

# NITRO TC3



Thank you for purchasing this Team Associated product. This manual contains steps and instructions you will use to set up your car. Please read this entire manual before attempting to start your car. Follow the directions in this manual closely to reduce any problems on start up. We hope that you will enjoy your new Team Associated car.

## TEAM NTC3 KIT

### KIT INCLUDES:

Threaded shocks.  
2-speed Transmission.  
Pro-Line wheels & tires.  
Aluminum MIP CVD's.  
Associated steel turnbuckles.

### Also includes:

6061 T6 aluminum chassis.  
Precision rubber-sealed ball bearings.  
Tuned pipe and manifold.

Log on to [www.rc10.com](http://www.rc10.com) and get your FREE computer wallpaper!

## REQUIRED EQUIPMENT TO RUN YOUR KIT

### WARNING!

Do not use a power screwdriver to install screws into nylon, plastic, or composite materials. The fast rotation speed can heat up the screws being installed. They can break the molded parts or strip the threads during installation.

### for the pull start version of Team Kit #2030:

Glow plug starter.  
Model car fuel.  
Fuel bottle.  
Receiver battery pack.  
Glow plugs (AE #MC-59).  
R/C two channel surface frequency radio system with two servos.  
.12 or .15 c.i. glow fuel R/C engine.  
200mm touring car body.

### for the non pull start version of Team Kit #2031

Glow plug starter.  
Model car fuel.  
Fuel bottle.  
Receiver battery pack.  
Glow plugs (AE #MC-59).  
Starter box or electric hand starter with car starter donut  
12 volt battery for starter system.  
R/C two channel surface frequency radio system with two servos.  
.12 or .15 c.i. glow fuel R/C engine.  
200mm touring car body.

### YOU WILL NEED THESE TOOLS TO ASSEMBLE YOUR KIT

- 1 Phillips screwdriver #2.
- 2 1/8" flat head screwdriver.
- 3 5/16" driver or glow plug wrench.
- 4 Needlenose pliers.
- 5 Thread locking compound (#1596 Locking Adhesive or equivalent)
- 6 Super glue or tire adhesive (#1597).
- 7 Hobby knife **WARNING!** This knife cuts plastic and fingers with equal ease, so be careful.
- 8 Precision ruler.

**YOUR ENGINE MAY REQUIRE TOOLS NOT LISTED HERE.**

### TOOLS SUPPLIED

Allen wrenches (#6950)

, .050", 1/16", 3/32", 5/64"

Clutch nut wrench (#1721)



Molded tools (#6956):



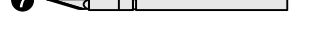
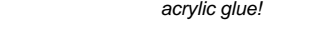
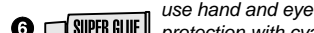
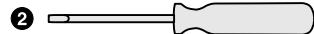
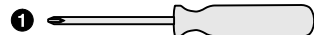
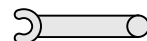
Droop gauge (#3987)



Camber/toe-in gauge (#1719)



Track width/ride height tool (#1719)



## CUSTOMER SUPPORT

(714) 850-9342, ext. 624

FAX (714) 850-1744

web site: <http://www.rc10.com/>



ASSOCIATED ELECTRICS, INC.

3585 Cadillac Ave.

Costa Mesa, CA 92626-1401

USA

©2001 Associated Electrics, Inc.

# READ THIS BEFORE BUILDING

## READ THE MANUAL!

This manual is for two different NTC3 kits and will help you assemble and set up each one. Read the manual before starting your kit and before contacting us for help. "Hello, Associated, I need some help." "Did you read the manual?"

## OPEN THE BAGS IN ORDER

The assembly is arranged so that you will open and finish that bag before you go on to the next bag. **Sometimes you will have parts remaining at the end of a bag. These will become part of the next bag.** Some bags may have a large amount of small parts. To make it easier to find the parts, we recommend using a partitioned paper plate for spreading out the parts so they will be easier to find.

## SUPPLEMENTAL SHEETS

We are constantly updating parts to improve our kits. These changes, if any, will be noted in supplementary sheets located in a parts bag or inside the kit box. Check the kit box before you start and each bag as it is opened. When a supplement is found, attach it to the appropriate section of the manual.

## MANUAL FORMAT

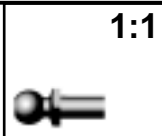
The following explains the format of these instructions.

**The beginning of each section indicates:**

- 1 Which bag to open ("**BAG A**") and which steps you'll be using those parts for ("**FOR STEPS 1-3**").
- 2 Which parts you will use for those steps. Remove only the parts shown. "**1:1**" indicates an actual size drawing; place your part on top of the drawing and compare it so it does not get confused with a similar part.
- 3 Which tools you should have handy for that section.
- 4 The instructions in each step are ordered in the order you complete them, so read the words AND follow the pictures. The numbers in circles are also in the drawing to help you locate them faster.
- 5 When we refer to left and right sides of the car, we are referring to the driver's point of view inside the car.
- 6 You'll see a car angled in a particular direction in several steps. The angle shows you which way the part is being viewed, helping you to tell front and rear, left and right.

# BAG A

REMOVE THESE PARTS FOR:  
Step 1



3857, qty 3  
short special  
ball end, black



2228, qty 1  
swing rack



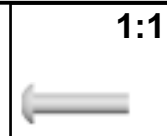
2228, qty 1  
swing rack arm



3929, qty 1  
spring



2228, qty 1  
.125 x .250 rack  
shim



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



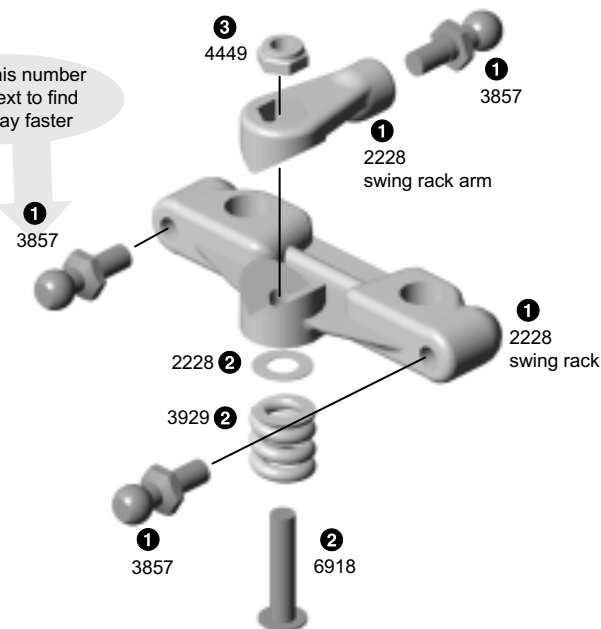
4449, qty 1  
4-40 locknut

# step 1

## SWING RACK ASSEMBLY

- 1 Attach two #3857 short ball ends to the #2228 swing rack and one to the #2228 swing rack arm.
- 2 Slide the #3929 spring and #2228 rack shim onto the #6918 screw. Slide the screw assembly through the bottom of the swing rack.
- 3 Attach the #2228 swing rack arm to the swing rack with a #4449 locknut.
- 4 Tighten down the screw until the screw end is even with the top of the nut.

Match this number to the text to find your way faster



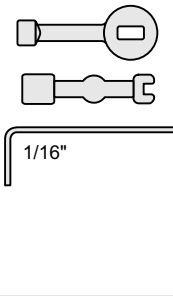
## TOOLS USED

1/16"

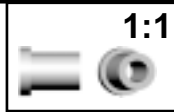
3/16"

# BAG A

# TOOLS USED



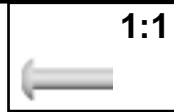
REMOVE THESE PARTS FOR:  
Steps 2-3



2229, qty 2  
pivot post



7337, qty 2  
washer



2229, qty 2  
screw



2229, qty 2  
swing rack mounting post



2228, qty 2  
swing rack bellcrank arm



2224, qty 1  
NTC3 chassis



2234, qty 2  
3/16 x 5/16 .109 bushing  
unflanged



6291, qty 2  
4-40 X 1/4 screw



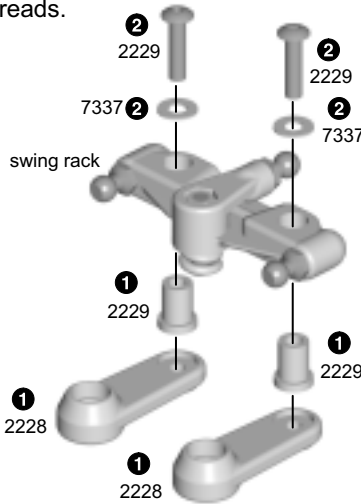
2234, qty 2  
1/8 x 1/4 bushing



6472, qty 2  
nylon locknut

## step 2

- Slide the #2229 pivot post through the swing rack followed by a #2228 swing rack bellcrank arm.
- Slide one #7337 washer onto the #2229 screw then slide the screw through the pivot post. Now tighten down the screw, but not to the point of damaging the threads.

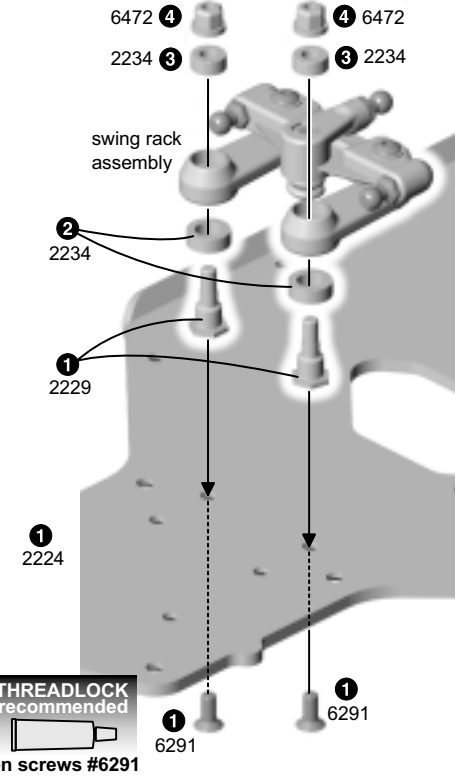


## step 3

### SWING RACK TO CHASSIS

- Install the two #2229 swing rack mounting posts to the #2224 chassis with #6291 screws.
- Slide one #2234 3/16 x 5/16" bushing onto each post. Slide the swing rack assembly down, making sure the mounting posts are in front of the rack.
- Now insert the #2234 1/8 x 1/4" bushings into the rack assembly where shown.
- Fasten the swing rack down with #6472 nylon locknuts. Tighten down each nut until the swing rack doesn't move freely. Then loosen each nut a 1/4 turn or until it moves freely.

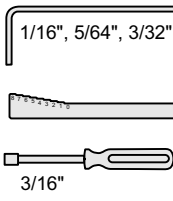
### CAR SHOWS VIEWING ANGLE



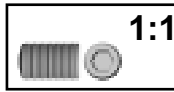
THREADLOCK recommended  
on screws #6291

# BAG B

# TOOLS USED



REMOVE THESE PARTS FOR:  
Steps 1-3



3865, qty 4  
set screw



2233, qty 2  
front a-arms,  
right & left



2231, qty 1  
front arm rear  
mount



2242, qty 4  
hinge pin



2243, qty 2  
rear a-arms,  
right & left



2231, qty 1  
rear arm front  
mount



2257, qty 2  
ball end



2240, qty 8  
5-40 x 7/16 screw



2226, qty 1  
front bumper/  
arm mount

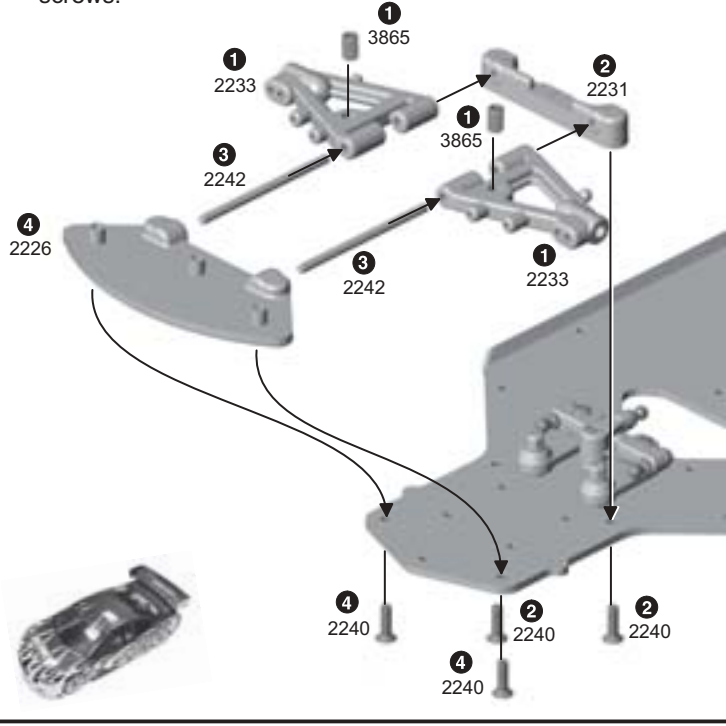
PUT ASIDE THE #2233 & #2243 UPPER ARMS UNTIL THEY ARE CALLED FOR IN BAG E.



# step 1

## FRONT ARM ASSEMBLY

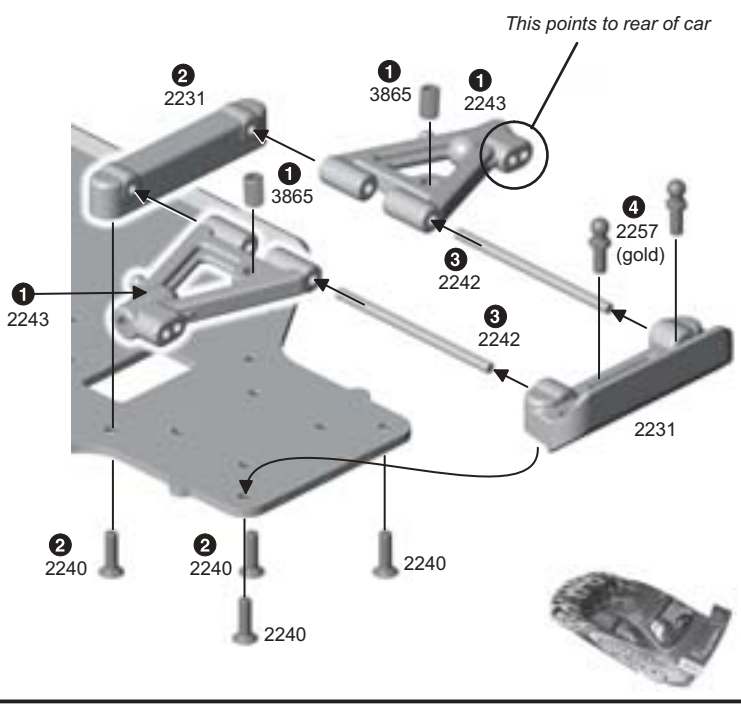
- 1 Install a #3865 set screw into each of the #2233 front arms, making sure there is a right and a left side. (We will do the final screw adjustment in step 3.)
- 2 Attach the #2231 front arm, rear mount to the chassis with two #2240 screws.
- 3 Slide the #2242 hinge pins through the #2233 arms. Slide the pins with the arms into the arm mount.
- 4 Align the #2226 front bumper/ arm mount with the two hinge pins and slide together. Tighten it down with two #2240 screws.



# step 2

## REAR ARM ASSEMBLY

- 1 Install a #3865 set screw into each of the #2243 rear arms, making sure there is a right and a left side. (We will do the final screw adjustment in step 3.)
- 2 Attach #2231 rear arm front mount to the chassis with two #2240 screws.
- 3 Slide the #2242 hinge pins through the #2243 rear arms. Slide the pins with the arms into the #2231 rear arm front mount.
- 4 Install the two #2257 ball ends into the #2231 rear arm mount. Align the rear arm mount up with the two hinge pins and slide together. Tighten down with two #2240 screws.

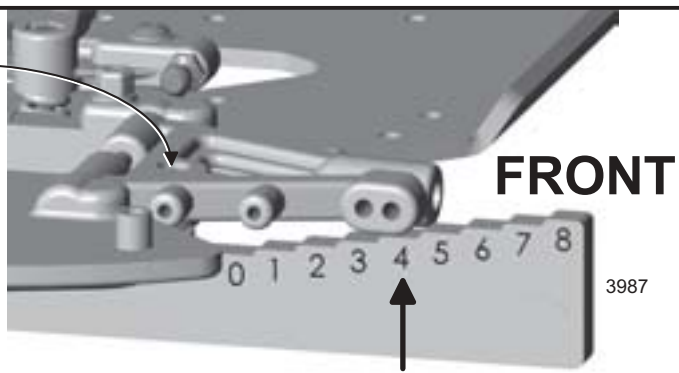


# step 3

## SETTING DROOP

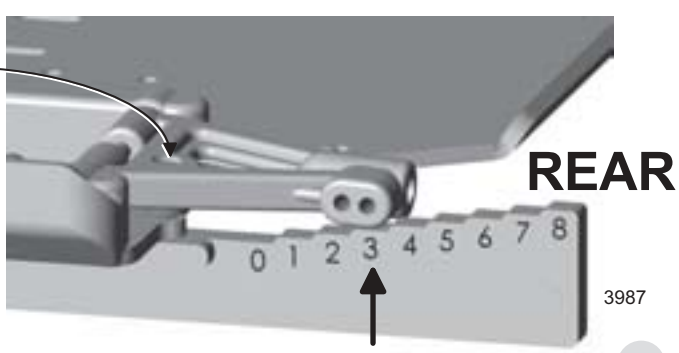
- 1 Place the supplied #3987 droop gauge on a flat surface. Place the bottom of the chassis on top as shown. Make sure the screws are not resting on the gauge and that you are holding the chassis and gauge flat.
- 2 Slide the gauge out so the shock mounting portion of the front arm rests on step 4. With your 3/32 Allen wrench, adjust the set screw so the outer part of the arm just touches the step. Adjust both front arms.
- 3 Slide the gauge to the rear arms and repeat the adjustment. The shock mounting portion of the rear arms will rest on step 3.

ADJUST DROOP SCREW



FRONT ARMS REST ON STEP 4

ADJUST DROOP SCREW

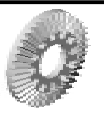


REAR ARMS REST ON STEP 3

# BAG C

# TOOLS USED

## REMOVE THESE PARTS FOR: Steps 1-5



2329, qty 2  
ring gear



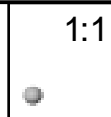
6591, qty 1  
Tranny lube



6909, qty 4  
3/16 x 5/16 bearing  
unflanged



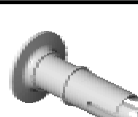
2332, qty 2  
friction disc



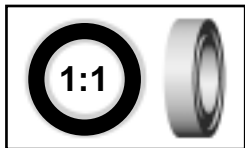
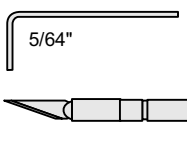
6581, qty 24  
diff balls



6582, qty 2  
diff spring



2328, qty 2  
long outdrive



3976, qty 4  
3/8 x 5/8 bearing  
rubber sealed, unflanged



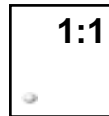
6573, qty 4  
thrust washer



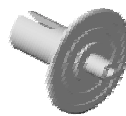
6575, qty 2  
diff bolt



6588, qty 1  
black grease



6574, qty 12  
thrust balls



2328, qty 2  
short outdrive



2293, qty 4  
outdrive shim

2331, qty 4  
drive ring

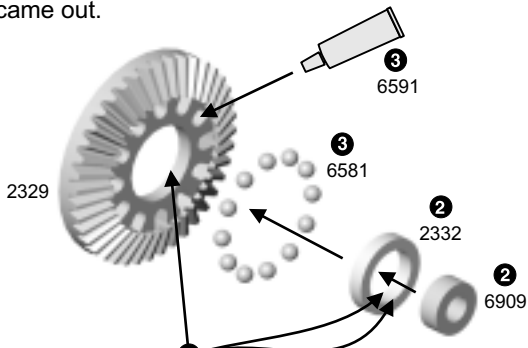


2330, qty 2  
T-nut

## step 1

### DIFFERENTIAL RING GEAR

- 1 Trim any burrs from the edges shown with a hobby knife.
- 2 Slide a #6909 bearing into the #2332 friction disc. Slide the bearing and disc into the center of the #2329 ring gear.
- 3 Add a generous amount of #6591 dif lube to the #2329 ring gear holes and friction disc. Push in the twelve #6581 diff balls. Now push the lube back in that came out.

