

Feb. '07

# TCS FACTORY Team

## 1:10th Scale 4wd Electric Touring Car Kit



## Owner's Manual & Tuning Guide

**Champions  
By Design**



**Thank you!** ...for selecting this Team Associated model.

Associated's Factory Team TC5 is Area-51's answer to the most competitive onroad touring car field in history. Starting with a blank sheet of paper, many decades of race winning experience and new ideas, the designers built the TC5 from the ground up producing an entirely new platform. The result is the TC5, an electric touring car that offers the performance and durability to stand up to the highest demands of touring car racing.

Team Associated wants you to enjoy the process of building, driving and maintaining your new model. If you discover any problems or need help with the assembly of your model, please give us a call and we will do our very best to help you!

**Manual**

Examine each step carefully before building. Special notes will be listed for each step.

**Bags**

Open the bags in order according to each step. Some bags contain a large amount of small parts. We recommend using a small container to keep the parts together.

**Supplies**

We are constantly developing new parts to improve our kits. These changes, if any, will be noted on supplementary sheets located in the appropriate parts bags. Check each bag for these sheets before you start to build.

hex key set (#6950)  
.050", 1/16",  
3/32", 5/64"



molded tools  
(#6956)



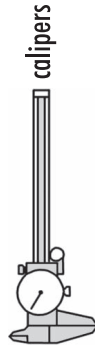
droop gauge  
(#3987)



## Recommended



hex drivers (#1541)  
.050", 1/16", 3/32",  
5/64"



calipers



hobby knife



nut drivers (#1561)  
3/16", 1/4", 11/32",  
5.5mm, 7mm, 8mm



pliers



soldering iron



scissors (#1737)



glue



quick dry glue  
threadlocking compound  
(#1596)

## Items Needed

You will need the following to complete you vehicle:

1. R/C two channel surface frequency radio system.
2. Electronic Speed Control.
3. R/C Electric Motor.
4. Battery pack.
5. Battery charger (peak detection recommended).
6. Pinion gear (see motor gearing chart).
7. 190mm Lexan body.
8. Wheels and tires.

## Customer Support

Tel: 949.544.7500  
Fax: 949.544.7501

Hours: Monday-Friday  
8:00am - 4:00pm, pst

Visit the following web sites for tips, setup help and racing information:

[www.RC10.com](http://www.RC10.com)  
[www.TeamAssociated.com](http://www.TeamAssociated.com)  
[www.CompetitionX.com](http://www.CompetitionX.com)



## Bag A - Shocks



6299, qty 2  
e-clip



6465, qty 1  
#3 piston



31251, qty 1  
.26" gold shock  
shaft



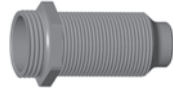
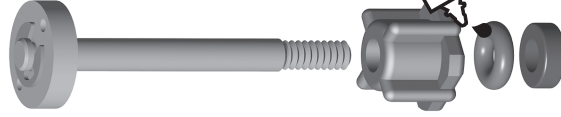
31120, qty 1  
seal retainer



5407, qty 1  
red o-ring



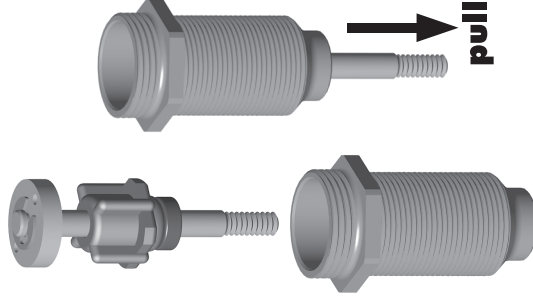
31120, qty 1  
o-ring spacer



3985, qty 1  
threaded shock  
body



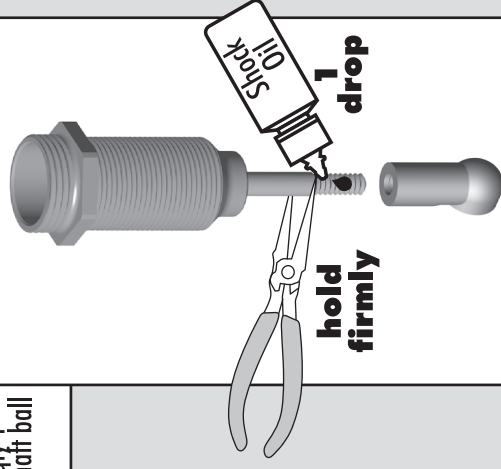
1 drop



pull



31249, qty 1  
shock shaft ball  
cup



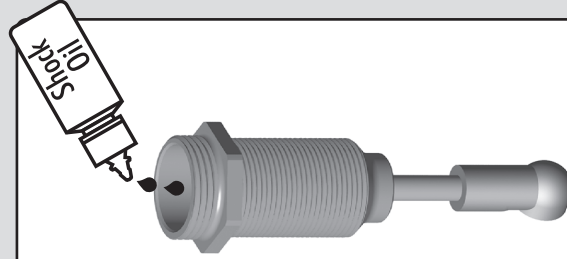
hold  
firmly

1 drop



5423, qty 1  
40wt shock oil

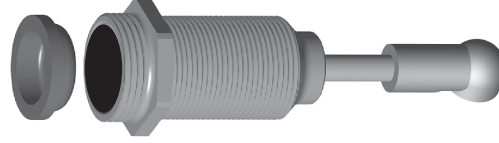
5436, qty 1  
60wt shock oil



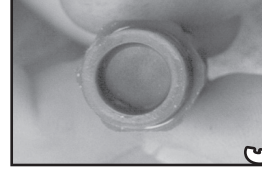
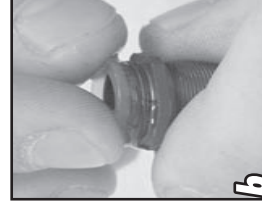
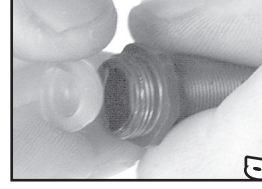
**front: 60wt  
rear: 40wt**



31120, qty 1  
VCS2 shock  
bladder



### Bladder installation



▶ With the shaft fully extended, place bladder onto the top of the shock body (a), displacing the extra oil (b). Make sure there are no air bubbles under the clear bladder (c). If there are, gently lift one side of the bladder to allow air bubbles to escape.



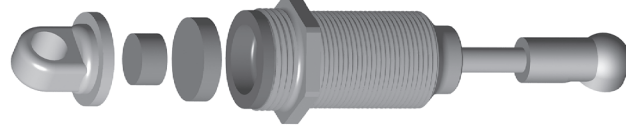
31120, qty 1  
VCS2 shock cap



31120, qty 1  
VCS2 foam,  
small

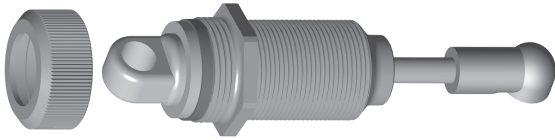


31120, qty 1  
VCS2 foam,  
large





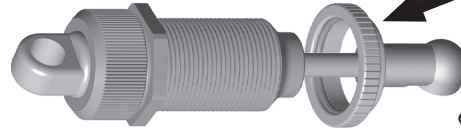
31121, qty 1  
VCS2 aluminum  
cap retainer



3948, qty 1  
threaded shock  
collar



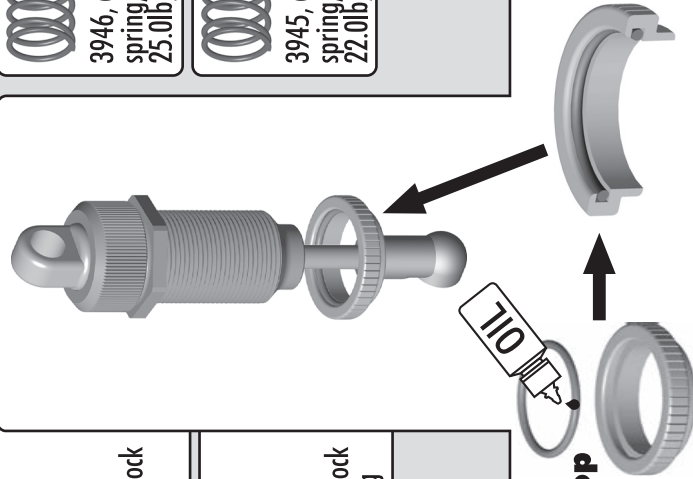
3959, qty 1  
threaded shock  
collar o-ring



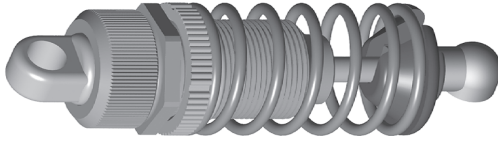
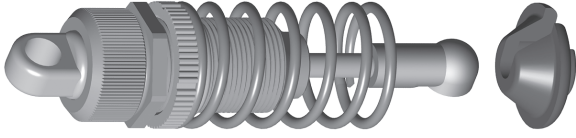
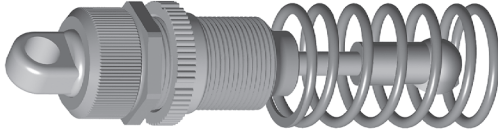
3946, qty 1  
spring, copper,  
25.0lb, **front**



3945, qty 1  
spring, red,  
22.0lb, **rear**



6475, qty 1  
spring cup



**build 4  
shocks**

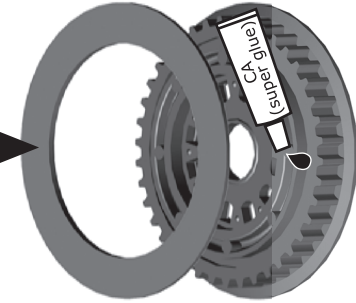


31167, qty 1  
diff pulley, 40T



31169, qty 1  
diff pulley  
flange

**flat side up**



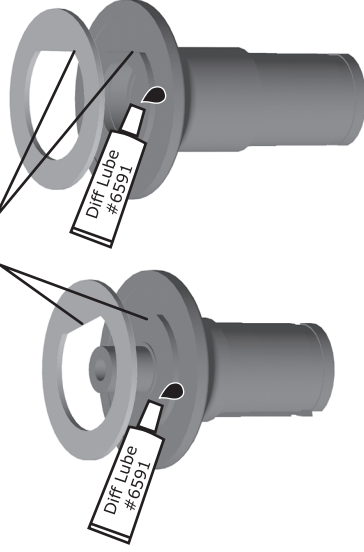
6581, qty 12  
3/32" carbide  
diff ball



**fill all 12 holes**

• 1:1

**align notches**



3906, qty 2  
diff d-ring



31167, qty 1  
short diff half



31167, qty 1  
long diff half





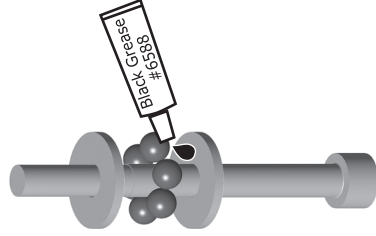
6574, qty 6  
5/64" diff thrust ball



6573, qty 2  
thrust washer

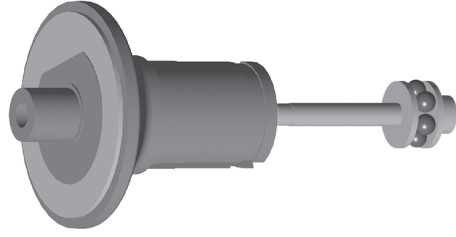


9274, qty 1  
thrust screw

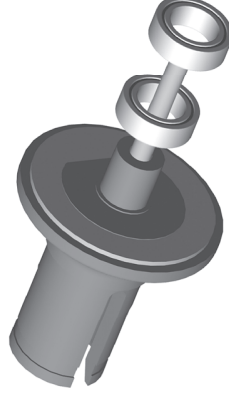


Black Grease  
#6588

1:1



31400, qty 2  
5x8x2.5 diff bearing



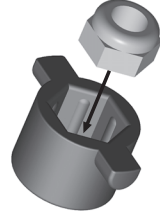
1:1



31166, qty 1  
2-56 locknut



31167, qty 1  
diff t-nut



**press all the way in**



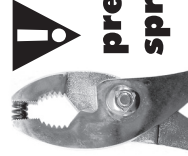
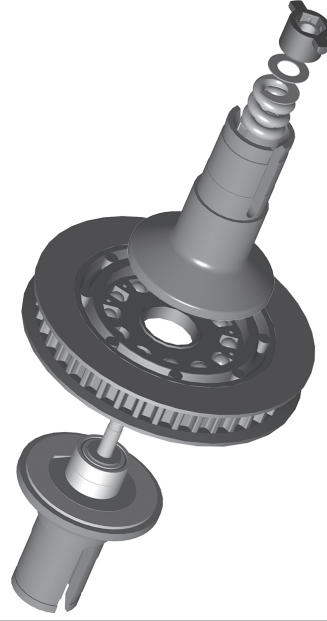
1:1



6582, qty 1  
diff spring



31166, qty 1  
washer



**pre-compress spring**



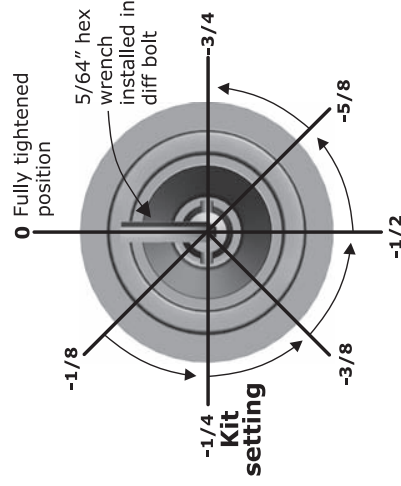
1:1



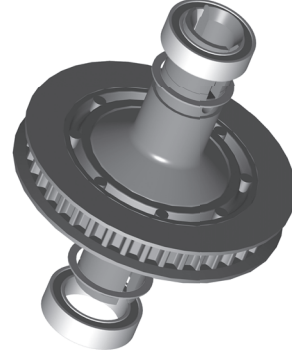
31162, qty 2  
diff shim



31401, qty 2  
10x15x4 bearing



**when fully compressed, set at 1/4 turn out (see diagram). re-check after initial run.**



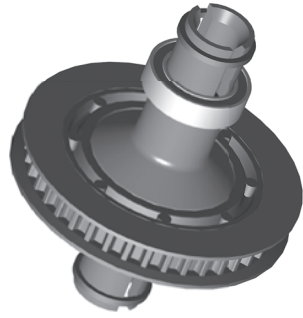
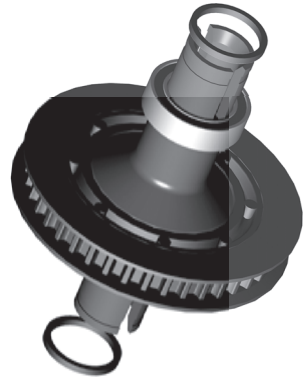
1:1



