

# TC4

## Instruction Manual for the Team Associated TC4

### 30100 - TC4 Team Kit

1. Blue anodized aluminum threaded shock bodies.
2. Treaded tires on lightweight AE Dish racing wheels.
3. Blue anodized heavy duty MIP CVD's.
4. Full rubber sealed ball bearings.
5. Machined aluminum motor mount with integrated heatsink.
6. Optimized steering rack/bellcrank system.

### 30111 - TC4 RTR

1. VCS Macro shock.
2. Treaded tires on chrome 8-spoke custom wheels.
3. Composite CVD's.
4. Full rubber sealed ball bearings.
5. Machined aluminum motor mount with integrated heatsink.
6. Optimized steering rack/bellcrank system.
7. Painted and mounted body.

### TC4 Chassis Specs

**Length:** 373 mm

**Width:** 190 mm

**Wheelbase:** 259 mm

**Internal Gear Ratio:** 2.50:1

**Weight:** 1375 g (as shown)

**Drivetrain:** Shaft drive

### TC4 - Key Features

Vertical ball stud adjustment

Heavy duty MIP CVD's

Optimized third generation steering rack/bellcrank system

Heavy duty input cups and driveshaft

Adjustable aluminum motor mount with integrated heatsink

Adjustable anti-squat/anti-dive shim system

# 1:10 Scale 4WD Electric Touring Car Kit

## Thank you for selecting this Team Associated model.

Team Associated's revolutionary TC3 set the benchmark for touring car performance and quickly became the choice of winning racers all over the world. The TC3's race-proven shaft-drive design captured many national & international championships in the past few years, and has spawned numerous imitations. Now Team Associated is proud to introduce the next generation RC10TC4 Touring Car...the refinement of the proven TC3 racing platform, optimized with more precise tuning features, better balance, and greater durability.

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

## The Manual

Examine each step carefully before building. Special notes for each step will be marked with a ▼.

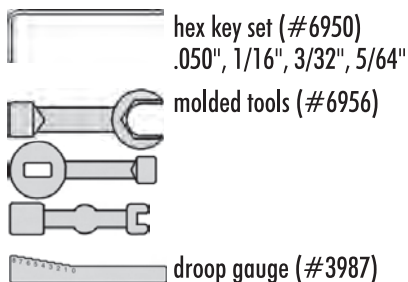
## The Bags

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.

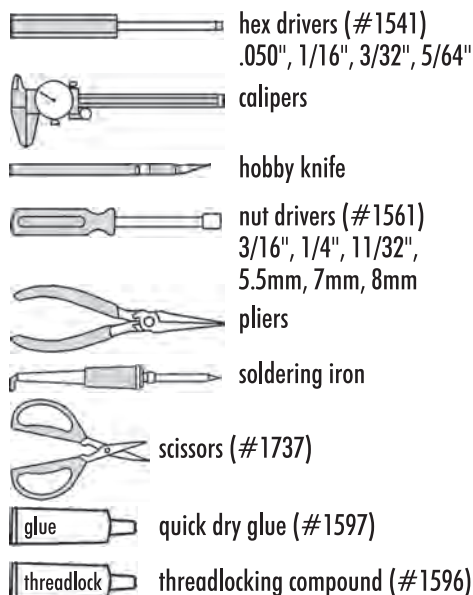
## Supplement Sheets

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

### kit supplied tools



### recommended tools for assembly



### items needed to complete your vehicle

1. R/C two channel surface frequency radio system.
2. Six cell battery pack.
3. Battery charger (we recommend a peak detection charger).
4. Electronic Speed Control (ESC).
5. R/C electric motor.
6. Pinion gear, size to be determined by type and wind of motor you will be using.
7. 190mm Lexan body.

## Customer Support

Tel: 714.850.9342  
Fax: 714.850.1744

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

<http://www.rc10.com>  
<http://www.TeamAssociated.com>



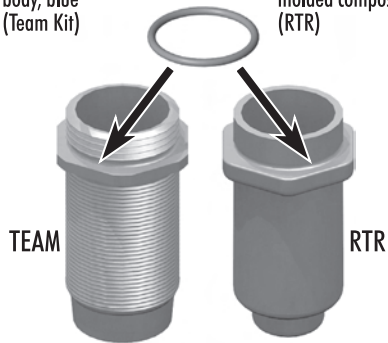
## Associated Electrics, Inc.

3585 Cadillac Ave. Costa Mesa, CA 92626 USA

Bag A - Shocks

Step 1

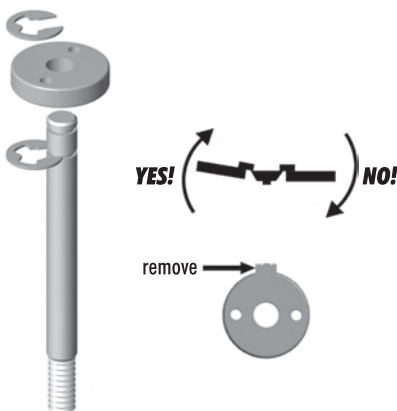
- 3963, qty 1 threaded shock body, blue (Team Kit)
- 6469, qty 1 large o-ring
- 8458, qty 1 macro shock body, molded composite (RTR)



place o-ring over shock body

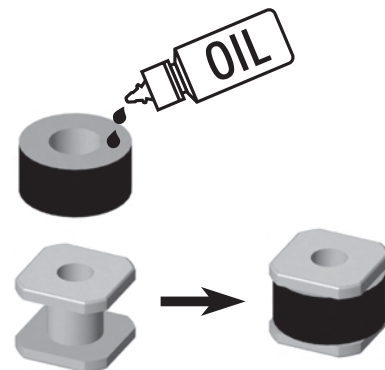
Step 2

- 6299, qty 2 small e-dip
- 6465, qty 1 shock piston #2
- 8844, qty 1 shock shaft, .35"



Step 3

- 5423, qty 1 40 wt silicone oil
- 8456, qty 1 VC bobbin
- 8456, qty 1 VC foam



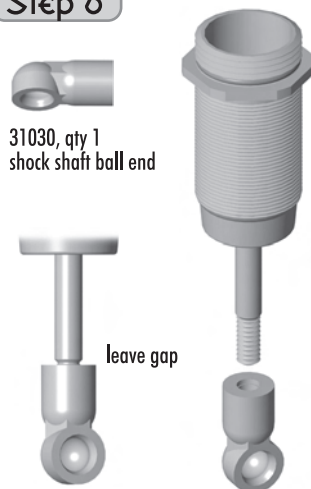
Step 4



Step 5

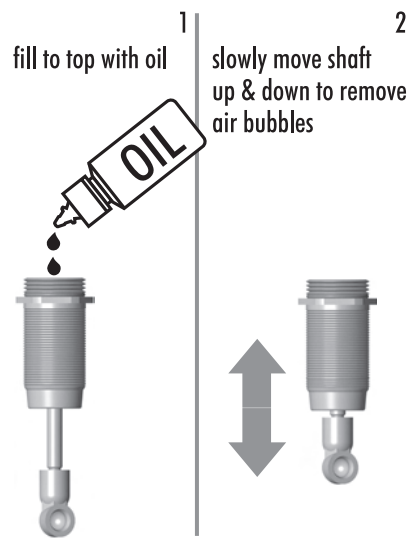


Step 6



repeat steps 1-6 for 4 shocks

Step 7



fill to top with oil

push the shaft in  
NOTE: the oil should crown

retain oil as you screw the cap on  
6428, qty 1 shock cap

fill to bottom of threads

move shaft up & down a few times, then push it all the way in. the shaft should push itself out slightly.

if you cannot push the shaft in, bleed out a small amount of oil. repeat step 6.

if the shaft does not push out, repeat steps 5 & 6 again.

