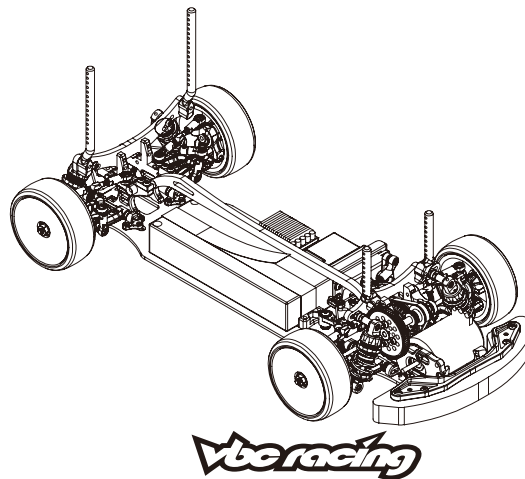


# COMPETITION GRADE HIGH PERFORMANCE RADIO CONTROL RACING CAR CHASSIS KIT



## 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)



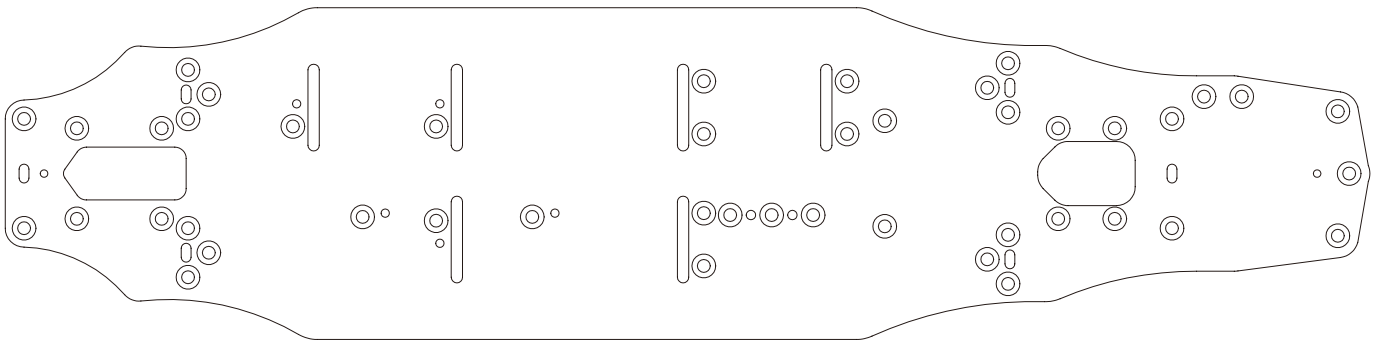
# 1

## Graphite Edges Protection Procedure

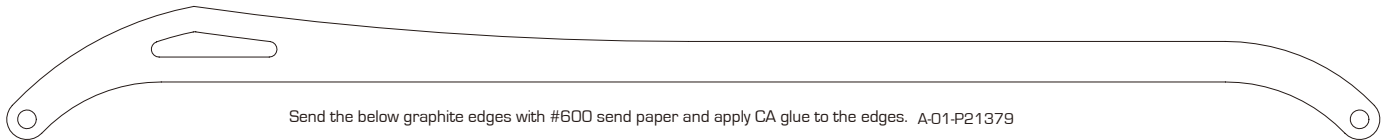


Send the chassis edgess with #600 send paper (not included) and apply CA glue (not included) to the edgess of the chassis.

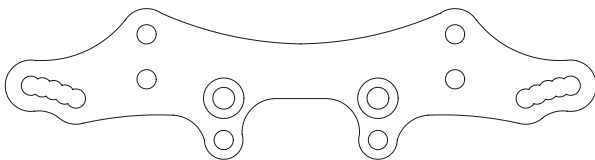
\*Not included in this kit



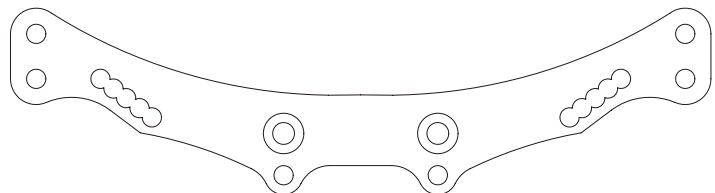
FF18 Main Chassis 21654



Send the below graphite edges with #600 send paper and apply CA glue to the edgess. A-01-P21379



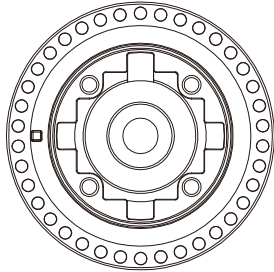
Graphite Front Shock Tower 21655



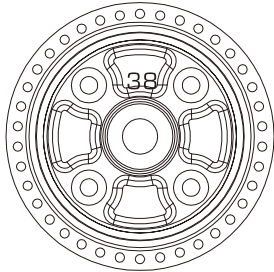
Graphite Rear Shock Tower 21656

# 2

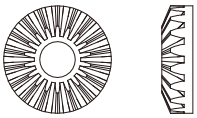
## Rear Gear Diff Assembly



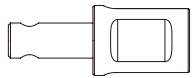
Gear Diff Housing A-03-VBC-0016 x 1



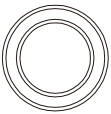
Gear Diff Pulley 38T A-03-VBC-0017 x 1



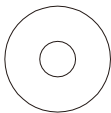
Diff Gear A-03-VBC-0019 x 2



Lightweight Gear Differential Cup B02-P30888 x 2



10 x 15 Ball Bearing C-02-BB-1510-P x 2



15 x 0.3 Shim B-02-VBC-0077 x 2



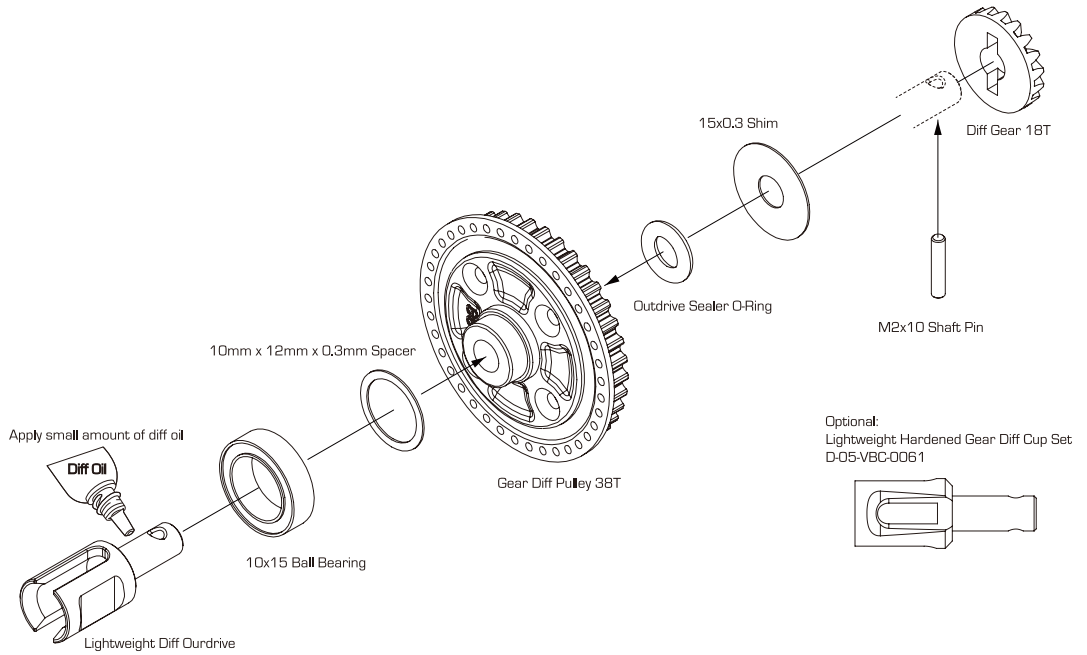
M2 x 10 Shaft Pin B-02-VBC-0020 x 2



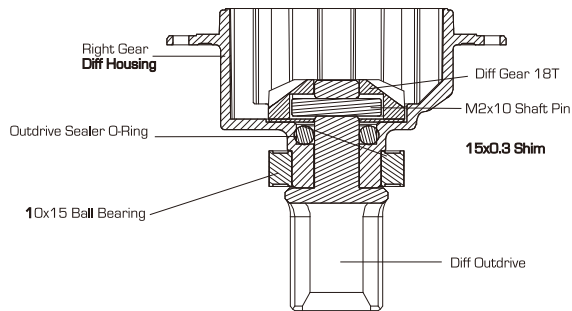
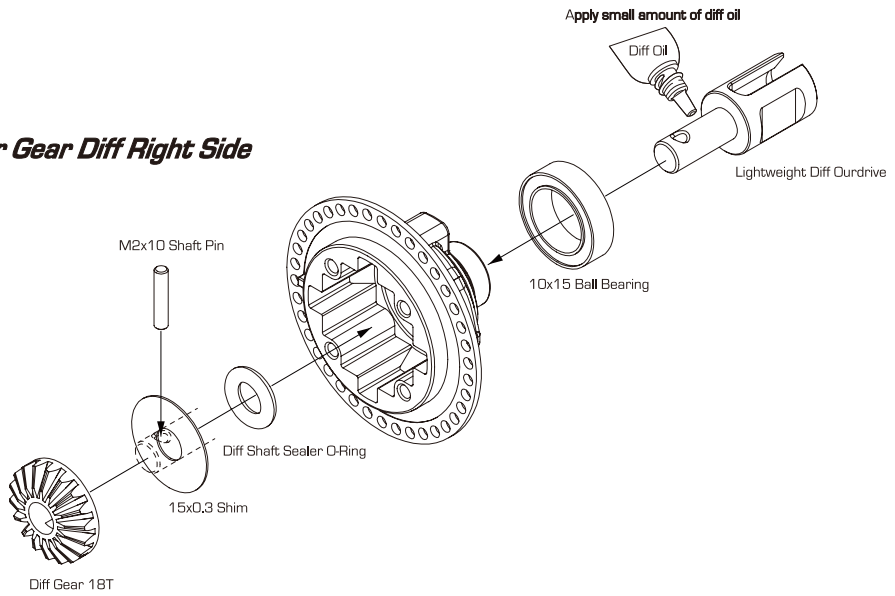
Diff Shaft Sealer O-Ring B-03-VBC-0006 x 2



10mm x 12mm x 0.3mm Spacer C-02-P30914 x 1



## Rear Gear Diff Right Side



### Rear Gear Diff Right Side Assembly Cross Section

# 2

## Rear Gear Diff Assembly Continue



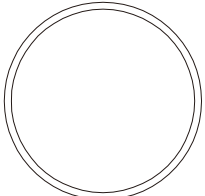
Diff Gear 10T A-03-VBC-0018 x 4



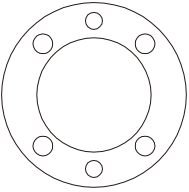
9.5x0.2mm Shim B-02-VBC-0078 x 4



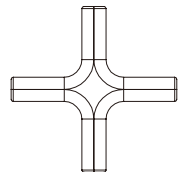
M2.6x10 Flathead Screw C-02-SC-F2.6x10 x 4



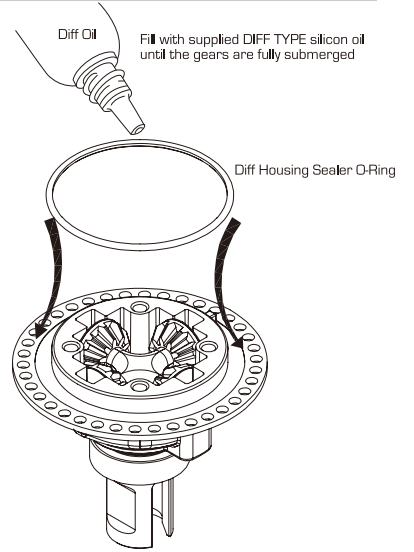
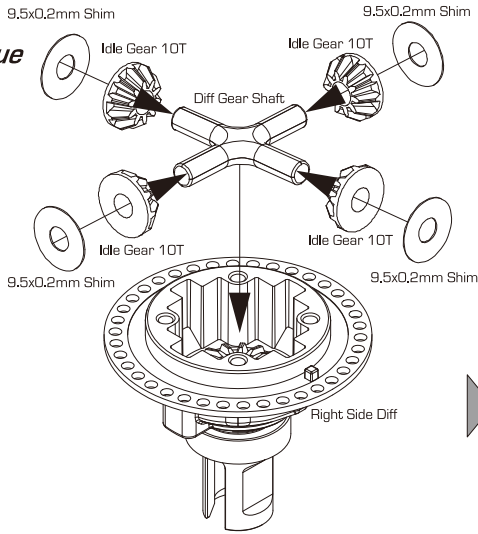
Diff Housing Sealer O-Ring B-03-VBC-0005 x 1



Seal Gasket B-03-VBC-0004 x 1

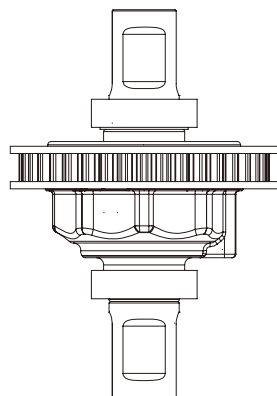


Diff Gear Shaft A-03-VBC-0020 x 1

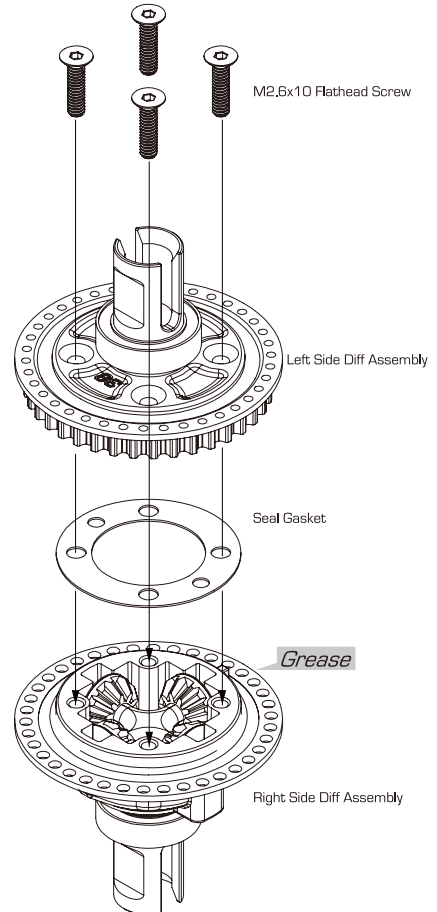


**TIP Gear Differentials**

Traction	Low	Medium	High
	1000 Cst	4000 Cst	8000 Cst
	3000 Cst	7000 Cst	20000 Cst



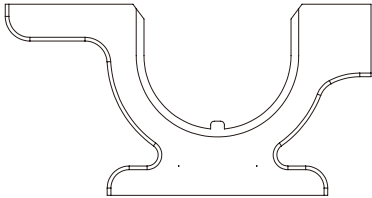
Place Seal Gasket to the left side diff assembly before putting the right side diff together



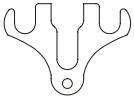


# 3

## Front Bulkhead And Center Suspension Mount Assembly



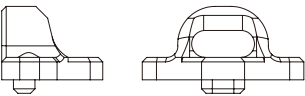
31555 WildFireD09 Bulkhead(Red) x 2



A01G30935 Center Suspension Mount Shim (0.5mm) x 4



C-02-SC-F0306 M3x6 Flathead x 20



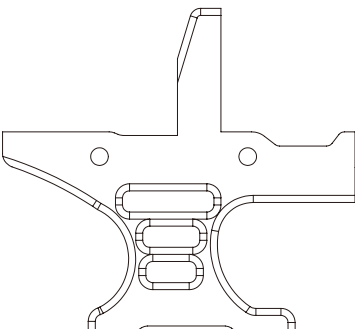
31619 Split Mount CO(Black) x 4



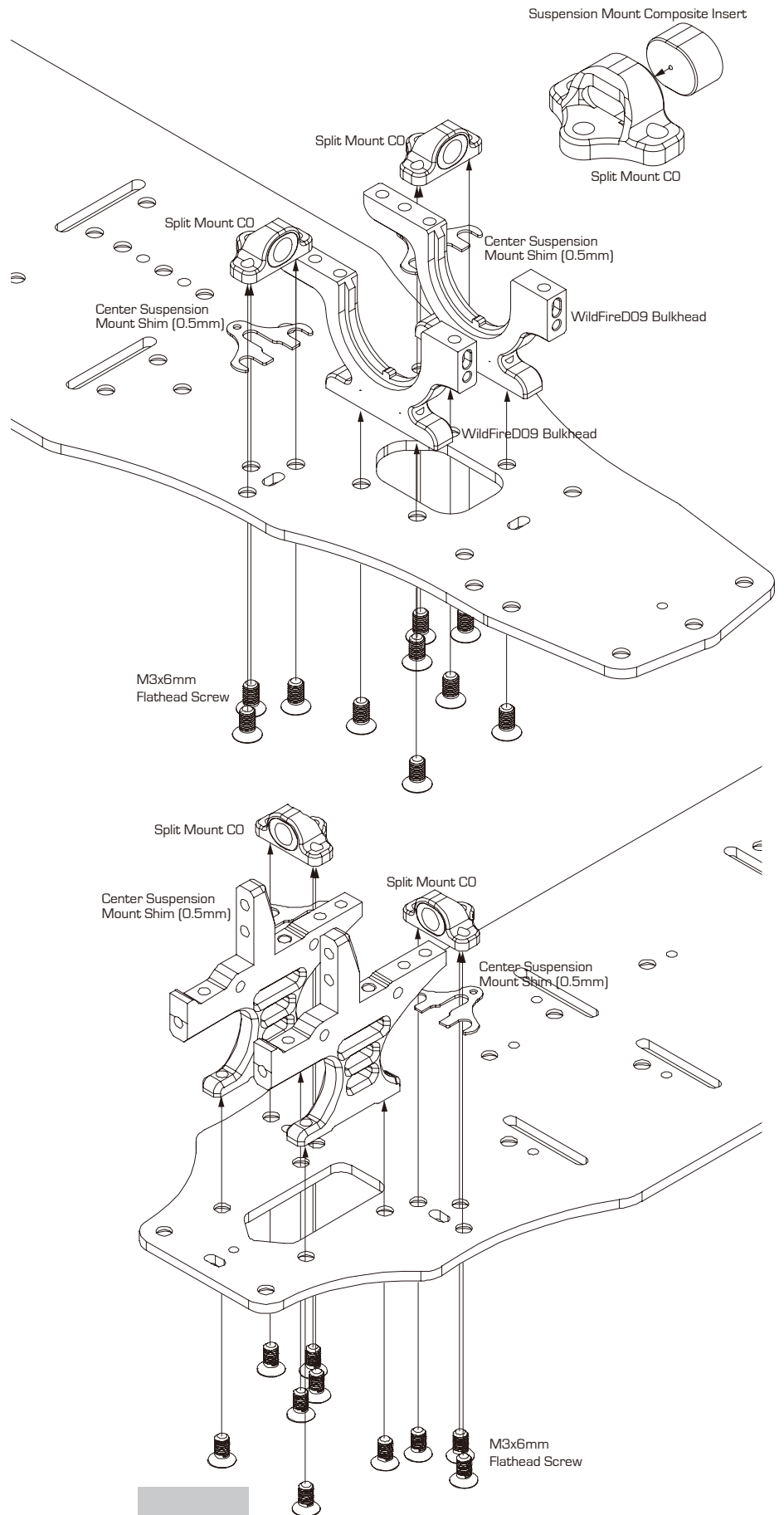
Suspension Mount Composite Insert 1 303110424 x 4

