



- #7027 SC10 Kit
- #7026 SC10 RTR Lucas Oil
- #7028 SC10 RTR Pro Comp
- #7029 SC10 RTR Team AE
- #7030 SC10 RTR KMC
- #7031 SC10 RTR Bully Dog
- #7032 SC10 RTR ReadyLift

SC10

SHORT COURSE



1:10 Scale Electric 2WD Offroad Race Truck Manual

TEAM ASSOCIATED



:: Introduction

Thank you for purchasing this Team Associated product. This manual contains instructions and tips for building and maintaining your new SC10. Please take a moment to read through it and familiarize yourself with these 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.

:: SC10 Features

- Built on 6-time National Champion RC10 T4 Platform
- Realistic Short Course Racing Truck 0.040" polycarbonate body
- KMC style wheels front and rear
- Aggressive tread multi-terrain scale tire with re-enforced sidewalls
- Realistic bumpers front and rear for maximum durability
- Rubber AE logo mud flaps
- 2.6:1 Ratio Gearbox equipped with sealed gear differential
- Dual-sided externally adjustable slipper clutch
- Molded composite low-CG chassis
- 2 spur gears included - 75 tooth gear for brushless stock and 87 tooth gear for brushed / modified.
- Set-screw to secure antenna tube
- Hinged battery hold-down strap fits up to 8 cell battery pack (Reedy #699)
- Durable front and rear body mounts with adjustable height
- Complete set of 14 rubber sealed ball bearings
- Rugged steel turnbuckles
- Fully adjustable caster, camber, and toe-in
- Angled bellcrank "co-planar" steering
- Built in servo saver
- Vertical ball end adjustment, front and rear
- Blue aluminum shock bodies with molded pre-load clips
- Dog bone rear axles

:: Additional

:: SC10 Kit

Your new SC10 kit comes unassembled and requires the following items for completion (refer to catalog for suggestions):

Items:

- R/C two channel surface frequency radio system
- AA-size batteries for transmitter (x8)
- 6-7cell NiMH battery pack or 2-3 cell LiPo battery pack
- Battery charger (we recommend a peak detection charger)
- Electronic Speed Control (ESC)
- R/C electric motor
- Pinion gear, size to be determined by type and wind of motor you will be using
- Lexan specific spray paint

:: SC10 RTR

Your new SC10 RTR comes factory assembled including radio gear, motor, and ESC. However, there are some items you will need to complete your kit (refer to catalog for suggestions):

- AA-size batteries for transmitter (x8)
- 6 cell NiMH battery pack or 2 cell LiPo battery pack
- Battery charger (we recommend a peak detection charger)

Tools included:

- Allen wrenches #6950 (.050", 1/16", 3/32", 5/64")
- 1.5mm allen wrench
- Molded tools #6956
- Camber gauge #1719
- Shock building tool #6429

:: Optional

Optional parts and gear to accessorize and maintain your SC10:

- Green Slime shock lube (AE Part # 1105)
- Cyanoacrylate glue (AE Part # 1597)
- Thread Locking Compound (AE Part # 1596)
- Silicone Shock Fluid (Refer to catalog for complete listings)
- Silicone Diff Fluid (Refer to catalog for complete listings)
- Body Scissors (AE Part # 1737)
- Reamer / Hole Punch
- FT Hex Wrenches (AE Part # 1541)
- Hobby Knife
- Needle Nose Pliers
- Wire Cutters
- Soldering Iron
- Calipers or a Precision Ruler
- FT Nut Driver Set (AE Part # 1561)



* These Symbols Indicate a special note or instructions.

There is a 1:1 fold out in the back of the manual. Fold it out while building your kit for easy parts sizing!

Associated Electrics, Inc.
26021 Commercentre Dr.
Lake Forest, CA 92630



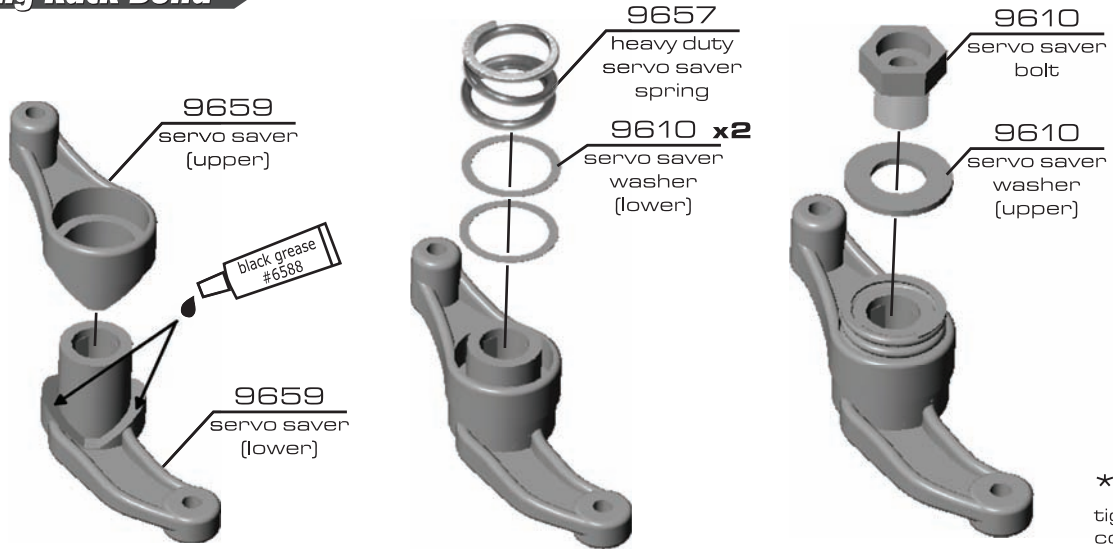
<http://www.TeamAssociated.com> • <http://www.RC10.com>

Customer Service
Tel: 949.544.7500
Fax: 949.544.7501

:: Steering Rack Build

BAG A

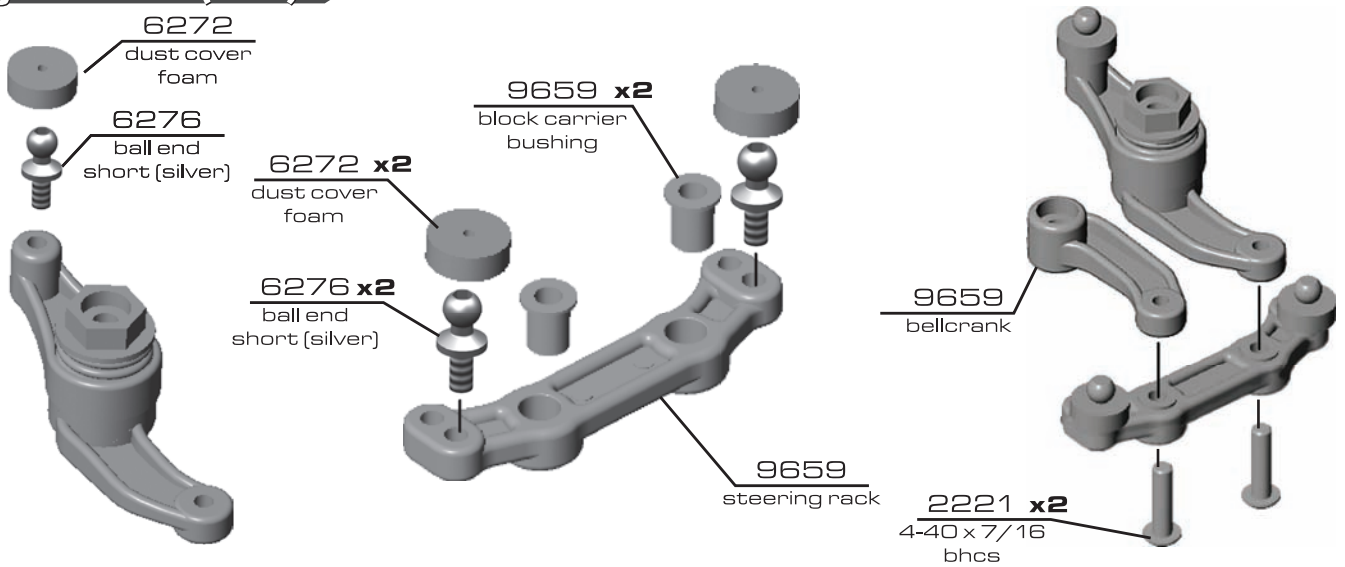
A2
STEP 1



* With supplied wrench, tighten servo saver bolt completely, but take care not to overtighten.

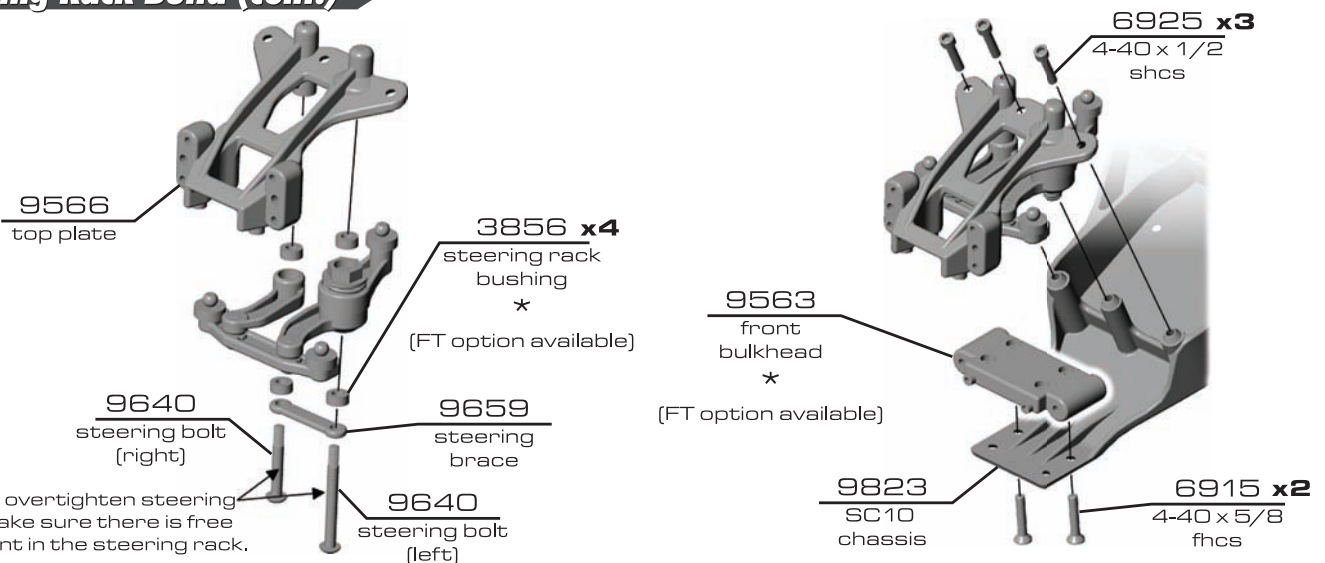
:: Steering Rack Build (cont.)

A 2 / 3
STEP 2



:: Steering Rack Build (cont.)

A 4 / 5
STEP 2



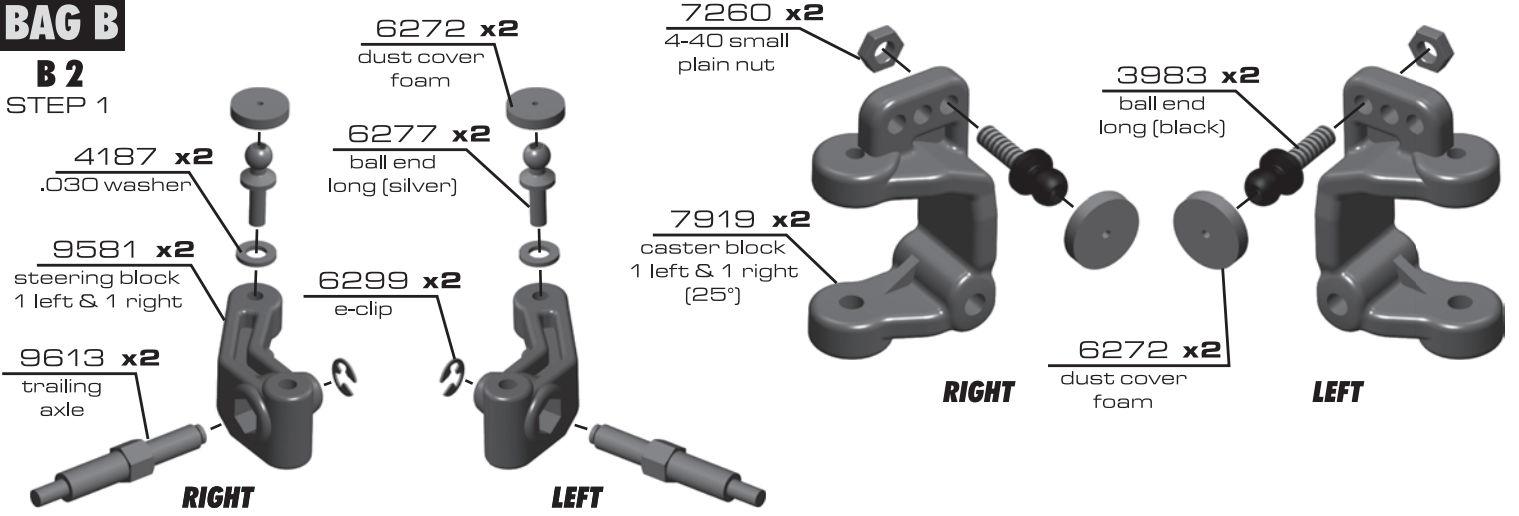
* Do not overtighten steering bolts. Make sure there is free movement in the steering rack.

:: Steering Knuckles Build

BAG B

B 2

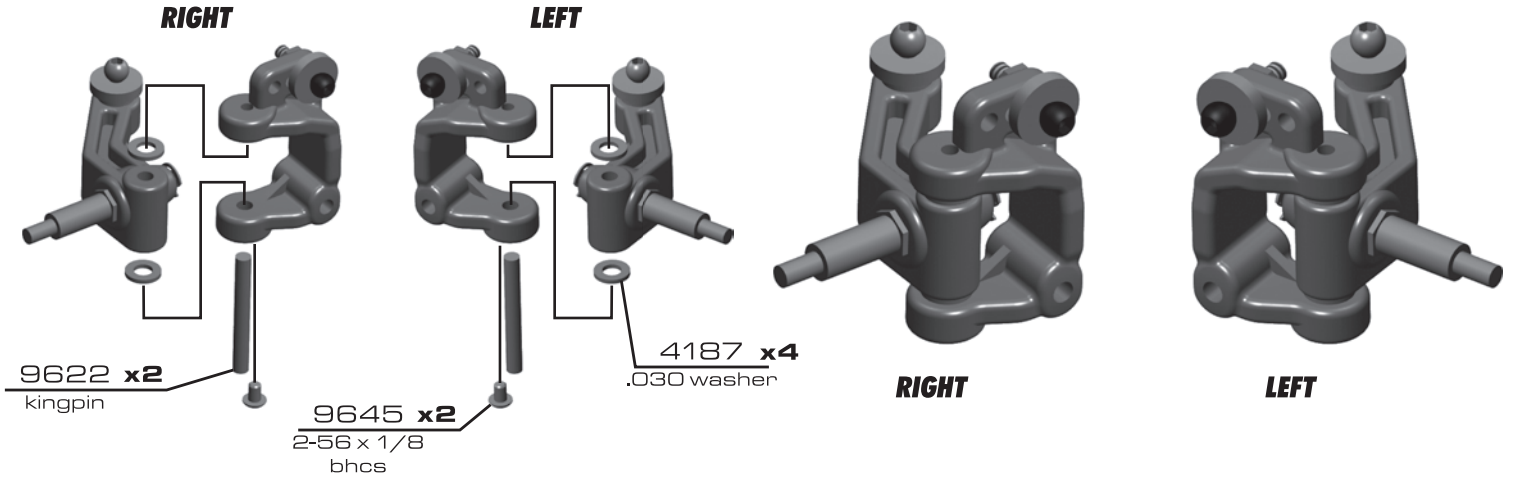
STEP 1



:: Steering Knuckles Build (cont.)

