

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.



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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.

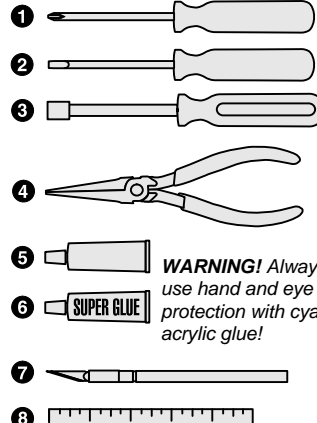
for the non pull start version of Team Kit #2031

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.



WARNING! Always use hand and eye protection with cyano-acrylic glue!

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/>



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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

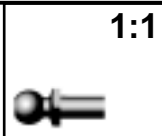
The following explains the format of these instructions.

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



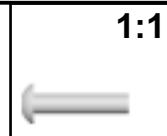
2228, qty 1
swing rack arm



3929, qty 1
spring



2228, qty 1
.125 x .250 rack
shim



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



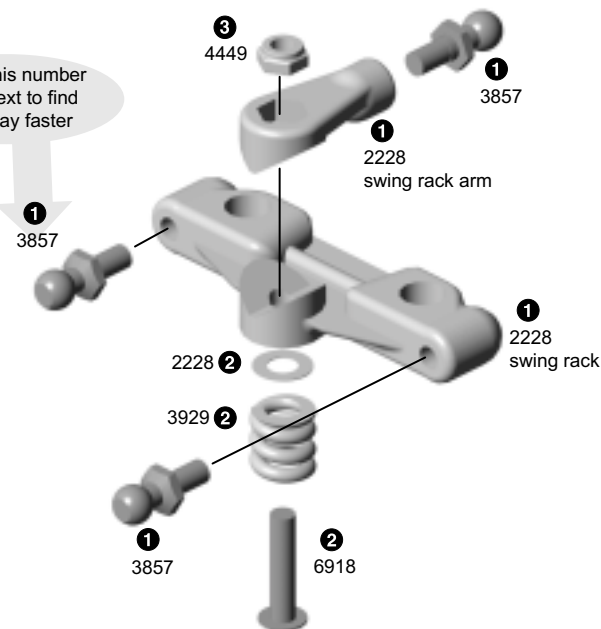
4449, qty 1
4-40 locknut

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

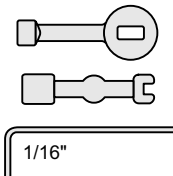
1/16"



3/16"

BAG A

TOOLS USED



1/16"

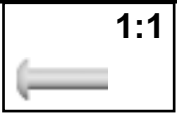
REMOVE THESE PARTS FOR:
Steps 2-3



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



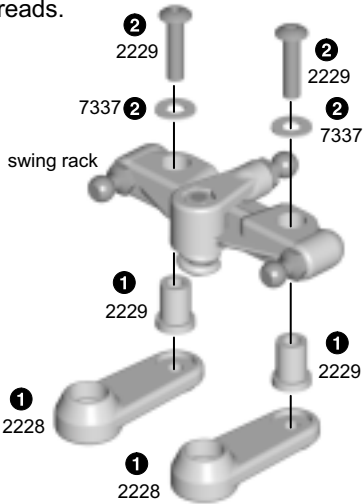
2234, qty 2
1/8 x 1/4 bushing



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.

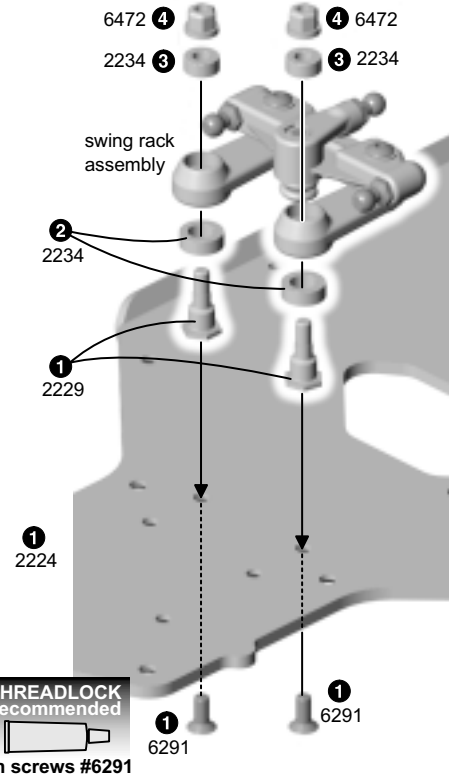


step 3

SWING RACK TO CHASSIS

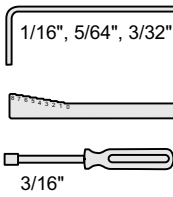
- Install the two #2229 swing rack mounting posts to the #2224 chassis with #6291 screws.
- Slide one #2234 3/16 x 5/16" bushing onto each post. Slide the swing rack assembly down, making sure the mounting posts are in front of the rack.
- Now insert the #2234 1/8 x 1/4" bushings into the rack assembly 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