# 4

## Rear Bulkhead And Center Suspension Mount Assembly



FF18 Rear Bulkhead B02P21664 x 2

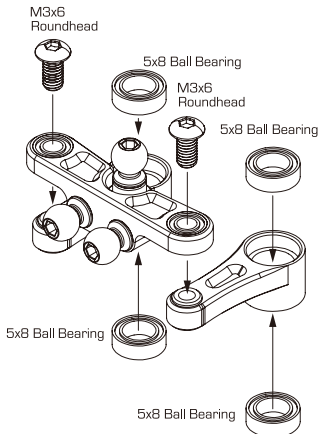


# 5

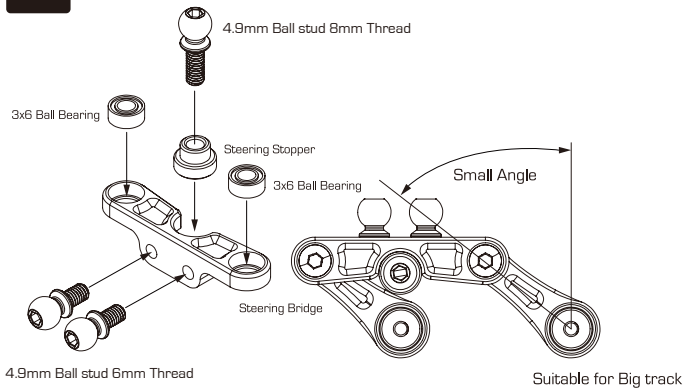
## Steering System Assembly

- 4.9mm Ball stud 8mm Thread 31517 X 2
- 5x8 Ball Bearing C-02-BB-0805-B x 4
- 3x6 Ball Bearing C-02-BB-0603 x 2
- 4.9mm Ball stud 8mm Thread 31518 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-F0306 x 4
- M3x42mm Turnbuckle 31642 x 2

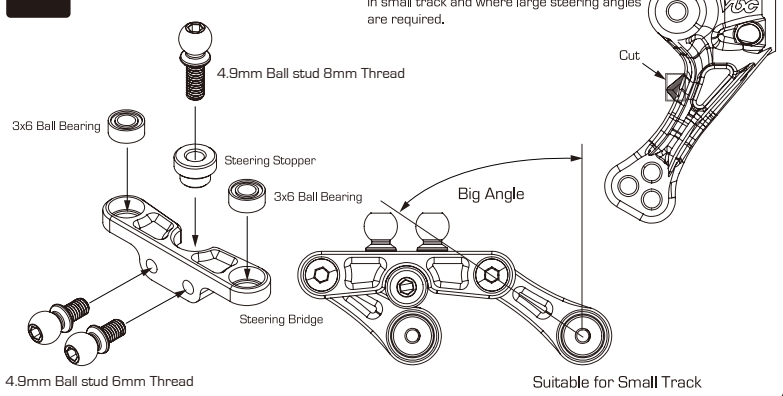
- Ball Connector (Long) 31478 X 4
- M3x6 Flathead Screw C-02-SC-F0306 x 2
- D09 Steering Chassis Mounted Post B02G31338 x 2



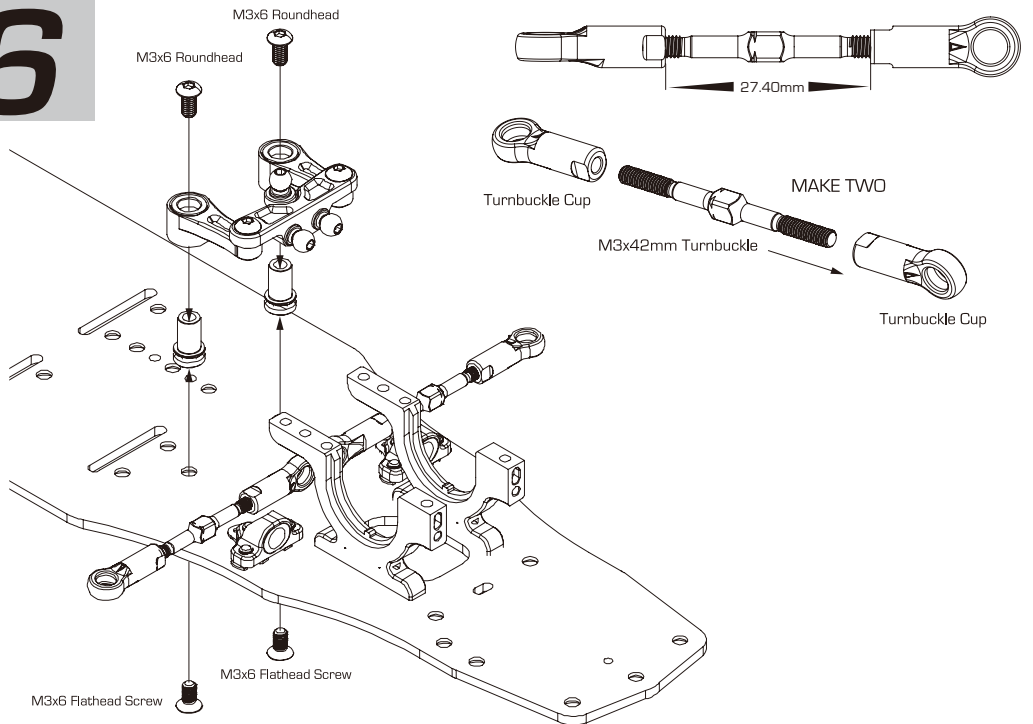
**TIP** Default Steering Angle Setup (27Deg)



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

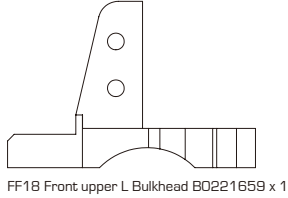


# 6

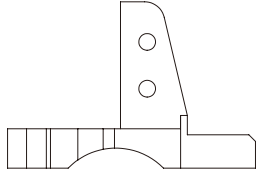


# 7

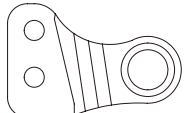
## Transmission Assembly



FF18 Front upper L Bulkhead B0221659 x 1



FF18 Front Upper R Bulkhead B02P21658 x 1



FF18 Main Shaft Support L B02P21661 x 1



FF18 Main Shaft Support R B02P21660 x 1



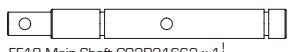
4.9mm Ball Connector 6mm Thread 31517 X 2



T1 7075 Spacer B-02-P30891 x 2



M2x10 Shaft Pin B-02-VBC-0020 x



FF18 Main Shaft C02P21662 x 1



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



Center Pulley 16T B-02-G21436 x 1



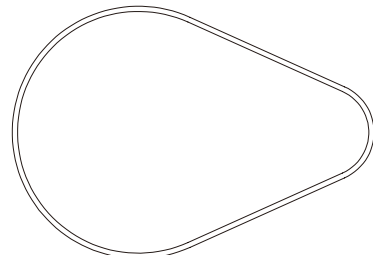
M4 E-clip C-02-P31343 x 2



5x8x2.5 bearing C-02-BB-D0805 x 2

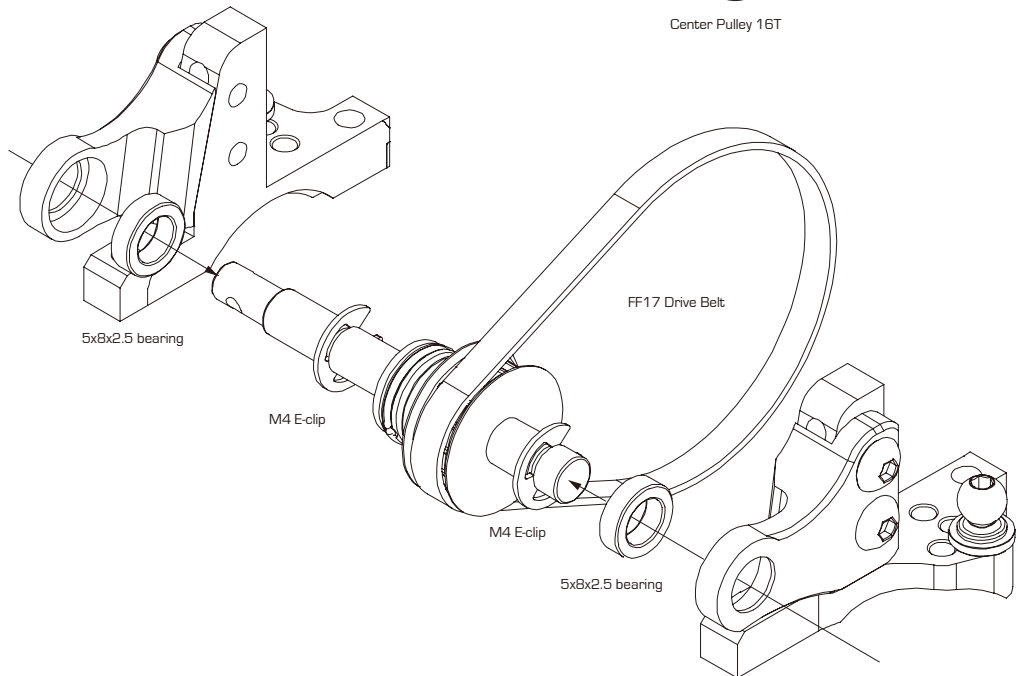
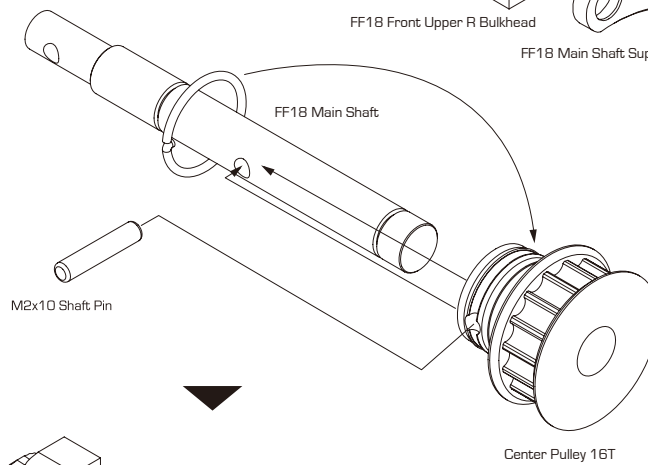
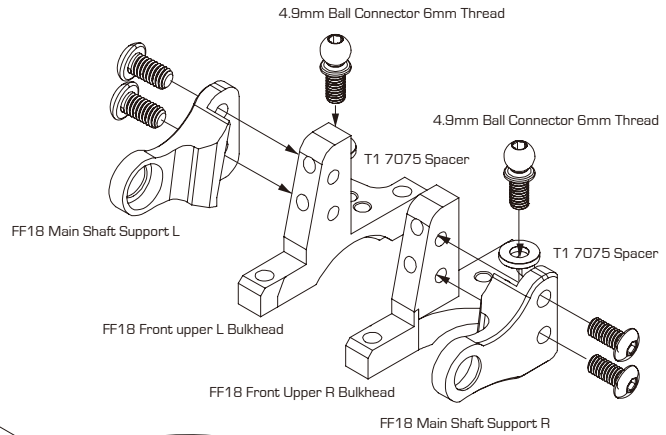