B 2

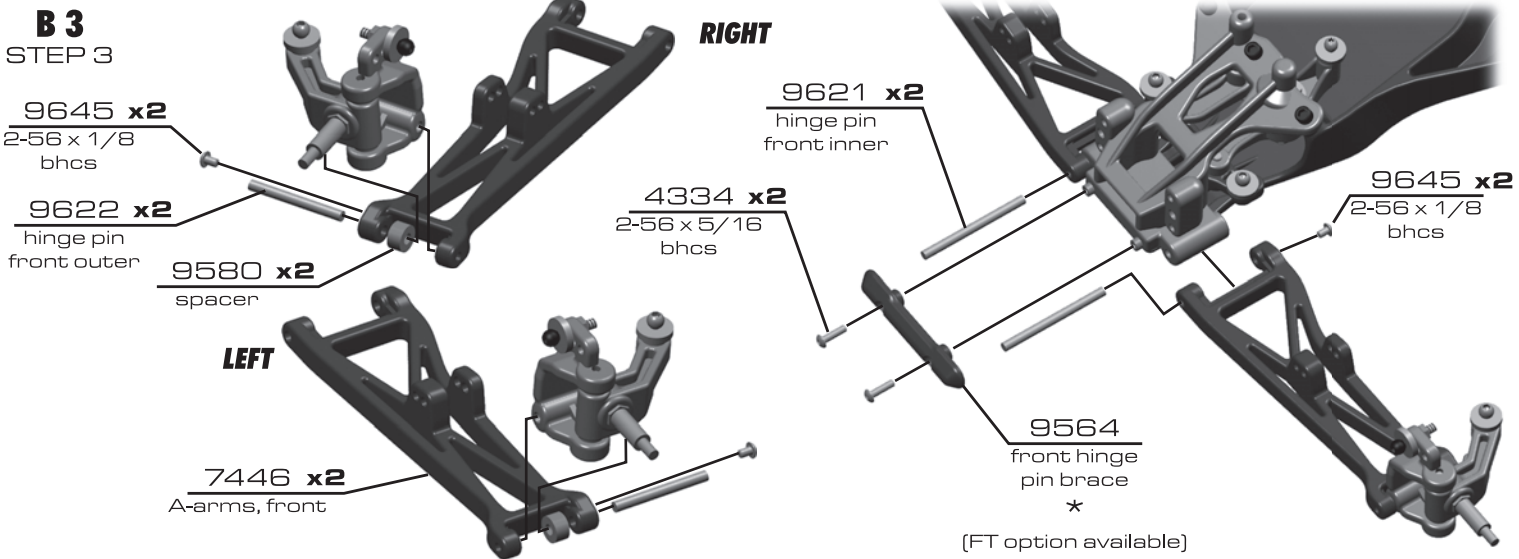
STEP 2



:: Front Arms

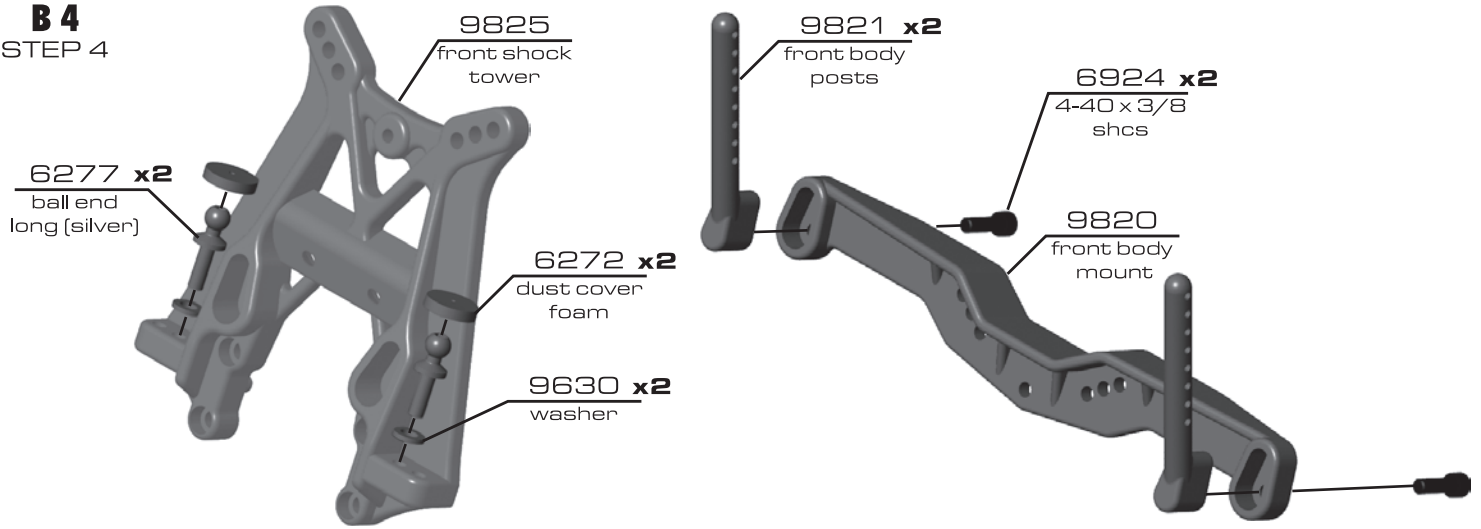
B 3

STEP 3



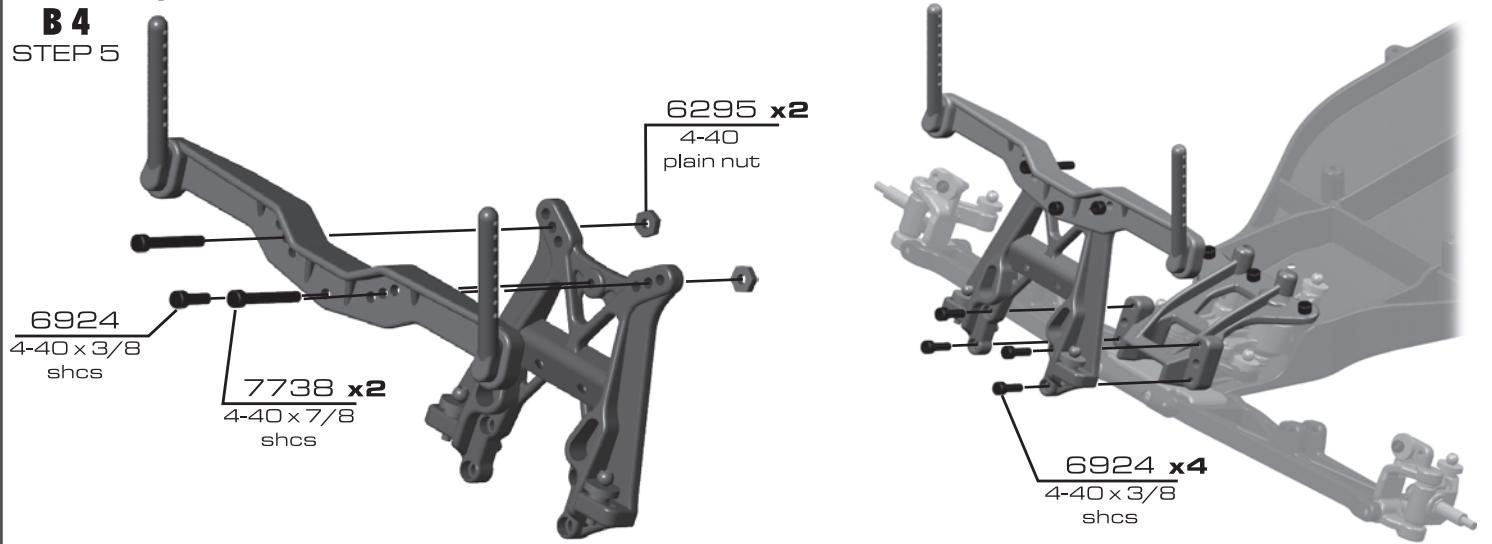
:: Front Shock Tower

B 4
STEP 4



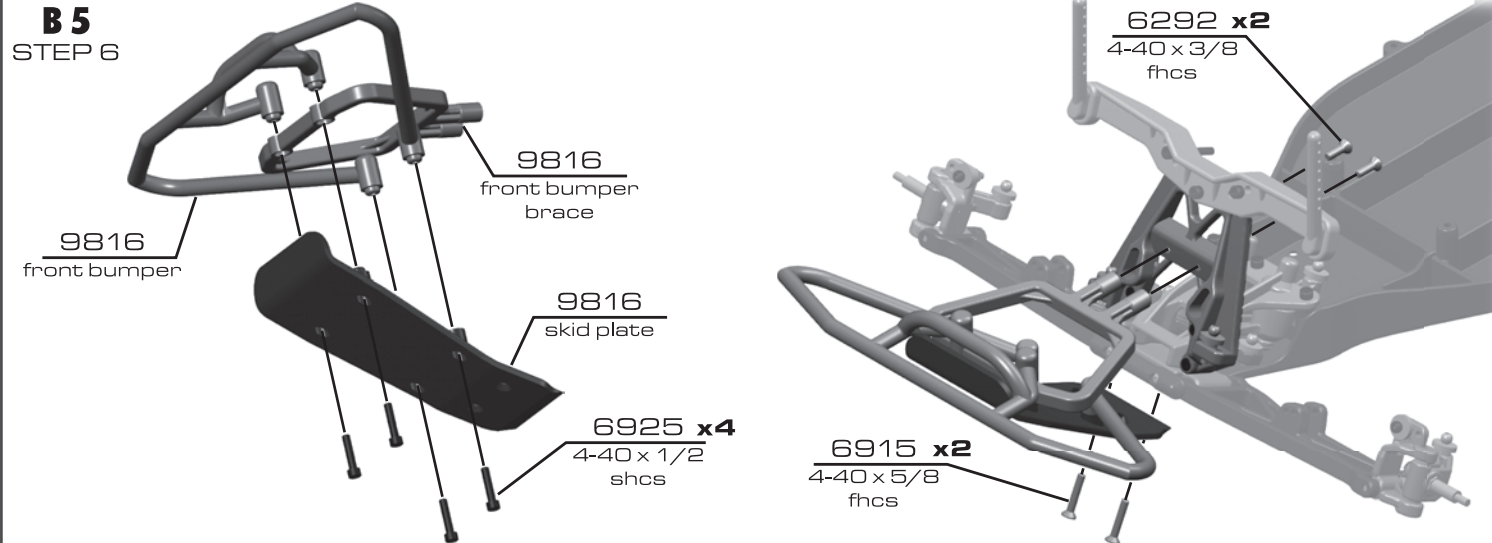
:: Steering Knuckles Build (cont.)

B 4
STEP 5



:: Front Bumper

B 5
STEP 6



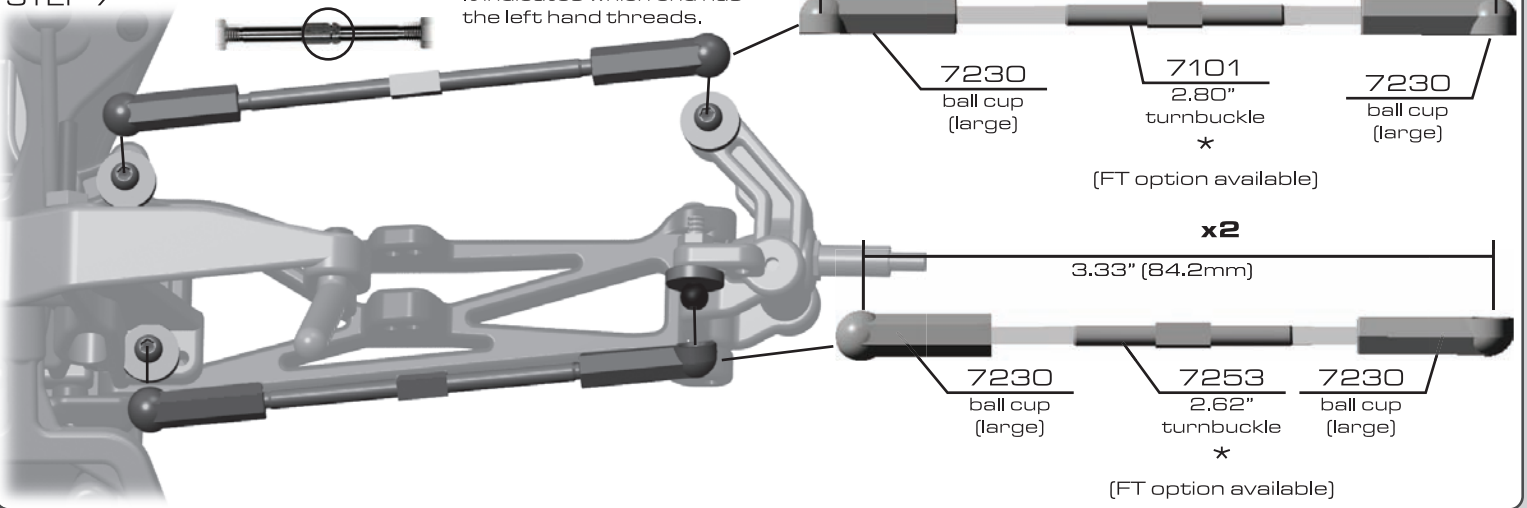
:: Front Turnbuckles

B 6

STEP 7



* Orient the notch to the left throughout the car. It indicates which end has the left hand threads.

