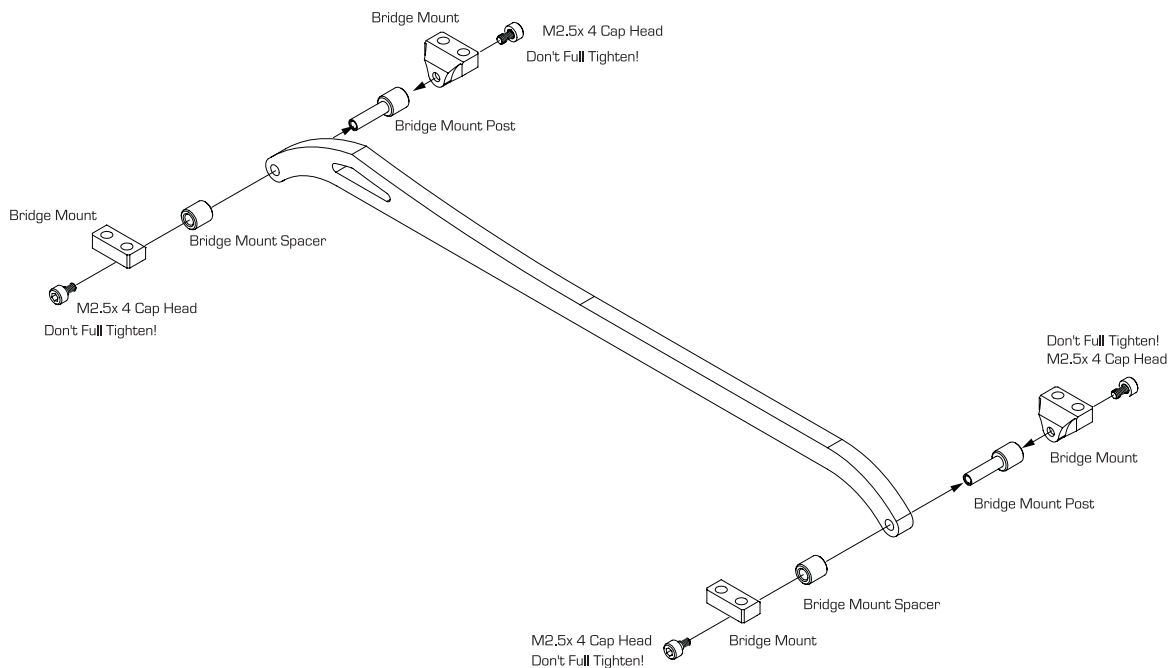
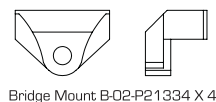
# 22