BH M3x8 C-02-SC-R0308 x 4



FF17 Drive Belt B-03-VBC-2018 x 1

© VBC Racing FF18



# 8

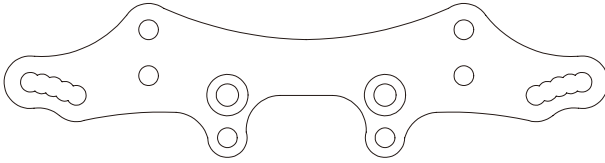
## Front Damper Stay Assembly



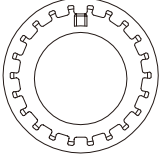
M3x8 Roundhead C-02-SC-R0308 x 5



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

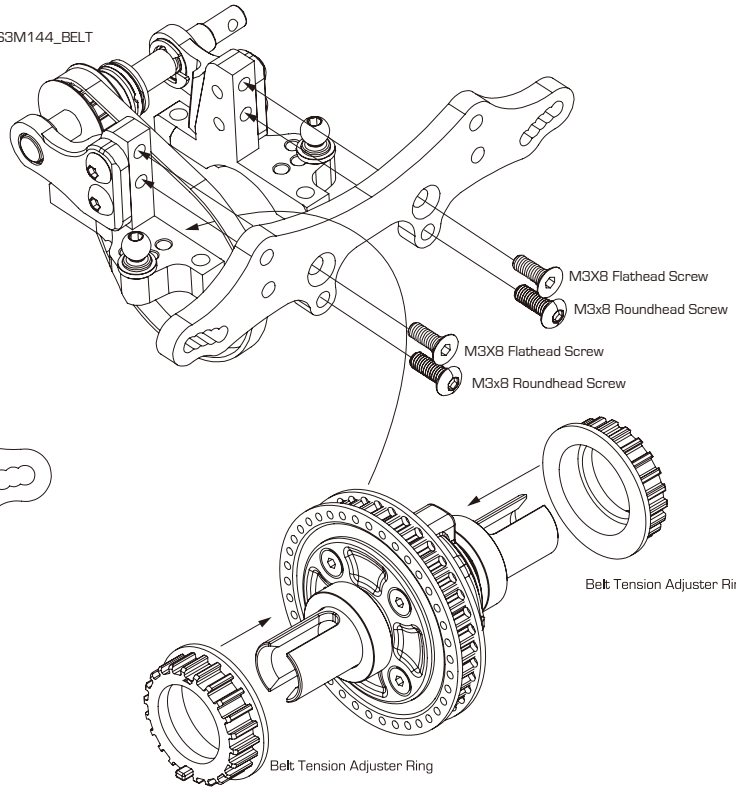


FF18 Front Shock Tower AD1P21655 x 1



Belt Tension Adjuster Ring A-03-VBC-0047 x 2

S3M144\_BELT



M3x8 Flathead Screw

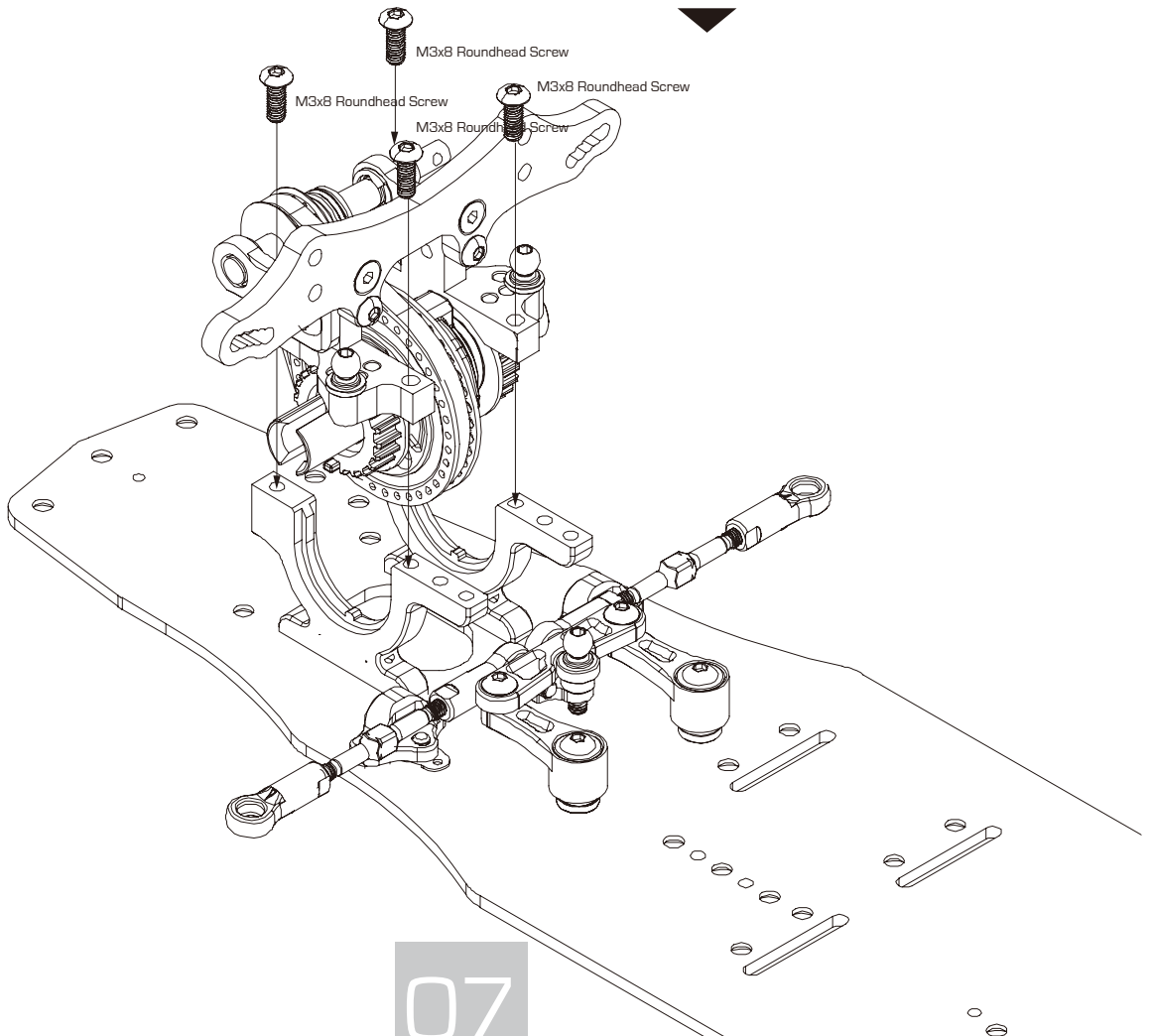
M3x8 Roundhead Screw

M3x8 Flathead Screw

M3x8 Roundhead Screw

Belt Tension Adjuster Ring

Belt Tension Adjuster Ring



# 9

## Upper Bulkhead And Rear Damper Stay Assembly



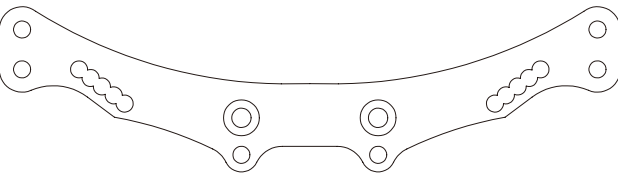
M3x8 Roundhead C-02-SC-R0308 x 2



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



M3x10 Flathead Screw C-02-SC-F0308 x 4



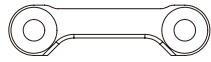
FF18 Rear Shock Tower A01P21656 x 1



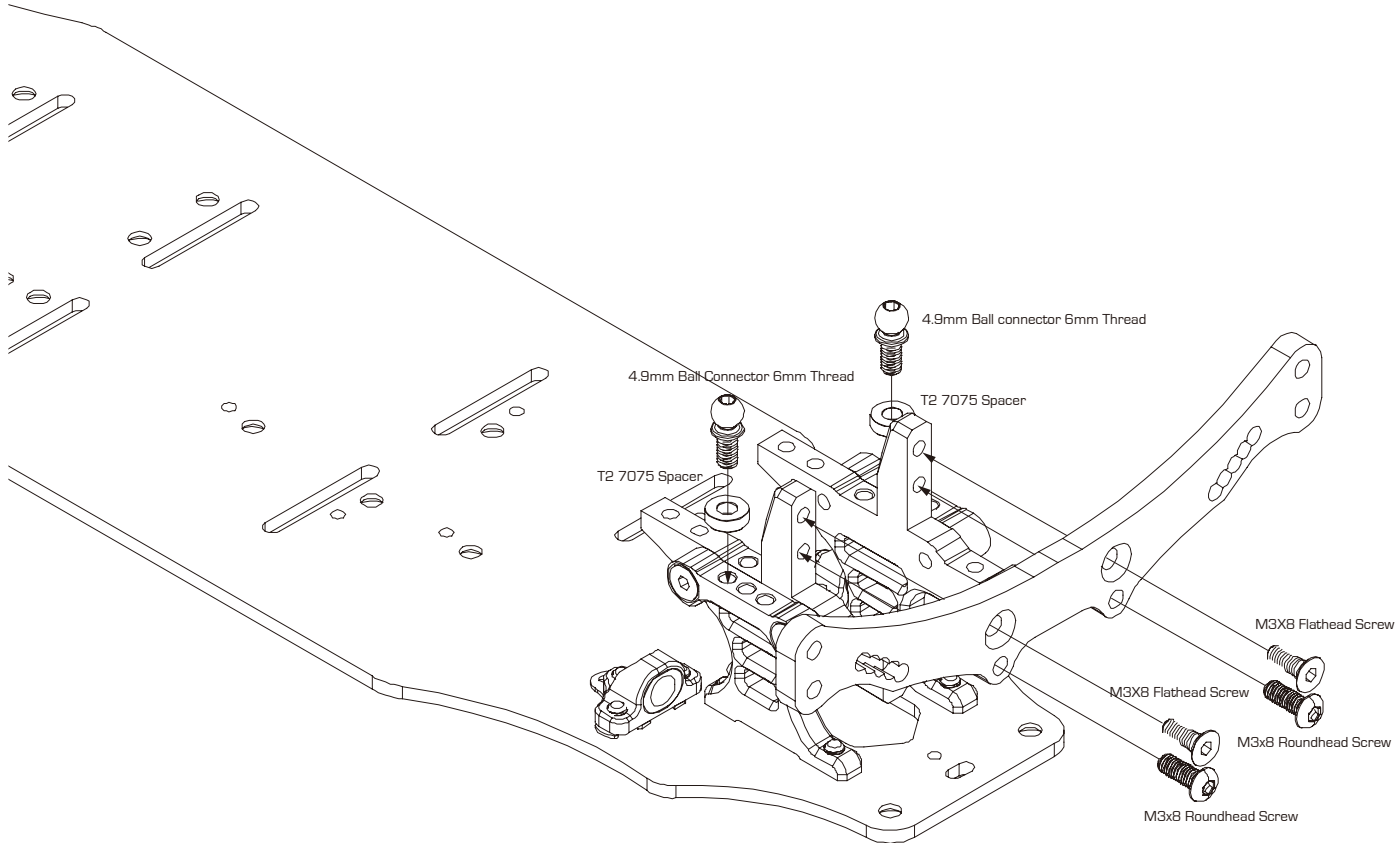
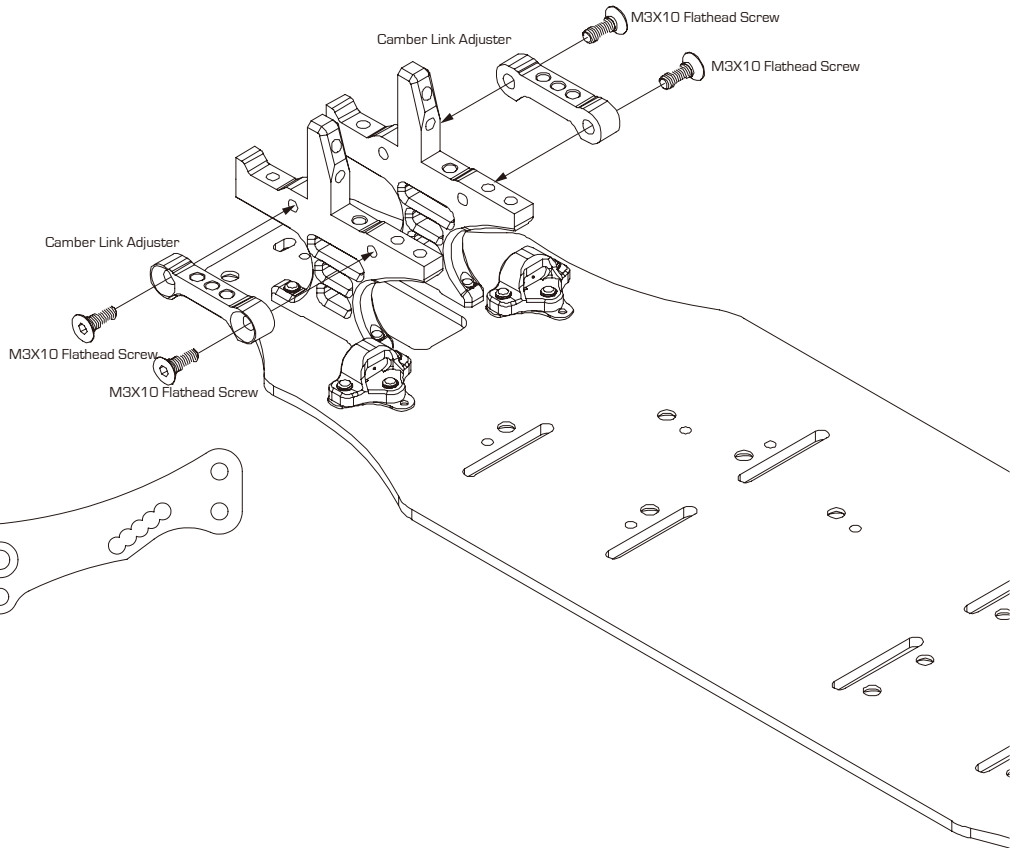
T2 7075 Spacer B-02-P30890 x 2



4.9mm Ball stud 6mm Thread 31517 x 2



Camber Link Adjuster B-02-G40362 x 2



# 10

## Rear Suspension Arm Assembly

M3x10 Set Screw C-02-SC-SS-310 x 2

M4x10 Set Screw C-02-SC-SS-410 x 2

4.9mm Ball stud 6mm Thread 31517 X 2

Ball Connector B-02-VBC-0045 x 2

Arm Pin Pivot Ball B-02-VBC-0035 x 2

M3X6 flat head C-02-SC-F0306 x 2

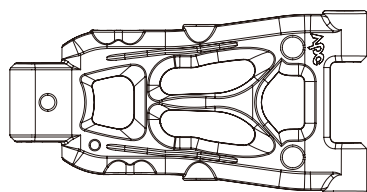
T1 7075 Spacer B-02-P30891 x 4

T2 7075 Spacer B-02-P30890 x 2

Suspension Mount Composite Insert 1 303110424 x 2

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

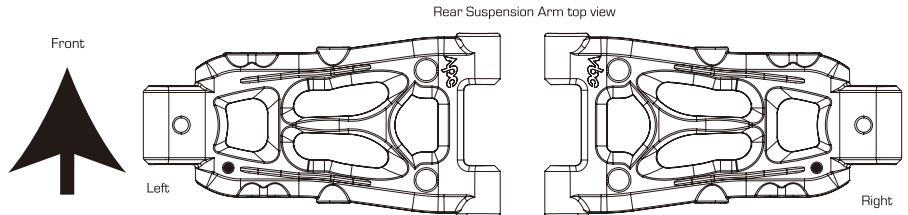
0.5mm Suspension Shim A01G30938 x 1



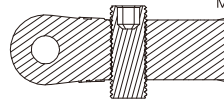
R suspension Arm Composite X silver A-03-P30898 x 2



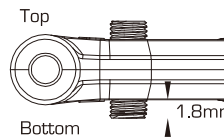
Suspension Mount RR(Black) 31632 x 1



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

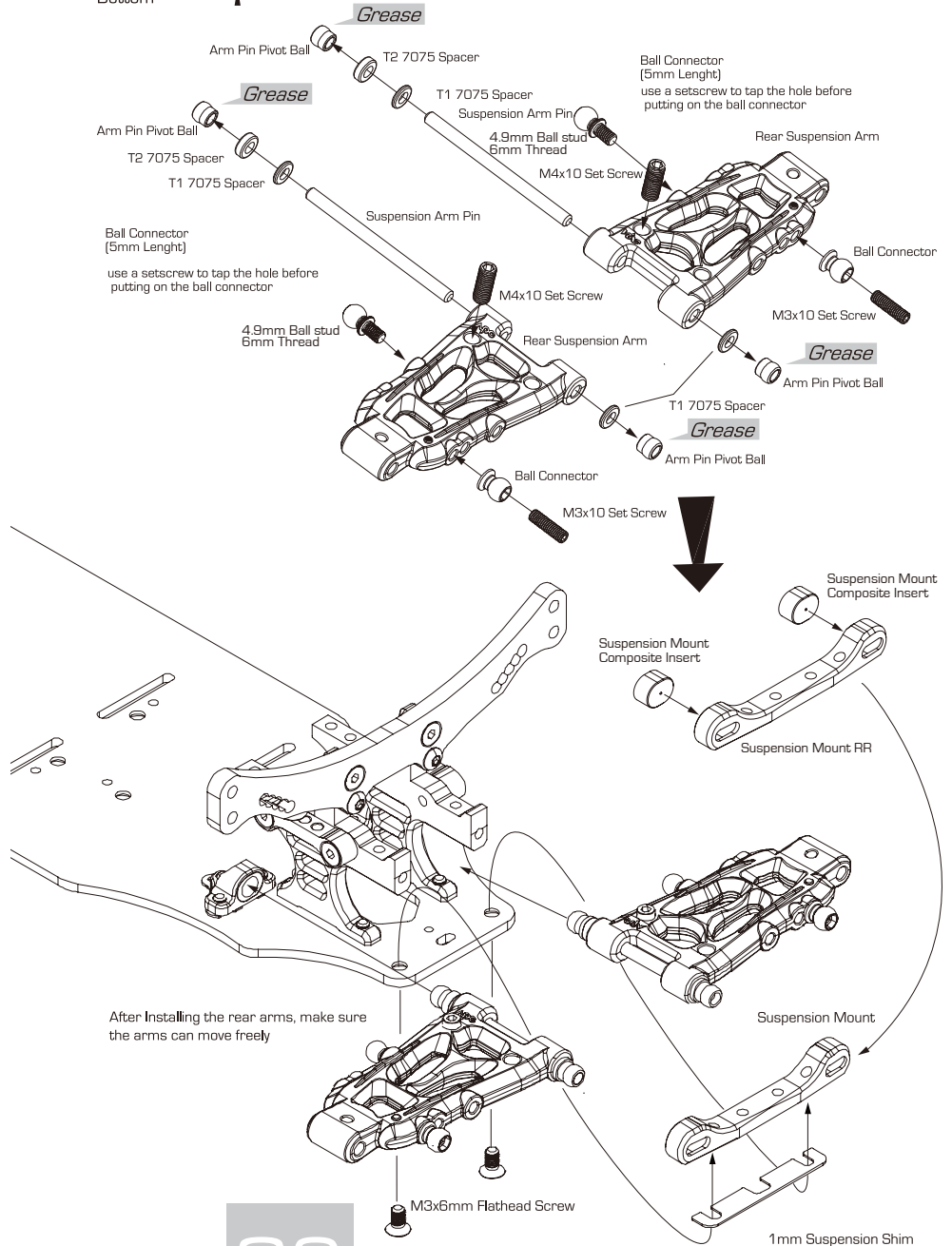


Insert M4x10 Set Screw from the top of the suspension arm for adjusting down stop. Initial setting is 1.8mm measuring from the bottom part of the arm for both sides.



