

# RC28F

TEAM KIT

1:28 Scale 2WD Electric  
On Road Competition Kit



# TEAM ASSOCIATED



1:28 Scale 2WD Electric On Road Competition Kit Manual

#20195 RC28F 2WD Kit



CHAMPIONS by DESIGN

[AssociatedElectrics.com](http://AssociatedElectrics.com)

# TEAM ASSOCIATED

## :: Introduction

Thank you for purchasing this Team Associated product. This assembly manual contains instructions and tips for building and maintaining your new vehicle. Please take a moment to read through the manual and familiarize yourself with the steps. We are continually changing and improving our designs; therefore, actual parts may appear slightly different than the illustrations. New parts will be noted on supplementary sheets located in the appropriate parts bags.

Check each bag for these sheets before you start to build.

Check [www.rc10.com](http://www.rc10.com) for the latest versions of our instruction manuals.

## :: RC28F Features

- Machined aluminum chassis and center bulkhead design allows for 24mm wide battery packs and ample space for mounting electronics while also reducing overall weight
- Fixed arm style front end with optional molded upper arms to adjust caster and camber
- Front bulkhead design allows for quick upper arm changes with consistent fitment and alignment
- Formula style polycarbonate body and molded plastic wings included
- Torsion style side links act as side spring with soft, medium, and hard options included
- Adjustable rear pod roll center inserts to tune roll characteristics to grip level
- Optimized roll geometry with side damper tubes
- Team carbon fiber shims
- Gear differential included but can fit other aftermarket options currently available
- V2 White wheels included that fit optional front wheel flanges to tune steering feel
- Team Associated's quality, distribution, support, and customer service

## :: Additional

Your new RC28F Kit comes unassembled and requires the following items for completion (refer to [AssociatedElectrics.com](http://AssociatedElectrics.com) for suggestions):

- R/C two channel surface frequency radio system
- AA-size batteries for transmitter
- Electronic Speed Control ("ESC")
- Steering servo
- R/C electric motor
- Battery charger (a peak detection charger, or LiPo compatible charger)
- 2 cell LiPo battery pack
- Polycarbonate specific spray paint
- Cyanoacrylate glue ("CA") (#1697)
- Thread locking compound (#1596)
- Pinion gear, size determined by type/turn or kV of motor

## :: Other Helpful Items

- Silicone Shock Fluid (Refer to [AssociatedElectrics.com](http://AssociatedElectrics.com) for complete listings)
- 4.5mm Nut Wrench
- FT Body Scissors (#1737)
- Calipers or a Precision Ruler
- .050", 0.9mm, 1.3mm, 1.5mm Hex Wrenches
- FT Body Reamer (#1499)
- Soldering Iron
- Small Needle Nose Pliers
- Hobby Knife

Associated Electrics, Inc.  
21062 Bake Parkway.  
Lake Forest, CA 92630



Customer Service  
Tel: 949.544.7500  
Fax: 949.544.7501

Hardware - 1:1 Scale View

Button Head (bhcs)

- 2x4mm (21666)
- 2x5mm (21666)

Shims and Washers

- 3.8x2x0.5mm (21649)
- 3.8x2x1mm (21650)
- 5x3x0.2mm (21644)
- 5.5x0.5mm (31381)
- 5.5x1.0mm (31382)
- 5.5x2.0mm (31383)

Flat Head (fhcs)

- 2x4mm (21667)
- 2x5mm (21667)
- 2x6mm (21667)

Phillips Head (phcs)

- 1 x 3mm (21669)
- 1 x 8mm (21669)

Ball Bearing / Axle Spacer

- 3x6x2.5mm (21643)
- 3x6x2.5mm (21653)

Nuts (lock/plain)

- M2 LockNut, Aluminum (21689)

Set Screws

- 2x3mm (21668)
- 2x6mm (21668)
- 3x3mm (25225)

Notes

## Table of Contents

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| 3..... | 1:1 Hardware “Fold Out” / Tuning Tips | 12..... | Wheels / Tires / Electronics / Body<br>Build<br>Bag 7 |
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| 5..... | Chassis Build<br>Bag 1                | 15..... | Setup Sheet “Blank”                                   |
| 7..... | Pivot Blocks Build<br>Bag 2           | 16..... | Back Cover                                            |
| 7..... | Rear Pod Build<br>Bag 3               |         |                                                       |
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## Notes



This symbol indicates a special note or instruction in the manual.



This symbol indicates the number of the same part that is required.



This symbol indicates the order within a step to assemble parts.



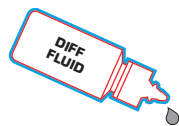
This symbol indicates there are optional FT parts available



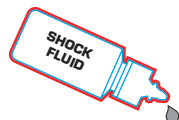
This symbol indicates a Racers Tip.



This symbol indicates where Thread Lock Adhesive should be applied. \*not included



This symbol indicates where Diff Fluid should be applied.



This symbol indicates where Shock Fluid should be applied.



This symbol indicates where FT Silicone Grease should be applied. \*not included



This symbol indicates where FT Diff Lube should be applied. \*not included



This symbol indicates where Black Grease should be applied.



This symbol indicates where Green Slime can be applied. \*not included



There is a 1:1 hardware foldout page in the front of the manual. To check the size of a part, line up your hardware with the correct drawing until you find the exact size. Each part in the foldout has a number assigned to it for ordering replacement parts.

### Bag 1 - Step 1



Note:  
Use small pliers to lightly  
hold pivot balls to assemble.  
Use caution not to mar the  
surface of the pivot ball.

21668 x2  
2x6mm  
Set Screw

21647 x2  
Threaded  
Pivot Ball  
3.5mm

21636  
Servo  
Horn



Note:  
Install set screws flush  
with servo horn!



Note:  
Servo horn designed for 20T  
4mm diameter spline servo.

### Bag 1 - Step 2



27175  
Reedy Micro  
Hi-Speed  
Servo

Servo  
\*Not Included  
(20T Spline)

21633 x2  
Servo Mount

21666 x2  
2x4mm  
BHCS

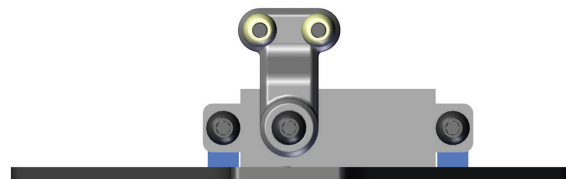
Note servo  
orientation

21666  
2x4mm  
BHCS

### Bag 1 - Step 3



Center steering servo so  
that the servo horn is on the  
centerline of the chassis



21667 x2  
2x4mm  
FHCS

21861  
RC28F  
Chassis  
Plate

## Bag 1 - Step 4

Soft  
Kit Setup

Medium

Hard



Note:  
Torsion link shims included  
for using higher center pivot  
positions. 0.5mm for mid,  
1mm for high.  
Kit setup is 0mm.