BAG B

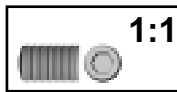
TOOLS USED



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

3/16"

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

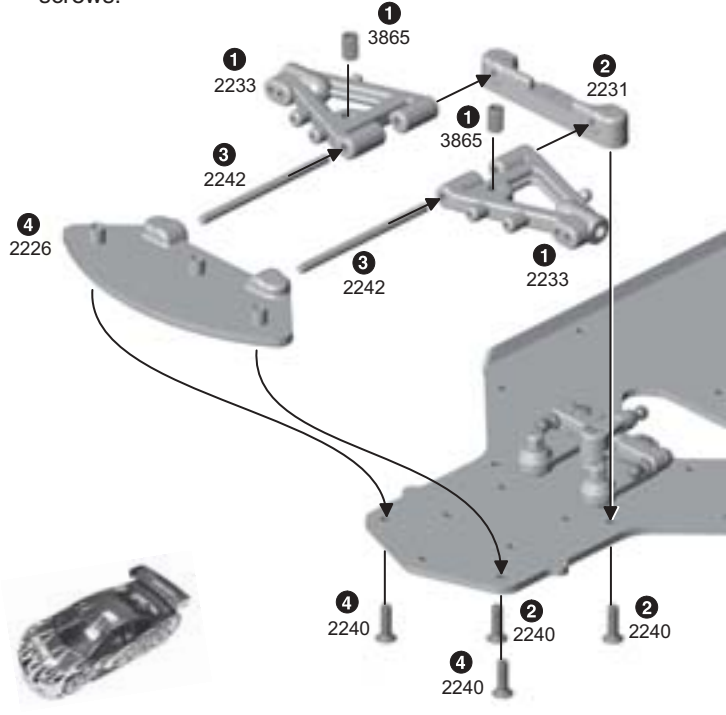
PUT ASIDE THE #2233 & #2243 UPPER ARMS
UNTIL THEY ARE CALLED FOR IN BAG E.



step 1

FRONT ARM ASSEMBLY

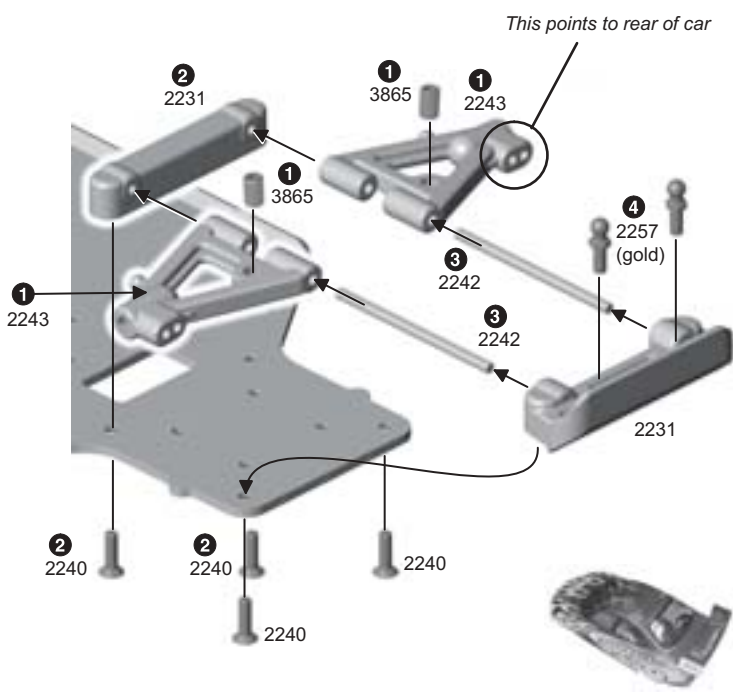
- 1 Install a #3865 set screw into each of the #2233 front arms, making sure there is a right and a left side. (We will do the final screw adjustment in step 3.)
- 2 Attach the #2231 front arm, rear mount to the chassis with two #2240 screws.
- 3 Slide the #2242 hinge pins through the #2233 arms. Slide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