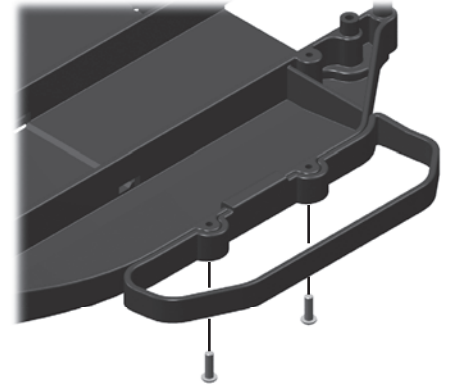


:: Side Nerf Bars

B 7

STEP 8

9822 x2
nerf bars
1 right & 1 left



6917 x2
4-40 x 3/8
bhcs



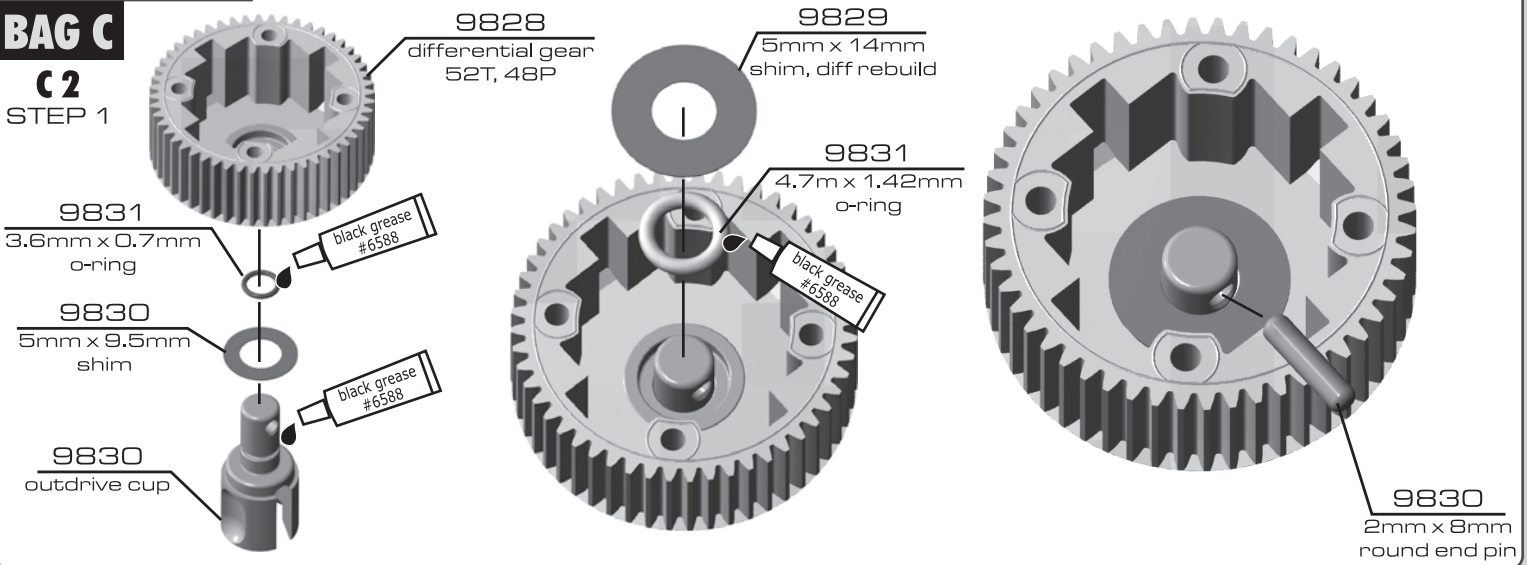
* Twist and flex side nerf guards into place

:: Transmission

BAG C

C 2

STEP 1



9828
differential gear
52T, 48P

9829
5mm x 14mm
shim, diff rebuild

9831
4.7mm x 1.42mm
o-ring

9831
3.6mm x 0.7mm
o-ring

black grease
#6588

9830
5mm x 9.5mm
shim

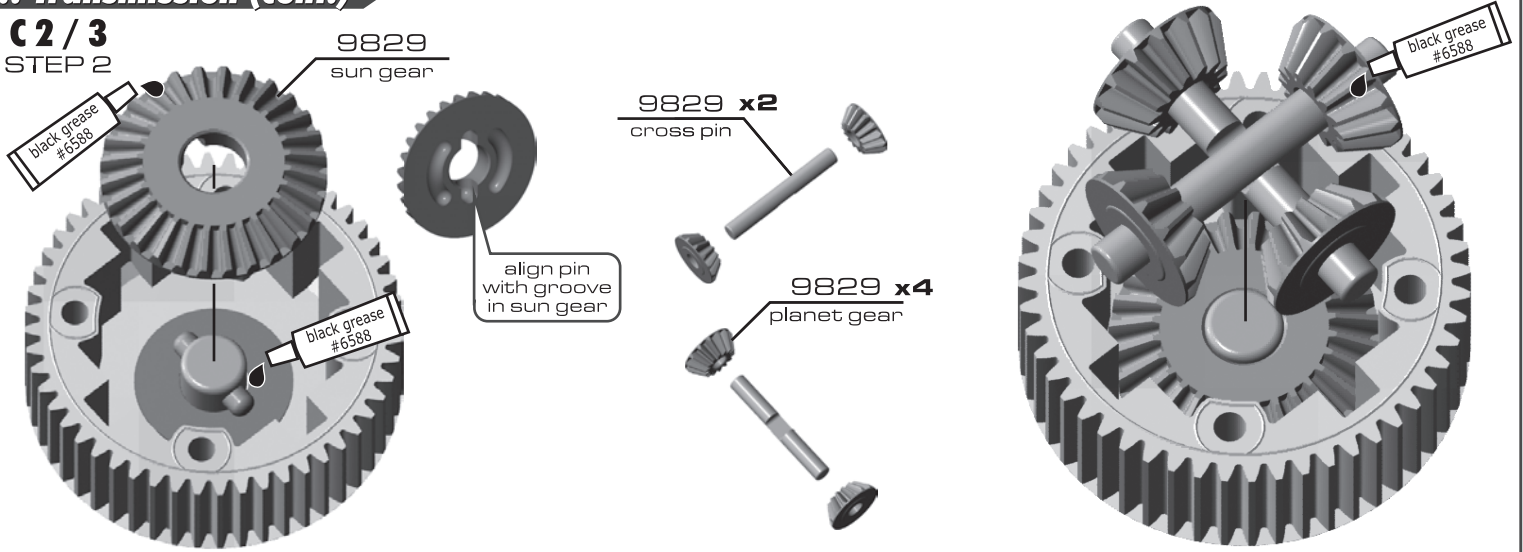
black grease
#6588

9830
outdrive cup

9830
2mm x 8mm
round end pin

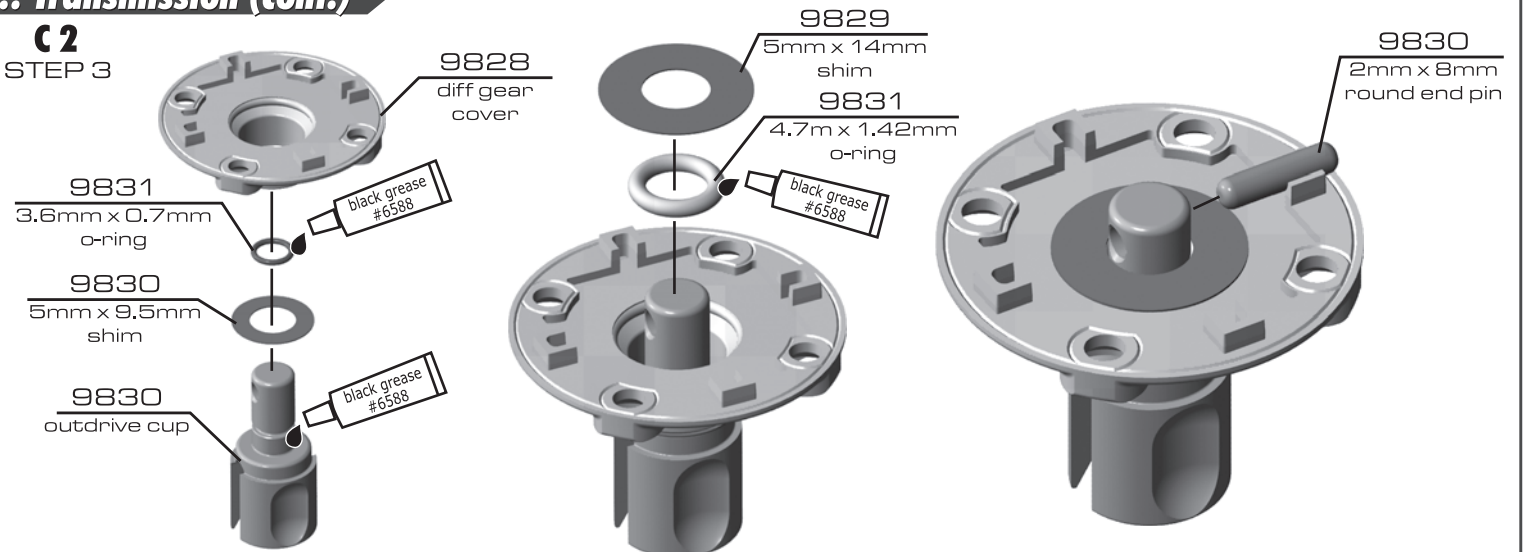
:: Transmission (cont.)

C2 / 3
STEP 2



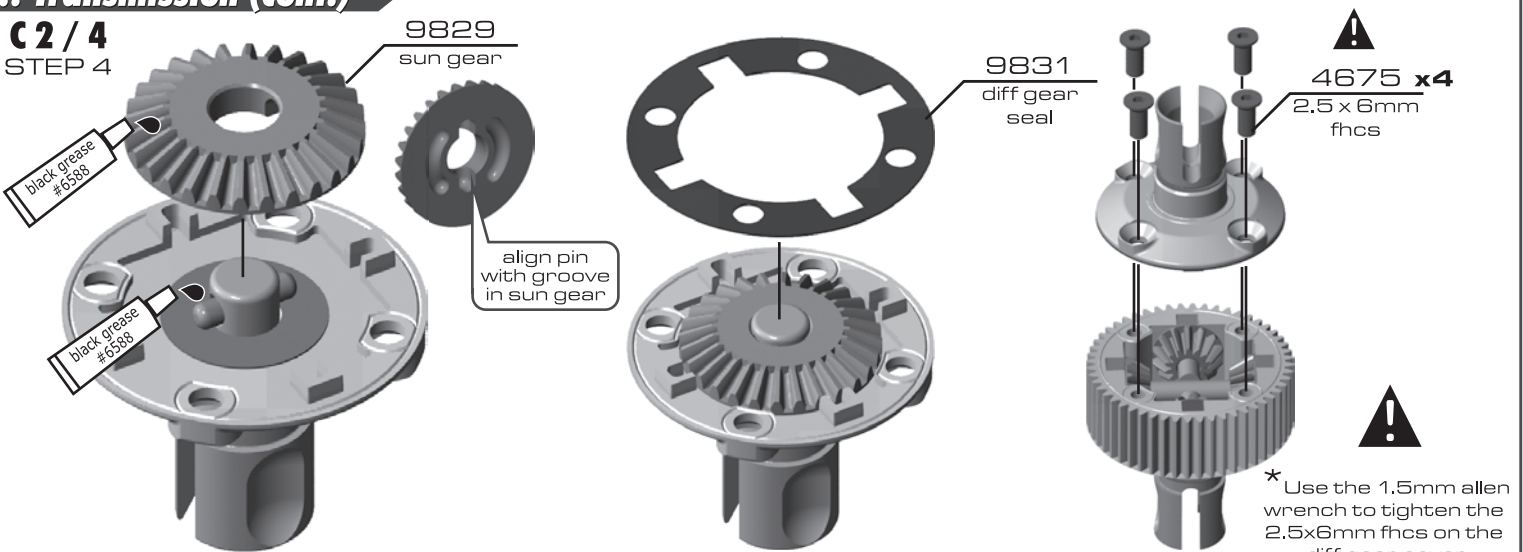
:: Transmission (cont.)

C2
STEP 3



:: Transmission (cont.)

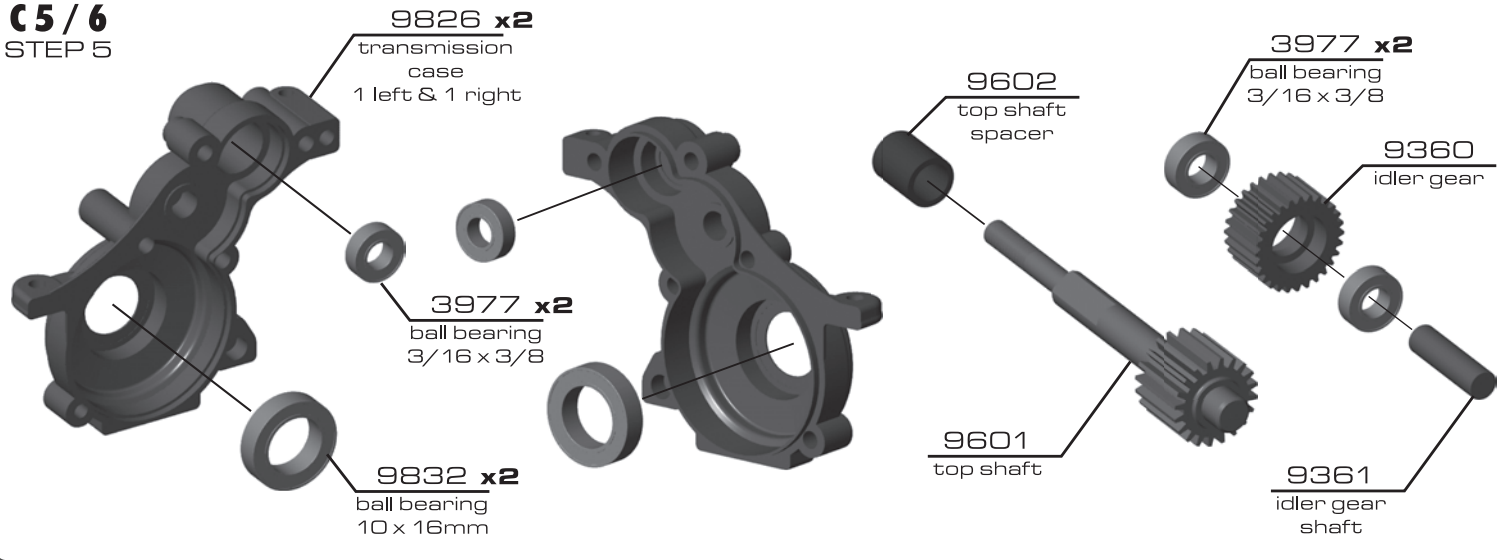
C2 / 4
STEP 4



* Use the 1.5mm allen wrench to tighten the 2.5x6mm flocs on the diff gear cover

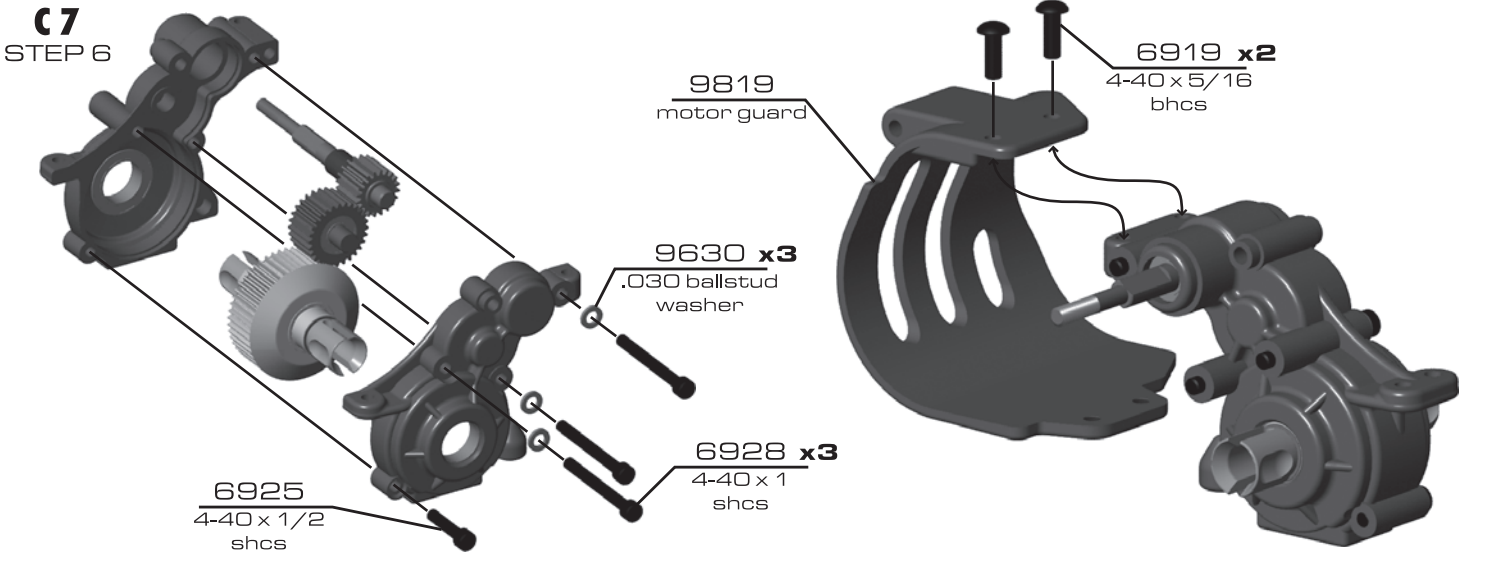
:: Transmission (cont.)