1:1



31168, qty 2  
outdrive rings



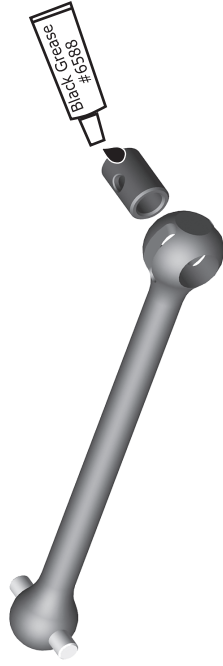
**build 2 diffs**



31227, qty 1  
CVA coupler



31232, qty 1  
CVA bone



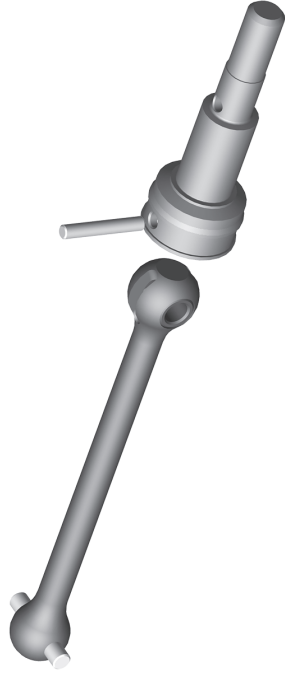
**Bag C - CVA's**



31227, qty 1  
CVA crosspin



31231, qty 1  
CVA axle



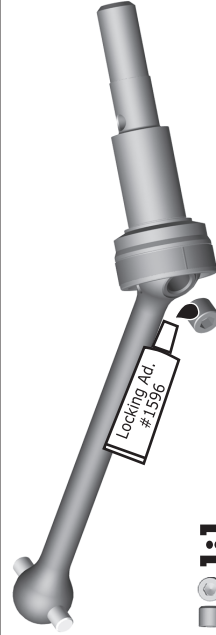
1:1



31237, qty 1  
CVA crosspin  
retaining clip



31500, qty 1  
M3x2.5 setscrew



1:1



**build 4 CVA's**



6274, qty 14  
ballcup



1401, qty 4  
ti turnbuckle,  
1.33", camber



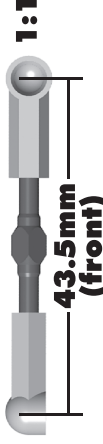
1403, qty 2  
ti turnbuckle,  
1.65", steering



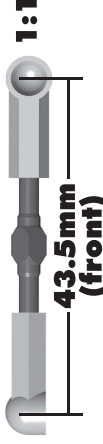
1418, qty 1  
ti turnbuckle,  
0.825", draglink



**Camber Link (#1401 x2)**



43.5mm  
(front)



43.2mm  
(rear)

**Steering Link (#1403 x2)**



52.8mm

**Draglink (#1418 x1)**



32.3mm

**Turnbuckles**



## Steering



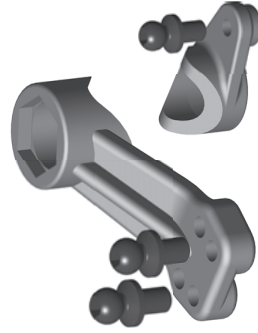
31280, qty 3  
ballstud, black,  
5mm



31245, qty 1  
steering  
bellcrank



31245, qty 1  
steering servo  
saver



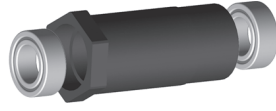
1:1



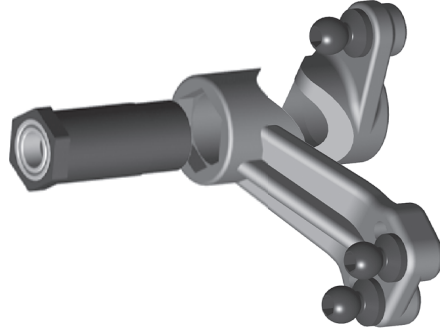
31403, qty 2  
4x7x2.5 bearing



31241, qty 1  
servo saver tube



1:1



31243, qty 1  
servo saver  
spring washer



31243, qty 1  
servo saver  
spring



31242, qty 1  
servo saver  
knurled nut



**pre-compress spring  
with pliers before  
installing**

**tighten until flush**



1:1

## Chassis Prep



31138, qty 1  
lower chassis



1:1



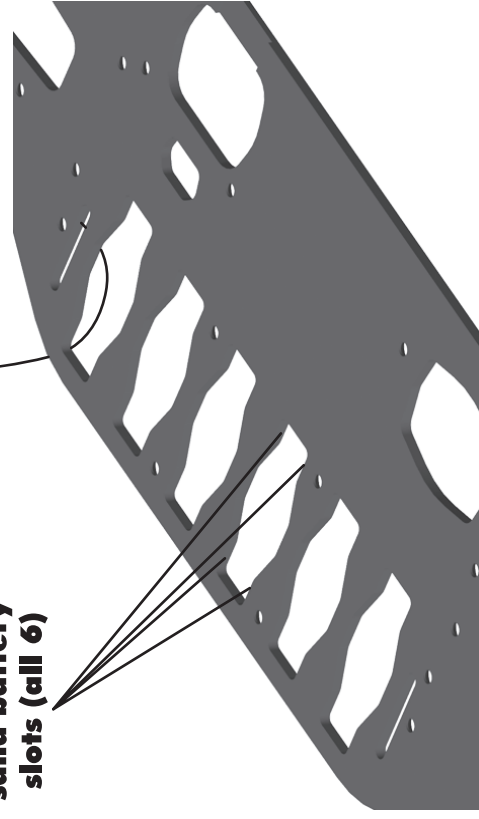
31244, qty 1  
steering post  
spacer



31240, qty 1  
steering  
bellcrank post

**sand tape slots  
(underneath, x2)**

**sand battery  
slots (all 6)**



## Bag D - Bulkheads



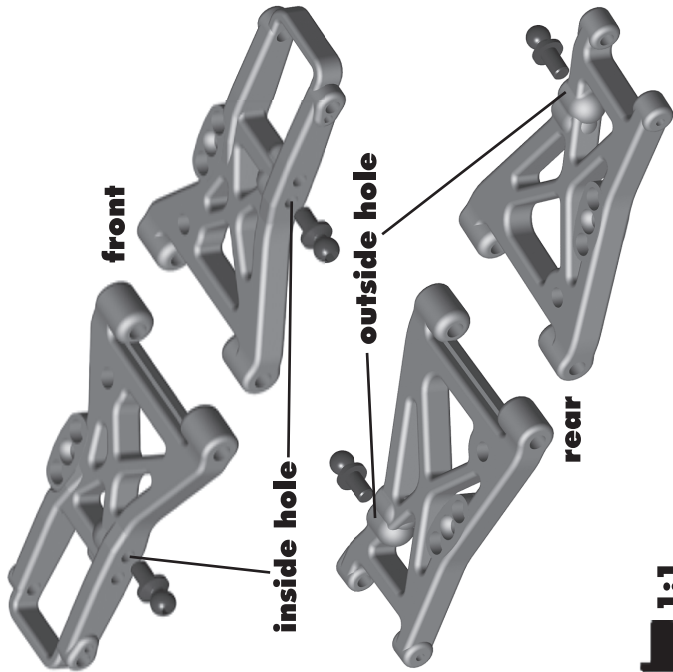
31280, qty 4  
ballstud, black,  
5mm



31205, qty 2  
suspension arm,  
front



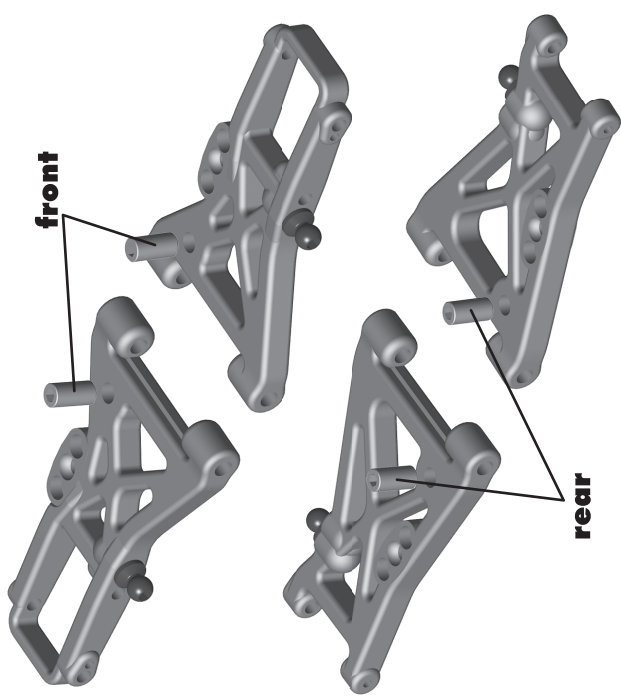
31206, qty 2  
suspension arm,  
rear



1:1



25227, qty 4  
M4x8 setscrew



1:1



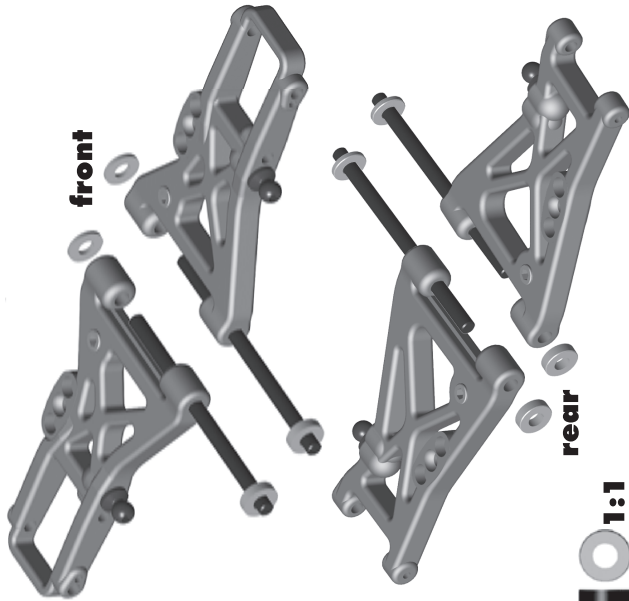
31200, qty 4  
wheelbase shim,  
2mm



31200, qty 4  
wheelbase shim,  
1mm



31221, qty 4  
inner hinge pin



1:1  
1:1



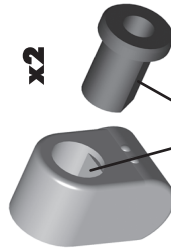
31197, qty 2  
arm mount nut



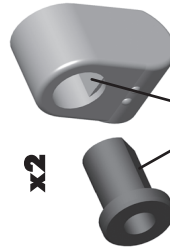
31195, qty 2  
arm mount A



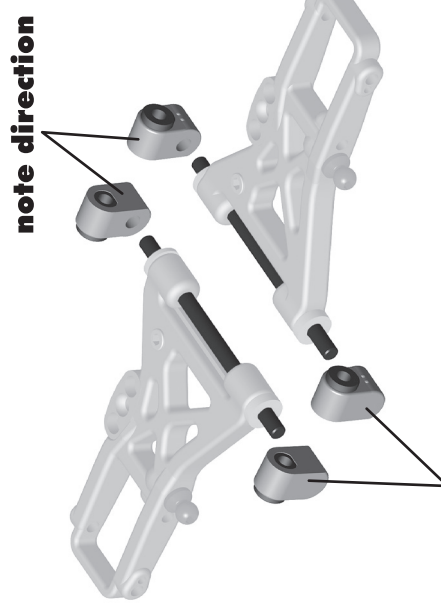
31196, qty 2  
arm mount B



align flats



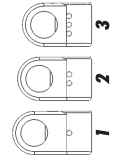
align flats



note direction  
note direction

Arm Mount System

1 dot: Low  
2 dots: Mid  
3 dots: High



**front**

**note: groove to inside**

**right**

**left**

**1:1**

**1:1**

**Toe Shim System**

1° 1.5° 2°

|                                    |                                                    |                                                   |                                                  |
|------------------------------------|----------------------------------------------------|---------------------------------------------------|--------------------------------------------------|
| <p>25211, qty 4<br/>M3x10 bhcs</p> | <p>31198, qty 4<br/>arm mount<br/>shim, 1 deg.</p> | <p>31146, qty 1<br/>bulkhead, right<br/>front</p> | <p>31147, qty 1<br/>bulkhead, left<br/>front</p> |
|------------------------------------|----------------------------------------------------|---------------------------------------------------|--------------------------------------------------|

|                                       |                                     |                                     |
|---------------------------------------|-------------------------------------|-------------------------------------|
| <p>31197, qty 2<br/>arm mount nut</p> | <p>31195, qty 2<br/>arm mount A</p> | <p>31196, qty 2<br/>arm mount B</p> |
|---------------------------------------|-------------------------------------|-------------------------------------|

**x2**

**A**

**align flats**

**x2**

**B**

**align flats**

**rear**

**note: groove to inside**

**31148: right**

**31149: left**

**1:1**

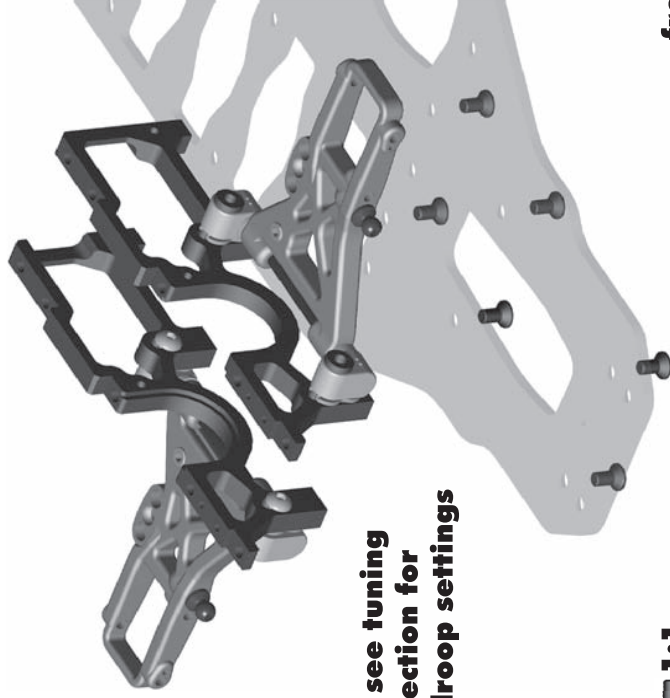
**1:1**

|                                    |                                                    |                                                  |                                                 |
|------------------------------------|----------------------------------------------------|--------------------------------------------------|-------------------------------------------------|
| <p>25211, qty 4<br/>M3x10 bhcs</p> | <p>31198, qty 2<br/>arm mount<br/>shim, 2 deg.</p> | <p>31148, qty 1<br/>bulkhead, right<br/>rear</p> | <p>31149, qty 1<br/>bulkhead, left<br/>rear</p> |
|------------------------------------|----------------------------------------------------|--------------------------------------------------|-------------------------------------------------|