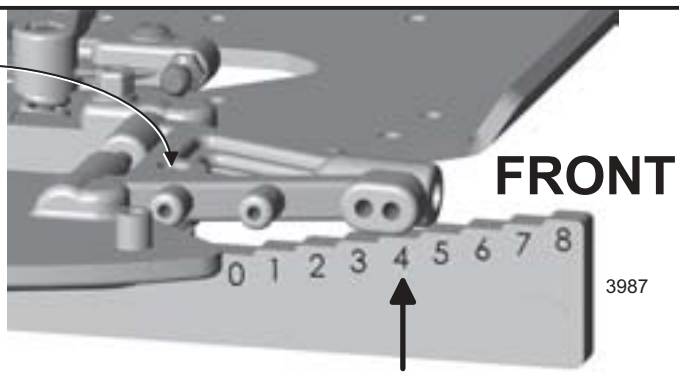


step 3

SETTING DROOP

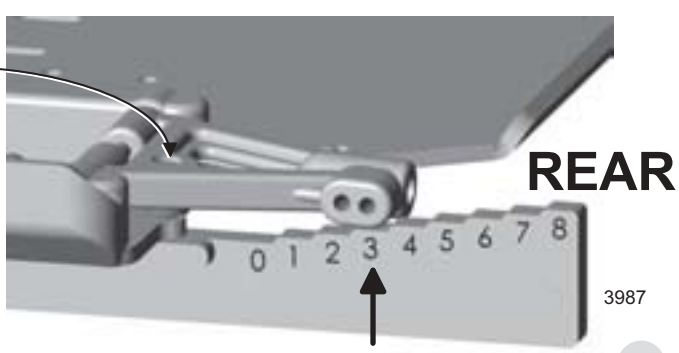
- 1 Place the supplied #3987 droop gauge on a flat surface. Place the bottom of the chassis on top as shown. Make sure the screws are not resting on the gauge and that you are holding the chassis and gauge flat.
- 2 Slide the gauge out so the shock mounting portion of the front arm rests on step 4. With 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

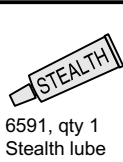
BAG C

TOOLS USED

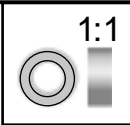
REMOVE THESE PARTS FOR: Steps 1-5



2329, qty 2
ring gear



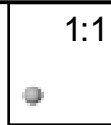
6591, qty 1
Stealth lube



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



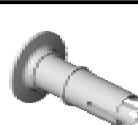
2332, qty 2
friction disc



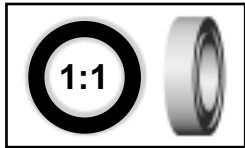
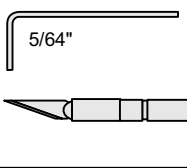
6581, qty 24
diff balls



6582, qty 2
diff spring



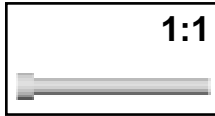
2328, qty 2
long outdrive



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



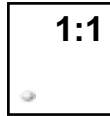
6573, qty 4
thrust washer



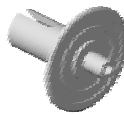
6575, qty 2
diff bolt



6588, qty 1
black grease



6574, qty 12
thrust balls

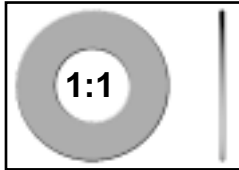


2328, qty 2
short outdrive



2293, qty 4
outdrive shim

2331, qty 4
drive ring

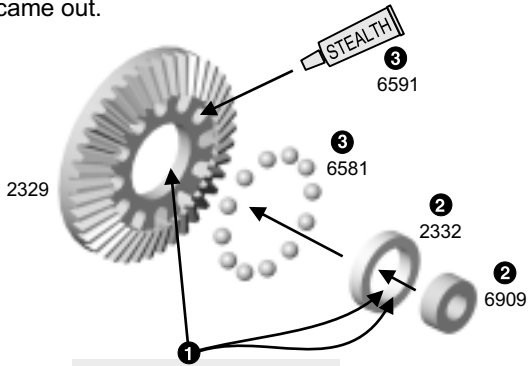


2330, qty 2
T-nut

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 Stealth 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.