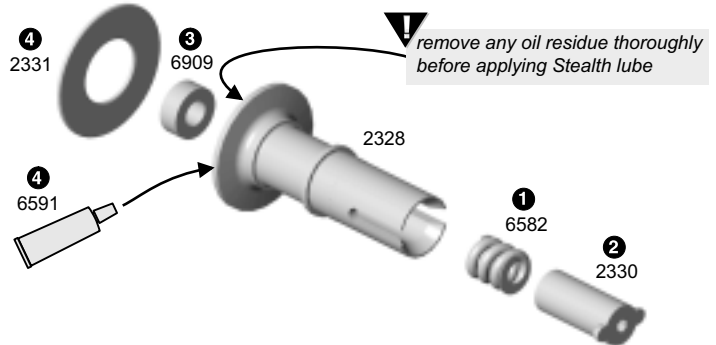


! Trim any burrs from these edges with a hobby knife.

## step 2

### LONG OUTDRIVE

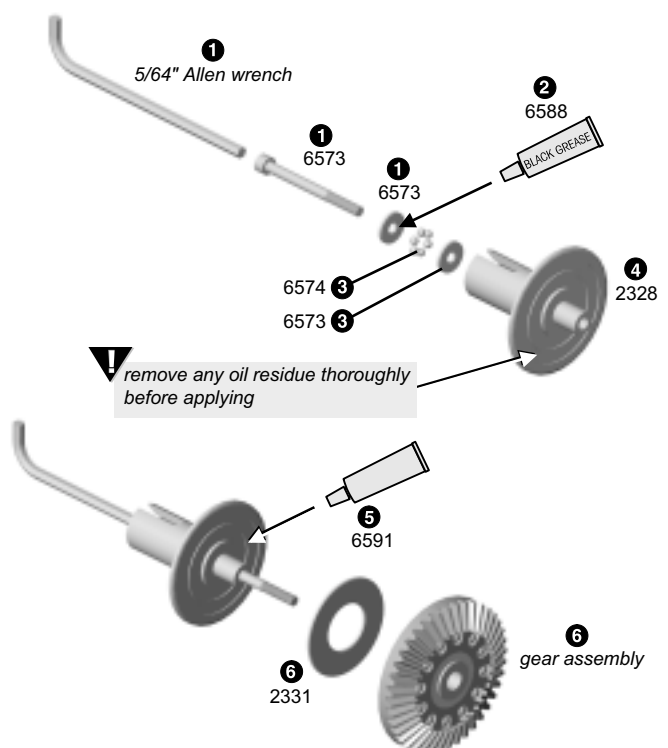
- 1 Remove any oil residue thoroughly where shown. With a pair of pliers, compress the #6582 spring a few times. Push the #6582 diff spring into the #2328 long outdrive.
- 2 Slide the #2330 T-nut into the long outdrive.
- 3 Insert one #6909 bearing into the face of the long outdrive.
- 4 Add a light coat of #6591 dif lube to the long outdrive face as shown. Place a #2331 drive ring on the outdrive face.



## step 3

### SHORT OUTDRIVE

- 1 Remove any oil residue thoroughly where shown. Hold the #6573 diff bolt with your 5/64" Allen wrench and slide one #6573 thrust washer onto the #6573 diff bolt.
- 2 Apply a generous amount of #6588 black grease to the washer on the side facing away from the bolt head.
- 3 Place six #6574 balls into the grease against the #6573 bolt and washer. Add the second #6573 washer. The grease will hold the balls in place during assembly, sandwiching the balls and washers.
- 4 Slide the thrust assembly into the #2328 short outdrive, being careful not lose any of the balls.
- 5 Add a light coat of #6591 lube to the short outdrive face as shown.
- 6 Place a #2331 drive ring and then the gear assembly on the outdrive.



# step 4

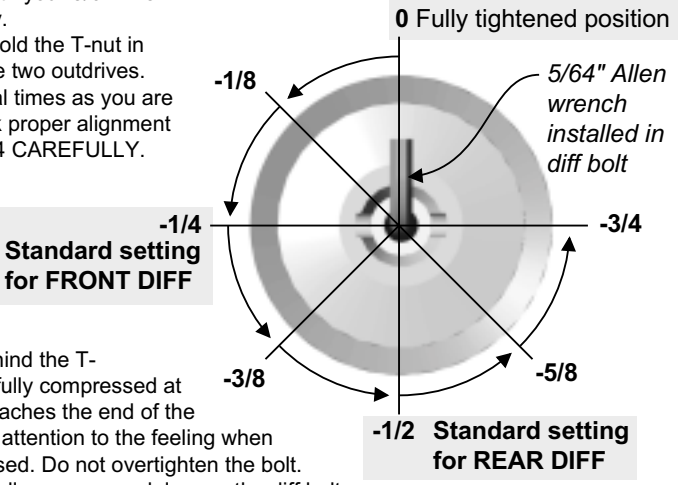
- 1 Holding the short outdrive assembly still with your 5/64" Allen wrench, place the long outdrive assembly into the face of the short outdrive / gear assembly.

### CHECK THE ALIGNMENT

- 2 Tighten the diff together with your 5/64 Allen wrench, but not completely.  
**NOTE:** You may need to hold the T-nut in place when assembling the two outdrives.
- 3 Rotate the diff hubs several times as you are tightening the bolt to check proper alignment of the parts. **READ STEP 4 CAREFULLY.**

### ADJUST THE DIFF

- 4 As you tighten the diff bolt, you will notice the T-nut ears moving closer to the bottom of the outdrive slot. This compresses the spring behind the T-nut. The spring should be fully compressed at the same time the T-nut reaches the end of the slot. **CAUTION:** Pay close attention to the feeling when the spring is fully compressed. Do not overtighten the bolt. When you feel the spring fully compressed, loosen the diff bolt 1/4 of a turn for the front and 1/2 of a turn for the rear. Your diff should now operate very smoothly with the outdrives moving in opposite directions. After you have driven the car once, recheck the diff adjustment.
- 5 Now assemble the second diff the same way.



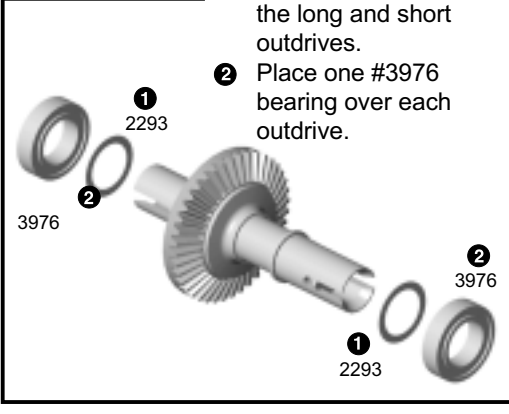
Amount the diff bolt is turned out from tight position (counter clockwise)

	-1/8	-1/4	-3/8	-1/2	-5/8	-3/4
<b>Result</b>	Diff Tighter ←-----→ Diff Looser					
<b>FRONT DIFF</b>	Less Steering ←-----→ More Steering					
<b>REAR DIFF</b>	More Steering ←-----→ Less Steering					

**CAUTION:** Do not turn the diff bolt out more than 3/4 of a turn.

# step 5

- 1 Place one #2293 outdrive shim on both the long and short outdrives.
- 2 Place one #3976 bearing over each outdrive.

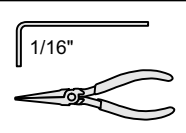


# BAG C

REMOVE THESE PARTS FOR: Step 6

3920, qty 1 front input shaft	2293, qty 3 input shaft shim	6299, qty 1 small E-clip	3977, qty 2 3/16 x 3/8 bearing, rubber sealed	3903, qty 1 drive pinion	2270, qty 1 drive cup	6920, qty 1 4-40 x 3/16 screw	2291, qty 2 dowel pin

### TOOLS USED



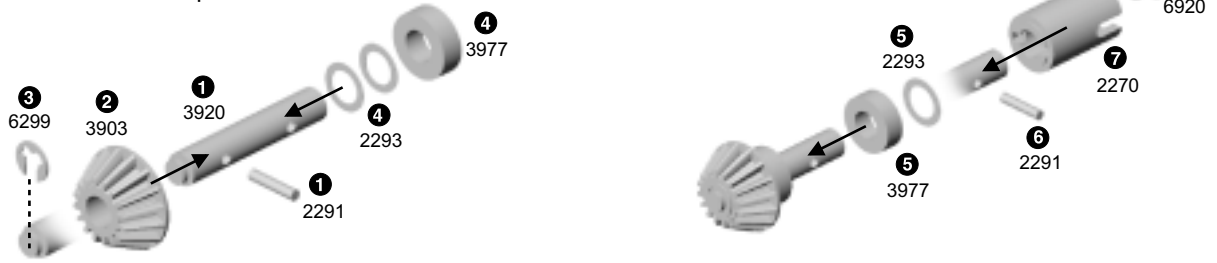
# step 6

**!** Trim any burrs from this edge of the drive pinion with a hobby knife.

### FRONT INPUT SHAFT ASSEMBLY

- 1 Install and center the #2291 dowel pin into the #3920 front input shaft.
- 2 Trim burrs from the drive pinion edge where shown above. Slide the #3903 drive pinion onto the input shaft. **Make sure the dowel pin aligns perfectly with the slot in the pinion.**
- 3 Add the #6299 small E-clip.
- 4 Slide two #2293 input shaft shims and one #3977 bearing onto the #3920 input shaft.

- 5 Slide the second #3977 bearing onto the input shaft, followed by the third #2293 input shaft shim.
- 6 Install and center the #2291 dowel pin into the input shaft.
- 7 Slide a #2270 drive cup onto the end of the input shaft.
- 8 Tighten it down with one #6920 screw.

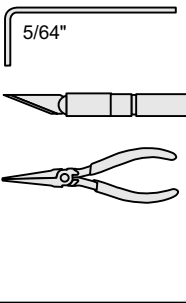
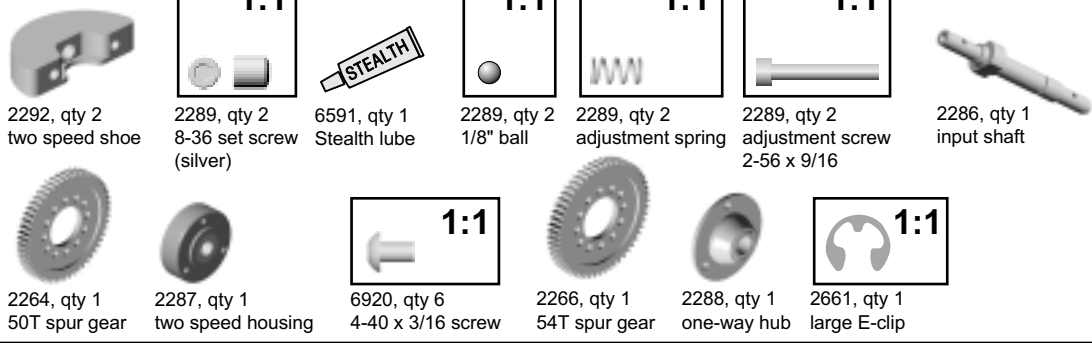


front input shaft assembled  
PLEASE COMPARE YOUR ASSEMBLY CAREFULLY

# BAG C

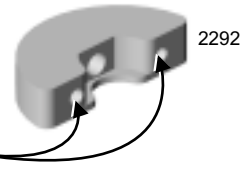
# TOOLS USED

REMOVE THESE PARTS FOR: Steps 7-10



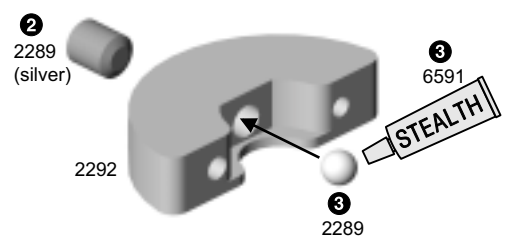
## step 7

**!** Trim any burrs from this edge of the holes with a hobby knife.



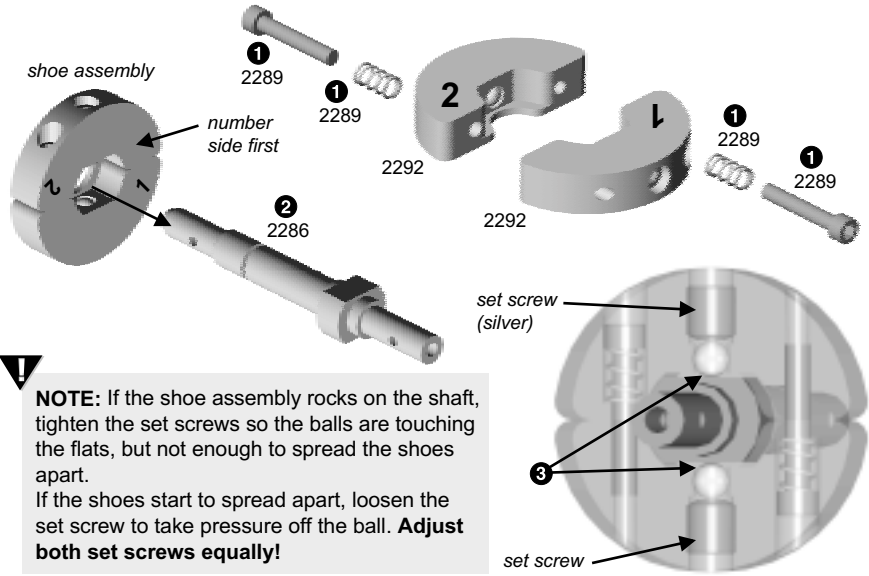
### TWO SPEED SHOES

- 1 Deburr holes edges on #2292 two speed shoes as shown.
- 2 Install #2289 set screws into the two speed shoes until the set screws are flush with the outer part of the shoes.
- 3 Add a dab of #6591 lube to the #2289 ball and insert it into the hole, resting against the end of the set screw. Screw in the set screw until the ball is slightly above the flat surface on the inside shoe. We will make the final adjustment later.
- 4 Repeat on the second shoe.



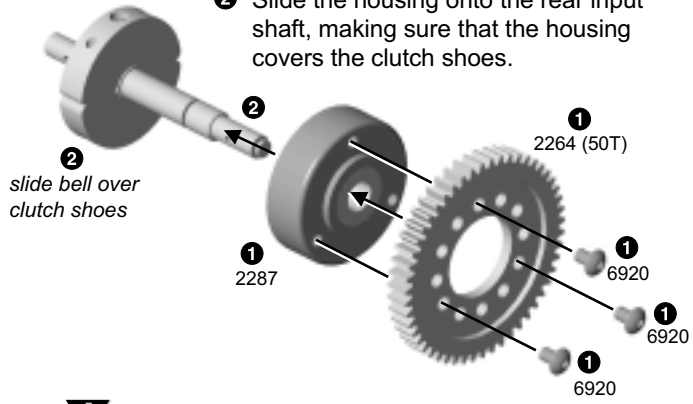
## step 8

- 1 Place your two clutch shoes together with the numbers side facing up. Slide #2289 adjustment spring onto #2289 adjustment screw. Insert the screw and spring into the shoes and tighten the screws until they are fully compressed. Be gentle! Now turn the screw 3 1/2 turns counter clockwise. Adjust both screws equally.
- 2 Slide your clutch shoe assembly onto #2286 input shaft.
- 3 To adjust the pressure of the set screw: Adjust the set screws equally so that the ball is just touching the flats on the input shaft as shown.



## step 9

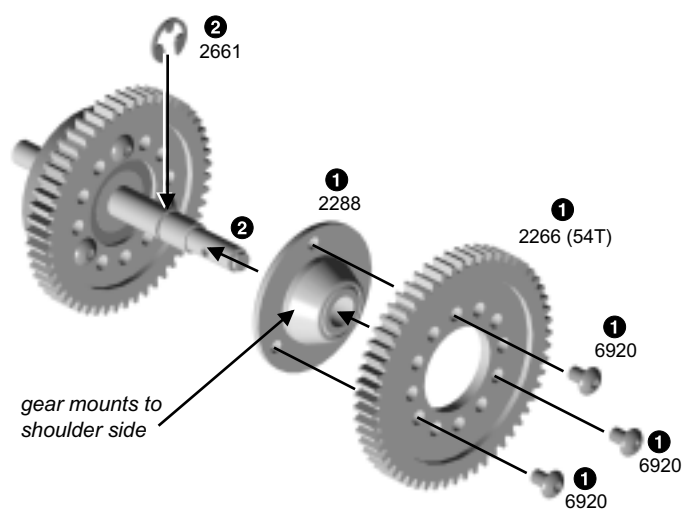
- 1 Attach #2264 50 tooth (smaller) spur gear to #2287 two speed housing with three #6920 screws.
- 2 Slide the housing onto the rear input shaft, making sure that the housing covers the clutch shoes.



**!** **RACER'S TIP:** After running your car for a tank of fuel, remove your two-speed housing and clean any oil or residue from inside the housing and outside the shoes to ensure consistent shifting.

## step 10

- 1 Attach #2266 54 tooth (larger) spur gear to the #2288 one-way hub with three #6920 screws.
- 2 Slide the one-way hub onto the input shaft. Now push #2661 e-clip into place.



# BAG C

REMOVE THESE PARTS FOR: Steps 11-12



3977, qty 2  
3/16 x 3/8 bearing, rubber sealed



2293, qty 3  
input shaft shim



2291, qty 2  
dowel pin



6299, qty 1  
small E-clip



2270, qty 1  
drive cup

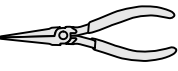


6920, qty 1  
4-40 x 3/16 screw



5407, qty 1  
red O-ring

## TOOLS USED



3903, qty 1  
drive pinion



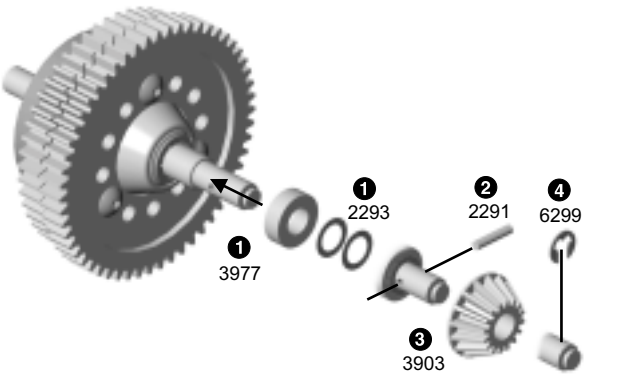
2281, qty 1  
brake disc



## step 11

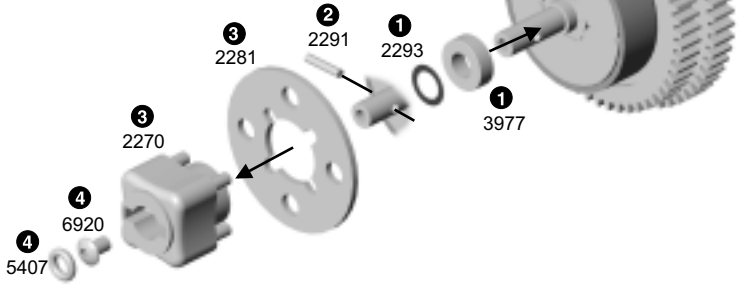
**!** Trim any burrs from this edge of the drive pinion with a hobby knife.

