

☐ **Fig. 47a** Install the screws in the gear.

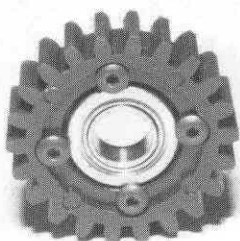


Fig. 47a

☐ **Fig. 48** To lock the screws in, we recommend the use of pink ZAP. This is a cyanoacrylate adhesive. Put a VERY, VERY SMALL amount of ZAP on the end of an X-acto blade and put it on the bottom screw as shown. Now rotate the gear and put it on the 2nd screw, which will now be in the bottom position. This way if you get too much ZAP on, it will run down away from the bearing and not on the bearing. Do all 4 screws this way, on both gears.

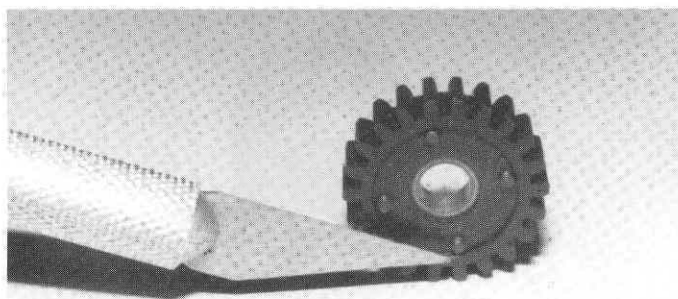


Fig. 48

☐ **Fig. 49** Now oil the bushing and put the completed gear on the pivot pin on the aluminum spine plate.

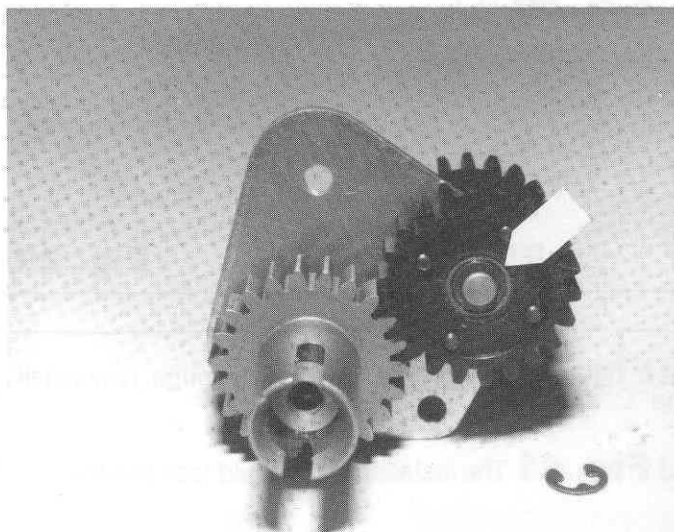


Fig. 49

☐ **Fig. 50** Oil and put the 2nd gear on and install both "E" clips.

☐ **Fig. 51** Rotate both L.H. and R.H. gear sets. They should both rotate very freely. If they do not rotate freely, you probably don't have one of the pivot pins installed properly in the aluminum plate. (Those flanges MUST be flush and even against the plate!) You can also try lifting and rotating the plastic gear a few teeth before remeshing. You may find a position where they are the smoothest.

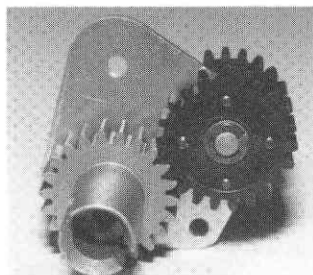


Fig. 50

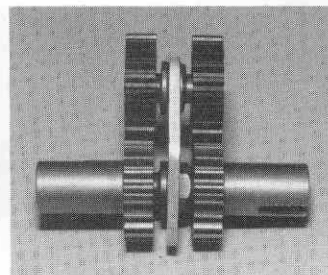


Fig. 51

☐ **Fig. 52** Now take the #6618 differential shaft with gear, and the thick thrust washer with the small hole from the same small bag. The gear is locked to the shaft on a taper. If the gear has come loose you can reseal by supporting the gear on the top of a vise and giving the big end of shaft a sharp rap with the WOODEN handle of a hammer.

