❑ **Fig. 35** Still using bag A take out the #6575 diff thrust bolt, the two #6573 diff thrust washers, and the six #6576 5/64" precision thrust balls.

WARNING! Due to precision packaging, when replacing lost or worn 5/64" diff balls, you must replace all 5/64" balls with new balls from same package.

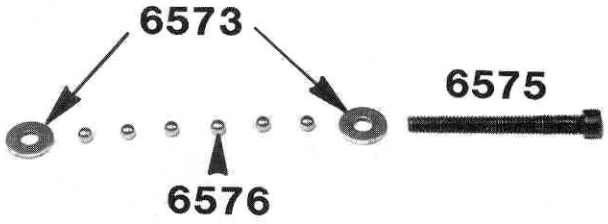


Fig. 35

❑ **Figs. 36 & 37** Slip the two washers on the bolt, as shown, and then fill the area between them with the #6588 black grease. DO NOT use the black grease on the diff balls in the gear.

Fig. 36

Fig. 37

❑ **Fig. 38** Now take the balls and place them all around the bolt between the two washers. The grease will hold them in place.

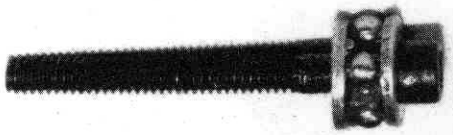
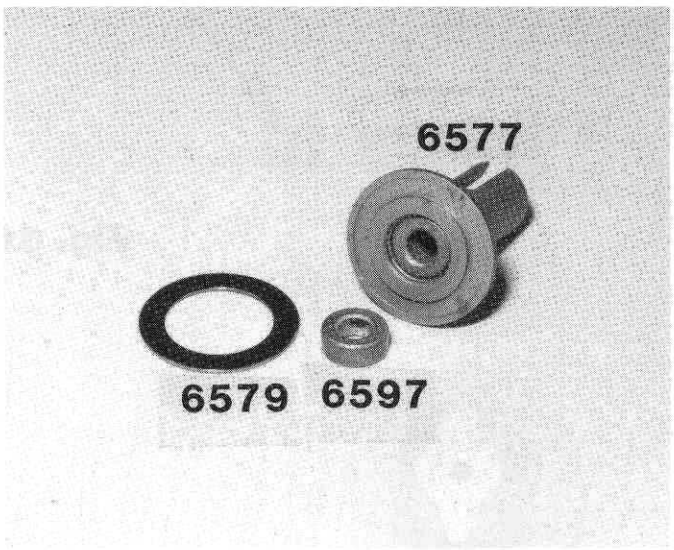


Fig. 38

❑ **Fig. 39** From Bag A take the #6577 right diff outdrive hub and **make sure it's clean and free of all burrs.** From Bag B take the second and remaining #6597 bushing and install it in the right hub. The bushings must go in with a simple push of yur finger. **NEVER drive them in!** Now place one of the #6579 diff drive rings onto the hub.



6597

Fig. 39

❑ **Fig. 40** Your hub should look like this. DO NOT try to pin the drive ring to the hub. The hub is designed to lock the drive ring without pinning. Leave AS IS.

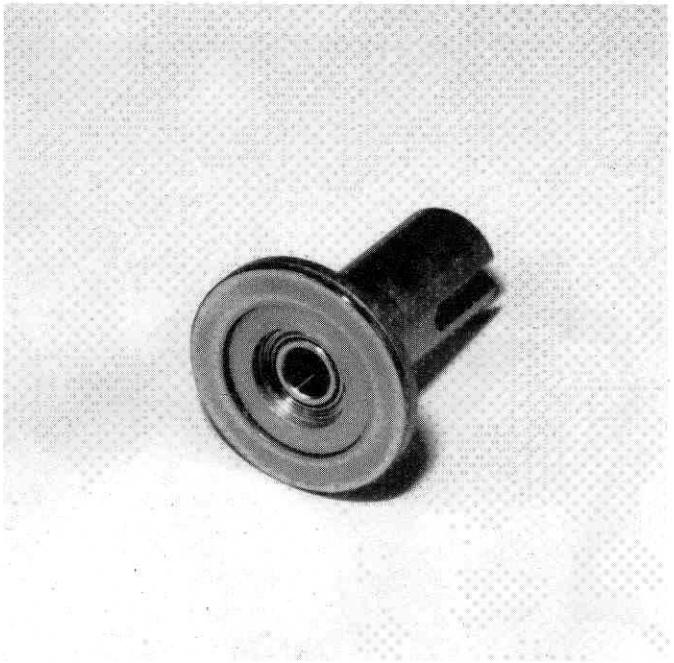


Fig. 40

❑ **Fig. 41** Slip the 5/64" Allen wrench into the #6575 diff thrust bolt head. Now slip the bolt assembly through the #6577 right hand hub.

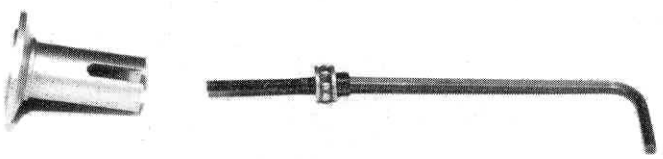


Fig. 41

❑ **Fig. 42** Turn the assembly upright. Make sure the #6579 drive ring is still ON and centered. Slip the #6580 diff gear with bushing onto the bolt as shown.

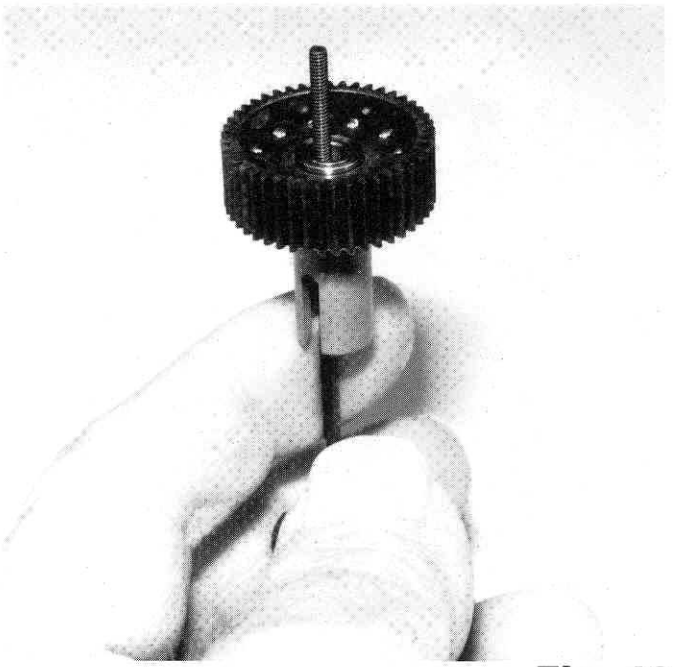


Fig. 42

❑ **Fig. 43** Now place the other drive ring onto the diff balls and center it as close as possible to the gear.

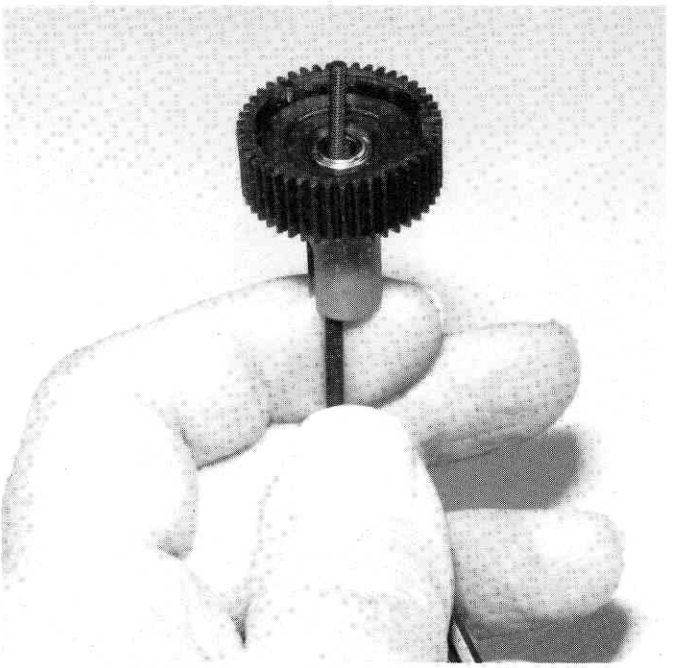


Fig. 43

❑ **Figs. 44 & 45** Slip the #6578 left hand hub down onto the bolt, making sure the hub centers itself onto the drive rings. THIS IS IMPORTANT.

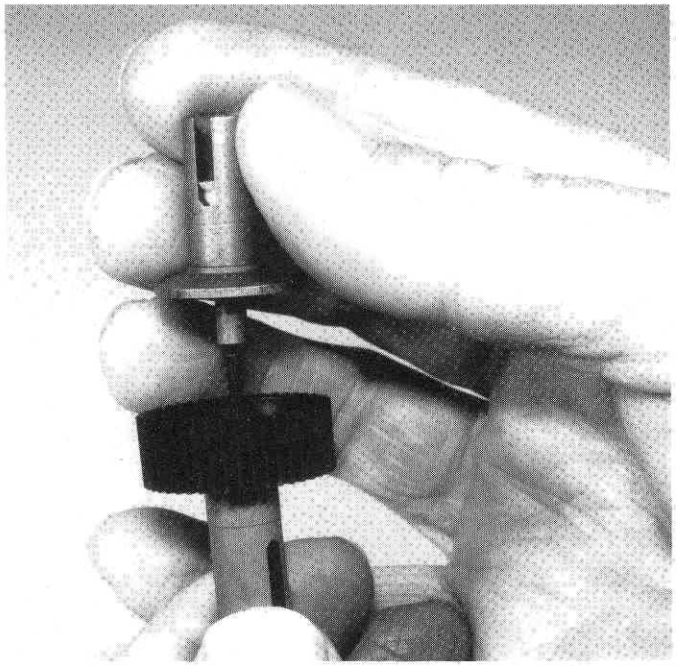


Fig. 44

❑ **Fig. 45** Now start to tighten the bolt with the Allen wrench, making sure the hubs and drive rings stay centered. Do this very slowly. We want to make sure everything stays centered. We'll finish the tightening in the next step with figs. 46 & 47.