repeat step 7 for 4 shocks

**TC4 Team Kit**

**Step 8**



3959, qty 1 shock collar o-ring

3963, qty 1 shock collar



o-ring fits in groove

**Step 9**



apply one drop to collar o-ring

**Step 10**



3943, qty 1 shock spring, blue, 17lbs

6475, qty 1 spring cup



**Step 11**



3943, qty 1 shock spring, blue, 17lbs

6475, qty 1 spring cup

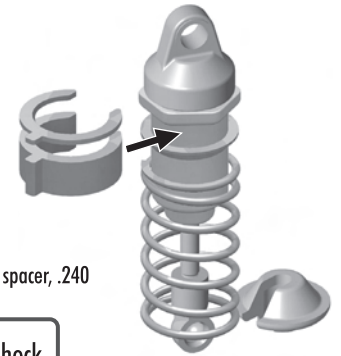
6475, qty 1 spring collar



8846, qty 1 spring preload spacer, .030



8846, qty 1 spring preload spacer, .240



front shock

**TC4 RTR**

**Step 12**



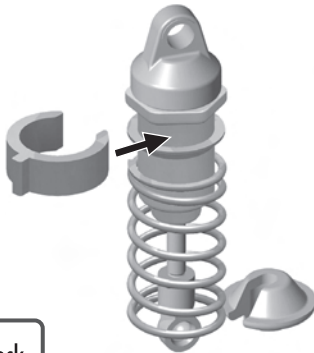
3943, qty 1 shock spring, blue, 17lbs

6475, qty 1 spring cup

6475, qty 1 spring collar

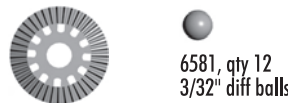


8846, qty 1 spring preload spacer, .240



rear shock

**Step 1**



3914, qty 1 differential ring gear

6581, qty 12 3/32" diff balls



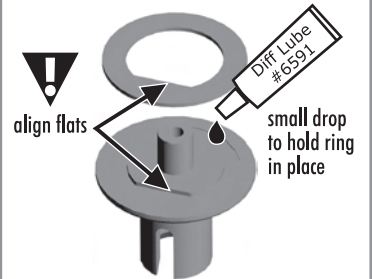
assemble 2 differentials

**Step 2**



3906, qty 1 diff drive ring

3908, qty 1 composite outdrive, short



align flats

small drop to hold ring in place

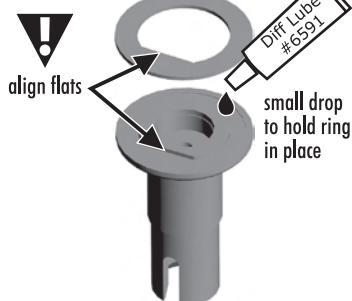
**Bag B - Differentials**

**Step 3**



3906, qty 1 diff drive ring

3908, qty 1 composite outdrive, long



align flats

small drop to hold ring in place

**Step 4**

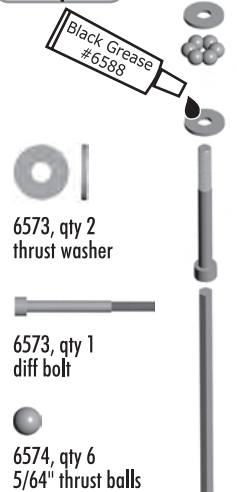


3904, qty 1 2-56 locknut



make sure nut seats completely

**Step 5**



6573, qty 2 thrust washer

6573, qty 1 diff bolt

6574, qty 6 5/64" thrust balls

supplied 5/64" wrench

**Step 6**



6582, qty 1 diff spring



pre-compress spring

Step 7

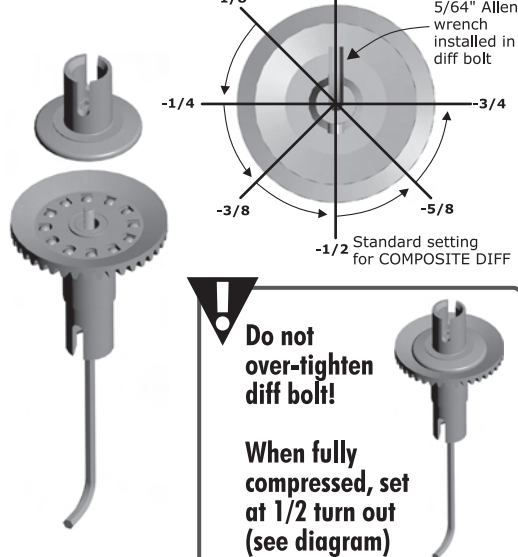


Step 8



3916, qty 2  
composite  
diff bearings

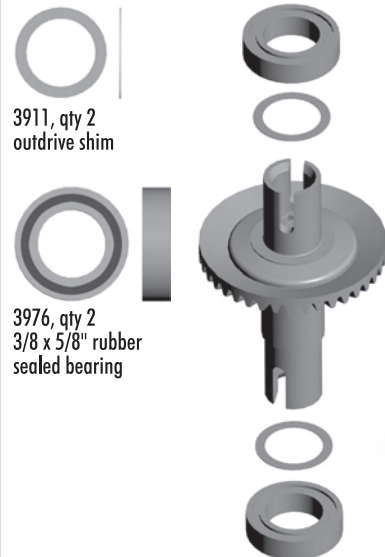
Step 9



**Do not over-tighten diff bolt!**

**When fully compressed, set at 1/2 turn out (see diagram)**

Step 10

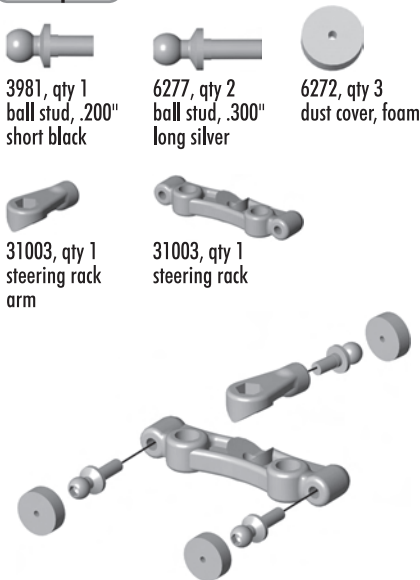


3911, qty 2  
outdrive shim

3976, qty 2  
3/8 x 5/8" rubber  
sealed bearing

Bag C - Steering

Step 1



3981, qty 1  
ball stud, .200"  
short black

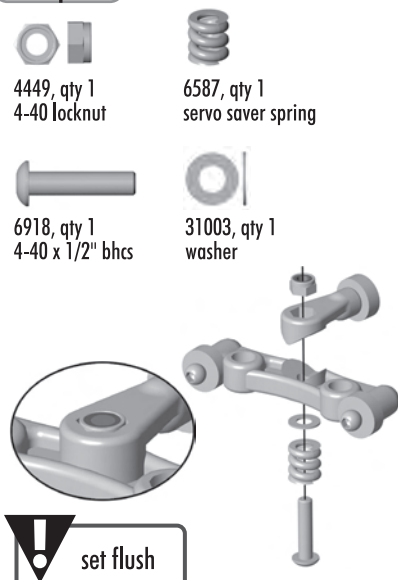
6277, qty 2  
ball stud, .300"  
long silver

6272, qty 3  
dust cover, foam

31003, qty 1  
steering rack  
arm

31003, qty 1  
steering rack  
arm

Step 2



4449, qty 1  
4-40 locknut

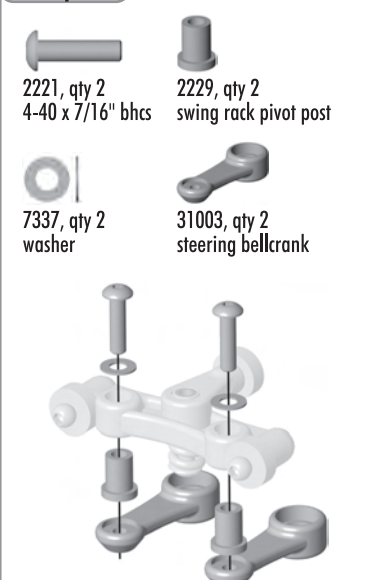
6587, qty 1  
servo saver spring

6918, qty 1  
4-40 x 1/2" bhcs

31003, qty 1  
washer

**set flush**

Step 3



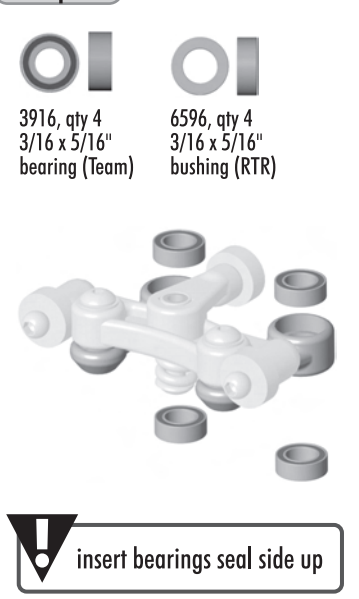
2221, qty 2  
4-40 x 7/16" bhcs

2229, qty 2  
swing rack pivot post

7337, qty 2  
washer

31003, qty 2  
steering bellcrank

Step 4

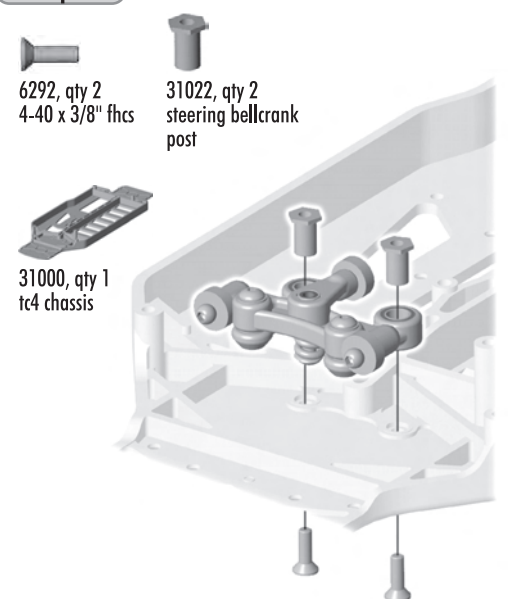


3916, qty 4  
3/16 x 5/16"  
bearing (Team)

6596, qty 4  
3/16 x 5/16"  
bushing (RTR)

**insert bearings seal side up**

Step 5

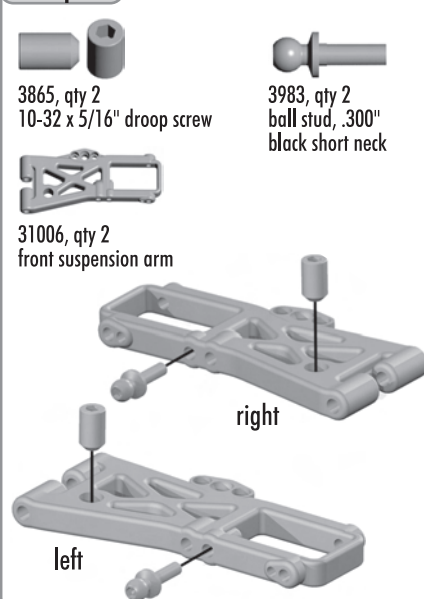


6292, qty 2  
4-40 x 3/8" fhcs

31022, qty 2  
steering bellcrank  
post

31000, qty 1  
tc4 chassis

Step 1



3865, qty 2  
10-32 x 5/16" droop screw

3983, qty 2  
ball stud, .300"  
black short neck

31006, qty 2  
front suspension arm

right

left

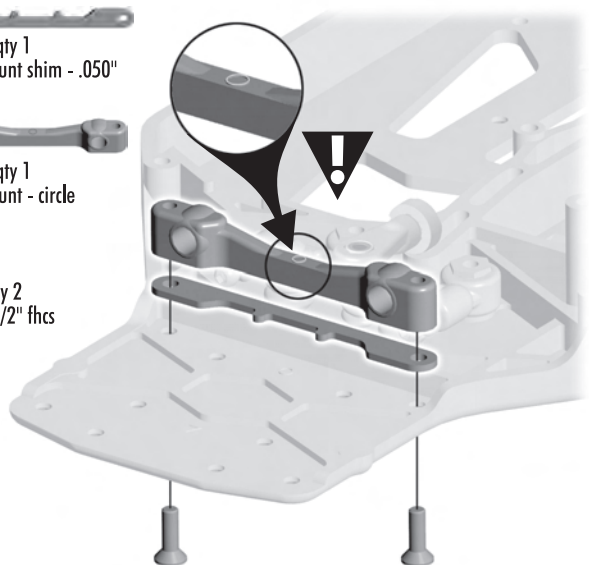
Bag D - Suspension

### Step 2

31010, qty 1  
arm mount shim - .050"

31025, qty 1  
arm mount - circle

6922, qty 2  
4-40 x 1/2" fhcs

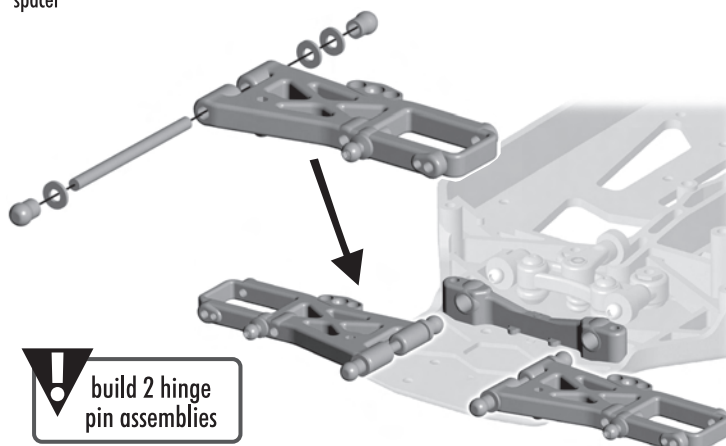


### Step 3

31010, qty 3  
wheelbase adjustment spacer

31010, qty 2  
hinge pin pivot ball

31024, qty 1  
hinge pin



**!** build 2 hinge pin assemblies

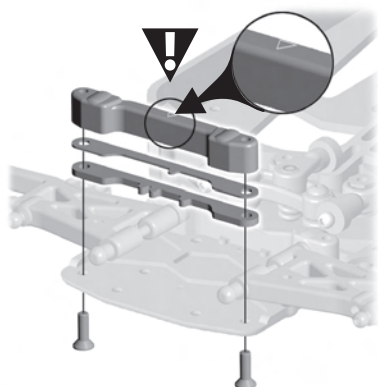
### Step 4

6922, qty 2  
4-40 x 1/2" fhcs

31010, qty 1  
arm mount shim - .075"

31010, qty 1  
arm mount shim - .025"

31025, qty 1  
arm mount - triangle

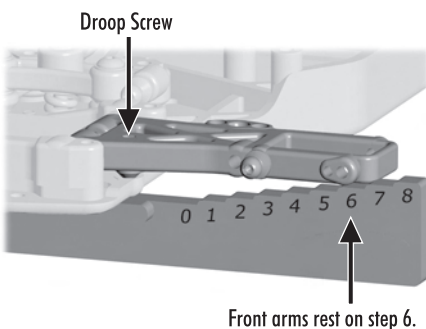


### Setting Front Droop

Adjust Droop

↑ Screw out, smaller number, more Droop

↓ Screw in, larger number, less Droop



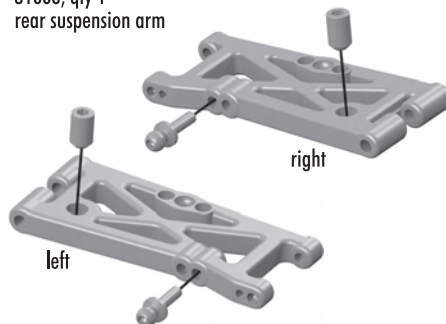
### Step 5

3983, qty 1  
ball stud, .300" black short neck

3865, qty 1  
10-32 x 5/16" droop screw



31008, qty 1  
rear suspension arm



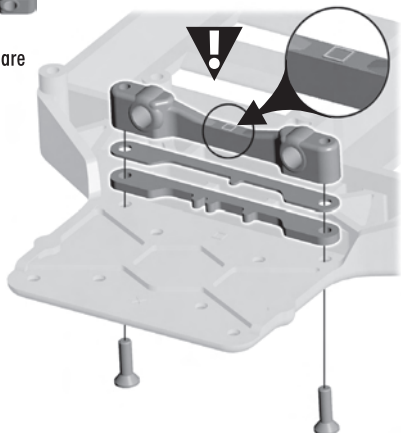
### Step 6

6922, qty 2  
4-40 x 1/2" fhcs

31010, qty 1  
arm mount shim - .025"

31010, qty 1  
arm mount shim - .075"

31025, qty 1  
arm mount - square

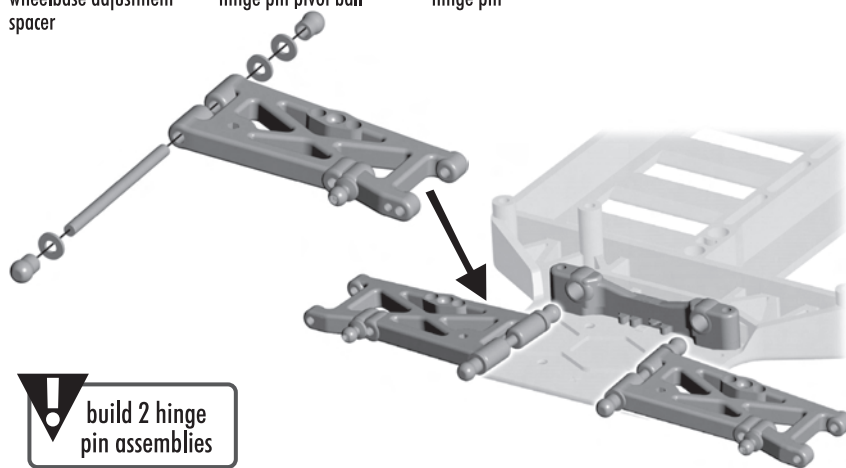


### Step 7

31010, qty 3  
wheelbase adjustment spacer

31010, qty 2  
hinge pin pivot ball

31024, qty 1  
hinge pin



**!** build 2 hinge pin assemblies

**Step 8**

6922, qty 2  
4-40 x 1/2" fhcs

31010, qty 1  
arm mount shim - .075"

31010, qty 1  
arm mount shim - .025"

31025, qty 1  
arm mount - X

**Setting Rear Droop**

Adjust Droop

Screw out, smaller number, more Droop

Screw in, larger number, less Droop

Droop Screw

0 1 2 3 4 5 6 7 8

Rear arms rest on step 4.