C5/6
STEP 5



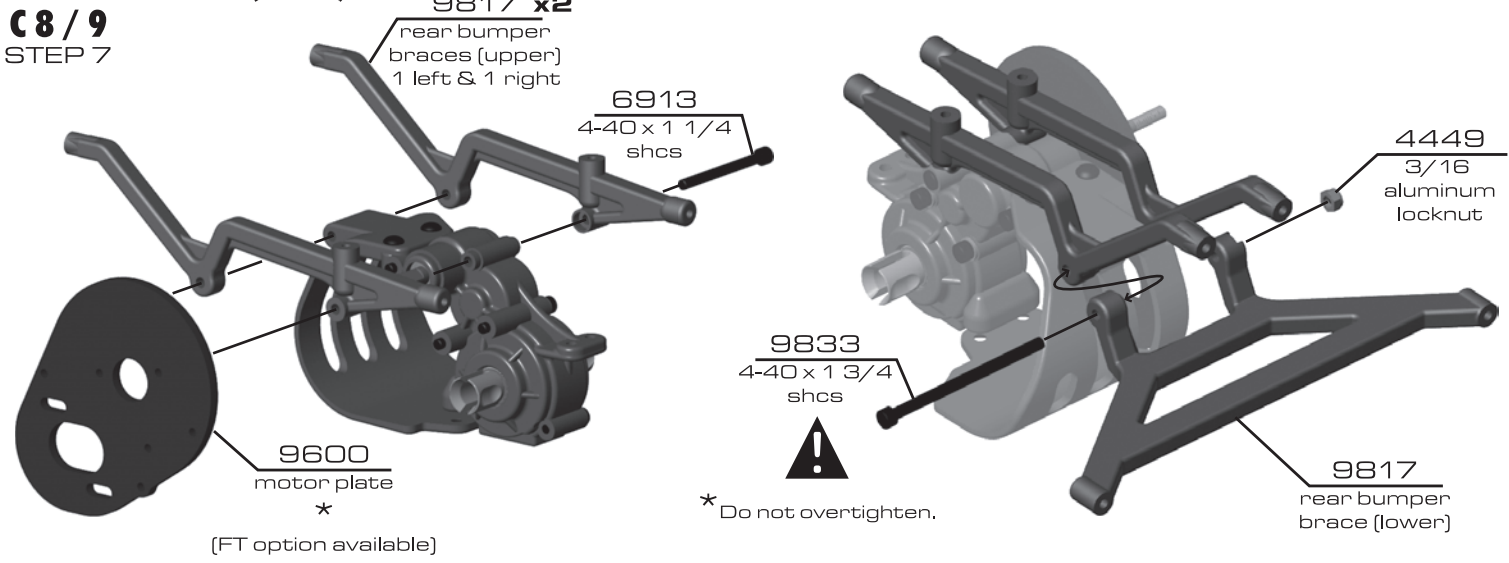
:: Transmission (cont.)

C7
STEP 6



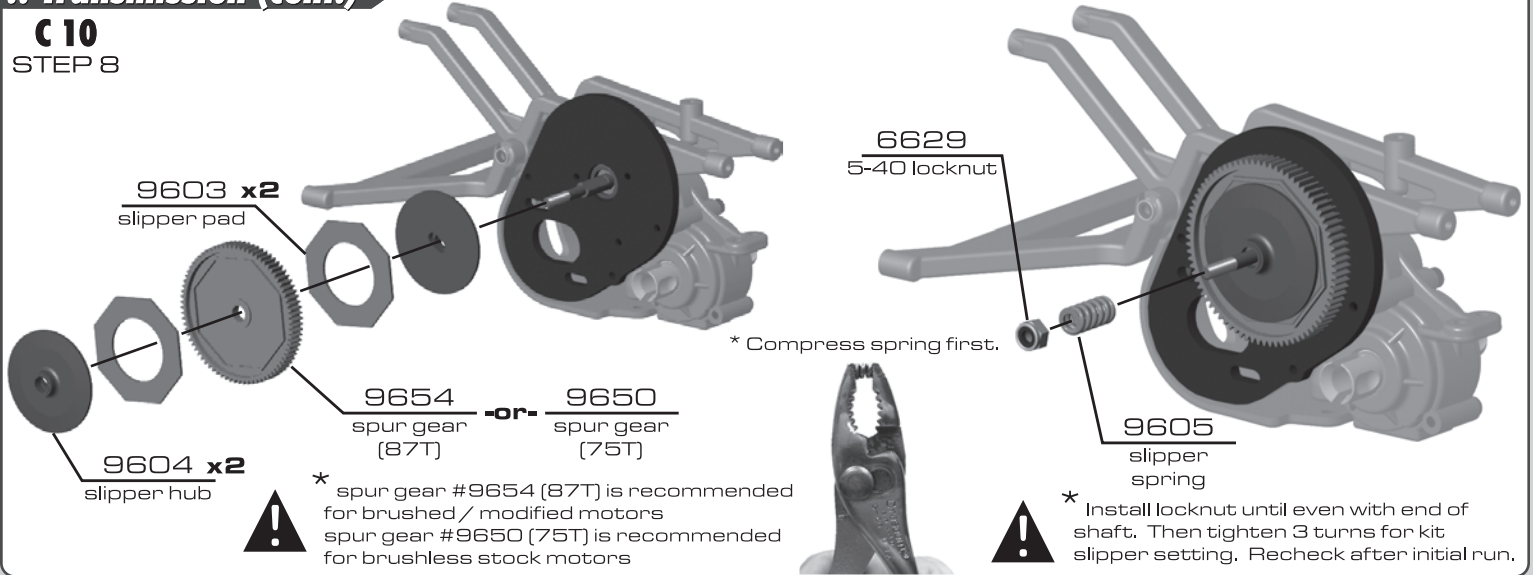
:: Transmission (cont.)

C8/9
STEP 7



:: Transmission (cont.)

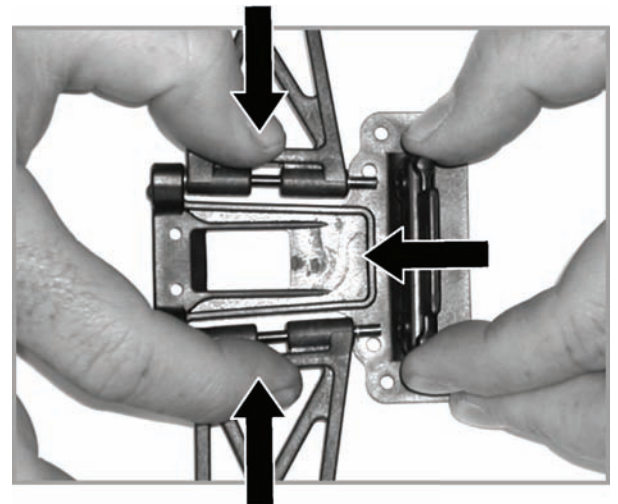
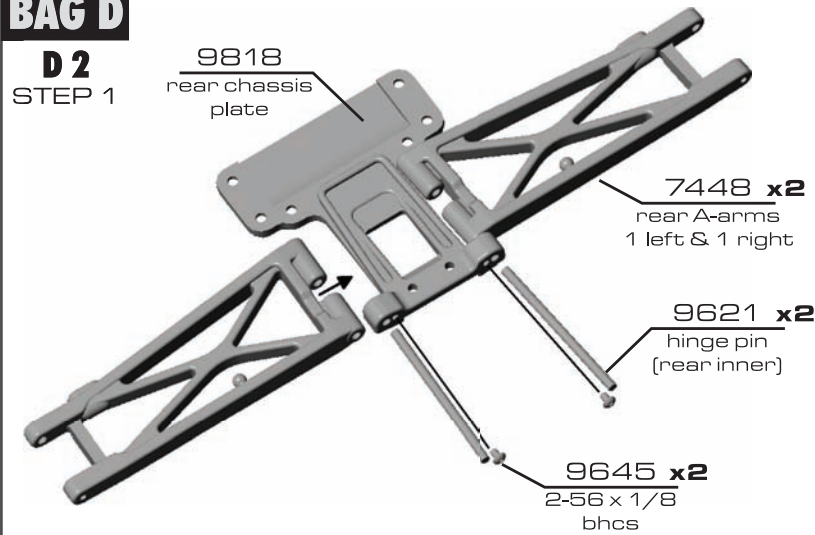
C 10
STEP 8



:: Rear Arms

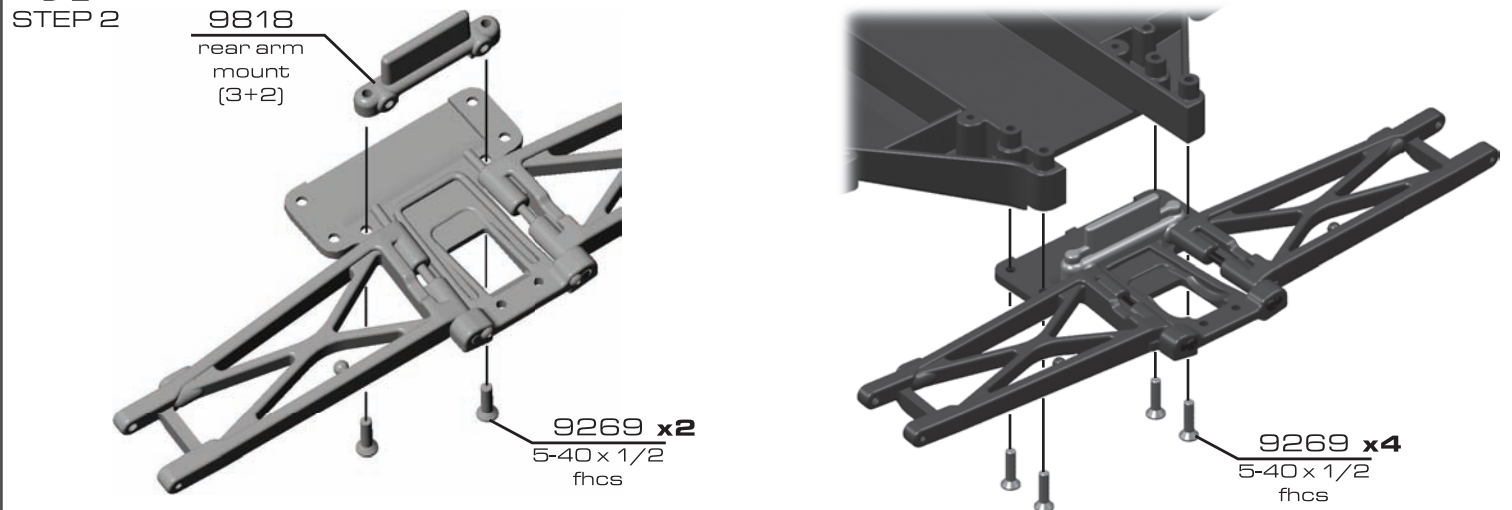
BAG D

D 2
STEP 1



:: Rear Arms (cont.)

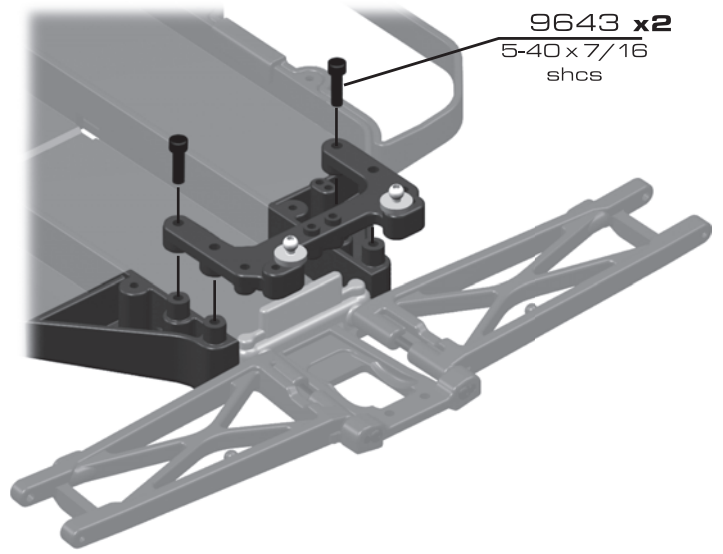
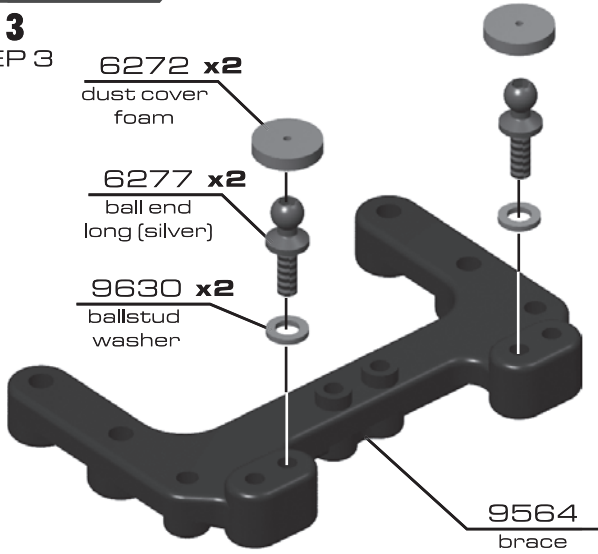
D 2
STEP 2