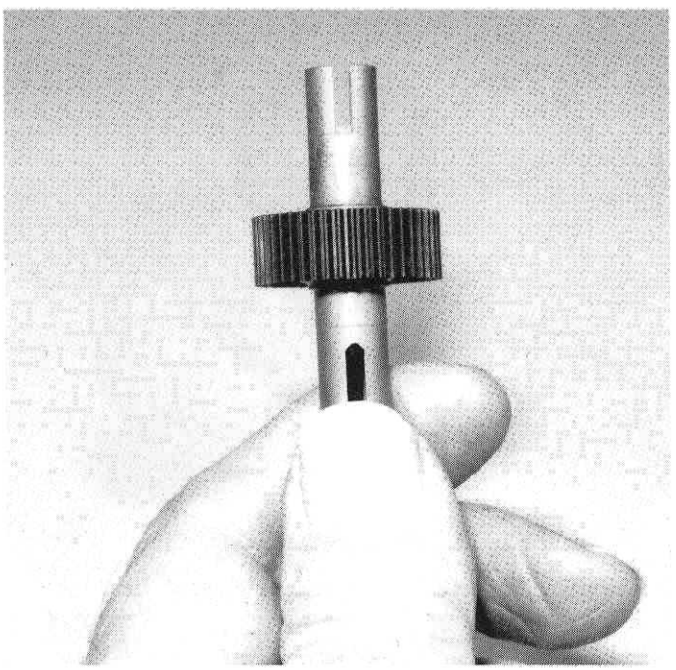


Fig. 45

❑ **Figs. 46 & 47** Continue tightening slowly until the spring is completely collapsed. DON'T OVER-TIGHTEN! Correct adjustment is bottoming the spring and then backing off 1/8 to 1/4 turn.

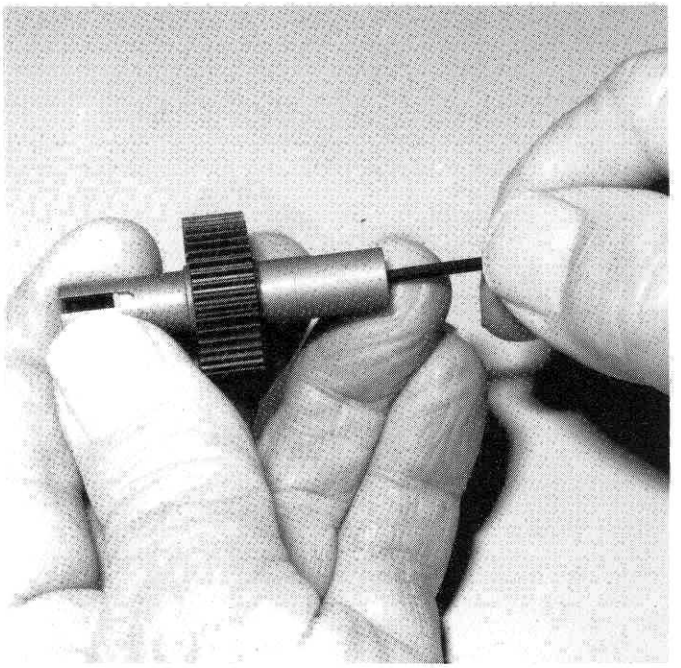


Fig. 46

❑ **Fig. 47** As you're tightening, you'll notice the ear on the T-nut, shown by the arrow, moving closer and closer to the bottom of the slot in the hub. The spring should bottom out about the same time as the ear is at the bottom of the slot. When you feel the spring bottom out, that's when you back off 1/8 to 1/4 turn and your diff is correctly adjusted. The diff should operate very smoothly when turning the hubs in opposite directions. They are not supposed to spin freely, but just roll smoothly. Recheck the adjustment before driving the car. There is never a need to adjust the diff in any other manner.

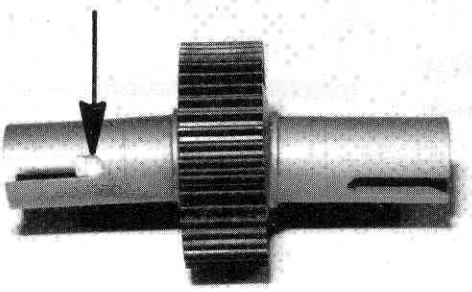


Fig. 47

❑ **Fig. 48** Open Bag C and remove the #6565 left and right hand transmission cases (tranny cases), and remove any flash left from molding. Then install the four #6864 upper and two #6598 lower bushings.

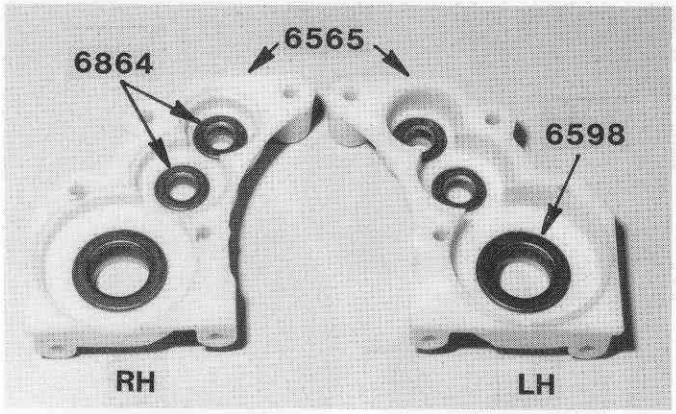
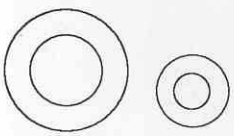


Fig. 48



Take out the #6572 roll pin.

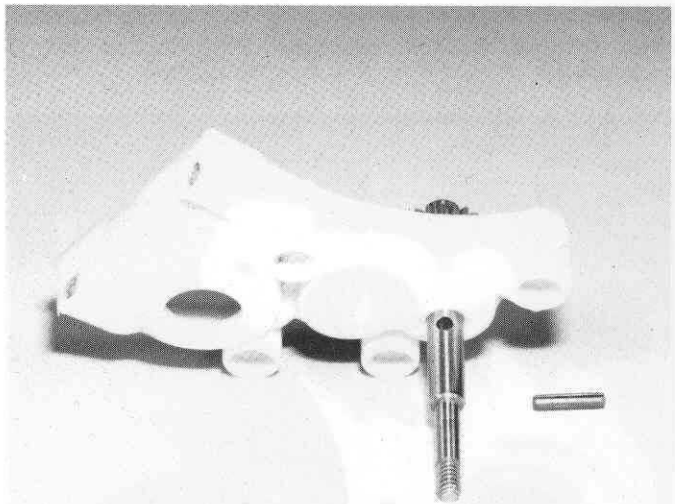


Fig. 50

6572

❑ **Figs. 49 & 50** Open Bag D and remove the #6571 drive gear assembly and slide it into the upper bearing in the right hand gear case. It may be necesary to deburr the pin hole to clear the bushing.

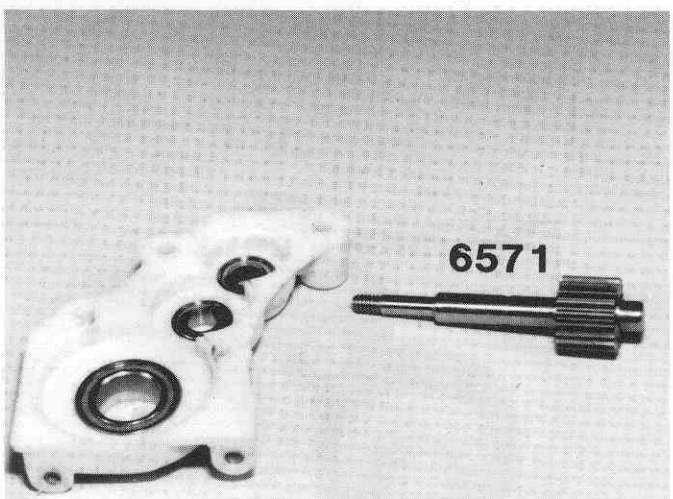


Fig. 49

❑ **Fig. 51** Open Bag E and using a pliers, squeeze the roll pin into the hole in the shaft until it is equally spaced.

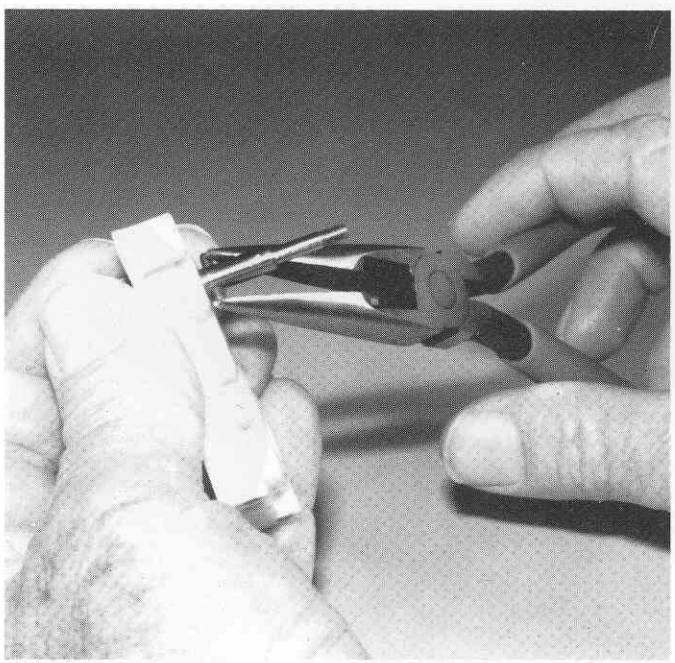


Fig. 51

❑ **Figs. 52 & 53** Now take the diff assembly and slip it into the lower big bushing into the right hand case. Insert the right hand hub, which is the one that has the bolt HEAD in it.