**Step 1**

3914, qty 1  
drive pinion

remove burrs

debur 2 gears

**Bag E - Transmission**

**Step 2**

3911, qty 2  
input shaft shim

3915, qty 1  
front input shaft

3919, qty 1  
dowel pin

3977, qty 1  
3/16 x 3/8" rubber sealed bearing

6299, qty 1  
small e-clip

**Step 3**

3911, qty 1  
input shaft shim

3919, qty 1  
dowel pin

3977, qty 1  
3/16 x 3/8" rubber sealed bearing

6920, qty 1  
4-40 x 3/16" bhcs

31019, qty 1  
tc4 drive cup

31019, qty 1  
foam spacer

**Step 4**

3922, qty 1  
72t spur gear

6288, qty 3  
4-40 x 1/4" bhcs

31019, qty 1  
spur gear hub

**Step 5**

3916, qty 1  
rear input shaft

3919, qty 1  
c-clip

3919, qty 1  
dowel pin

3919, qty 1  
large e-clip

**Step 6**

3977, qty 1  
3/16 x 3/8" rubber sealed bearing

31019, qty 1  
input bearing housing

**Step 7**

3911, qty 1  
input shaft shim

3911, qty 1  
input shaft shim, aluminum

3919, qty 1  
dowel pin

6920, qty 1  
4-40 x 3/16" bhcs

31019, qty 1  
tc4 drive cup

31019, qty 1  
foam spacer

Step 8



3911, qty 2  
input shaft  
shim



3914, qty 1  
drive pinion



3919, qty 1  
dowel pin



3977, qty 1  
3/16 x 3/8" rubber  
sealed bearing



6299, qty 1  
small e-clip



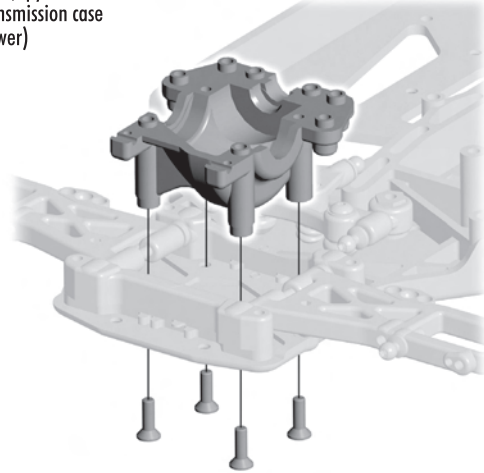
Step 9



2368, qty 1  
transmission case  
(lower)



6292, qty 4  
4-40 x 3/8" fhrs



Step 10



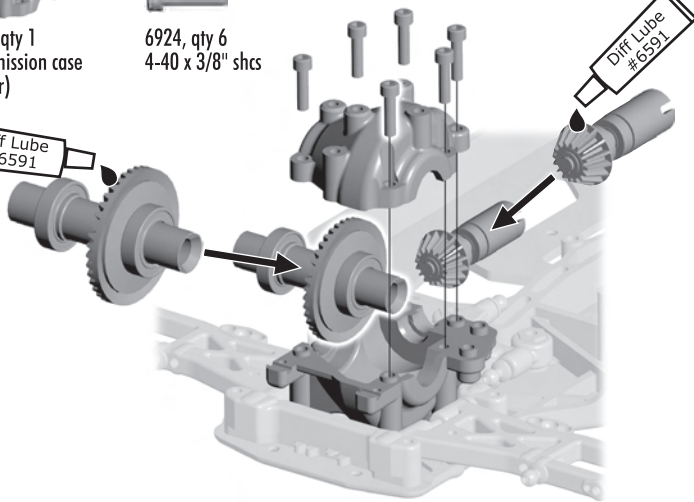
2368, qty 1  
transmission case  
(upper)



6924, qty 6  
4-40 x 3/8" shcs

Diff Lube  
#6591

Diff Lube  
#6591



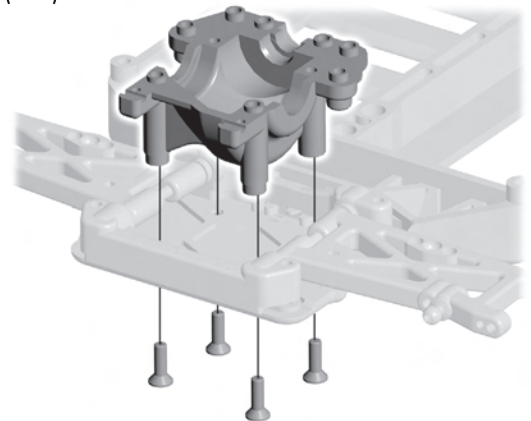
Step 11



2368, qty 1  
transmission case  
(lower)



6292, qty 4  
4-40 x 3/8" fhrs



Step 12

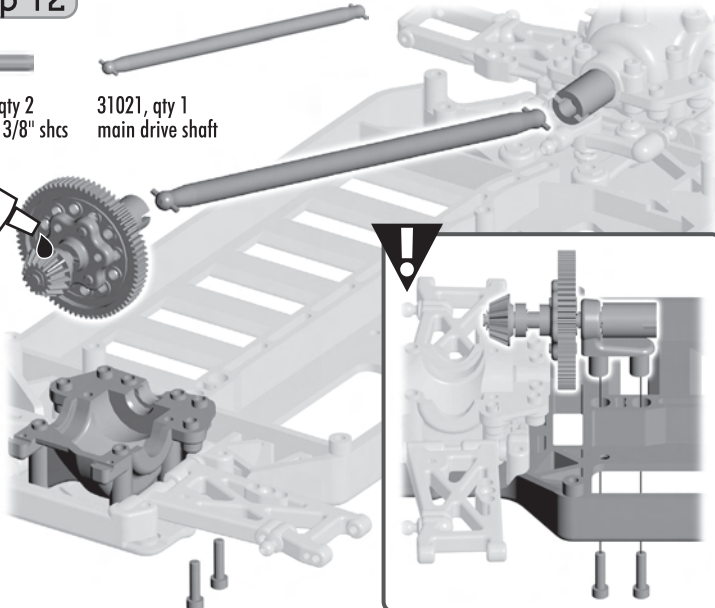


6924, qty 2  
4-40 x 3/8" shcs



31021, qty 1  
main drive shaft

Diff Lube  
#6591



Step 13

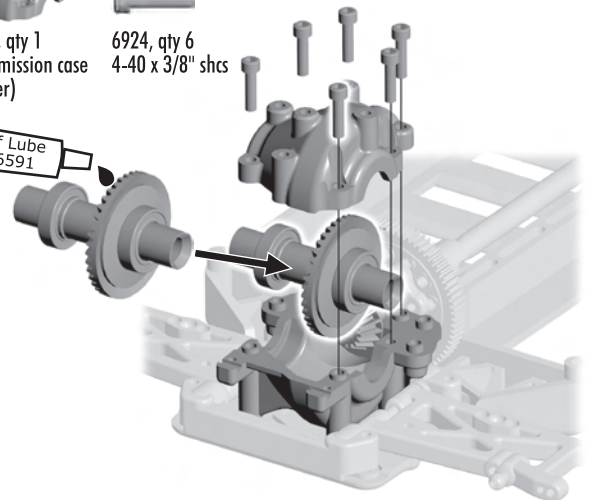


2368, qty 1  
transmission case  
(upper)