**TIP** Suspension Arm Composite Compound Chart

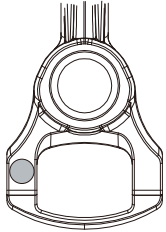
Silver A-03-G30896	Gold A-03-P30930	Red A-03-G31300
Medium	Hard	UltraHard



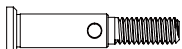


# 11

## Rear Suspension Arm Assembly



R 2-hole Upright Composite X Silver 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 8mm 31518 x 2



T2 7075 Spacer B-02-P30890 x 2



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



M3x3 Set Screw C-02-SS-SS-0303 x 2



3x6 set screw C-02-SS-SS-0306 x 2



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



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



M3x5x0.3mm shim B-02-VBC0101 x 2

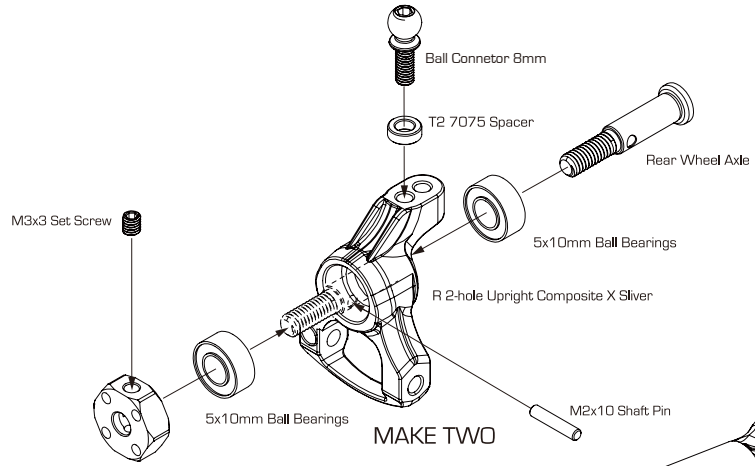


Ball Connector (Long) 31478 x 4

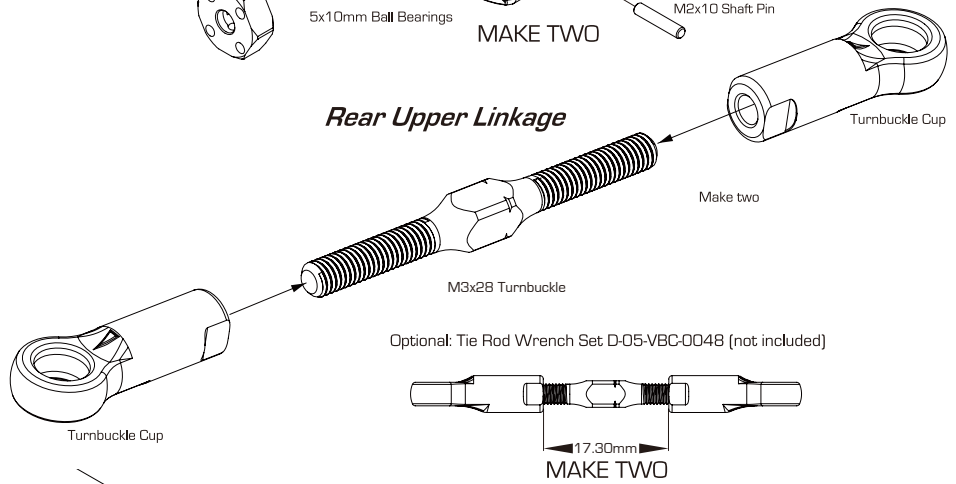


M3x28mm Turnbuckle (Black) 31630 x 2

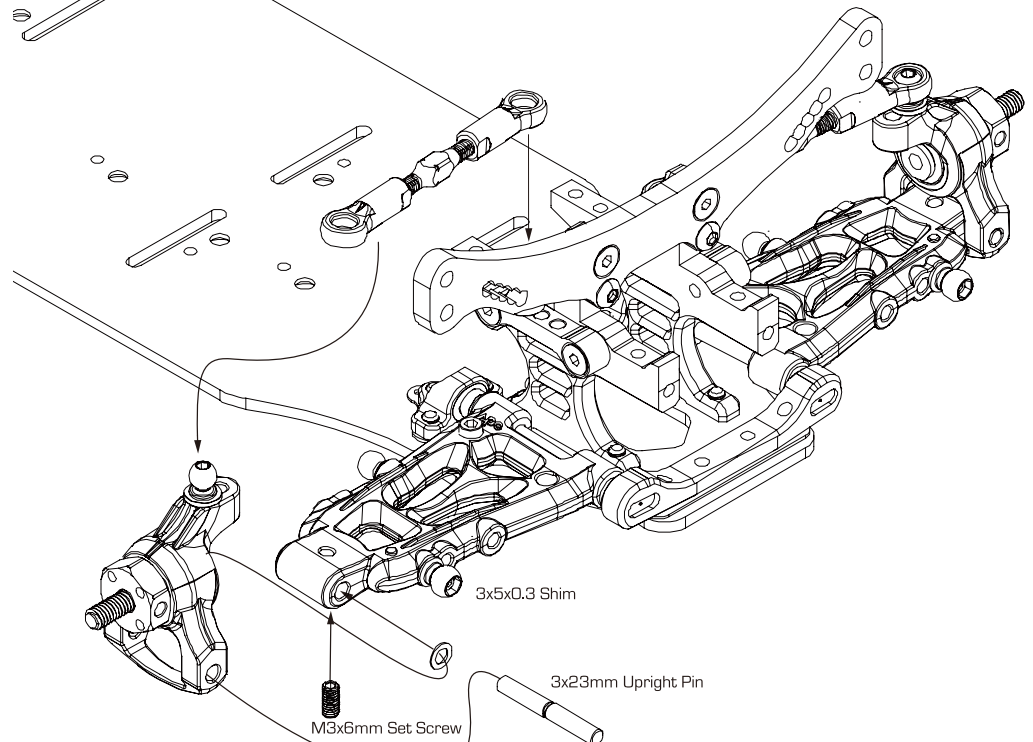
## Rear Suspension Upright Assembly



## Rear Upper Linkage



## Rear Suspension Arm Assembly



# 10

# 12

## Front Suspension Arm Assembly



Ball Connector 8mm 31518 x 2



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



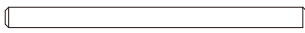
T1 7075 Spacer B-02-P30891 x 4



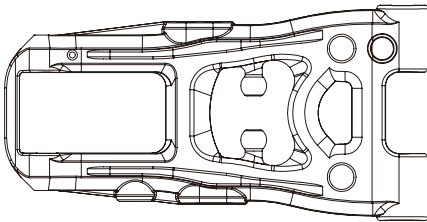
T2 7075 Spacer B-02-P30890 x 2



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



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



F Suspension Arm Composite X Silver A-03-P30899 x 2



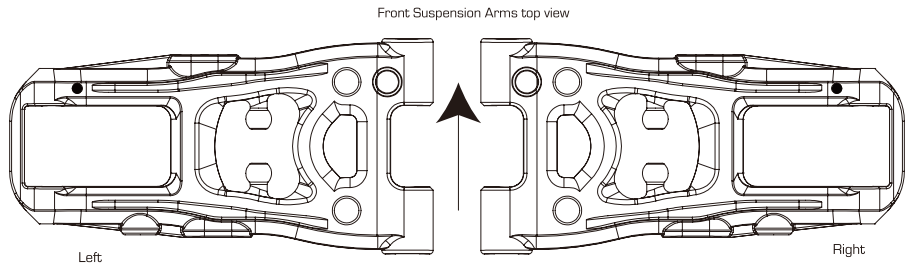
Ball Connector B-02-VBC-0045 x 2



M3x10 Set Screw C-02-SC-SS-0310 x 2



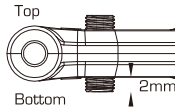
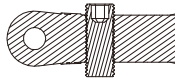
M4x10 Set Screw C-02-SC-SS-0410 x 2



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

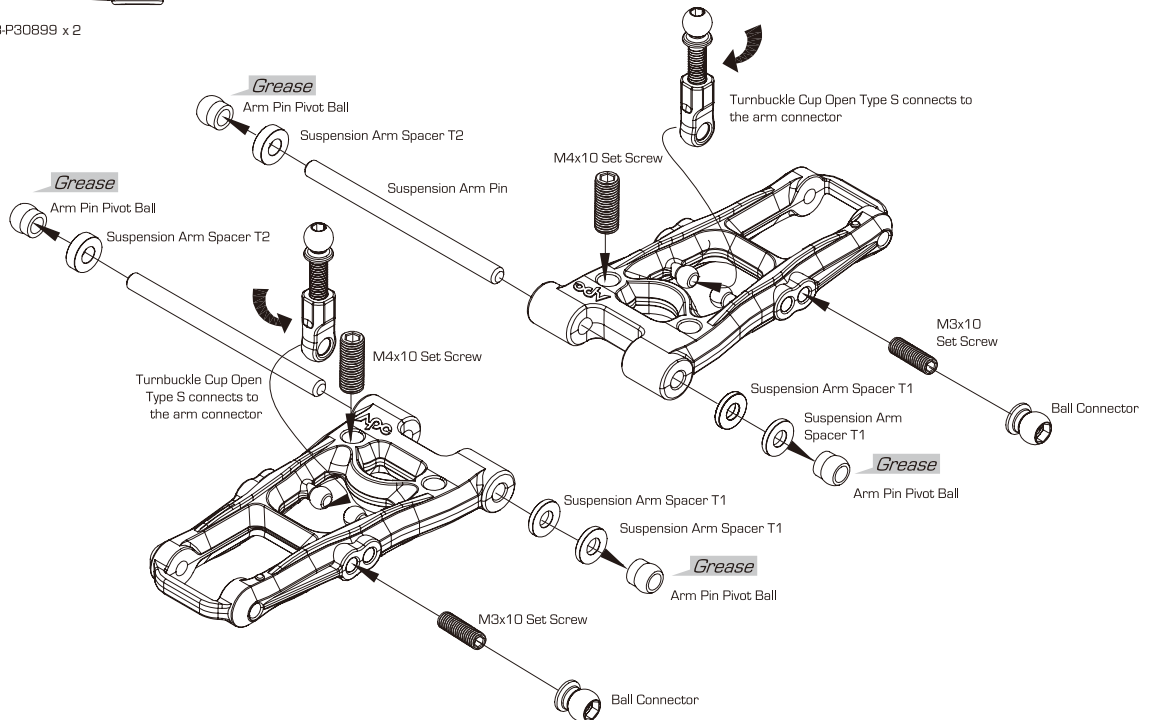
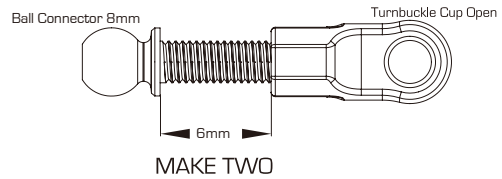
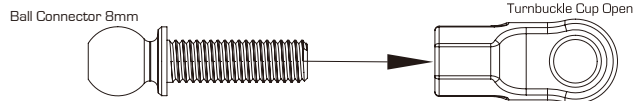
**TIP** Suspension Arm Composite Compound Chart

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.

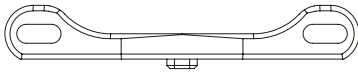
### Front Anti-Roll Bar Connector





# 13

## Front Suspension Arm Assembly



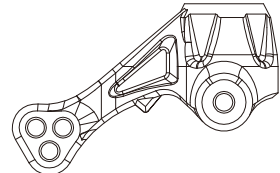
Suspension Mount FF (Black) 31633 x 1



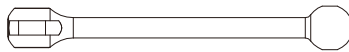
0.5mm Suspension Shim A01G30938 x 1



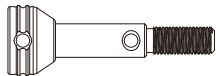
M3x6 Flat Head Screw C-02-SC-F0306 x 2



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-0020-12 x 2



M2x10 Shaft Pin B-02-VBC-0020 x 4



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



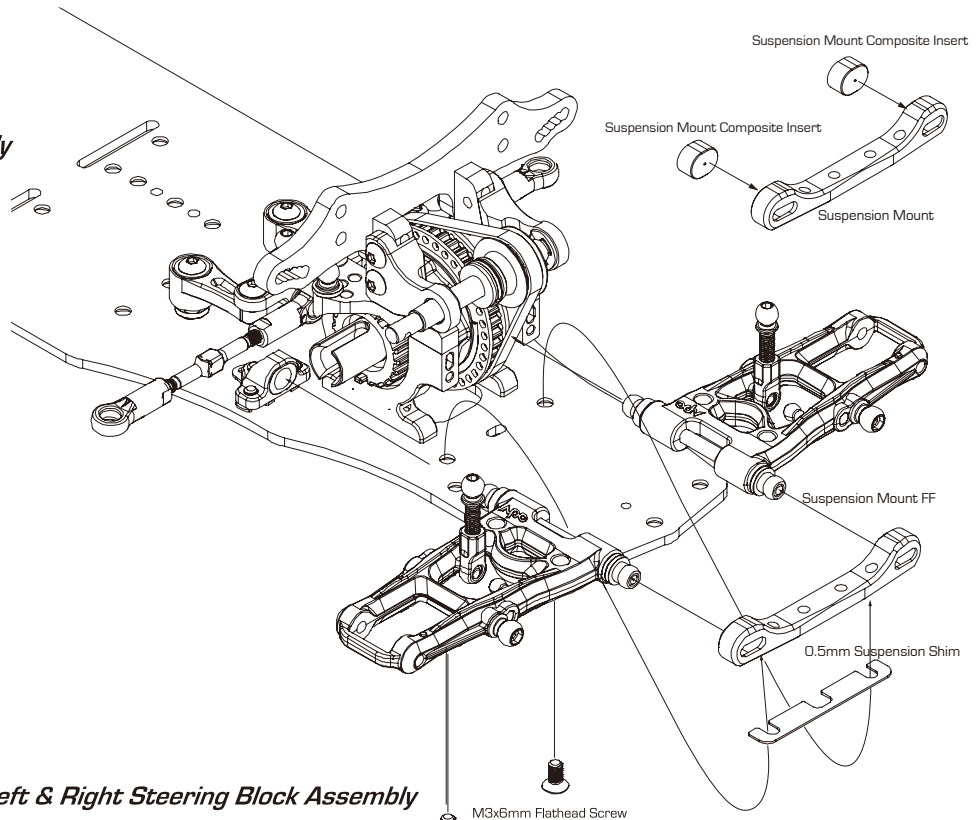
M3x2 Set Screw C-02-SC-SS-0302 x 2



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

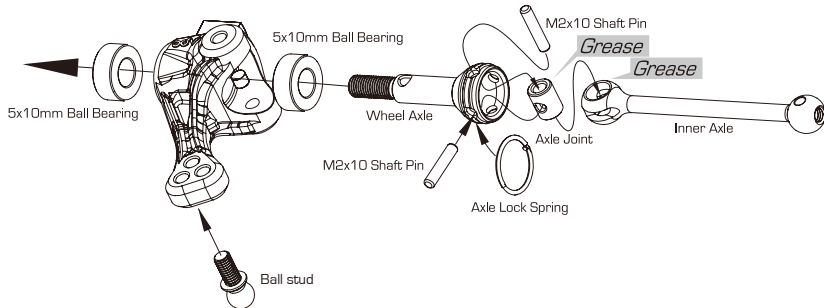


M3x3 Set Screw C-02-SC-SS-0303 x 2

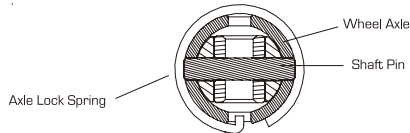


## Left & Right Steering Block Assembly

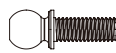
### Left Steering



### Joint cross section



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



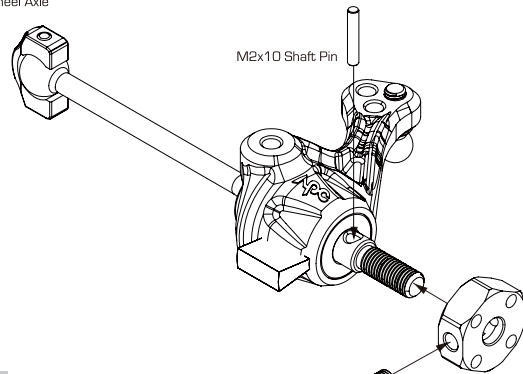
Ball Connector 6.5mm 31517 x 2



T2 7075 Spacer B-02-P30890 x 1



Suspension Mount Composite Insert 1 A03G30311 x 2

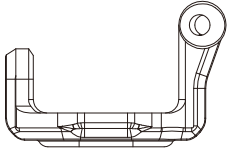


M3x3 Set Screw

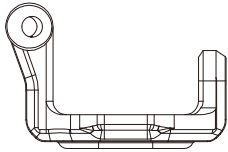
Lightweight O Offset Hex Wheel Hub

# 13

## Front Suspension Arm Assembly



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



L C-Hub Composite X Sliver A-03-P30901 x 1



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

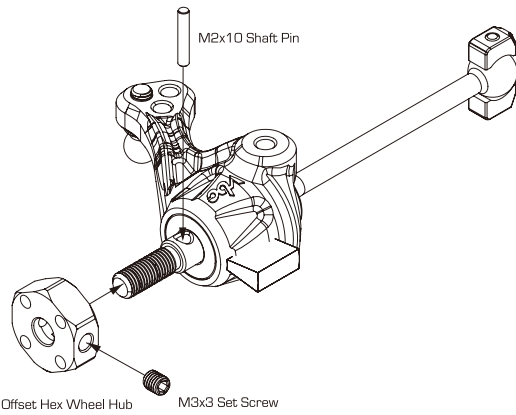
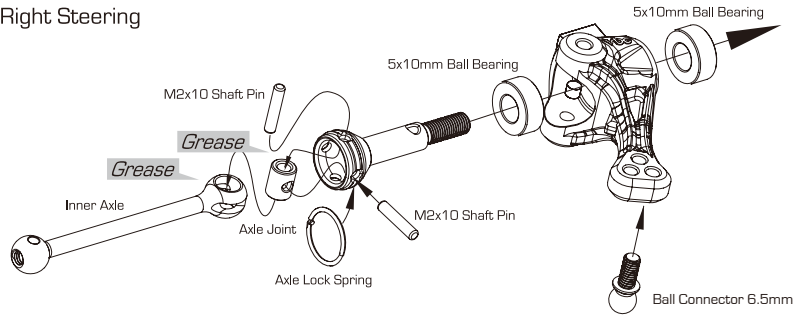