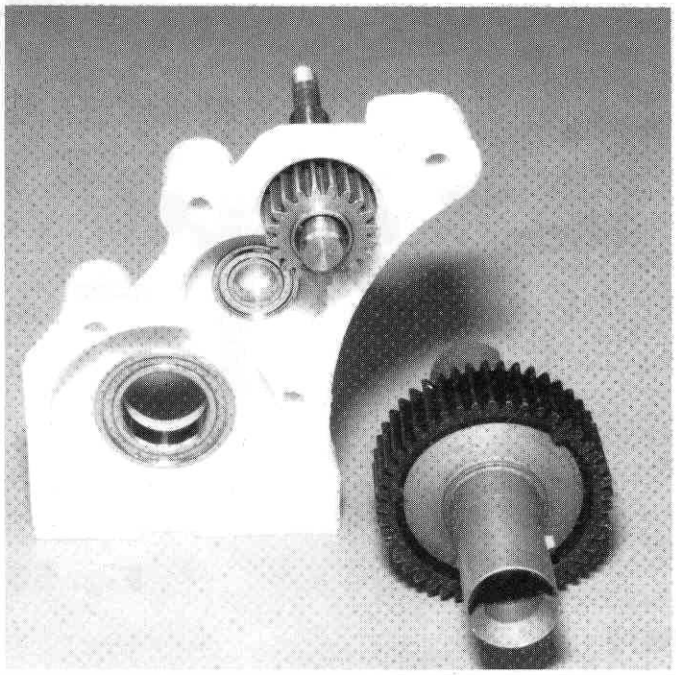


Fig. 52

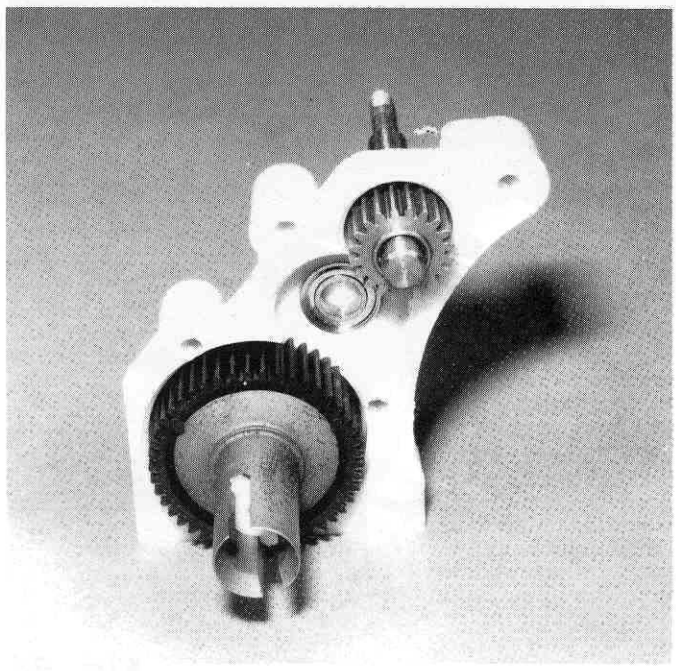


Fig. 53

❑ **Fig. 54** Now carefully slip the #6570 from Bag D idler gear into the center bushing.

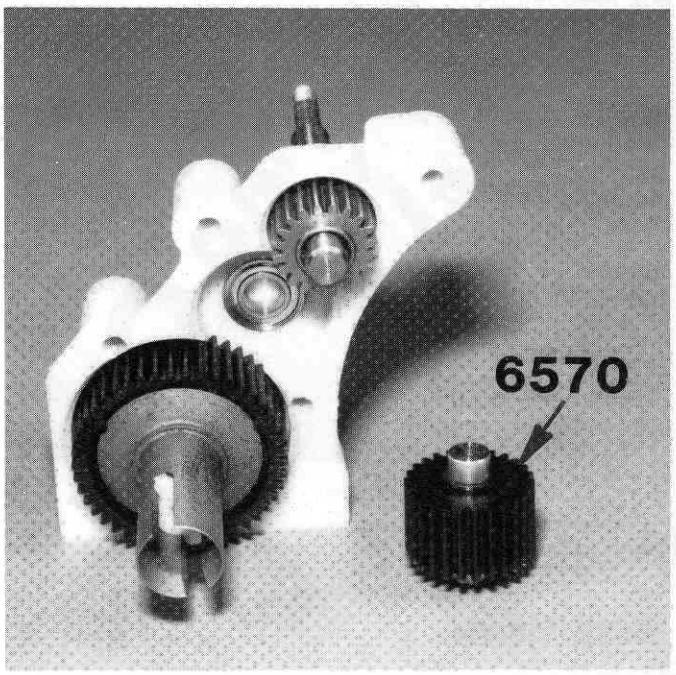


Fig. 54

❑ **Fig. 55** The inside of your tranny should look like this. Slip the left hand side of your tranny onto the right hand side.

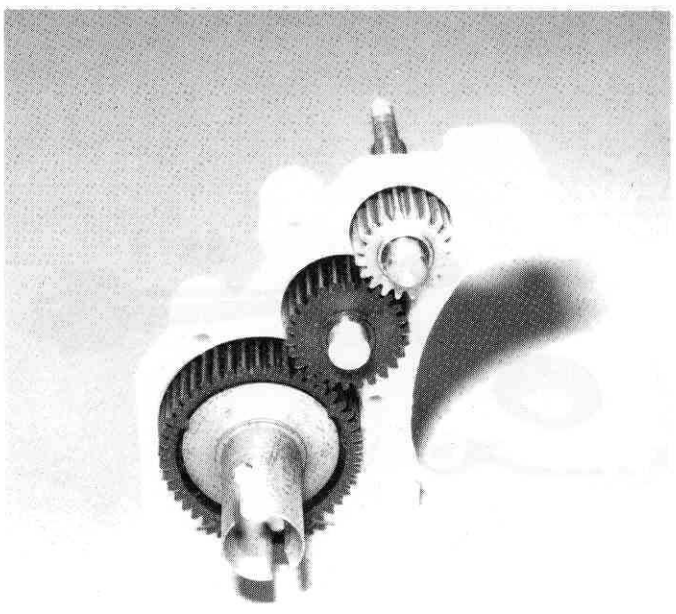
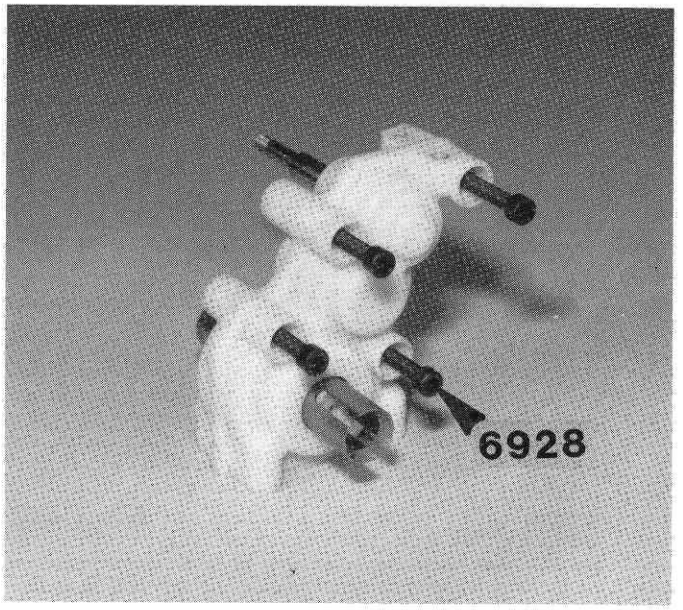
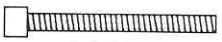


Fig. 55

❑ **Fig. 56** From Bag F put the four #6928 1" Allen head case bolts into the case from the left hand side. You'll have to screw them in. Screw in the bolts so they extend about 1/8" on the other side. (Note: #6567 is a complete replacement screw set for the Stealth transmission.)





6928

Fig. 56

❑ **Fig. 57** Now from Bag C take the four #6569 plastic spacers and slip three of them into the #6566 felt dust shield from Bag F so that the small end of the spacers can go into the case holes.

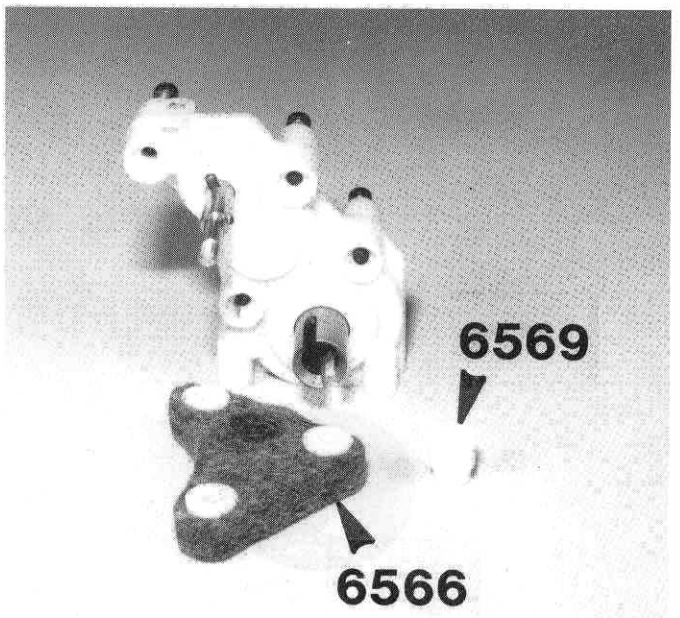


Fig. 57

❑ **Fig. 58** Slip the felt dust shield on the three bolts as shown and slip the fourth plastic spacer on the other bolt.