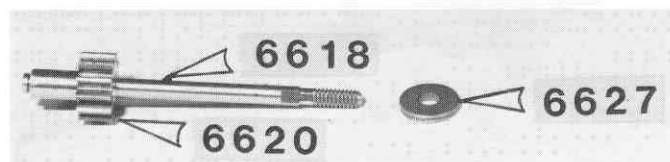


Fig. 52

- ☐ **Fig. 53** Slip the washer on the shaft. Slip the blue thrust bearing on, as shown. Now set this shaft aside until we do step #65.

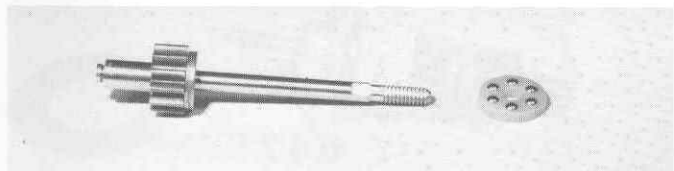


Fig. 53

- ☐ **Fig. 54** Take one of the #6606 bearing adaptors out of bag #6-12 and one of the narrow bushings with a 1/4" dia bore.

- ☐ **Fig. 55** Install the bushing all the way in the adaptor, as shown.

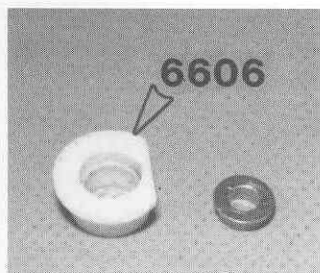


Fig. 54

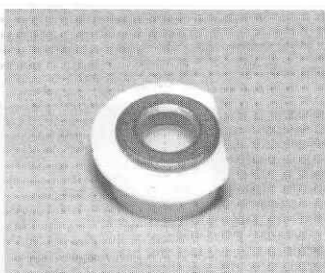


Fig. 55

- ☐ **Fig. 56** If you're installing ball bearings, install it in the adaptor.

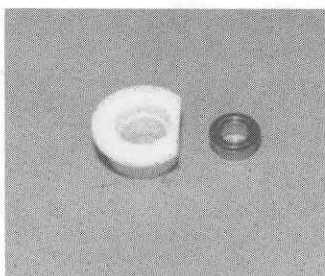


Fig. 56

- ☐ **Fig. 57** Take the #6617 dif tube out of the bag.

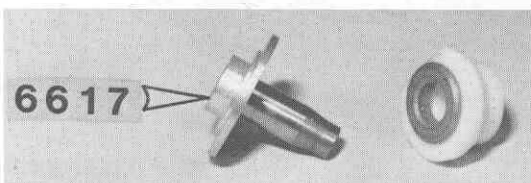


Fig. 57

- ☐ **Fig. 58** Oil the bushing and slip it on the dif tube, as shown, or install a ball bearing.

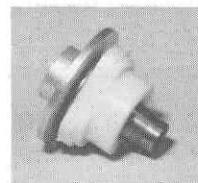


Fig. 58

- ☐ **Fig. 59** Take the #6621 dif pinion gear out of the bag.