6924, qty 6  
4-40 x 3/8" shcs

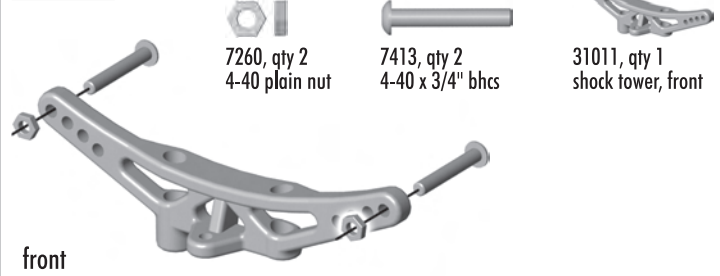
Diff Lube  
#6591



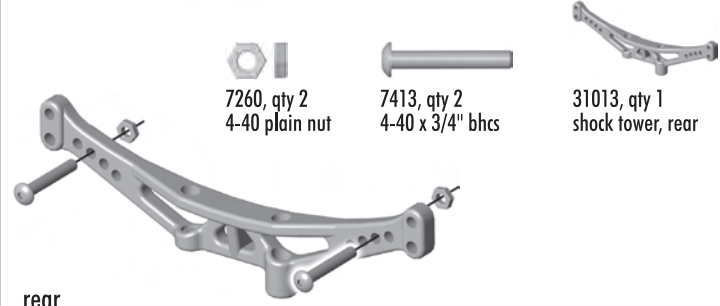


Bag F - Shock Towers

Step 1

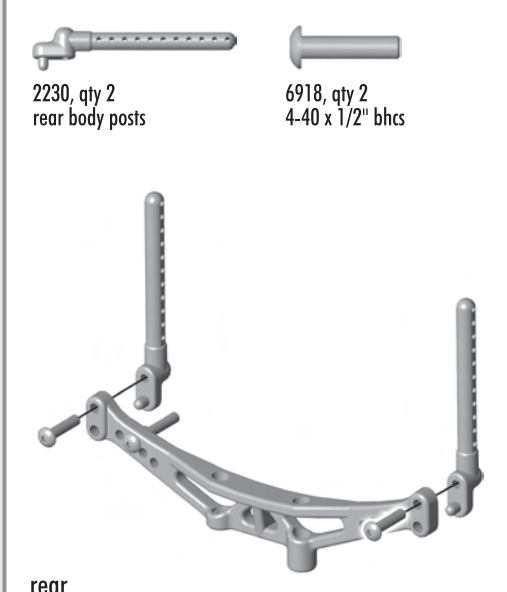


front



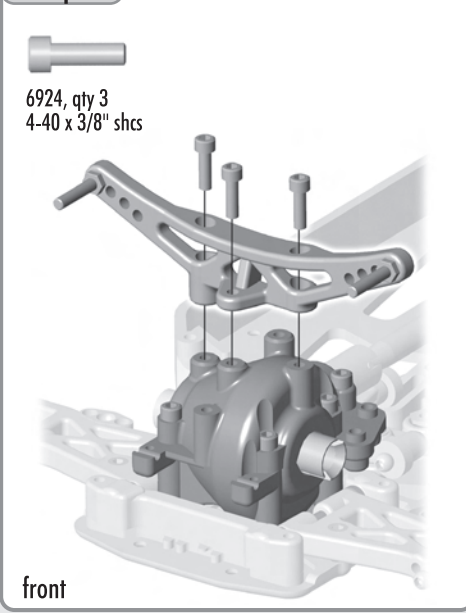
rear

Step 2



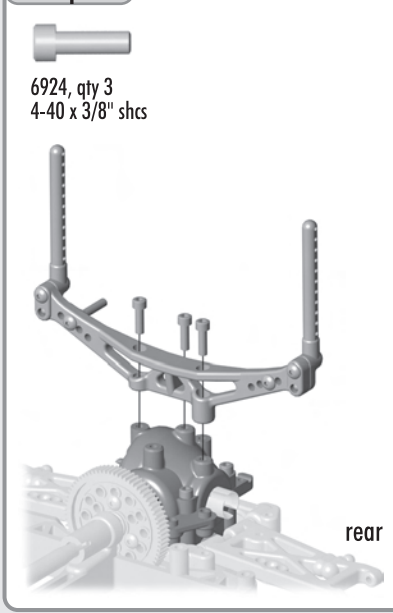
rear

Step 3



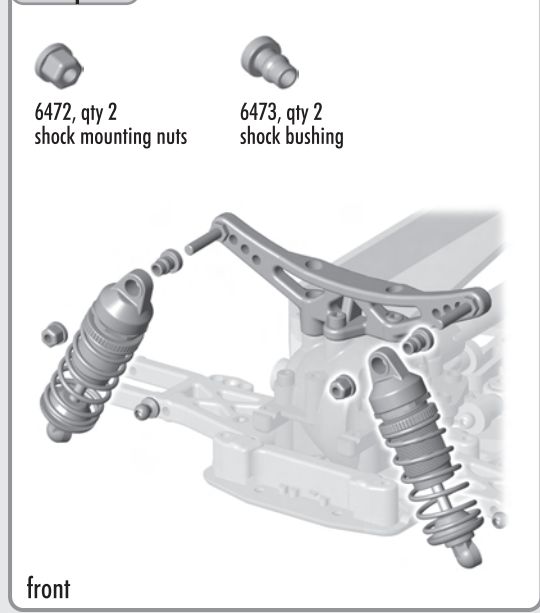
front

Step 4



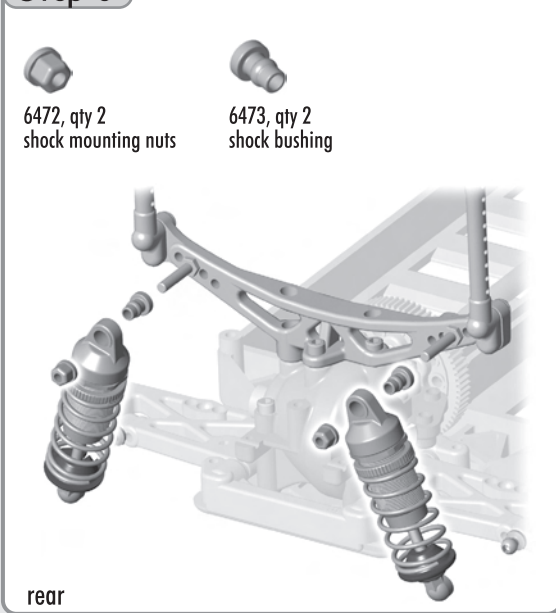
rear

Step 5



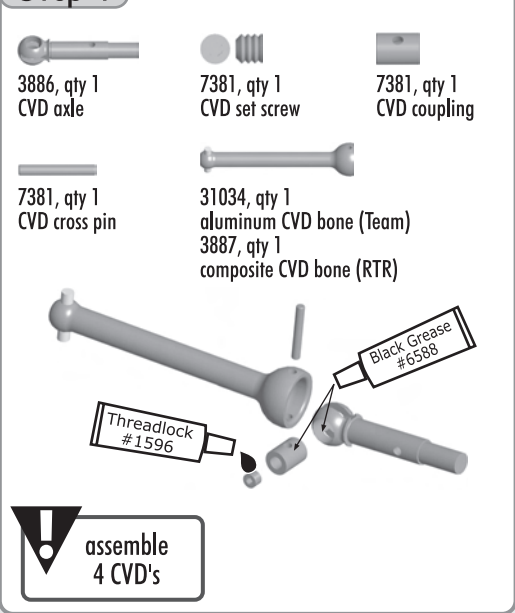
front

Step 6



rear

Step 1

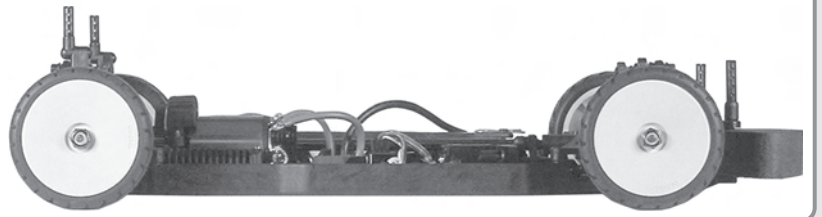


assemble 4 CVD's

Bag G - CVD's

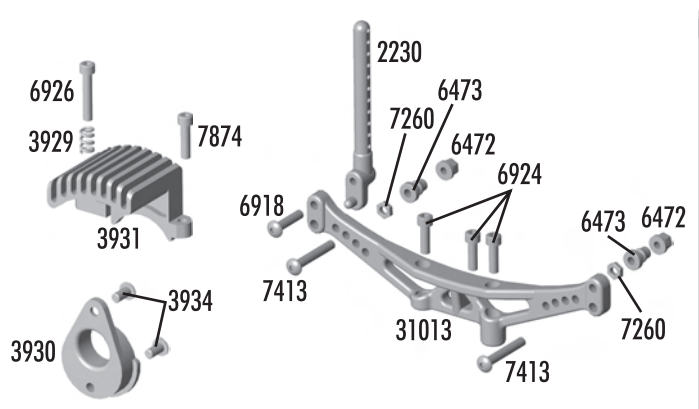
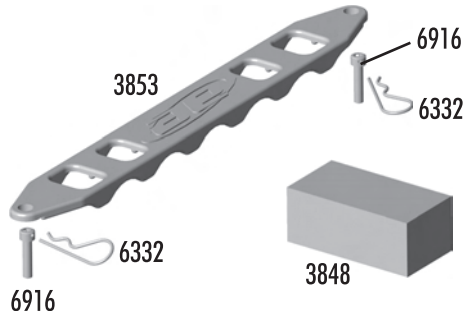
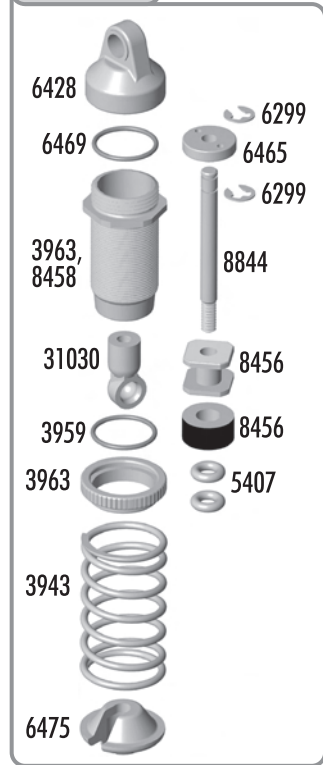


# 1:10 Scale 4WD Electric Touring Car Kit

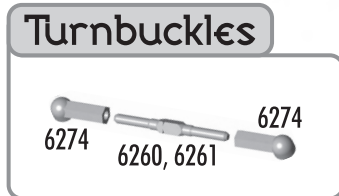
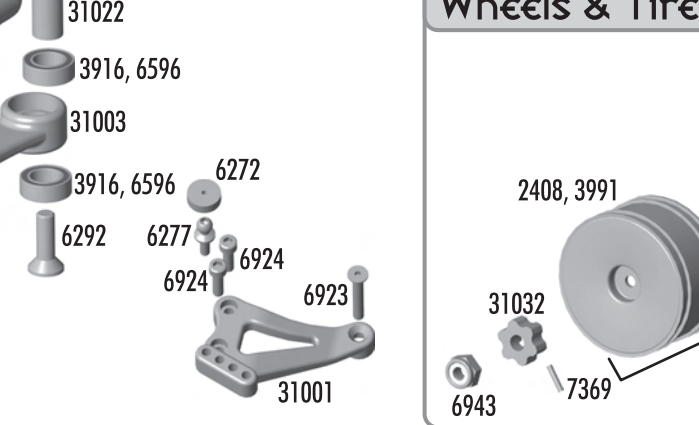
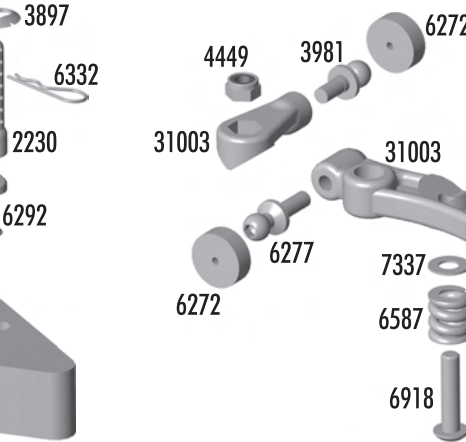
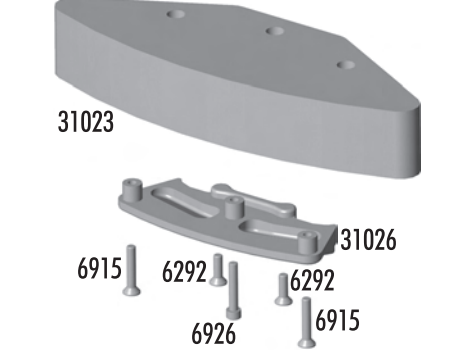
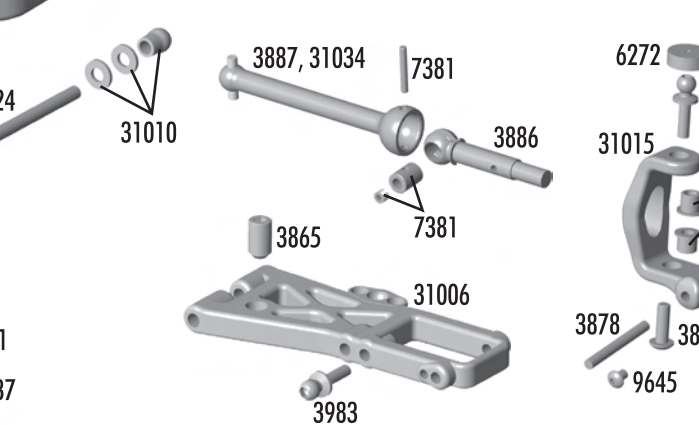
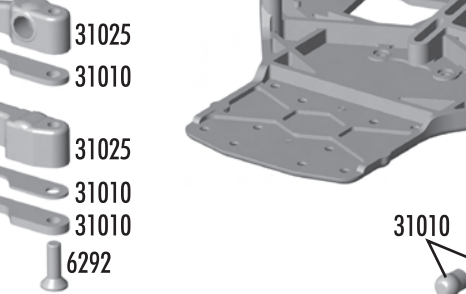
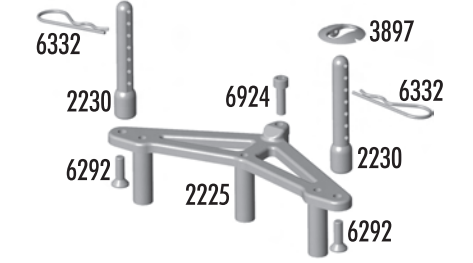
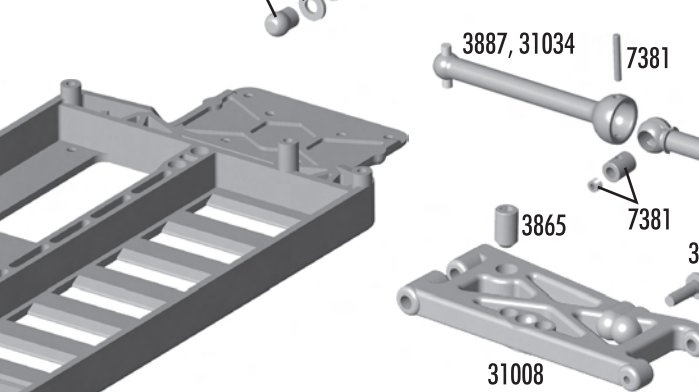
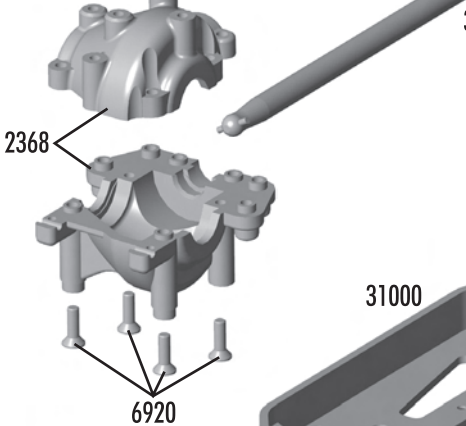
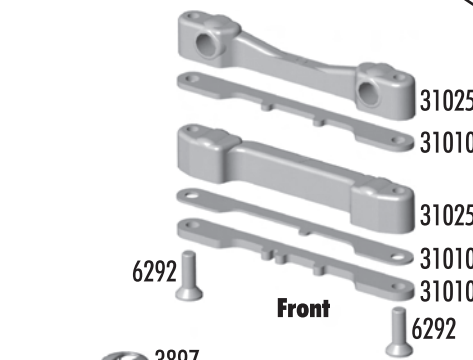
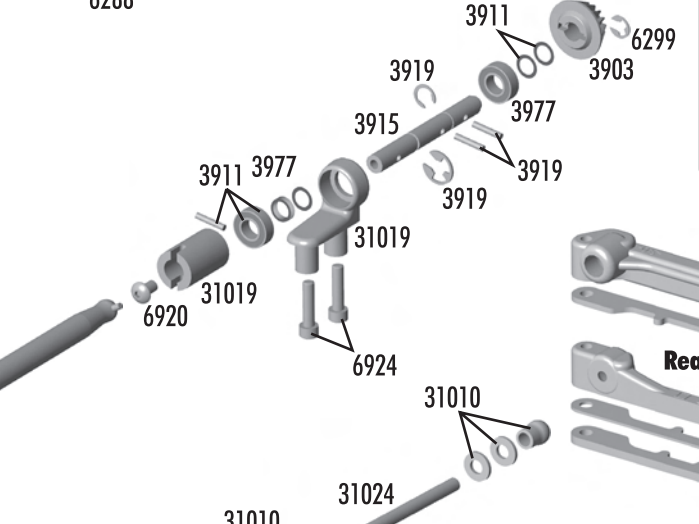
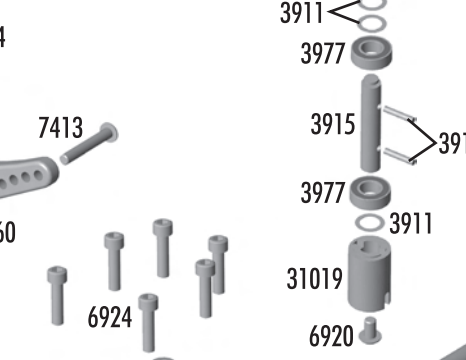
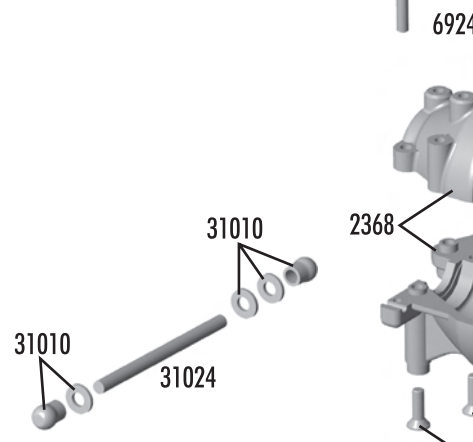
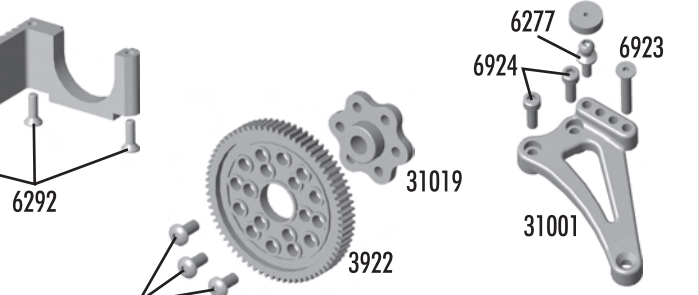
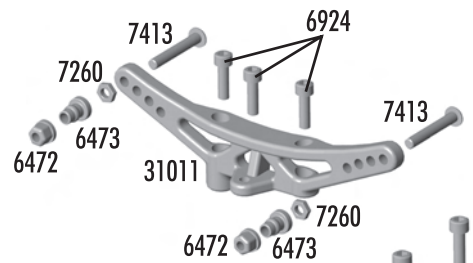
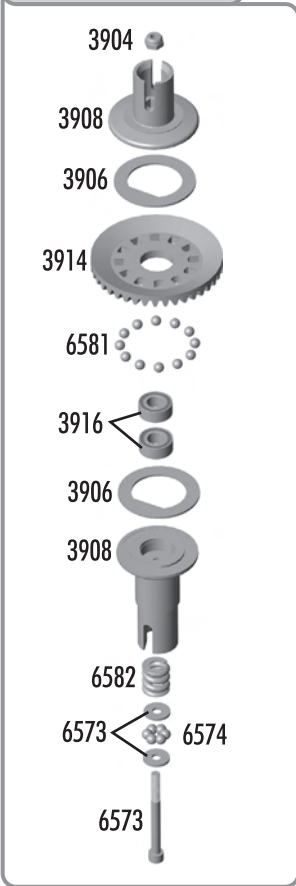