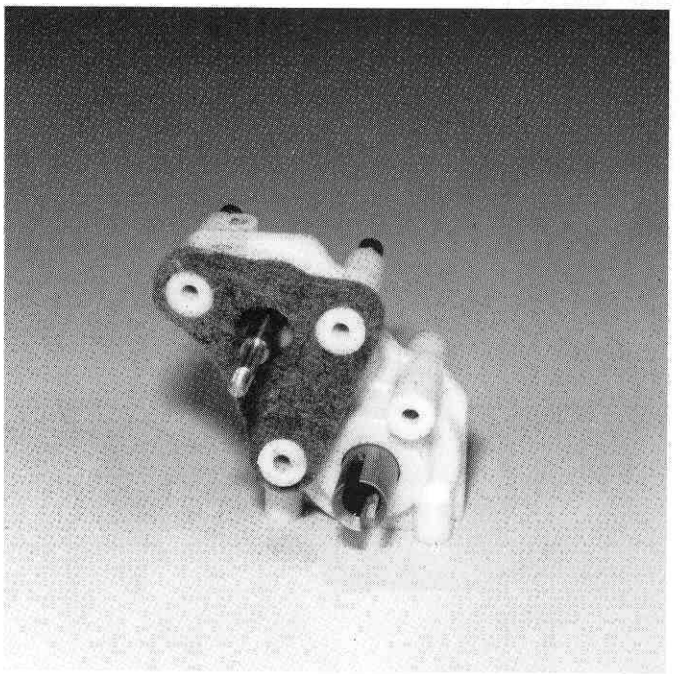


Fig. 58

❑ **Fig. 59** Now take the #6607 gold motor mount (in the tranny bag) and bolt the tranny to it in the location shown and tighten the four bolts. Then install the small plastic dust cap (in Bag C) in the case, where the arrow indicates.

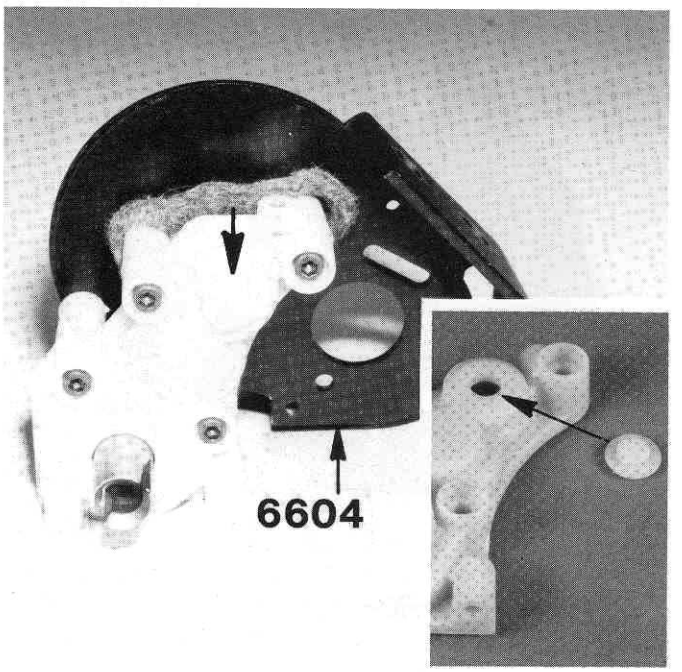


Fig. 59 **Fig. 59A**

❑ **Figs. 60, 61 & 62** Now we'll assemble the clutch Torque Control assembly. Slip the #6583 inner clutch hub in Bag E onto the shaft, making sure the slots align with the pin.

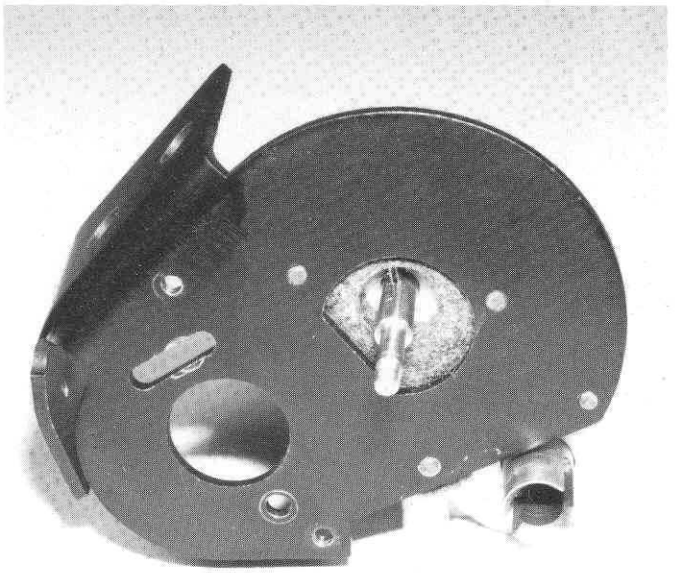


Fig. 60

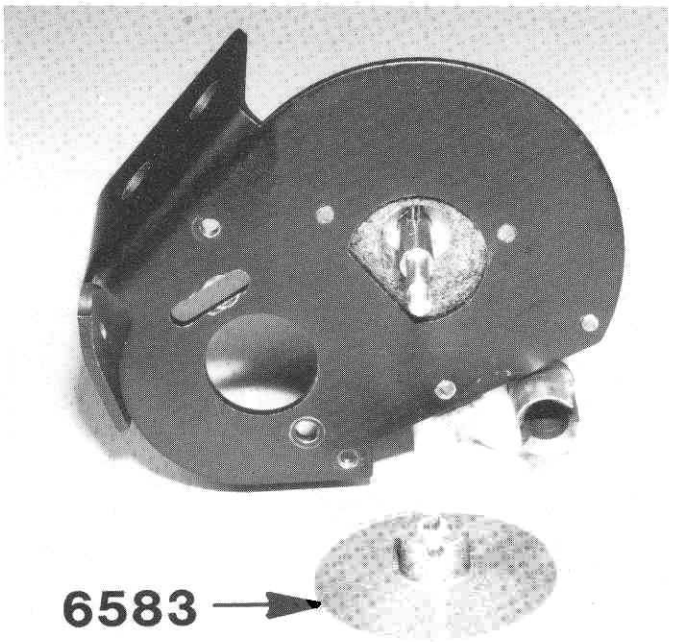


Fig. 61

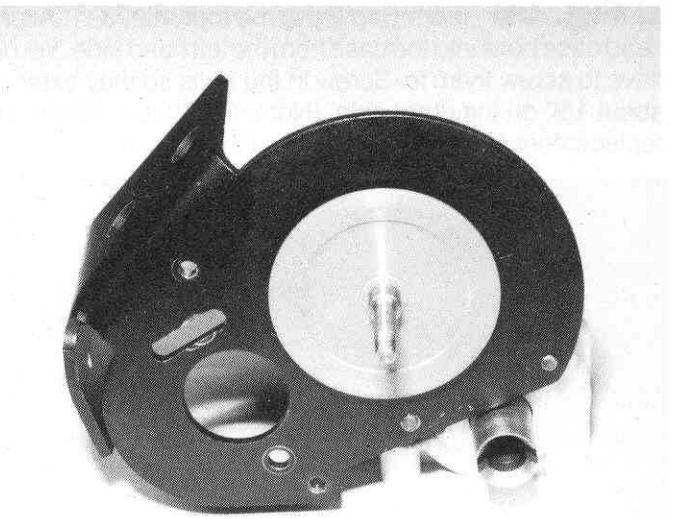


Fig. 62

❑ **Figs. 63 & 64** Position the #6585 clutch disk (also in Bag E) so it's centered onto the #6584 outer hub, as shown.

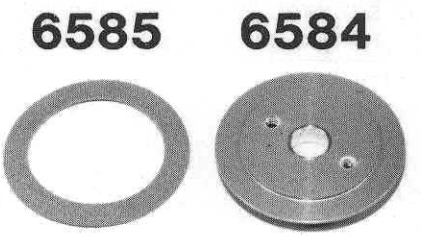


Fig. 63

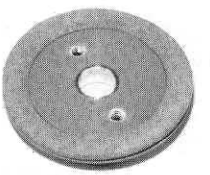


Fig. 64

❑ **Fig. 65** Now we'll be assembling these parts, in the order shown in the photo, onto the #6571 shaft. First, install the #6596 3/16" x 5/16" bushing from Bag B into the clutch hub. Now slide the hub onto the shaft, making sure the clutch disk stays centered on the hub.

From Bag E install one of the #6586 thrust washers, then the thrust bearing and the other thrust washer. (NOTE: when servicing this thrust bearing you can use a **very little** of the #6588 black grease.)

Now slip the #6587 spring on and start the 5/40 nut on both from Bag E). Tighten the nut until about 1/2 thread is showing outside the nut. This is a good starting point for the clutch adjustment. If the bushing in the clutch hub will not slip onto the shaft, then you have not used the correct bushing described in fig. 29a. Disassemble the diff and install the correct bushing.

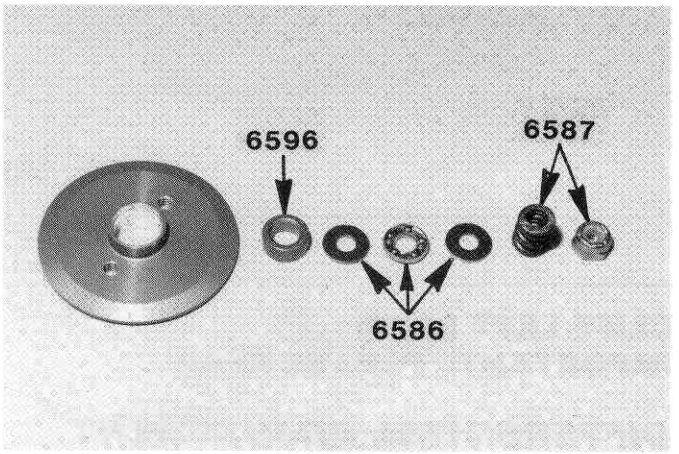


Fig. 65

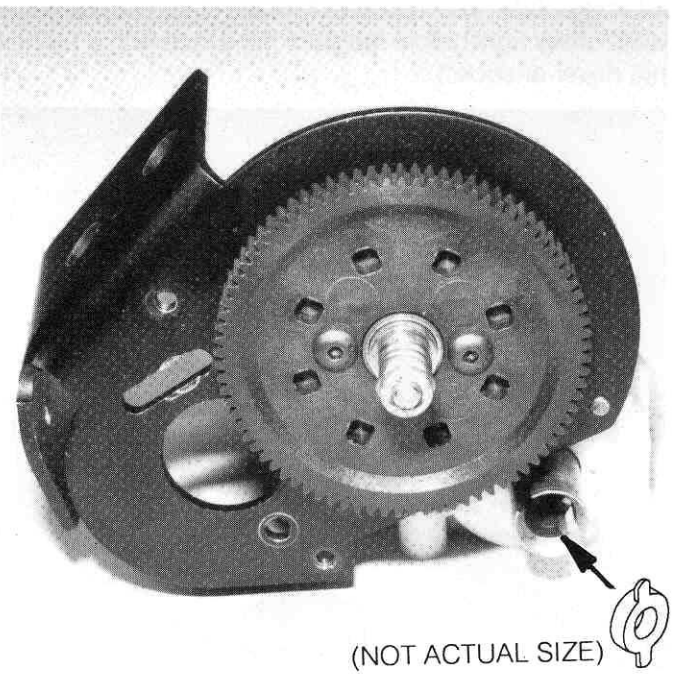
6596

❑ **Figs. 66 & 67** Now open Bag #6-15 and remove the #6693 81 tooth 48 pitch spur gear. Deburr the center hole of the spur gear. Failure to do this can prevent the gear from sitting flat and will cause gear wobble. Mount the gear to the hub using the two #6568 4/40 x 3/16 BHSS mounting screws from Bag F. Try to tighten the screws with equal pressure.

