

#2285 NTC3 2 SPEED ASSEMBLY

FIRST UNINSTALL THE PARTS IN STEPS 1-3 AND KEEP THEM (See page 11 of your manual for visual help).

1. Remove the two screws over the bearing cap and put all three items aside.
2. Remove the six screws securing the rear transmission and put all seven items aside.
3. Remove the input shaft assembly from the car.

IF YOU HAVE THE NTC3 Kit 2 speed version:

4. Follow your manual's directions on pages 8-9 for removing and installing the 2 speed. Follow pages 23-24 to install the clutch bell assembly.

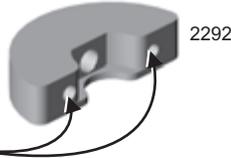
IF YOU HAVE THE RTR NTC3 single speed version:

4. Disassemble the parts in your manual on page 8 steps 7-8 and keep them.
5. Disassemble the parts in your manual on page 9 step 9 and keep them.
6. Remove your engine from the car. See pages 24-25 for help.
7. Remove your clutch bell and keep the parts. See page 23 for help.

THE FOLLOWING STEPS CONTINUE FROM STEP 7 ABOVE.

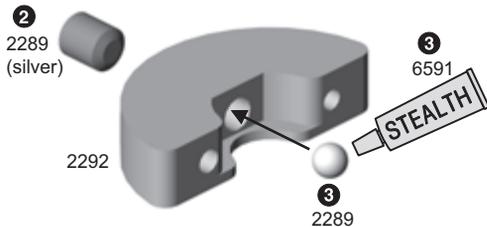
step 8

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



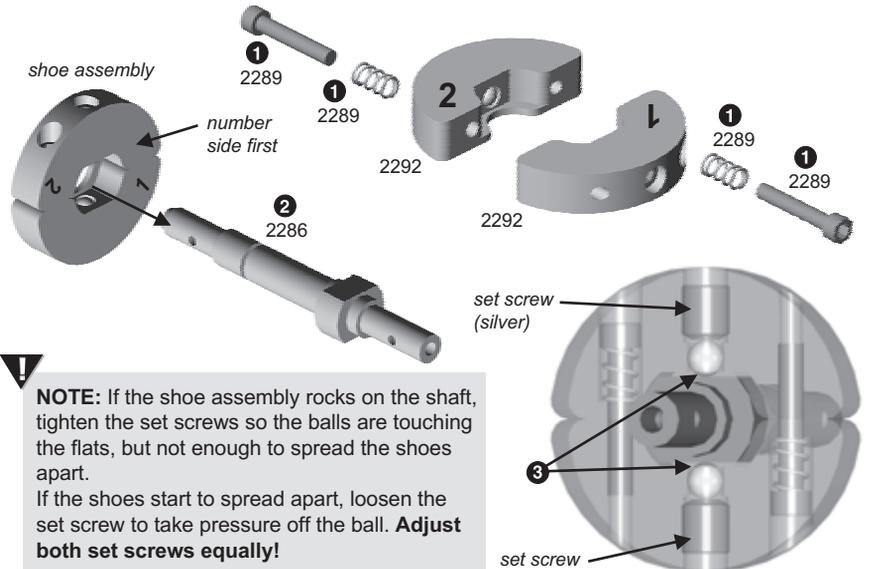
TWO SPEED SHOES

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 9

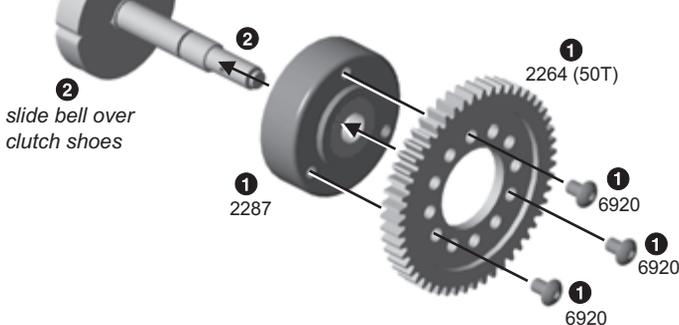
1. Place your two clutch shoes together with the numbers side facing up. Slide #2289 adjustment spring onto #2289 adjustment screw. Insert the screw and spring into the shoes and tighten the screws until they are fully compressed. Be gentle! Now turn the screw 3 1/2 turns counter clockwise. Adjust both 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.



NOTE: If the shoe assembly rocks on the shaft, tighten the set screws so the balls are touching the flats, but not enough to spread the shoes apart. If the shoes start to spread apart, loosen the set screw to take pressure off the ball. **Adjust both set screws equally!**