Note the double ring face to ball connector

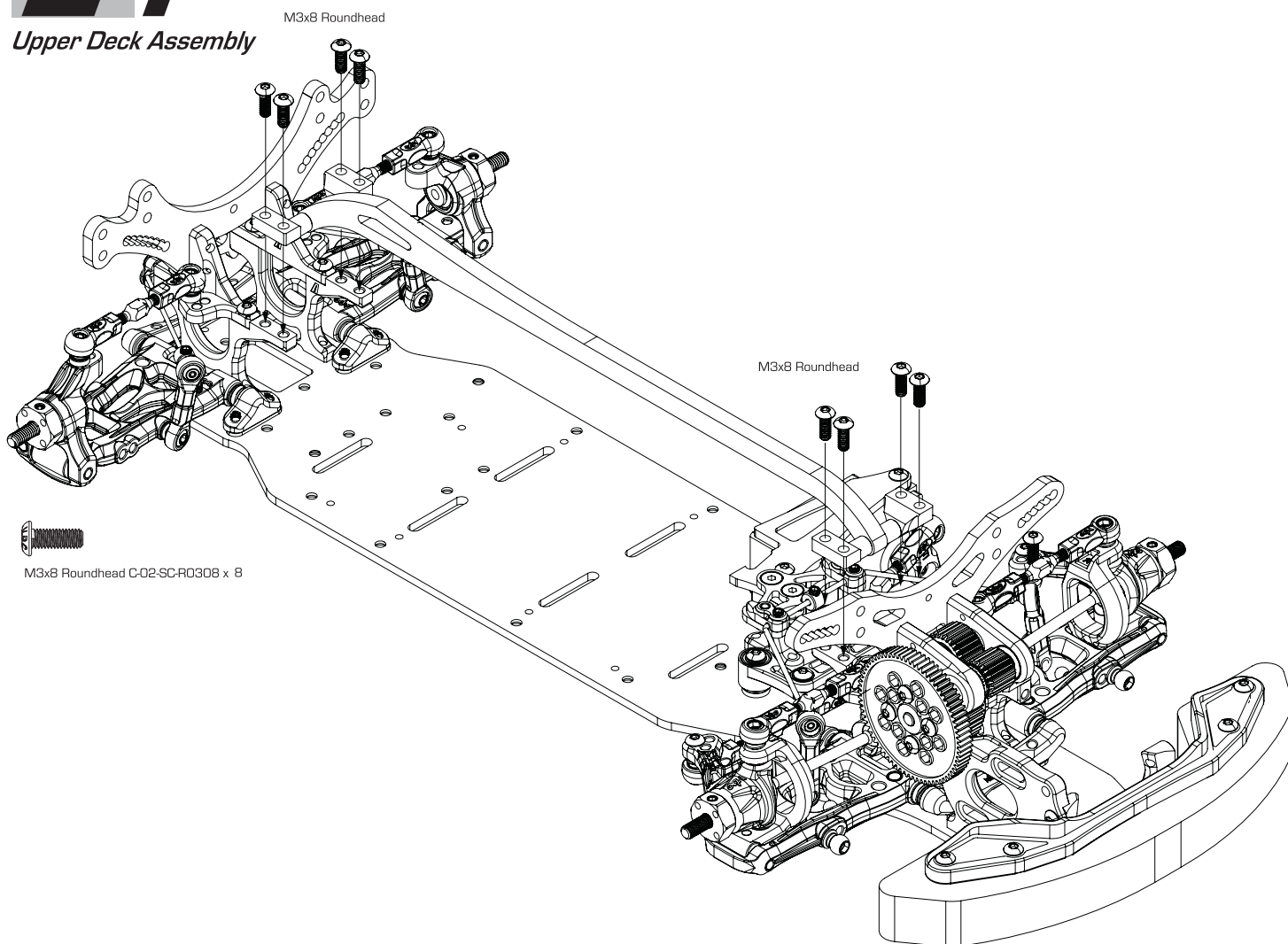
# 23

## Upper Deck Assembly



# 24

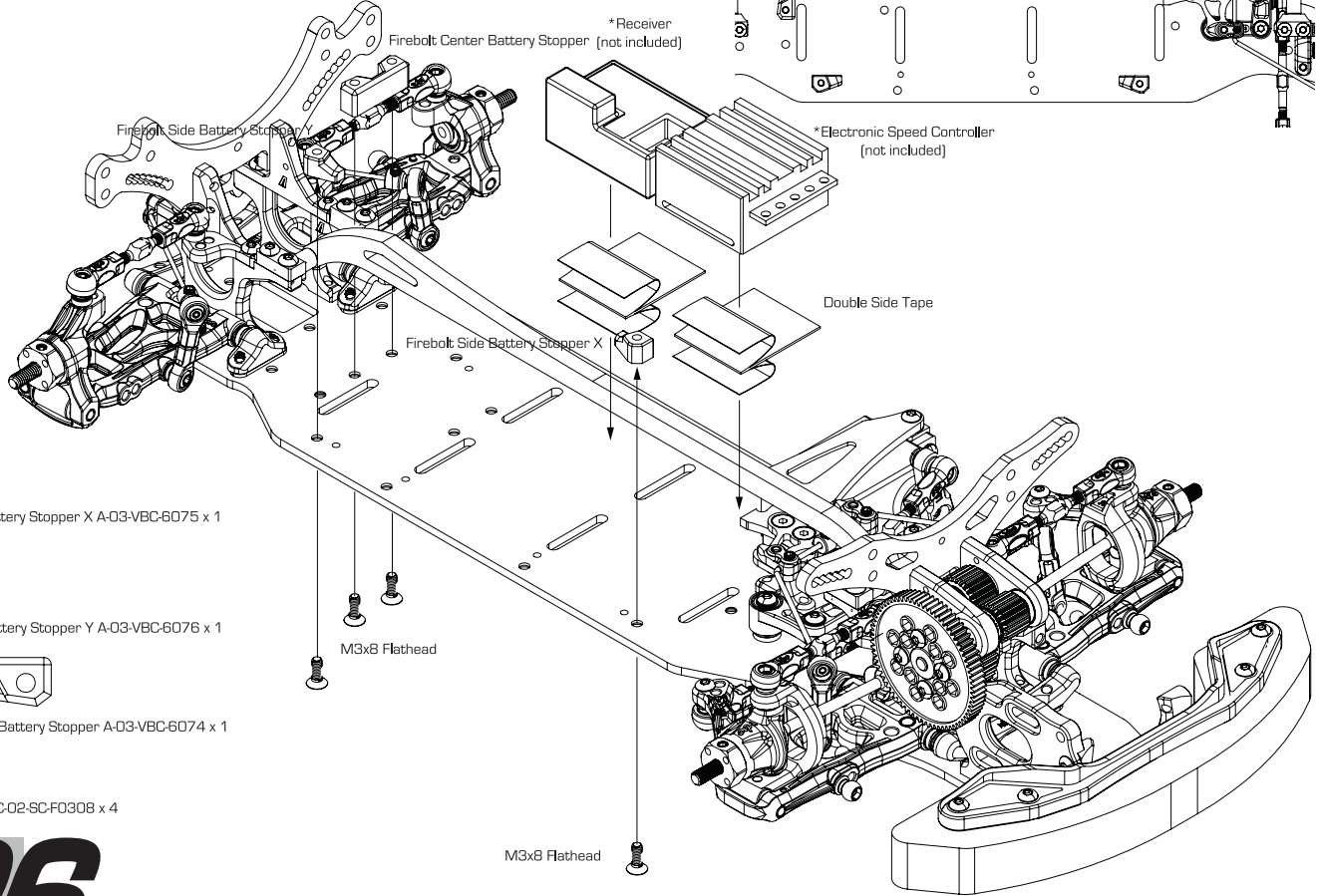
## Upper Deck Assembly



# 25

## Receiver And ESC Installation

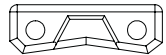
Note the position of ESC and receiver



Firebolt Side Battery Stopper X A-03-VBC-6075 x 1



Firebolt Side Battery Stopper Y A-03-VBC-6076 x 1



Firebolt Center Battery Stopper A-03-VBC-6074 x 1



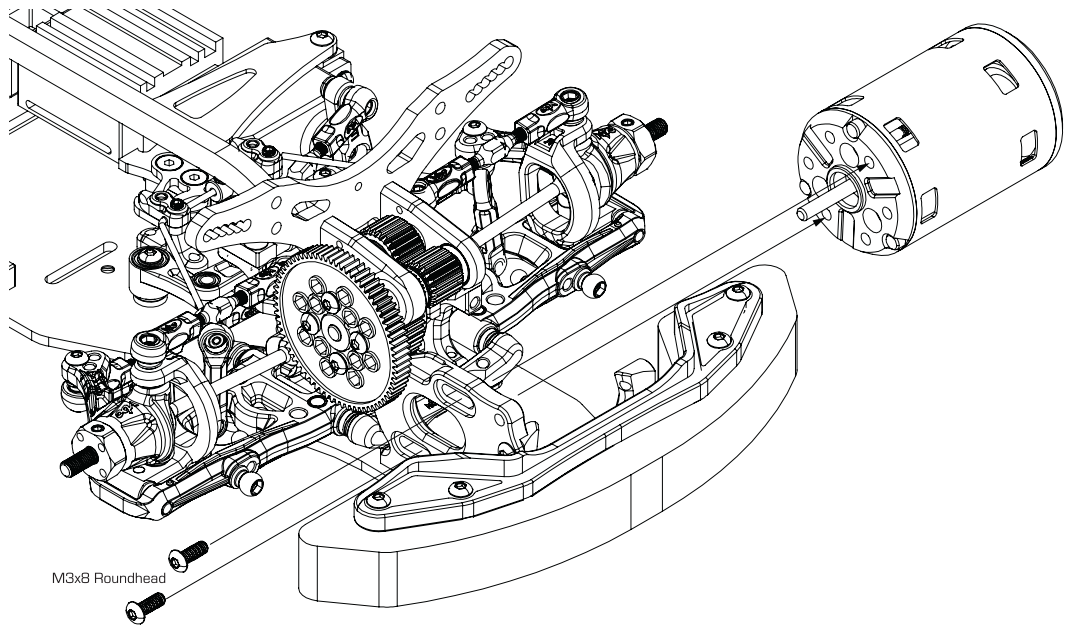
M3x8 Flathead C-02-SC-F0308 x 4

# 26

## Motor Installation



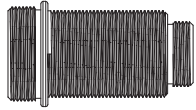
M3x8 Roundhead C-02-SC-R0308 x 2



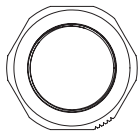
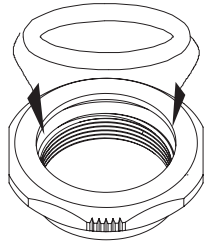
# 27

## Assemble Oil Shocks

MAKE 4 SHOCKS



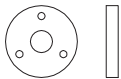
Shock Body B-02-VBC-0039 x 4



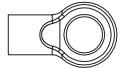
Shock Height Adjuster B-02-P21414 x 4



Shock Bottom Cap B-02-P21415 x 4



Shock Piston (3 holes) A-03-VBC-0045 x 4



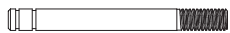
Shock Bottom Connector A-03-VBC-0066 x 4