6568

Fig. 66

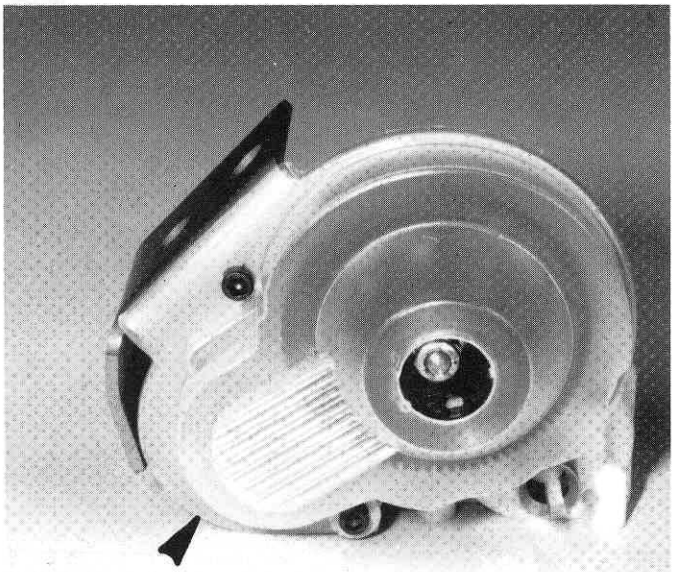
❑ **Fig. 67** From Bag A of Stealth tranny, locate the #6575 diff bolt thrust cover. This looks like a short T-nut without the threaded insert (see drawing below). Insert the thrust cover into the right diff outdrive (covers Allen bolt head) on the passenger (or right side) of car.



(NOT ACTUAL SIZE)

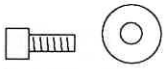
Fig. 67

❑ **Fig. 68** From the Stealth tranny bag remove the #6608 plastic gear cover. Cut out the center button hole and the two mounting holes with an X-acto knife. Trim the outside edge of cover to match the photo. Mount the cover using two #6285 4/40 x 1/4 SHCScrews and one #6936 #4 aluminum washer. The washer goes on lower mounting screw.



6608

Fig. 68



6285 6936

❑ **Fig. 69** You'll be able to make clutch adjustments quite easily right before the start of the race with a 1/4 hex nut driver or socket.

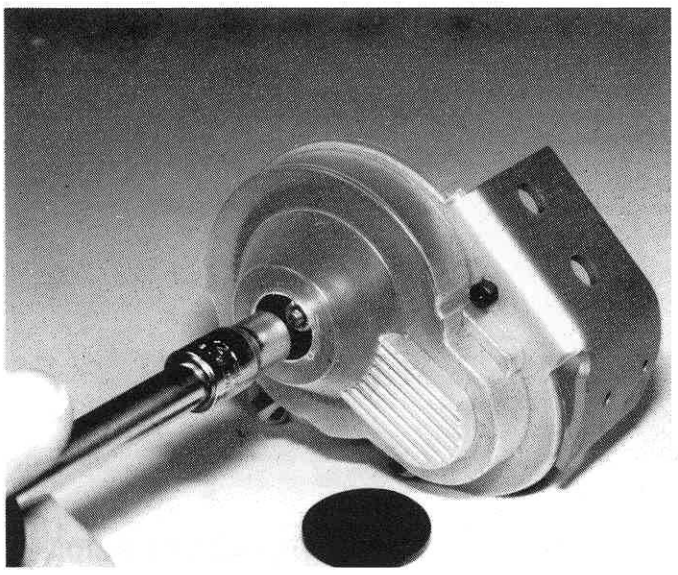


Fig. 69

❑ **Fig. 70** Make sure you put the black button on the cover to keep the dirt out.

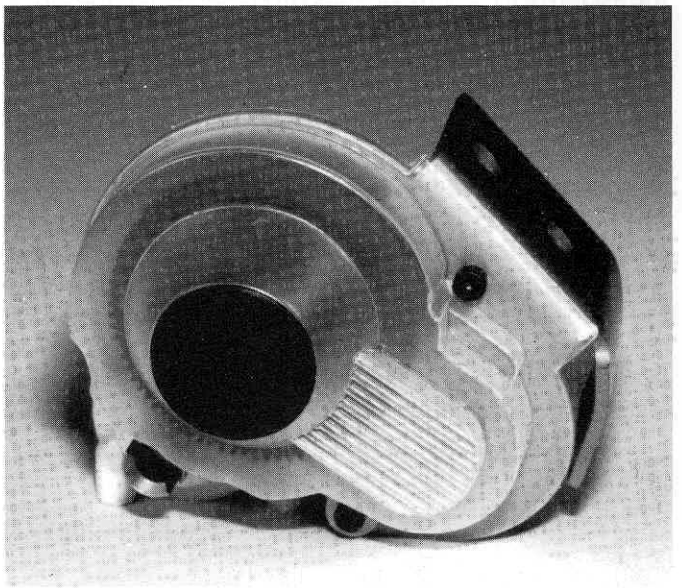


Fig. 70

CLIFF LETT SAYS:
IMPORTANT-- PLEASE READ

DIFFERENTIAL ADJUSTMENT

Once the differential has been correctly adjusted there should be no need to change it until rebuilding time. **Be very careful when bottoming the spring during adjustment and extremely accurate when backing the screw out 1/8 to 1/4 turn. This is the most important adjustment in the transmission.** When you've made all of the necessary adjustments and the car is ready to run (battery and motor included), apply a small amount of throttle while holding one of the rear wheels stationary. Do this for about 15 seconds. This will correctly seat all of the differential parts. Now re-check the diff adjustment.

You should rebuild the differential when the action gets somewhat "gritty" feeling. Usually cleaning and relubing the diff will bring it back to new condition. The 3/32" tungsten carbide and 5/64" precision balls should very rarely need changing. However, the large and small thrust washers should be checked regularly.

TORQUE CLUTCH ADJUSTMENT

It is very easy to over-tighten the torque clutch. If you do, you may damage the differential. Therefore take your time and allow the clutch disk to properly seat before adjusting to race setting. This is done by running the torque clutch adjustment a little on the loose side for about one minute. Remember that the purpose of the clutch is to gain traction, not break the tires loose.

REAR END ASSEMBLY

❑ **Fig. 71** From bag #6-4 take the #6323 rear bulkhead out, and the 2 #6327 wing tubes. The wing tubes are the short tubes. Take the tubes, round off the square cut corners on the ends with a file, and tap the wing tubes into the bulkhead.

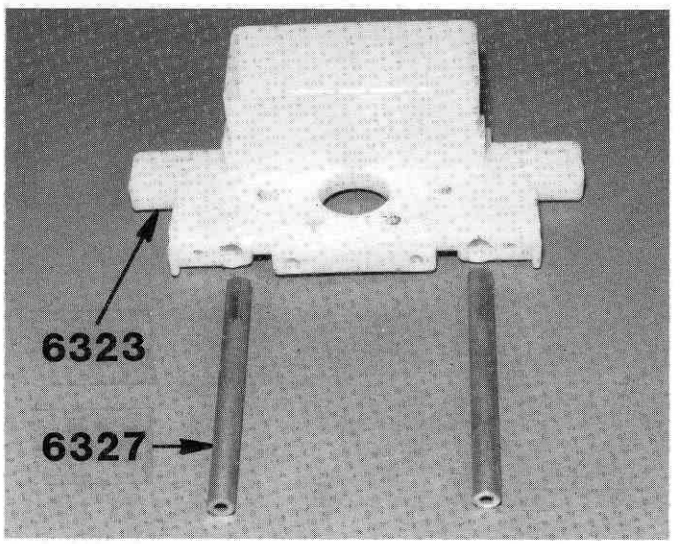


Fig. 71

6327

❑ **Fig. 72** From the same bag, take two #6280 8/32 x 1/2" FHMS Phillips screws and attach the bulkhead to the chassis, but DO NOT tighten the screws all the way down yet, but almost tight. Then install the two #6925 4/40 x 1/2" SHCS Allen screws, as shown, but do not tighten these down yet. We'll be tightening these four screws down later.

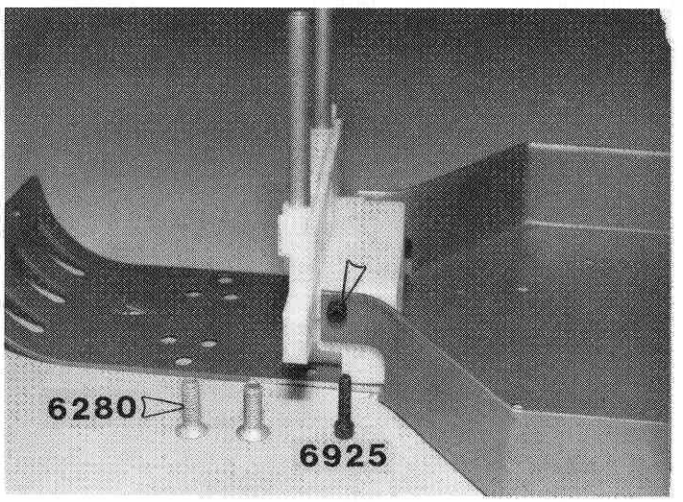
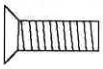


Fig. 72



6280

6925

❑ **Fig. 73** Install two #6273 long ball ends from bag 6-14 into the upper, inner holes, as shown, below the wing tubes. Tighten them all the way down.