21867  
RC28R.1  
Torsion Link,  
Medium

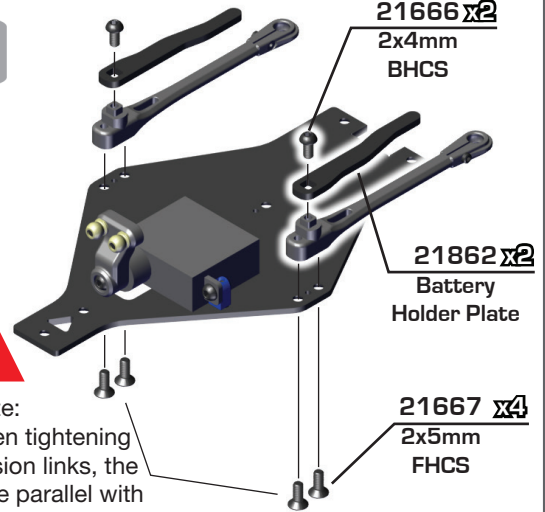
21669 x2  
1x3mm  
PHCS



Note:  
Leave loose. Use M1  
screw to remove play  
from torsion link pivot  
ball fitment.



Note:  
Take care when tightening  
screws for torsion links, the  
link needs to be parallel with  
the center line of the chassis.

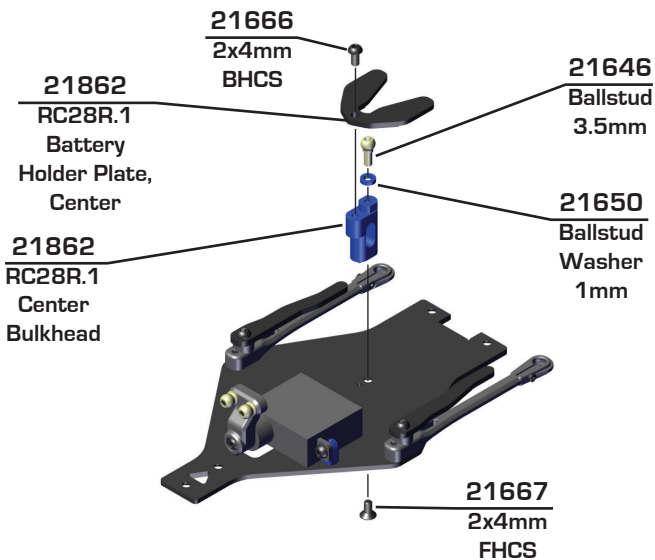


21666 x2  
2x4mm  
BHCS

21862 x2  
Battery  
Holder Plate

21667 x4  
2x5mm  
FHCS

## Bag 1 - Step 5



21862  
RC28R.1  
Battery  
Holder Plate,  
Center

21862  
RC28R.1  
Center  
Bulkhead

21666  
2x4mm  
BHCS

21646  
Ballstud  
3.5mm

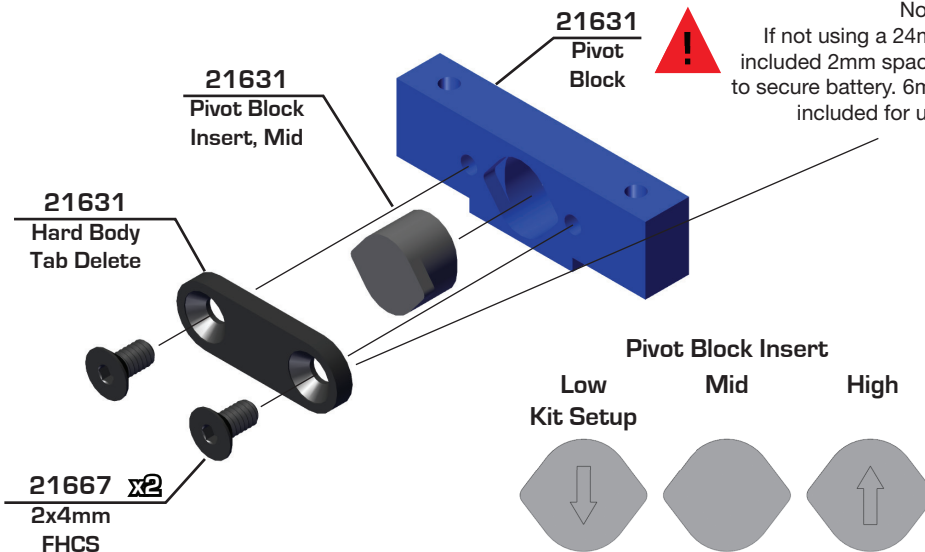
21650  
Ballstud  
Washer  
1mm

21667  
2x4mm  
FHCS



Note:  
Battery Holder Plate, Center has a  
machined face for battery fitment. Use  
the machined side for taller batteries.

## Bag 2 - Step 1



21631  
Pivot Block  
Insert, Mid

21631  
Pivot  
Block

21631  
Hard Body  
Tab Delete

Pivot Block Insert

Low  
Kit Setup

Mid

High

21667 x2  
2x4mm  
FHCS

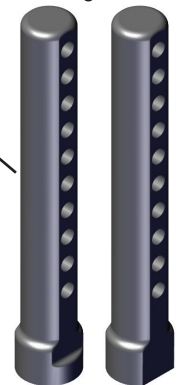


Note:  
If not using a 24mm width battery,  
included 2mm spacers may be needed  
to secure battery. 6mm and 8mm screws  
included for using spacers.



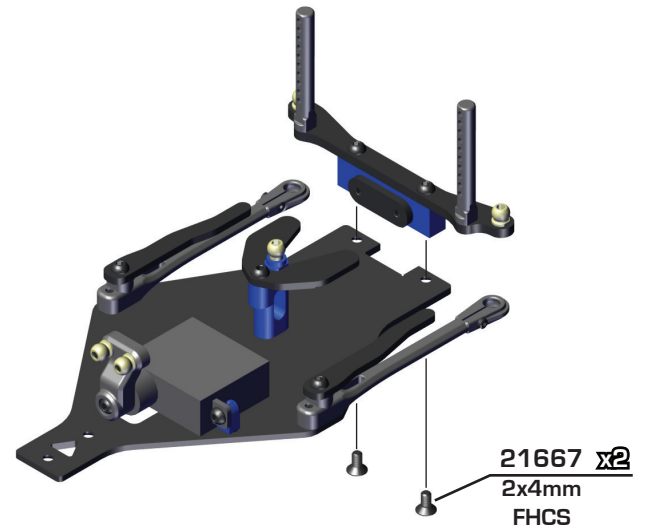
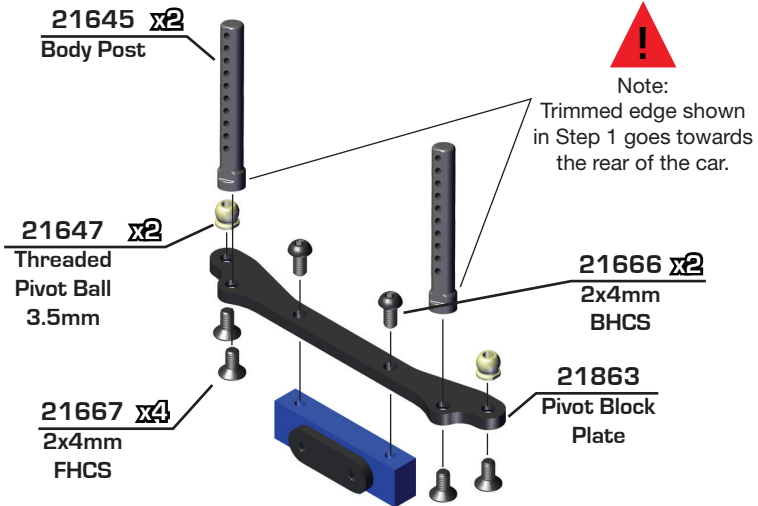
Note:  
Trim back edge like shown  
in image below.