Ball Connector 6.5mm 31517 x 2

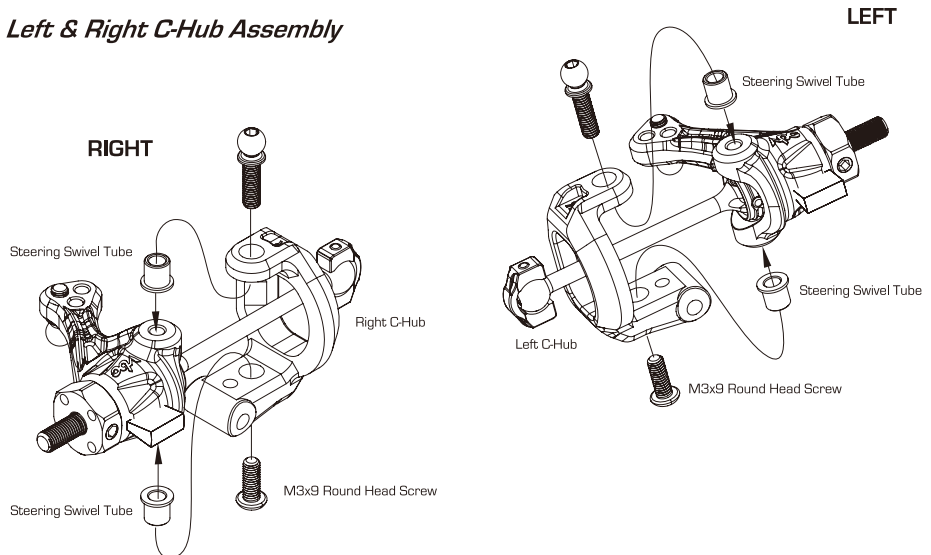


M3x9 Round Head Screw C-02-SC-R0308 x 2

### Right Steering



### Left & Right C-Hub Assembly



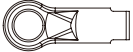
Please note the 'L'(Left) and 'R'(Right) markings on C-Hubs

# 14

## Front Suspension Arm Assembly



M3x28mm Turnbuckle (Black) 31630 x 2



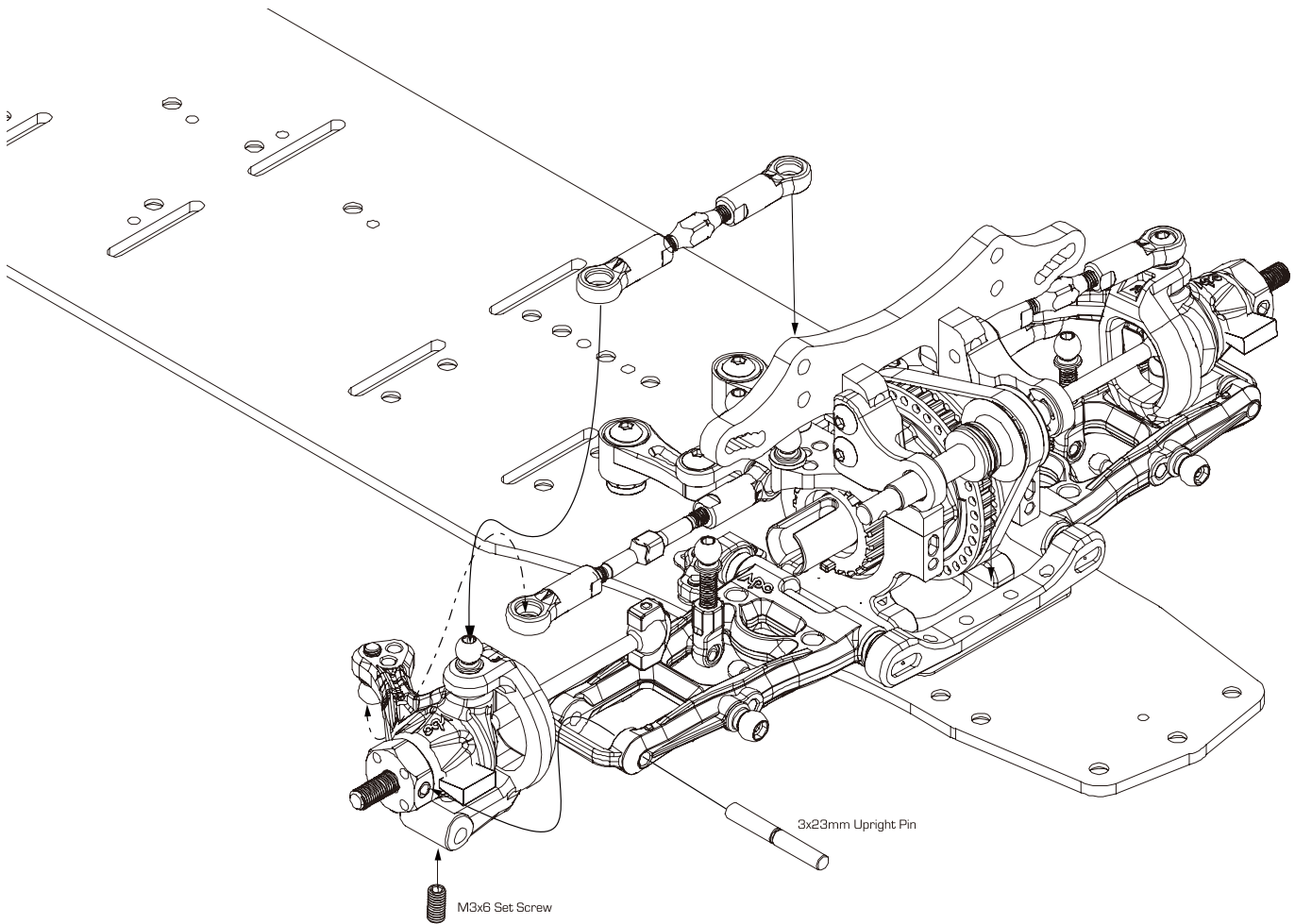
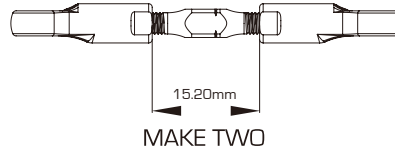
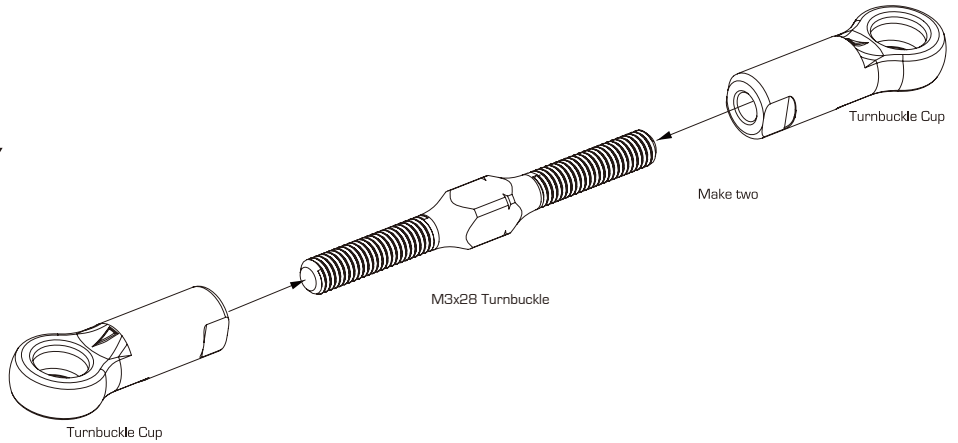
Ball Connector (Long) 31478 x 4



3x23 Upright Pin B-02-VBC-0032 x 2

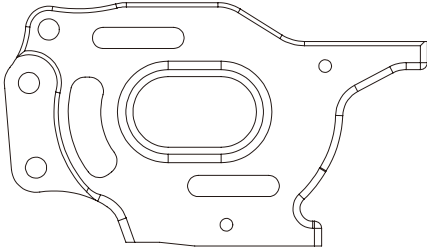


M3x6 Set Screw C-02-SC-SS-0306 x 2

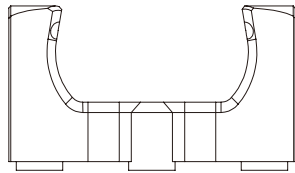


# 15

## Motor Mount Assembly



FF18 Motor Mount B02P21670 x 1



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



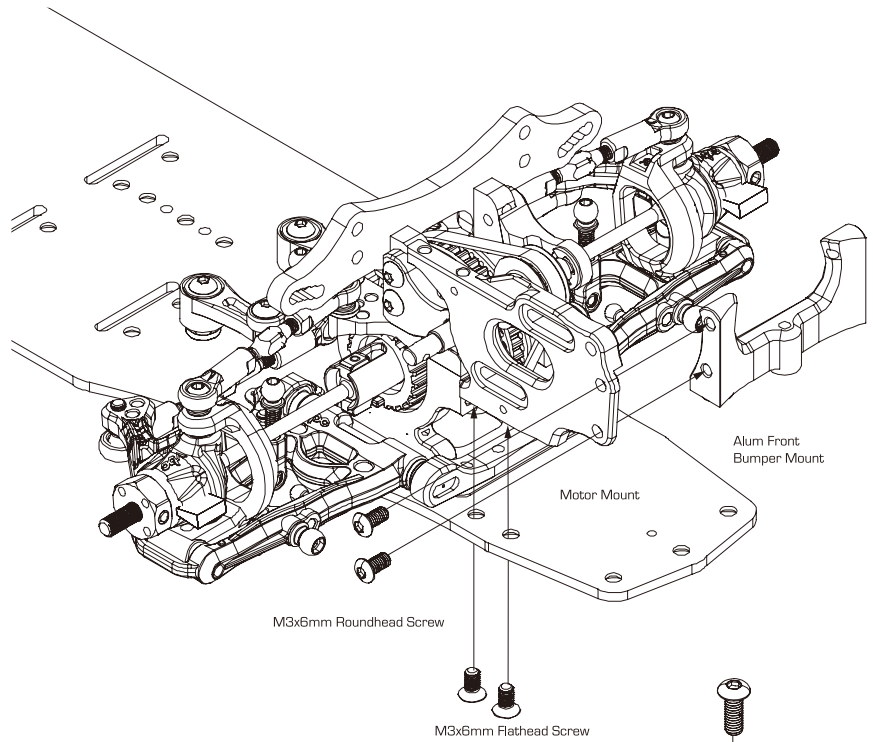
M3x6 Flathead C-02-SC-F0306 x 2



M3x6 Roundhead C-02-SC-R0306 x 2

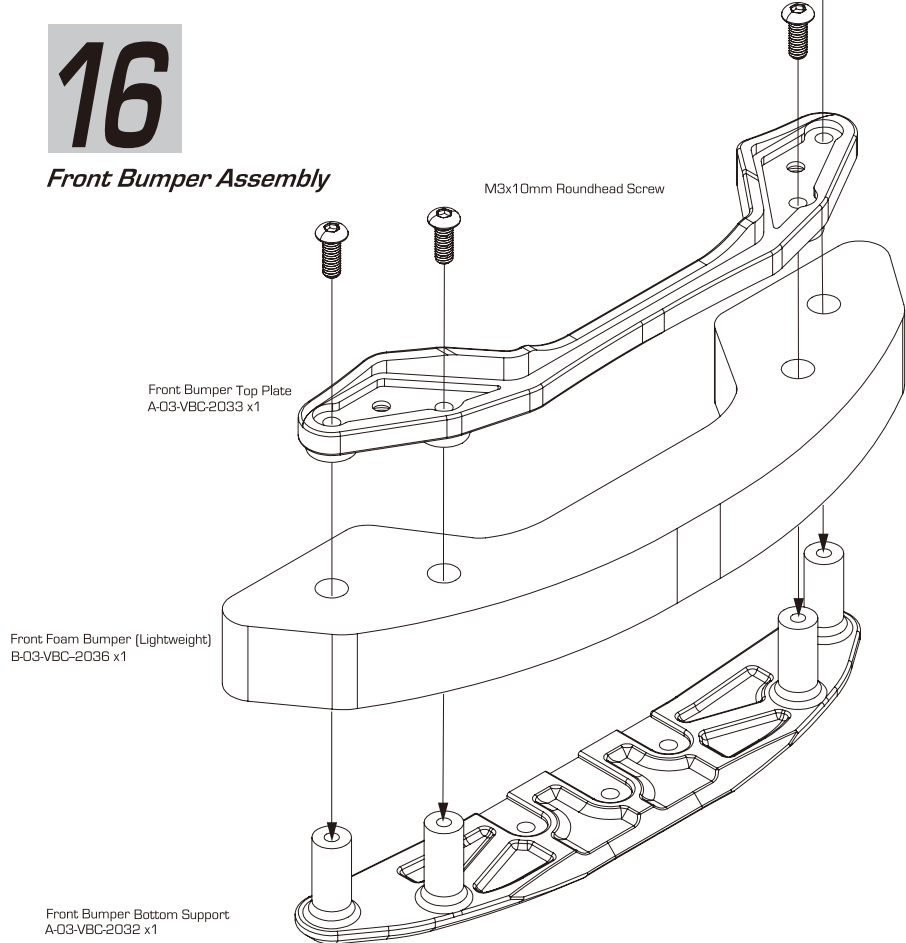


M3x10 Roundhead C-02-SC-R0310 x 4



# 16

## Front Bumper Assembly

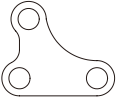


# 16

## Front Bumper Assembly



M3x8 Flathead Screw C-02-SC-F0308 x 3



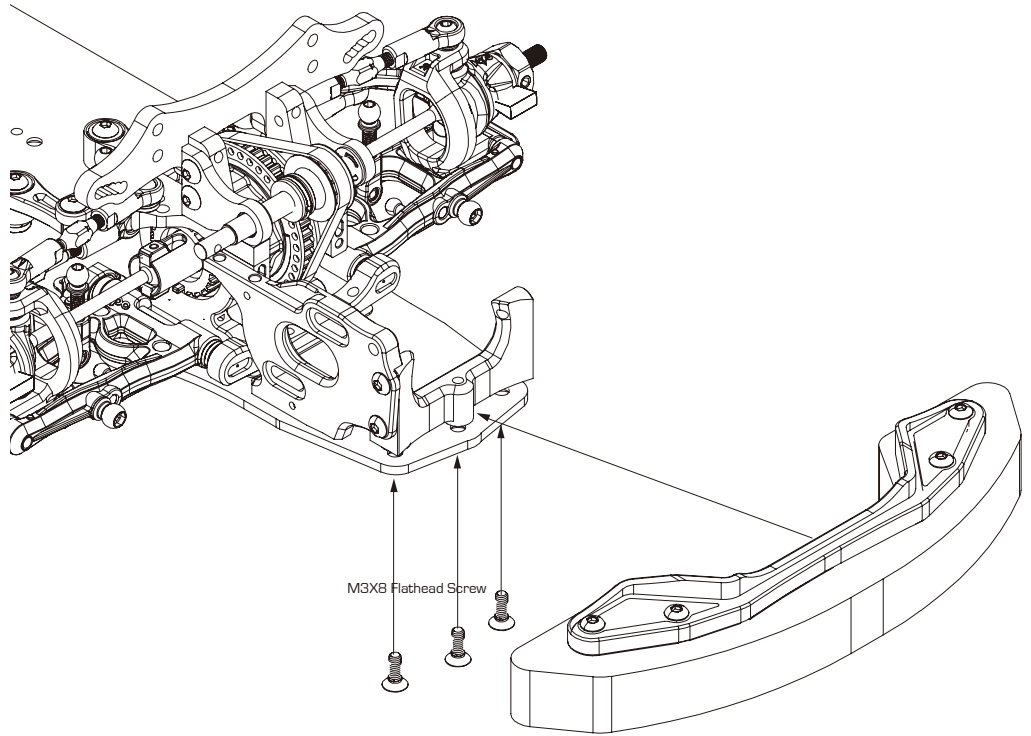
FF18 Motor Mount Bridge B02P21665 x 1



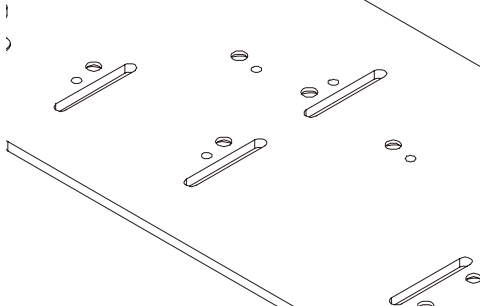
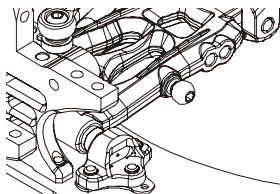
M3x10 Roundhead C-02-SC-R0310 x 1



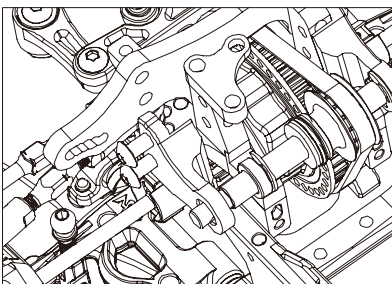
M3x8 Roundhead C-02-SC-R0308 x 2



M3x8 Flathead Screw



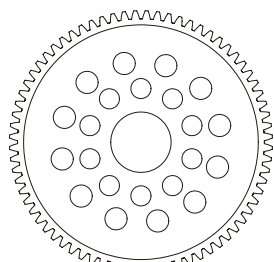
M3x10 Roundhead  
M3x8 Roundhead  
M3x8 Roundhead



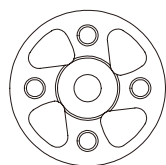
For easier installation of Graphite Motor Mount Support, please remove Right Bulkhead Top A to allow more clearance for tool.