31541, qty 6  
M3x6 flcs



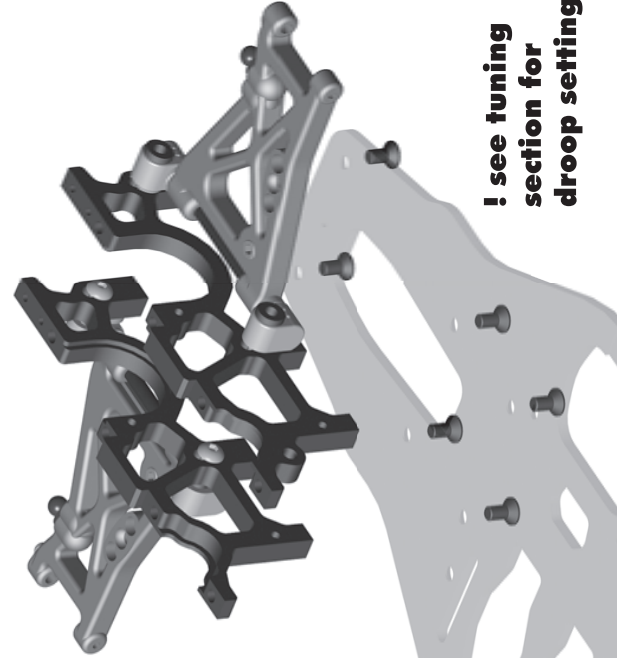
! see tuning  
section for  
droop settings



front



31541, qty 6  
M3x6 flcs



! see tuning  
section for  
droop settings



rear



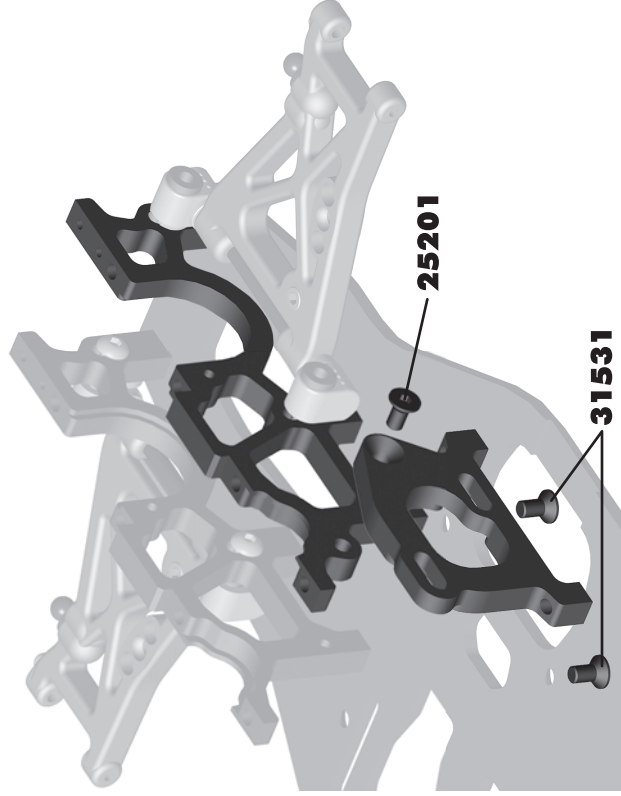
31541, qty 2  
M3x6 flcs



25201, qty 1  
M3x8 flcs



31152, qty 1  
motor mount



25201

31531



rear



31284, qty 2  
ballstud, silver,  
8mm

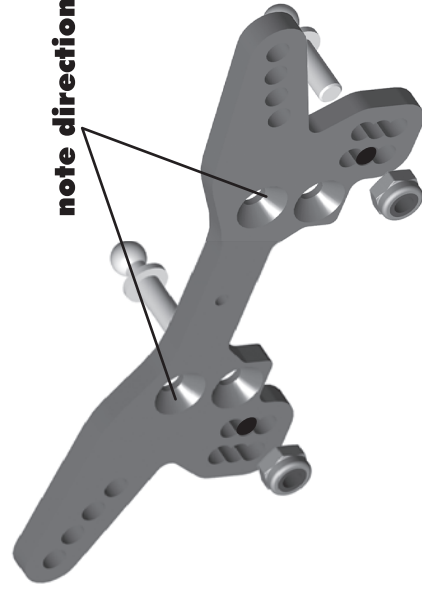


31550, qty 2  
M3 aluminum  
locknut, blue



31142, qty 1  
shock tower,  
front

## Shock Towers



note direction



1:1

1:1

1:1

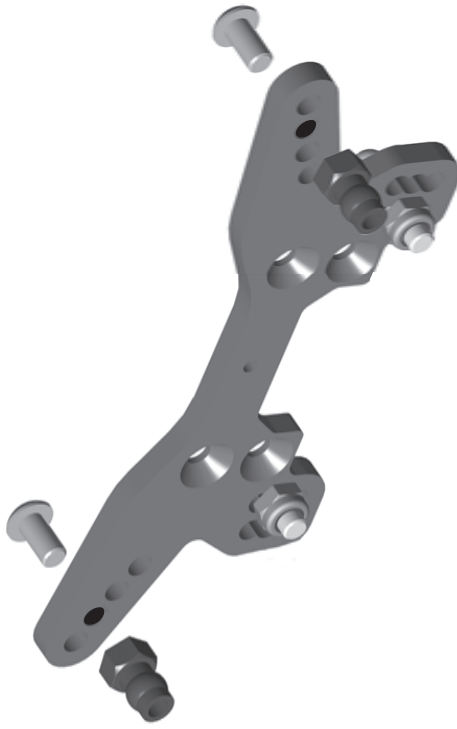
front



31531, qty 2  
M3x6 bhcs



31250, qty 2  
shock bushing



**note: groove to inside**

**A**

**B**

**front**

**1:1**



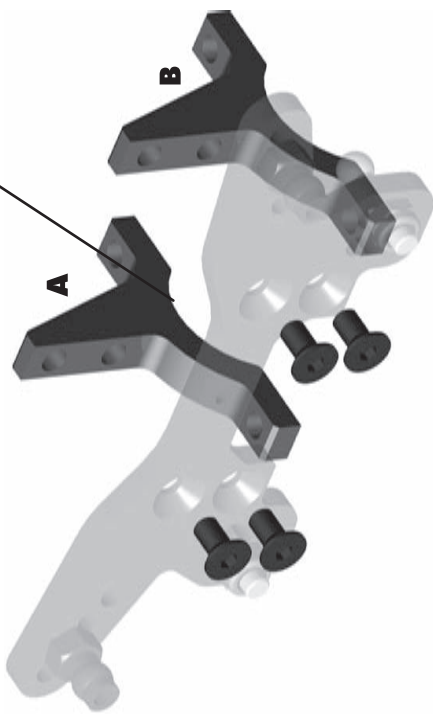
31541, qty 4  
M3x6 fhcs



31150, qty 1  
bearing cap A



31151, qty 1  
bearing cap B



**note: groove to inside**

**A**

**B**

**front**

**1:1**



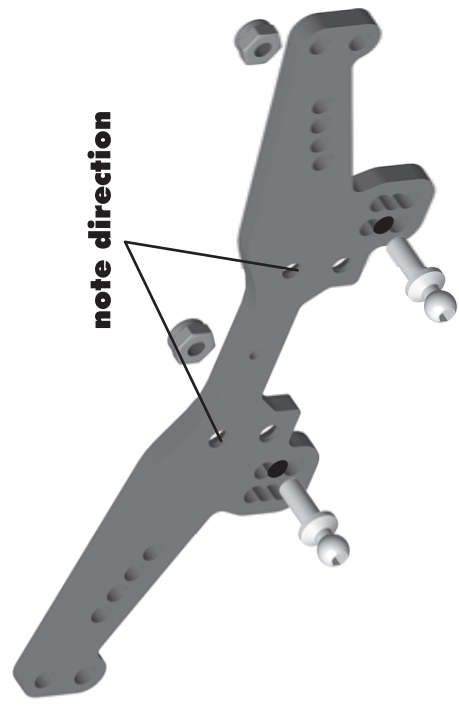
31284, qty 2  
ballstud, silver,  
8mm



31550, qty 2  
M3 aluminum  
locknut, blue



31143, qty 1  
shock tower,  
rear



**note direction**

**A**

**B**

**rear**

**1:1**

**1:1**



31531, qty 2  
M3x6 bhcs



31250, qty 2  
shock bushing



**rear**

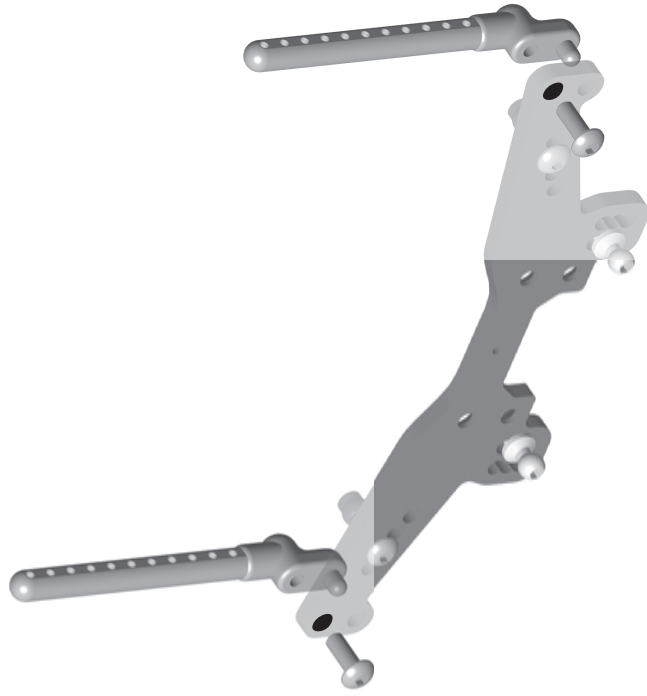
**1:1**



31532, qty 2  
M3x8 bhcs



2230, qty 2  
body mount,  
rear



1:1

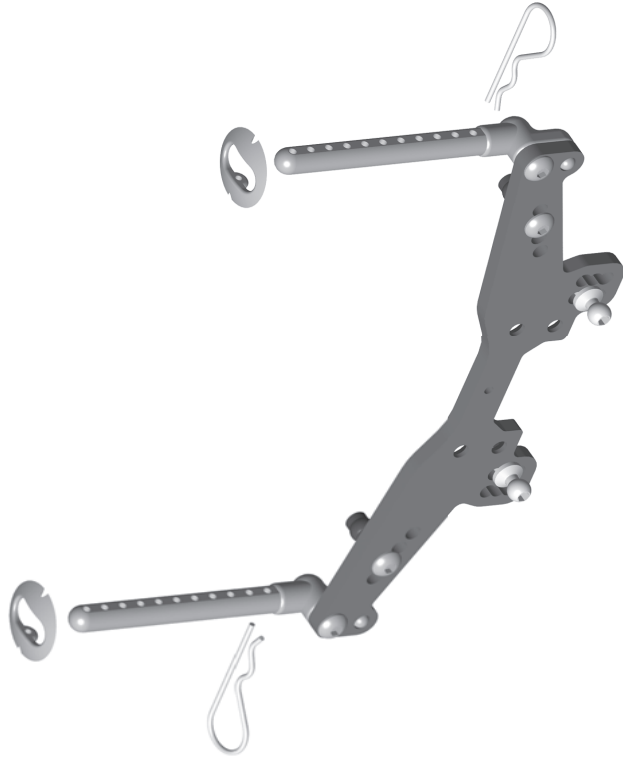
rear



3897, qty 2  
swivel mounts



6332, qty 2  
body clips



rear



31541, qty 4  
M3x6 fhcs



31150, qty 1  
bearing cap A



31151, qty 1  
bearing cap B



1:1

rear



3919, qty 1  
input shaft pin



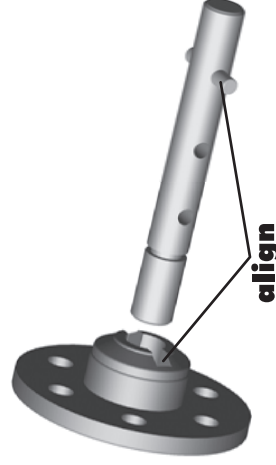
31153, qty 1  
center shaft



31154, qty 1  
spur gear hub



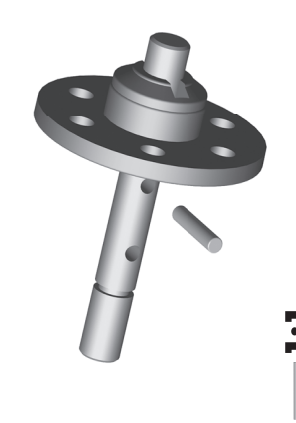
1:1



align

## Bag F - Center Shaft

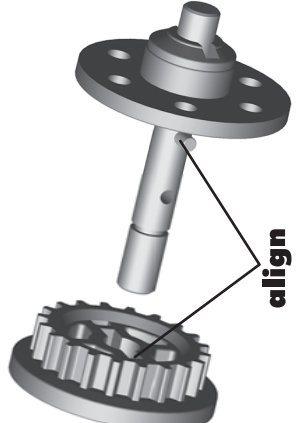




1:1



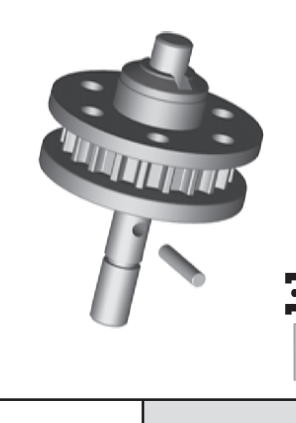
3919, qty 1  
input shaft pin



align



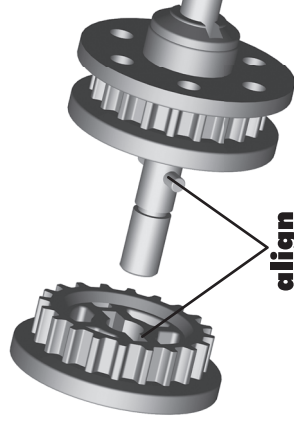
31157, qty 1  
center pulley  
(20T)



1:1



3919, qty 1  
input shaft pin



align



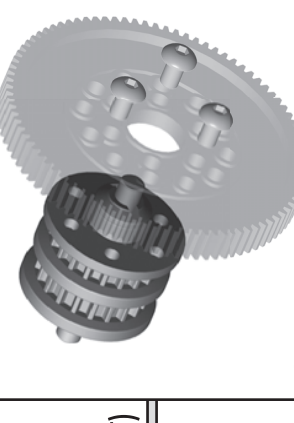
31157, qty 1  
center pulley  
(20T)



1:1



31160, qty 1  
e-clip, 3mm



1:1



31164, qty 1  
spur gear (87T)