21645  
Body Post

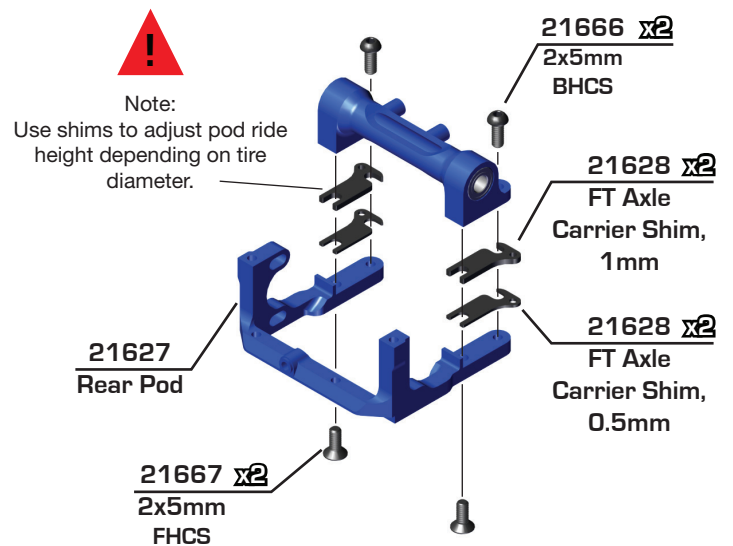
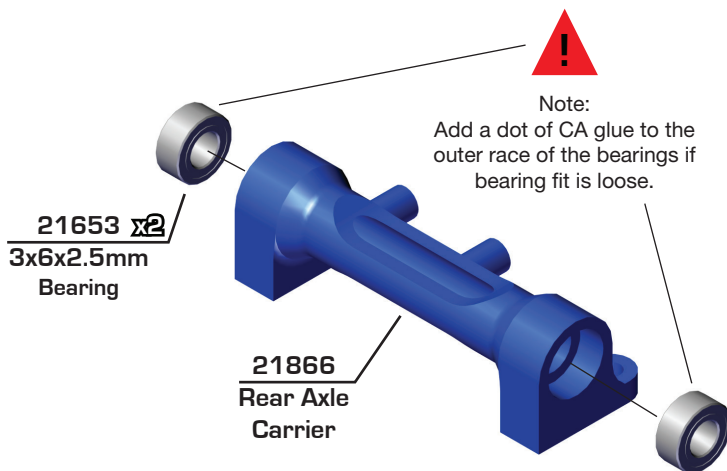


Before After

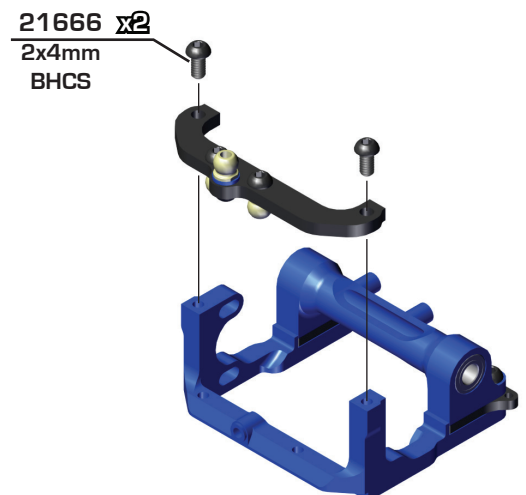
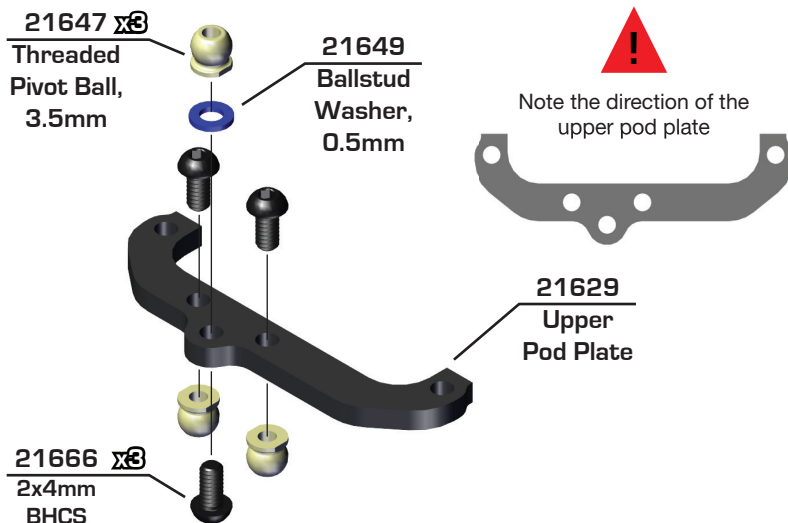
### Bag 2 - Step 2



### Bag 3 - Step 1



### Bag 3 - Step 2



### Bag 3 - Step 3

21646  
Ballstud  
3.5mm



21630  
RC28R FT  
Lower Pod  
Plate, Steel

21647 x2  
Threaded  
Pivot Ball,  
3.5mm

21667 x4  
2x4mm  
FHCS

21629  
Lower Pod  
Plate

! Note the direction and top/bottom (FHCS countersink facing downwards) of the lower pod plate.

Motor

\* Not Included  
Reedy Sonic  
1525 Motors



21690  
RC28R FT  
Aluminum  
1:28 Scale  
Pinion Gear  
Set, 9-11  
Tooth - 64p

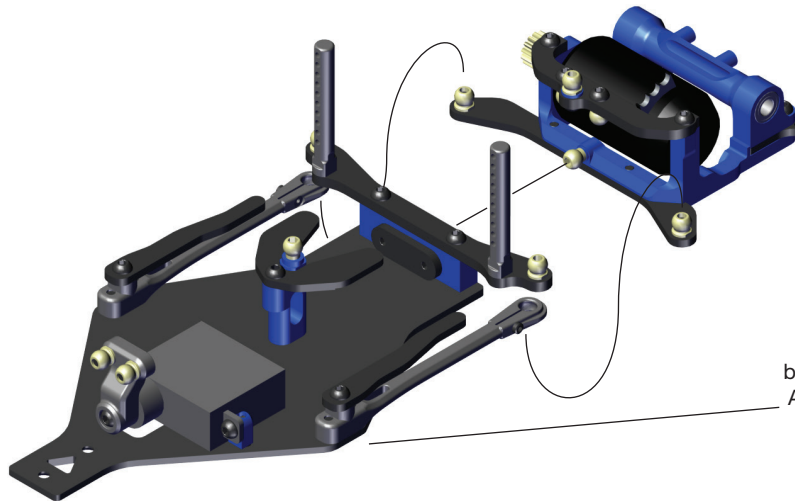


21691  
RC28R FT  
Aluminum  
1:28 Scale  
Pinion Gear  
Set, 12-14  
Tooth - 64p

64P Pinion  
and Set Screw  
\* Not Included

21666 x2  
2x5mm  
BHCS

### Bag 3 - Step 4



Note:  
Pinch torsion link on pivot ball with pliers lightly if tight. Adjust torsion bar tweak as needed by loosening and tightening screws.