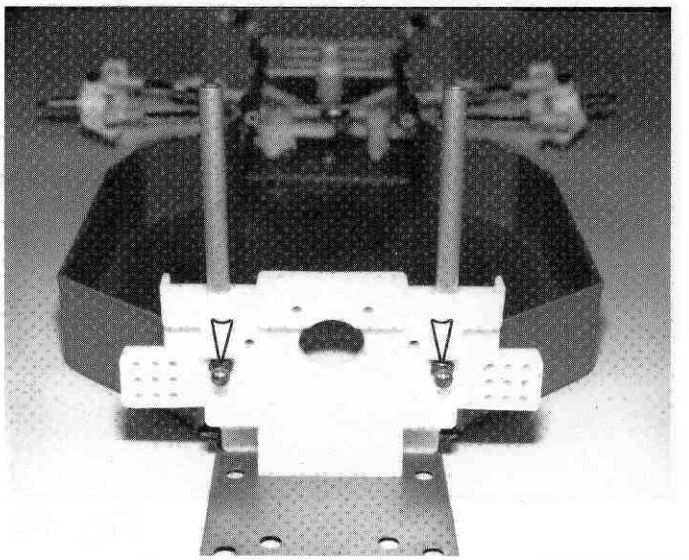
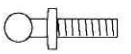
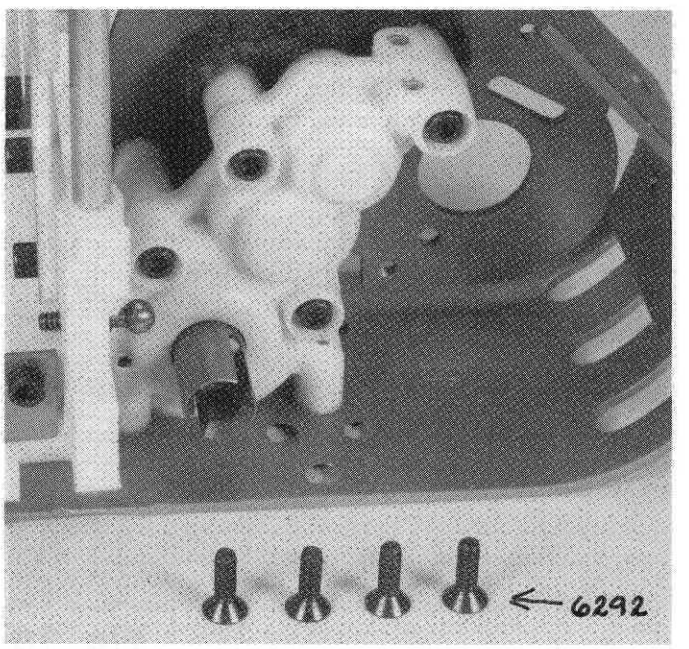


Fig. 73



6273

❑ **Fig. 74** Take the assembled Stealth tranny and install it with four #6292 4/40 x 3/8" FHSS screws from the Stealth tranny Bag F. Do not tighten the screws all the way yet. Be sure the motor mount plate is INSIDE of the chassis at the back, as shown.



6292

Fig. 74

❑ **Fig. 75** These 6 screws should be loose yet.

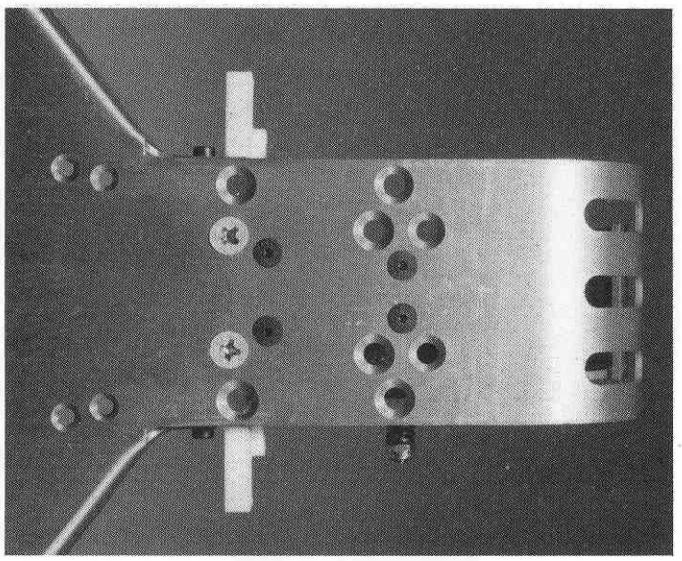


Fig. 75

❑ **Fig. 76** Take the #6325 transmission brace out of bag #6-4, the rear #6330 body mount from bag #6-5, one #3323 #8 thick aluminum washer, and one #6280 8/32 x 1/2" aluminum FHMScrew. Slip the 8/32 screw through the brace. (One side of brace is countersunk for screw head.) Place #8 washer over screw and thread on body mount until tight. From bag #6-4 take two #6925 4/40 x 1/2" SHCScrews, two #6932 4/40 x 5/16" SHCScrews, and four #6936 #4 washers.

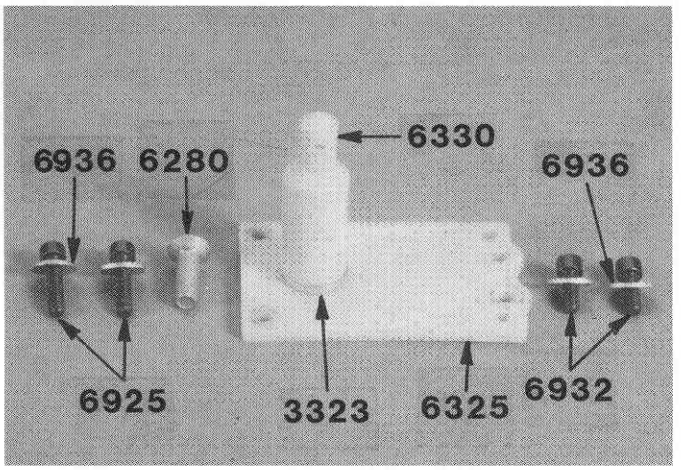
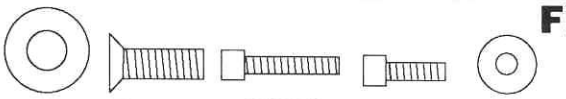


Fig. 76



3323 6280 6925 6932 6936

❑ **Fig. 77** Install the transmission brace with the body mount closer to the bulkhead. Use the two 4/40 x 1/2" SHCScrews and two #4 washers on bulkead mounting holes and two 4/40 x 5/16" SHCScrews with #4 washers on transmission mounting holes as shown. Do not tighten down all the way yet.

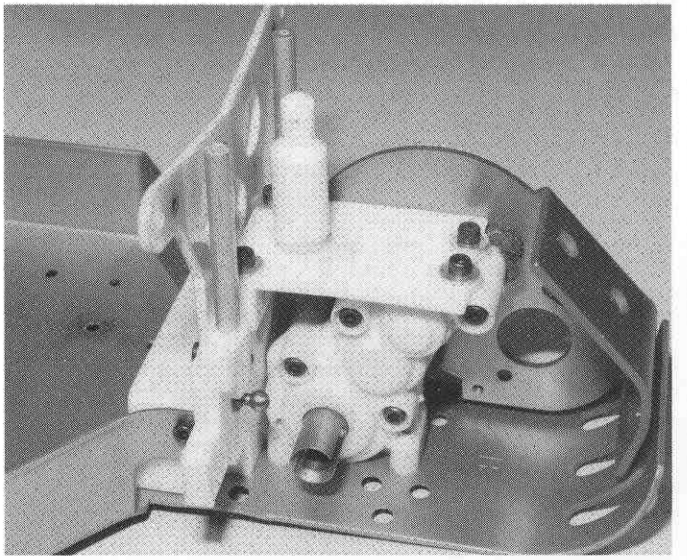
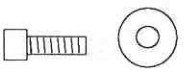


Fig. 77



6932 6936

❑ **Fig. 78** Attach the rear of the chassis plate to the motor mount with two short #6285 4/40 x 1/4" SHCS Allen screws from bag #6-4 and tighten down. Now go back and tighten down all the screws in photos #72, 74, 75, and 78. Be careful when tightening screws into plastic. As soon as they feel like they're starting to tighten up **STOP** so you don't strip out the plastic.

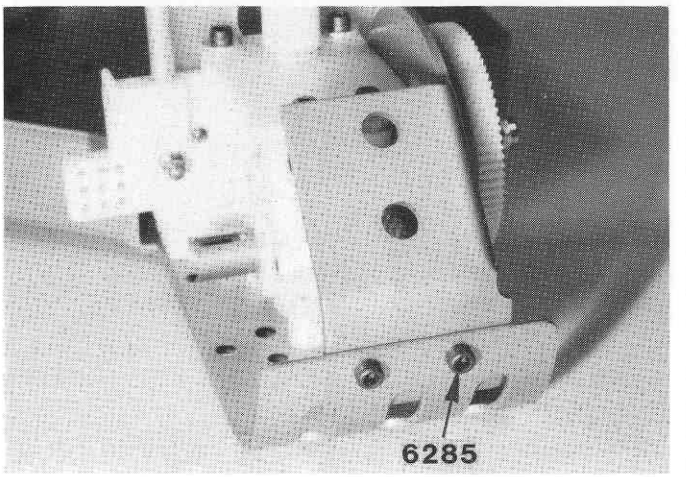
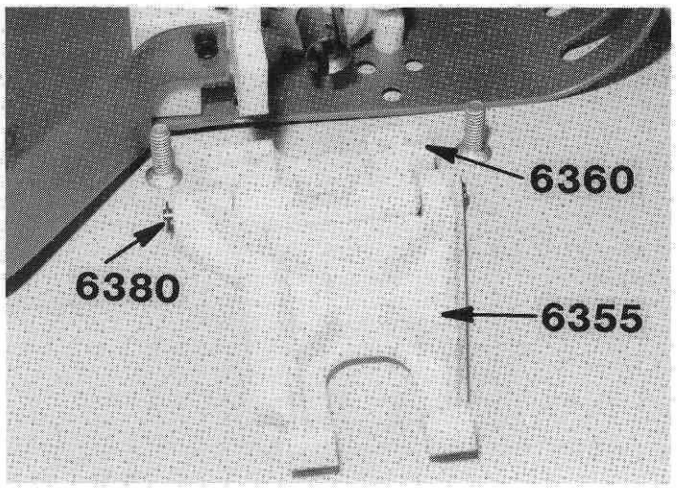


Fig. 78

6285

❑ **Fig. 79** In bag #6-8 you will find the #6360 rear suspension mounts, #6355 rear A-arms, and two #6380 inner hinge pins. Take the left hand mount (with the "L" on the bottom), the left hand A-arm and one hinge pin. Line up the holes in the arm and mount and install the pin. Install two e-clips, one on each end. The pin should be loose in the arm but tight in the mount. Assemble the right hand arm.