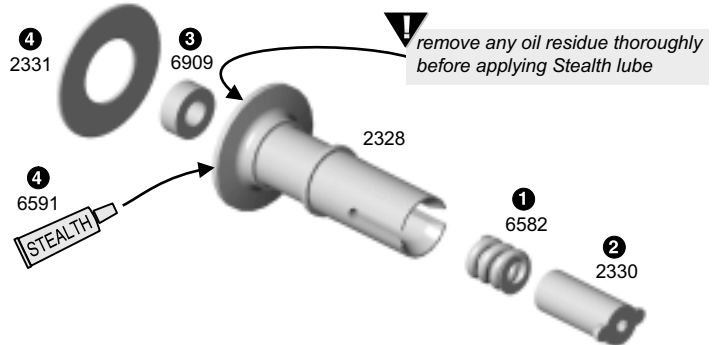


Trim any burrs from these edges with a hobby knife.

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 Stealth lube to the long outdrive face as shown. Place a #2331 drive ring on the outdrive face.

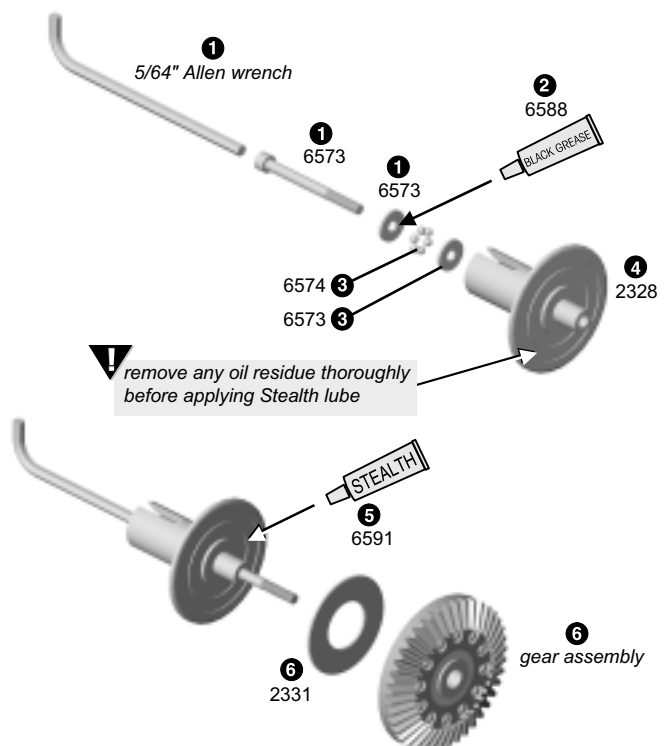


remove any oil residue thoroughly before applying Stealth lube

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 to lose any of the balls.
- 5 Add a light coat of #6591 Stealth lube to the short outdrive face as shown.
- 6 Place a #2331 drive ring and then the gear assembly on the outdrive.



remove any oil residue thoroughly before applying Stealth lube

step 4

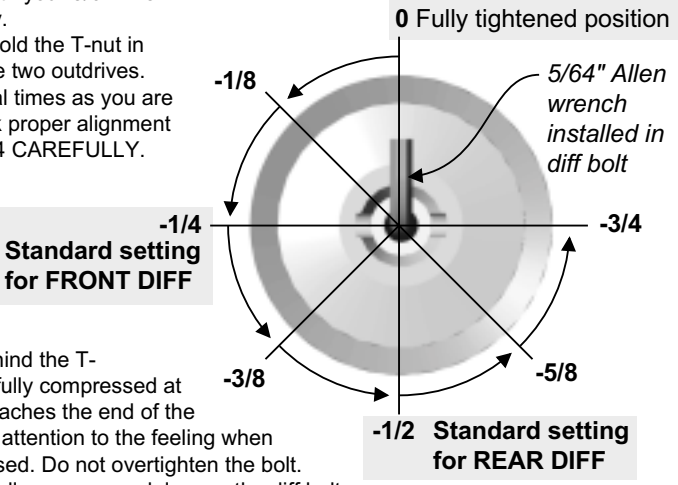
- 1 Holding the short outdrive assembly still with your 5/64" Allen wrench, place the long outdrive assembly into the face of the short outdrive / gear assembly.

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.