### Bag 4 - Step 1

21638 x2  
Suspension  
Arm Pivot  
Ball

21865  
Front  
Bulkhead



21655  
RC28R  
FT Front  
Bulkhead  
Shim Set

21865  
Lower  
Arm

21667 x2  
2x6mm  
FHCS

21638  
Kingpin



Note:  
Boss facing up!

! Note the direction of the notch in the kingpin during installation! Shorter side down.

21636  
Steering  
Block

21668  
2x3mm  
Set Screw



Build x2 (right and left side)

## :: Bag 4 - Step 2



**21637**  
RC28R FT  
Adjustable  
Front Axles,  
Titanium

**21646**  
Ballstud  
3.5mm

**21650**  
Ballstud  
Washer,  
1mm



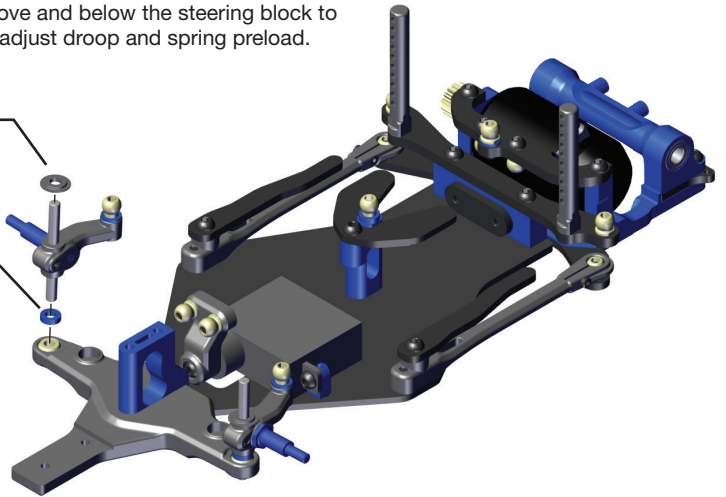
Note: Shims can be added and removed above and below the steering block to adjust droop and spring preload.

**21636**  
Spring  
Cup

**21650**  
Ballstud  
Washer,  
1mm



Take care to thread the axle into the steering block straight.



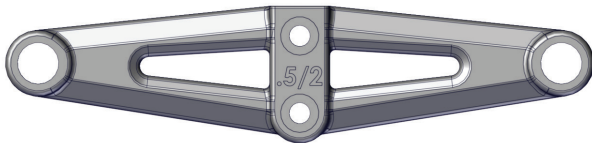
Build x2 (right and left side)

Install x2 (right and left side)

## :: Bag 4 - Step 3



Number on the left is for Camber, number on the right is for Caster.

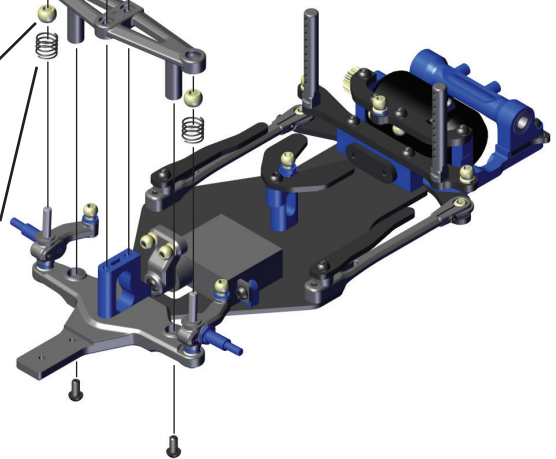


**21865**  
Upper Arm,  
0.5/2

**21638 x2**  
Suspension  
Arm Pivot  
Ball

**21651 x2**  
Front  
Spring, Red

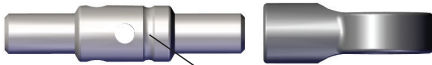
**21666 x4**  
2x4mm  
BHCS



## :: Bag 4 - Step 4



**21640 x2**  
Rod End



**21640**  
Turnbuckle,  
12mm



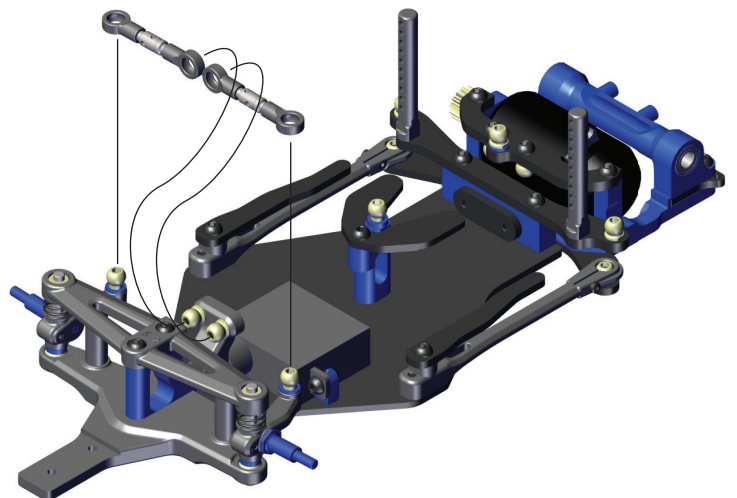
Note:  
Notch indicates left hand thread. Install notch on left side of car.



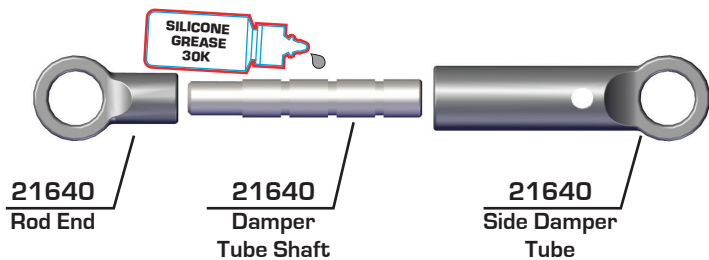
Note:  
Pinch ballcups on pivot ball with pliers lightly if tight.