## Exploded View

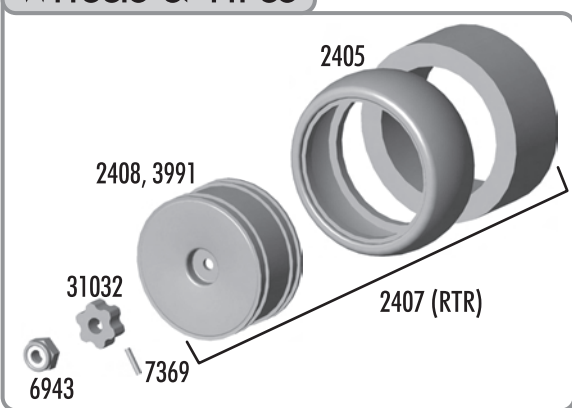
### Shock



### Differential



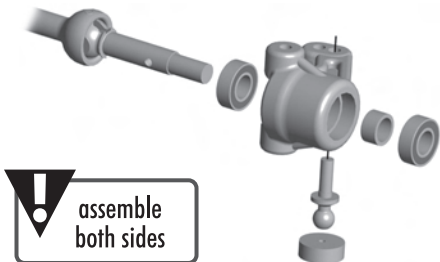
### Wheels & Tires



**Step 2**

- 3965, qty 1 bearing spacer
- 3977, qty 2 3/16 x 3/8" rubber sealed bearing
- 6272, qty 1 dust cover, foam

- 6277, qty 1 ball stud, .300" long silver
- 31004, qty 1 steering block



**!** assemble both sides

**Step 3**

- 3874, qty 2 block carrier bushing
- 31015, qty 1 caster block, 0 degrees

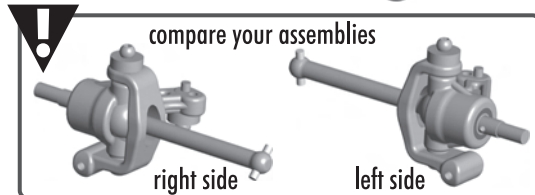
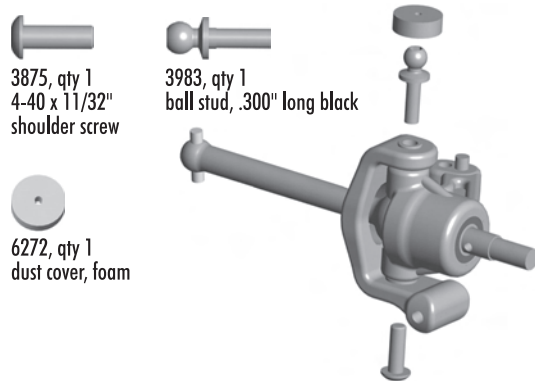


**!** assemble both sides

**Step 4**

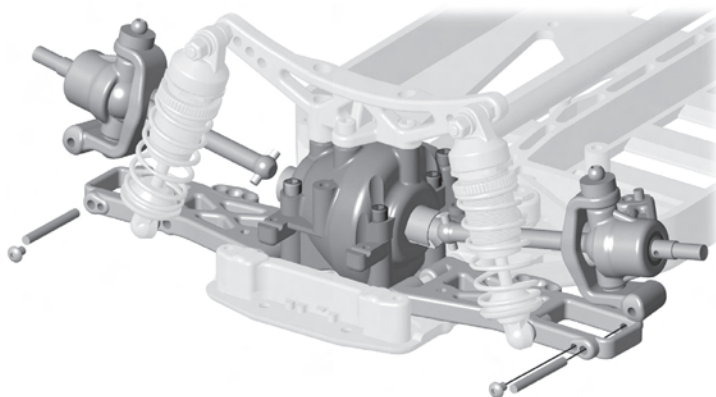
- 3875, qty 1 4-40 x 11/32" shoulder screw
- 3983, qty 1 ball stud, .300" long black

- 6272, qty 1 dust cover, foam



**Step 5**

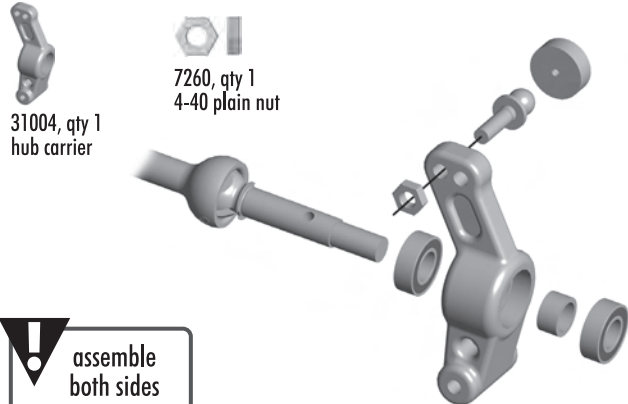
- 3878, qty 2 front outer hinge pin
- 9645, qty 2 2-56 x 1/8" bhcs



**Step 6**

- 3965, qty 1 bearing spacer
- 3977, qty 2 3/16 x 3/8" rubber sealed bearing
- 3983, qty 1 ball stud, .300" long black
- 6272, qty 1 dust cover, foam

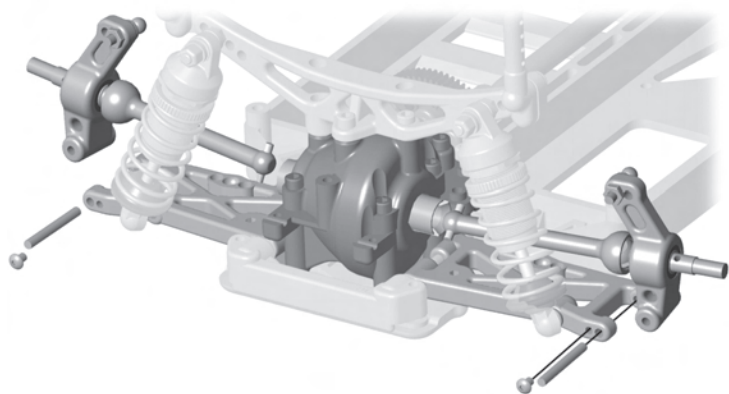
- 31004, qty 1 hub carrier
- 7260, qty 1 4-40 plain nut



**!** assemble both sides

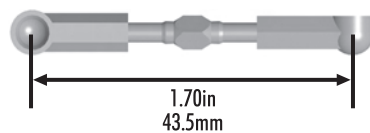
**Step 7**

- 3878, qty 2 rear outer hinge pin
- 9645, qty 2 2-56 x 1/8" bhcs



**Step 1**

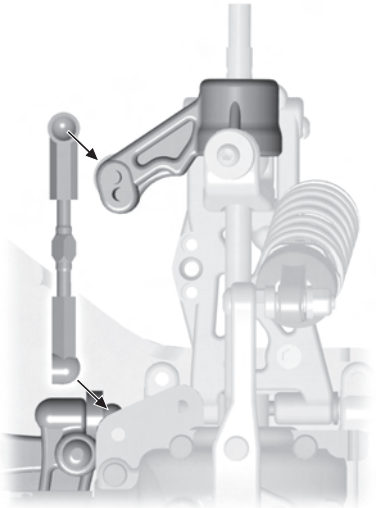
- 6260, qty 1 turnbuckle, 1.00"
- 6274, qty 2 ball cup



**!** assemble 2 steering linkages

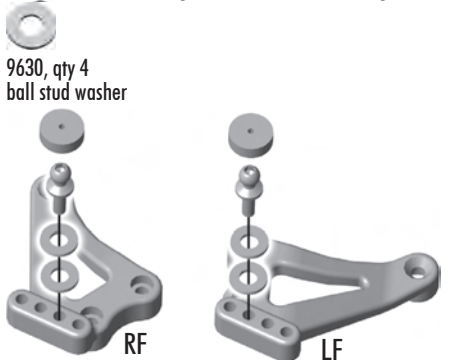
Bag H - Linkage

Step 2



Step 3

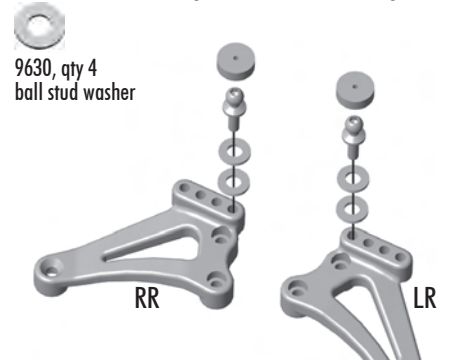
- 6272, qty 2  
dust cover, foam
- 6277, qty 2  
ball stud, .300"  
long silver
- 31001, qty 2  
chassis braces,  
left front/right front