:: Rear Brace

D 3

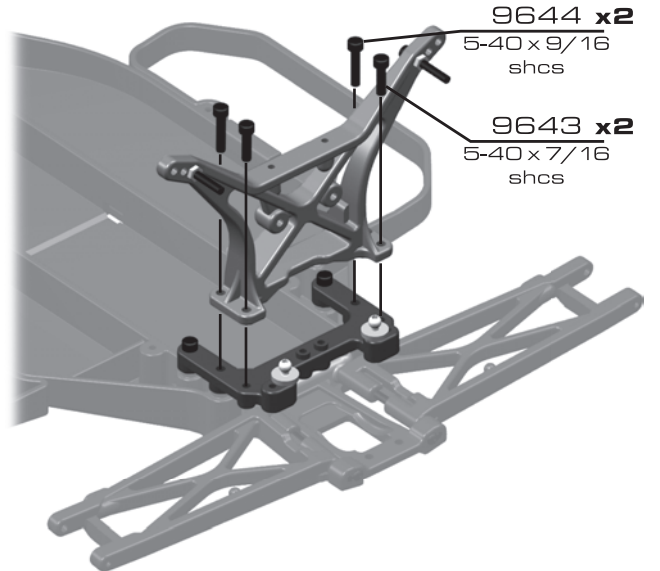
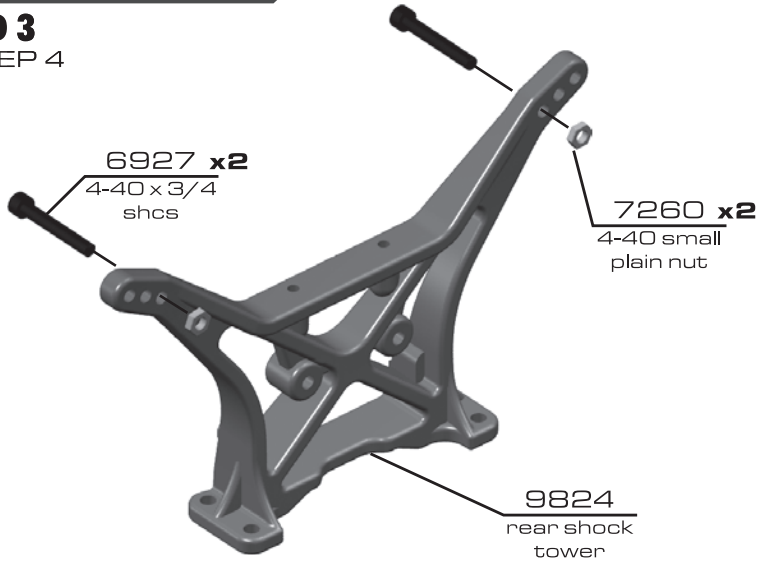
STEP 3



:: Rear Shock Tower

D 3

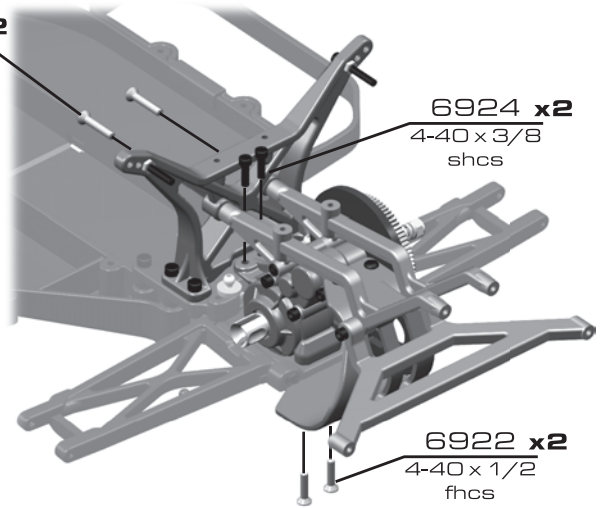
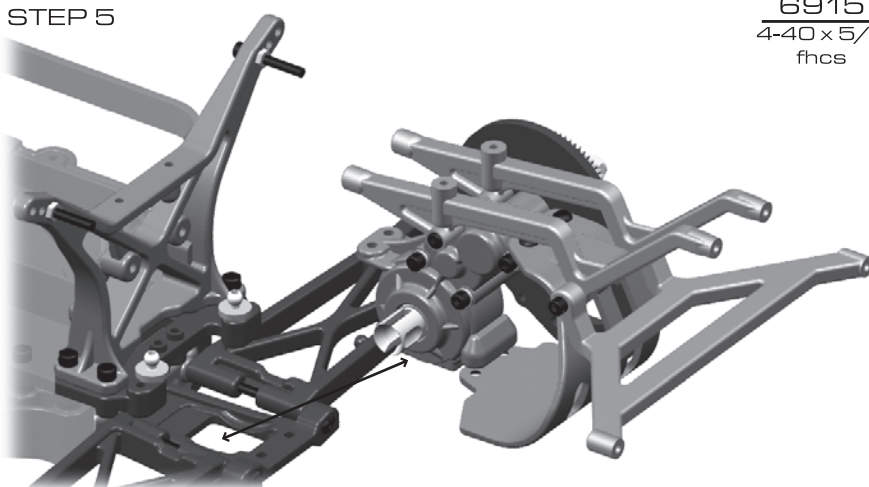
STEP 4



:: Transmission Install

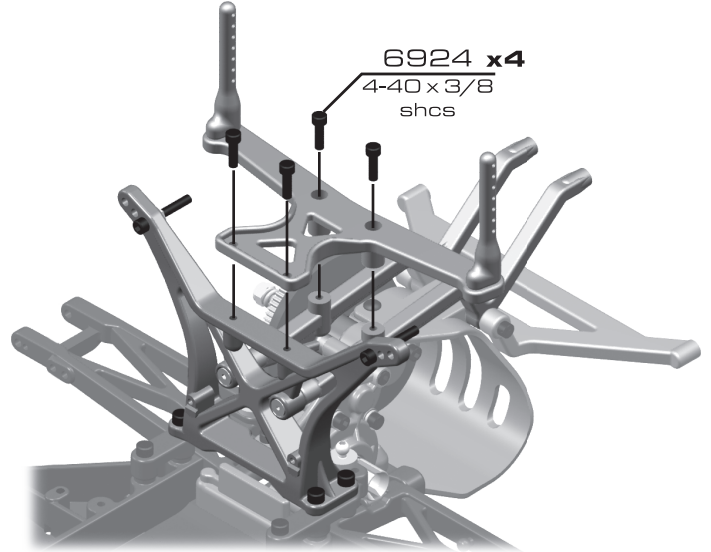
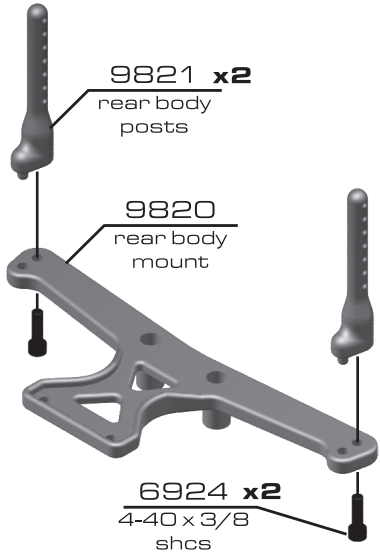
D 4

STEP 5



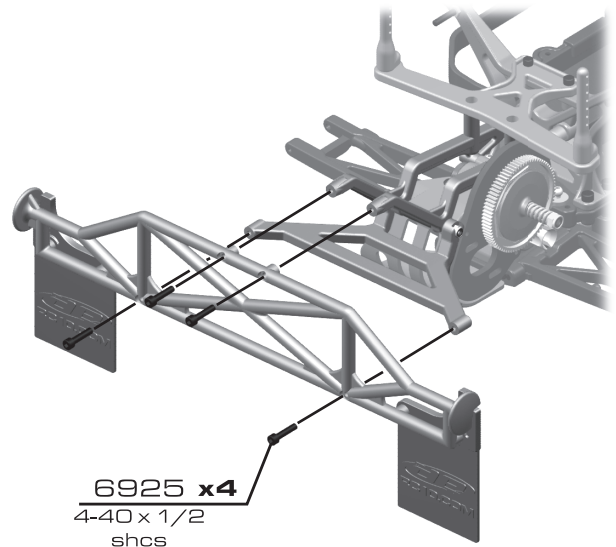
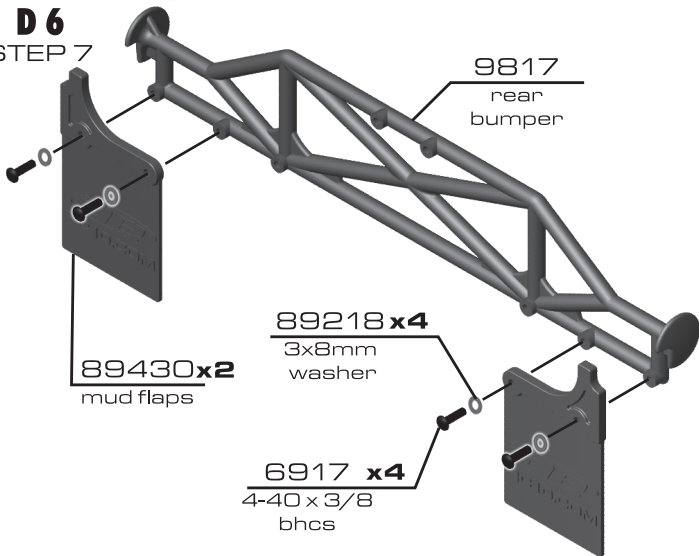
:: Rear Upper Plate

D5
STEP 6



:: Rear Bumper

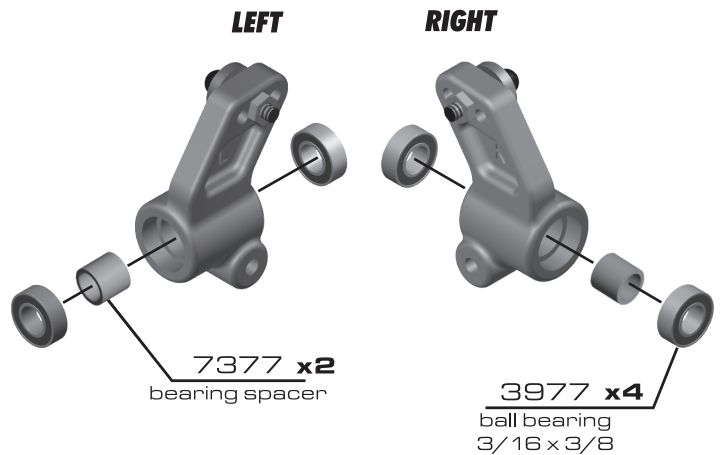
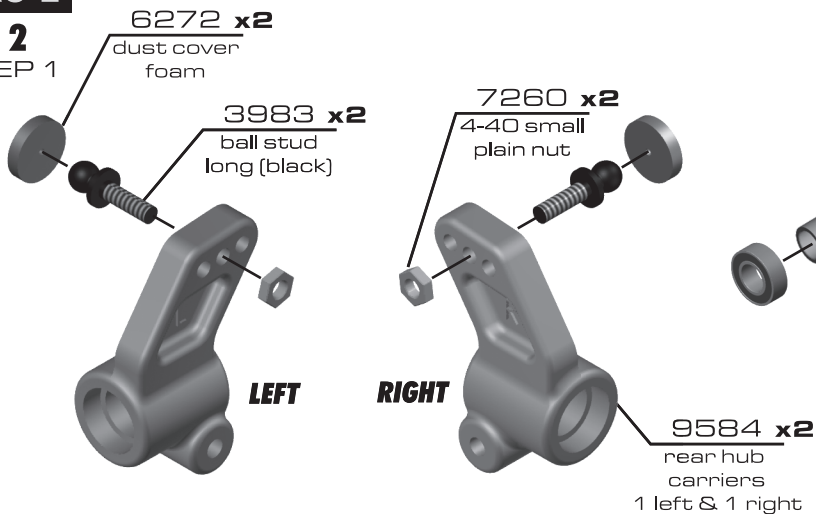
D6
STEP 7



:: Rear Hubs

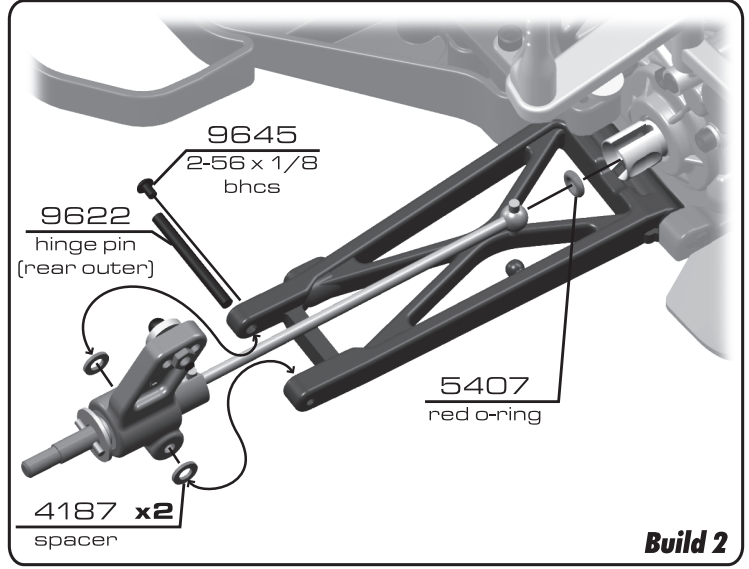
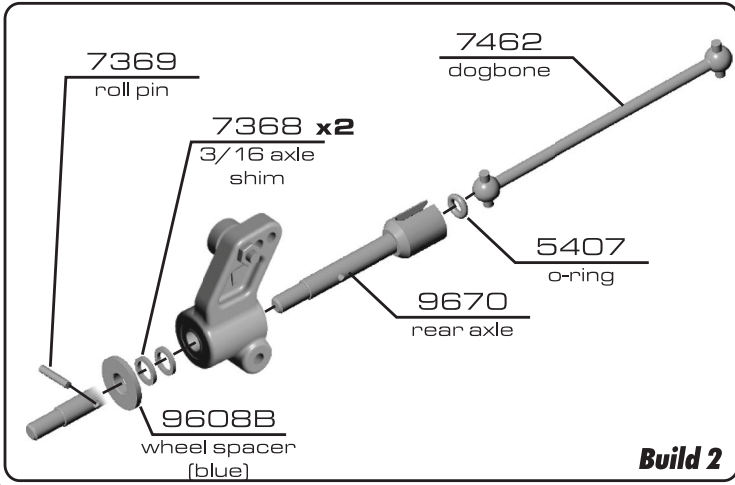
BAG E

E2
STEP 1



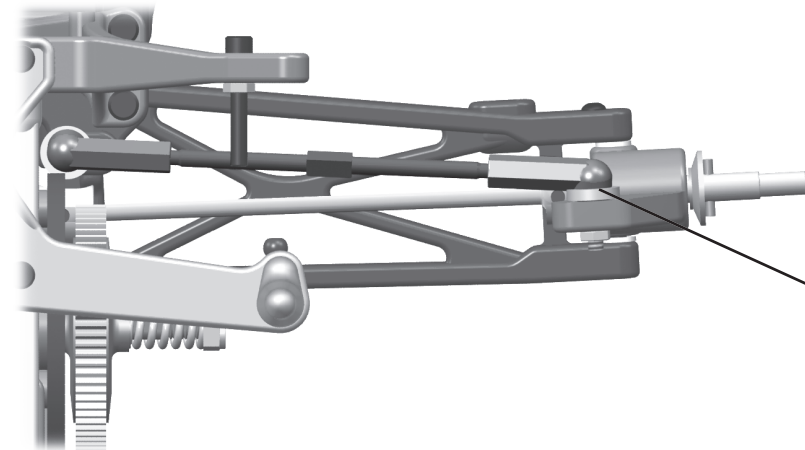
:: Rear Hubs (cont.)