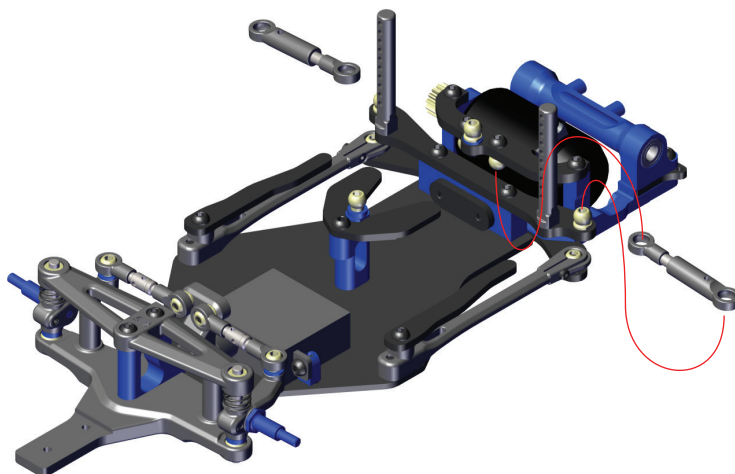
6.7mm



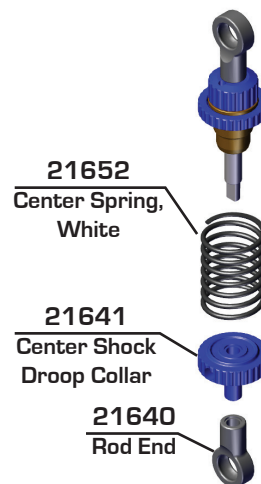
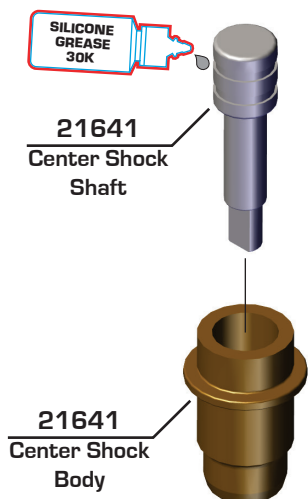
### :: Bag 5 - Step 1



Note:  
Pinch ballcups on pivot ball  
with pliers lightly if tight.



### :: Bag 5 - Step 2

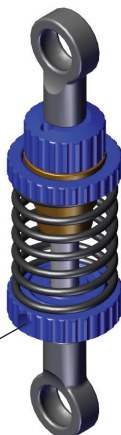


### :: Bag 5 - Step 3

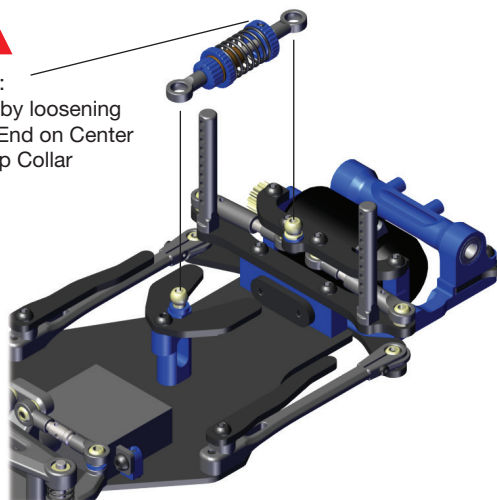


Note:  
Compress shock shaft and  
spring to insert into droop  
collar and tighten screw on  
flat of shaft.

21668  
2x3mm  
Set Screw




Note:  
Pod droop is set by loosening  
or tightening Rod End on Center  
Shock Droop Collar



## :: Bag 6 - Step 1

21642  
Differential  
Tension Nut

21642  
Differential  
Tension Nut  
O-ring

21642  
Rear Axle, Gear  
Differential



Note:  
Use black grease on pins and  
gears to help hold the assem-  
bly together during build.

21644 x3  
Gear  
Differential  
Crosspin

21644  
Planet  
Gear Cage

21644 x3  
Planet  
Gear, 13T

BLACK GREASE  
#6588

BLACK GREASE  
#6588

## :: Bag 6 - Step 2



Note:  
Ensure bearing is  
pressed into gear  
all the way.

21688  
E-Clip

21644  
Sun Gear,  
Inner

21644  
Sun Gear,  
Outer

21653  
3x6x2.5mm  
Bearing

21644 x2  
Gear Diff  
Shim

## :: Bag 6 - Step 3

21868  
Gear Diff  
Cover

25225  
3x3mm  
Set Screw

21642  
Rear Axle  
Wheel Hub

21868 x3  
1x6  
PHCS

21868  
Gear Diff  
Cover

21868  
Spur Gear,  
64P, 53T

31382 x2  
Ballstud  
Washer,  
0.5mm



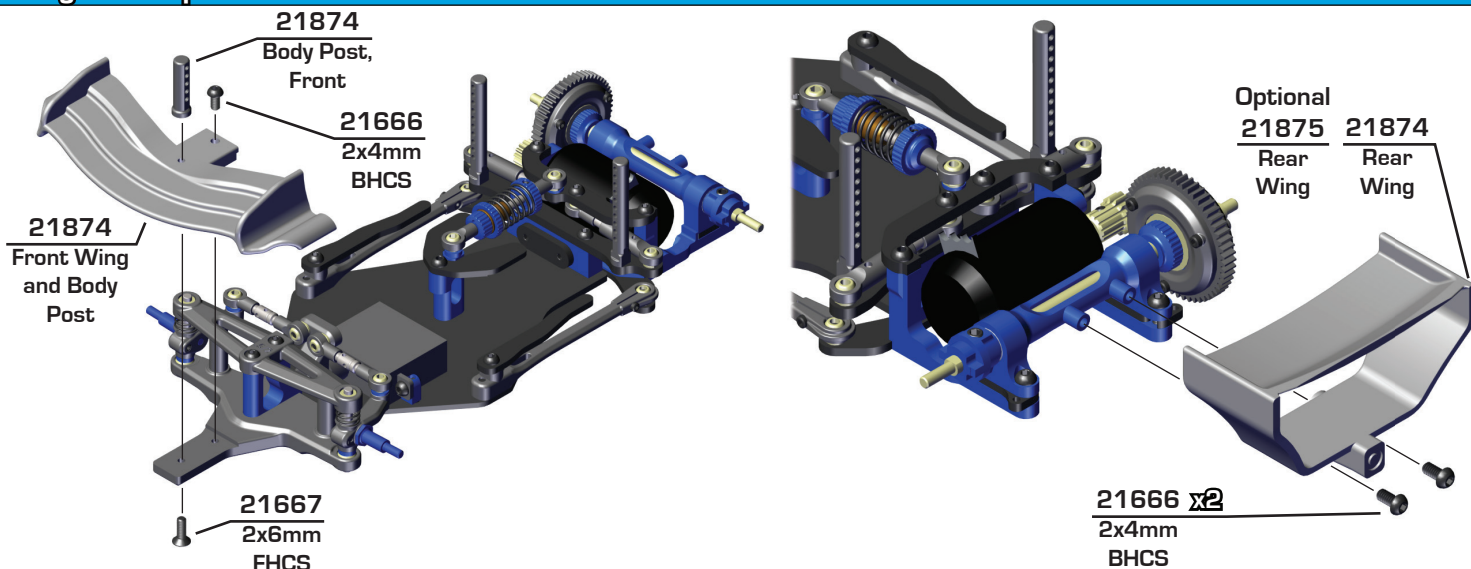
Note:  
Start M1 screws in gear  
diff cover to help line up  
the assembly.