31530, qty 3  
M3x5 bhcs



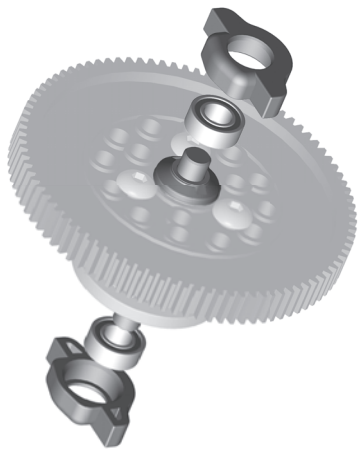
1:1



31162, qty 2  
4mm drivetrain  
shim



31161, qty 1  
centershaft  
spacer



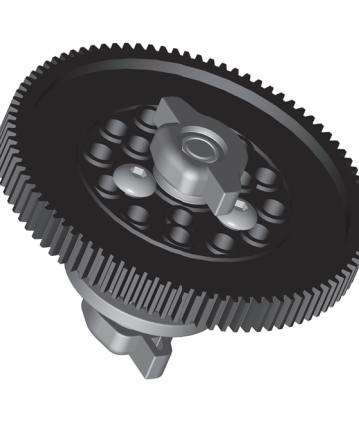
1:1



31402, qty 2  
8x4x3 bearing



31163, qty 2  
spur gear  
bearing cap



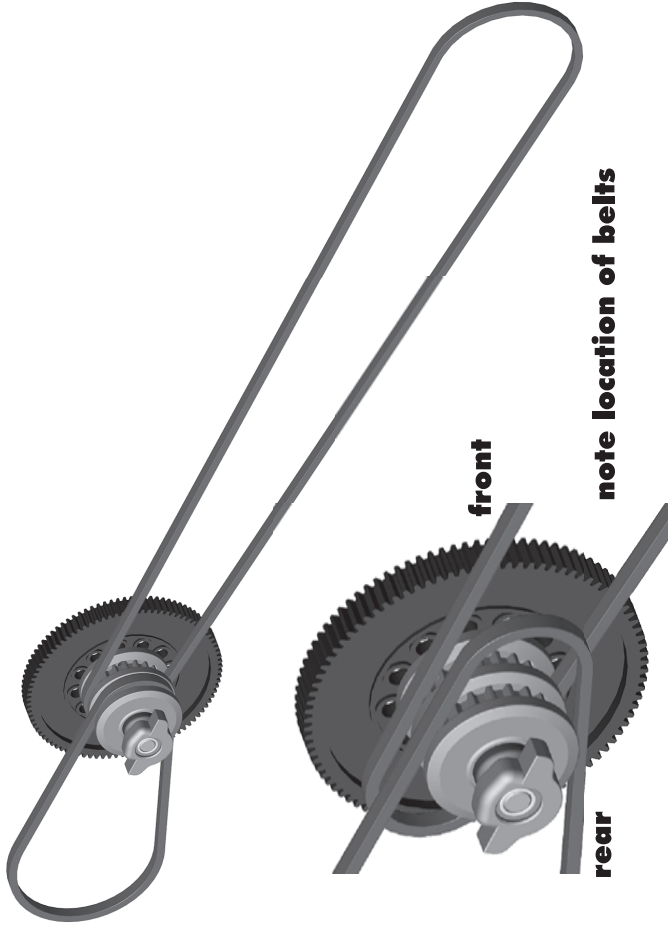
1:1



31187, qty 1  
front belt



31188, qty 1  
rear belt

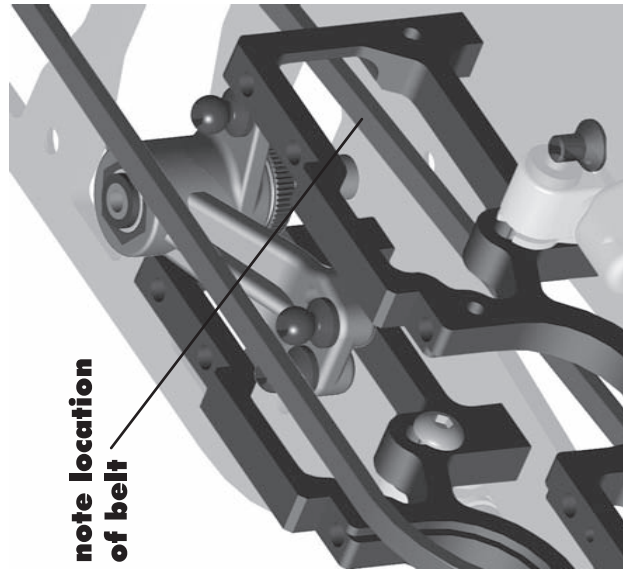


note position

rear



31540, qty 1  
M3x5 fhrs



1:1

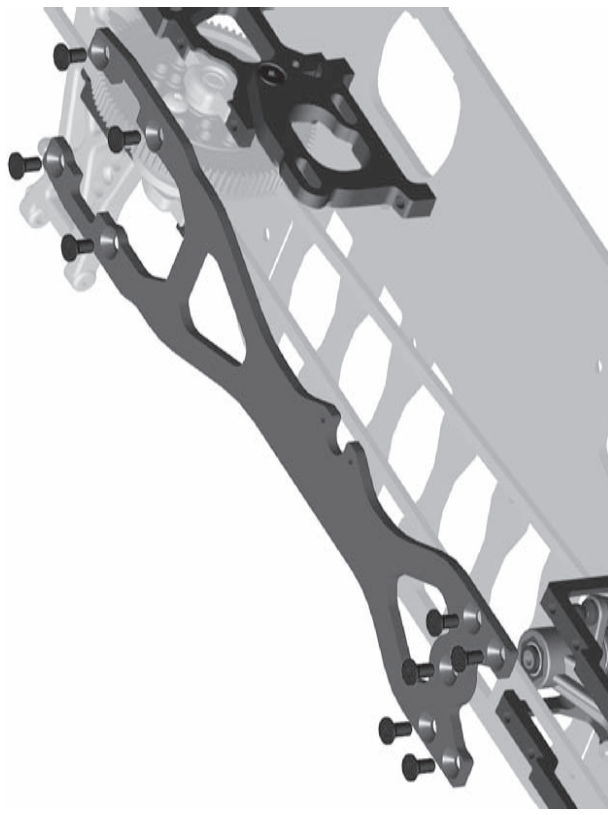
front



31541, qty 9  
M3x6 fhrs



31139, qty 1  
top deck



1:1

rear

## Bellcrank - Install

## Top Deck - Install

## Differentials - Install

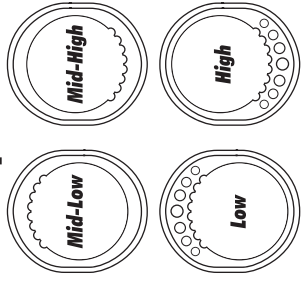


31185, qty 2  
diff bearing cam



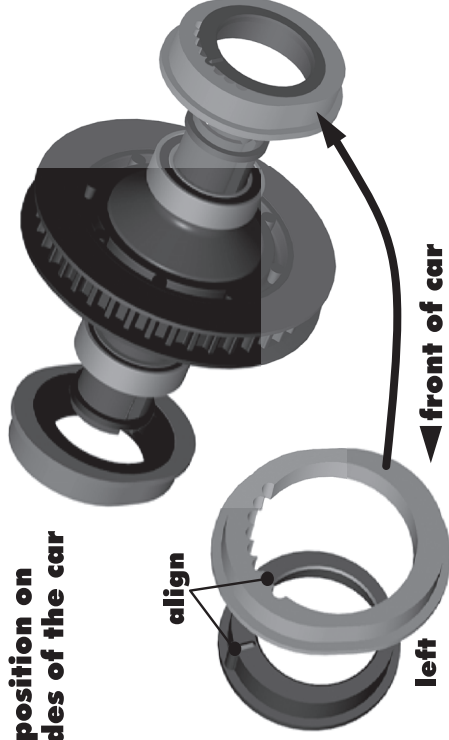
31186, qty 2  
diff bearing cam  
holder

### cam positions



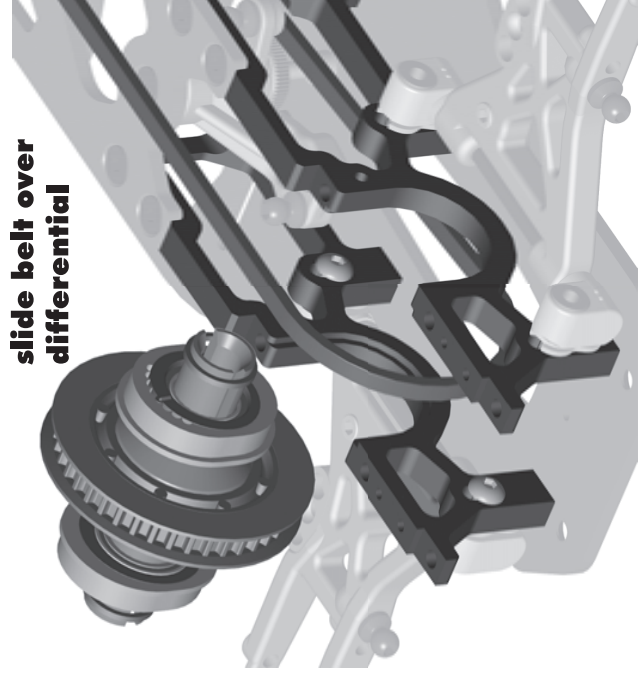
match right side cam  
position to the left  
side cam position

**NOTE:**  
always use the same  
cam position on  
both sides of the car



### front diff cam position

slide belt over  
differential



front



31531, qty 4  
M3x6 bhcs



1:1



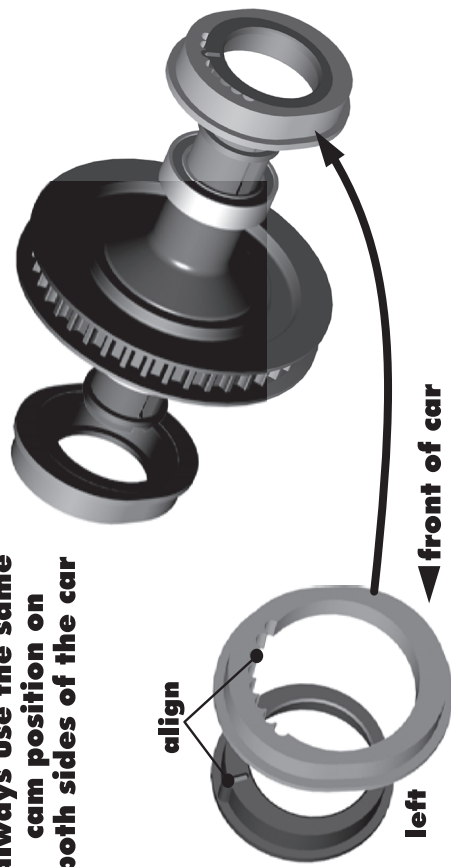
31185, qty 2  
diff bearing cam



31186, qty 2  
diff bearing cam  
holder

match right side cam  
position to the left  
side cam position

**NOTE:**  
always use the same  
cam position on  
both sides of the car



### rear diff cam position

front of car

left

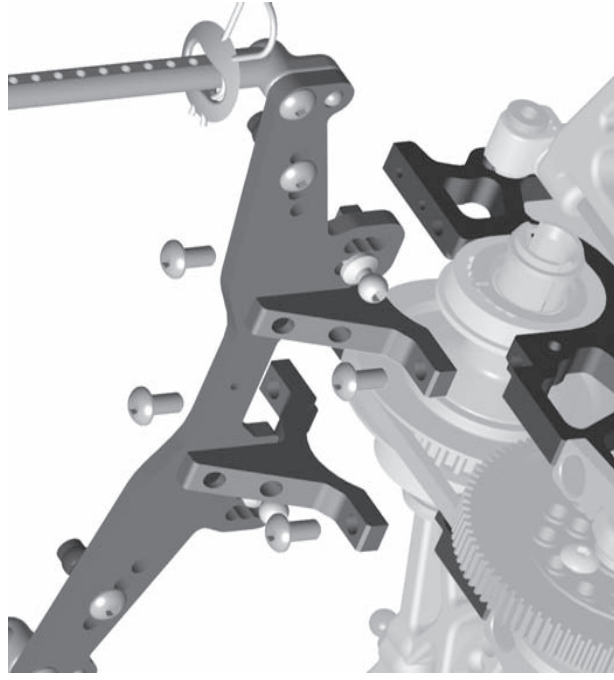
**slide belt over differential**



**rear**



31531, qty 4  
M3x6 bncs



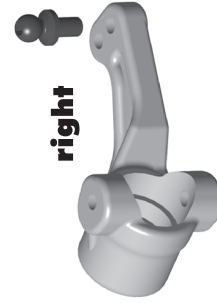
**1:1**

**rear**

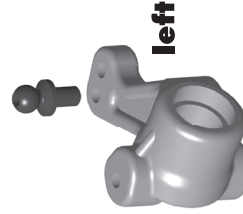


31280, qty 2  
ball stud, 5mm,  
black

**right**



**note direction**



**left**



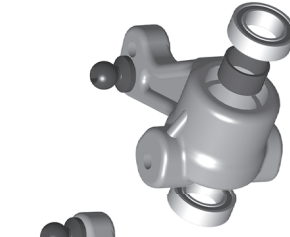
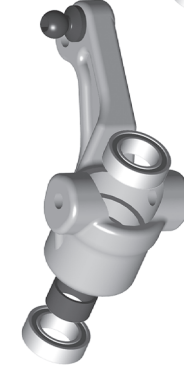
**1:1**



31215, qty 2  
steering block



31404, qty 4  
6x10x4 bearing



**1:1**



31233, qty 2  
axle crush tube

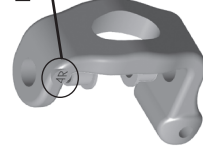


31214, qty 4  
caster block  
bushing

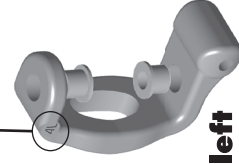


31212, qty 2  
caster block, 4°

**note direction**

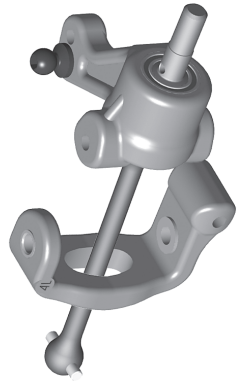
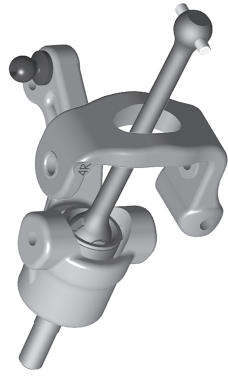