NOTE: The left and right rear mounts are attached together by a thin "runner" that should be removed with scissors.



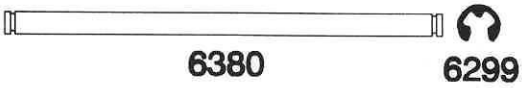


Fig. 79

❑ **Fig. 80** Install the L.H. mount to the chassis with two #6280 8-32 x 1/2" FHMS Phillips screws as shown, also from bag #6-8. Now install the R.H. arm. There are four holes in the mounts. Be sure you use the rear holes, which will keep the arms in the forward position.

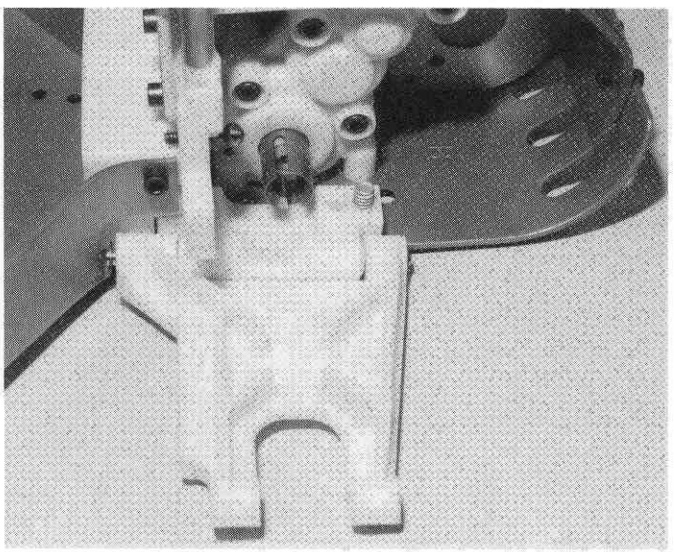
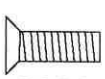


Fig. 80



❑ **Fig. 81** Before proceeding with the assembly of the rear hub carrier, it's a good idea to check fit of the #6370 dogbone in the #6374 stub axle. These parts are in bag #6-8. If it does not slide and swivel freely, then check for burrs around the dogbone pins, burrs in the dogbone pin slots, and for heat-treating residue inside the stub axle. Also check that the #6272 dogbone spring fits freely in the small hole at the bottom of the dogbone socket (see Fig. 115). If either of these holes are clogged they can be cleaned by soaking the stub axle in hot or boiling water for a half hour. Dry and oil the stub axle after cleaning.

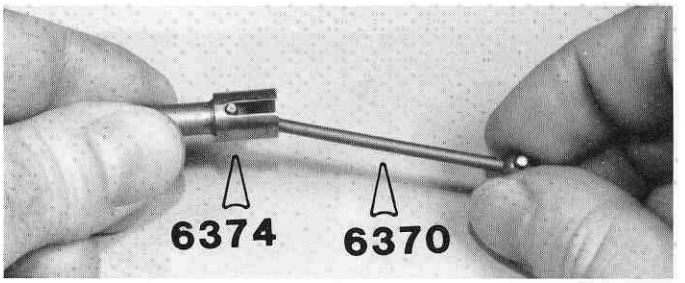


Fig. 81

❑ **Fig. 82** Still working with bag #6-8, take the #6374 rear stub axle and slip the #6387 flat washer, as shown, onto the axle. Install the #6387 bushing into the #6366 R.H. rear hub carrier in the direction shown. (The L.H. hub carrier can be identified by the "L" molded into the back side of the carrier. The R.H. carrier has no markings.) Oil the bushing and slip the axle into the bushing. Now take the #6388 cone washer, the one that is not flat, and slip it on the shaft so that the part that touches the bearing or bushing is the center of the washer. Repeat the procedures for L.H. rear hub carrier.

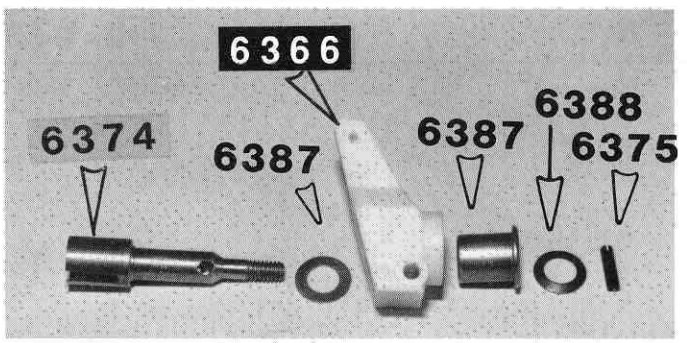
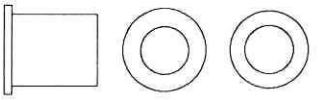


Fig. 82



❑ **Fig. 83 & 83a** For this step you may need 3 hands, so get a friend to help you. Set the axle on a vise or a flat surface. Hold the roll pin or slotted pin with a needle nose pliers and align the pin with the hole in the axle. Lightly tap the pin in the axle so it's evenly spaced. These parts are in bag #6-8.

An alternate method of installing the pin is shown in Fig. 83a, using a pair of water pump pliers. Start the pin by holding with small pliers and pushing into the hole with a twisting motion. Finish with large pliers as shown. Angle the pliers slightly to allow the pin to come through the other side.

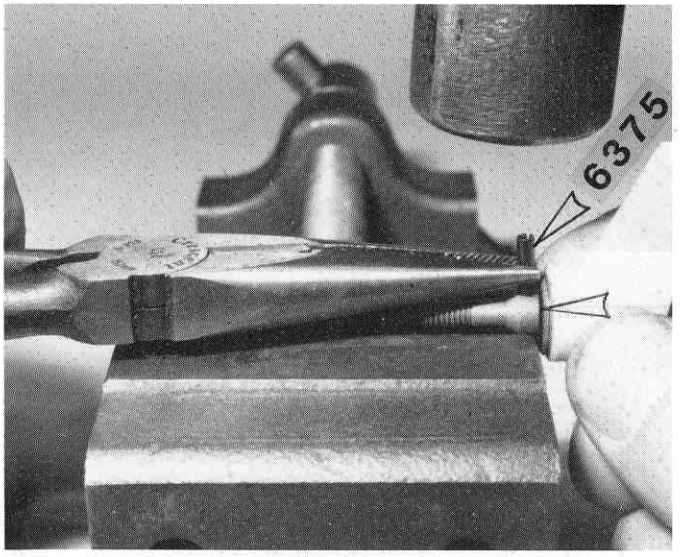


Fig. 83

6375

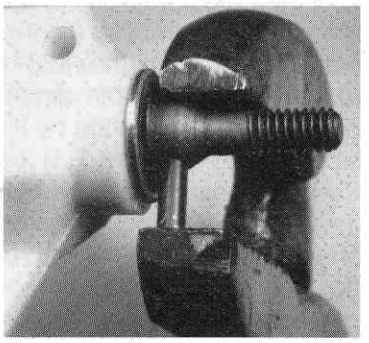


Fig. 83a

❑ **Fig. 84** Install the LH hub carrier in the LH "A" arm with the #6381 outer hinge pin. Install two #6299 e-clips. Install a #6273 steel ball end (with the long threads) in the forward side of the hub carrier, as shown, with a #6295 4/40 plain nut. Install the R.H. hub carrier. The R.H. ball end should also face forward.

NOTE: The pin is intentionally a tight fit in the hub carrier; do not ream the hole. The pin will turn in the A-arm.

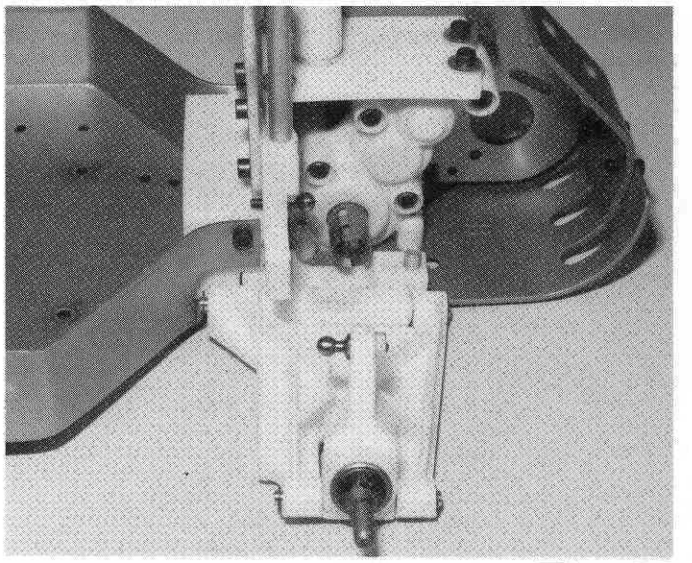
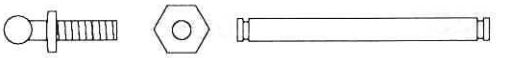


Fig. 84



6273 **6295** **6381**

❑ **Fig. 85** Your L.H. rear end should look like this now.