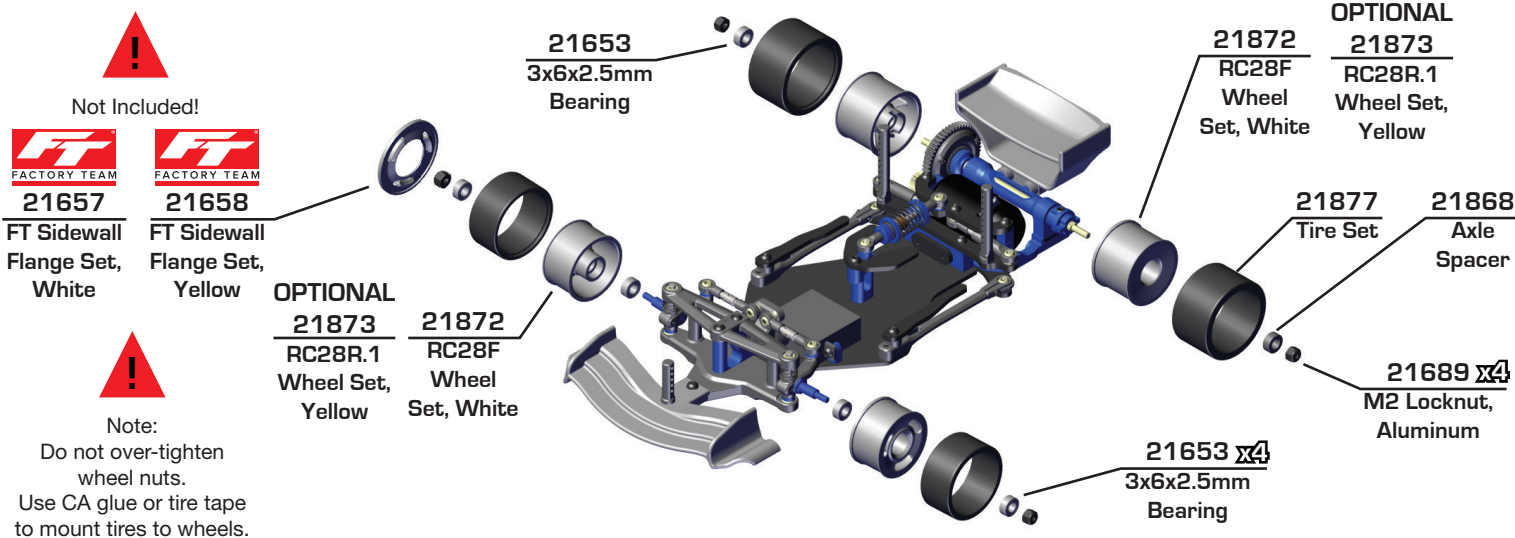
Note:  
Leave 0.2mm axial play so  
that the axle spins freely

BLACK GREASE  
#6588

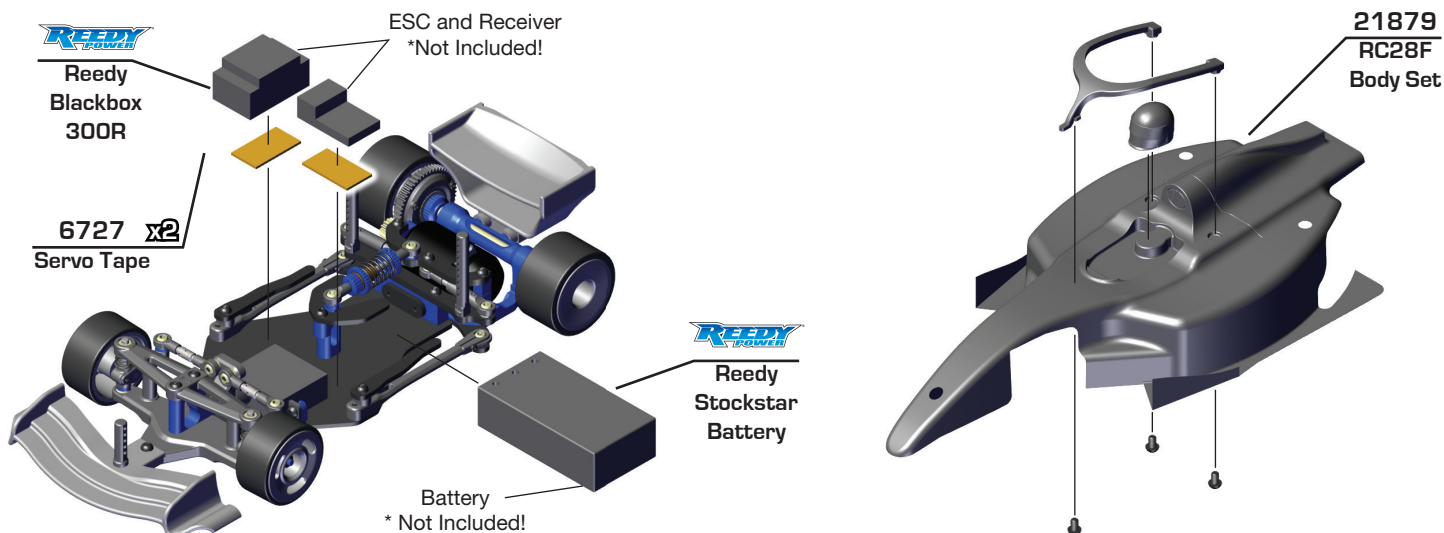
### Bag 7 - Step 1



### Bag 7 - Step 2



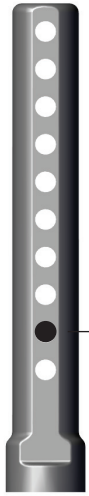
### Bag 7 - Step 3



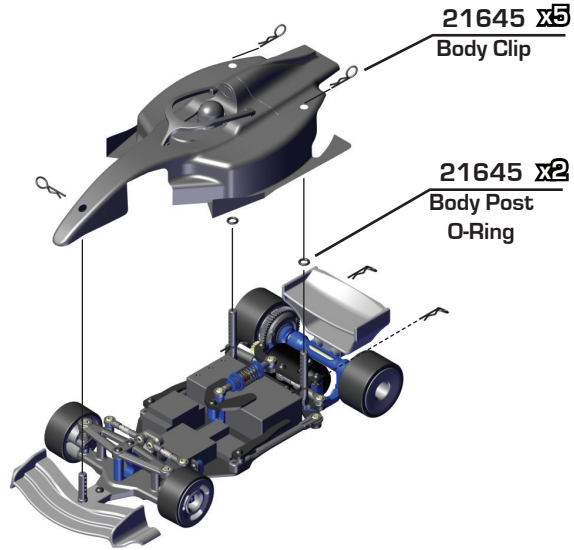
## Bag 7 - Step 2



Note:  
Adjust the body height  
depending on body used.



Rear



Install body with the  
O-Rings 1st, then body,  
then body clips.