**right**



**left**





31281, qty 2  
ballstud, black,  
8mm



31532, qty 2  
M3x8 bhcs



1:1



31162, qty 2  
axle shim



3919, qty 2  
axle pin



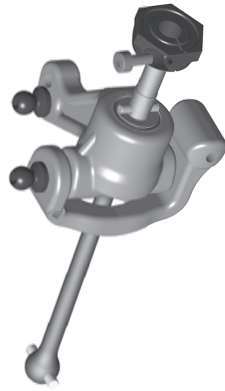
1:1



31511, qty 2  
M2x5 shcs



31234, qty 2  
clamping wheel  
hex



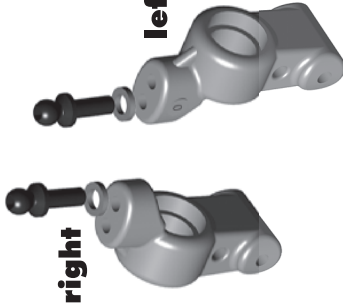
31281, qty 2  
ballstud, black,  
8mm



31286, qty 2  
1mm aluminum  
shim, blue



31218, qty 2  
rear hub carrier,  
0 degree



right

left



1:1



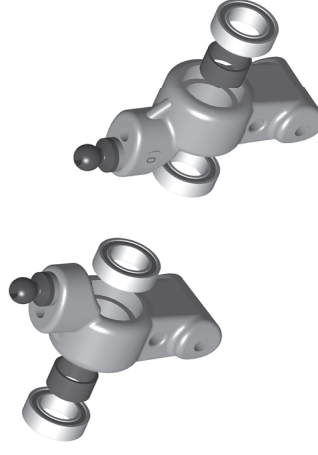
1:1



31404, qty 4  
6x10x4 bearing



31233, qty 2  
axle crush tube



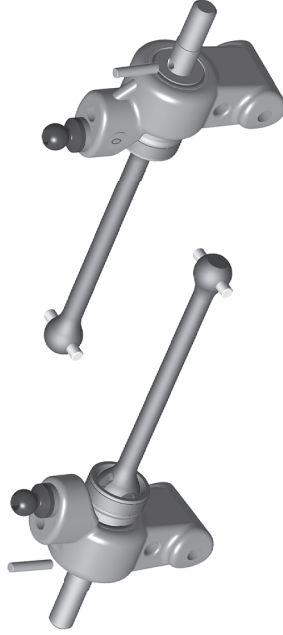
1:1



31162, qty 2  
axle shim



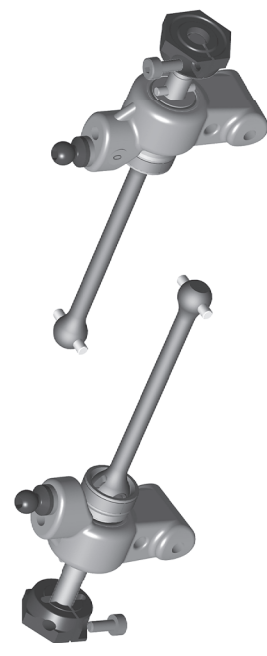
1:1



3919, qty 2  
axle pin



1:1



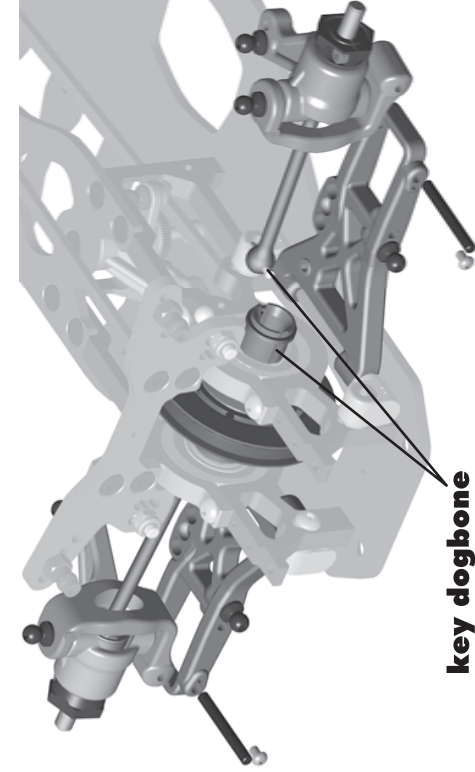
31511, qty 2  
M2x5 shcs



31234, qty 2  
clamping wheel  
hex



1:1



key dogbone  
into outdrive

31222, qty 2  
hinge pin, outer

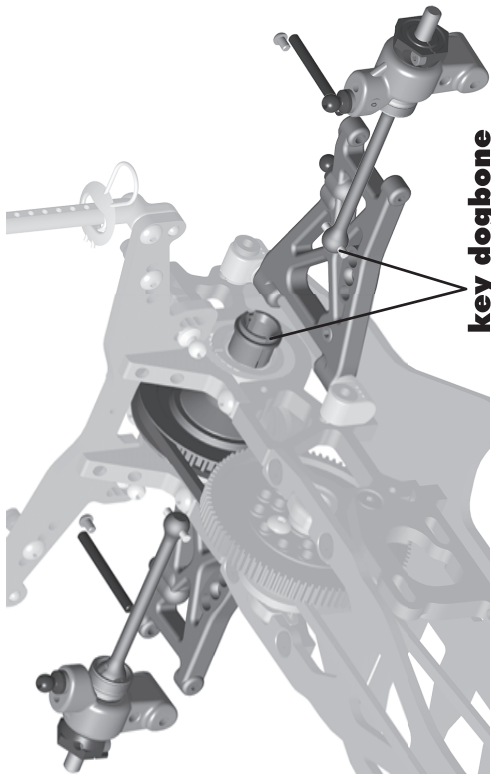


31510, qty 2  
M2x4 bhcs



1:1

front



key dogbone  
into outdrive

31222, qty 2  
hinge pin, outer



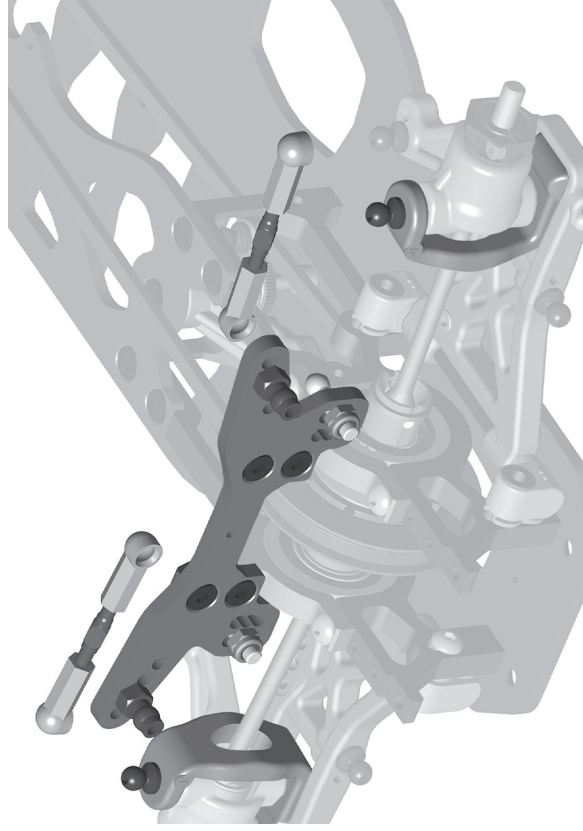
31510, qty 2  
M2x4 bhcs



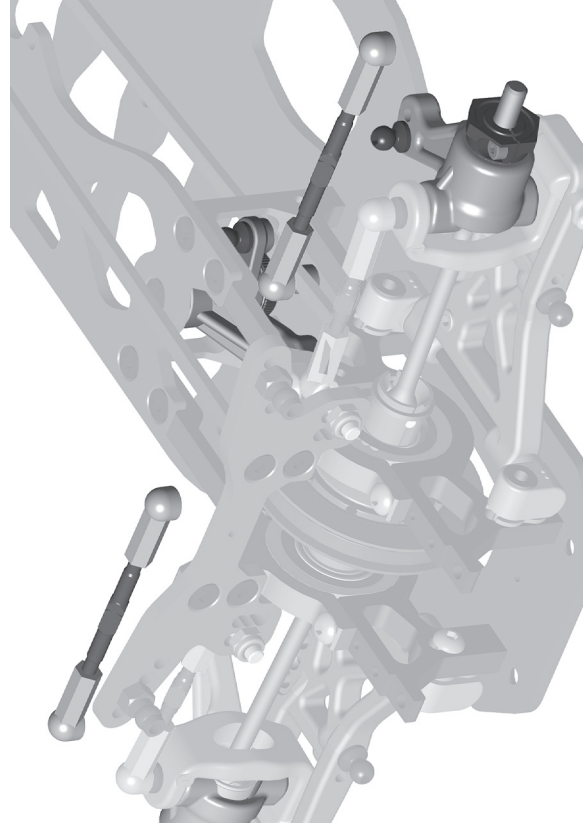
1:1

rear

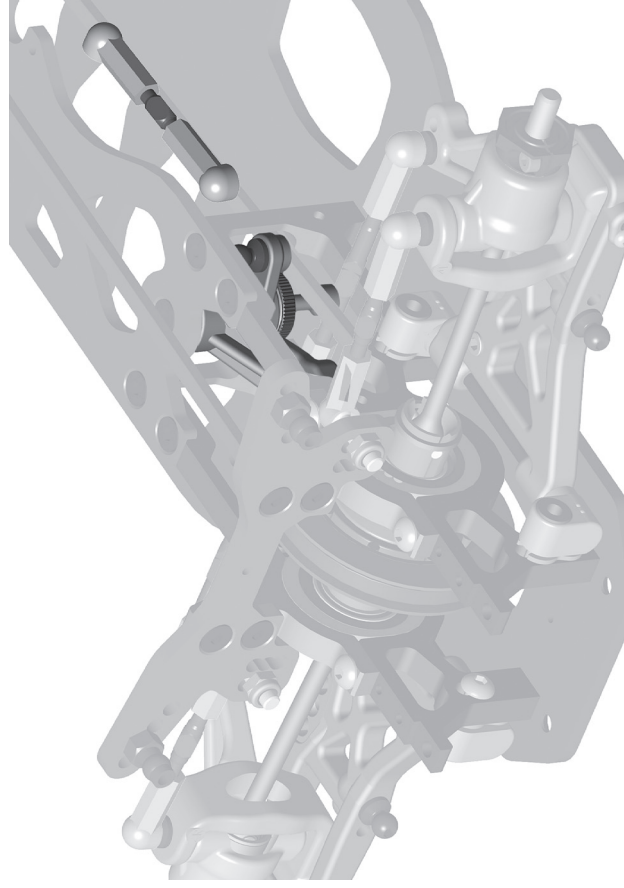
**Turnbuckles - Install**



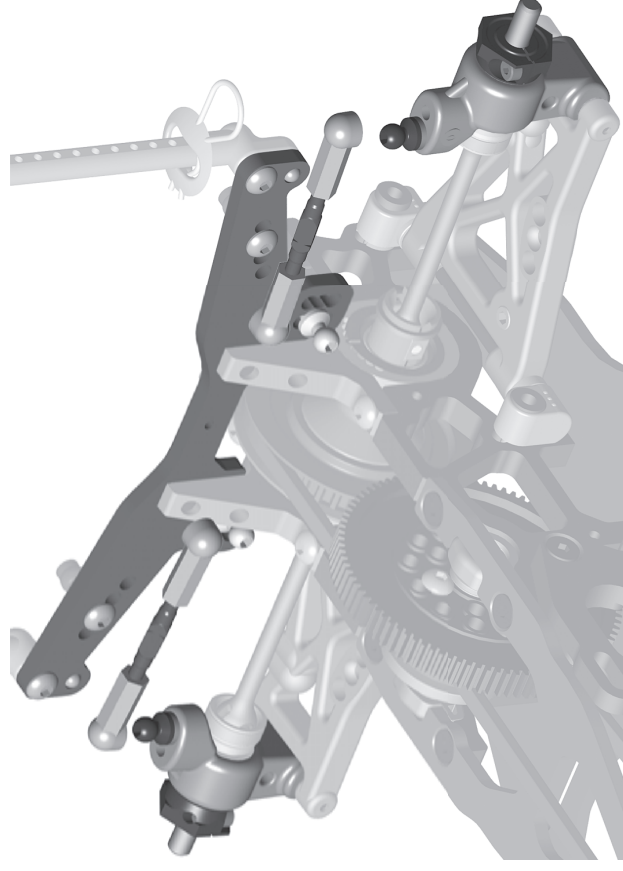
**front - camber links**



**front - steering links**



**front - draglink**

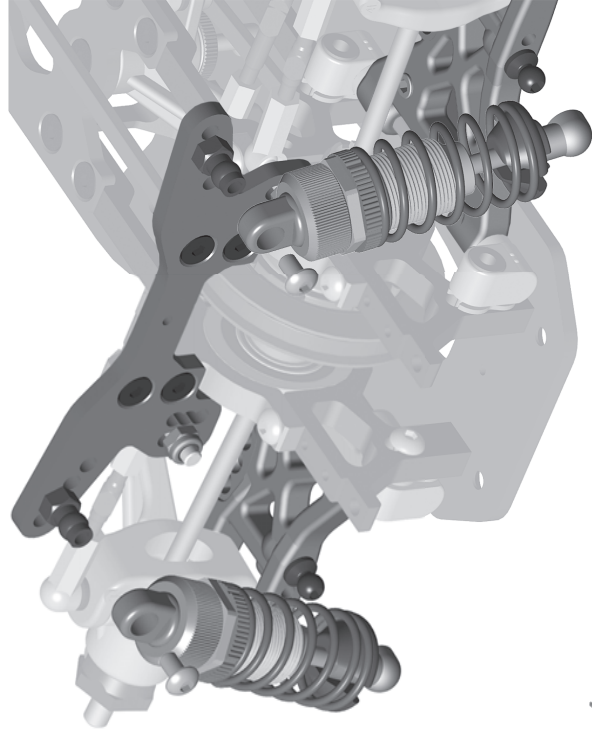


**rear - camber links**

## Bag 6 - Shocks



31530, qty 2  
M3x5 bhcs

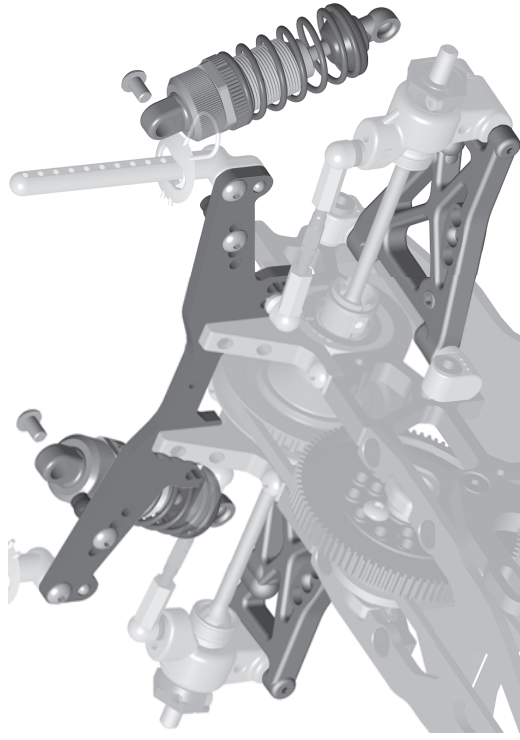


1:1

front



31530, qty 2  
M3x5 bhcs



1:1

rear



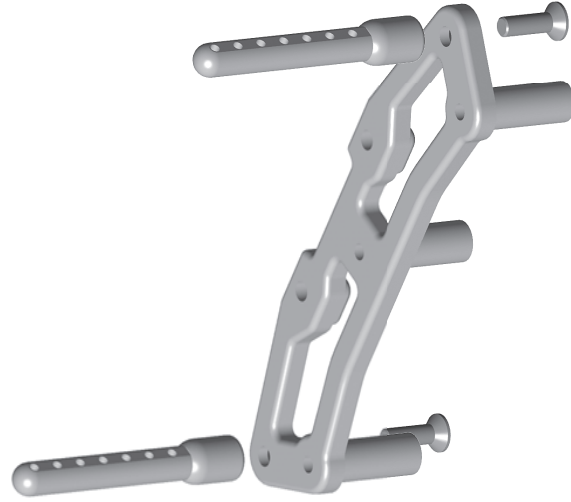
25202, qty 2  
M3x10 fhcs



31271, qty 1  
bumper brace



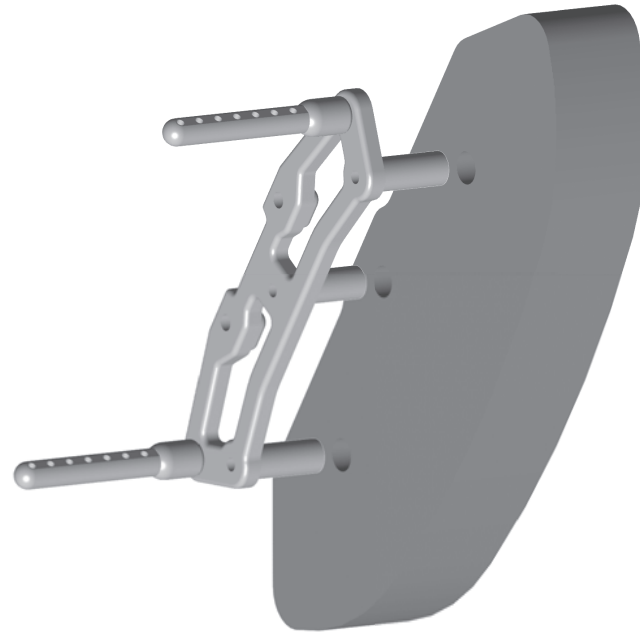
2230, qty 2  
body post



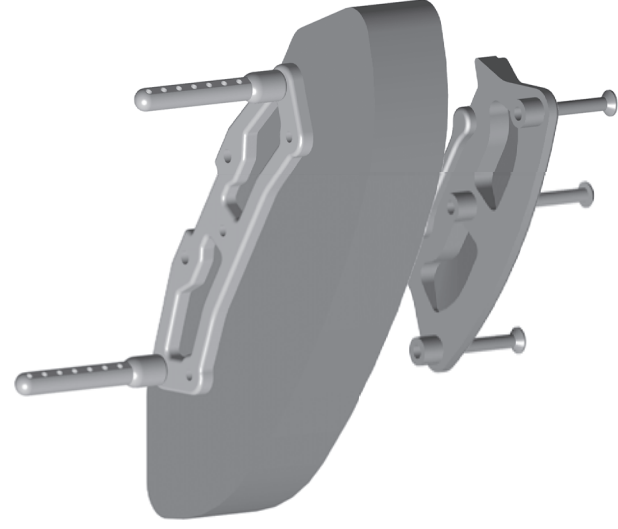
1:1



31272, qty 1  
foam bumper







1:1 1:1



25204, qty 2  
M3x16 fhcs