- Slide one #3977 bearing and two #2293 input shaft shims onto the rear input shaft.
- Install and center a #2291 dowel pin into the input shaft.
- Slide #3903 drive pinion onto the end of the input shaft.
- Add a #6299 small e-clip.



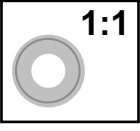
## step 12

- Slide on one #3977 bearing onto the opposite end of the input shaft followed by the third #2293 input shaft shim.
- Install and center a #2291 dowel pin into the input shaft.
- Clean the #2281 brake disc with motor cleaner. Place #2281 brake disc onto #2270 drive cup. Slide the drive cup with brake disc onto the input shaft. Tighten it down with one #6920 screw.
- Slide one #5407 O-ring into drive cup.



# BAG C

REMOVE THESE PARTS FOR: Steps 13-18



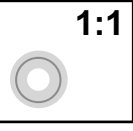
6863, qty 1  
flanged bushing 3/16 x 5/16



2276, qty 1  
brake cam



2274, qty 1  
brake bracket



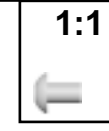
2277, qty 1  
flanged bushing 1/8 x 1/4



2661, qty 1  
large E-clip

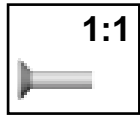
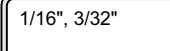


2280, qty 1  
brake cam lever wire

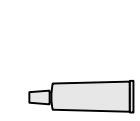


6920, qty 1  
4-40 x 3/16 screw

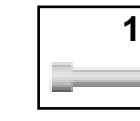
## TOOLS USED



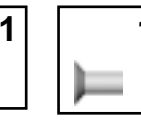
2368, qty pr  
transmission cases, top & bottom



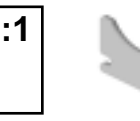
6292, qty 4  
4-40 x 3/8 screw



6591, qty 1  
diff tube



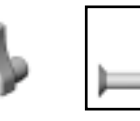
6924, qty 6  
4-40 x 3/8 screw



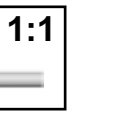
6291, qty 2  
4-40 X 1/4 screw



2278, qty 2  
brake pad



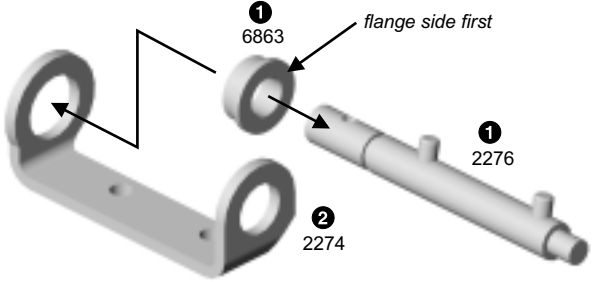
2269, qty 1  
center bulkhead



6922, qty 2  
4-40 x 1/2 screw

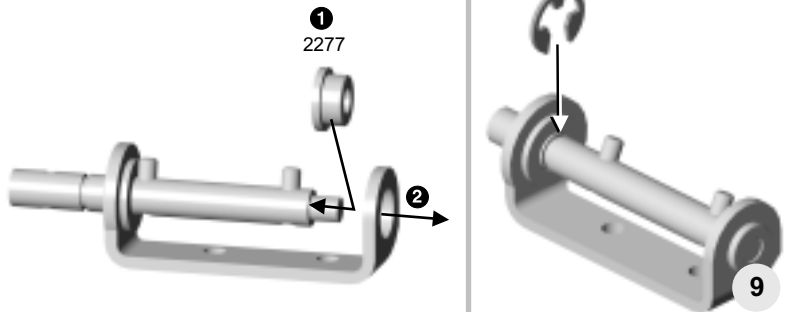
## step 13

- Slide #6863 bushing onto the end of the #2276 brake cam.
- Angle the brake cam with bushing and slide it through the large hole of the #2274 brake bracket. Press #6863 bushing into the brake cam while still on the brake cam.



## step 14

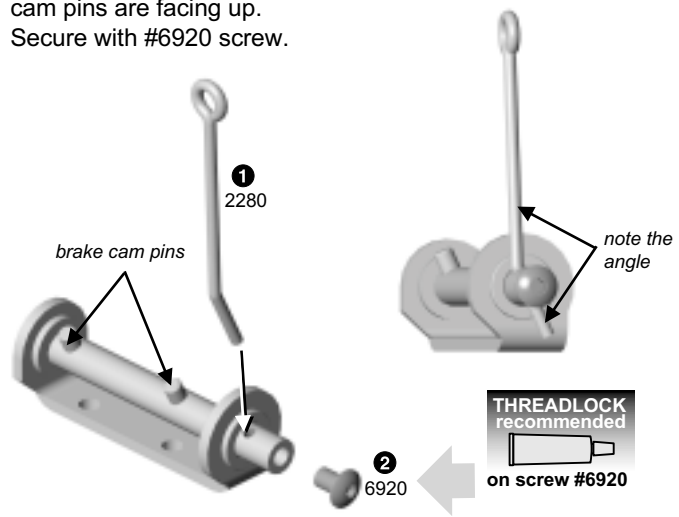
- Place #2277 bushing in between the brake cam and brake bracket and press it into the brake bracket.
- Slide the brake cam into the bushing.
- Add #2661 large E-clip.





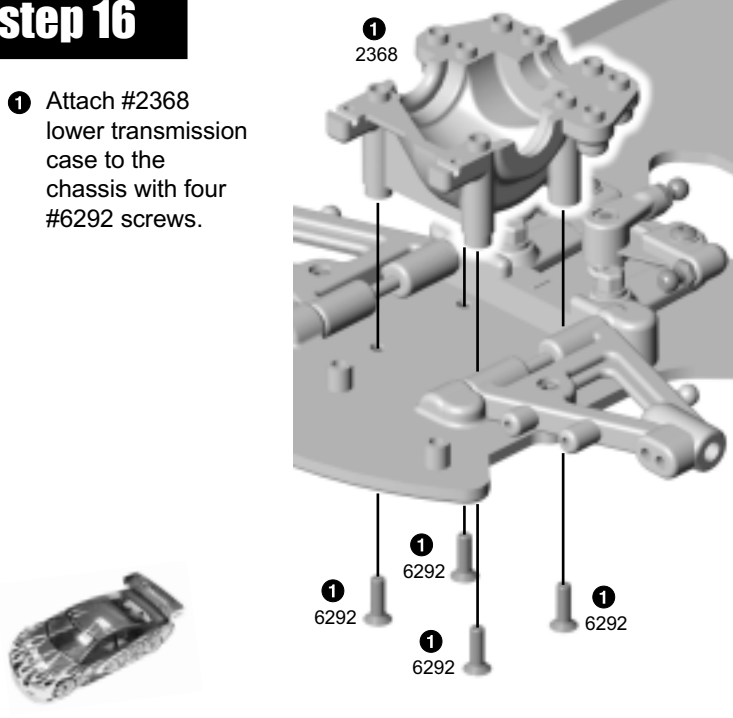
# step 15

- Slide #2280 brake cam lever wire into the brake cam. Make sure that the wire is angled as shown at right. Slide the wire through the side of the cam so the brake cam pins are facing up.
- Secure with #6920 screw.



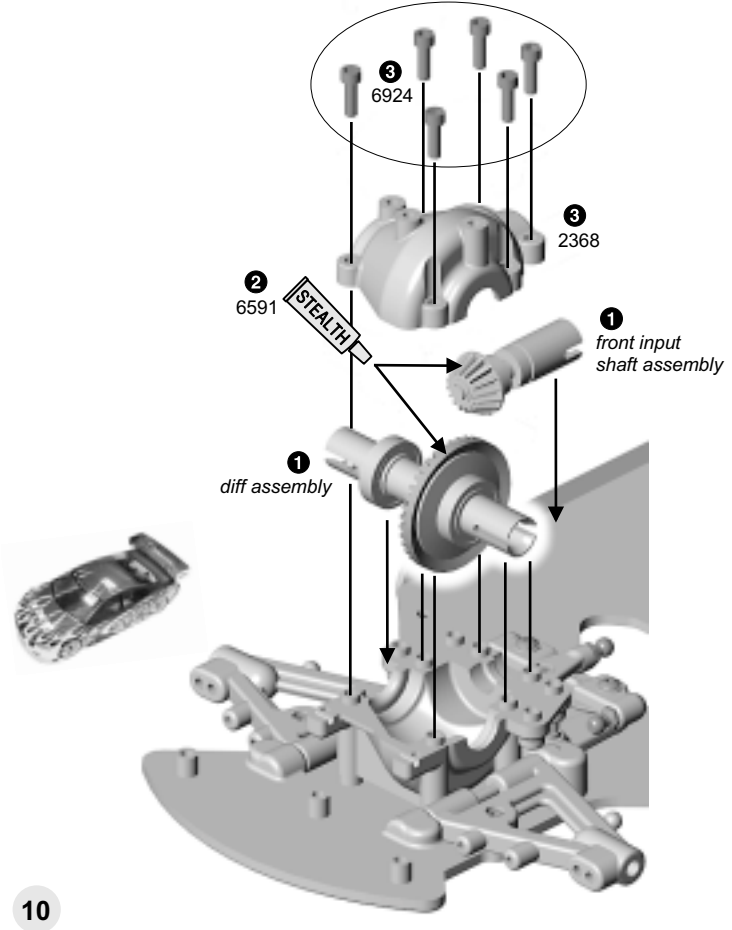
# step 16

- Attach #2368 lower transmission case to the chassis with four #6292 screws.



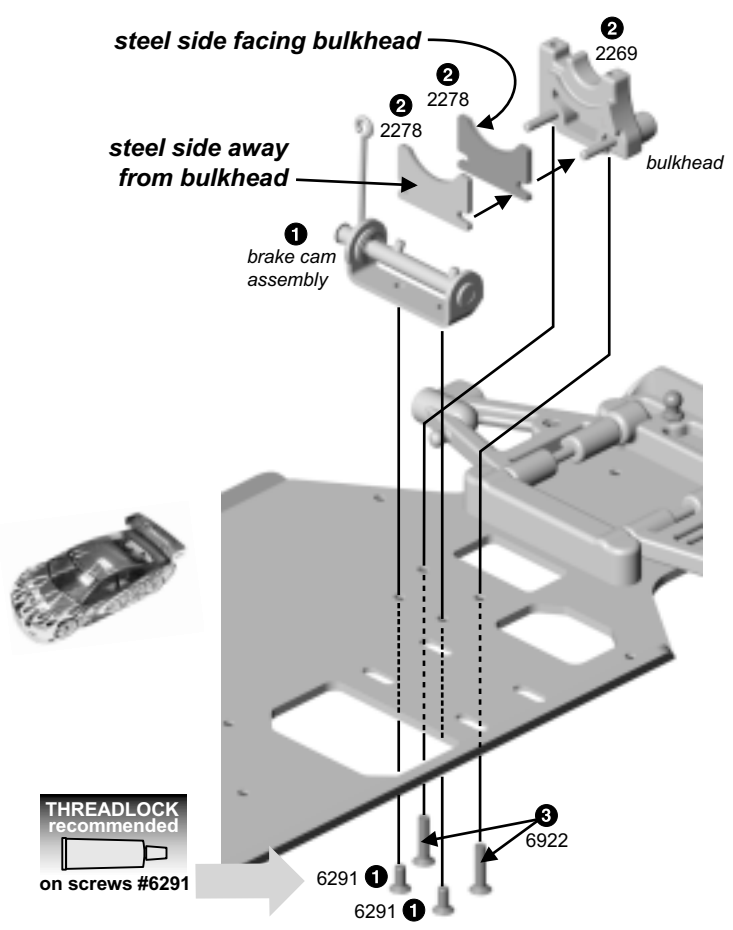
# step 17

- Place the front diff assembly and front input shaft assembly into the lower transmission case.
- Squeeze four beads of #6591 diff lube equally spaced apart to the front side of the ring gear and pinion gear.
- Attach the #2368 upper transmission case to the lower case with six #6924 screws. **Do not overtighten.**



# step 18

- Attach the brake cam assembly to the chassis with two #6291 screws.
- Slide one #2278 brake pad (steel side facing bulkhead) onto the #2269 center bulkhead. Slide the second #2278 brake pad (steel side facing away from bulkhead) onto the #2269 center bulkhead.
- Attach center bulkhead to the chassis with two #6922 screws.



# BAG C

# TOOLS USED

1/16", 3/32"

REMOVE THESE PARTS FOR: Steps 19-21



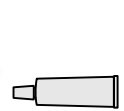
2368, qty 1  
lower transmission case



6292, qty 4  
4-40 x 3/8 screw



2262, qty 1  
main drive shaft



6591, qty 1  
Stealth lube



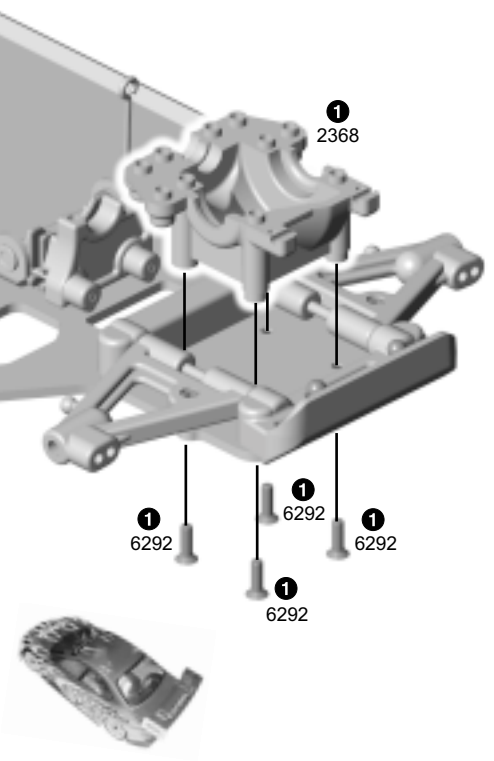
6924, qty 8  
4-40 x 3/8 screw



2269, qty 1  
bearing cap

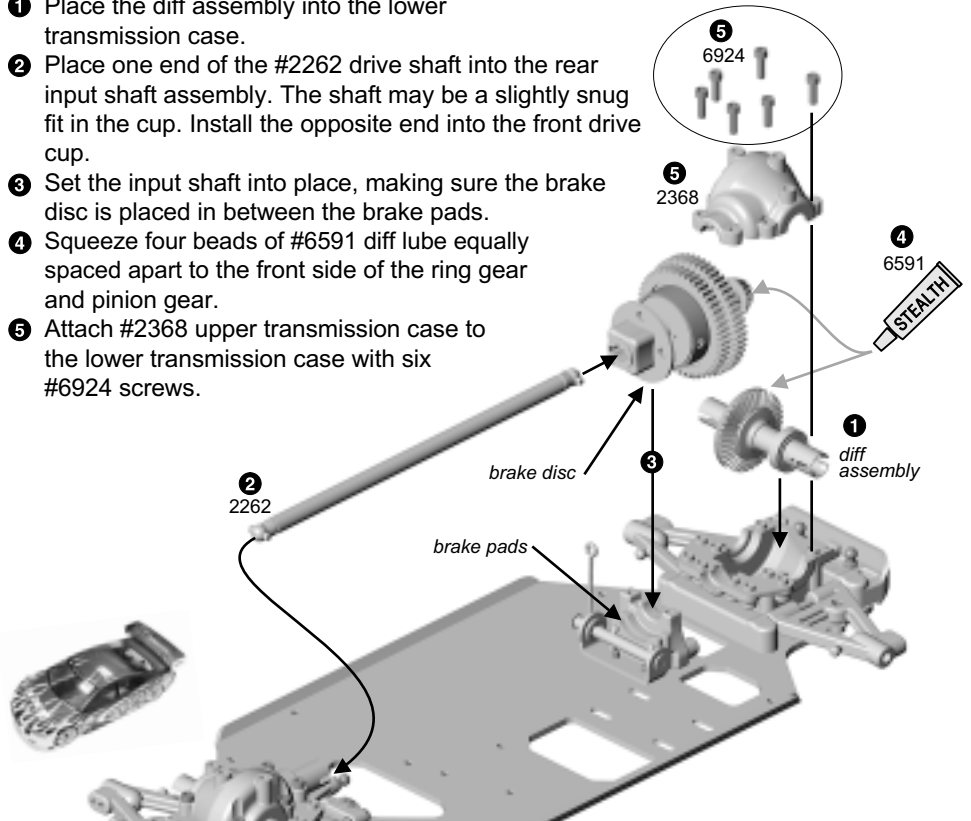
## step 19

- 1 Attach #2368 lower transmission case to the chassis with four #6292 screws.



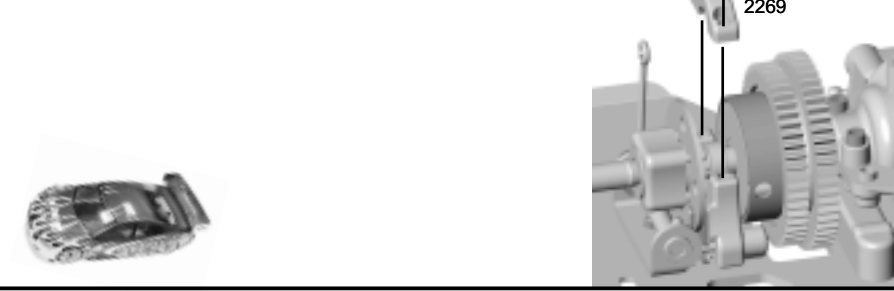
## step 20

- 1 Place the diff assembly into the lower transmission case.
- 2 Place one end of the #2262 drive shaft into the rear input shaft assembly. The shaft may be a slightly snug fit in the cup. Install the opposite end into the front drive cup.
- 3 Set the input shaft into place, making sure the brake disc is placed in between the brake pads.
- 4 Squeeze four beads of #6591 diff lube equally spaced apart to the front side of the ring gear and pinion gear.
- 5 Attach #2368 upper transmission case to the lower transmission case with six #6924 screws.



## step 21

- 1 Align the #2269 bearing cap over the bearing and attach with two #6924 screws. Do not overtighten.



# BAG D

# TOOLS USED

1/16", 3/32"

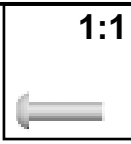
## REMOVE THESE PARTS FOR: Steps 1-5



2254, qty pr front chassis braces, left & right



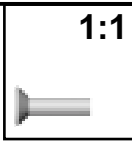
2254, qty pr rear chassis braces, left & right



6917, qty 8 4-40 x 3/8 screw



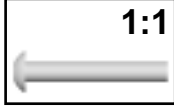
2260, qty 1 handle



6292, qty 6 4-40 x 3/8 screw



5407, qty 2 red O-ring



7413, qty 4 4-40 x 3/4 screw



2250, qty 2 tower (front or rear)



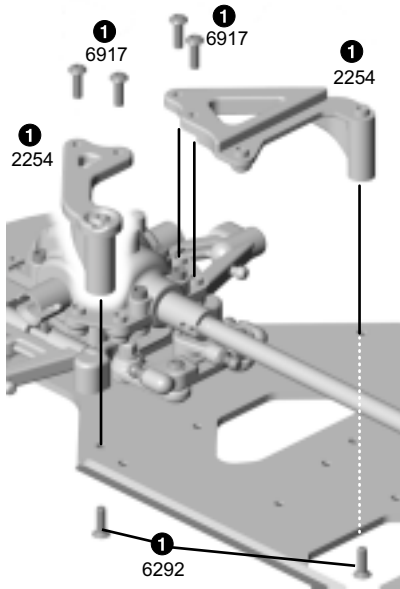
7260, qty 4 4-40 nut



6924, qty 6 4-40 x 3/8 screw

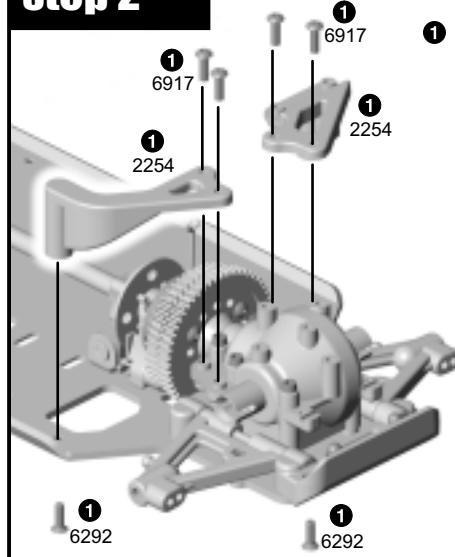
## step 1

- 1 Attach #2254 right & left front chassis braces to the transmission case with #6917 screws and to the chassis with #6292 screws.