step 10

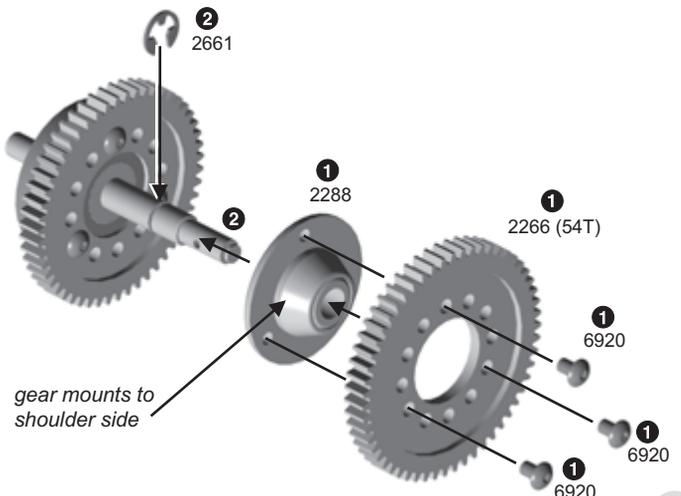
1. Attach #2264 50 tooth (smaller) spur gear to #2287 two speed housing with three #6920 screws.
2. Slide the housing onto the rear input shaft, making sure that the housing covers the clutch shoes.



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 11

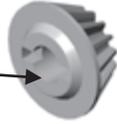
1. Attach #2266 54 tooth (larger) spur gear to the #2288 one-way hub with three #6920 screws.
2. Slide the one-way hub onto the input shaft. Now push #2661 e-clip into place.



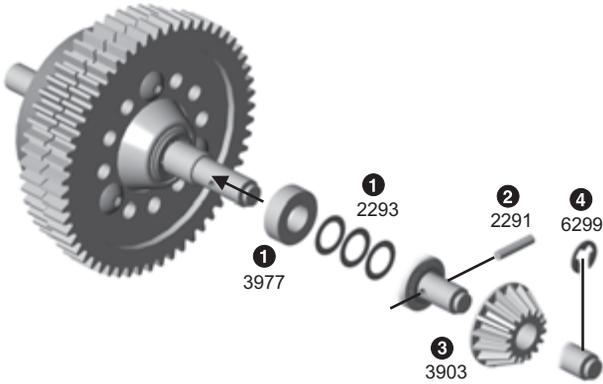
USE THESE PARTS FROM YOUR EXISTING SHAFT

step 12

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



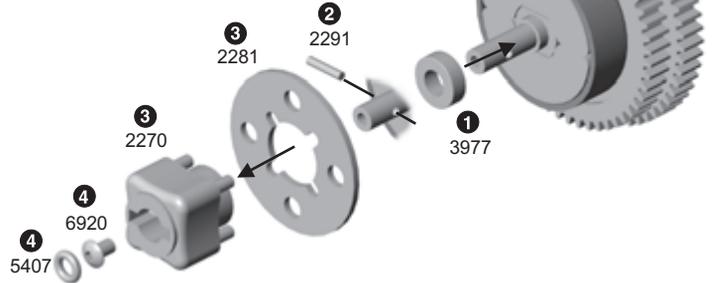
- 1 Slide one #3977 bearing and three #2293 input shaft shims onto the rear input shaft.
- 2 Install and center a #2291 dowel pin into the input shaft.
- 3 Slide #3903 drive pinion onto the end of the input shaft.
- 4 Add a #6299 small e-clip.



USE THESE PARTS FROM YOUR EXISTING SHAFT

step 13

- 1 Slide on one #3977 bearing onto the opposite end of the input shaft.
- 2 Install and center a #2291 dowel pin into the input shaft.
- 3 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.
- 4 Slide one #5407 O-ring into drive cup.

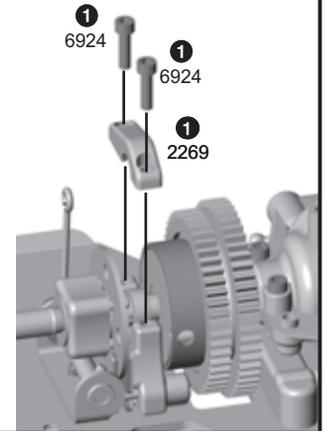


step 14

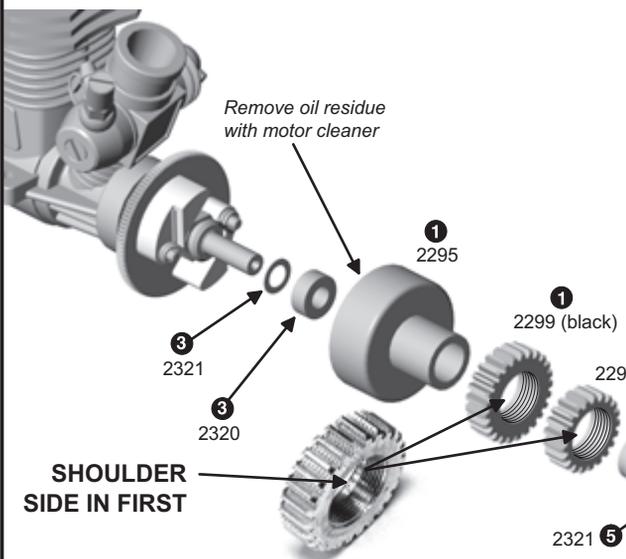
Place the input shaft assembly into the transmission case according to your manual. Follow all the steps of the following portions:
 RTR manual, page 11 step 17.
 Kit manual: page 11 step 20.

step 15

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



step 16



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.**

step 17

Reinstall the engine according to your manual.