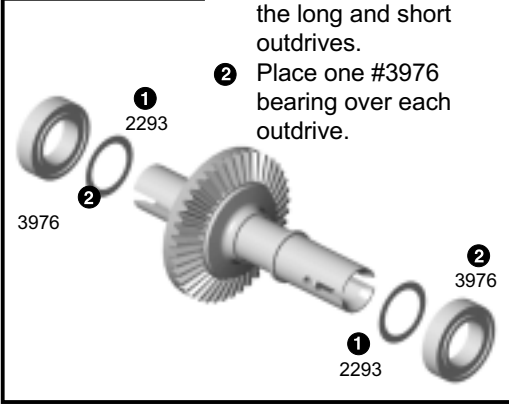
Amount the diff bolt is turned out from tight position (counter clockwise)

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

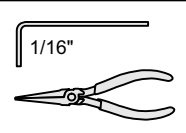


BAG C

REMOVE THESE PARTS FOR: Step 6

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

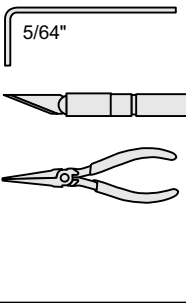
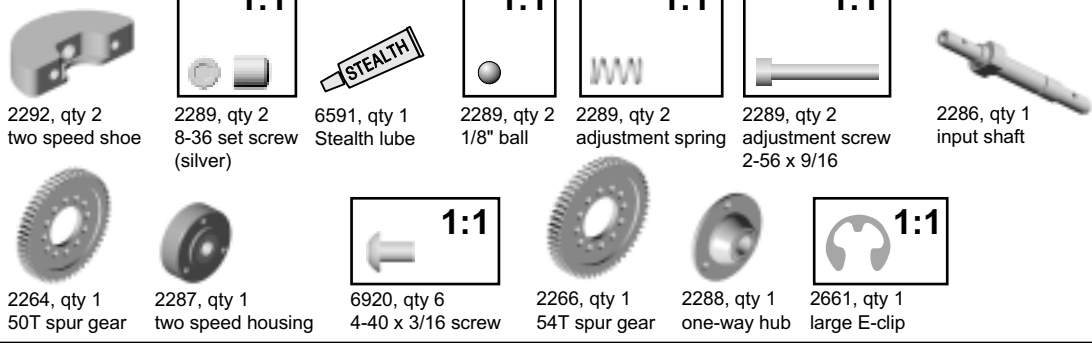


front input shaft assembled
PLEASE COMPARE YOUR ASSEMBLY CAREFULLY

BAG C

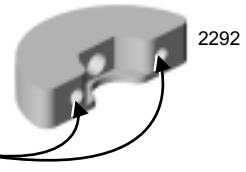
TOOLS USED

REMOVE THESE PARTS FOR: Steps 7-10



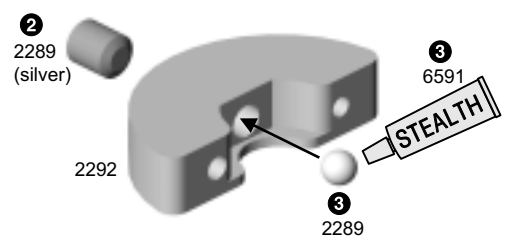
step 7

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



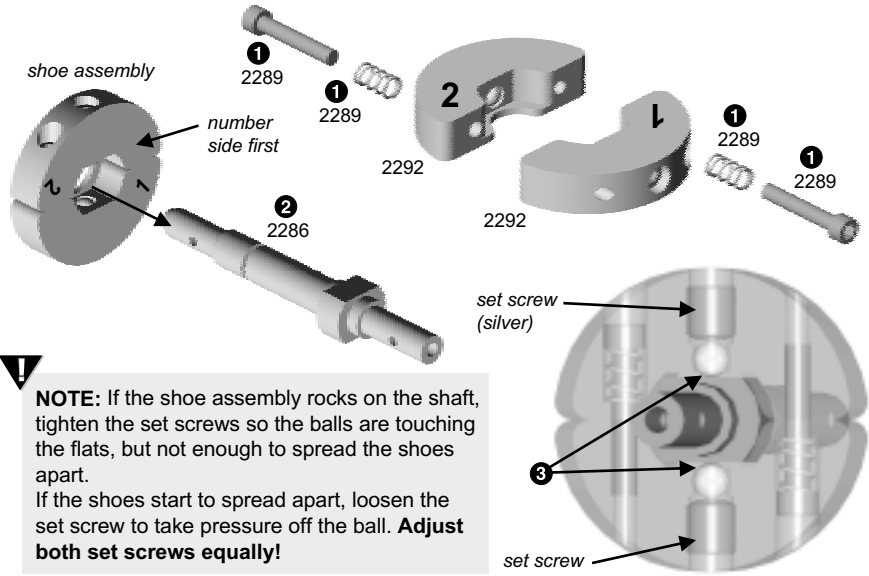
TWO SPEED SHOES

- 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 Stealth 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.