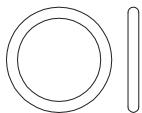
Shaft Cap A-03-VBC-0046 x 4



Shaft Guide A-03-VBC-0058 x 4



Shock Shaft B-02-VBC-0043 x 4



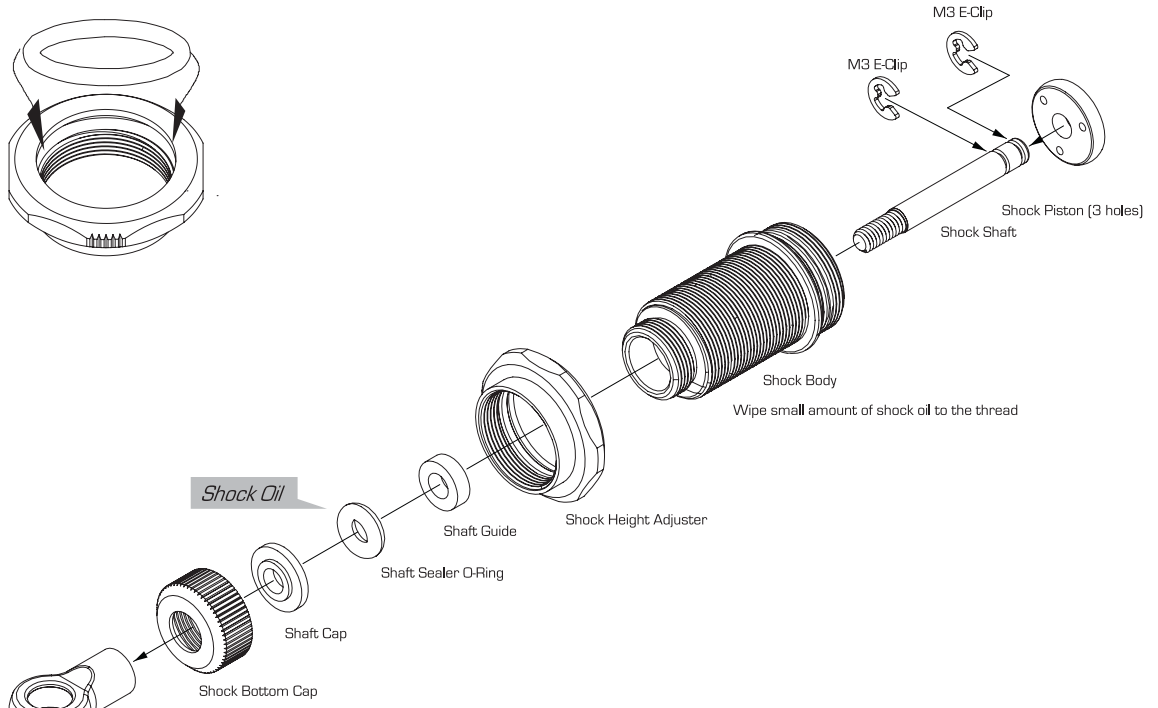
Sealer O-Ring B-03-VBC-0002 x 4



Shaft Sealer O-Ring B-03-VBC-0012 x 4

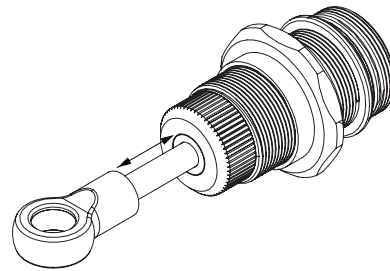


M3 E-Clip B-02-VBC-0044 x 8



Wipe small amount of shock oil to the thread

Note the double ring face to ball connector



Make sure the shock shaft can move up and down freely



# 28

## Assemble Oil Shocks Part 2



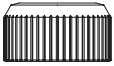
Shock Top Connector A-03-VBC-0042 x 4