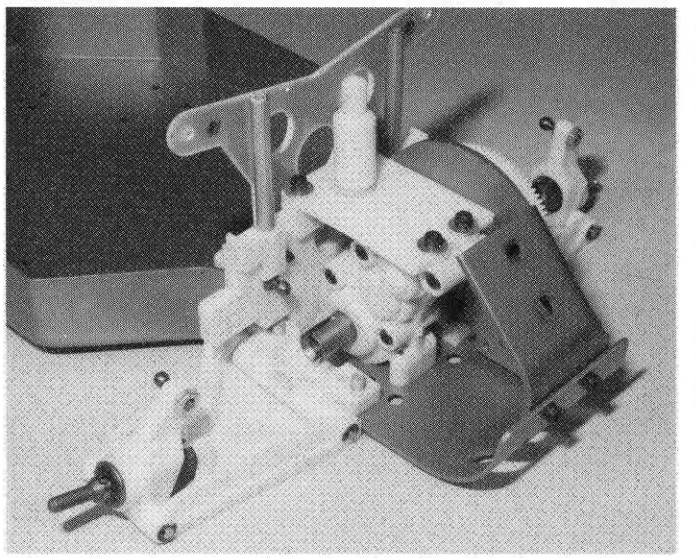


Fig. 85

❑ **Fig. 86** Again from bag #6-8, take the two #6262 turnbuckle rods and screw two #6274 plastic rod ends on each to the dimension shown. Note that on this strut one ball faces forward and one faces to the rear.

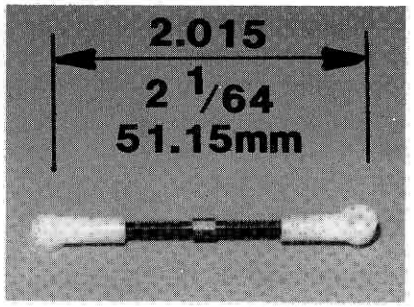
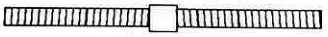


Fig. 86



6262

❑ **Fig. 87** Bag #6-8 also contains two #6372 springs and nylon washers as well as two #6370 dogbones. Install one nylon washer in each outdrive on Stealth tranny. (The outdrive is clearly pictured in Fig. 47.)

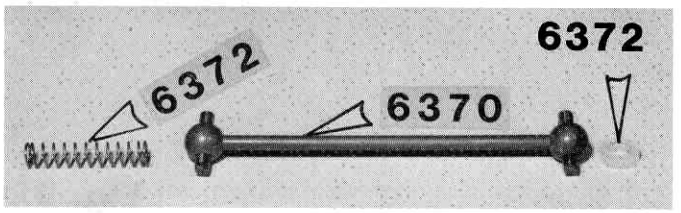


Fig. 87

❑ **Fig. 88** Put the strut (A) onto the ball on the bulkhead. Put the spring inside the stub axle, and make sure the spring fits freely in the hole. If the spring binds you may be able to clear the hole with an Allen wrench; or you can reread step 111. Put the dogbone or half-shaft into the gear slot. Now, align the stub axle with the dogbone and slide it in. Put the strut (B) on the ball in the hub carrier. It should look like Fig. 116 now. Do the R.H. side.

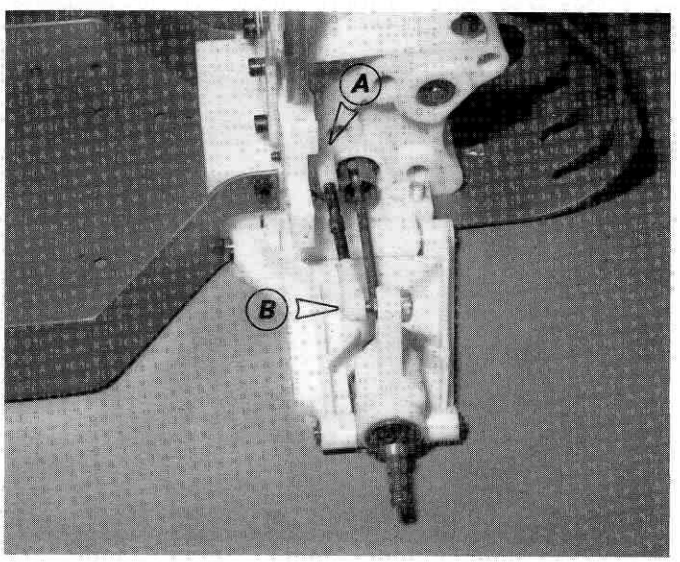


Fig. 88

SHOCK ASSEMBLY

❑ **Figs. 89 & 89a** It's easier to build all four shocks at the same time. Open bag #6-9 and remove two #6458 shock shafts. Open bag #6-10 and remove two #6460 shock shafts. Install one #6299 E-clip on each shaft in the groove closest to threads.

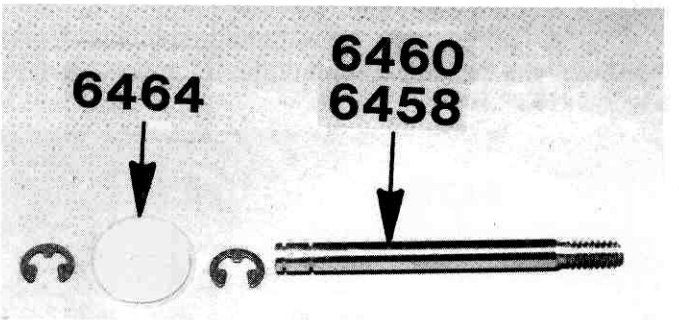


Fig. 89

Fig. 89a

❑ **Fig. 90** Now slip the #6464 piston on each shaft, and then install the second #6299 E-clip. Make sure both E-clips are fully seated in the groove.

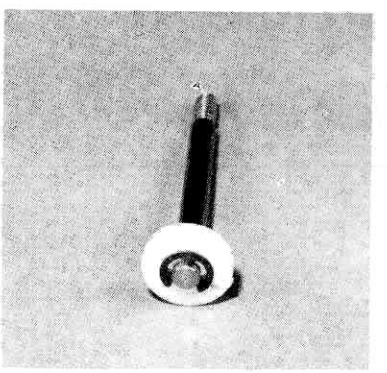


Fig. 90

❑ **Figs. 91 & 91a** The #6429 assembly tool, from main plastic bag, makes it quite easy to build shocks. The internal shock parts will be slipped onto the assembly tool in the following order. First, the large split washer, then the small washer, red O-ring, spacer, red O-ring, and small washer. This is exactly as the order shown in the photo.

NOTE: Be sure to check the large split washer and small washers for burrs (raised edges). Carefully remove any found with an X-acto knife.

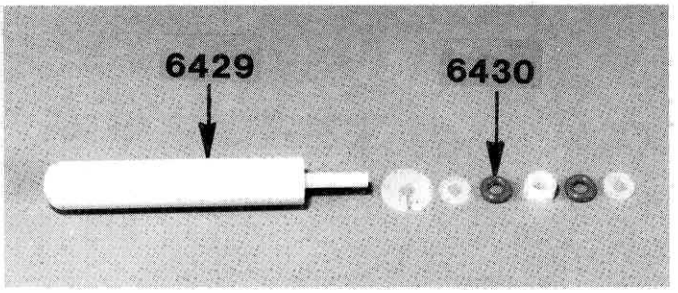
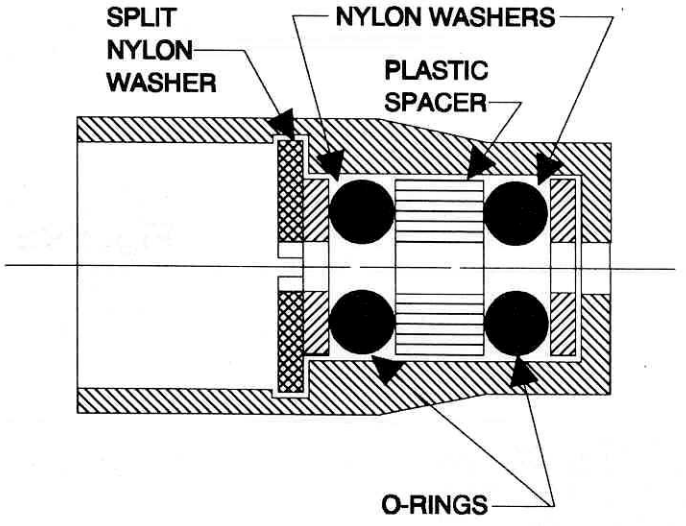


Fig. 91



(DRAWING NOT ACTUAL SIZE.)

Fig. 91a

❑ **Fig. 92** Your kit comes with a very high-quality shock oil, but if you want the best, Associated also has a special Silicone Shock Oil, which we highly recommend. If you're going to use the Silicone Oil, then do not build the shocks with the kit oil, because the two oils will not mix.

Fig. 92

❑ **Fig. 93** Apply a liberal amount of oil to the parts on the installation tool.

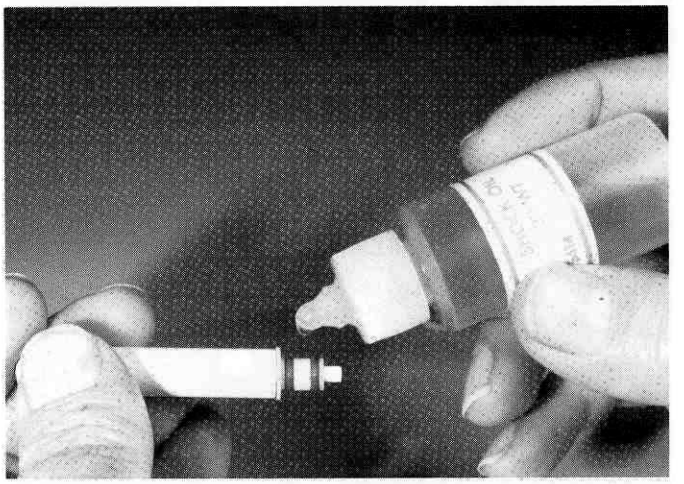


Fig. 93