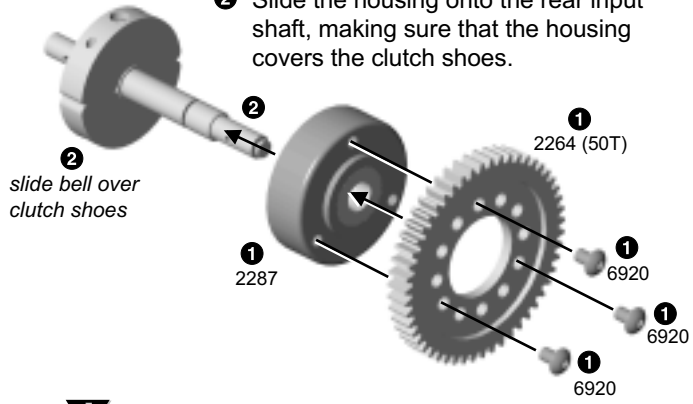
step 8

- 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

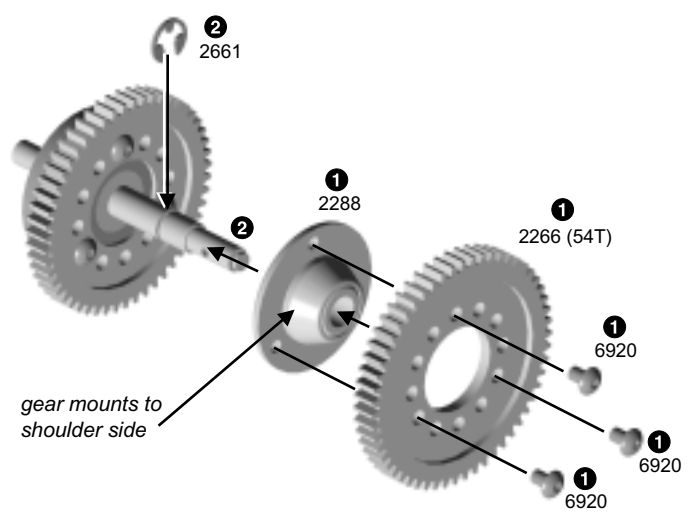
- 1 Attach #2264 50 tooth (smaller) spur gear to #2287 two speed housing with three #6920 screws.
- 2 Slide the housing onto the rear input shaft, making sure that the housing covers the clutch shoes.








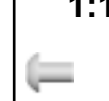

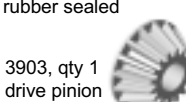
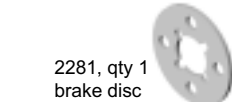
! **RACER'S TIP:** After running your car for a tank of fuel, remove your two-speed housing and clean any oil or residue from inside the housing and outside the shoes to ensure consistent shifting.

step 10

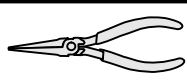
- 1 Attach #2266 54 tooth (larger) spur gear to the #2288 one-way hub with three #6920 screws.
- 2 Slide the one-way hub onto the input shaft. Now push #2661 e-clip into place.



BAG C

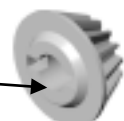
 1:1 3977, qty 2 3/16 x 3/8 bearing, rubber sealed	 1:1 2293, qty 3 input shaft shim	 1:1 2291, qty 2 dowel pin	 1:1 6299, qty 1 small E-clip	 1:1 2270, qty 1 drive cup	 1:1 6920, qty 1 4-40 x 3/16 screw	 1:1 5407, qty 1 red O-ring
 1:1 3903, qty 1 drive pinion	 1:1 2281, qty 1 brake disc					