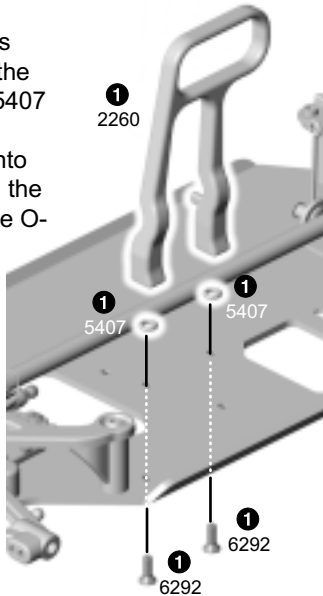
## step 2

- 1 Attach #2254 right & left rear chassis braces to the transmission case with #6917 screws and to the chassis with #6292 screws.



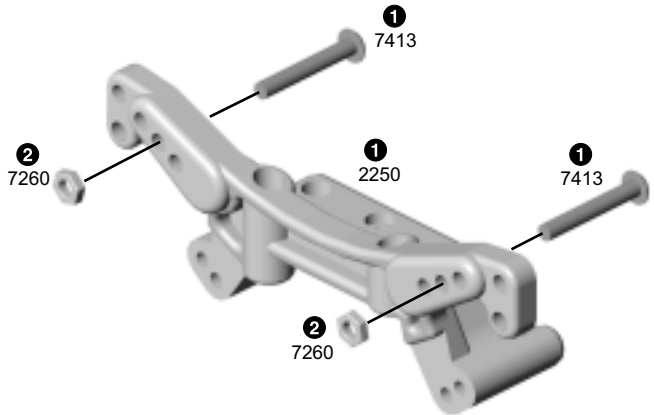
## step 3

- 1 Push the #6292 screws through the bottom of the chassis and place a #5407 O-ring on each screw.
- 2 Place #2260 handle onto the screws and tighten the screws to compress the O-rings.



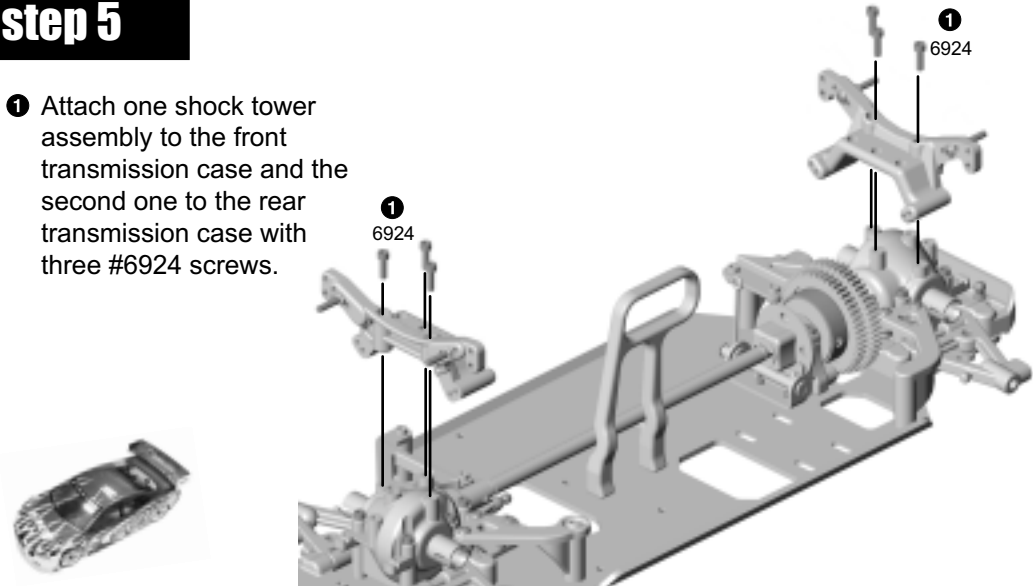
## step 4

- 1 Install the #7413 screws through the middle hole on the #2250 front / rear tower.
- 2 Then thread on the #7260 nuts and tighten.
- 3 Repeat step for second tower.



# step 5

1 Attach one shock tower assembly to the front transmission case and the second one to the rear transmission case with three #6924 screws.



### TOOLS USED

--	--

# BAG E

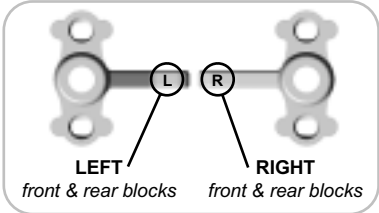
REMOVE THESE PARTS FOR: Step 1

6588, qty 1 black grease	3886, qty 4 CVD axle	7381, qty 4 CVD coupling	7381, qty 4 CVD cross pin	3888, qty 4 CVD dogbone	7381, qty 1 MIP threadlock	7381, qty 4 CVD set screw	
3977, qty 8 3/16 x 3/8 bearing, rubber sealed	2247, qty 2 pr steering/hub carrier left and right	3965, qty 4 bearing spacer	7368, qty 4 thin spacer	7369, qty 4 roll pin	6273, qty 2 ball end (silver)	7260, qty 2 4-40 plain nut	2257, qty 2 rear toe ball end (gold)

# step 1

## CVD ASSEMBLY

- Spread some Associated #6588 black grease inside the #3886 axle hole where shown, then on the #7381 coupling and insert the coupling into the axle.
- Slide the #3886 axle into the #3888 dogbone, aligning the cross pin holes.
- Insert the #7381 cross pin, making sure it is evenly spaced on both sides of the dogbone.
- Add a small drop of MIP thread lock to the #7381 set screw. Angle and turn the CVD so the set screw can be screwed in with the Allen wrench.
- Repeat steps for the three remaining CVDs.



## STEERING / HUB CARRIER ASSEMBLY

- Slide one #3977 bearing onto the axle. Slide the axle assembly into the back of the #2247 steering/hub carrier
- Slide in a #3965 bearing spacer
- Install the second #3977 bearing into the steering / hub carrier, followed by one #7368 thin spacer.
- Insert the #7369 roll pin into the axle.
- Repeat steps 6-9 for the three remaining steering / hub carriers.
- FRONT:** Thread a #6273 ball end into the bottom of one right and one left steering / hub carriers for the front. Add a #7260 plain nut.
- REAR:** Thread a #2257 rear toe ball end into the bottom of one right and one left steering / hub carriers for the rear. Add a #2257 large plain nut.

**FRONT**  
Use this hole in the front steering/hub carriers

**REAR**  
Use this hole in the rear steering/hub carriers

# BAG E

# TOOLS USED

REMOVE THESE PARTS FOR: Steps 2-4



2246, qty 8  
pivot ball



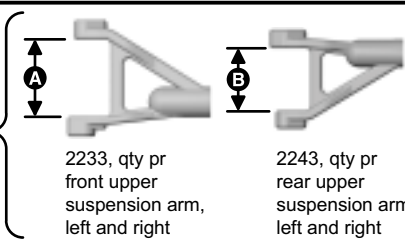
2249, qty 8  
socket cap



6924, qty 16  
4-40 x 3/8 screw

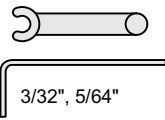
1:1

Compare the front and rear upper arms. Opening A (front upper arm) is wider than opening B (rear upper arm)



2233, qty pr front upper suspension arm, left and right

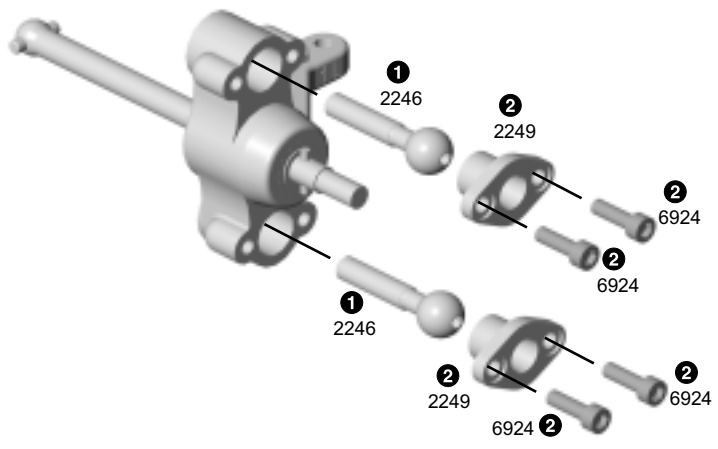
2243, qty pr rear upper suspension arm, left and right



3/32", 5/64"

## step 2

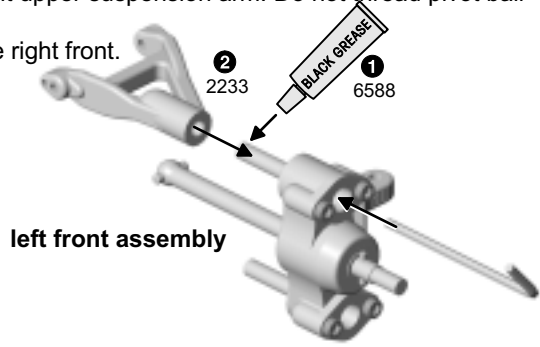
- 1 Insert one #2246 pivot ball into the upper socket and one into the lower socket of the steering / hub carrier assemblies.
- 2 Insert the #2249 socket caps and secure them down with #6924 screws. Tighten the socket cap screws so that the pivot ball moves freely without any binding or excess play.
- 3 Repeat for the remaining three steering / hub carriers.



## step 3

### FRONT UPPER SUSPENSION ARM

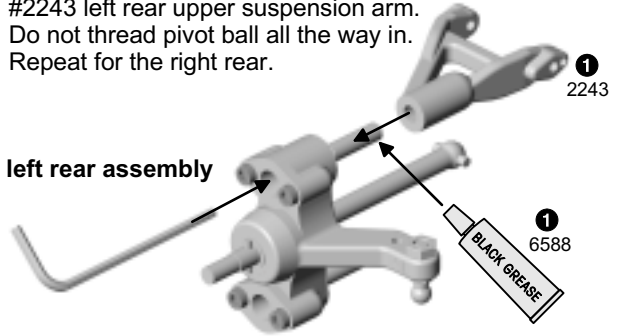
- 1 Add a small amount of #6588 black grease to the end of the threads on the pivot ball.
- 2 Use your 5/64" Allen wrench to screw the pivot ball into the #2233 left front upper suspension arm. Do not thread pivot ball all the way in.
- 3 Repeat for the right front.



## step 4

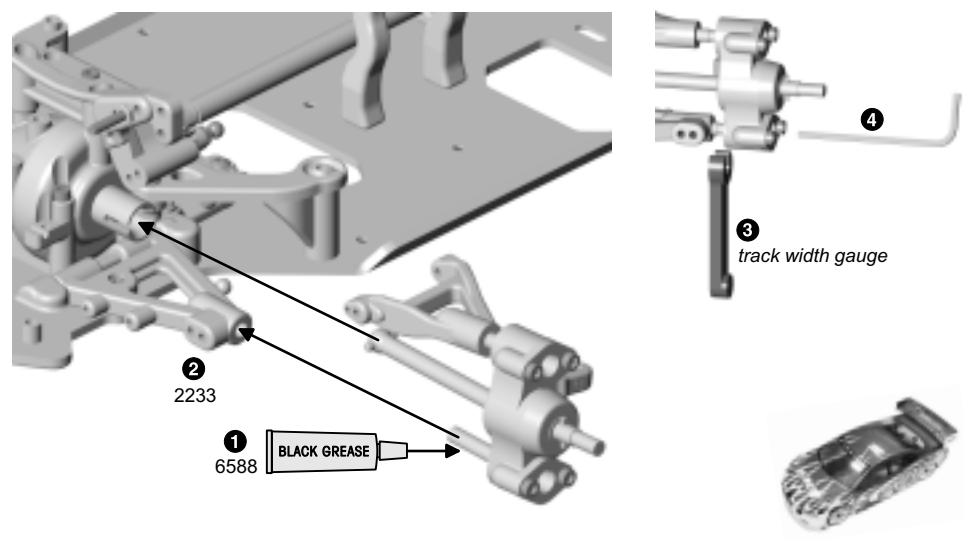
### REAR UPPER SUSPENSION ARM

- 1 Add a small amount of #6588 black grease to the end of the threads on the pivot ball.
- 2 Use your 5/64" Allen wrench to screw the pivot ball into the #2243 left rear upper suspension arm. Do not thread pivot ball all the way in.
- 3 Repeat for the right rear.



## step 5

- 1 Add a small amount of #6588 black grease to the end of the threads on the pivot ball.
- 2 Use your Allen wrench to screw the pivot ball into the #2233 front lower suspension arm.
- 3 Slide your supplied track width gauge in between the steering / hub carrier assembly and the lower arm.
- 4 Use your 5/64" Allen wrench to tighten the pivot ball until the gauge is sandwiched in between the two. Turn the pivot ball counter clockwise until the gauge can be removed.
- 5 Repeat for the lower suspension arms for the right front, left rear, and the right rear.



1:1

2235, qty 2  
front hinge pin

1:1

1:1

1:1

**TOOLS USED**

REMOVE THESE PARTS FOR:  
Steps 6-



9146, qty 4  
2/56 x 3/16 screw



2239, qty 4  
caster clip

2235, qty 2  
rear hinge pin



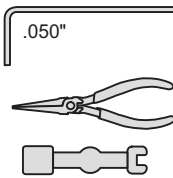
1:1



6274, qty 4  
ball cup,  
black



2251, qty 4  
ball cup,  
gray



6264, qty 2  
steering link  
turnbuckle



1:1

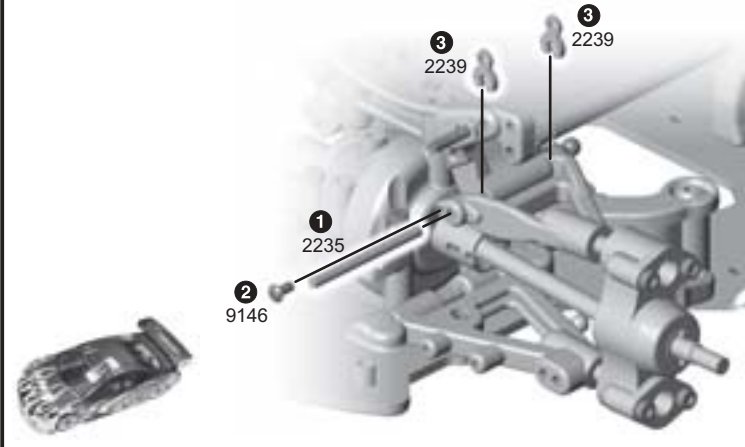
2253, qty 2  
rear toe  
turnbuckle



1:1

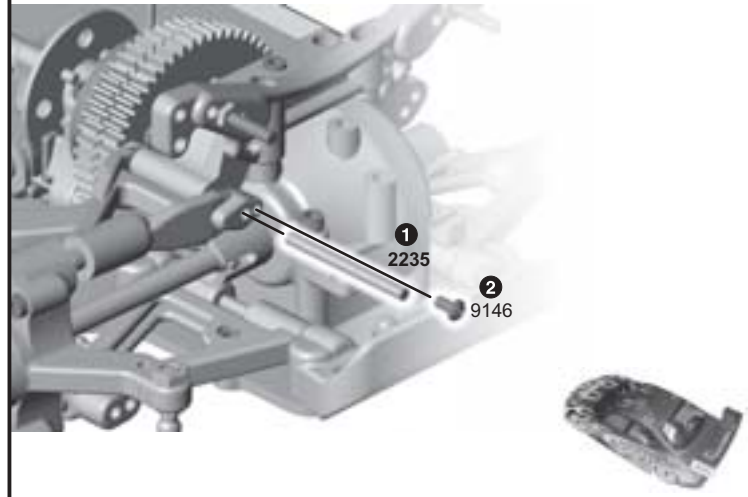
## step 6

- Line up the #2233 front upper suspension arm with the inner hole on the shock tower, making sure the CVD dogbone is in the slots of the outrive. Push a #2235 hinge pin into the arm and the shock tower.
- Fasten #9146 screw into the upper arm. The screw holds in the hinge pin.
- Clip in the two #2239 caster clips. Place one on each side of the tower. This sets your caster at 9 degrees.
- Repeat step 6 for the right front.



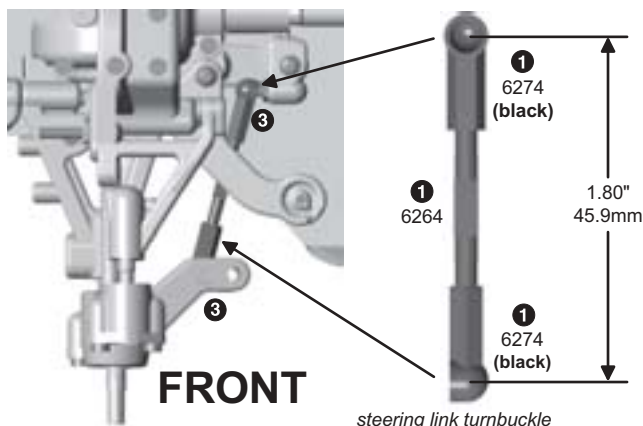
## step 7

- Line up the #2243 rear upper suspension arm with the inner hole on the shock tower, making sure the CVD dogbone is in the slots of the outrives. Push #2235 hinge pin into the arm and the tower.
- Fasten #9146 screw into the upper arm.
- Repeat step 7 for the right rear.



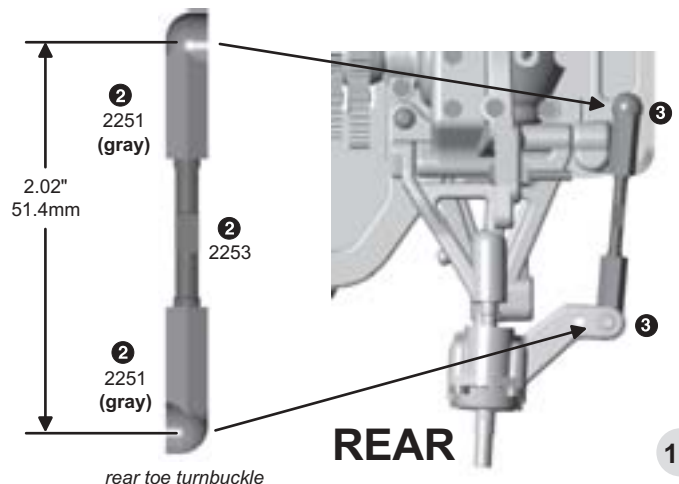
## step 8

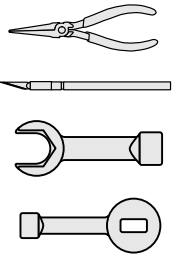
- Twist the #6274 ball cups onto the #6264 turnbuckle until you get the dimension shown (steering turnbuckle). Assemble both turnbuckles.
- Twist the #2251 gray ball cups onto the #2253 rear toe turnbuckle until you get the dimension shown (rear toe turnbuckle). Assemble both turnbuckles. This results in 2° rear toe.
- Snap all four turnbuckles into place where shown.