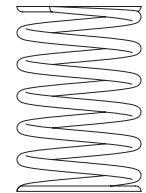
Spring Bottom Support A-03-VBC-0043 x 4



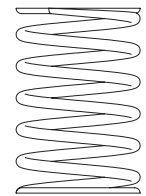
Oil Sealer Cap B-03-VBC-0011 x 4



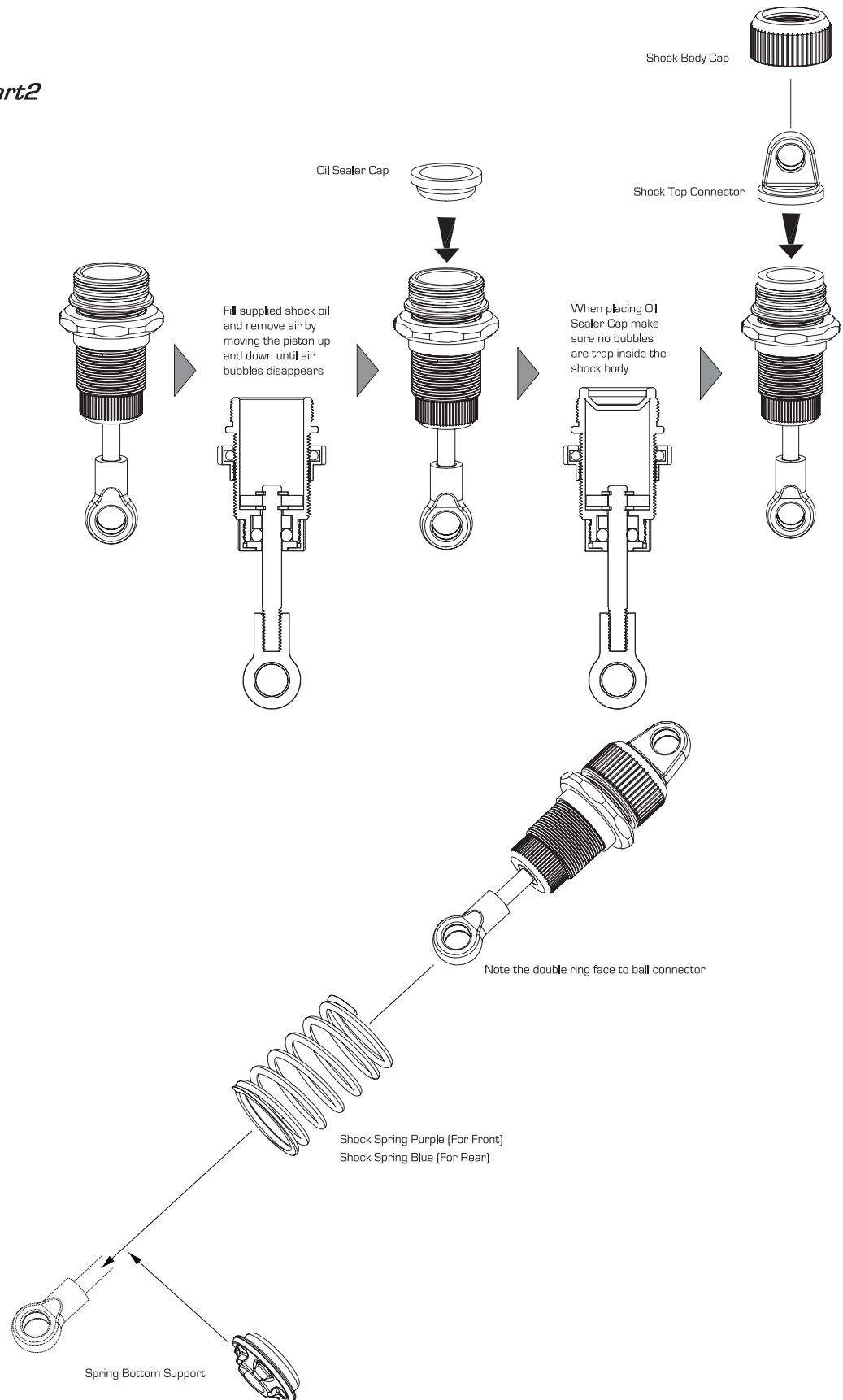
Shock Body Cap B-02-P21417 x 4



FF17 Purple Spring N-01-P21418 X 2

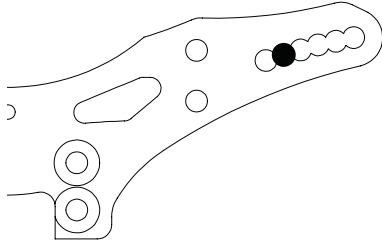


FF17 Blue Spring N-01-P21419 X 2

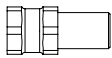


# 29

## Damper Set Assembly



Basic setup damper position



Alum Shock Mount Post  
B-02-VBC-2054 x 2



M3x6 Roundhead Screw C-02-SC-R0306 x 4

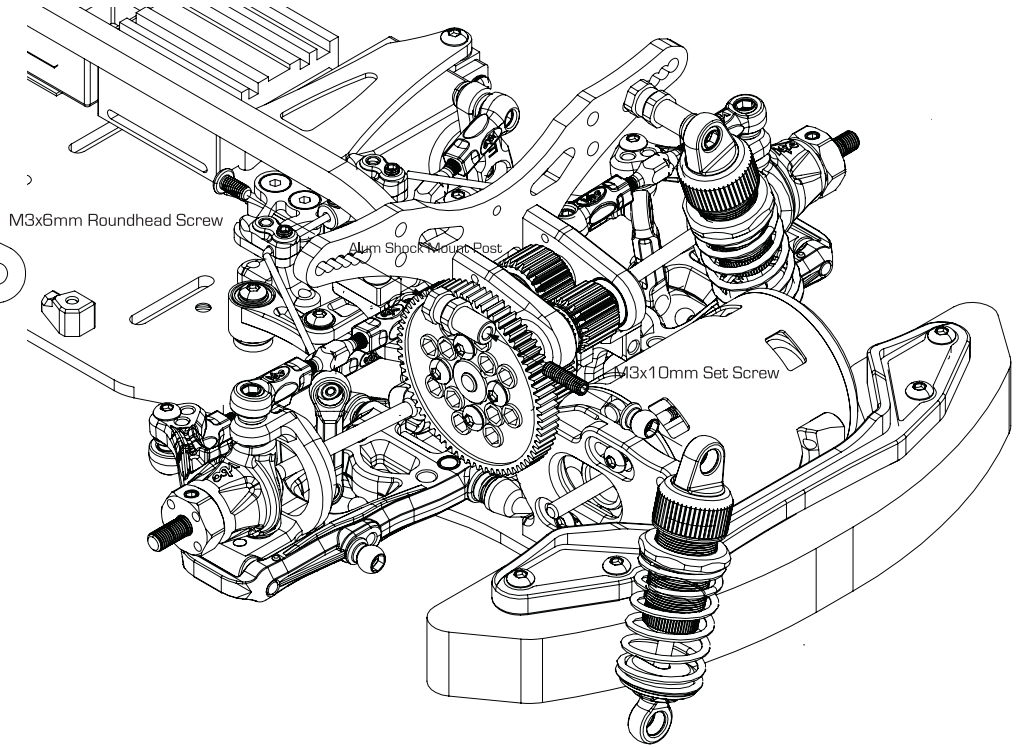
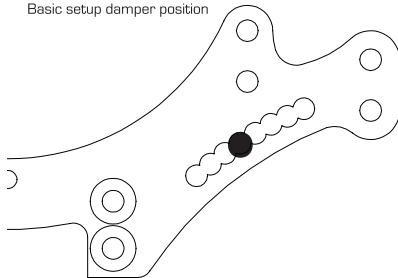