E3 / 4 / 5
STEP 2

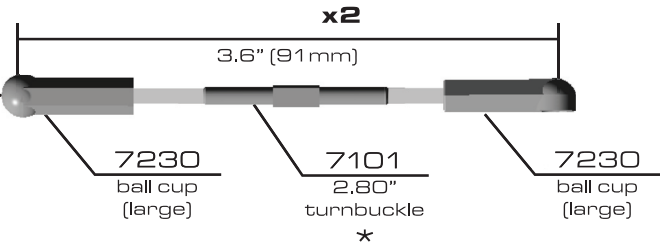
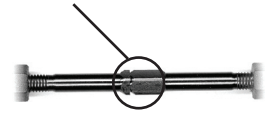


:: Rear Camber Turnbuckle

E6
STEP 3



* Orient the notch to the left throughout the car. It indicates which end has the left hand threads.

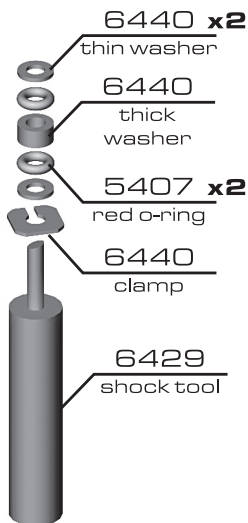
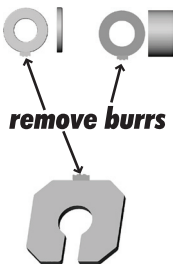


(FT option available)

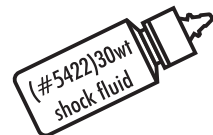
:: Shocks

BAG F

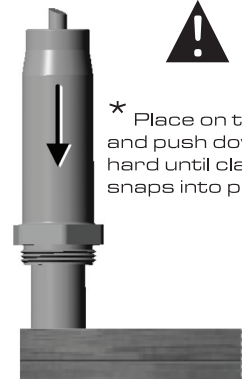
F2
STEP 1



Front x2



Rear x2



* Place on table and push down hard until clamp snaps into place

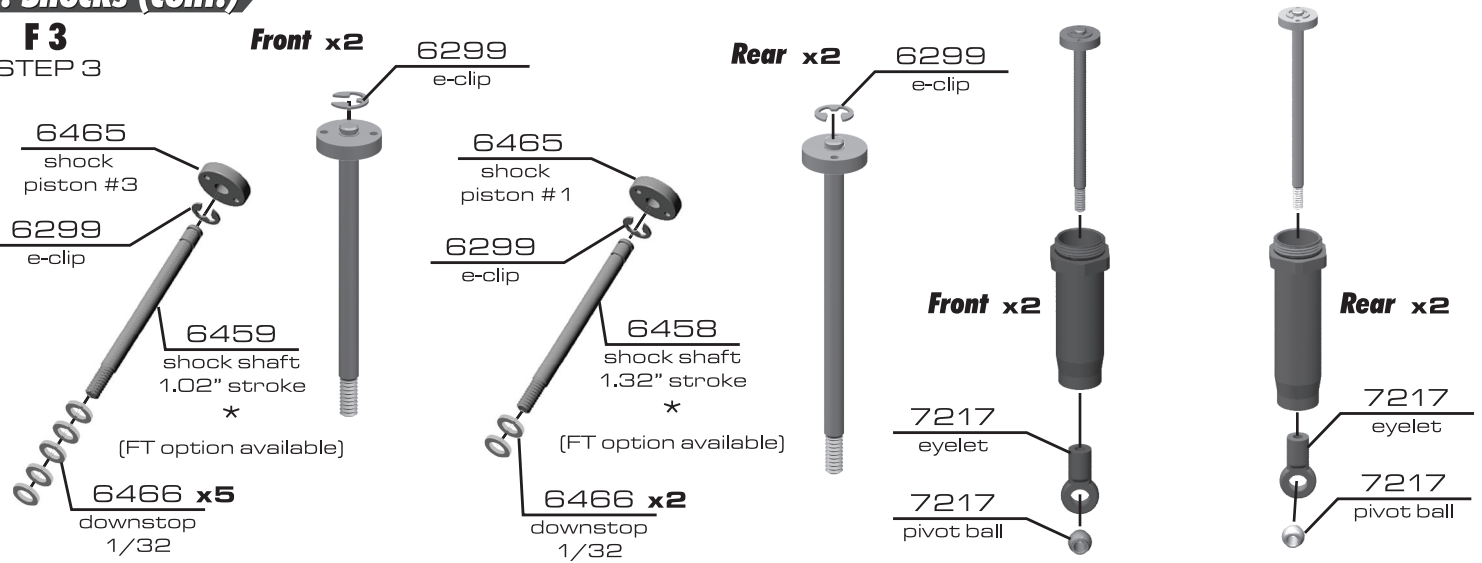
:: Shocks (cont.)

F 2 / 3
STEP 2



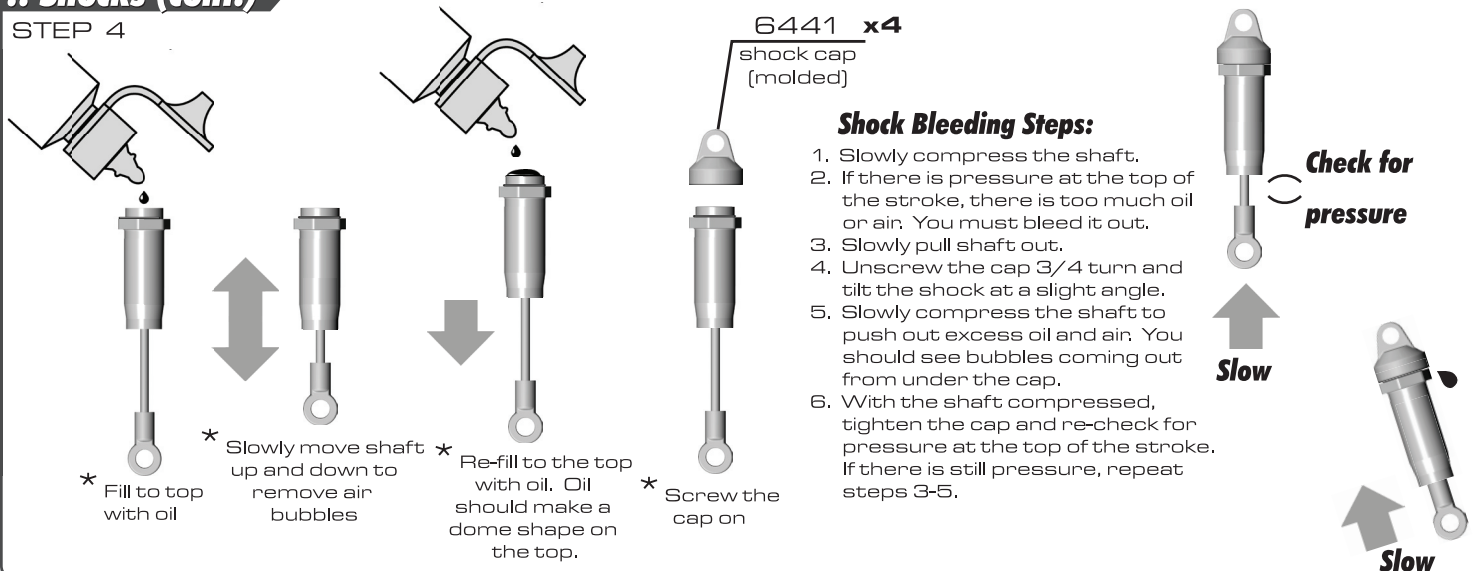
:: Shocks (cont.)

F 3
STEP 3



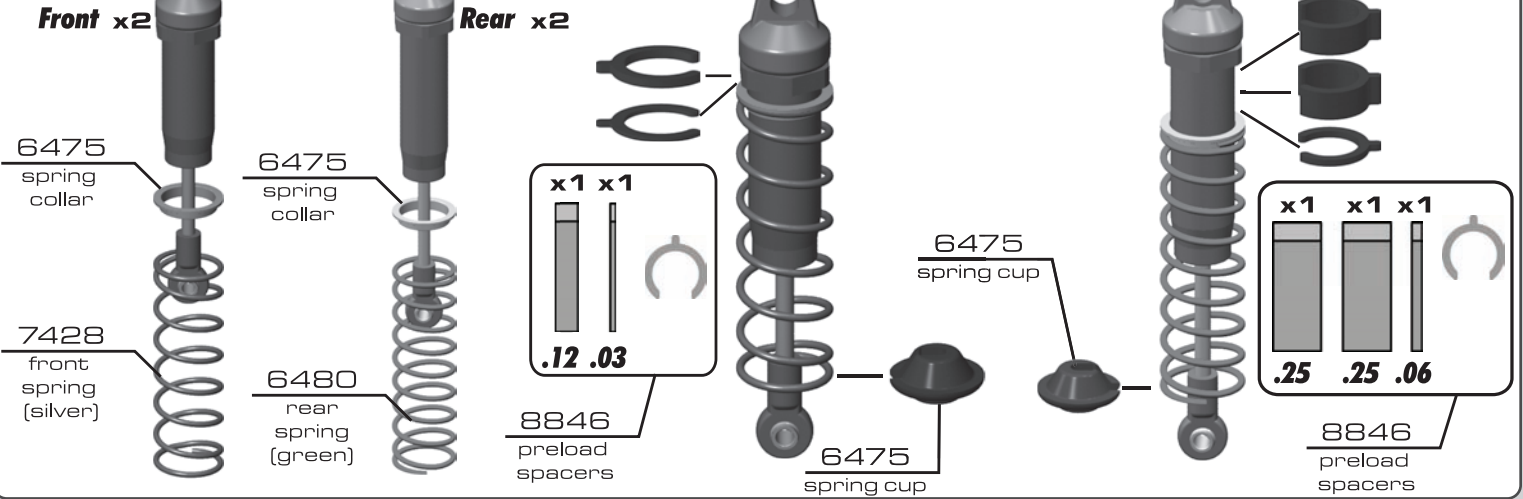
:: Shocks (cont.)

STEP 4



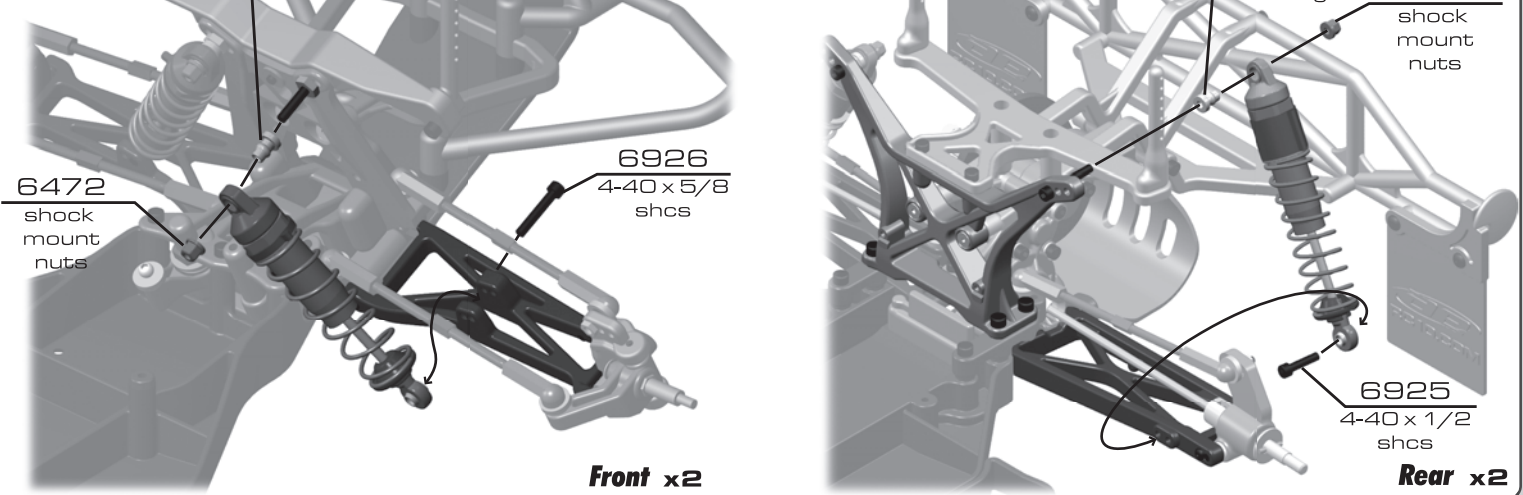
:: Shocks (cont.)

F4 / 5
STEP 5



:: Shocks (cont.)

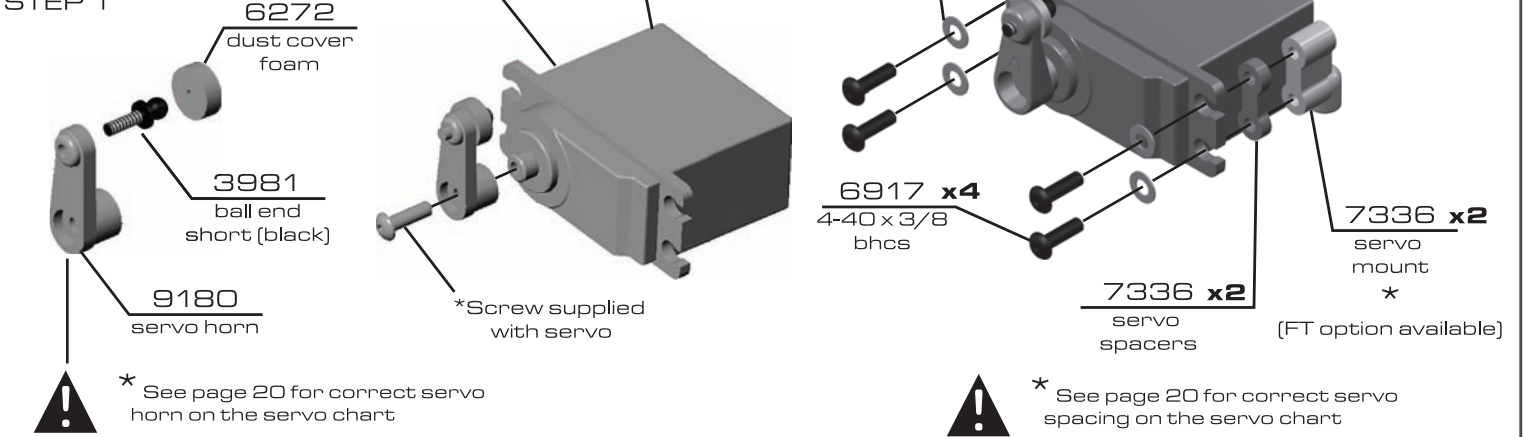
F6
STEP 6



:: Steering Servo

BAG G

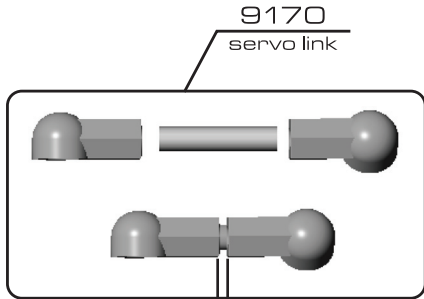
G2 / 3
STEP 1



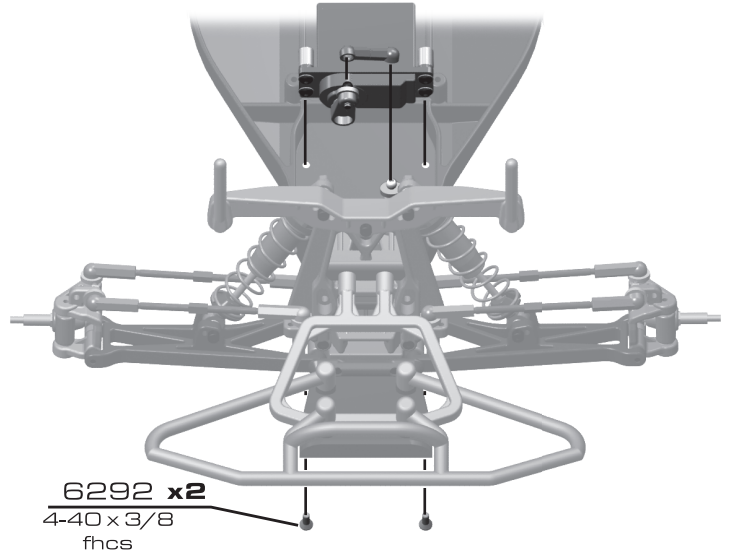
:: Steering Servo (cont.)