# 17

## Spur Gear Assembly



Kawada 48P78T\_SPUR\_GEAR G01P21698x 1



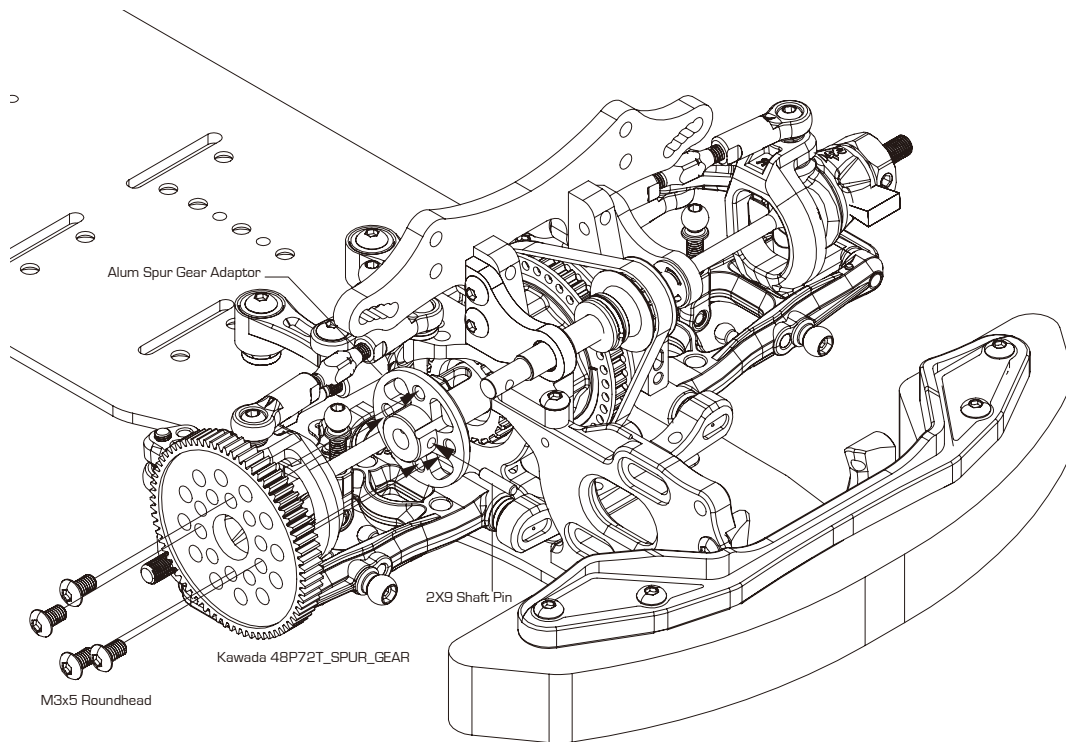
Alum Spur Gear Adaptor B-02-VBC-2037 x 1



2X9 Shaft Pin B-02-VBC-2038 x 1



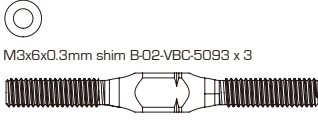
M3x5 Roundhead C-02-SC-R03005 x 4



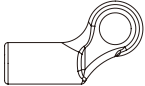


# 18

## Servo Assembly



M3x28 Turnbuckle (Black) 31630 x 1



Ball Connector (Long) 31478 x 1



Ball Connector (Long) 31478 x 1



4.9mm Ball stud 6mm Thread 31517 x 1



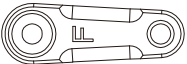
M3X6 Flat head C-02-SC-F0306 x 3



M3x8 Roundhead C-02-SC-R0308 x 3



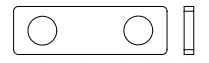
M3x6 Roundhead C-02-SC-R0306 x 1



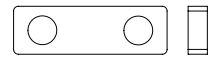
Servo Horn Type F (Futaba)  
A-03-VBC-0053 x 1



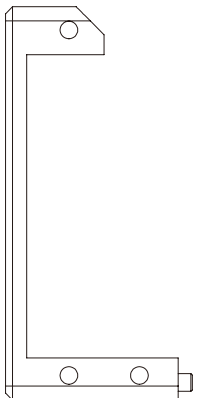
Servo Horn Type A (Sanwa/KO)  
A-03-VBC-0054 x 1



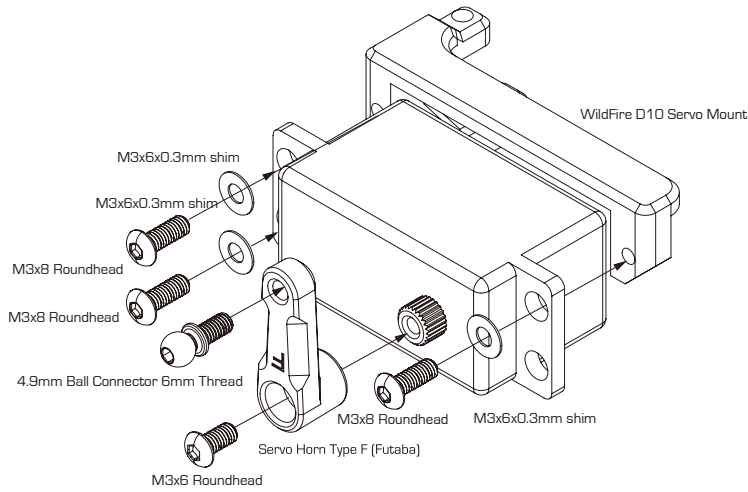
Servo Saver 1mm A-03-VBC-0032 x 1



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

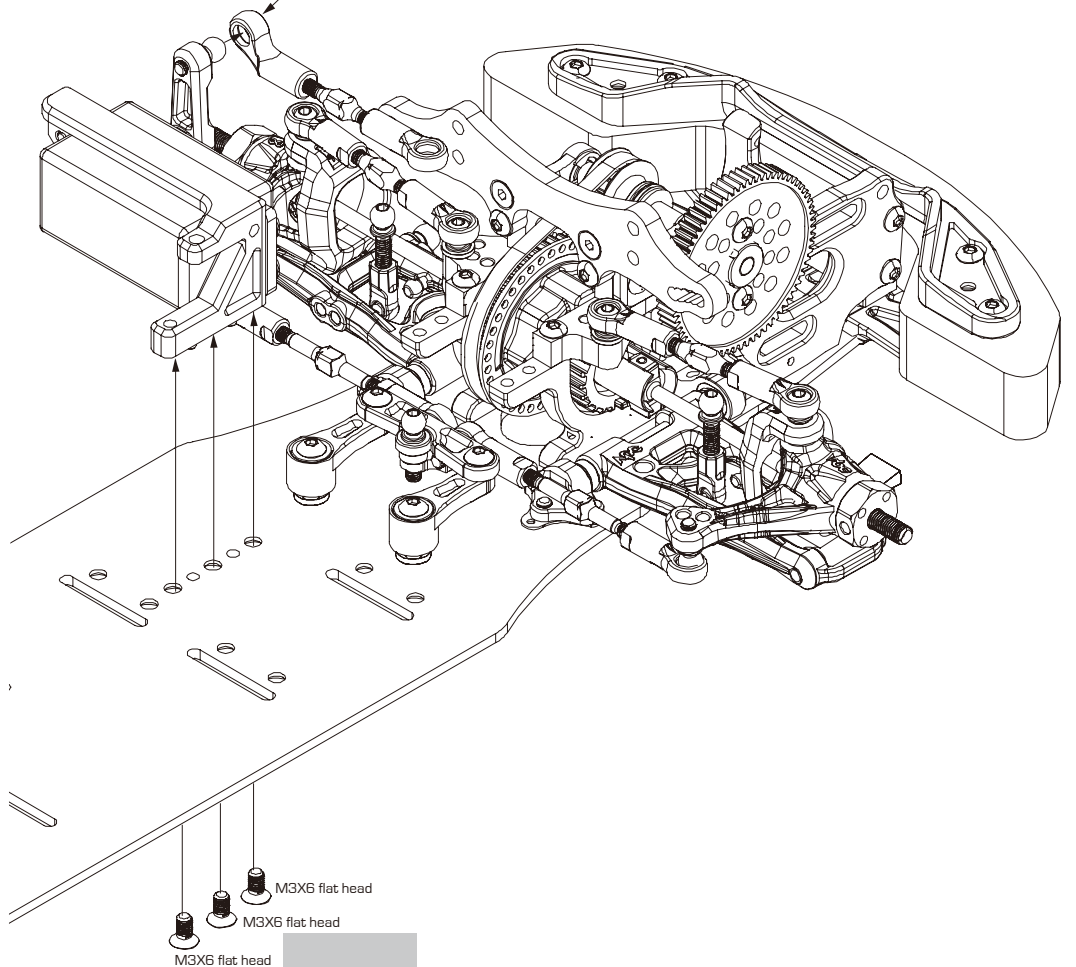
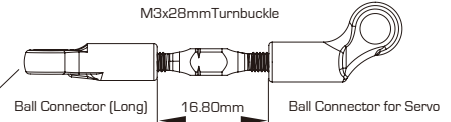


WildFire D10 Servo Mount 31563 x 1



# 19

## Servo Linkage Assembly



# 20

## Front And Rear Stabilizer Mount Assembly



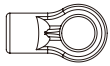
VBC Dynamic Stabilizer Connector B02G31134 x 2



Set screw M3x3 C-02-SC-SS-0303 x 4



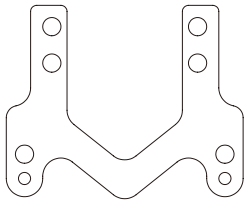
Plastic Front Stabilizer Mount A-03-VBC02051 x 2



Ball connector (Short) 31479 x 2



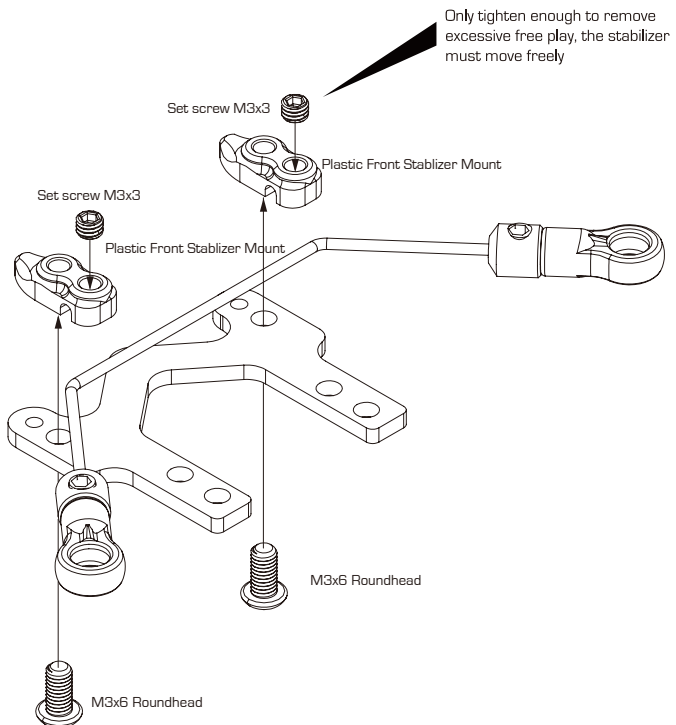
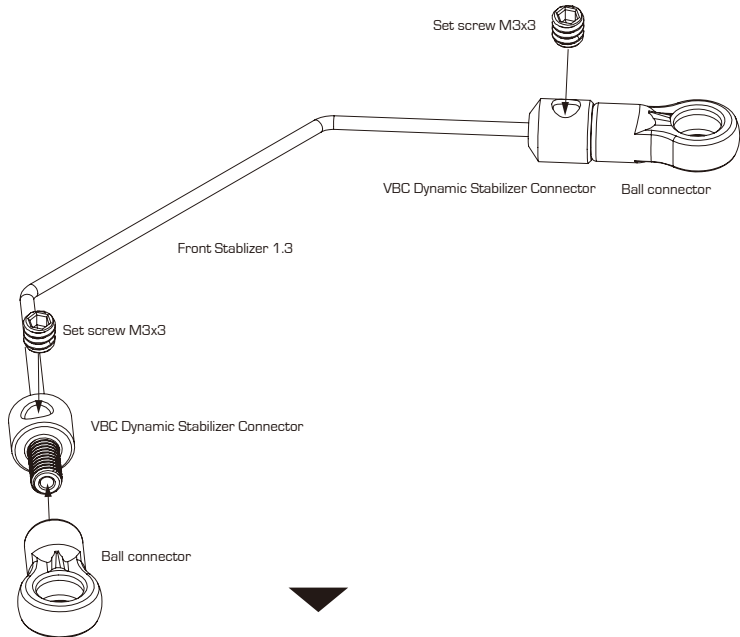
M3x6 Roundhead C-02-SC-R0306 x 2



FF18 Front Sway Bar Mount A01P21657 x 1



Front Stabilizer 1.3 C-02-P30248 x 1





# 20

## Front And Rear Stabilizer Mount Assembly



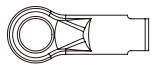
VBC Dynamic Stabilizer Connector B02G31134 x 2



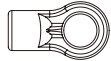
M3x3 Set Screw C-02-SC-SS-0303 x 2



Plastic Front Stabilizer Mount A-03-VBC02051 x 2



Ball Connector (Long) 31478 x 2



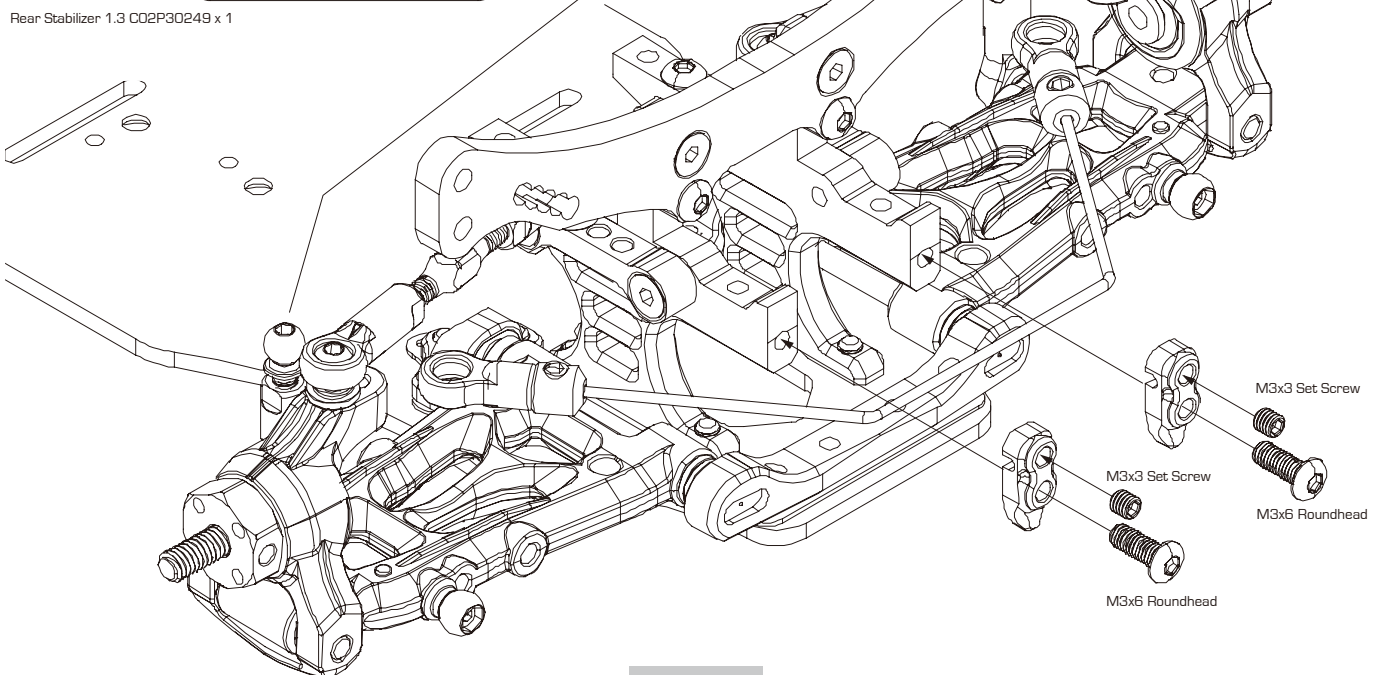
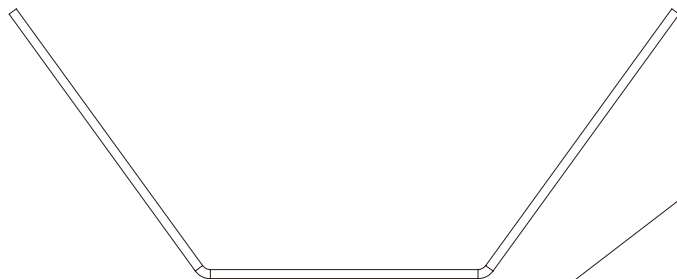
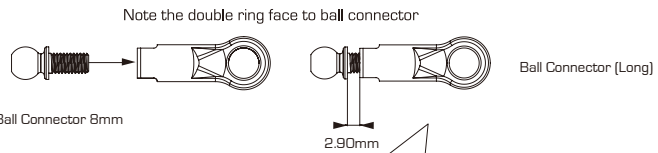
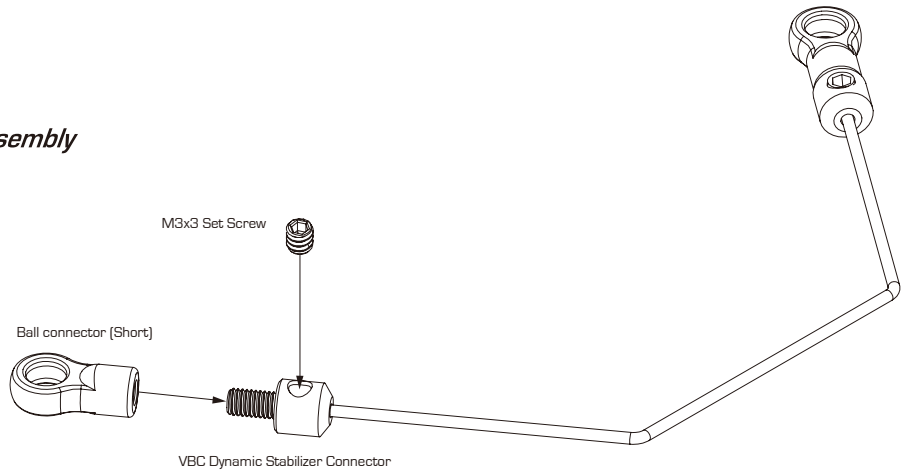
Ball connector (Short) 31479 x 2