M3x10mm Set Screw C-02-SC-SS-0310 x 2

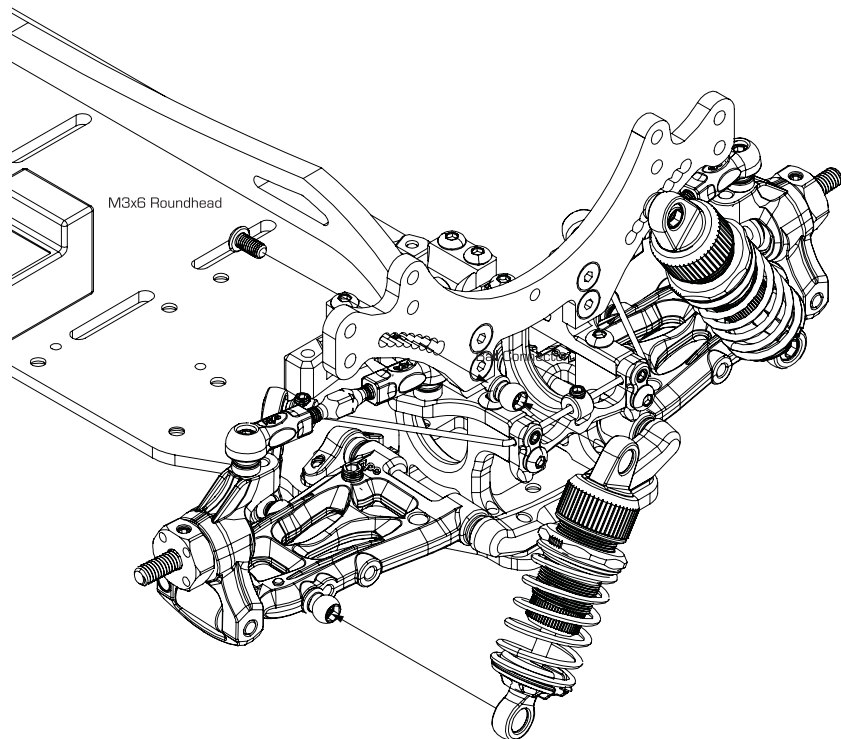


Ball Connector B-02-VBC-0045 x 4

Basic setup damper position

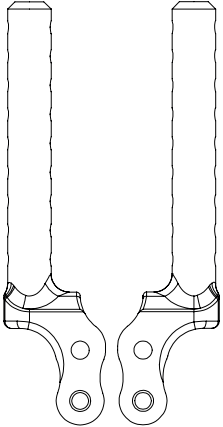


INSTALL LEFT &  
RIGHT DAMPERS