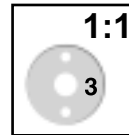
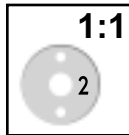
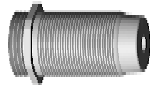
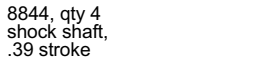
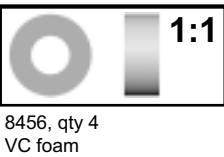
### To screw ball cup onto turnbuckle:

- Grip middle of turnbuckle with needlenose pliers.
- Thread on ball cup by hand at first, then use turnbuckle tool to finish.
- Squeeze turnbuckle onto ball end with needlenose pliers.





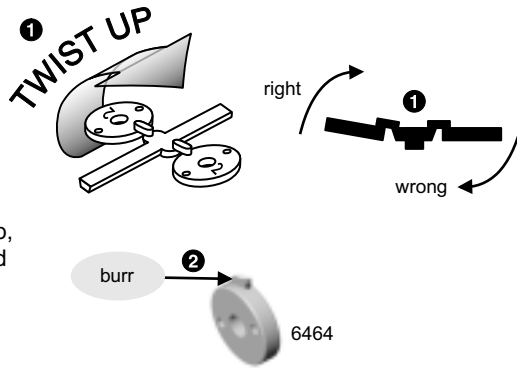
## REMOVE THESE PARTS FOR: Steps 1-4



## step 1

### TRIM SHOCK PISTON

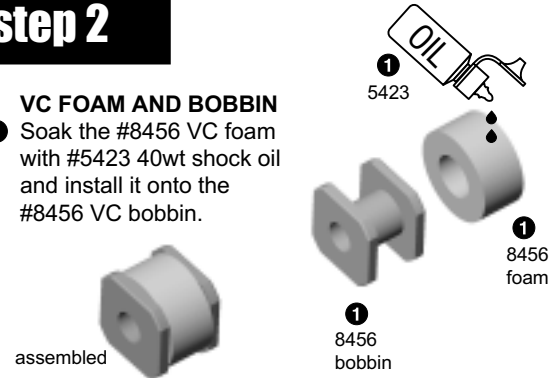
- 1 Burrs on the #6465 shock piston interfere with smooth shock action within the shock body. To remove from tree without creating burrs, twist up, not down. Remove two #2 and two #3 shock pistons.
- 2 Remove remaining burrs carefully with a hobby knife.



## step 2

### VC FOAM AND BOBBIN

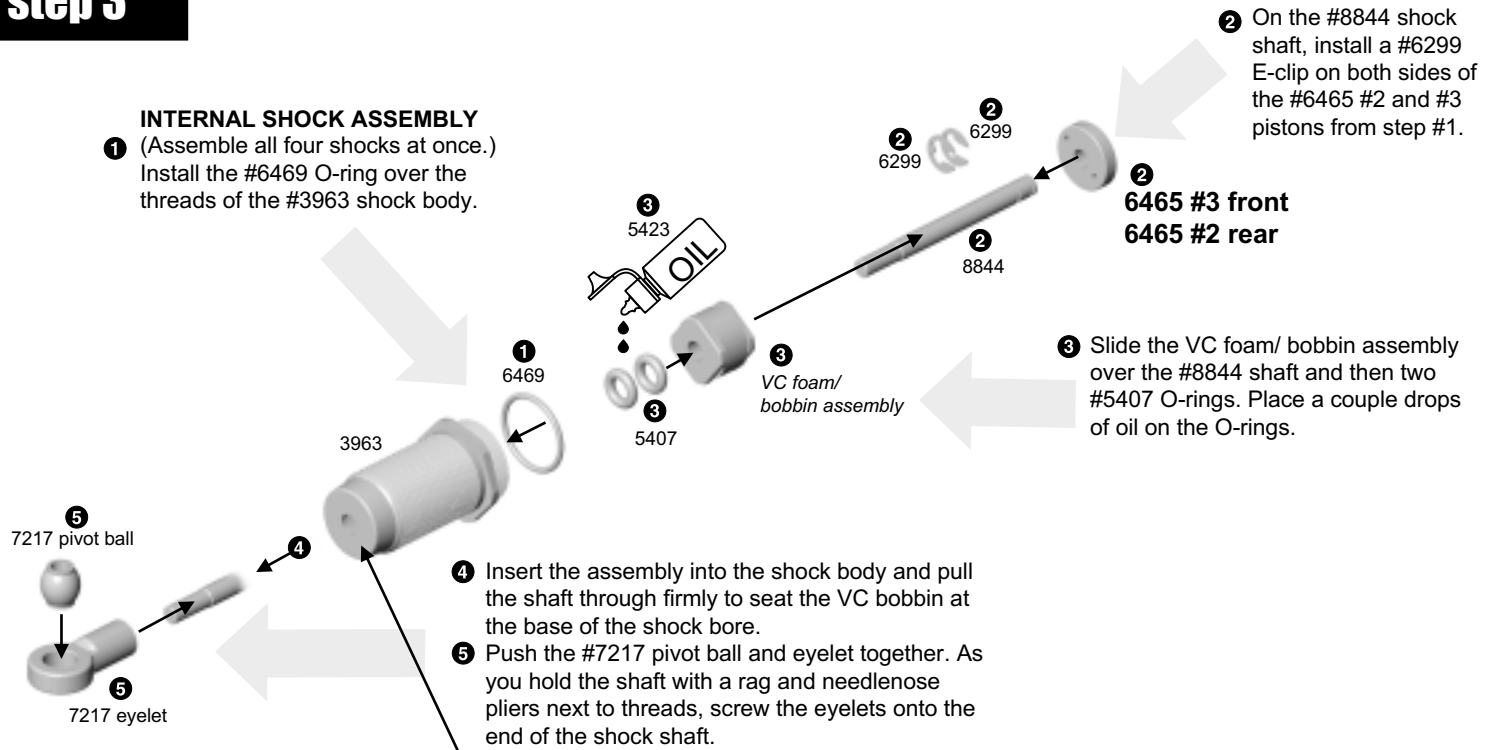
- 1 Soak the #8456 VC foam with #5423 40wt shock oil and install it onto the #8456 VC bobbin.



## step 3

### INTERNAL SHOCK ASSEMBLY

- 1 (Assemble all four shocks at once.) Install the #6469 O-ring over the threads of the #3963 shock body.



- 2 On the #8844 shock shaft, install a #6299 E-clip on both sides of the #6465 #2 and #6465 #3 pistons from step #1.

6465 #3 front  
6465 #2 rear

- 3 Slide the VC foam/ bobbin assembly over the #8844 shaft and then two #5407 O-Rings. Place a couple drops of oil on the O-rings.

- 4 Insert the assembly into the shock body and pull the shaft through firmly to seat the VC bobbin at the base of the shock bore.
- 5 Push the #7217 pivot ball and eyelet together. As you hold the shaft with a rag and needlenose pliers next to threads, screw the eyelets onto the end of the shock shaft.

**TIP:** Use a permanent marker to mark your shocks with an F and R to designate front and rear.

# step 4









- 1 Holding the shock upright, fill with oil to the top of the body.
- 2 Slowly move the shaft up and down several times to allow air bubbles to escape to the top.
- 3 Refill with oil to the top of the body.
- 4 Push the shaft up until the piston is level with the top of the body. The oil will bulge up above the shock body.
- 5 Fill The #6428 shock cap about halfway with oil and install onto the body. Try to retain as much oil as possible during assembly. The shaft will extend out as you tighten the cap down.

## SETTING THE REBOUND

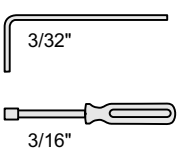
- 6 Move the shock shaft in and out a few times an then push it all the way in. It should be easy to push the shaft in until the eyelet hits the body
- 7 Then the shaft should push itself out to its full length very slowly.
- 8 If the shock does not push out this far there is not enough oil in it. Add a drop of oil and try steps 6-7 again.
- 9 If the shock rebounds too fast, or you cannot push the shaft in until the eyelet hits the body, there is too much oil. Loosen the cap about a full turn and pump out a small amount of oil by pushing the shaft in. Retighten the cap and try steps 6-7 again.  
Too much oil in the shock will result in leakage.

# BAG F

REMOVE THESE PARTS FOR: Steps 5-8

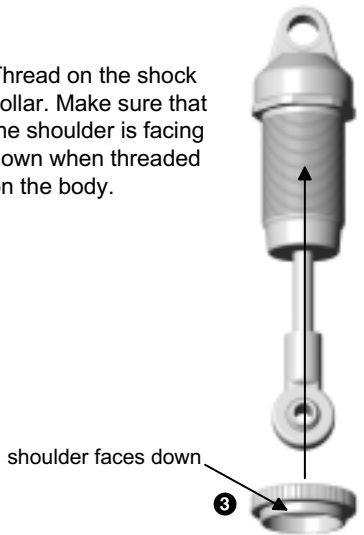
<p><b>1:1</b></p>  <p>6925, qty 4 4-40 x 1/2 screw</p>	<p><b>1:1</b></p>  <p>6472, qty 4 shock nut, small</p>	<p><b>1:1</b></p>  <p>3959, qty 4 shock collar O-ring</p>	 <p>3946, qty 2 spring, copper, front</p>	 <p>3944, qty 2 spring, gold, rear</p>
 <p>6473, qty 4 shock bushing</p>	 <p>3963, qty 4 shock collar</p>	 <p>6475, qty 4 spring cup</p>		

## TOOLS USED



# step 5

- 1 Slide one #3959 black O-ring into the groove in the #3963 threaded shock collar.
- 2 Put one drop of oil on the O-ring before you thread on the shock collar.
- 3 Thread on the shock collar. Make sure that the shoulder is facing down when threaded on the body.



# step 6

- 1 Slide the #3946 copper springs on the front shocks, and #3944 gold springs on the rear shocks.
- 2 Compress the spring to add the #6475 spring cup to all four shocks.

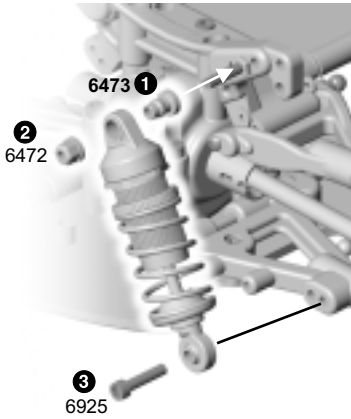




# step 7

## FRONT SHOCK MOUNTING

- 1 Add the #6473 shock bushing to the front shock tower screw shown.
- 2 Push the shock cap over the bushing and add a #6472 shock nut. **Do not over tighten or the shock will bind.**
- 3 Fasten the shock eyelet into the outer hole of the arm with a #6925 screw.
- 4 Repeat steps for second front shock.

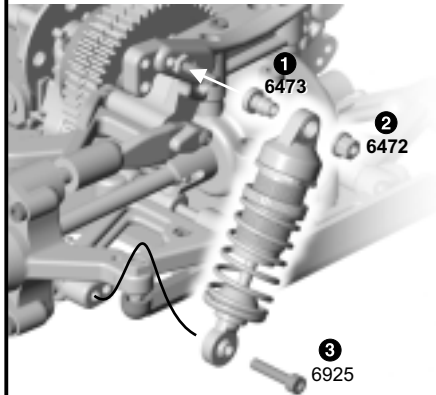


# step 8

## REAR SHOCK MOUNTING

- 1 Add the #6473 shock bushing to the rear shock tower screw shown.
- 2 Push the shock cap over the bushing and add #6472 shock nut. **Do not over tighten or the shock will bind.**
- 3 Fasten the shock eyelet into the outer hole of the arm with a #6925 screw.
- 4 Repeat steps for second rear shock.

Your front and rear shock collars set ride height. For more information on ride height, see page 30.



# BAG G

REMOVE THESE PARTS FOR:  
Step 1



7673, qty 3  
4-40 x 5/16 screw



5407, qty 3  
red O-ring

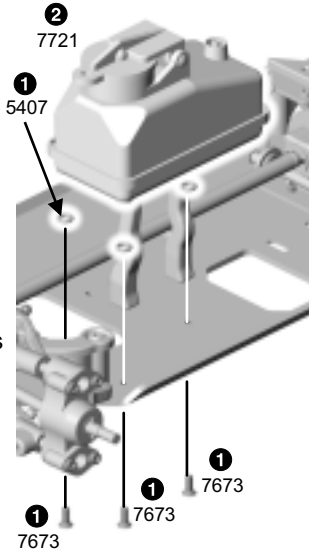


7721, qty 1  
fuel tank

1/16"

# step 1

- 1 Push the #7673 screws through the bottom of the chassis and place a #5407 red O-ring on each screw.
- 2 Set the #7721 tank onto the screws and tighten the screws just enough to slightly compress the O-rings so the tank can't move around.



# BAG H

REMOVE THESE PARTS FOR:  
Steps 1-5B



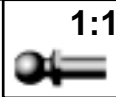
9146, qty 4  
2-56 x 3/16 screw



2258, qty 1  
receiver box



9180, qty 4  
servo horn



3857, qty 1  
short special ball end, black



7336, qty 2  
servo mount



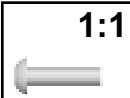
7336  
offset spacer



qty 2 thin (.050")  
qty 2 thick (.100")



7337, qty 8  
steel washer



6917, qty 8  
4-40 x 3/8 screw



2256, qty 1  
radio tray



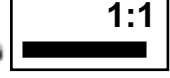
3720, qty 2  
wire tie, 8"



3718, qty 1  
wire tie, 12"



2238, qty 2  
throttle servo spacer  
med (.080")



2238, qty 2  
throttle servo spacer  
med (.080")



6918, qty 4  
4-40 x 1/2 screw



2252, qty 1  
battery mount

# TOOLS USED

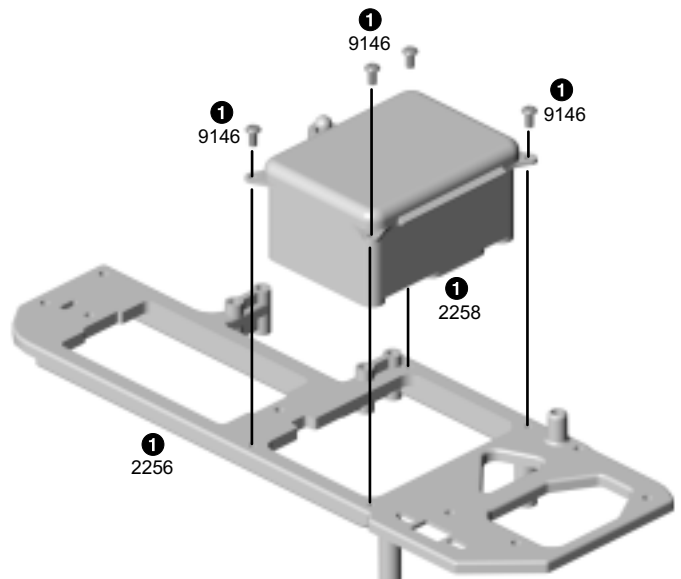
.050", 1/16"

3/16"

# step 1

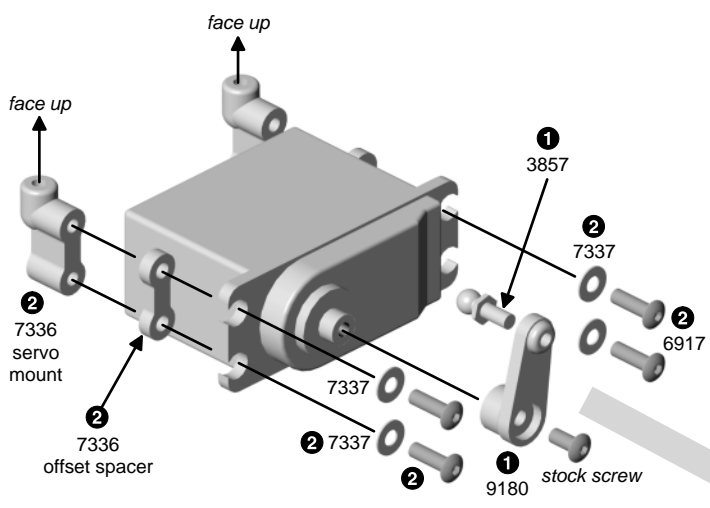
- 1 Insert #2258 receiver box into the #2256 radio tray and secure with four #9146 screws.

**CAUTION:** The box will fit tight.



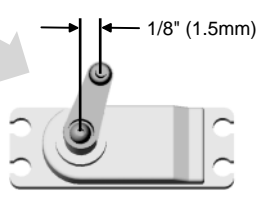
# step 2

- 1 Find the appropriate #9180 servo horn for your servo from the chart at right. Install the #3857 short ball end into the servo arm. Fasten the servo arm down with the stock mounting screw that came with your servo. **DO NOT POINT IT STRAIGHT UP!** See below for correct angle.
- 2 Find the appropriate thick or thin #7336 offset spacer for your servo from the chart at right. Attach the spacer if any, in between the #7336 mount and the servo with the #7337 washers and #6917 screws.



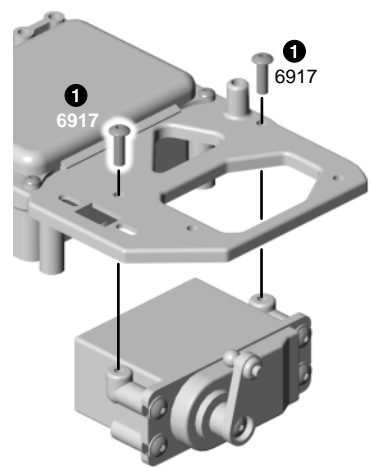
See Radio Adjustments section of manual for more info on correctly setting steering linkage.

STEERING SERVO TYPE	#7336 SPACER	#9180 SERVO ARM
<b>Airtronics</b> 94102	no spacer	<b>A</b>
<b>Airtronics</b> 94738, 94157, 94158, 94257, 94258, 94357, 94358, 94452, 94453, 94751, 94755	thick spacer	<b>A</b>
<b>Hitec</b> HS-5625MG, HS-5645MG, HS-625MG, HS645MG	no spacer	<b>H</b>
<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	<b>H</b>
<b>JR</b> Z4725, Z4750, Z2750, Z8450, Z8550, NES-4750	no spacer	<b>J</b>
<b>JR</b> Z250, Z550	thin spacer	<b>J</b>
<b>Futaba</b> S9204, S9250, S9450, S148	no spacer	<b>F</b>
<b>Futaba</b> S3003, S9202, S9101	thin spacer	<b>F</b>
<b>Futaba</b> S9404	thick spacer	<b>F</b>
<b>KO</b> PS-401, PS-2001, PS-2004, PS-2015, PS-2173, PS-2174, PS-2123, PS-2143, PS-2144	thin spacer	<b>J</b>



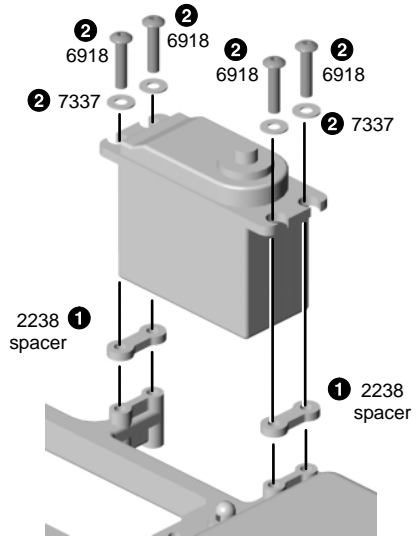
# step 3

- 1 Attach the servo to the radio tray with two #6917 screws.



# step 4

1 Look at the chart at right to see if a #2238 spacer is needed for your throttle servo. Attach the spacer if any, in between the radio tray and servo with the #7337 washers and #6918 screws.