## Notes

## Track Info:

Size: Small ☐ Medium ☐  
Large ☐ Extra Large ☐

Surface: RCP (Smooth) ☐ RCP (Rough) ☐  
Other:

Traction: Low ☐ Medium ☐ High ☐

Condition: Bumpy ☐ Smooth ☐  
Dirty ☐ Clean ☐

Temperature: Ambient:  Track:

Notes:

## Vehicle Info:

Body: RC28F

Wing: RC28F

Body Notes:

Wheelbase: 110mm

Weight:

Notes:

## Electronics Info:

Radio:  Servo:

EPA: Throttle: % Brake: %

ESC:

ESC Settings:

Motor:

Pinion:  Spur: 53T

Battery:

Notes:

## Wheels and Tires Info:

Front Tires:

Front Wheels: AE V2 11mm Offset: 0

Front Adhesive: CA Glue ☐ Tape ☐

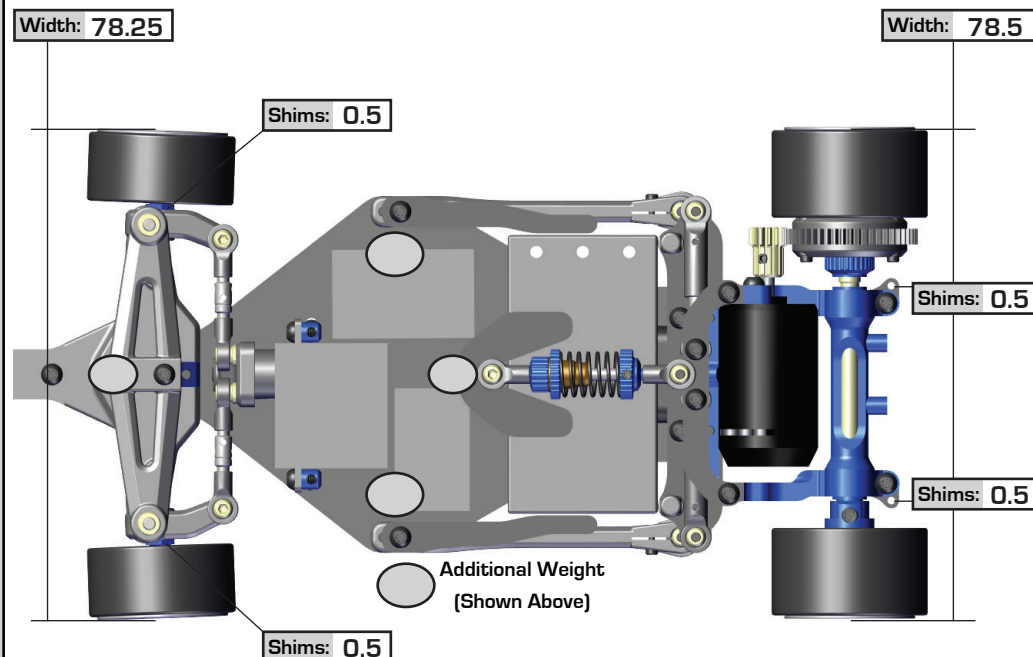
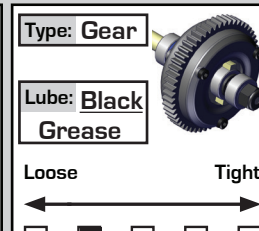
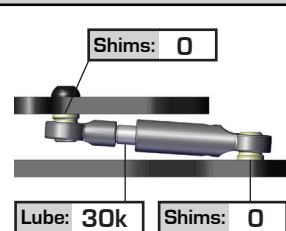
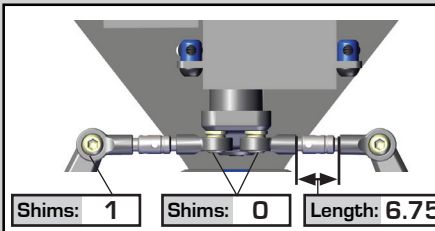
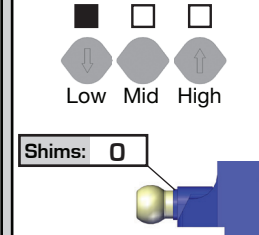
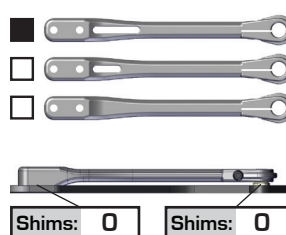
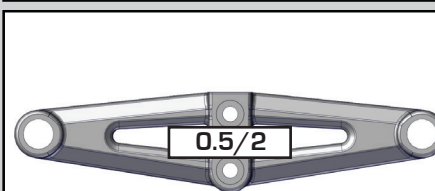
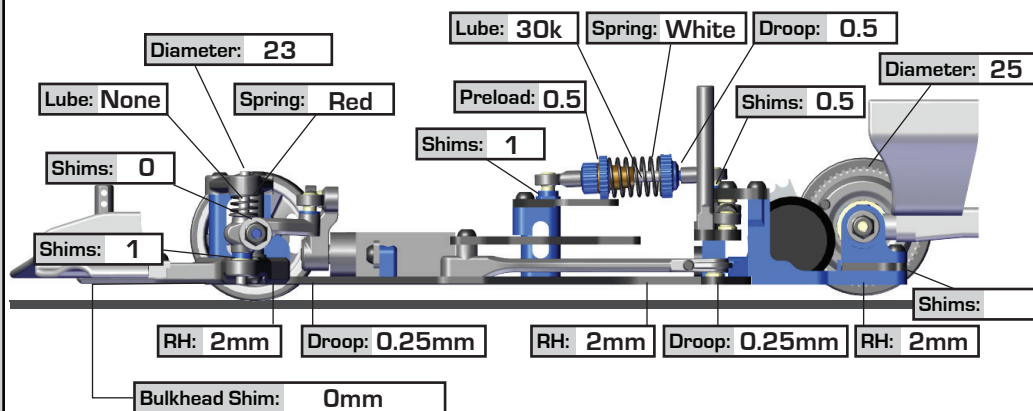
Front Wheel Flange Diameter:  None ☐

Rear Tires:

Rear Wheels: AE V2 14mm Offset: 0

Rear Adhesive: CA Glue ☐ Tape ☐

Notes:



### Track Info:

|                     |                                       |                                      |
|---------------------|---------------------------------------|--------------------------------------|
| <b>Size:</b>        | Small <input type="checkbox"/>        | Medium <input type="checkbox"/>      |
|                     | Large <input type="checkbox"/>        | Extra Large <input type="checkbox"/> |
| <b>Surface:</b>     | RCP (Smooth) <input type="checkbox"/> | RCP (Rough) <input type="checkbox"/> |
| <b>Other:</b>       |                                       |                                      |
| <b>Traction:</b>    | Low <input type="checkbox"/>          | Medium <input type="checkbox"/>      |
|                     | High <input type="checkbox"/>         |                                      |
| <b>Condition:</b>   | Bumpy <input type="checkbox"/>        | Smooth <input type="checkbox"/>      |
|                     | Dirty <input type="checkbox"/>        | Clean <input type="checkbox"/>       |
| <b>Temperature:</b> | Ambient: _____                        | Track: _____                         |
| <b>Notes:</b>       | <div></div> <div></div> <div></div>   |                                      |