# 30

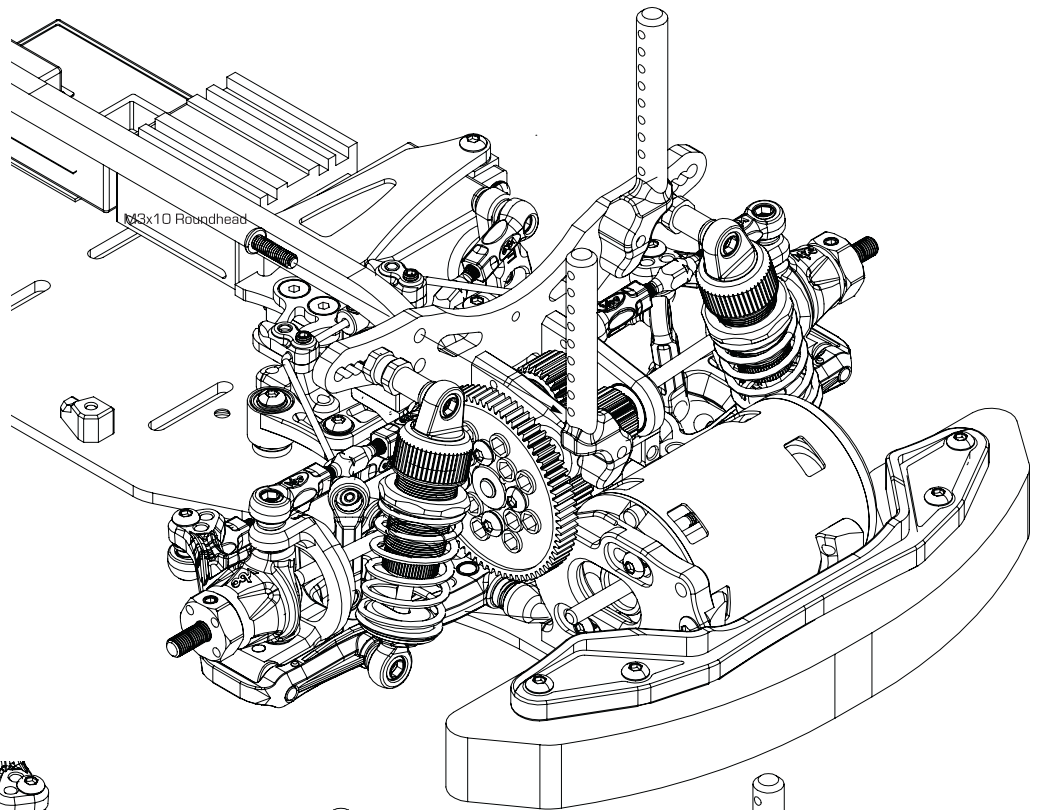
## Front Body Post Assembly



Front Body Post, L&R A-03-VBC-2055 x 2

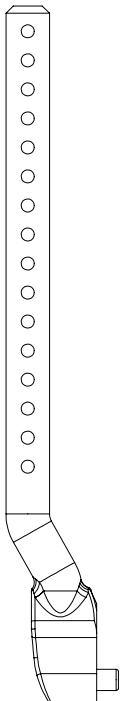


M3x10 Roundhead Screw C-02-SC-R0310 x 4

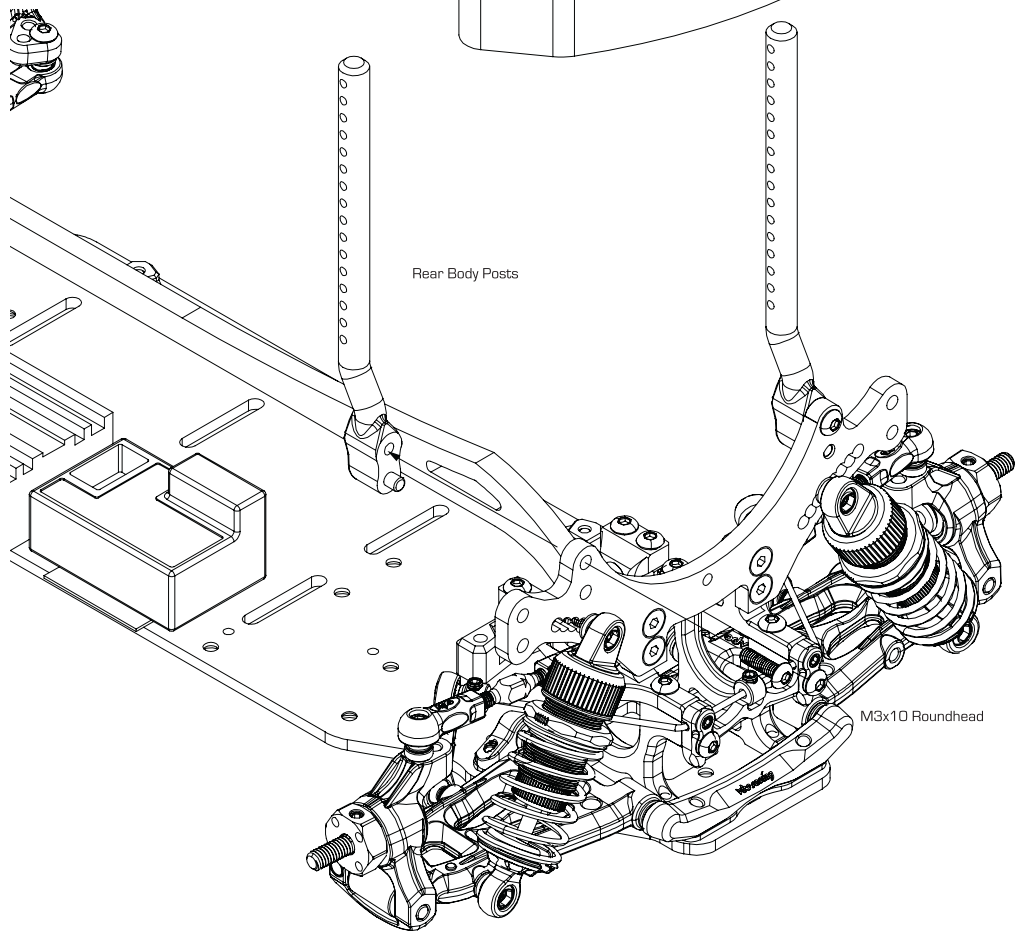