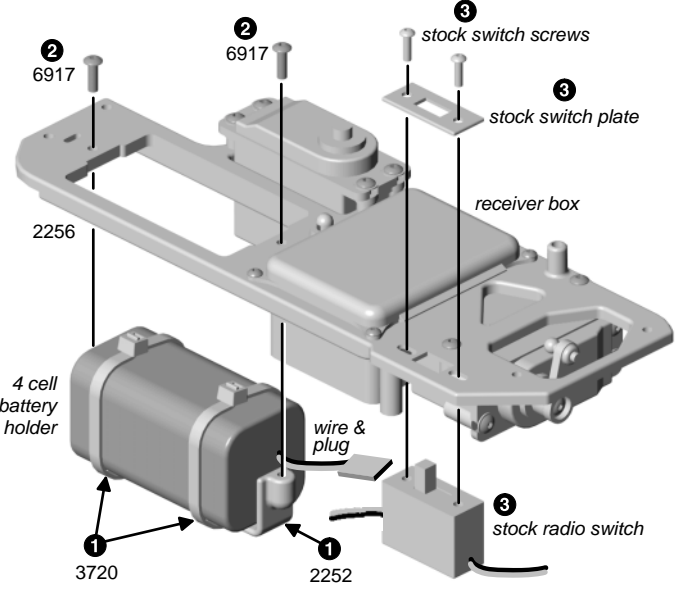
THROTTLE SERVO TYPE	#2238 SPACER	SERVO HORN
<b>Airtronics</b> 94102	no spacer	A
<b>Airtronics</b> 94738, 94157, 94158, 94257, 94258, 94357, 94358, 94452, 94453, 94751, 94755	spacer	A
<b>Hitec</b> HS-5625MG, HS-5645MG, HS-625MG, HS645MG HS-303, HS-300BB, HS-945MG, HS-925MG, HS-5945MG, HS-5925MG, HS-525MG, HS-525BB, HS-425BB, HS-422	no spacer	H
<b>JR</b> Z4725, Z4750, Z2750, Z8450, Z8550, NES-4750	no spacer	A
<b>JR</b> Z250, Z550	spacer	A
<b>Futaba</b> S9204, S9250, S9450, S148, S3003, S9202, S9101	no spacer	F
<b>Futaba</b> S9404	spacer	F
<b>KO</b> PS-401	spacer	A
<b>KO</b> PS-2001, PS-2004, PS-2015, PS-2173, PS-2174, PS-2123, PS-2143, PS-2144	no spacer	A

## CHOOSE ONE OF THE STEPS BELOW DEPENDING ON HOW YOUR RECEIVER BATTERIES MOUNT

### step 5A

#### USING A BATTERY HARNESS OR 5 CELL HUMP PACK

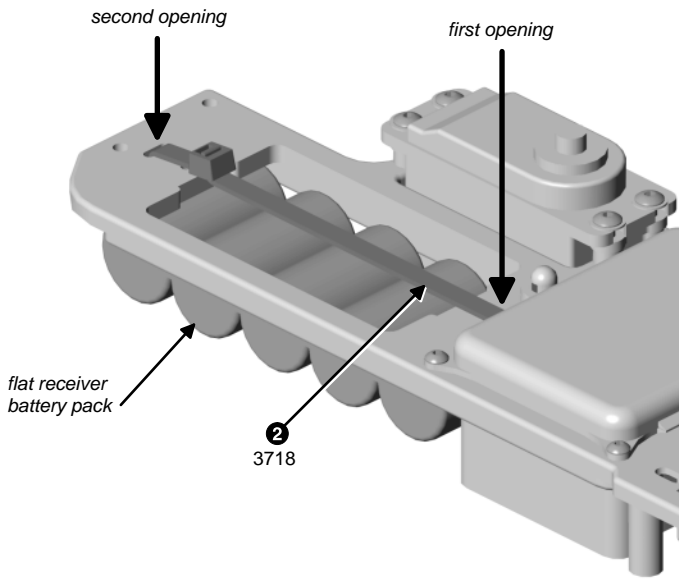
- 1 Place your batteries into your stock radio battery harness. Attach your harness to the #2252 battery mount with two #3720 wire ties, making sure the harness wires are facing the receiver box.
- 2 Place the battery harness assembly up into the radio tray and fasten down with #6917 screws.
- 3 Attach the switch to the radio tray with the stock switch screws.



### step 5B

#### USING A FLAT 5 CELL RECEIVER PACK

- 1 Place the receiver battery underneath the radio tray as shown, making sure to place it so the battery wire is facing the receiver box.
  - 2 Secure it down with #3718 wire tie by sliding the tie into the first opening and wrapping it around the battery and sliding it up through the second opening.
- ! If you use a switch see step 5 #3 at left.



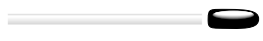
# BAG H

# TOOLS USED

REMOVE THESE PARTS FOR: Steps 6-8



6332, qty 1  
body clip



6338, qty 1  
antenna tube and cap



6727, qty 1  
servo tape



6917, qty 4  
4-40 x 3/8 screw



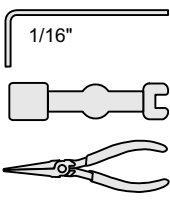
6292, qty 2  
4-40 x 3/8 screw



3867, qty 1  
steering turnbuckle

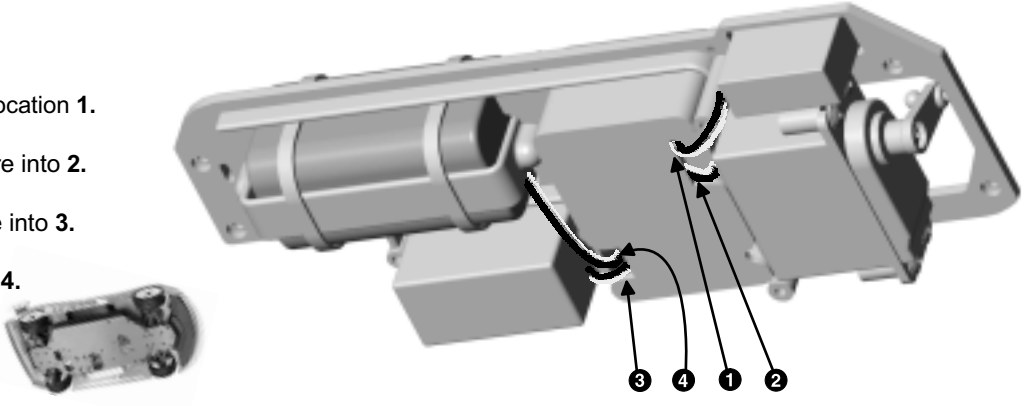


6274, qty 2  
ball cup



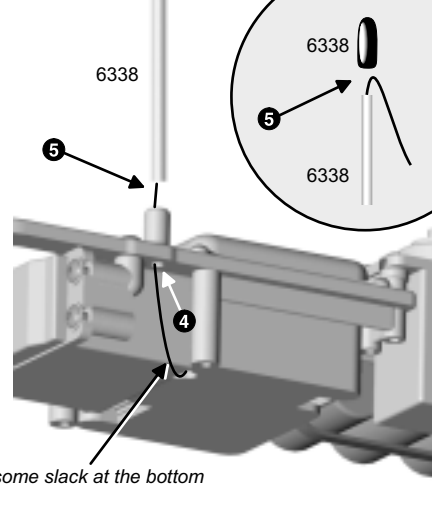
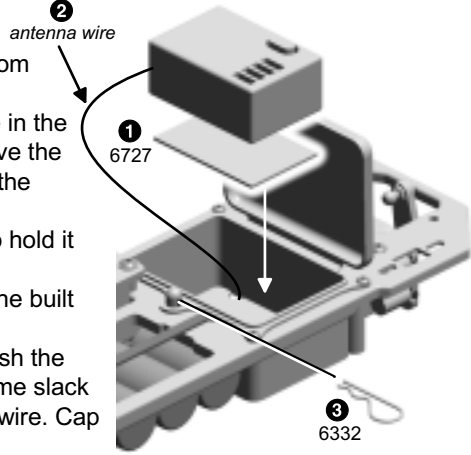
## step 6

- 1 Feed your switch wires into location 1.
- 2 Feed your steering servo wire into 2.
- 3 Feed your throttle servo wire into 3.
- 4 Feed your battery wires into 4.



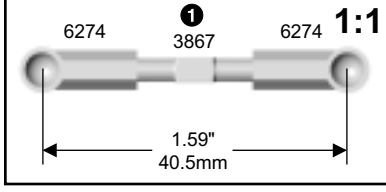
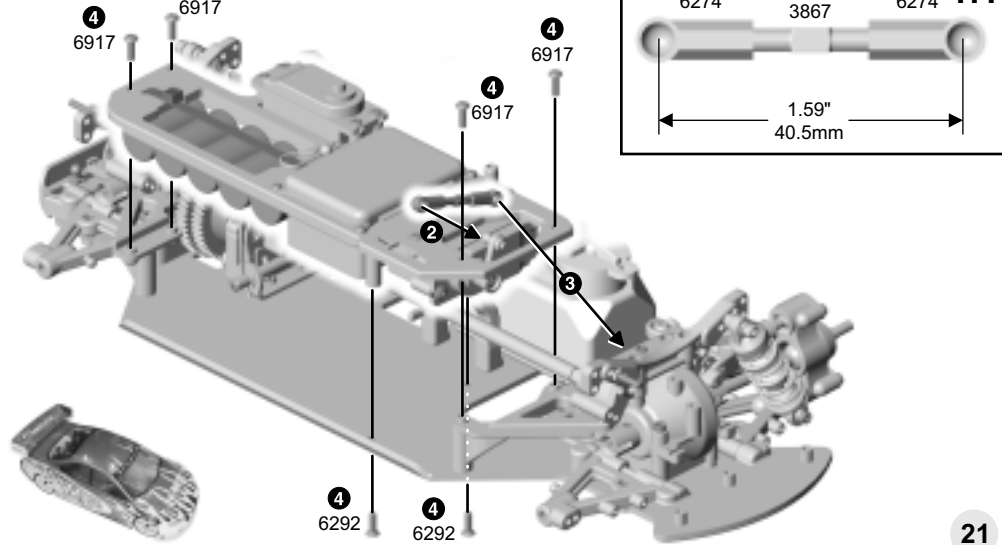
## step 7

- 1 Place a piece of #6727 servo tape to the bottom of the receiver.
- 2 Feed the antenna wire through the small hole in the receiver box. Before placing the receiver, move the wire off to the side of the box and then place the receiver into the box.
- 3 Close the box and slip a #6332 body clip in to hold it shut.
- 4 Take your antenna wire and push it through the built in antenna mount in the radio tray.
- 5 Slide the wire through #6338 antenna and push the antenna tube firmly into the mount. Leave some slack at the bottom. Do not cut off excess antenna wire. Cap the other end with the black rubber cap.



## step 8

- 1 Twist #6274 ball cups onto the #3867 turnbuckle until you get the dimension shown.
- 2 Snap one end of the ball end onto the servo arm.
- 3 Place the radio tray temporarily on the chassis. Snap the second end of the turnbuckle onto the ball end of the swing rack. Now place the radio tray into place.
- 4 Before attaching screws make sure the wires from your receiver box are lying flat so they won't get smashed. Attach the radio tray with four #6917 screws for the top and two #6292 screws for the bottom.

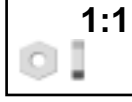


# If you are using a rotary style carburetor start at step 1. If you are using a slide carburetor start at step 2.

## BAG 1



2326, qty 1  
2-56 ball end



2326, qty 1  
2-56 plain nut



7618, qty 1  
collet



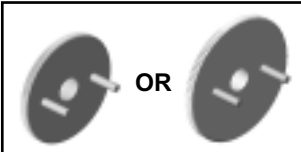
2313, qty 1  
SG clutch nut



2312, qty 1  
standard clutch nut



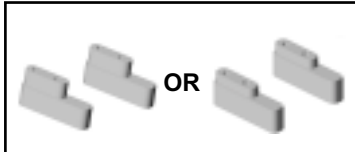
2306, qty 2  
clutch spring



2322, qty 1  
non pull start  
flywheel

OR

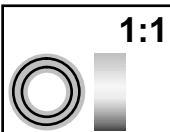
2323, qty 1  
pull start  
flywheel



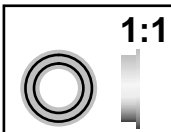
2340, qty pr  
pull start  
engine mounts

OR

2341, qty pr  
non pull  
engine mounts



2320, qty 1  
unflanged bearing  
5 x 10 x 4



2320, qty 1  
flanged bearing  
5 x 9 x 3



2310, qty 2  
clutch shoe



2321, qty 2  
SG shim



3934, qty 1  
screw



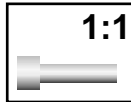
2299, qty 1  
26 tooth pinion  
black



2297, qty 1  
22 tooth pinion  
blue



2295, qty 1  
clutch bell



7874, qty 4  
4-40 x 7/16 screw



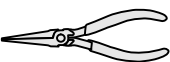
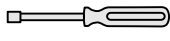
7773, qty 4  
screw



2321, qty 1  
clutch shim

## TOOLS USED

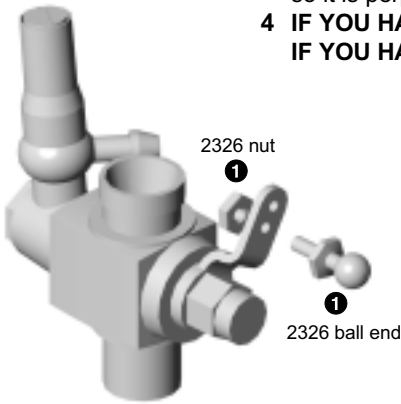
1/16", 5/64", 3/32"



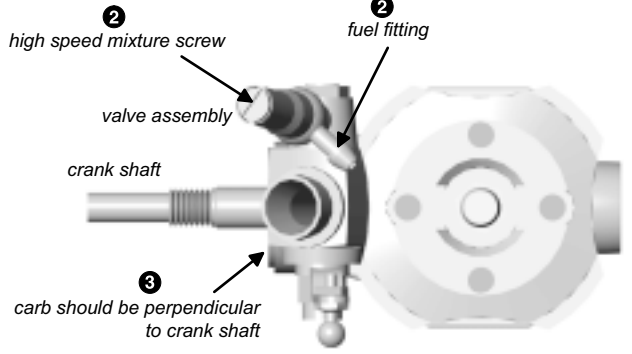
CLUTCH NUT TOOL

## step 1 ROTARY CARB ONLY

**1** Attach a #2326 2-56 ball end and a #2326 2-56 plain nut to the lower hole in the throttle arm pivot. If the hole is too small for the ball end, drill it out with a #43 or a 3/32 drill bit. Be careful not to get any metal or plastic shavings into the carb opening.

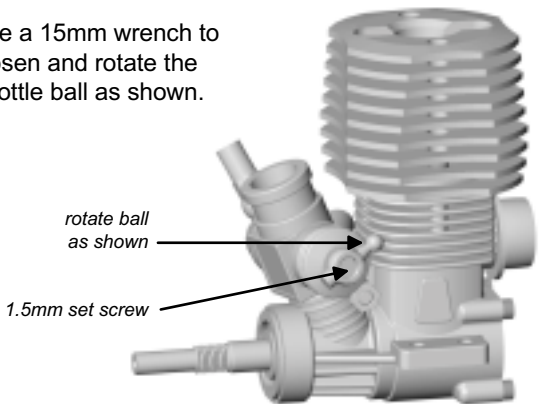


- 2** Use a wrench to loosen your high speed mixture screw. Turn the valve assembly until the fuel fitting is facing the direction shown below, then retighten the valve assembly.
- 3** Loosen the screw or clamp bolt that holds the carburetor in place. Rotate the carb so it is perpendicular to the crank shaft as shown.
- 4 IF YOU HAVE AN SG CRANK SHAFT, GO TO STEP 3.**  
**IF YOU HAVE A STANDARD SHORT CRANK SHAFT, GO TO STEP 4.**

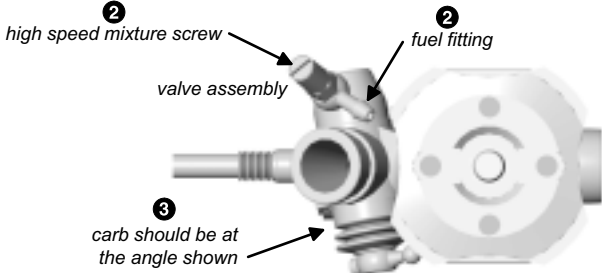


## step 2 SLIDE CARB ONLY

**1** Use a 15mm wrench to loosen and rotate the throttle ball as shown.



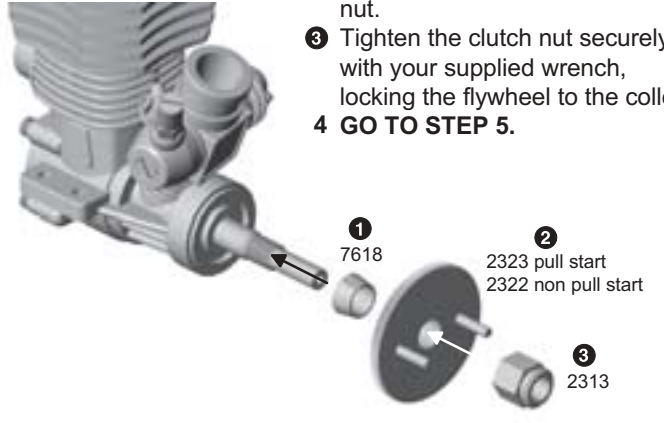
- 2** Use a wrench to loosen your high speed mixture screw. Turn the valve assembly until the fuel fitting is facing the direction shown below, then retighten the valve assembly.
- 3** Loosen the screw or clamp bolt that holds the carburetor in place. Rotate the carb so it is angled as shown below.
- 4 IF YOU HAVE AN SG CRANK SHAFT, GO TO STEP 3.**  
**IF YOU HAVE A STANDARD SHORT CRANK SHAFT, GO TO STEP 4.**



# step 3

## FLYWHEEL ASSEMBLY FOR SG CRANK SHAFT

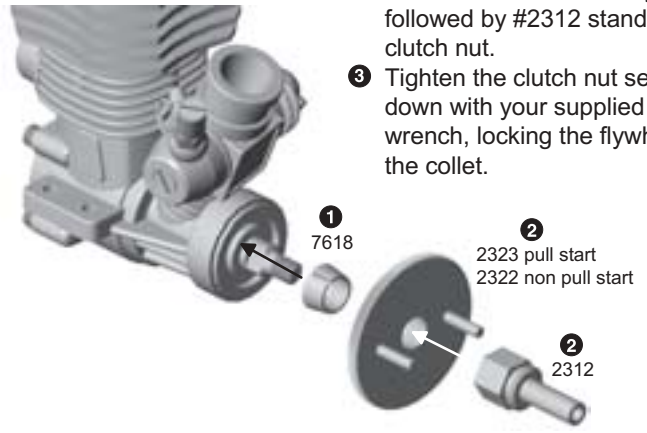
- 1 Slide on #7618 collet
- 2 Install #2322 or #2323 flywheel followed by #2313 SG clutch nut.
- 3 Tighten the clutch nut securely with your supplied wrench, locking the flywheel to the collet.
- 4 GO TO STEP 5.