M3x6 Roundhead C-02-SC-R0306 x 1



Ball Connector 8mm 31518 x 2



# 23

## Upper Deck Assembly



M3x8 Roundhead C-02-SC-R0308 x 4



Bridge Mount B02P21667 x 4



Bridge Mount Post B02P21666 x 2



Bridge Mount Spacer B02P21668 x 2



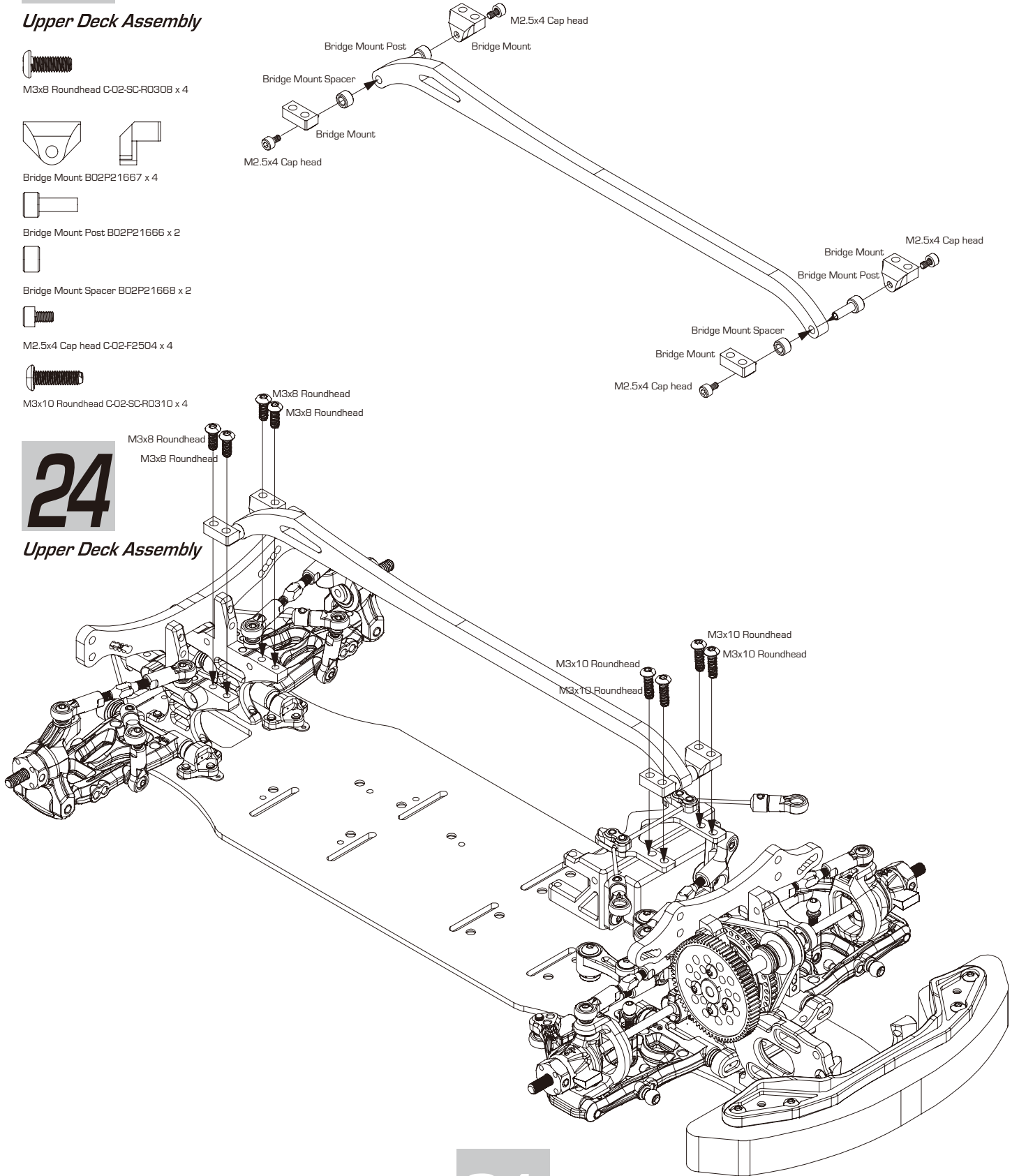
M2.5x4 Cap head C-02-F2504 x 4



M3x10 Roundhead C-02-SC-R0310 x 4

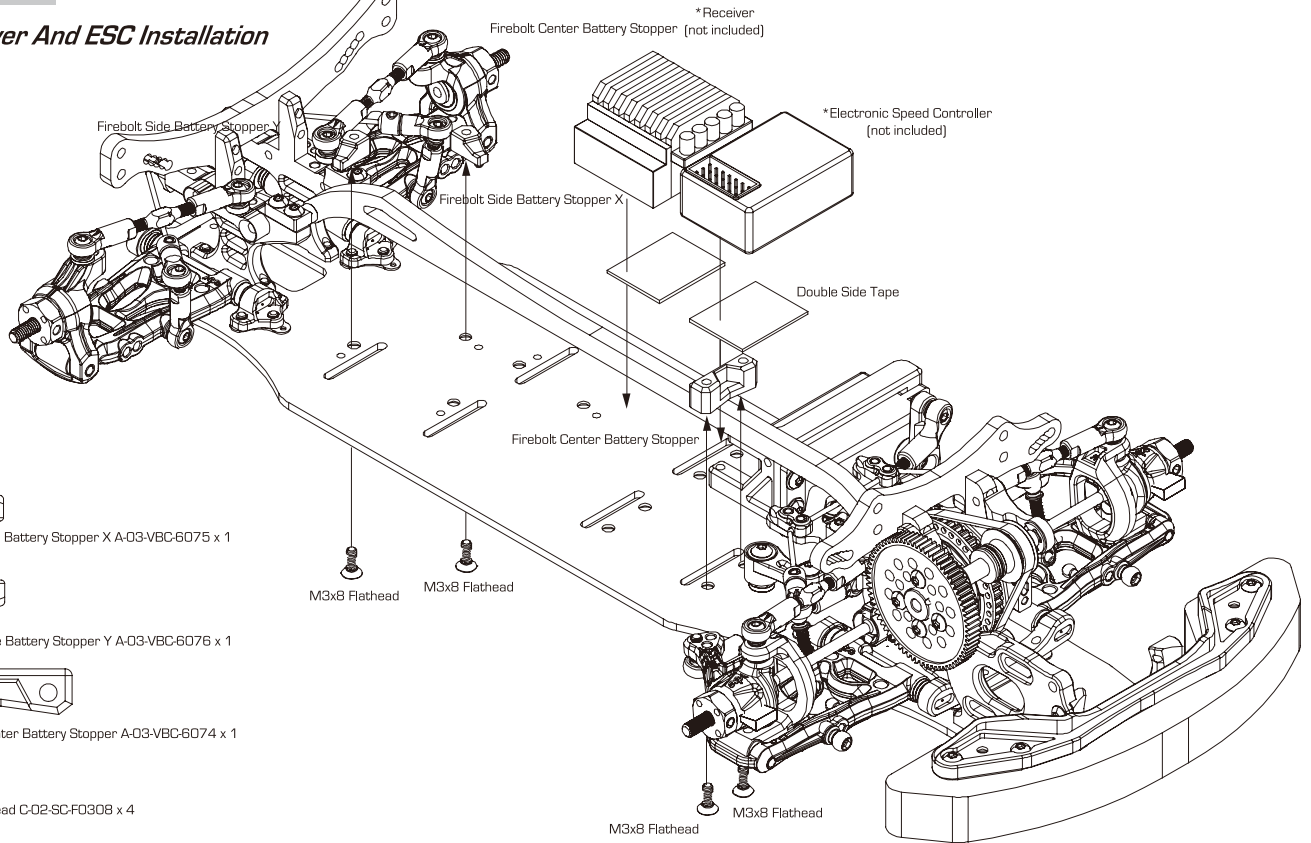
# 24

## Upper Deck Assembly



# 25

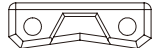
## Receiver And ESC Installation



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



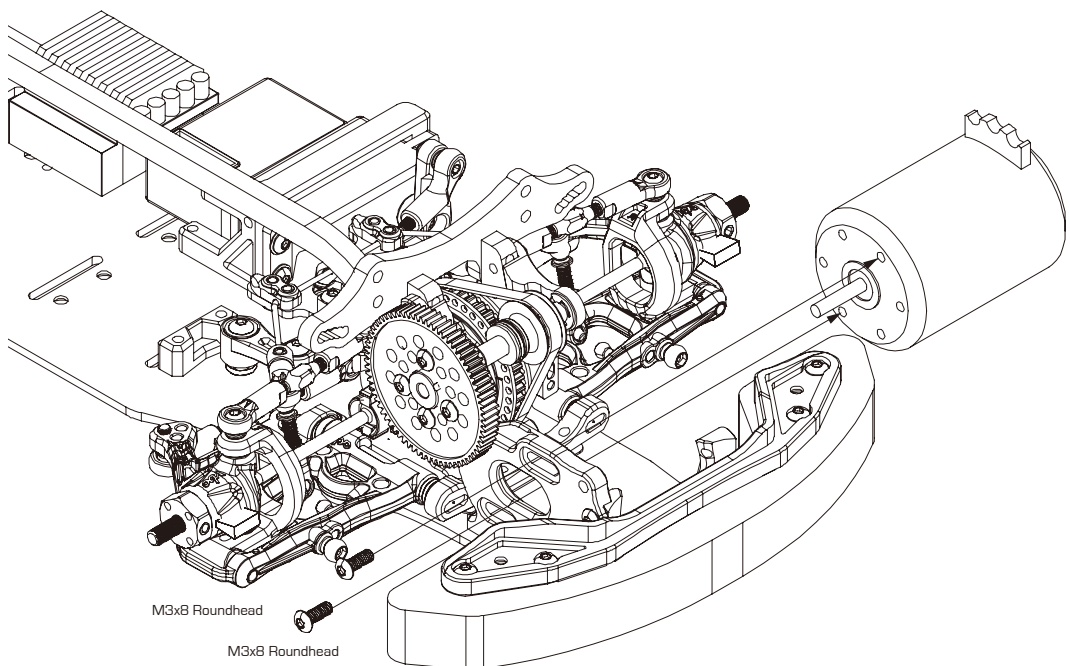
M3x8 Flathead C-02-SC-F030B x 4

# 26

## Motor Installation



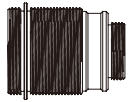
M3x8 Roundhead C-02-SC-R030B x 2



# 27

## Assemble Oil Shocks

MAKE 4 SHOCKS



Shock Body (Black) 31470 x 4



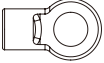
TBB Shock Height Adjuster (Black) 31636 x 4



TBB Bottom Cap (Black) 31637 x 4



TBBS Shock Piston (4 holes) A-03-VBC-0138 x 4



TBB Shock Bottom Connector A-03-VBC-0124 x 4



TBB Shaft Cap B-02-VBC-0125 x 4



TBBS Shock Shaft C02G30957 x 4



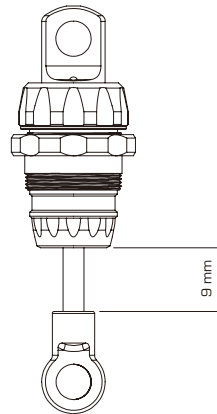
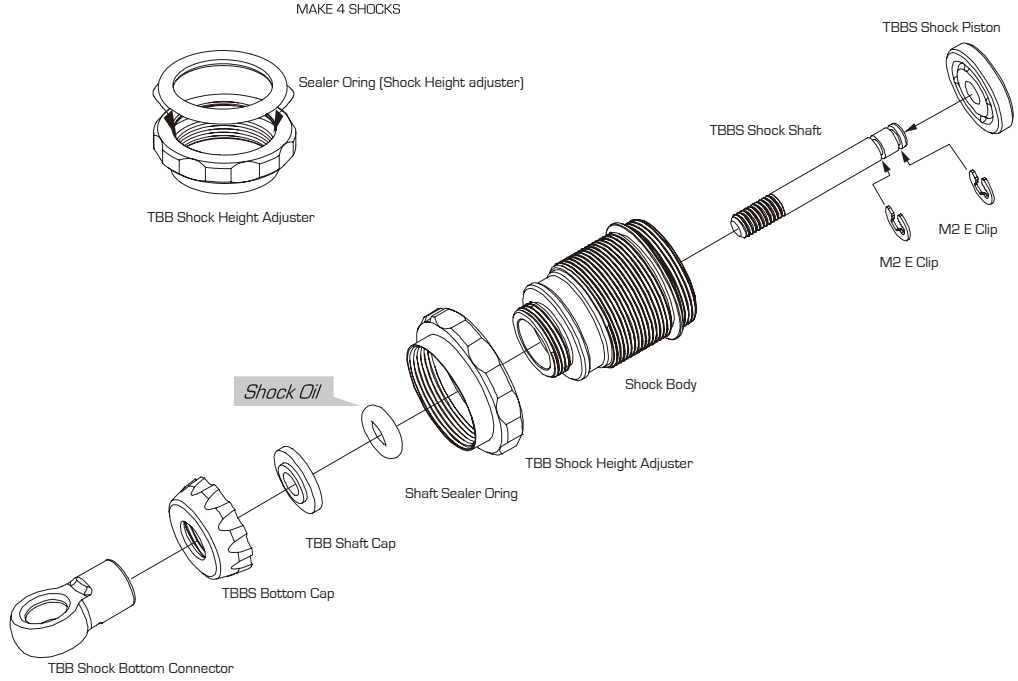
Sealer Oring (Shock Height adjuster) B-03-VBC-0128 x 4



Shaft Sealer Oring B-03-VBC-0012 x 4



M2 E Clip B-02-VBC-0129 x 8



Make sure the shock shaft can move up and down freely

# 28

## Assemble Oil Shocks Part 2



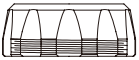
TBB Shock Top Connector A-03-VBC-0130 x 4



TBB Spring Bottom Support A-03-VBC-0131 x 4



TBB Short Oil Sealer Cap (Medium Soft) B-03-VBC-0140 x 4



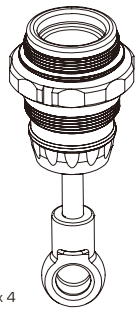
TBB Shock Body Cap (Black) 31638 x 4



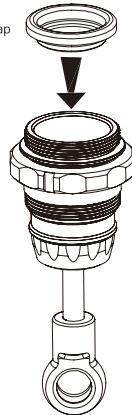
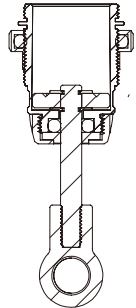
TBB Spring TS 3.0 (Short Silver) 31614 x 2



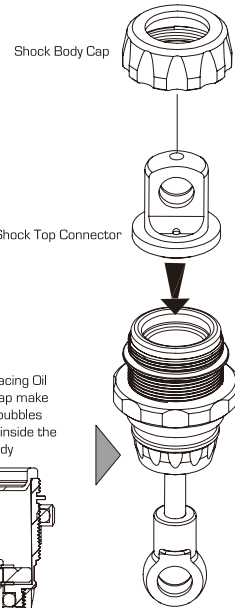
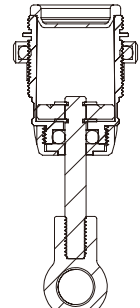
TBB Spring TS 2.8 (Short Blue) 31613 x 2



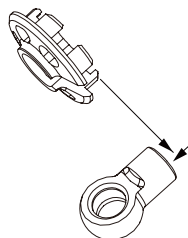
Fill supplied shock oil and remove air by moving the piston up and down until air bubbles disappears



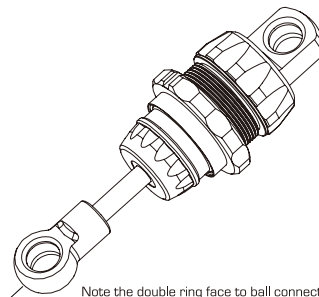
When placing Oil Sealer Cap make sure no bubbles are trap inside the shock body



TBB Spring Bottom Support



Spring Bottom Support

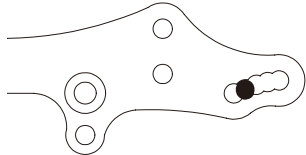


Note the double ring face to ball connector

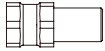
TBB Spring TS 3.0 (Silver) For Front  
TBB Spring TS 2.8 (Blue) For Rear