G 4

STEP 2



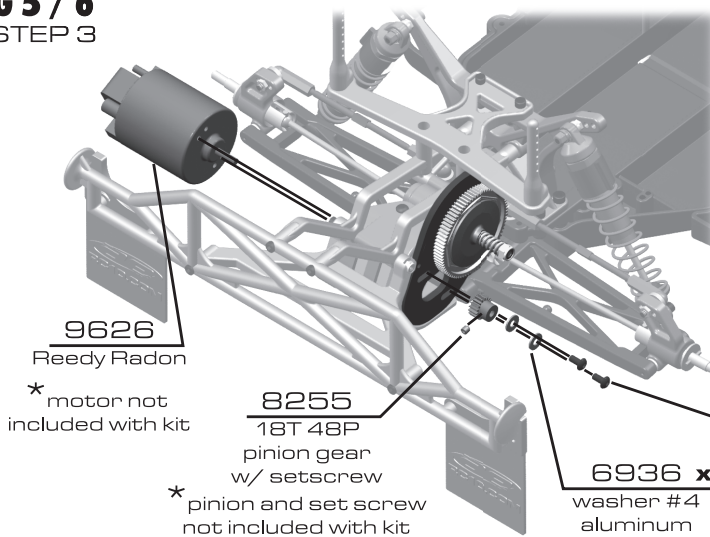
*Leave a 1/16" gap



:: Motor / Gear Cover

G 5 / 6

STEP 3



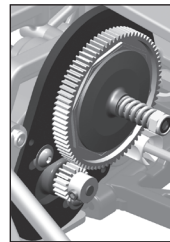
9626
Reedy Radon

* motor not included with kit

8255
18T 48P
pinion gear
w/ setscrew

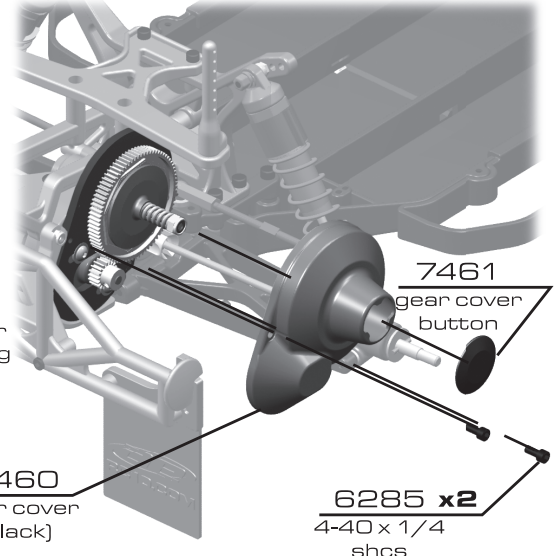
* pinion and set screw not included with kit

6936 x2
washer #4
aluminum



* See page 18 for gear mesh setting instructions

31531 x2
m3x6mm
bhcs



7461
gear cover
button

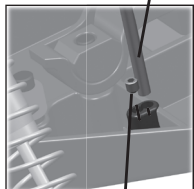
7460
gear cover
(black)

6285 x2
4-40 x 1/4
shcs

:: Electronics / Battery Strap

G 7 / 8

STEP 4



6338
antenna tube
and cap

29122
XP2
receiver

3862
5-40 x 1/8
set screw

* receiver and electronic speed control not included with kit

29140
XP SC200
esc

9815
foam
spacer

9814 x2
thumb
knob

9814 x2
4-40 x 1/2
set screw



gap

*leave a 2.5mm gap

:: Battery Strap (cont.)

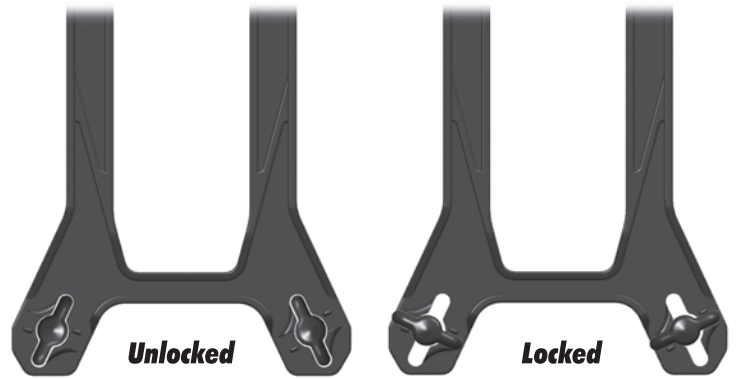
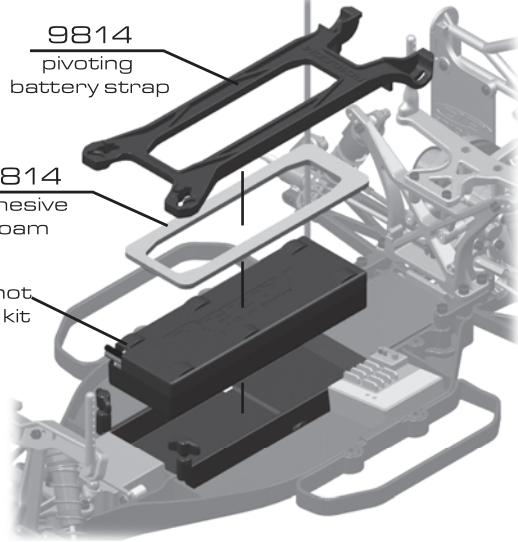
G7/8

STEP 5

9814
pivoting
battery strap

9814
adhesive
foam

* battery not
included in kit



* Move thumb screws to the unlocked position and lift the battery strap to remove your battery pack. Lock the thumb screws after you install your battery pack.

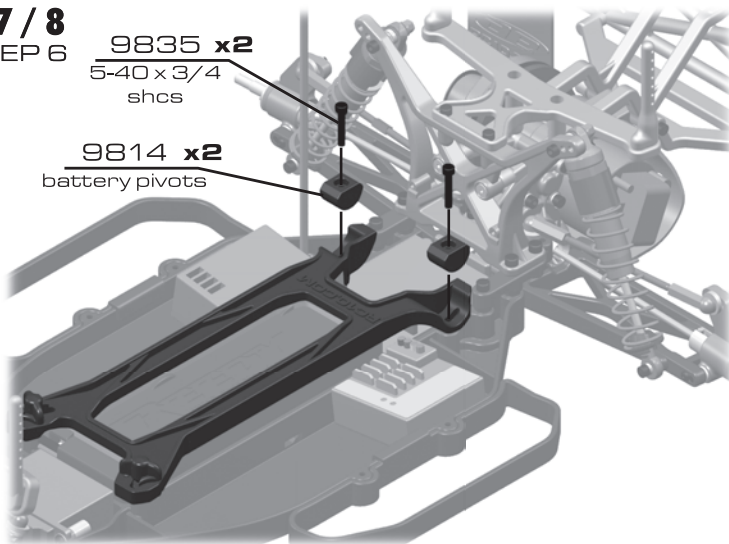
:: Battery Strap (cont.)

G7/8

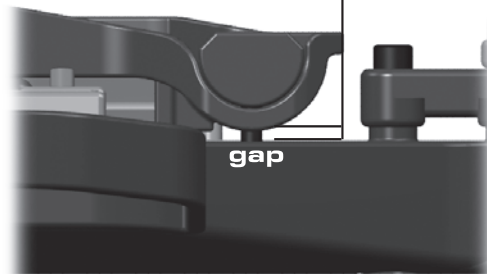
STEP 6

9835 x2
5-40 x 3/4
shcs

9814 x2
battery pivots



* Leave a 1/16" gap between the battery pivots and the chassis.



:: Wheels and Tires

BAG H

H1

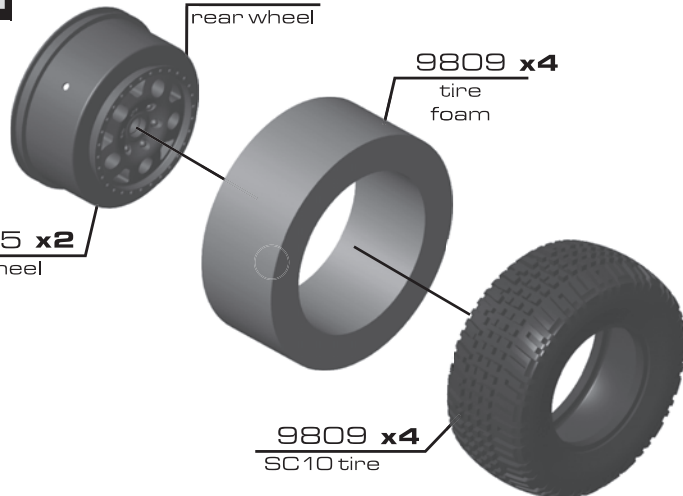
STEP 1

9806 x2
rear wheel

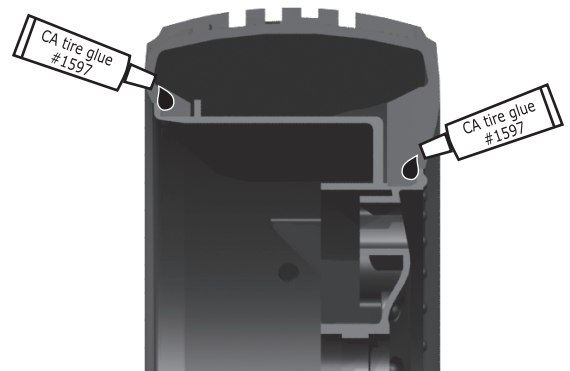
9809 x4
tire
foam

9805 x2
front wheel

9809 x4
SC10 tire



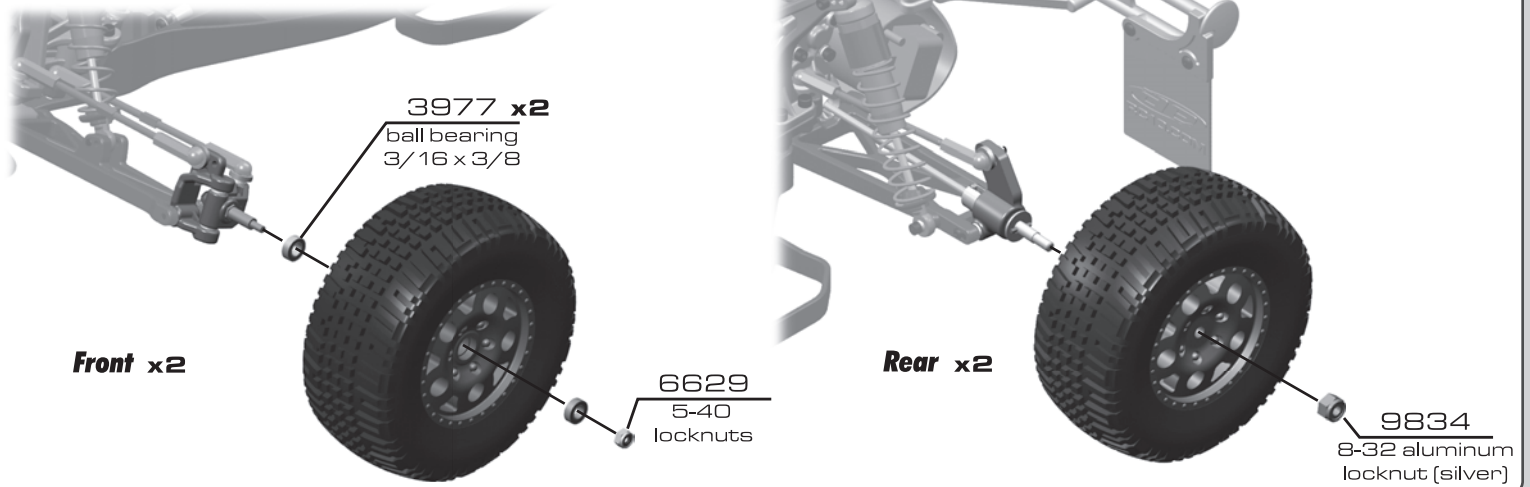
* Use #1597 or equal cyanoacrylate glue to glue your tires to the wheels.