# step 4

## FLYWHEEL ASSEMBLY FOR STANDARD SHORT CRANK SHAFT

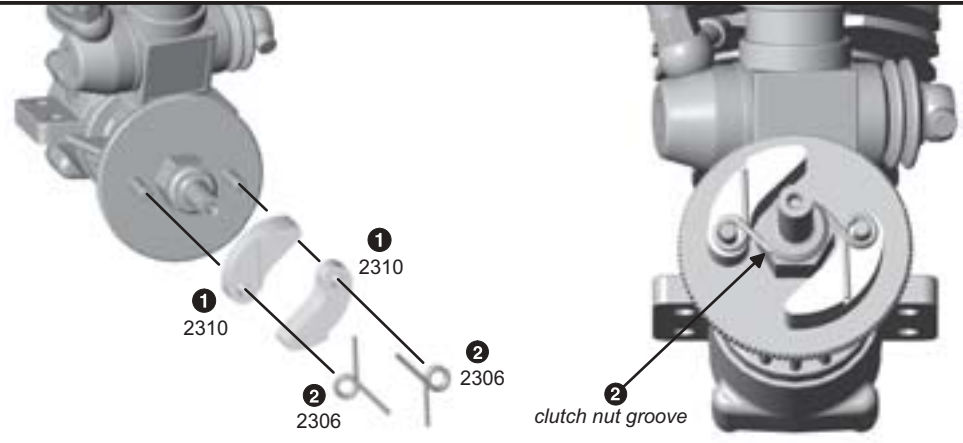
- 1 Slide on #7618 collet.
- 2 Install #2322 or #2323 flywheel followed by #2312 standard clutch nut.
- 3 Tighten the clutch nut securely down with your supplied wrench, locking the flywheel to the collet.



# step 5

## CLUTCH SHOE ASSEMBLY

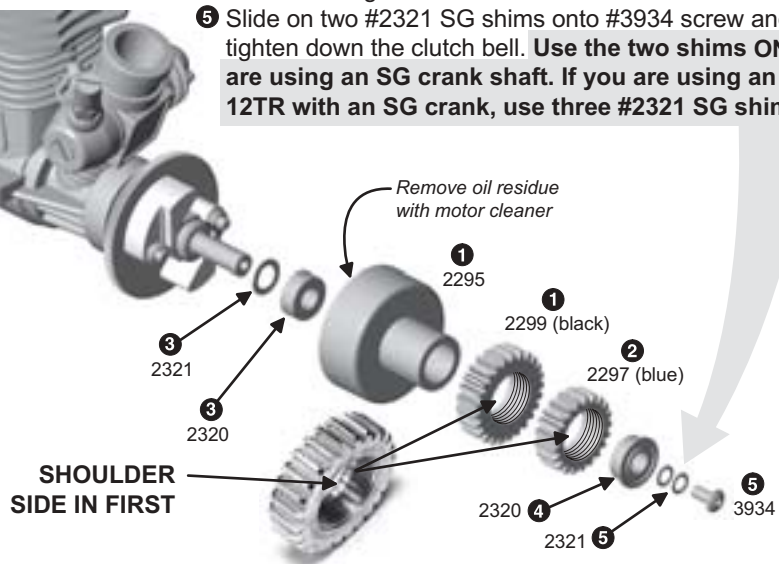
- 1 Install your #2310 clutch shoes on the flywheel clutch pins.
- 2 Place the #2306 clutch springs onto the pins on top of the clutch shoes. Use a flat head screwdriver to snap the other side of the spring into the groove of the clutch nut, as shown at far right.



# step 6

## CLUTCH BELL ASSEMBLY

- 1 Thread the #2299 (black) 26 tooth pinion onto the #2295 clutch bell, making sure the shoulder side of the pinions goes on first.
- 2 Thread on the second #2297 (blue) 22 tooth pinion onto the clutch bell, making sure the shoulder side of the pinions goes on first.
- 3 Slide on one #2321 clutch shim followed by #2320 non flanged clutch bearing.
- 4 Slide on the clutch bell assembly followed by #2320 flanged clutch bearing.
- 5 Slide on two #2321 SG shims onto #3934 screw and now tighten down the clutch bell. **Use the two shims ONLY if you are using an SG crank shaft. If you are using an OS Max 12TR with an SG crank, use three #2321 SG shims.**



# step 7

- 1 Attach the #2340 or #2341 engine mounts to your engine with four #7874 screws.



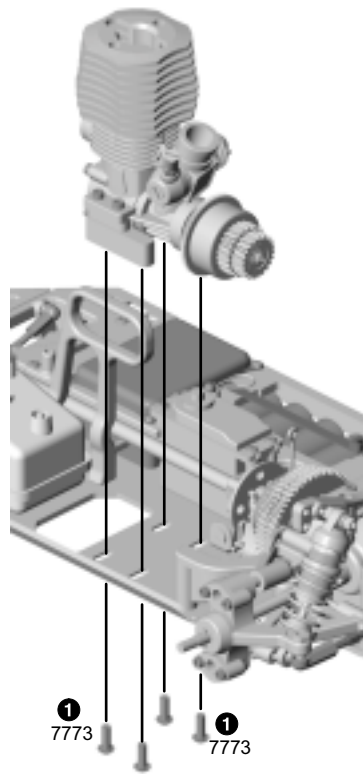
# step 8

## ENGINE INSTALLATION

- Place your engine assembly on top of the chassis. Attach the engine to the chassis with four #7773 screws. Do not tighten the screws yet.

## GEAR MESH

- Now we set the spur-to-pinion gear spacing, otherwise known as gear mesh. Make sure you can still slide your engine, then mesh the clutch bell pinions with the spur gears. The correct gear spacing is when the pinion is close to the spur gear, but if you hold the pinion gears, you should still be able to rock the spur gears back and forth slightly with light pressure. Roll the gears and check the mesh in several different locations on the spur gear. Now tighten the four motor screws. Recheck the mesh.



# step 9

**If you have a rear exhaust engine, go to step 9R.**

**If you have a side exhaust engine, go to step 9S.**

## BAG I

REMOVE THESE PARTS FOR: Step 9R



2350, qty 1  
rear exhaust manifold



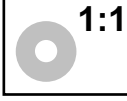
7733, qty 1  
silicone tubing



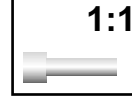
2353, qty 1  
muffler



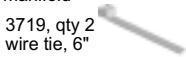
2353, qty 1  
set screw



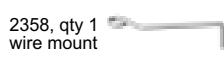
3216, qty 1  
washer



6924, qty 1  
4-40 x 3/8 screw



3719, qty 2  
wire tie, 6"



2358, qty 1  
wire mount



2357, qty 1  
manifold spring

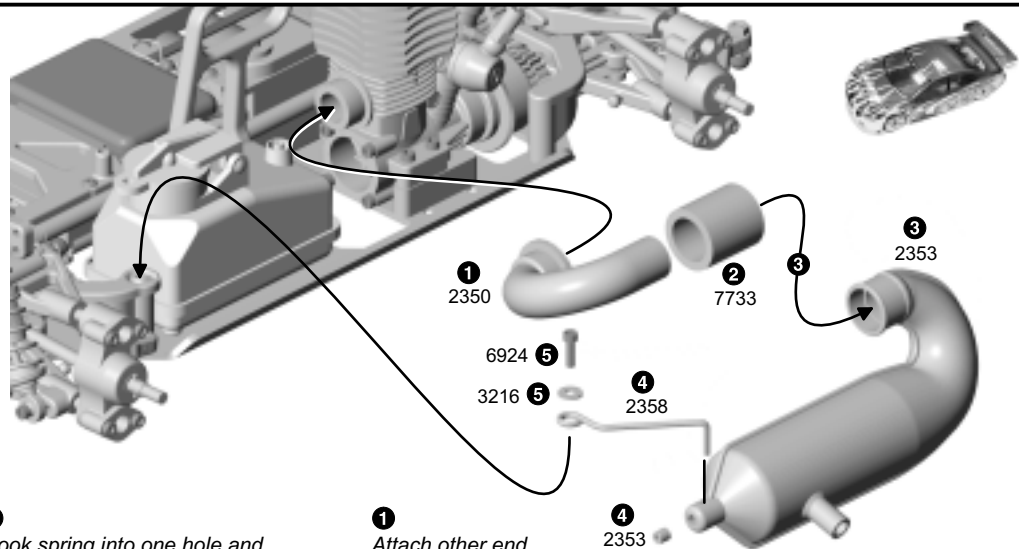
## TOOLS USED

5/64", 3/32"

# step 9R

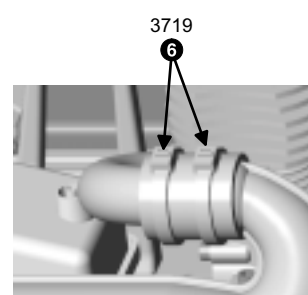
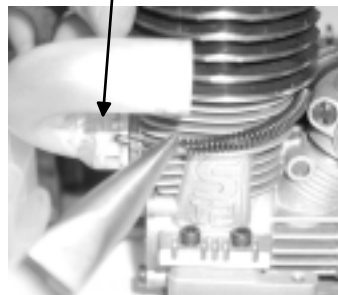
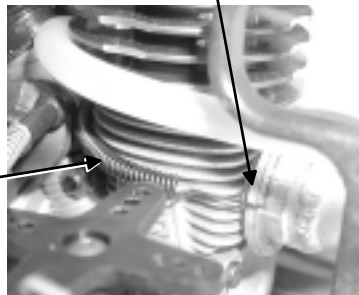
## REAR EXHAUST ENGINE

- Attach the #2350 rear exhaust manifold to your engine with #2357 manifold spring--see two photos below.
- Cut a piece of #7733 silicone tubing to 1 inch in length. Slide one end of the tubing about half way onto the muffler.
- Slide the muffler with the tubing over the end of the manifold, making sure the manifold slides all the way into the muffler.
- Slide the #2358 wire mount into the muffler and secure it with a #2353 set screw.
- Attach the other end of the wire mount to the chassis brace with one #3216 washer and one #6924 screw.
- Secure the silicone tubing with two #3719 wire ties.
- GO TO BAG H STEP 10.

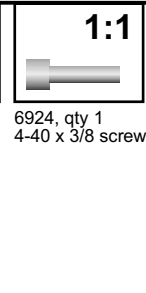
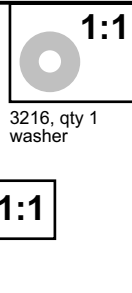
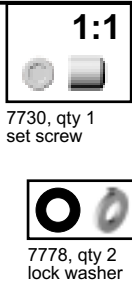
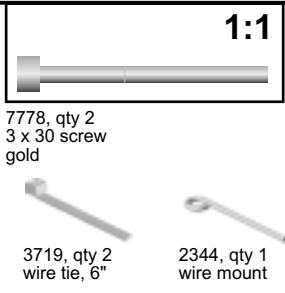
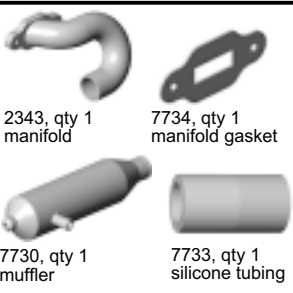


1 Hook spring into one hole and wrap around engine

1 Attach other end with pliers



# BAG I



# TOOLS USED

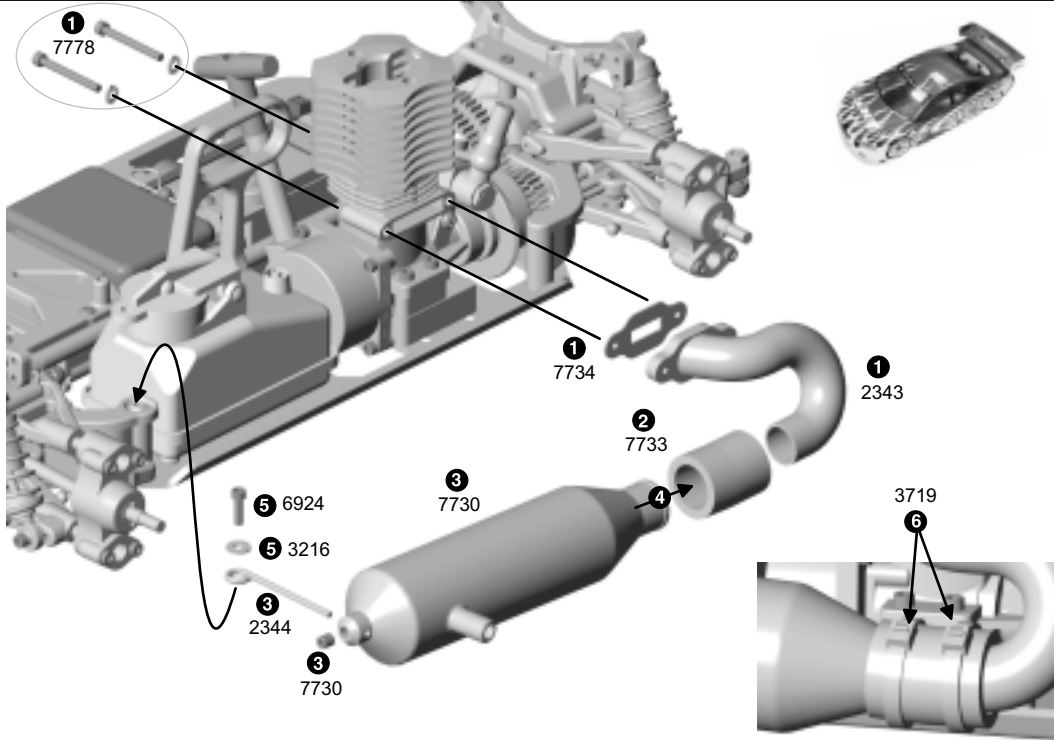
5/64", 3/32"

REMOVE THESE PARTS FOR:  
Step 9S

## step 9S

### SIDE EXHAUST ENGINE

- Slide the two #7778 lock washers onto the #7778 screws. Attach the #2343 manifold to the engine with the #7734 manifold gasket in between with two #7778 screws.
- Cut a piece of #7733 silicone tubing to 1 inch in length. Slide one end of the tubing about half way onto the end of the manifold.
- Attach #2344 wire mount to the #7730 muffler with #7730 set screw.
- Slide the end of the #7730 muffler into the end of the tubing on the manifold to 1/8" from the manifold.
- Attach the other end of the wire mount to the chassis brace with one #3216 washer and one #6924 screw.
- Secure the silicone tubing with two #3719 wire ties.



# BAG I



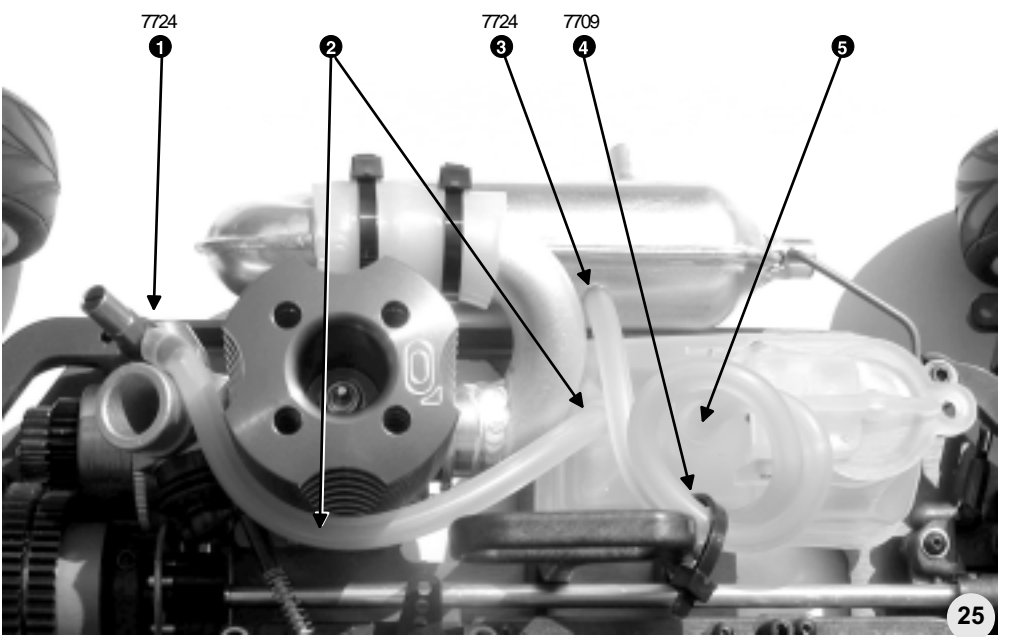
# TOOLS USED

REMOVE THESE PARTS FOR:  
Step 10

## step 10

### FUEL TUBING

- Cut one piece of #7724 fuel tubing 4 3/4" long. Slide one end onto the fuel fitting on your engine.
- Run the fuel tubing along the side of the engine and place the second end into the first inlet of the fuel tank.
- Cut a second piece of #7724 fuel tubing 10" long. Slide one end into the hole of the muffler about 3/8".
- Wrap the fuel tubing into a small coil and to hold the coil use a #7709 wire tie. Tighten the wire tie just enough to hold the fuel tubing. Don't forget this step.
- Place the second end of tubing into the second inlet on the fuel tank.

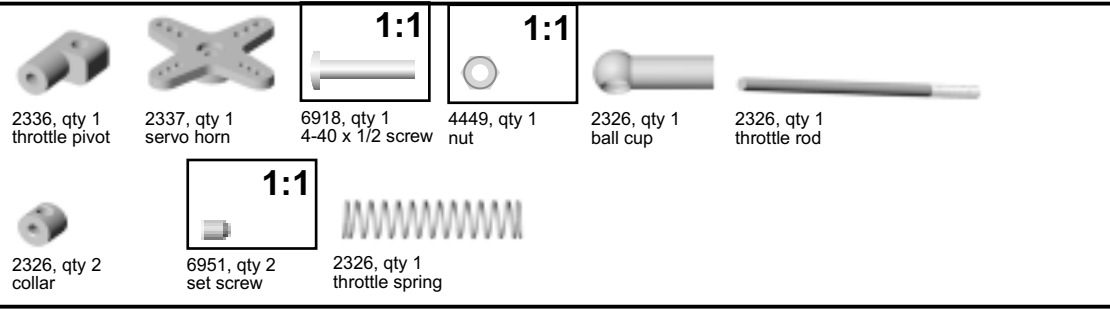




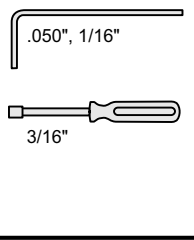
**If you have a slide carburetor, follow steps 11S-12S.  
If you have a rotary carburetor, follow steps 11R-12R.**

**BAG I**

REMOVE THESE PARTS FOR: Step 11S



**TOOLS USED**

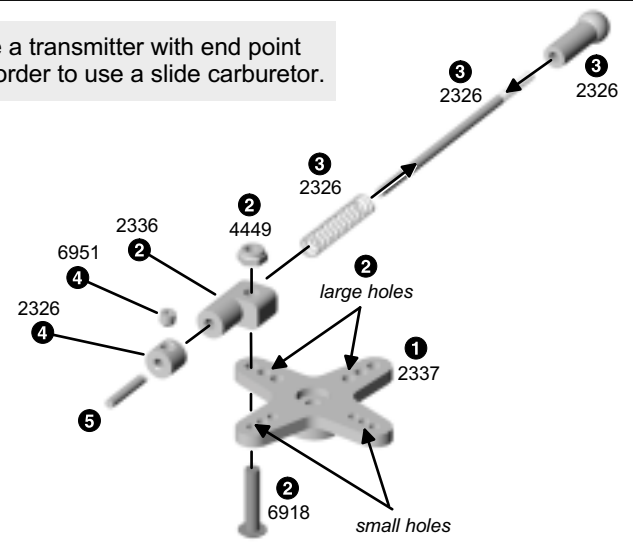


**step 11S SLIDE CARB ONLY**

**NOTE:** You must use a transmitter with end point adjustment (EPA) in order to use a slide carburetor.

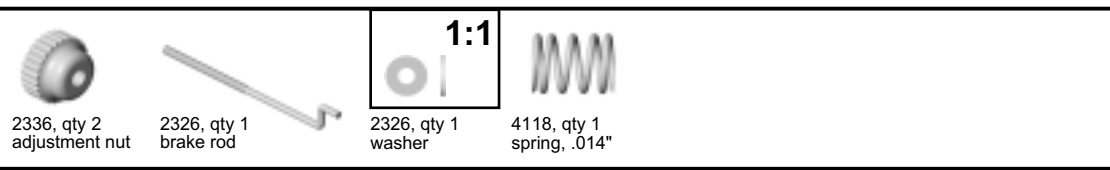
**THROTTLE LINKAGE**

- Choose the correct servo horn for your throttle servo from the chart on page 20, step 4.
- Notice that the servo horn has two arms next to each other with **large holes**. Thread a #6918 screw through the large outside hole of your servo horn. Attach a #2336 throttle pivot onto the screw then a #4446 nut. Only tighten the nut down enough so that the pivot can still move freely.
- Thread #2326 ball cup onto the end of the #2326 throttle rod. Slide #2326 throttle spring onto the throttle rod.
- Slide the throttle rod with the spring through the pivot and attach a #2326 collar to the rod with a #6951 set screw.
- Cut off the remaining part of the throttle rod, leaving 1/2" length protruding so you can adjust your throttle linkage.