TOOLS USED

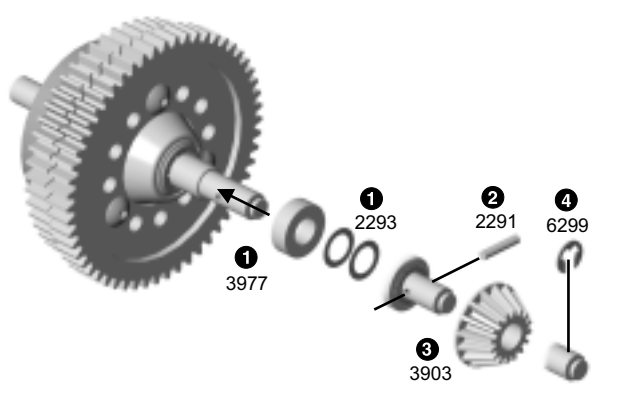


step 11

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

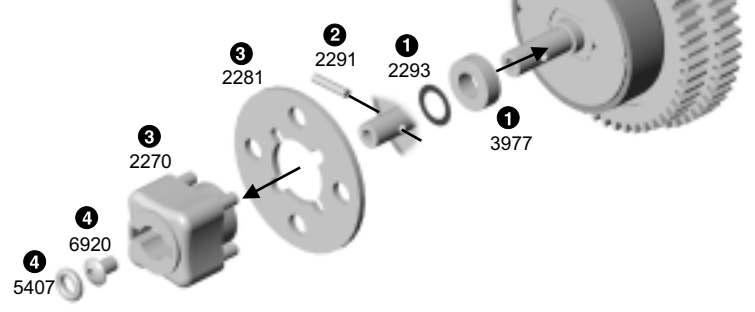


- Slide one #3977 bearing and two #2293 input shaft shims onto the rear input shaft.
- Install and center a #2291 dowel pin into the input shaft.
- Slide #3903 drive pinion onto the end of the input shaft.
- Add a #6299 small e-clip.









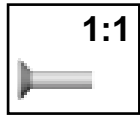
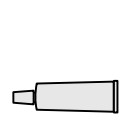




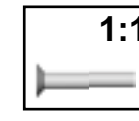


step 12

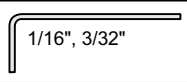
- Slide on one #3977 bearing onto the opposite end of the input shaft followed by the third #2293 input shaft shim.
- Install and center a #2291 dowel pin into the input shaft.
- Clean the #2281 brake disc with motor cleaner. Place #2281 brake disc onto #2270 drive cup. Slide the drive cup with brake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



BAG C

 1:1 6863, qty 1 flanged bushing 3/16 x 5/16	 1:1 2276, qty 1 brake cam	 1:1 2274, qty 1 brake bracket	 1:1 2277, qty 1 flanged bushing 1/8 x 1/4	 1:1 2661, qty 1 large E-clip	 1:1 2280, qty 1 brake cam lever wire	 1:1 6920, qty 1 4-40 x 3/16 screw	
 1:1 2368, qty pr transmission cases, top & bottom	 1:1 6292, qty 4 4-40 x 3/8 screw	 1:1 6591, qty 1 diff tube	 1:1 6924, qty 6 4-40 x 3/8 screw	 1:1 6291, qty 2 4-40 X 1/4 screw	 1:1 2278, qty 2 brake pad	 1:1 2269, qty 1 center bulkhead	 1:1 6922, qty 2 4-40 x 1/2 screw

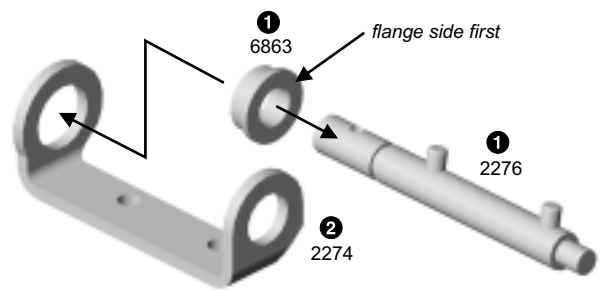
TOOLS USED



1/16", 3/32"

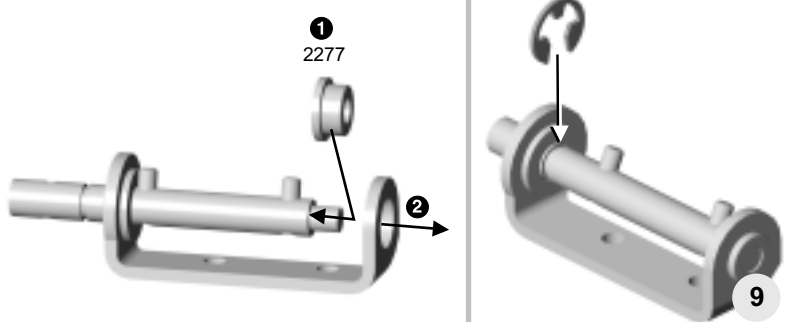
step 13

- 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.



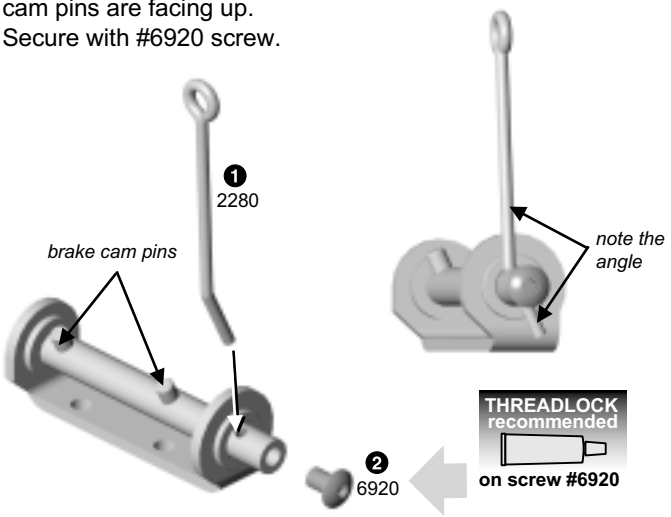
step 14

- 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.