**!** assemble RF - LF

Step 4

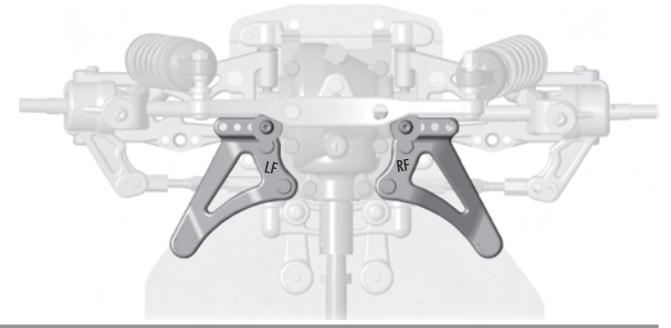
- 6272, qty 2  
dust cover, foam
- 6277, qty 2  
ball stud, .300"  
long silver
- 31001, qty 2  
chassis braces,  
left rear/right rear



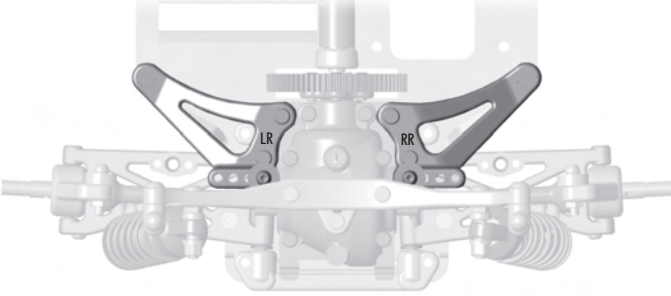
**!** assemble RR - LR

Step 5

**!** front, shown assembled

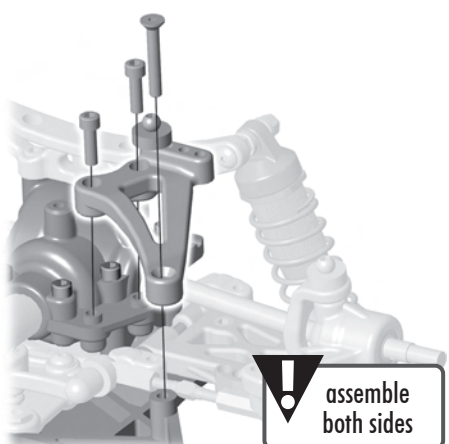


**!** rear, shown assembled



Step 6

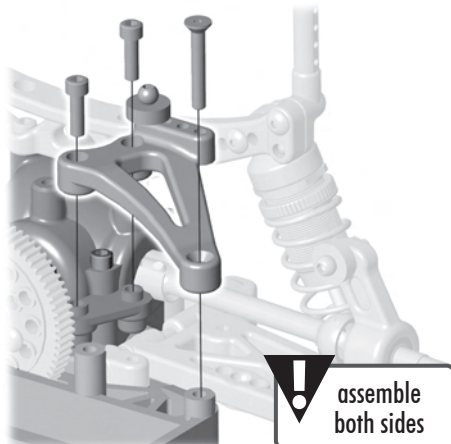
- 6923, qty 1  
4-40 x 3/4" fhcs
- 6924, qty 2  
4-40 x 3/8" shcs



**!** assemble both sides

Step 7

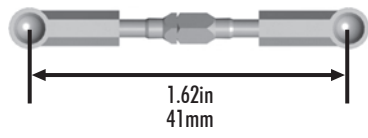
- 6923, qty 1  
4-40 x 3/4" fhcs
- 6924, qty 2  
4-40 x 3/8" shcs



**!** assemble both sides

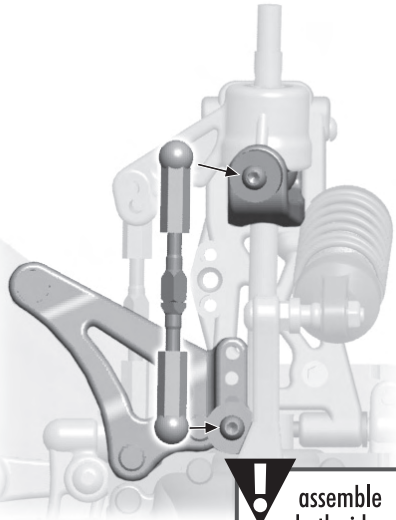
Step 8

- 6261, qty 1  
turnbuckle, 1.25"
- 6274, qty 2  
ball cup



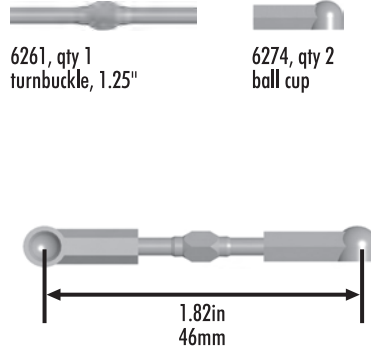
**!** assemble 2 front camber linkages

Step 9



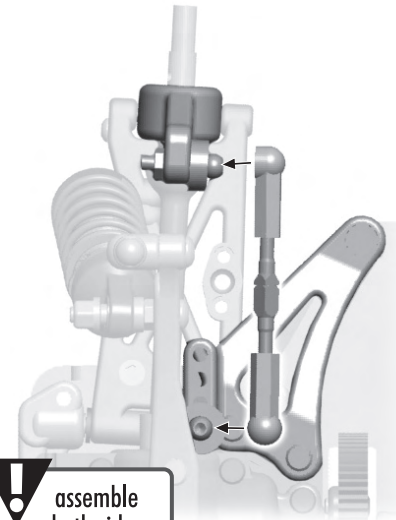
⚠ assemble both sides

Step 10



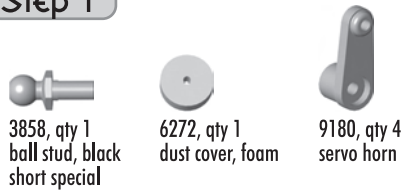
⚠ assemble 2 rear camber linkages

Step 11



⚠ assemble both sides

Step 1



3858, qty 1 ball stud, black short special

6272, qty 1 dust cover, foam

9180, qty 4 servo horn



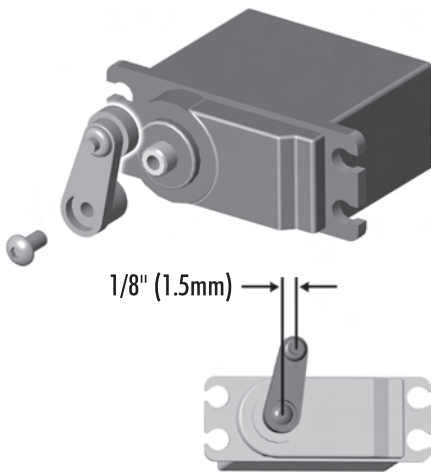
Bag 1 - Servo Install

Steering Servo Chart \*

\*Not all servo's are listed.

	#7336 Spacer	#9180 Servo Arm
<b>Airtronics</b> 94102	no spacer	A
<b>Airtronics</b> 94738, 94157, 94158, 94257, 94258, 94357, 94358, 94452, 94453, 94751, 94755	thick spacer	A
<b>Hitec</b> HS-5625MG, HS-5645MG, HS625MG, HS645MG	no spacer	H
<b>Hitec</b> HS-303, HS-300BB, HS-945MG, HS-925MG, HS- 5945MG, HS-5925MG, HS-525MG, HS-525BB, HS-425BB, HS-422	thin spacer	H
<b>JR</b> Z4725, Z4750, Z2750, Z8450, Z8550, NES-4750	no spacer	J
<b>JR</b> Z250, Z550	thin spacer	J
<b>Futaba</b> S9204, S9250, S9450, S148	no spacer	F
<b>Futaba</b> S3003, S9202, S9101	thin spacer	F
<b>Futaba</b> S9404	thick spacer	F
<b>KO</b> PS-401, PS-2001, PS-2004, PS-2015, PS-2173, PS-2174, PS-2123, PS-2143, PS-2144	thin spacer	J

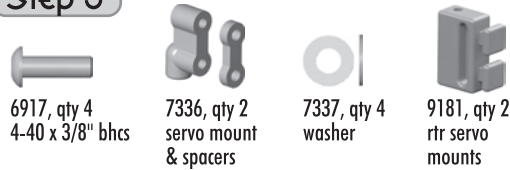
Step 2



1/8" (1.5mm)