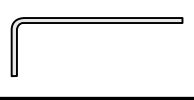


**BAG I**

REMOVE THESE PARTS FOR: Step 12S



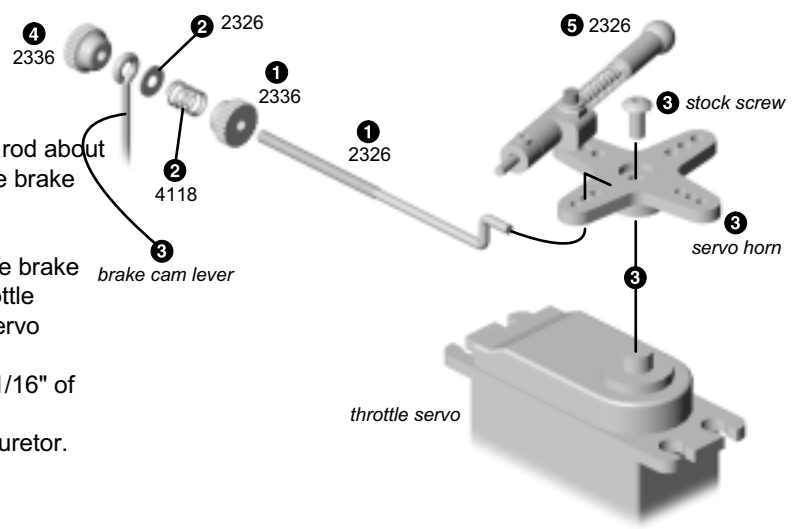
**TOOLS USED**



**step 12S SLIDE CARB ONLY**

**BRAKE LINKAGE**

- Thread on one #2336 adjustment nut onto the #2326 brake rod about 9/16" from the rod's threaded end. Feed the other end of the brake rod through the middle (small) hole of the servo horn.
  - Slide on #4118 spring followed by #2326 washer.
  - Slide the threaded end of the rod through the opening on the brake cam lever and then place the servo horn onto your throttle servo. Secure the servo horn to the servo with your stock servo screw.
  - Thread on the second #2336 adjustment nut so that about 1/16" of the brake cam wire protrudes from the end.
  - Attach the throttle rod ball cup onto the ball end on the carburetor.
- SKIP STEP 11R-12R AND GO TO STEP 13.**



# BAG I

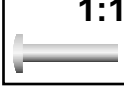
REMOVE THESE PARTS FOR: Step 11R



2336, qty 1 throttle pivot



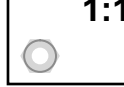
2337, qty 1 servo horn



6918, qty 1 4-40 x 1/2 screw



6466, qty 1 1/16" spacer



4449, qty 1 4-40 locknut



2326, qty 1 ball cup



2326, qty 1 throttle spring



2326, qty 2 collar



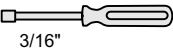
6951, qty 2 set screw



2326, qty 1 throttle rod

# TOOLS USED

.050", 1/16"

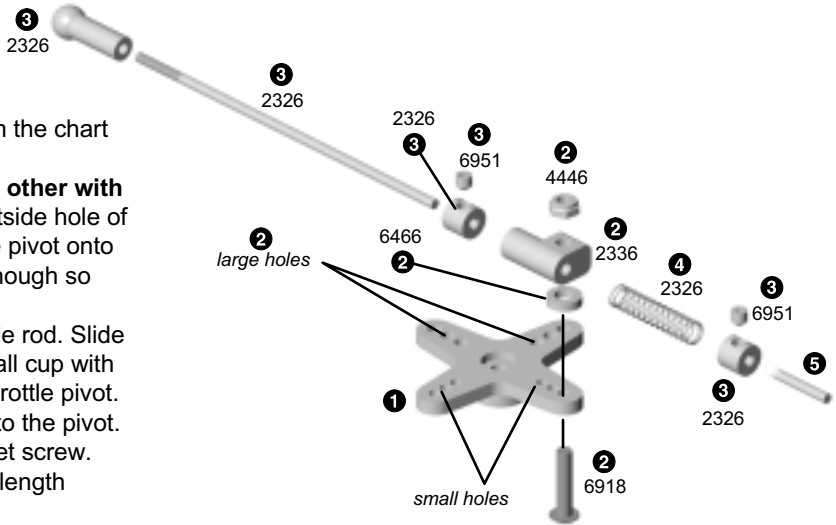


3/16"

## step 11R ROTARY CARB ONLY

### THROTTLE LINKAGE

- 1 Choose the correct servo horn for your throttle servo from the chart on page 20, step 4.
- 2 Notice that the servo horn has two arms next to each other with large holes. Thread a #6918 screw through the large outside hole of your servo horn. Slide a #6466 spacer and #2336 throttle pivot onto the screw then a #4446 nut. Only tighten the nut down enough so that the pivot can still move freely.
- 3 Thread a #2326 ball cup onto the end of the #2326 throttle rod. Slide on a #2326 collar and attach it 1/2" from the end of the ball cup with one #6951 set screw. Slide the throttle rod through the throttle pivot.
- 4 Slide one #2326 throttle spring onto the throttle rod next to the pivot. Attach the second #2326 collar to the rod with a #6951 set screw.
- 5 Cut off the remaining part of the throttle rod, leaving 1/2" length protruding so you can adjust your throttle linkage.

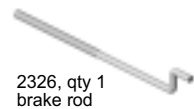


# BAG I

REMOVE THESE PARTS FOR: Step 12R



2336, qty 2 adjustment nut



2326, qty 1 brake rod



2326, qty 1 washer



4118, qty 1 spring, .014"

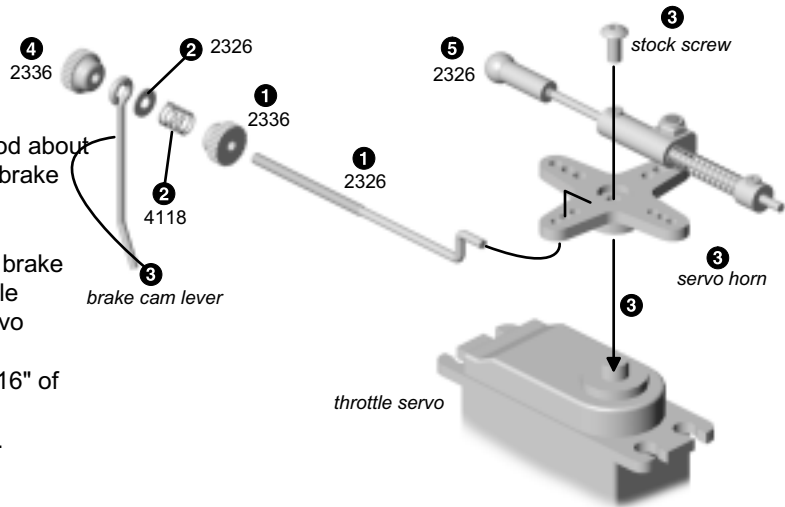
# TOOLS USED

.050", 1/16"

## step 12R ROTARY CARB ONLY

### BRAKE LINKAGE

- 1 Thread on one #2336 adjustment nut onto the #2326 brake rod about 9/16" from the rod's threaded end. Feed the other end of the brake rod through the middle (small) hole of the servo horn.
- 2 Slide on #4118 spring followed by #2326 washer.
- 3 Slide the threaded end of the rod through the opening on the brake cam lever and then place the servo horn onto your throttle servo. Secure the servo horn to the servo with your stock servo screw.
- 4 Thread on the second #2336 adjustment nut so that about 1/16" of the brake cam wire protrudes from the end.
- 5 Attach the #2326 ball cup onto the ball end on the carburetor.

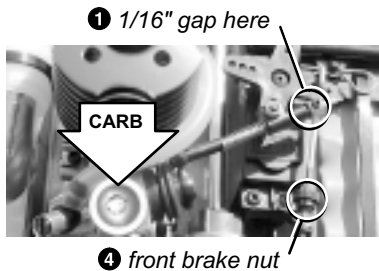


# step 13

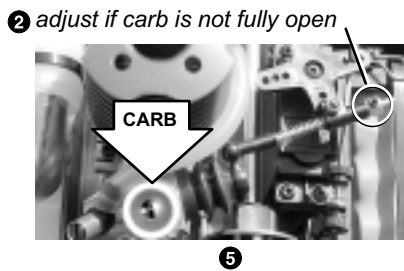
## ADJUSTING THROTTLE LINKAGE

- 1 Turn on your transmitter and then the car's electronics (but don't start the engine). When at idle (trigger of transmitter not pulled), adjust the collar so there is 1/16" (1.58mm) of space between the collar and throttle pivot.
- 2 Apply full throttle (pull the trigger of your transmitter all the way back). Your carb should be almost fully open. If it is not, then adjust the collar near the throttle pivot. (You may also adjust your throttle trim according to your radio's instructions.)
- 3 Now apply the brake. Your carb should be in idle position. The spring should not be completely compressed.

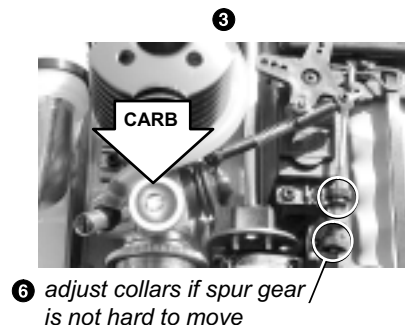
### SLIDE CARB IDLE



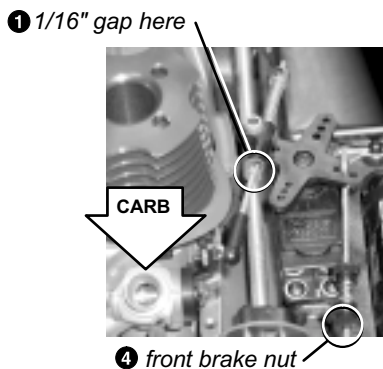
### SLIDE CARB FULL THROTTLE



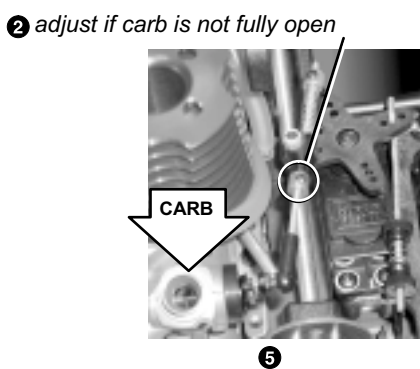
### SLIDE CARB BRAKE



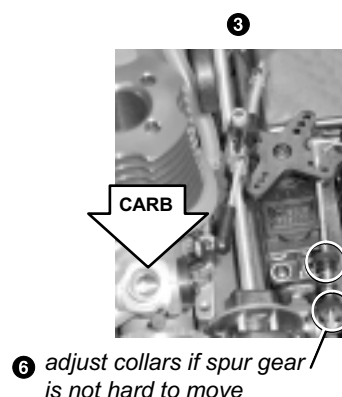
### ROTARY CARB IDLE



### ROTARY CARB FULL THROTTLE



### ROTARY CARB BRAKE



## ADJUSTING BRAKE LINKAGE

- 4 With the throttle trigger at idle, adjust the front brake nut so the brake is applied slightly. You can test this by turning the spur gear. The spur gear should have some resistance to it. Also, keep about a 1/16 gap between the back nut and the brake cam lever wire.

- 5 Now pull full throttle. The brakes should disengage immediately.

**NOTE:** Your NTC3 will require 2-3 tanks of fuel to sufficiently seat the brake shoes. The brakes will increase in power as this happens.

- 6 Now apply the brake fully. Your brakes should fully engage. The spur gear will be hard to move. If it is not engaged, adjust the collars or your setup in your radio to get the brakes to engage properly.

## BAG J

REMOVE THESE PARTS FOR: Steps 1-3



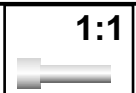
6918, qty 2  
4-40 x 1/2 screw



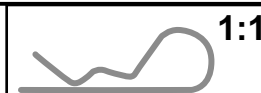
6292, qty 2  
4-40 x 3/8 screw



6923, qty 3  
4-40 x 3/4 screw



6924, qty 1  
4-40 x 3/8 screw



6332, qty 4  
body clip



2232, qty 3  
rubber pad

## TOOLS USED

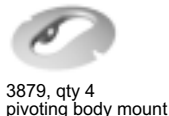
.050", 1/16"



2232, qty 1  
wide front bumper



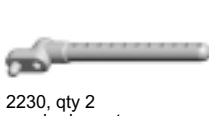
2227, qty 1  
foam front bumper



3879, qty 4  
pivoting body mount



2230, qty 2  
front body post



2230, qty 2  
rear body post

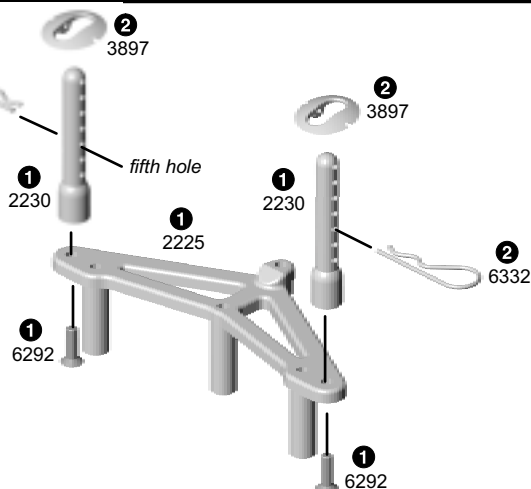


2225, qty 1  
bumper top plate

## step 1

### FRONT BODY POSTS

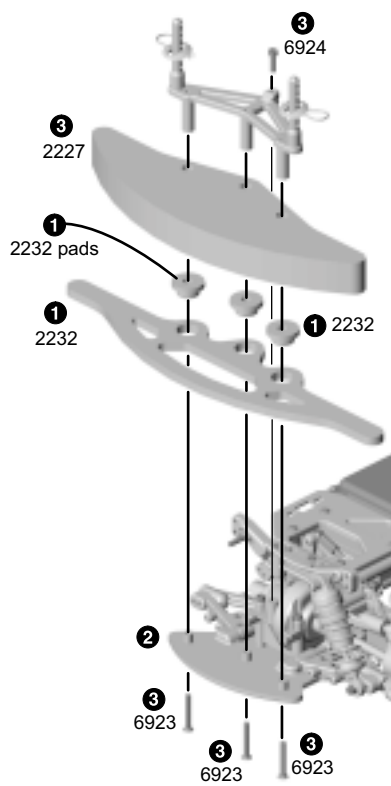
- 1 Attach #2230 front body post to the #2225 bumper top plate with two #6292 screws.
- 2 Slide the #3897 pivoting body mounts over the body post so its holes line up with the fifth hole from the top. Slide in #6332 body clip to hold it in place. You may need to readjust this depending on your body style.



## step 2

### FRONT BUMPER

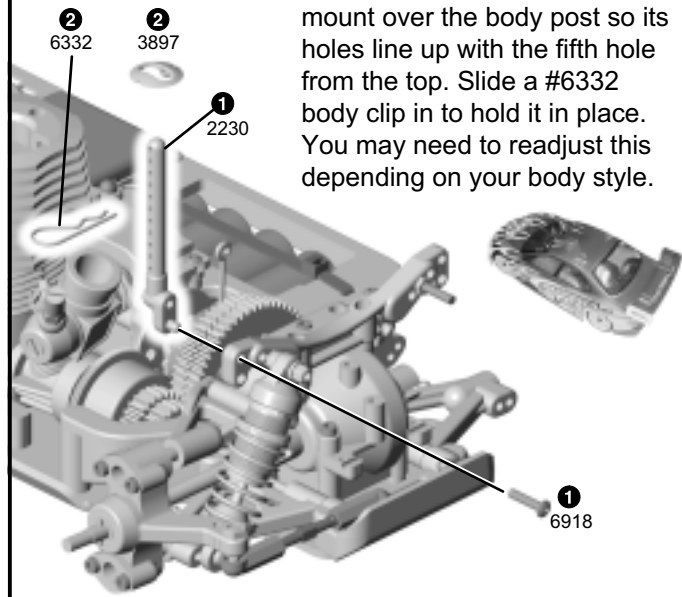
- 1 Push #2232 rubber pads into the #2232 wide front bumper, making sure the shoulder is facing up.
- 2 Place the wide front bumper onto the lower front bumper.
- 3 Slide the #2227 foam front bumper onto the bumper top plate assembly. Attach the foam and the bumper top plate to the lower bumper with three #6923 screws on the bottom and one #6924 screw on top.



## step 3

### REAR BODY POSTS

- 1 Place the #2230 rear body post to the front side of the rear shock tower. Attach the post with a #6918 screw.
- 2 Slide the #3897 pivoting body mount over the body post so its holes line up with the fifth hole from the top. Slide a #6332 body clip in to hold it in place. You may need to readjust this depending on your body style.



## BAG K

REMOVE THESE PARTS FOR:  
Steps 1-2



3989, qty 4  
TC wheel



3955, qty 4  
foam insert



3955, qty 4  
TC tire



3950, qty 4  
hex adapter



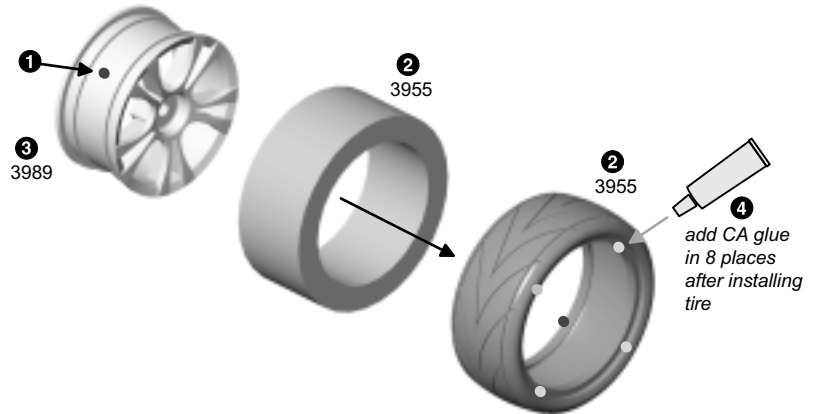
6943, qty 4  
locknut

## TOOLS USED



## step 1

- 1 Make a 1/8" hole in one area of the #3989 TC wheel.
- 2 Push the #3955 foam insert into the #3955 tire. Make sure the insert is centered in the tire.
- 3 Install the #3955 tire and insert onto the #3989 wheel.
- 4 Glue the tire to the wheel with super glue (cyanoacrylate glue or #1597 tire adhesive) in four equally-spaced spots around the tire on both sides.  
**WARNING! Follow the adhesive manufacturer's instructions for proper use and safety. Wear eye and hand protection.**  
**TIP: Place a rubber band around the tire to hold it tight to the wheel while gluing.**
- 5 Repeat steps for the three remaining tires.



## step 2

- 1 Install the #3950 wheel hex drive adapter to the axle, lining up the roll pin with the slot in the hex adapter.
- 2 Slide the wheels over the axle and tighten it down with a #6943 lock nut.
- 3 Install the remaining tires.