**Vehicle Info:**

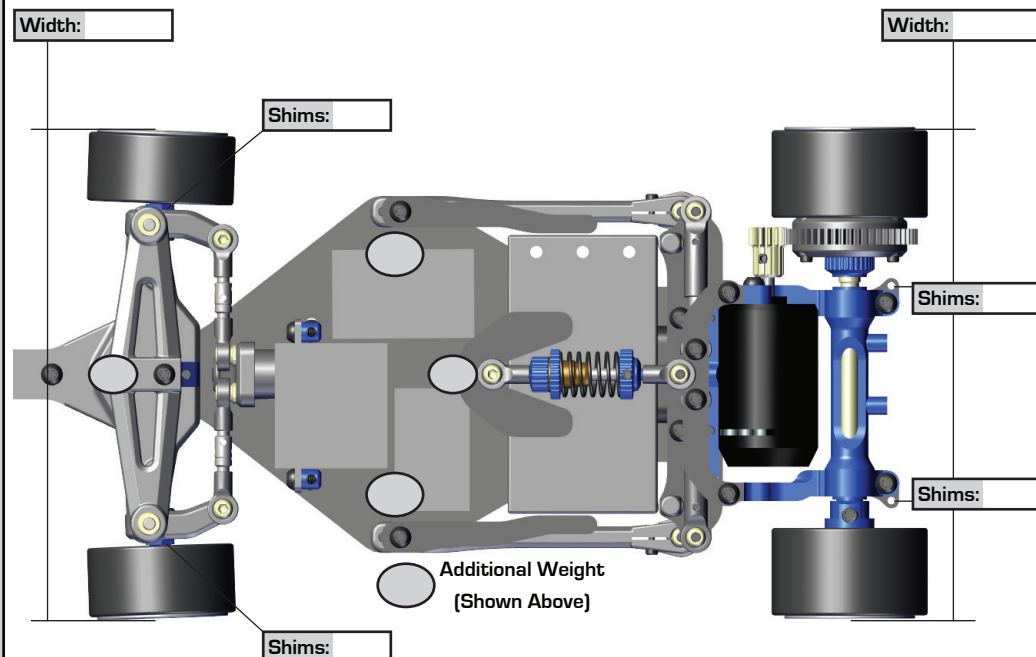
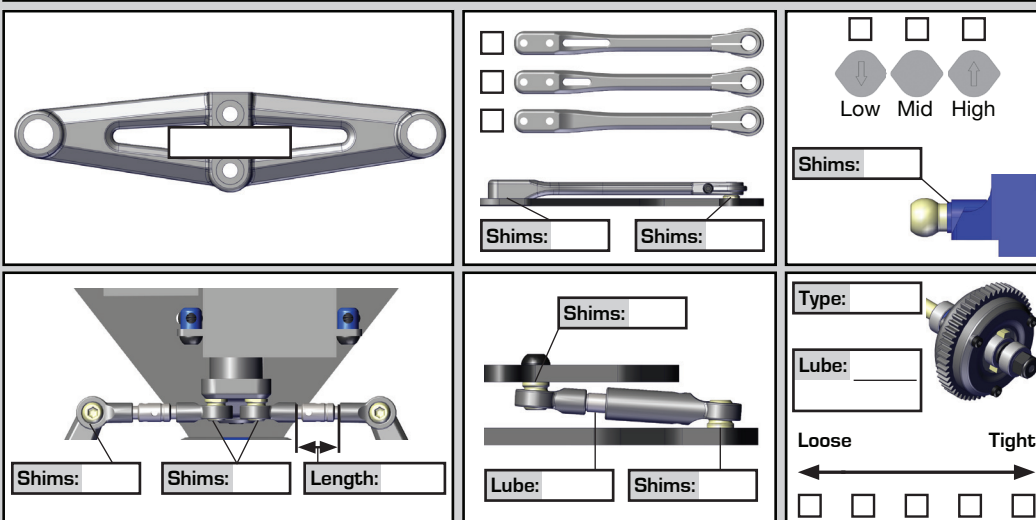
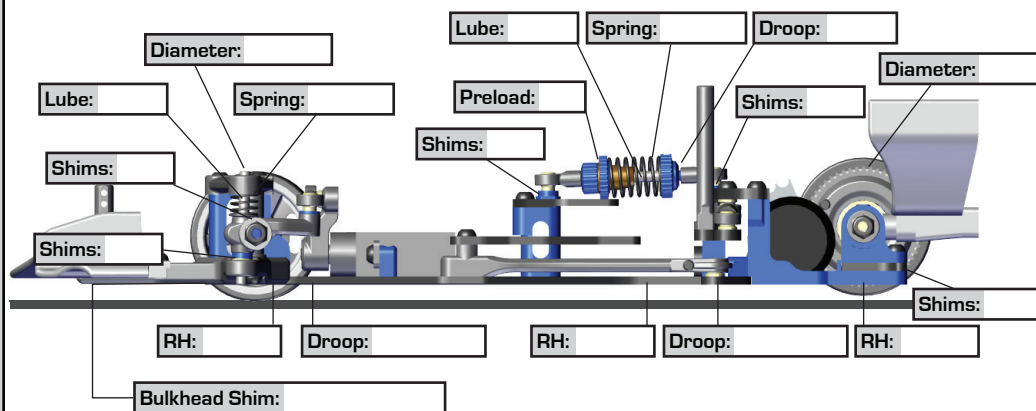
|             |  |
|-------------|--|
| Body:       |  |
| Wing:       |  |
| Body Notes: |  |
| Wheelbase:  |  |
| Weight:     |  |
| Notes:      |  |

## Electronics Info:

|               |           |        |        |   |  |
|---------------|-----------|--------|--------|---|--|
| Radio:        |           | Servo: |        |   |  |
| EPA:          | Throttle: | %      | Brake: | % |  |
| ESC:          |           |        |        |   |  |
| ESC Settings: |           |        |        |   |  |
| Motor:        |           |        |        |   |  |
| Pinion:       |           |        | Spur:  |   |  |
| Battery:      |           |        |        |   |  |
| Notes:        |           |        |        |   |  |
|               |           |        |        |   |  |
|               |           |        |        |   |  |
|               |           |        |        |   |  |
|               |           |        |        |   |  |

### Wheels and Tires Info:

|                                                                                |         |
|--------------------------------------------------------------------------------|---------|
| Front Tires:                                                                   |         |
| Front Wheels:                                                                  | Offset: |
| Front Adhesive: CA Glue <input type="checkbox"/> Tape <input type="checkbox"/> |         |
| Front Wheel Flange Diameter: None <input type="checkbox"/>                     |         |
| Rear Tires:                                                                    |         |
| Rear Wheels:                                                                   | Offset: |
| Rear Adhesive: CA Glue <input type="checkbox"/> Tape <input type="checkbox"/>  |         |
| Notes:                                                                         |         |





***Associated Electrics, Inc.***  
***21062 Bake Parkway Lake Forest, CA 92630 USA***

***call: (949) 544-7500 - fax: (949) 544-7501***  
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