25187, qty 1  
M3x14 bhcs



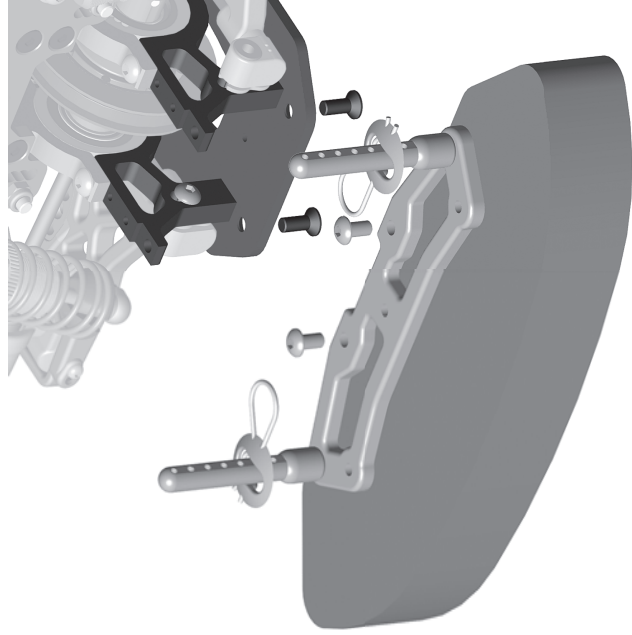
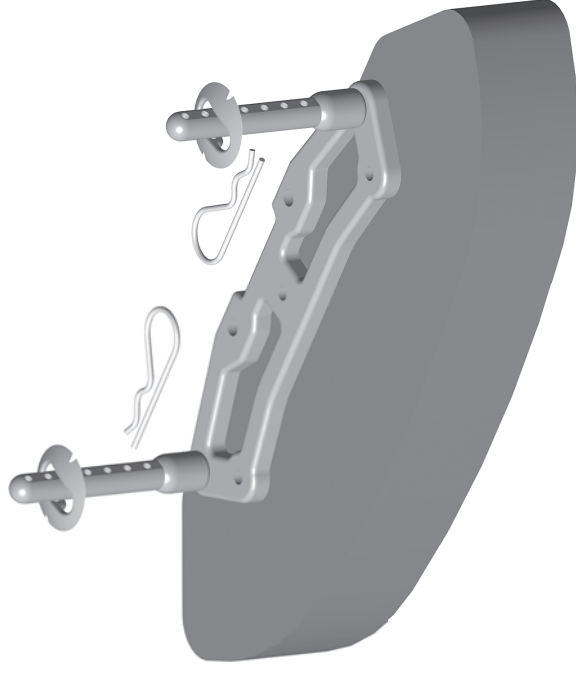
31270, qty 1  
front bumper



3897, qty 2  
swivel mounts



6332, qty 2  
body clips



1:1 1:1



25201, qty 2  
M3x8 fhcs



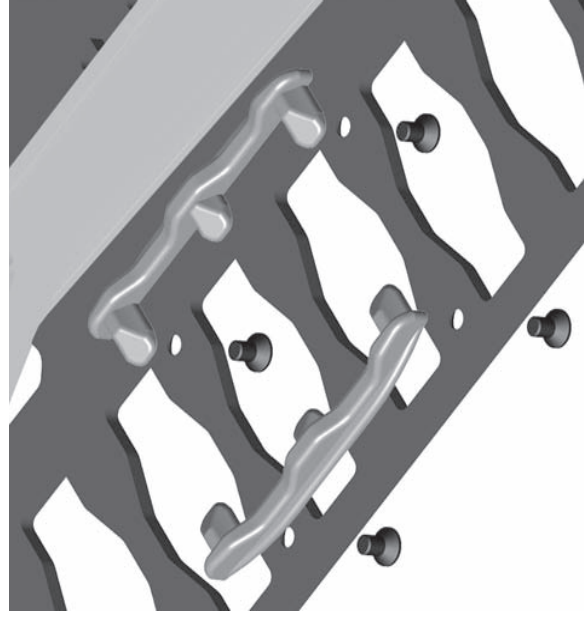
31531, qty 2  
M3x6 bhcs



31540, qty 4  
M3x5 fhcs

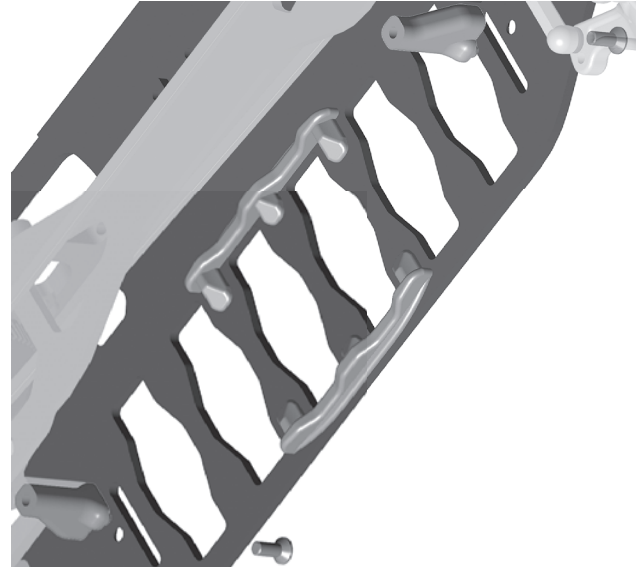


31255, qty 2  
battery support



1:1

## Battery Strap - Install



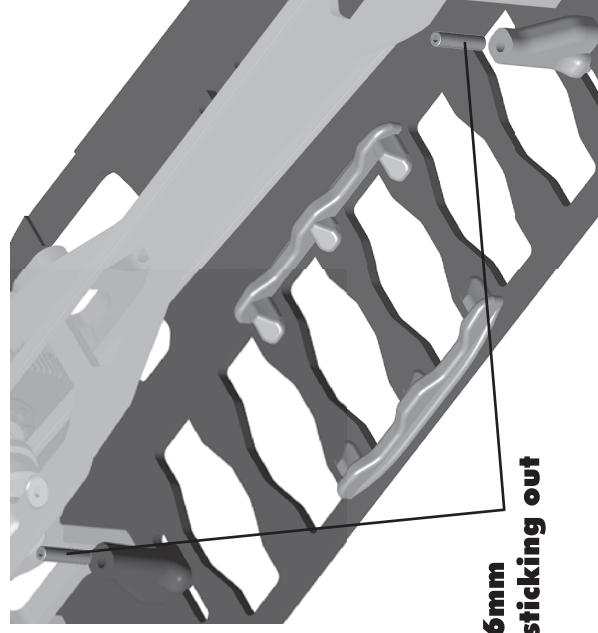
1:1



25201, qty 2  
M3x8 fhrs



31254, qty 2  
battery strap  
posts

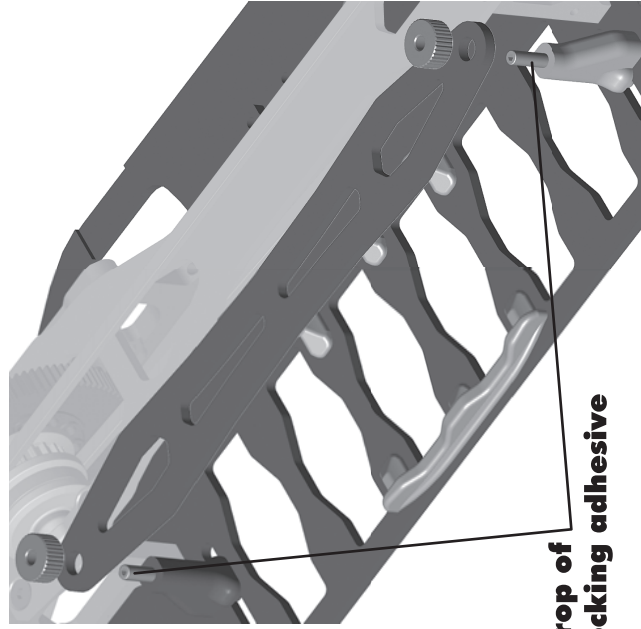


6mm  
sticking out

1:1



1787 qty 2  
servo screw



drop of  
locking adhesive



1787, qty 2  
thumbscrew



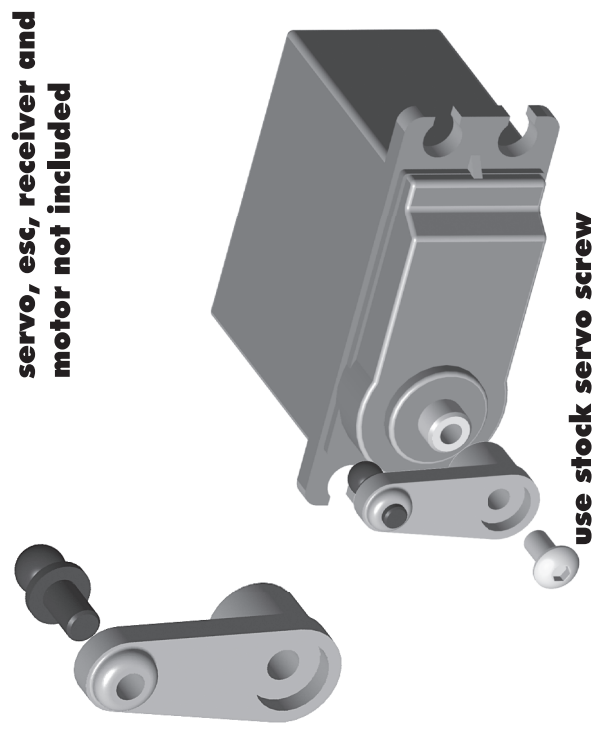
31256, qty 1  
battery strap



31280, qty 1  
ballstud, 5mm



9180, qty 1  
servo horn



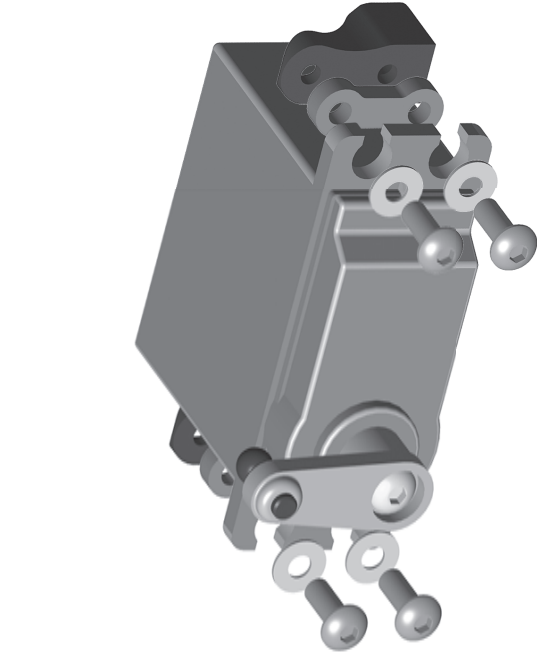
servo, esc, receiver and  
motor not included

use stock servo screw



1:1

## Electronics - Install



31532, qty 4  
M3x8 bhcs



71246, qty 2  
servo mount



71337, qty 4  
gold washer



71336, qty 2  
servo mount  
spacer



1:1

1:1

## Steering Servo Chart\*

**Airtronics** 94102

**Airtronics**

94738, 94157, 94158, 94257, 94258, 94357, 94358, 94452, 94453, 94751, 94755

**Hitec**

HS-5625MG, HS-5645MG, HS625MG, HS645MG

**Hitec**

HS-322HD, HS-325HB, HS-965, HS-985MG, HS-5965, HS-5985MG, HS-425BB, HS-422

**JR**

Z4725, Z4750, Z2750, Z8450, Z8550, NES-4750

**JR**

Z250, Z550

**Futaba**

S9204, S9250, S9450, S148

**Futaba**

S3003, S9202, S9101

**Futaba**

S9404

**KO**

PS-401, PS-2001, PS-2004, PS-2015, PS-2173, PS-2174, PS-2123, PS-2143, PS-2144

#31111  
Spacer

no spacer

thick spacer

no spacer

thin spacer

no spacer

thin spacer

no spacer

thin spacer

thick spacer

thin spacer

#9180  
Servo Arm

A

A

H

H

J

J

F

F

F

J

\*Not all servo's are listed.