⚠ assemble using stock servo screw

Step 3

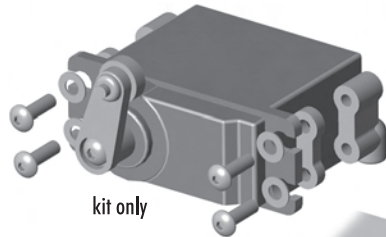


6917, qty 4 4-40 x 3/8" bhcs

7336, qty 2 servo mount & spacers

7337, qty 4 washer

9181, qty 2 rtr servo mounts

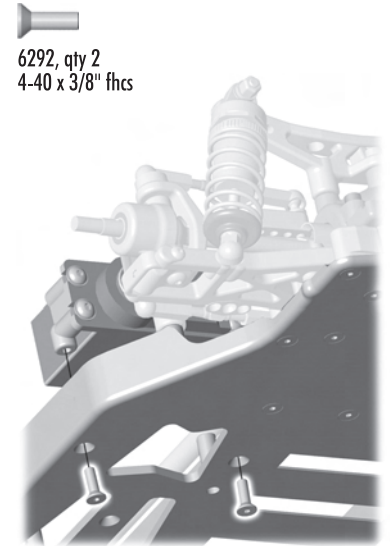


kit only

rtr only

face letter away from servo

Step 4

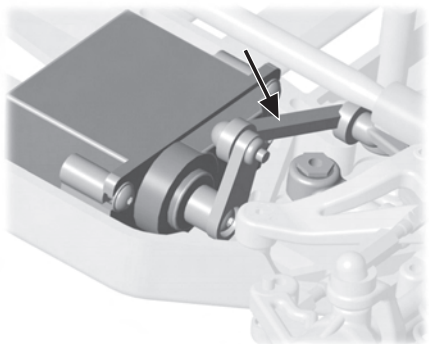


6292, qty 2 4-40 x 3/8" fhcs

Step 5



6265, qty 1  
tc4 steering drag link



Step 1



3930, qty 1  
motor cam

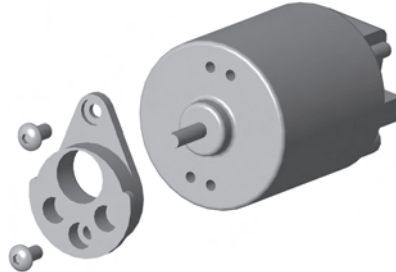


3934, qty 2  
3mm motor screw



9626, qty 1  
17 turn motor

Bag J - Power System



! motor included in RTR only

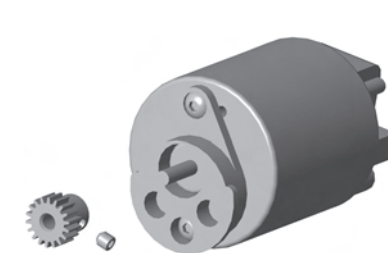
Step 2



6681, qty 1  
23 tooth pinion



3862, qty 1  
pinion set screw



! pinion & setscrew included in RTR only

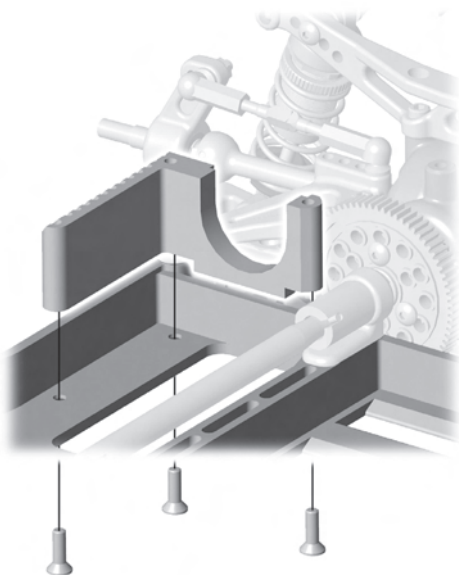
Step 3



6292, qty 3  
4-40 x 3/8" fhcs



31020, qty 1  
motor mount



Step 4



3929, qty 1  
motor clamp spring



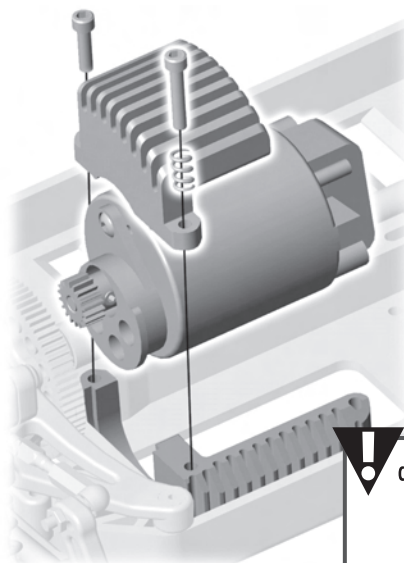
3931, qty 1  
heatsink motor clamp



6926, qty 1  
4-40 x 5/8" shcs



7874, qty 1  
4-40 x 7/16" shcs



! compress spring completely, then loosen 1 to 1 1/2 turns

Step 5



6338, qty 1  
antenna tube & cap

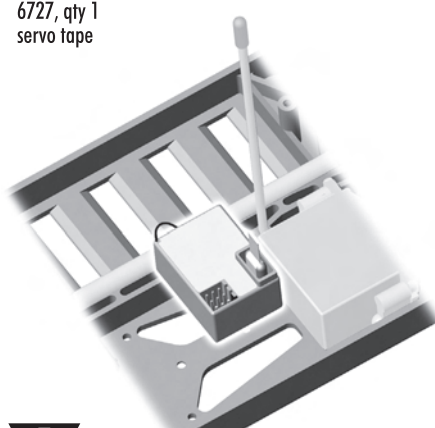


! feed antenna as shown receiver included in RTR only

Step 6



6727, qty 1  
servo tape

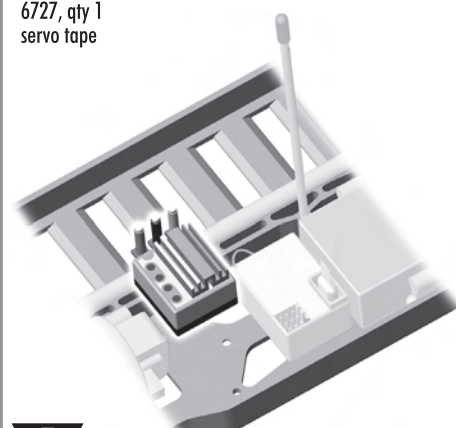


! attach receiver to chassis with servo tape

Step 7



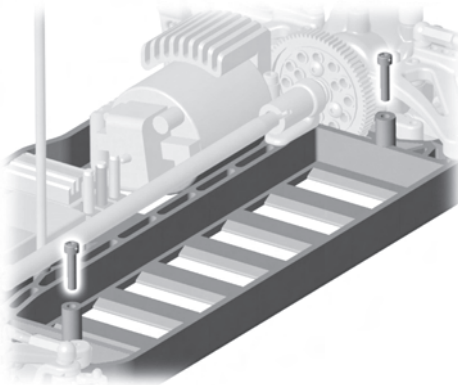
6727, qty 1  
servo tape



! attach speed control to chassis with servo tape. esc included in RTR only

Step 8

6916, qty 2  
4-40 x 1/2" shcs  
with hole

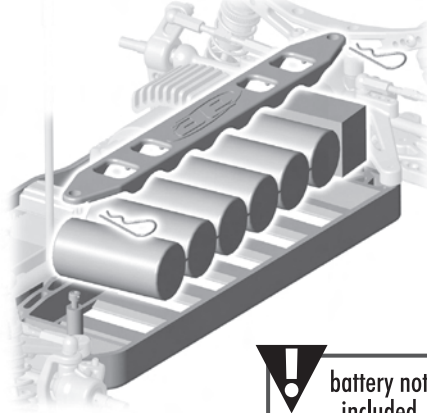


Step 9

3848, qty 1  
battery foam  
spacer

3853, qty 1  
battery brace

6332, qty 2  
body clip



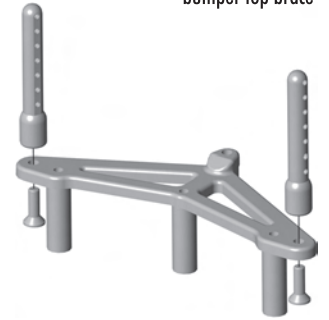
**!** battery not included

Step 1

2230, qty 2  
body posts

6292, qty 2  
4-40 x 3/8" fhcs

2225, qty 1  
bumper top brace

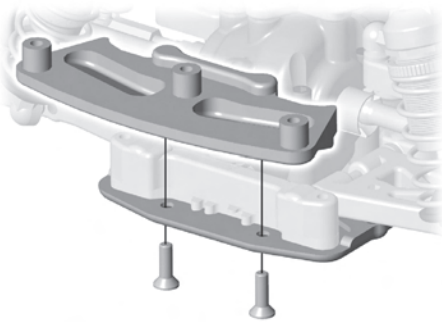


Bag K - Bumper & Body

Step 2

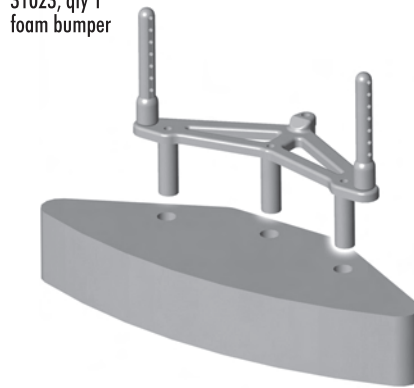
6292, qty 2  
4-40 x 3/8" fhcs

31026, qty 1  
front bumper



Step 3

31023, qty 1  
foam bumper



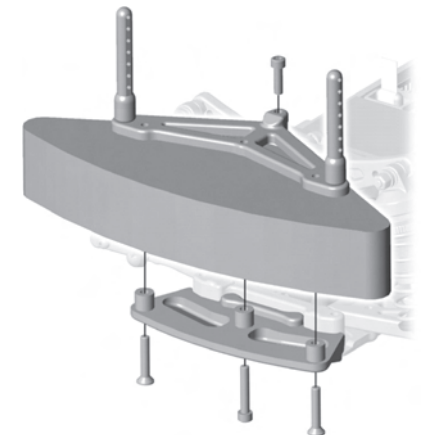
**!** foam bumper may require trimming to fit under some bodies

Step 4

6915, qty 2  
4-40 x 5/8" fhcs

6924, qty 1  
4-40 x 3/8" shcs

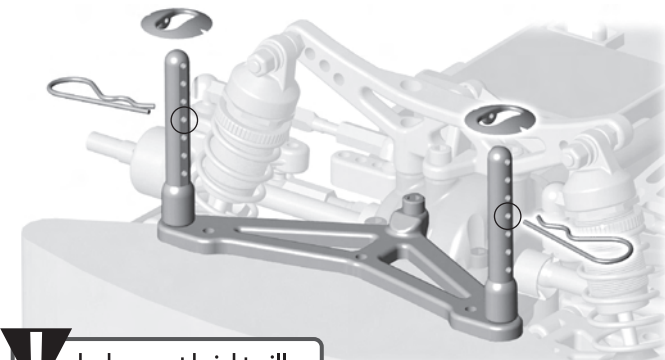
6926, qty 1  
4-40 x 5/8" shcs



Step 5

3897, qty 2  
pivoting body mount

6332, qty 2  
body clip

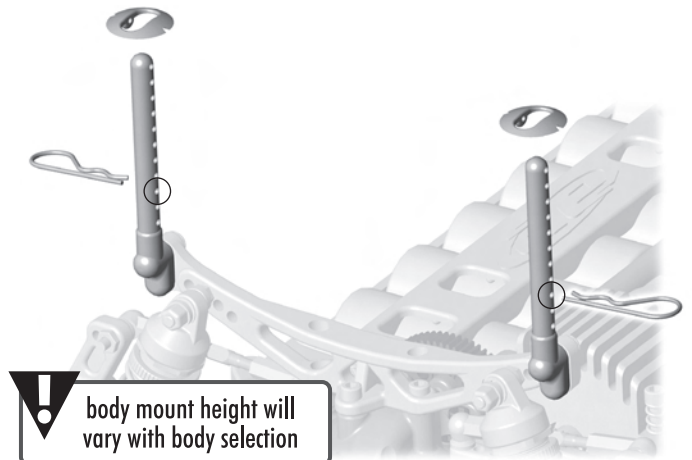


**!** body mount height will vary with body selection

Step 6

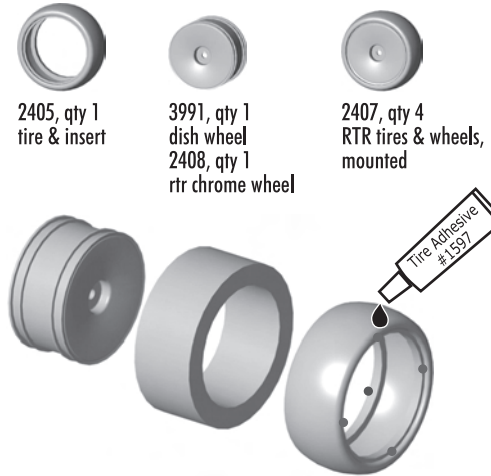
3897, qty 2  
pivoting body mount

6332, qty 2  
body dip



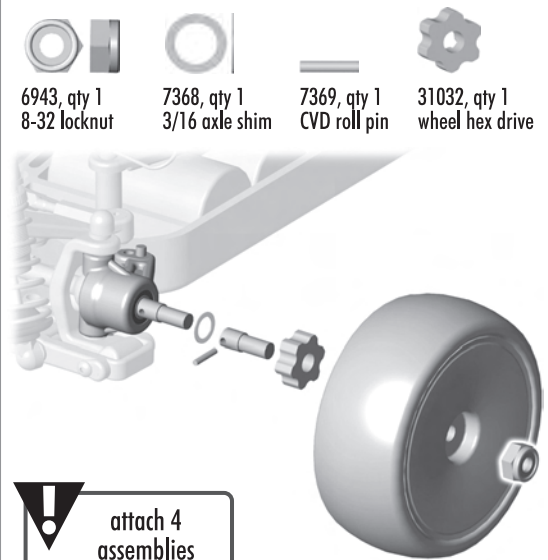
**!** body mount height will vary with body selection

**Step 1**



**!** assemble 4 wheels, kit only

**Step 2**



**!** attach 4 assemblies

**Congratulations!**  
This completes the assembly of the Team Associated TC4.  
  
It is suggested that you select a body shell that best suits the situation for which your new TC4 will be used. Follow the instructions included with the body for painting and mounting.

**Ackermann**

The inside hole on the steering blocks gives more Ackermann, while the outboard hole yields less Ackermann. 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.

**Anti-Dive**

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.

**Arm Mount Shimming**

The TC4s new arm mounting system allows for maximum adjustability for both asphalt and foam tire conditions. The shimming system allows you to run the pins flat, kick-up, anti-dive, anti-squat, and pro-squat. Each shim is numbered 1,2, and 3 is designated by the number of tabs on the shim. To determine what you are running, for each pair of mounts ( $\Delta$  and  $\bigcirc$  for front,  $\square$  and  $\times$  for rear) subtract the number of tabs on the forward arm mount ( $\Delta$  or  $\square$ ) from the number of tabs on the rearward arm mount ( $\bigcirc$  or  $\times$ ).

Some examples:

**Front Suspension**

triangle	circle	result	Type	Roll Center
2	2	0	flat	std.
3	3	0	flat	high
0	0	0	flat	low
4	2	+2	kick-up	std.
2	0	+2	kick-up	low
2	1	+1	kick-up	low
2	4	-2	anti-dive	high
0	2	-2	anti-dive	low
1	2	-1	anti-dive	std.

**Rear Suspension**

square	x	result	Type	Roll Center
4	4	0	flat	std.
6	6	0	flat	high
2	2	0	flat	low
4	2	+2	anti-squat	std.
2	0	+2	anti-squat	low
4	3	+1	anti-squat	std.
2	4	-2	pro-squat	std.
0	2	-2	pro-squat	low
3	4	-1	pro-squat	std.

Also, you can raise or lower the mounts for maximum roll-center adjustability. Simply raise the mounts in equal increments under both mounts and you can raise the roll center. Lowering the mounts in equal increments will lower the roll center.

**Anti-Squat**

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

**Kick-Up**

Front mount higher than rear mount, positive result. Increasing kick-up will make the front suspension stiffer, as well as increasing caster at the wheel.

**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. Adding 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.



## 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. You can lower the ballstud from standard by using a black short-neck ballstud.

## Battery Placement

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

Moving the wheels towards the center of the car will increase traction on that end of the car. 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.

## Ride Height

The standard starting point for ride height is 5mm front and rear and will be used at 90% of conditions. You can lower the front slightly relative to the rear to gain steering. Raise the car slightly for tracks with banking or large bumps. Some carpet tracks have a minimum ride height so check with the track manager.

## 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.

## Rear Toe-In

The TC4 comes with 3 rear toe-in per side. Decreasing toe-in will decrease rear traction and increase corner speed. The optional parts needed are #31068 2.5 degree toe-in and #31069 2.0 degree toe-in blocks.