# 29

## Damper Set Assembly



Basic setup damper position



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



M3x6 Roundhead C-02-SC-R306 x 2



M3x10 Roundhead C-02-SC-R310 x 2



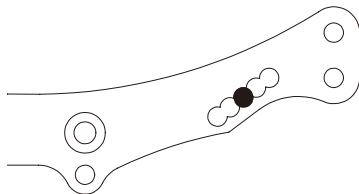
M3x10mm Set Screw C-02-SC-SS-0310 x 2



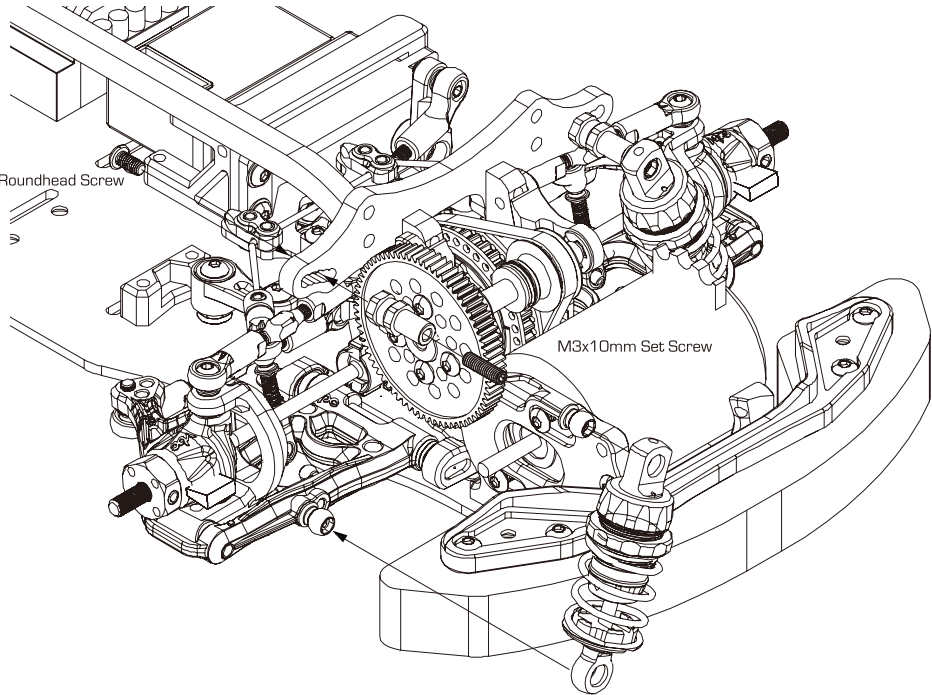
Ball Connector B-02-VBC-0045 x 4



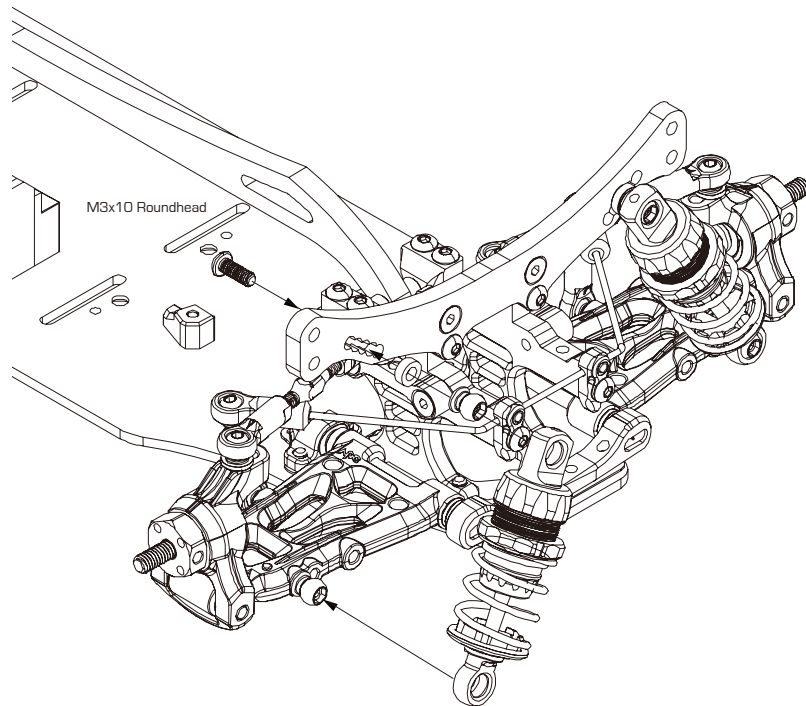
T2 7075 Spacer B-02-P30890 x 2



Basic setup damper position



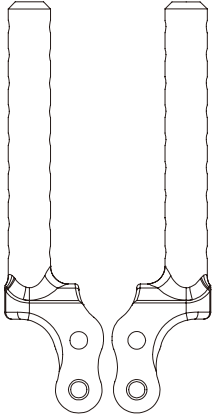
INSTALL LEFT & RIGHT DAMPERS





# 30

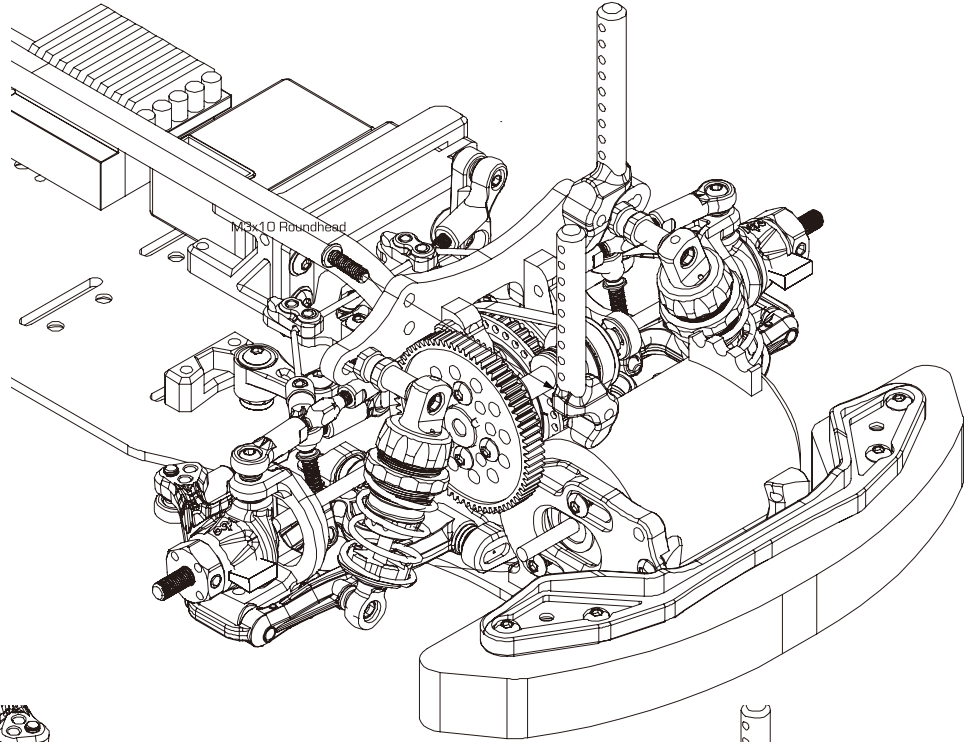
## Front Body Post Assembly



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

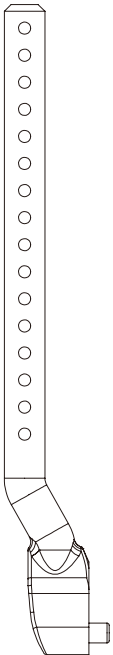


M3x10 Roundhead Screw C-02-SC-R0310 x 4

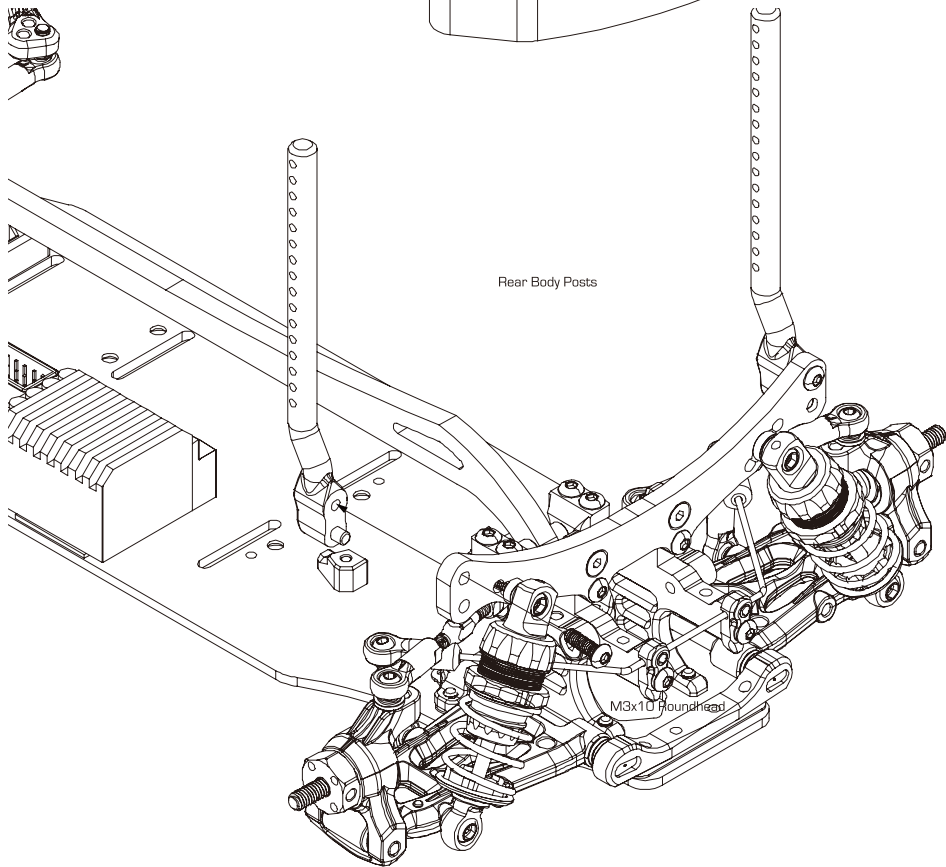


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## Rear Body Post Assembly

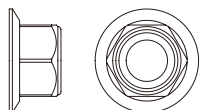
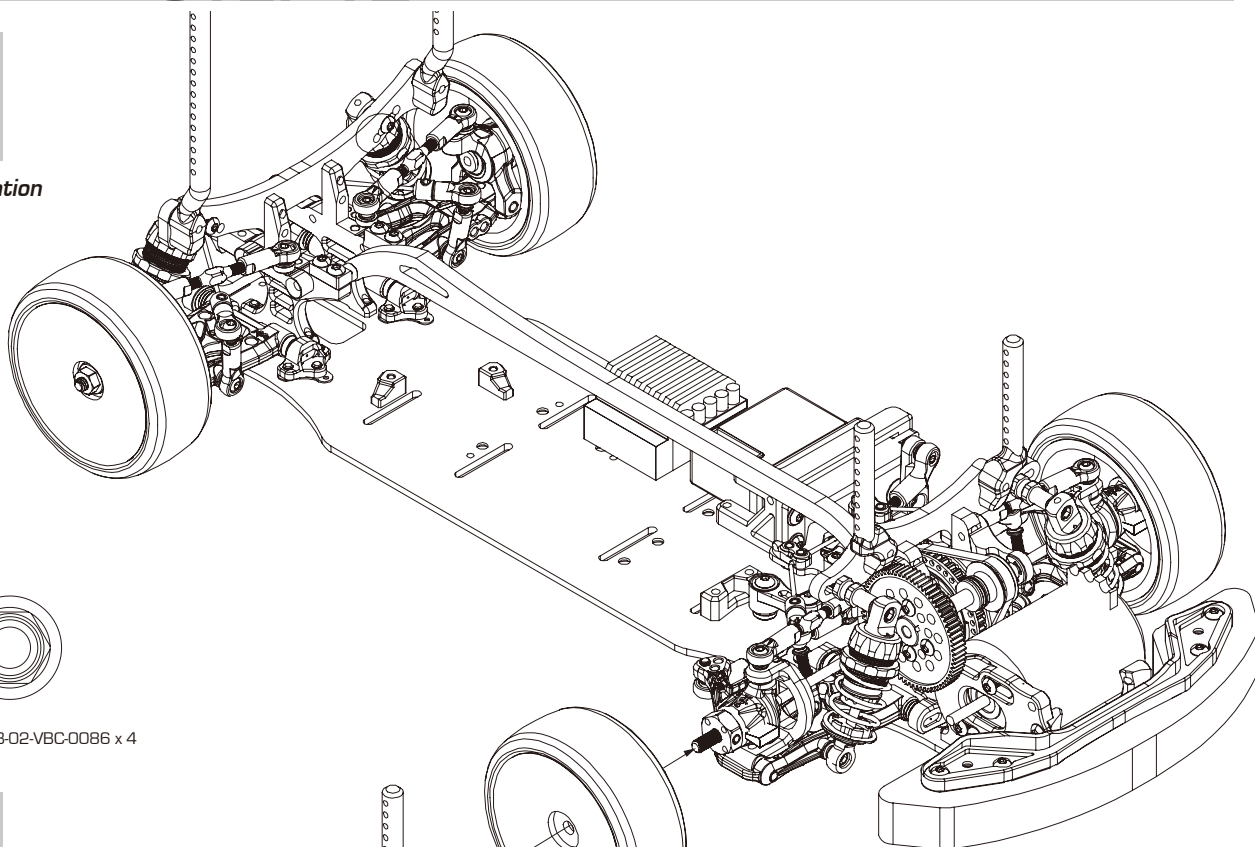


Rear Body Posts A-03-VBC-2056 x 2



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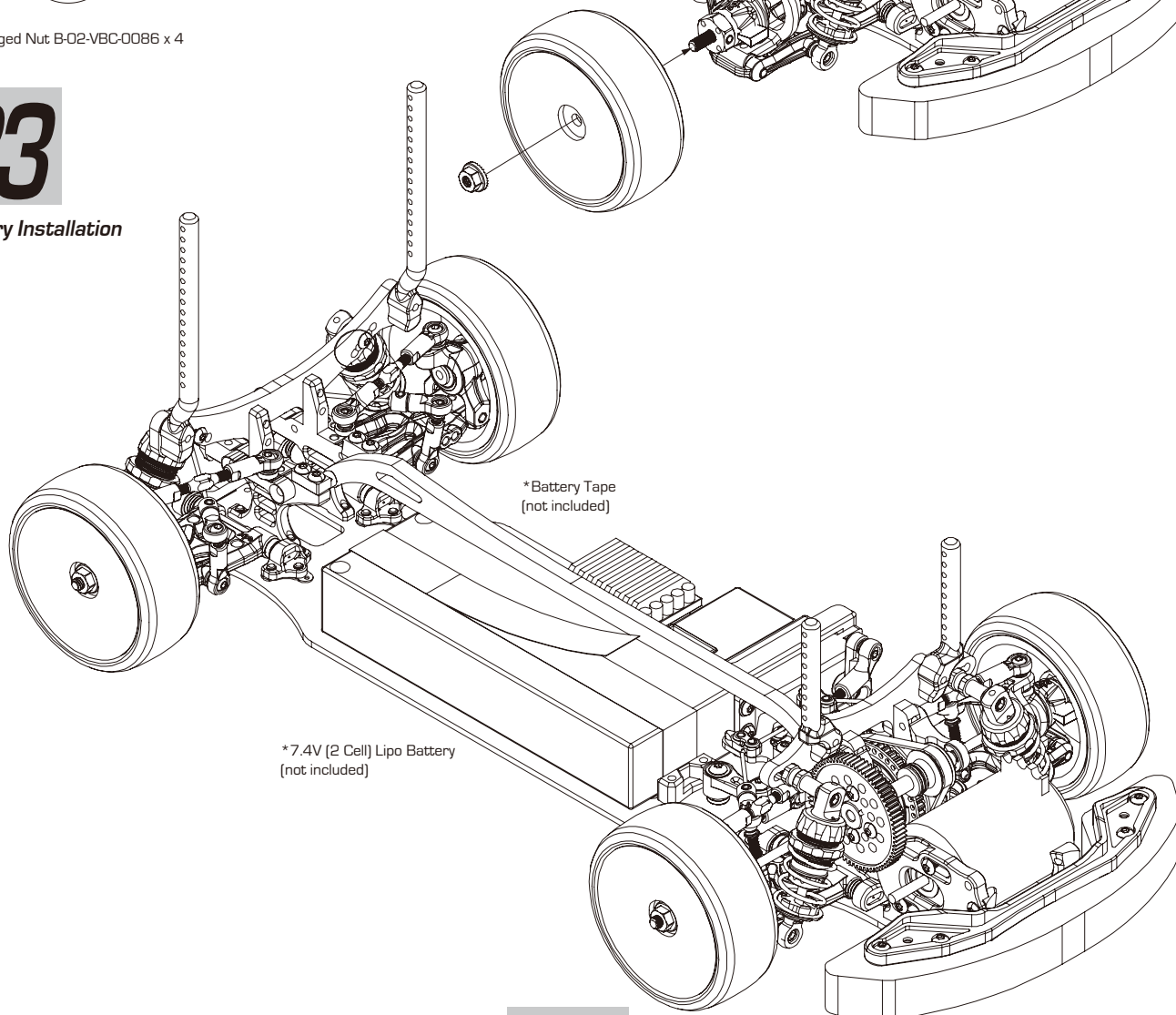
### Tires Installation



M4 Flanged Nut B-02-VBC-0086 x 4

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### Battery Installation



\*Battery Tape  
(not included)

\*7.4V (2 Cell) Lipo Battery  
(not included)





**1/10 SCALE ELECTRIC FRONT WHEEL DRIVE COMPETITION TOURING CAR KIT**



VBC Racing FF18 Car Kit D-05-VBC-CK34 1.0

**COMPETITION GRADE HIGH PERFORMANCE RADIO CONTROL RACING CAR CHASSIS KIT**