:: Wheels and Tires

H 2

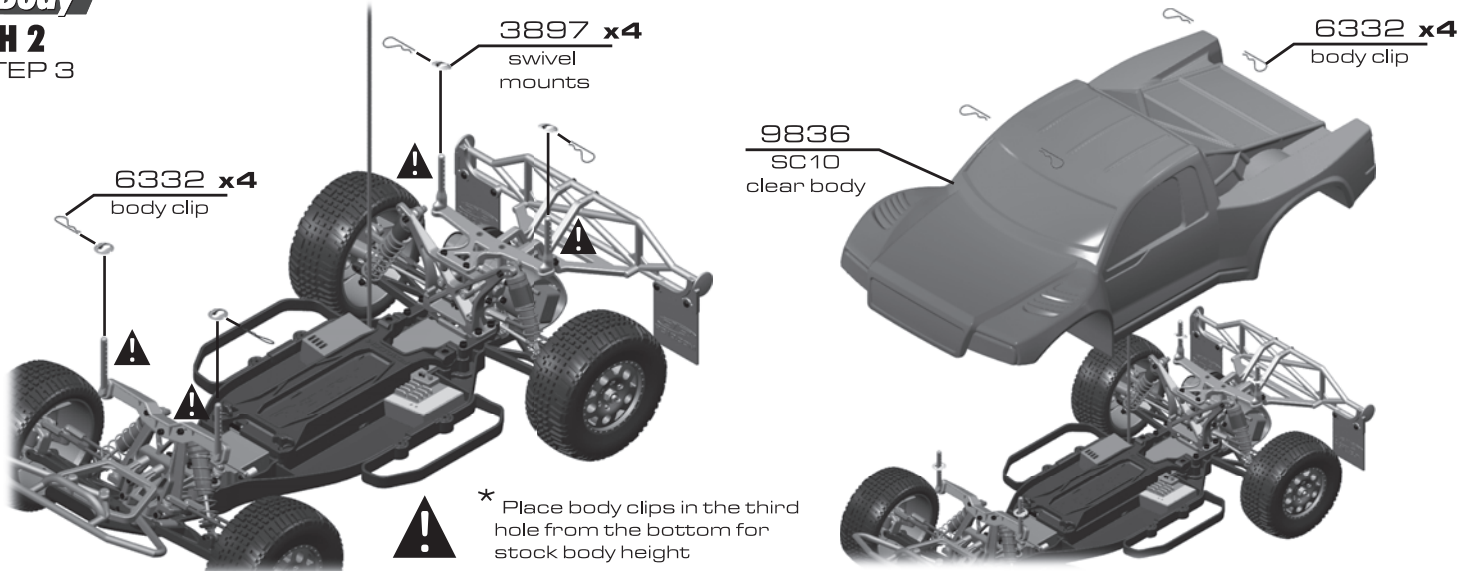
STEP 2



:: Body

H 2

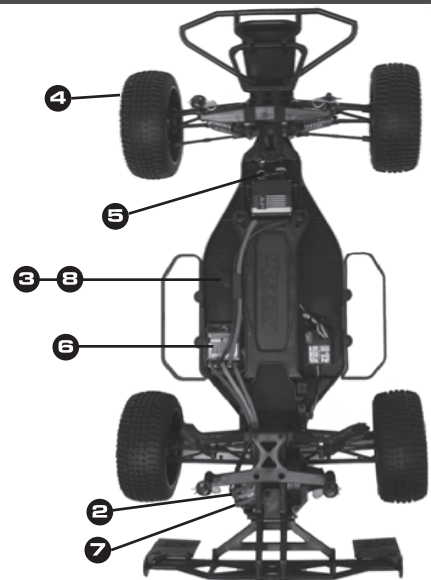
STEP 3



:: Final Adjustments

Use the following steps to make the final adjustments on your truck.

1. Turn the transmitter on.
2. Make sure the motor is disconnected.
3. Connect your battery pack and turn the power switch on.
4. Move the steering control on the transmitter to the right and left. Do the wheels move in the correct direction? If not, you must reverse the steering servo direction on your transmitter (see transmitter manual).
5. Adjust your steering trim (see radio manual) until the steering rack is centered under the top plate. Then, using the two steering turnbuckles, adjust the front wheels so they are pointing straight ahead.
6. Adjust the ESC (electronic speed control) according to the speed control manufacturer's instructions. **Some manufacturers have the motor connected during adjustment and some do not.** Now turn the power switch off.
7. Connect the motor. Place your car on a block or car stand so that all four wheels are elevated. Turn the power switch on again. Check the throttle, brake, and steering settings you have made and then turn the power switch back off.
8. Remember this! The transmitter is always the **FIRST TO BE TURNED ON** and **THE LAST TO BE TURNED OFF.**



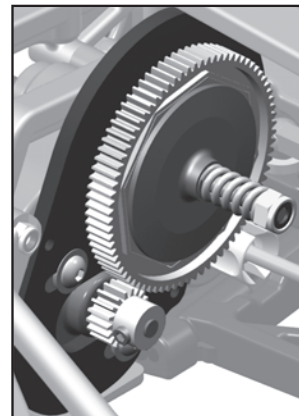
:: Adjustments / Tips

Motor Gearing:

Proper motor gearing will result in maximum performance and run time while reducing the chance of overheating and premature motor failure. The gear ratio chart lists recommended starting gear ratios for the most widely used motor types. Gear ratios will vary depending upon track conditions, driving style, and personal preference. Generally, you should not increase the pinion gear size more than one tooth greater than the starting size.

SC10 Gear Ratio Chart

MOTOR	Pinion	Spur	FDR
27T Stock Motor	19	87	11.91:1
19T Super Stock Motor	19	87	11.91:1
17T Modified Motor	24	87	9.43:1
15T Modified Motor	22	87	10.28:1
14T Modified Motor	21	87	10.77:1
17.5 Brushless Motor	28	75	6.96:1
13.5 Brushless Motor	26	75	7.50:1
10.5 Brushless Motor	24	87	9.42:1



Set The Gear Mesh

You should be able to rock the spur gear back and forth in the teeth of the pinion gear without making the pinion gear move. If the spur gear mesh is tight, then loosen the #31531 screws and move the motor away, then try again. A gear mesh that is too tight or too loose will reduce power and damage the gear teeth.

MAINTENANCE

Check For Fit

Periodically check all moving suspension parts. Suspension components must be kept clean and move freely without binding to prevent poor and/or inconsistent handling.

Motor Maintenance

Brushed motors require frequent maintenance to keep performance levels at their maximum. Between runs and after letting the motor cool completely, inspect the brushes to ensure that they are moving freely in their holders. Remove the springs and slide the brushes in and out of their holders checking for any resistance or rough spots. If found, remove the brush and carefully wipe it clean. Removing buildup will allow the brush to slide freely and create maximum contact with the commutator resulting in maximum power output.

After every 3-5 runs, remove the brushes from their holders and inspect the tips for wear or burning. If there is noticeable wear (less than 75% of the brush remaining), replace the brush with a new pair. If the tips become a burned blue color, the lubricant in the brush has been burned away and new brushes should be installed.

Occasionally, the motor should be cleaned with a soft brush to prevent dirt build up around the brush hood area and ball bearings. At this time, it is a good idea to add one drop of bushing/bearing oil to each bushing or ball bearing.

If using a brushless motor, please refer to the motor manufacturer's guidelines for proper maintenance.

Slipper Clutch

The assembly instructions give you a base setting for your clutch. Turn the nut on the shaft so that the end of the top shaft is even with the outside of the nut. Tighten the nut 3 more turns. At the track, tighten or loosen the nut in 1/8 turn increments until you hear a faint slipping sound for 1-2 feet on takeoffs.

Another popular way to set the clutch is to hold both rear tires firmly in place and apply short bursts of throttle. If the clutch is properly set, the front tires should lift slightly up off the surface.

:: Adjustments / Tips

Front Camber Links

Changing the length of the camber link is considered a bigger step than adjusting the ball end height on the tower. Shortening the camber link (or lowering the ball end) will give the front end less roll and quicken steering response. Lengthening the camber link (or raising the ball end) will give the front more roll and slower steering response.

Longer camber links are typically used on high grip tracks and shorter links tend to work better on medium-grip loose tracks.

Caster

Caster describes the angle of the kingpin as it leans toward the rear of the vehicle. Positive caster means the kingpin leans rearward at the top. The supplied 25° caster blocks (#7919) are recommended in most cases. For more corner entry steering and less exit steering, try the optional 30° blocks (#7922).

Front Camber

Camber describes the angle at which the tire and wheel rides when looked at from the front. Negative camber means that the tire leans inward at the top.

A good starting camber setting is -1°. Use the included #1719 camber gauge to set your camber. Positive camber, where the top of the tire is leaning out, is not recommended.



* Raise or lower the ball end by adding or subtracting washers here



* Testing camber with camber gauge

Rear Camber Link

Changing the length of the camber link is considered a bigger step than adjusting the ball end height on the rear chassis brace. Shortening the camber link (or lowering the ball end) will give the rear end less roll and the car will tend to accelerate or "square up" better. Lengthening the camber link (or raising the ball end) will give the rear more roll and more cornering grip. Longer camber links are typically used on high grip tracks, while shorter links tend to work better on med-grip loose tracks. The kit setting is the best compromise of cornering grip and acceleration.



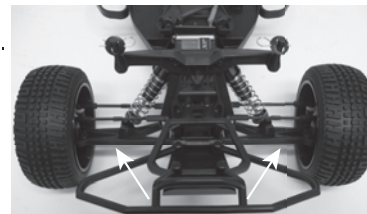
* Raise or lower the ball end by adding or subtracting washers here

Rear Camber

Camber describes the angle at which the tire and wheel rides when looked at from the back. Negative camber means that the tire leans inward at the top. A good starting camber setting is -1°. Use the included #1719 camber gauge to set your camber. Adding a small amount of positive camber, where the top of the tire is leaning out, will tend to improve straight-line acceleration on loose tracks.

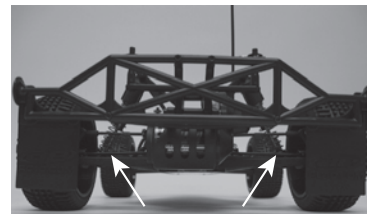
Ride Height

Ride height is the distance from the ground to the bottom of the chassis. The standard front ride height setting is with the front arms level (referred to as "arms level"). Check the ride height by lifting up the entire car about 8-12 inches off the bench and drop it. After the suspension "settles" into place, add or remove pre-load clips so that the left & right arms appear to be level.



* Front arms should be in a straight line when ride height is set at "arms level"

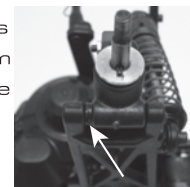
The rear ride height setting you should use most often is with the outdrive, driveshaft, and axles all on the same imaginary horizontal line (referred to as "bones level"). Check the ride height by lifting up the entire car about 8-12 inches off the bench and drop it. After the suspension "settles" into place, add or remove pre-load clips so that the left & right driveshafts appear to be level.



* Dogbones should be in a straight line when ride height is set at "dogbones level"

Wheelbase Adjustment

You have three options for rear hub spacing, Forward, Middle, & Back. The kit setting provides the most rear traction, and will be used most often. For improved handling in bumps or rhythm sections, try moving the hubs to the Middle or Back position. This can also make the car handle better in 180° turns.















* Spacers to the rear will place hubs forward, shortening the wheelbase

Anti-Roll bar






The optional #9635 rear anti-roll bar kit (also called the "swaybar") allows you to add roll resistance to the rear end with minimal effect on handling over bumps and jumps. It is an especially helpful tuning item on high-grip tracks (try the gold bar). The silver and black anti-roll bars are typically used on medium-grip loose tracks.

:: Hardware - 1:1







socket head (shcs)

-  4-40 x 1/4 (6285)
-  4-40 x 3/8 (6924)
-  4-40 x 1/2 (6925)
-  4-40 x 5/8 (6926)
-  4-40 x 3/4 (6927)
-  4-40 x 7/8 (7738)
-  4-40 x 1 (6928)
-  4-40 x 1 1/4 (6913)
-  4-40 x 1 3/4 (9833)
-  5-40 x 7/16 (9643)
-  5-40 x 9/16 (9644)
-  5-40 x 3/4 (9835)


flat head (fhcs)

-  2.5x6mm (4675)
-  4-40 x 3/8 (6292)
-  4-40 x 1/2 (6922)
-  4-40 x 5/8 (6915)
-  5-40 x 1/2 (9269)


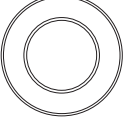
button head (bhcs)

-  2-56 x 1/8 (9645)
-  2-56 x 5/16 (4334)
-  4-40 x 5/16 (6919)
-  4-40 x 3/8 (6917)
-  4-40 x 7/16 (2221)
-  3x6mm (31531)




setscrews

-  4-40 x 1/2 (9814)
-  5-40 x 1/8 (3862)

ball bearings

-  3/16 x 3/8 (3977)
-  10 x 16mm (9832)







shims & washers

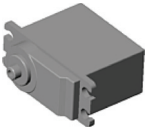


-  ballstud washer (9630)
-  .03 nylon washer (4187)
-  gold washer (7337)
-  3/16 axle shim (7368)
-  #4 aluminum washer (6936)
-  5 x 9.5mm shim (9830)
gear diff outdrives
-  servo saver shim (9610)
servo saver hardware (lower)
-  servo saver shim (9610)
servo saver hardware (upper)
-  5 x 14mm shim (9829)
diff rebuild

ballstuds

-  black .200" (3981)
-  black .300" (3983)
-  silver .200" (6276)
-  silver .300" (6277)

nuts (lock/plain)

-  4-40 small plain nut (7260)
-  3/16 aluminum locking nut (4449)
-  shock mount nut (6472)
-  4-40 nut (6295)
-  5-40 lock nut (6629)
-  8-32 aluminum lock nut (9834)

Servo Chart	STEERING SERVO TYPE		#7336 SPACER	#9180 SERVO ARM
1 FIND YOUR SERVO TYPE	1 (Steering servo is sold separately) NOT ALL SERVOS ARE LISTED		2	3
	Associated Electrics / XP AE SHV1504MG, DS1015, DS1313 Airtronics 94102 Airtronics 94738, 94157, 94158, 94257, 94258, 94357, 94358, 94452, 94453, 94751, 94755		thin spacer	F
	Hitec HS-5625MG, HS-5645MG, HS-625MG, HS-645MG Hitec HS-303, HS-300BB, HS-945MG, HS-925MG, HS-5945MG, HS-5925MG, HS-525MG, HS-525BB, HS-425BB, HS-422		no spacer	A
	JR Z4725, Z4750, Z2750, Z8450, Z8550, NES-4750 JR Z250, Z550		thick spacer	A
	Futaba S9204, S9250, S9450, S148		no spacer	H
	Futaba S3003, S9202, S9101		thin spacer	H
	Futaba S9404 KO PS-401, PS-2001, PS-2004, PS-2015, PS-2173, PS-2174, PS-2123, PS-2143, PS-2144		no spacer	J
	Futaba S9404		thin spacer	J
	Futaba S9404		thin spacer	F
	KO PS-401, PS-2001, PS-2004, PS-2015, PS-2173, PS-2174, PS-2123, PS-2143, PS-2144		thick spacer	F

SC10

:: Driver: _____ **:: Date:** _____
:: Track: _____
:: Event: _____

Setup Sheet for Team Associated's SC10

Rev. 1

:: Front End

camber: _____

washers: _____

ABC

10

12

toe: _____ ride height: _____

axle height up 20°
 middle 25°
 down 30°

caster 20°
 25°
 30°

bump steer spacer: _____

:: Rear End

camber: _____

washers: _____

anti-squat
 std
 other

ABC

10

12

rear hub carriers
 std
 0°
 0.5°
 1°

ride height: _____

axle height up 20°
 middle 25°
 down 30°

caster 20°
 25°
 30°

wheel base
 long
 medium
 short

anti-roll bar
 none
 black (soft)
 silver (med)
 gold (hard)

:: Front Shocks

spring: _____ piston: _____
shock oil: _____ limiter: _____

:: Rear Shocks

spring: _____ piston: _____
shock oil: _____ limiter: _____

:: Electronics

motor & wind: _____
pinion: _____
spur gear: _____
esc: _____ setting: _____
batteries: _____
battery placement: _____

:: Transmitter

radio: _____
steering expo: _____
brake e.p.a.: _____
throttle expo: _____
servo: _____
initial brake: _____ drag brake: _____

:: Other

body: _____
notes: _____

:: Gear Differential

fluid: _____

:: Front Tires

tire: _____
compound: _____
insert: _____
wheel: _____

:: Rear Tires

tire: _____
compound: _____
insert: _____
wheel: _____

:: Race and Vehicle Comments

qualify: _____ main: _____ finish: _____ tq:
comments: _____

:: Track Info

smooth: bumpy: blue groove:
traction: high med. low
soft dirt: grass: clay: wet:
dusty: other: _____



Associated Electrics, Inc.
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Lake Forest, CA 92630 USA
<http://www.TeamAssociated.com>
<http://www.RC10.com>