31540, qty 2  
M3x5 fhcs



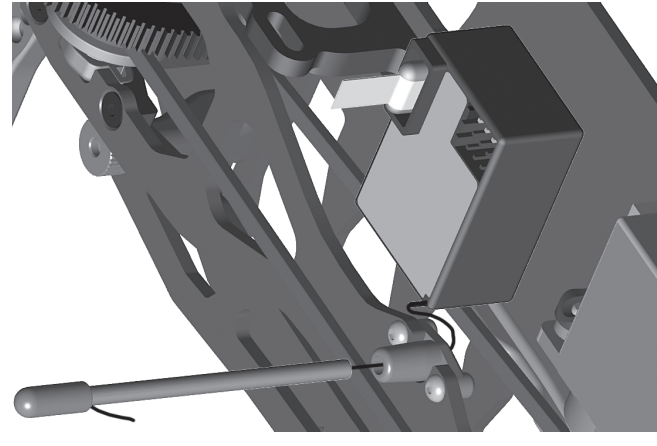
31520, qty 2  
M2.5x6 bhcs



31113, qty 1  
antenna mount



6338, qty 1  
antenna tube  
and cap



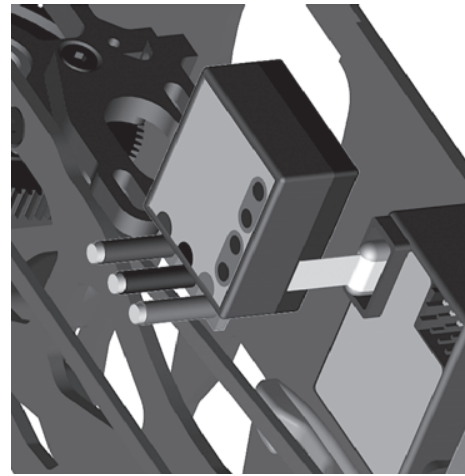
1:1



1:1



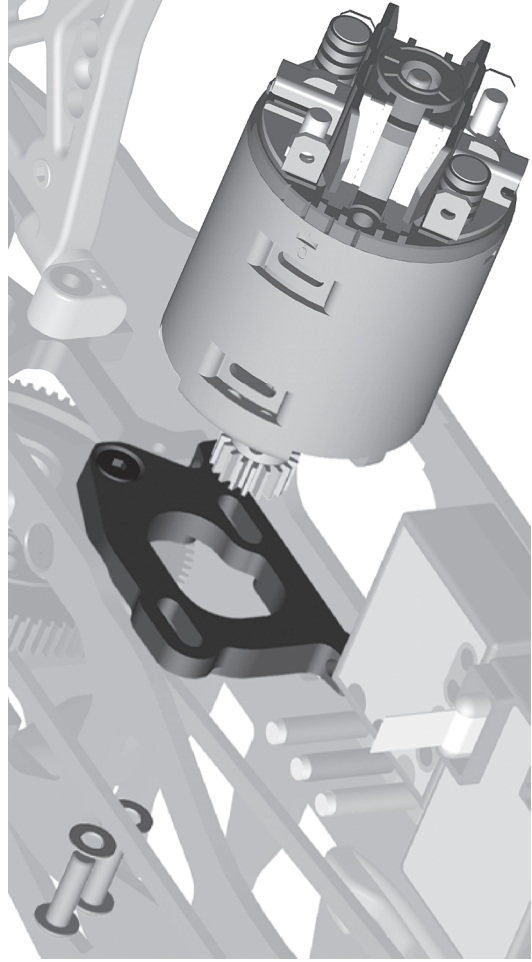
6727, qty 1  
servo tape



31531, qty 2  
M3x6 blhrs



9630, qty 2  
alum. washer



1:1



1:1

gearing will depend on the  
motor and track size. pinion  
gear and set screw not included.

Anti-Roll Bars - Install



31269, qty 4  
anti-roll bar  
pivot



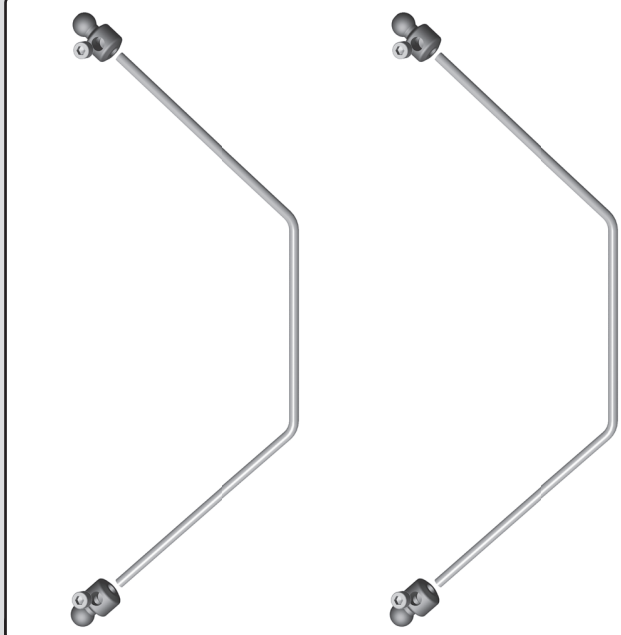
31500, qty 4  
M3x2.5 setscrew



31262, qty 1  
anti-roll bar,  
silver, 1.5mm,  
**front**



31261, qty 1  
anti-roll bar,  
black, 1.25mm,  
**rear**



1:1



31511, qty 2  
M2x5 shcs



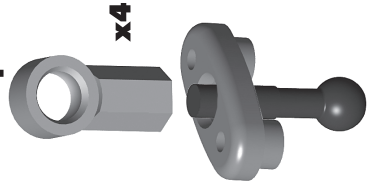
8828, qty 1  
anti-roll bar  
ball cup



31269, qty 1  
anti-roll bar  
pivot cap



31058, qty 1  
anti-roll bar  
pivot ball, blue

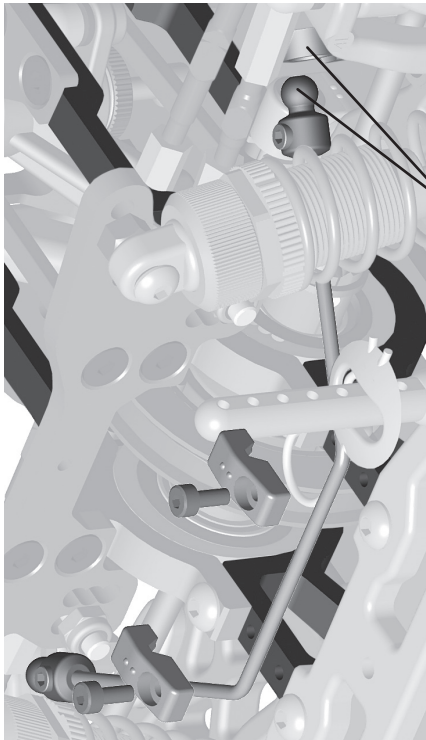


all 4 equal length



1:1





1:1

ball into cup

When changing the anti-roll bar, replace the anti-roll bar mount with the correct corresponding mount to ensure a tight fit. This helps prevent unwanted anti-roll bar movement.

- 1 dot: 1.25mm bar
- 2 dots: 1.50mm bar
- 3 dots: 1.75mm bar

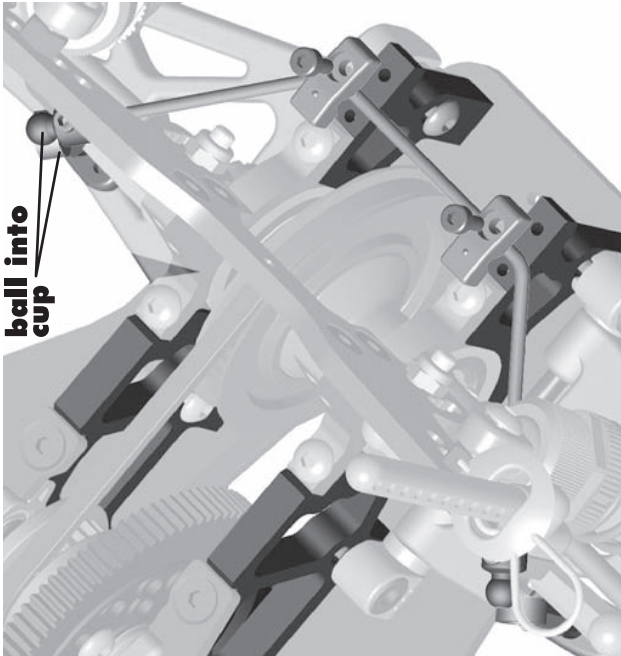
Anti-Roll Bar Mount System



31511, qty 2  
M2x5 shcs



31264, qty 2  
anti-roll bar  
mount, 1.25mm



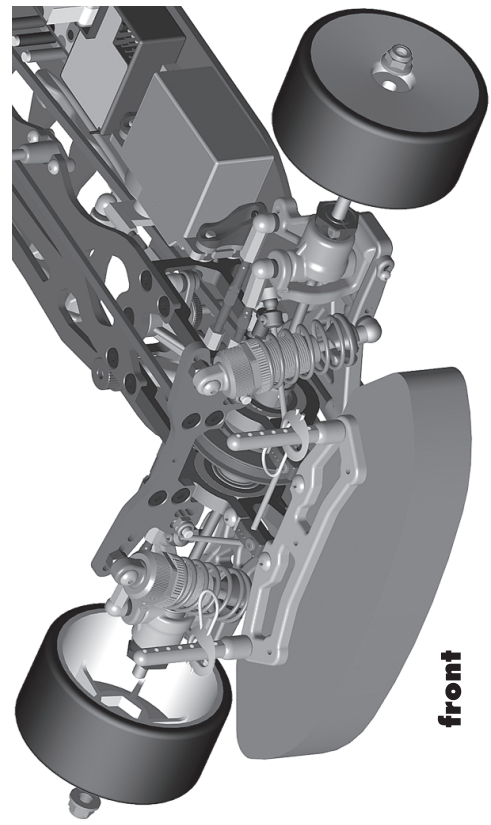
1:1

ball into cup

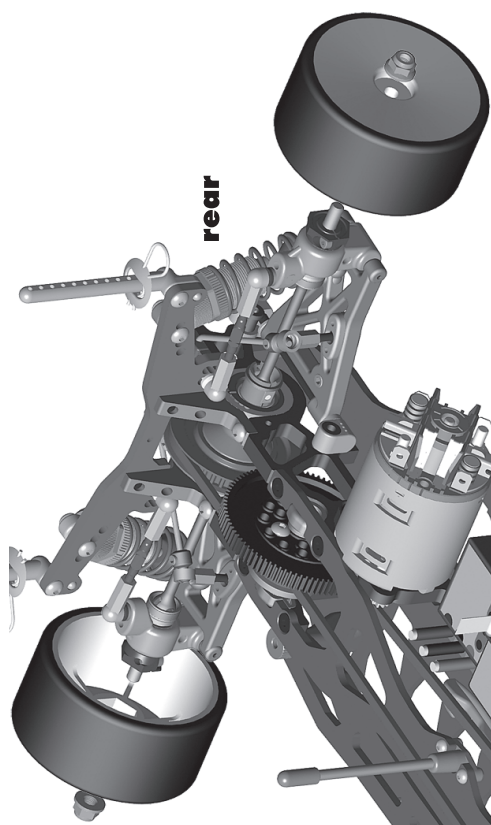
## Wheels/Tires - Install



25391, qty 4  
M4 wheel nut



front



rear

wheel & tires not included

### Ackermann

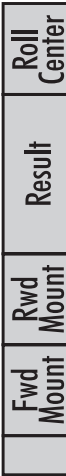
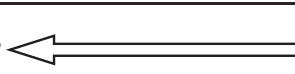
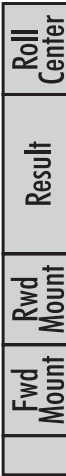
The inside hole on the steering blocks gives more Ackermann, while the outboard hole yields less Ackermann. Similarly, the rearward holes on the steering bellcrank produce more Ackermann, while the forward holes give less. Increasing Ackermann will smooth out steering and is best when running a one-way or on a high traction surface such as carpet. Reduced Ackermann will typically work best with a front diff or a solid axle. This will give more mid-to-exit steering and more corner speed.

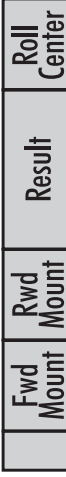
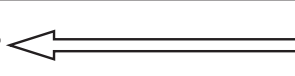
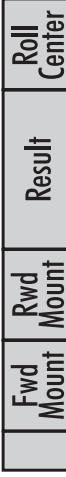
### Ride Height

The standard starting point for ride height is 4.5mm (keep in mind that your local track may have minimum ride height requirements). You can slightly raise the rear relative to the front to give the car more steering. Raise the car slightly for tracks with large bumps.

### Arm Mount Position

The TC5s arm mounting system allows for maximum adjustability for both rubber tire and foam tire conditions. Six arm mount positions allow you to run the pins flat, or with angles to produce kick-up, anti-dive, anti-squat, and pro-squat. The arm mounts are indicated one, two, and three with the corresponding number of dots on the outer face, where one is the lowest and three is the highest. Each bulkhead has two positions for the arm mount, the lower (position A) and upper (position B). The following chart shows some examples of arm mount positions and there resulting arm angle shown in degrees:

| Front                                                                               |    | Fwd Mount | Rwd Mount    | Result                                                                                | Roll Center |
|-------------------------------------------------------------------------------------|----|-----------|--------------|---------------------------------------------------------------------------------------|-------------|
|  | 1B | 3A        | 1° Kick-Up   |   | High        |
|                                                                                     | 3A | 1B        | 1° Anti-Dive |                                                                                       |             |
|                                                                                     | 1B | 2A        | 2° Kick-Up   |                                                                                       |             |
|                                                                                     | 2A | 1B        | 2° Anti-Dive |                                                                                       |             |
|                                                                                     | 3A | 3A        | Flat         |                                                                                       |             |
|                                                                                     | 3A | 2A        | 1° Kick-Up   |                                                                                       |             |
|                                                                                     | 2A | 3A        | 1° Anti-Dive |                                                                                       |             |
|                                                                                     | 3A | 1A        | 2° Kick-Up   |                                                                                       |             |
|                                                                                     | 1A | 3A        | 2° Anti-Dive |                                                                                       |             |
|                                                                                     | 2A | 2A        | Flat         |                                                                                       |             |
|  | 2A | 1A        | 1° Kick-Up   |  | Std.        |
|                                                                                     | 1A | 2A        | 1° Anti-Dive |                                                                                       |             |
|                                                                                     | 1A | 1A        | Flat         |                                                                                       |             |
|                                                                                     |    |           |              |                                                                                       |             |

| Rear                                                                               |    | Fwd Mount | Rwd Mount     | Result                                                                               | Roll Center |
|------------------------------------------------------------------------------------|----|-----------|---------------|--------------------------------------------------------------------------------------|-------------|
|  | 2B | 1B        | 1° Anti-Squat |   | High        |
|                                                                                    | 1B | 2B        | 1° Pro-Squat  |                                                                                      |             |
|                                                                                    | 2B | 3A        | 2° Anti-Squat |                                                                                      |             |
|                                                                                    | 3A | 2B        | 2° Pro-Squat  |                                                                                      |             |
|                                                                                    | 1B | 1B        | Flat          |                                                                                      |             |
|                                                                                    | 1B | 3A        | 1° Anti-Squat |                                                                                      |             |
|                                                                                    | 3A | 1B        | 1° Pro-Squat  |                                                                                      |             |
|                                                                                    | 1B | 2A        | 2° Anti-Squat |                                                                                      |             |
|                                                                                    | 2A | 1B        | 2° Pro-Squat  |                                                                                      |             |
|                                                                                    | 3A | 3A        | Flat          |                                                                                      |             |
|  | 3A | 2A        | 1° Anti-Squat |  | Low         |
|                                                                                    | 2A | 3A        | 1° Pro-Squat  |                                                                                      |             |
|                                                                                    | 2A | 2A        | Flat          |                                                                                      |             |
|                                                                                    |    |           |               |                                                                                      |             |

### Anti-Dive (front)

Rear mount higher than front mount, negative result. Adding anti-dive reduces weight transfer to the front on deceleration entering corners. It also reduces caster at the wheel.