# 31

## Rear Body Post Assembly

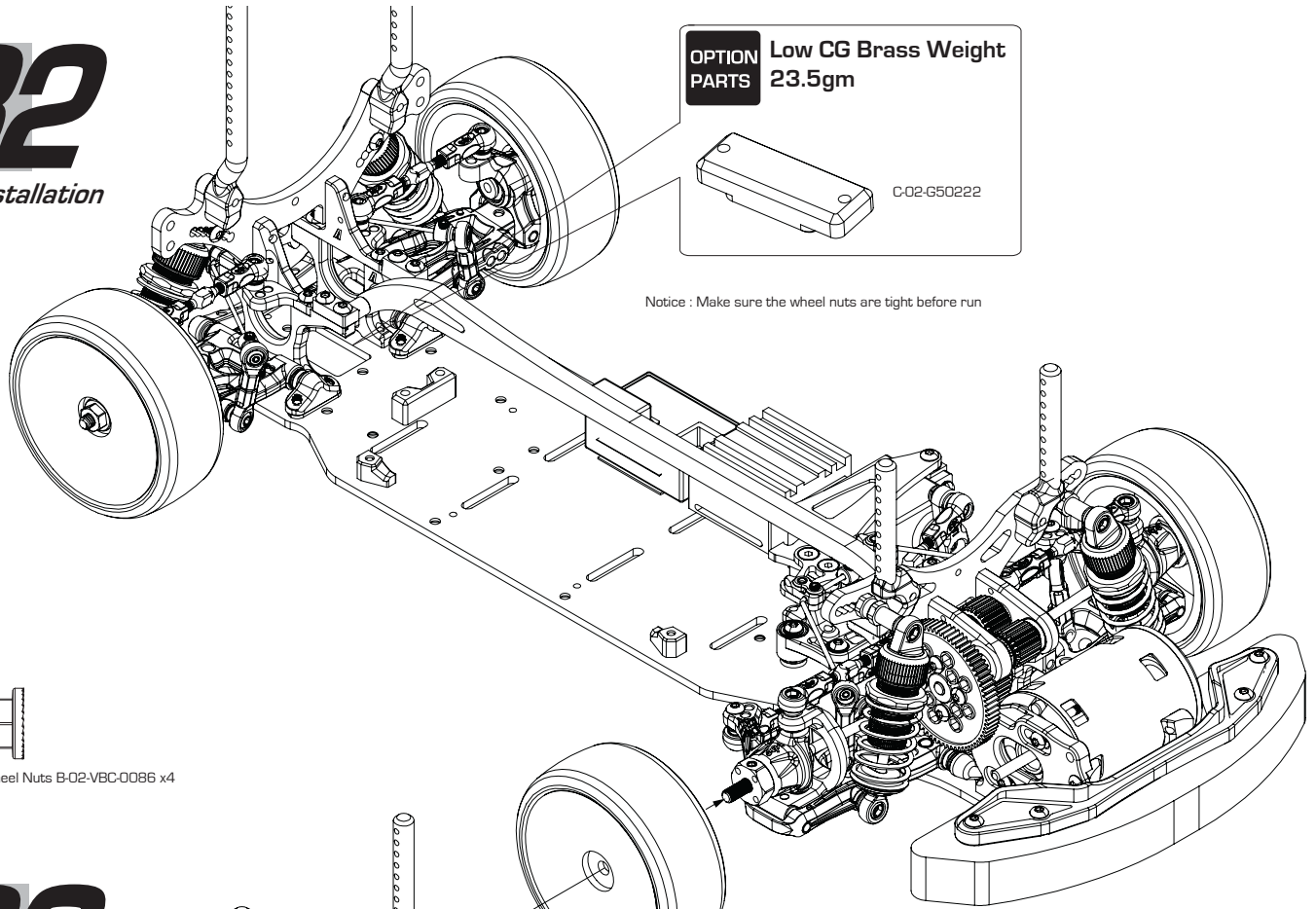


Rear Body Posts A-03-VBC-2056 x 2



# 32

Tires Installation



M4 Flanges Wheel Nuts B-02-VBC-0086 x4

# 33

Battery Installation