## Motor Gearing

### Spur (48 Pitch)

	69	70	71	72	73	74	75
18	9.58	9.72	9.86	10.00	10.14	10.28	10.42
19	9.08	9.21	9.34	9.47	9.61	9.74	9.87
20	8.63	8.75	8.88	9.00	9.13	9.25	9.38
21	8.21	8.33	8.45	8.57	8.69	8.81	8.93
22	7.84	7.95	8.07	8.18	8.30	8.41	8.52
23	7.50	7.61	7.72	7.83	7.93	8.04	8.15
24	7.19	7.29	7.40	7.50	7.60	7.71	7.81
25	6.90	7.00	7.10	7.20	7.30	7.40	7.50
26	6.63	6.73	6.83	6.92	7.02	7.12	7.21
27	6.39	6.48	6.57	6.67	6.76	6.85	6.94
28	6.16	6.25	6.34	6.43	6.52	6.61	6.70
29	5.95	6.03	6.12	6.21	6.29	6.38	6.47
30	5.75	5.83	5.92	6.00	6.08	6.17	6.25
31	5.56	5.65	5.73	5.81	5.89	5.97	6.05
32	5.39	5.47	5.55	5.63	5.70	5.78	5.86

Pinion (48 Pitch)

Motor	72t Spur
24-degree stock (torque based)	28
24-degree stock (RPM based)	27
19 Turn Spec	30
12-Turn Modified (Big Track)	25
12-Turn Modified	24
11-Turn Modified	22
10-Turn Modified	21
9-Turn Modified	20
8-Turn Modified	19

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

## 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 cannot 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](http://www.RC10.com) • [www.TeamAssociated.com](http://www.TeamAssociated.com) • [www.CompetitionX.com](http://www.CompetitionX.com)

**Associated Electrics, Inc.**

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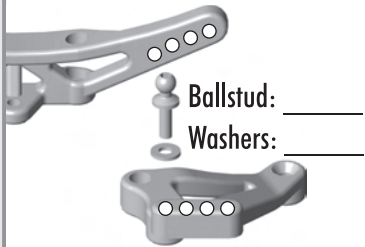
© 2004 Associated Electrics, Inc.



# TC4! Setup Sheet

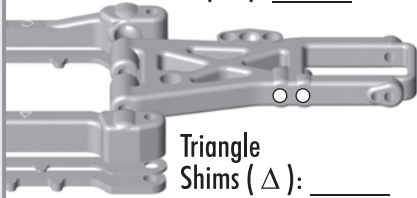
Driver: \_\_\_\_\_ Date: \_\_\_\_\_  
 Track: \_\_\_\_\_ Indoor  Outdoor   
 Event: \_\_\_\_\_  
 Conditions: \_\_\_\_\_

## Front Suspension



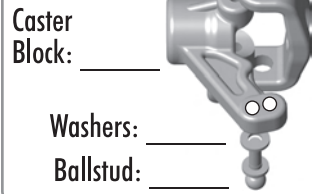
Ballstud: \_\_\_\_\_  
 Washers: \_\_\_\_\_

Circle Shims ( O ): \_\_\_\_\_



Triangle Shims ( Δ ): \_\_\_\_\_

## Front Upright



Caster Block: \_\_\_\_\_

Washers: \_\_\_\_\_  
 Ballstud: \_\_\_\_\_

## Arm Spacing



## Anti-Roll Bar

- .055 - Black
- .063 - Silver
- .078 - Gold
- Other: \_\_\_\_\_

Notes: \_\_\_\_\_

## Front Shocks

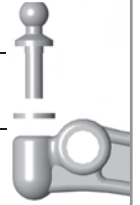


Piston: \_\_\_\_\_  
 Oil: \_\_\_\_\_ wt  
 Spring: \_\_\_\_\_  
 Ride Height: \_\_\_\_\_ mm

## Alignment

Droop: \_\_\_\_\_  
 Camber: \_\_\_\_\_  
 Toe: \_\_\_\_\_

## Steering Rack

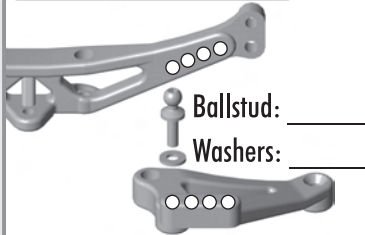


Ballstud: \_\_\_\_\_  
 Washers: \_\_\_\_\_

## Front Diff

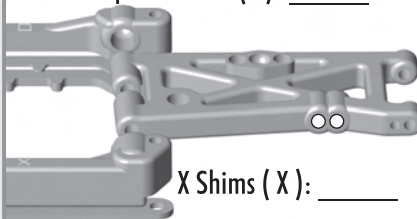
- Diff Setting: \_\_\_\_\_
- Solid Axle
- Oneway

## Rear Suspension



Ballstud: \_\_\_\_\_  
 Washers: \_\_\_\_\_

Square Shims ( □ ): \_\_\_\_\_



X Shims ( X ): \_\_\_\_\_

## Rear Upright



## Rear Shocks



Piston: \_\_\_\_\_  
 Oil: \_\_\_\_\_ wt  
 Spring: \_\_\_\_\_  
 Ride Height: \_\_\_\_\_ mm

## Anti-Roll Bar

- .055 - Black
- .063 - Silver
- .078 - Gold
- Other: \_\_\_\_\_

Notes: \_\_\_\_\_

## Alignment

Droop: \_\_\_\_\_  
 Camber: \_\_\_\_\_  
 Toe: \_\_\_\_\_

## Body & Wing

Body: \_\_\_\_\_  
 Wing: \_\_\_\_\_  
 Sidedams  
 Spillplates  
 Notes: \_\_\_\_\_

## Tires

### Front Tires

Compound: \_\_\_\_\_  
 Insert: \_\_\_\_\_  
 Wheel: \_\_\_\_\_  
 Traction Compound: \_\_\_\_\_  
 Notes: \_\_\_\_\_

### Rear Tires

Compound: \_\_\_\_\_  
 Insert: \_\_\_\_\_  
 Wheel: \_\_\_\_\_

## Electronics

Motor: \_\_\_\_\_ Gear: \_\_\_\_\_ t/ \_\_\_\_\_ t  
 Motor Brush: \_\_\_\_\_ Motor Spring: \_\_\_\_\_  
 Motor Timing: \_\_\_\_\_  
 Battery: \_\_\_\_\_ Position: \_\_\_\_\_  
 ESC: \_\_\_\_\_ Mode: \_\_\_\_\_  
 Drag Brake: \_\_\_\_\_ Initial Brake: \_\_\_\_\_

## Race Comments

Main: \_\_\_\_\_ Qualifying Position: \_\_\_\_\_ Finish: \_\_\_\_\_  
 Notes: \_\_\_\_\_

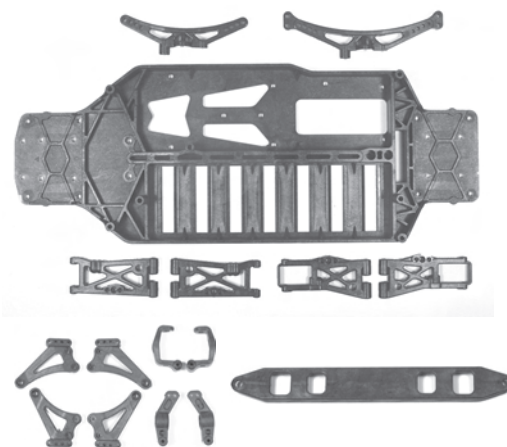
## Car Comments

Notes: \_\_\_\_\_

### Factory Team Options

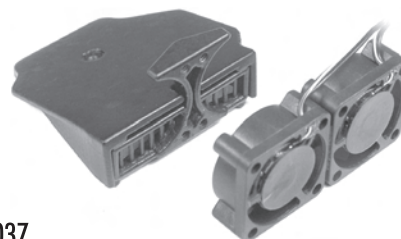
1401	FT 1.30"/33mm Titanium Turnbuckles	Pr.	\$ 8.00
1414	FT 1.125"/28.5mm Titanium Turnbuckles	Pr.	9.00
1729	TC3/TC4/NTC3 HD Oneway Housing w/Bearings	1	40.00
1731	HD Oneway Special Outdrive Bearings	Pr.	8.00
1785	Graphite Battery Spacer	1	8.99
3978	TC3/TC4 HD Front Oneway Assembly	1	61.99
3979	TC3/TC4 HD Front Oneway Outdrives	Pr.	21.00
3985	FT Hard Anodized Threaded Shock Kit (2 complete shocks)	Set	39.99
3990	FT Hard Anodized Threaded Shock Bodies	Pr.	20.00
31002	TC4 Carbon Chassis Braces	Set	9.99
31005	TC4 Carbon Hub Carrier & Steering Block (1 ea)	Set	11.99
31007	TC4 Carbon Front A-Arms	Pr.	10.99
31008	TC4 Carbon Rear A-Arms	Pr.	10.99
31012	TC4 Carbon Front Shock Tower	1	8.99
31014	TC4 Carbon Rear Shock Tower	1	8.99
31035	FT Motor Cooling Duct/Screen	1	5.99
31036	FT Motor Cooling Fans, prewired	2	24.99
31037	FT Motor Cooling Duct/Fan Kit	1	28.99
31039	FT Blue Graphite Battery Brace w/Chrome Decal	1	14.99
31041	TC4 Carbon Chassis	1	39.99
31042	TC4 Carbon Component Kit	Set	69.99
31046	FT TC4 Motor Mount, blue	1	19.99
31047	FT TC4 Motor Clamp, blue	1	27.99
31048	FT Aluminum Motor Heatsink, black (for std clamp)	1	9.99
31049	FT Aluminum Motor Heatsink, blue (for #31047)	1	14.99
31052	FT Titanium Turnbuckle Kit (6 + wrench)	Set	29.99
31054	FT TC4 Aluminum Screw Kit, blue (38 pcs)	Set	12.99
31057	FT Anti-Roll Bar Kit (includes 3 bars)	Set	12.99
31058	FT Aluminum Anti-Roll Bar Studs, blue	2	3.99
31060	FT TC4 Polished Hinge Pin Set	Set	9.99
31062	FT TC4 Lightened Steel Diff Outdrives (1 ea side)	Pr.	19.99
31064	FT TC4 Aluminum F Arm Mount - Triangle	1	12.99
31065	FT TC4 Aluminum F Arm Mount - Circle	1	12.99
31066	FT TC4 Aluminum R Arm Mount - Square	1	12.99
31067	FT TC4 Aluminum R Arm Mount - X-3.0	1	12.99
31068	FT TC4 Aluminum R Arm Mount - X-2.5	1	12.99
31069	FT TC4 Aluminum R Arm Mount - X-2.0	1	12.99

### Carbon Chassis Set



#31042

### Motor Cooling Duct/Fan Kit



#31037

### Motor Mount



#31046

### Ti Turnbuckles



#1401

### Factory Team Tools

1110	FT Turnbuckle Wrench	1	\$ 1.50	1572	Hex Driver Replacement Tip, .050"	1	5.50
1450	FT Ride Height Gauge	1	14.99	1573	Hex Driver Replacement Tip, 1/16"	1	5.50
1541	Hex Driver Set	Set	59.99	1574	Hex Driver Replacement Tip, 1.5mm	1	5.50
1542	Hex Driver, .050", Silver Handle	1	10.50	1575	Hex Driver Replacement Tip, 5/64"	1	5.50
1543	Hex Driver, 1/16", Black Handle	1	10.50	1576	Hex Driver Replacement Tip, 3/32"	1	5.50
1544	Hex Driver, 1.5mm, Purple Handle	1	10.50	1577	Hex Driver Replacement Tip, 2.5mm	1	5.50
1545	Hex Driver, 5/64", Blue Handle	1	10.50	1578	Hex Driver Replacement Tip, 3mm	1	5.50
1546	Hex Driver, 3/32", Gold Handle	1	10.50	1593	FT Body Reamer Tip	1	9.95
1547	Hex Driver, 2.5mm, Green Handle	1	10.50	1594	FT Body Reamer	1	22.00
1548	Hex Driver, 3mm, Red Handle	1	10.50	1737	FT Body Scissors	1	5.99
1561	Nut Driver Set	Set	69.99				
1562	Nut Driver, 3/16", Black Handle	1	12.99				
1563	Nut Driver, 1/4", Red Handle	1	12.99				
1564	Nut Driver, 5.5mm, Purple Handle	1	12.99				
1565	Nut Driver, 11/32", Green Handle	1	12.99				
1566	Nut Driver, 7mm, Silver Handle	1	12.99				
1567	Nut Driver, 8mm, Gold Handle	1	12.99				



1541



1561