### Anti-Squat (rear)

Front mount higher than rear mount, positive result. Increasing anti-squat will make the rear suspension stiffer. It tends to give the car more entry steering and reduce rearward weight transfer on power.

### Pro-Squat (rear)

Rear mount higher than front mount, negative result. Running Pro-Squat will increase rearward weight transfer on power.

### Kick-Up (front)

Front mount higher than rear mount, positive result. Increasing kick-up will give more entry steering, as well as increasing caster at the wheel.

### Droop

The standard settings of 5mm front and 4mm rear will work best in most cases. Reducing the droop by 0.5 to 1mm both front and rear will increase responsiveness. On carpet, you should run more droop to account for smaller tire diameters.

### Caster

Caster describes the angle of the kingpin from vertical while looking from the side of the car. Positive caster means the top of the kingpin leans rearward. Negative caster means the kingpin is leaning towards the front of the car. Since caster is measured at the wheel, it is affected by running any inclination in your inboard arm mount. Kick-up adds (+) caster, and anti-dive adds (-) caster.

When figuring out your caster at the wheel, add the number of degrees of kick-up or anti-dive and add it to the degree caster blocks you have on the car.

Typically for most racing surfaces, 4 degrees caster is the normal starting point for the Team. From there, increase caster to reduce mid to exit steering and make the front end less responsive. Conversely, decreased caster gives a more responsive feel and more exit steering.

Motor Gearing

Motor gearing is a starting recommendation only. You may need to adjust your gearing according to your track size. Internal Gear Ratio is 2.0.

| Spur (48 Pitch) |      |       |       |       |       |       |       |  |  |
|-----------------|------|-------|-------|-------|-------|-------|-------|--|--|
|                 | 84   | 85    | 86    | 87    | 88    | 89    | 90    |  |  |
| 17              | 9.88 | 10.00 | 10.12 | 10.24 | 10.35 | 10.47 | 10.59 |  |  |
| 18              | 9.33 | 9.44  | 9.56  | 9.67  | 9.78  | 9.89  | 10.00 |  |  |
| 19              | 8.84 | 8.95  | 9.05  | 9.16  | 9.26  | 9.37  | 9.47  |  |  |
| 20              | 8.40 | 8.50  | 8.60  | 8.70  | 8.80  | 8.90  | 9.00  |  |  |
| 21              | 8.00 | 8.10  | 8.19  | 8.29  | 8.38  | 8.48  | 8.57  |  |  |
| 22              | 7.64 | 7.73  | 7.82  | 7.91  | 8.00  | 8.09  | 8.18  |  |  |
| 23              | 7.30 | 7.39  | 7.48  | 7.57  | 7.65  | 7.74  | 7.83  |  |  |
| 24              | 7.00 | 7.08  | 7.17  | 7.25  | 7.33  | 7.42  | 7.50  |  |  |
| 25              | 6.72 | 6.80  | 6.88  | 6.96  | 7.04  | 7.12  | 7.20  |  |  |
| 26              | 6.46 | 6.54  | 6.62  | 6.69  | 6.77  | 6.85  | 6.92  |  |  |
| 27              | 6.22 | 6.30  | 6.37  | 6.44  | 6.52  | 6.59  | 6.67  |  |  |
| 28              | 6.00 | 6.07  | 6.14  | 6.21  | 6.29  | 6.36  | 6.43  |  |  |
| 29              | 5.79 | 5.86  | 5.93  | 6.00  | 6.07  | 6.14  | 6.21  |  |  |
| 30              | 5.60 | 5.67  | 5.73  | 5.80  | 5.87  | 5.93  | 6.00  |  |  |
| 31              | 5.42 | 5.48  | 5.55  | 5.61  | 5.68  | 5.74  | 5.81  |  |  |
| 32              | 5.25 | 5.31  | 5.38  | 5.44  | 5.50  | 5.56  | 5.63  |  |  |

Tips for Beginners

Before making any changes to the standard setup, make sure you can get around the track without crashing. Changes to your car will not be beneficial if you can't stay on the track. Your goal is consistent laps.

Once you can get around the track consistently, start tuning your car. Make only ONE adjustment at a time, testing it before making another change. If the result of your adjustment is a faster lap, mark the change on the included setup sheet (make additional copies of the sheet before writing on it). If your adjustment results in a slower lap, revert back to the previous setup and try another change.

When you are satisfied with your car, fill in the setup sheet thoroughly and file it away. Use this as a guide for future track days or conditions.

For more racing tips and setup information, go to:  
www.RC10.com • www.TeamAssociated.com • www.CompetitionX.com

Ballstud Height/Camber Location

You can lower the front or rear roll center by lowering the arm mounts, or raising the inner ballstud. A lower roll center will put more weight on the tires during cornering, and increases traction to that end of the car. Shortening the link (typically used on high grip and carpet) will raise the roll center and decrease grip. A similar effect can come from lowering the ballstud.

Battery Placement (4 or 5 cell packs)

For most cases, run the battery in the standard forward position. Typically this will be the most stable and easiest to drive. Try moving the battery back if you encounter a low traction surface.

Wheelbase

Lengthening the front will reduce steering, shortening the front will increase steering. Shortening the rear will increase rear grip, lengthening the rear will decrease rear traction.

Rear Toe-In

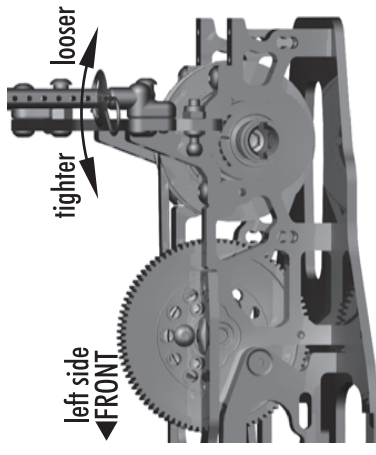
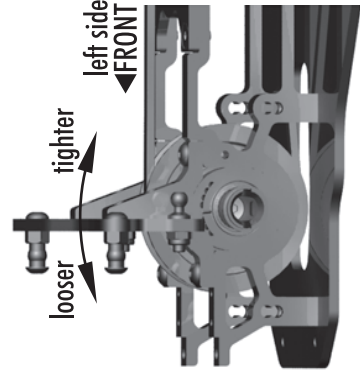
Decreasing toe-in will decrease rear traction and increase corner speed. Use numbered toe shims for adjustment.

Belt Tension

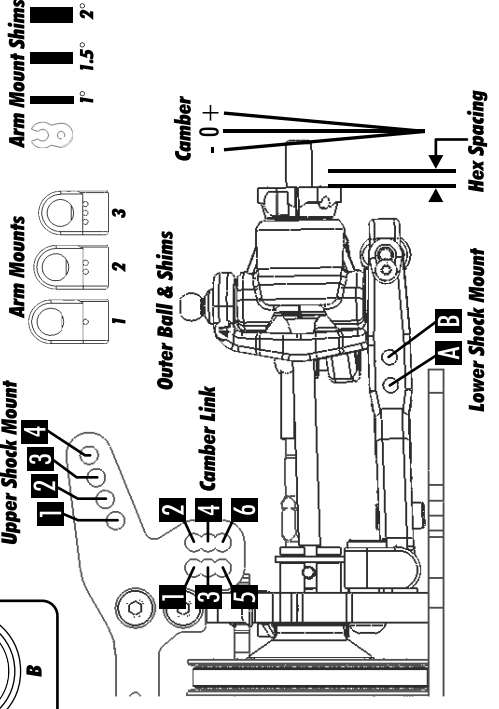
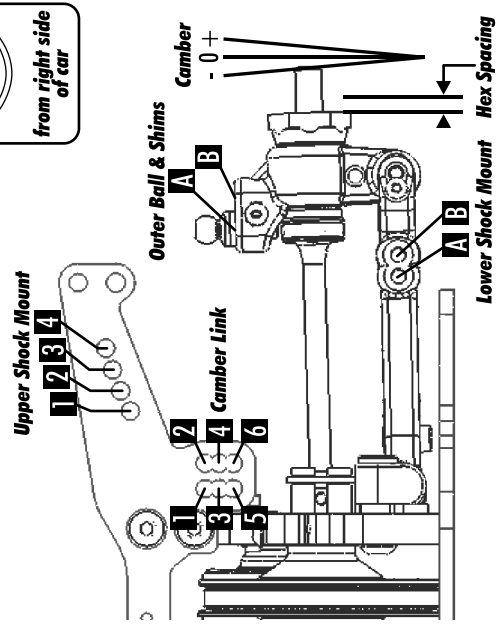
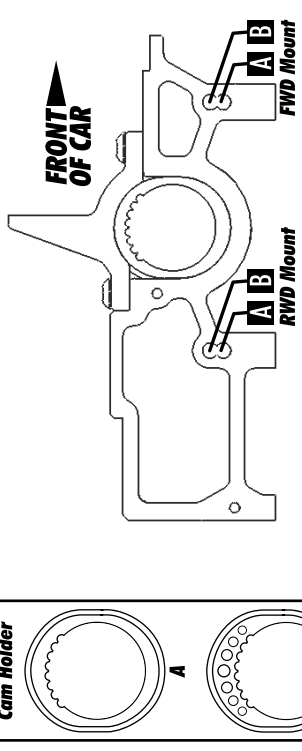
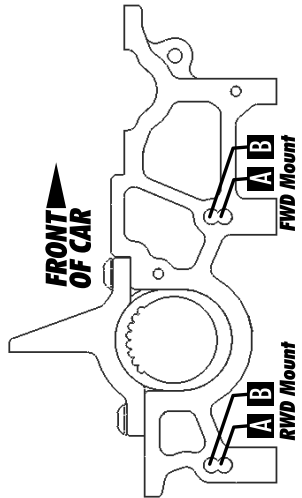
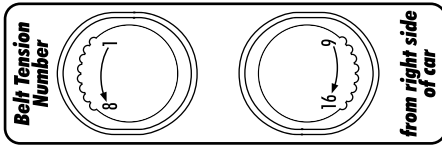
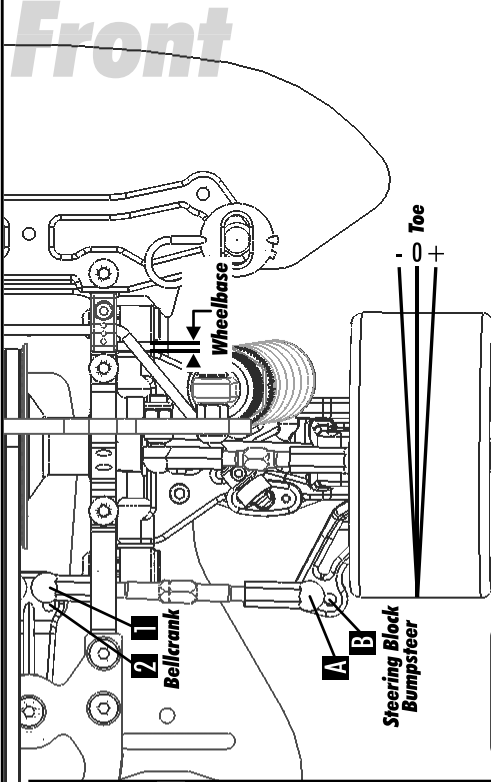
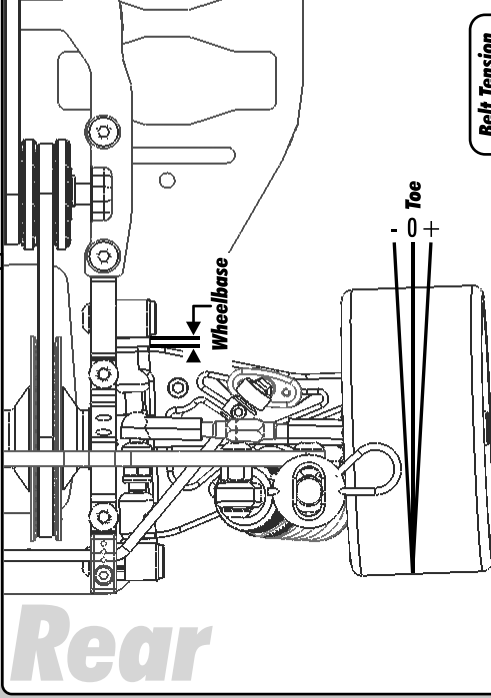
When altering the differential height, you will need to adjust the tension of the belt. Follow the chart below.

| Height   | Pos. |
|----------|------|
| Mid-Low  | 2    |
| Mid-High | 9    |
| Low      | 1    |
| High     | 10   |

| Height   | Pos. |
|----------|------|
| Mid-Low  | 6    |
| Mid-High | 13   |
| Low      | 8    |
| High     | 11   |



NOTE: Charts show left side cam positions from the left side of the car. Match right side cam position to left side cam position.



| Rear | Alignment     | Front |
|------|---------------|-------|
|      | Ride Height   |       |
|      | Camber        |       |
| N/A  | Caster        |       |
|      | Rear Hub Toe  | N/A   |
|      | Toe           |       |
|      | Hex Spacing   |       |
|      | Wheelbase     |       |
| N/A  | Steering Link |       |
| N/A  | Bumpsteer     |       |

|                      |                     |
|----------------------|---------------------|
| Notes:               |                     |
| <b>Differentials</b> |                     |
|                      | Type                |
|                      | Setting             |
|                      | Belt Tension Number |
|                      | Cam Holder          |

|                     |                   |
|---------------------|-------------------|
| <b>Notes:</b>       |                   |
| <b><i>Tires</i></b> |                   |
|                     | Tire              |
|                     | Tire Diameter     |
|                     | Insert & Wheel    |
|                     | Additive & Amount |

|                      |         |
|----------------------|---------|
| <b>Notes:</b>        |         |
| <b><i>Shocks</i></b> |         |
|                      | Oil     |
|                      | Piston  |
|                      | Rebound |
|                      | Spring  |

|                |           |  |
|----------------|-----------|--|
| Notes:         |           |  |
| <b>Chassis</b> |           |  |
|                | Chassis   |  |
|                | Top Plate |  |

| Notes:              |                      |
|---------------------|----------------------|
| Suspension Geometry |                      |
|                     | Shock Position       |
|                     | Camber Link Position |
|                     | Outer Ball & Shims   |
|                     | FWD Arm Mount        |
|                     | FWD Mount Shims      |
|                     | RWD Arm Mount        |
|                     | RWD Mount Shims      |
|                     | Droop                |
|                     | Anti-Roll Bar        |

|                        |                |
|------------------------|----------------|
| <b>Body &amp; Wing</b> | <b>Battery</b> |
|                        |                |

| <b>Motor</b> | <b>Gear</b> | <b>Brush</b> | <b>Spring</b> | <b>Timing</b> |
|--------------|-------------|--------------|---------------|---------------|
|              | /           |              |               |               |