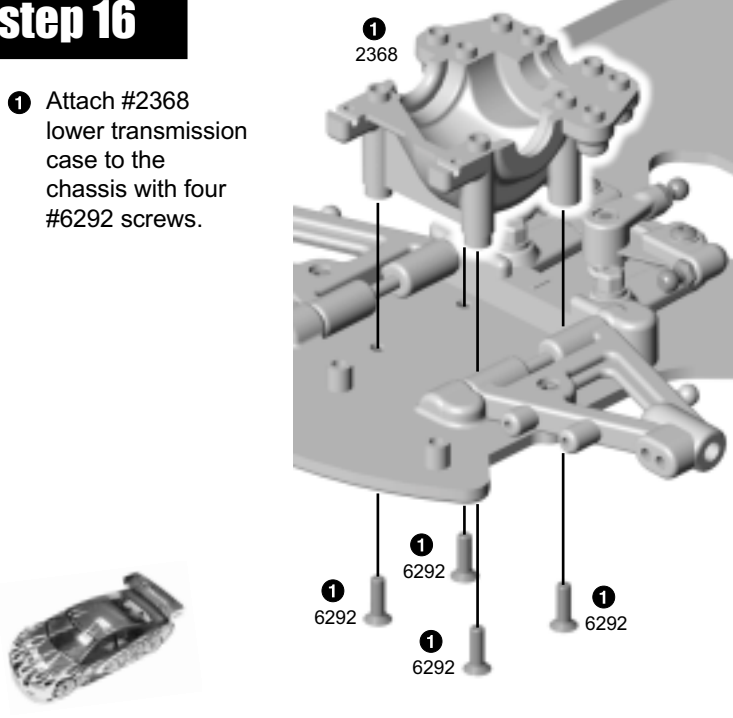
step 15

- 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.



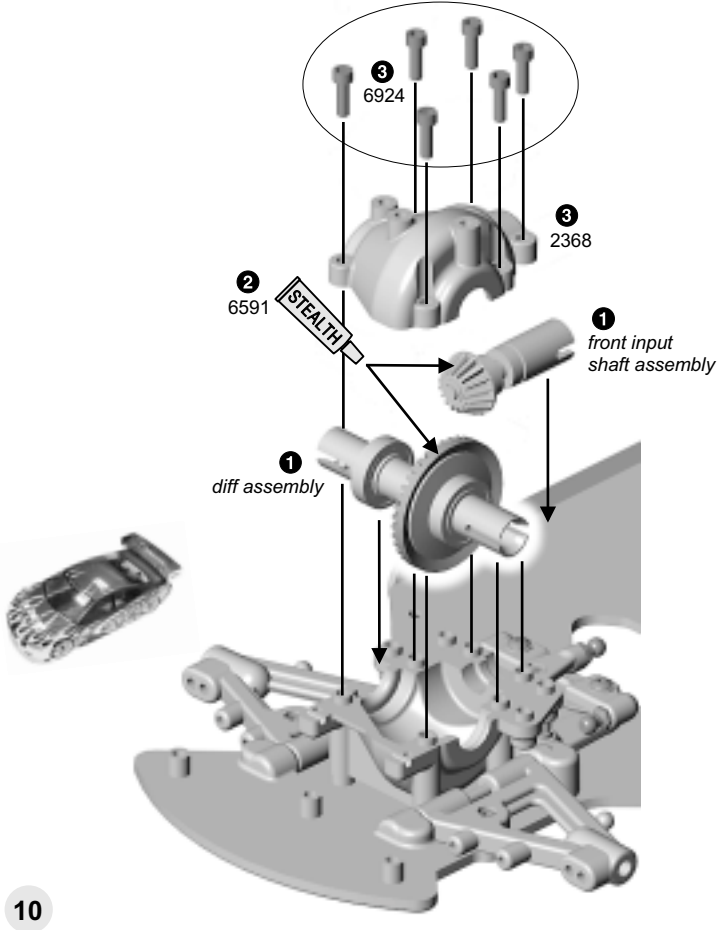
step 16

- 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.