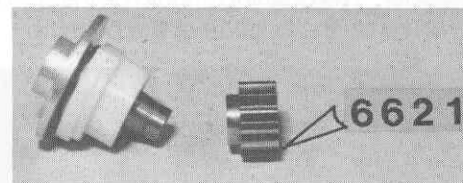
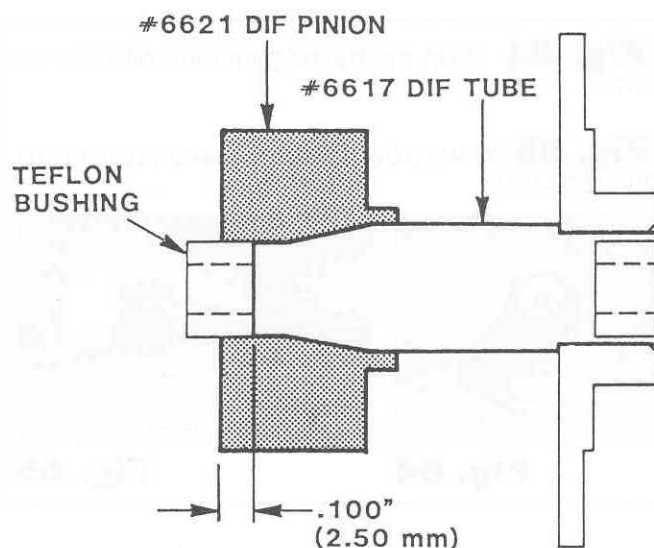


Fig. 59

- ☐ **Fig. 60** Slip the gear onto the tube and tap the assembly together using the plastic handle of a screwdriver. DO NOT use a vise to squeeze it on. The gear does NOT go all the way on. There should be enough room left in the gear (.100 or 2.5mm) to install the Teflon bushing shown in Fig. 65.



- ☐ **Fig. 61** Take one of the #6623 small white Teflon bushings out.

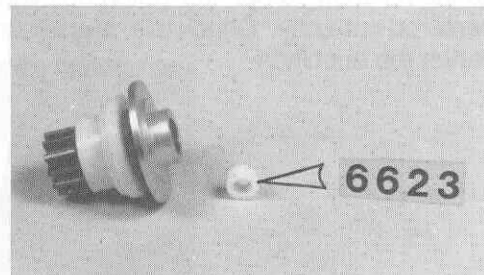


Fig. 61

☐ **Fig. 62** You should be able to push the bushing into the tube with your finger.

☐ **Fig. 63** Now take the other #6623 bushing and the other thick thrust washer out. Push the bushing inside the washer. The bushing should be inside the dif tube with the washer on the outside of the bushing.

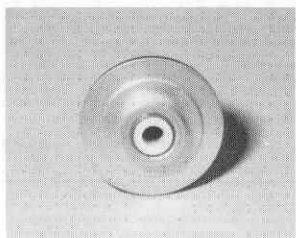


Fig. 62

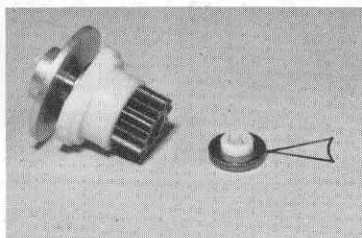


Fig. 63

☐ **Fig. 64** Push the bushing into the dif tube, as shown.

☐ **Fig. 65** Now slip the dif tube assembly onto the dif shaft, as shown.

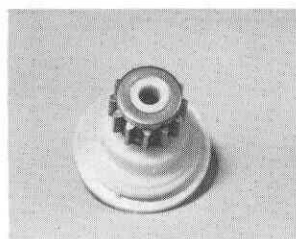


Fig. 64

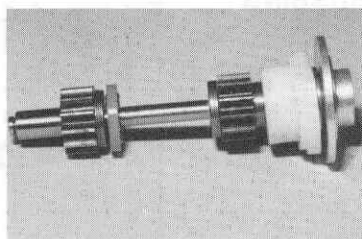


Fig. 65

☐ **Fig. 66** The dif tube assembly should spin freely on the dif shaft. If not, the Teflon bushings might not be centered correctly. Check this, and use the shaft to help center the bushings.

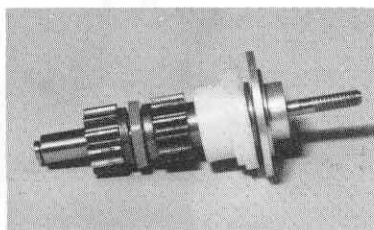


Fig. 66

☐ **Fig. 67** Take one of the #6625 dif drive rings out of the bag.

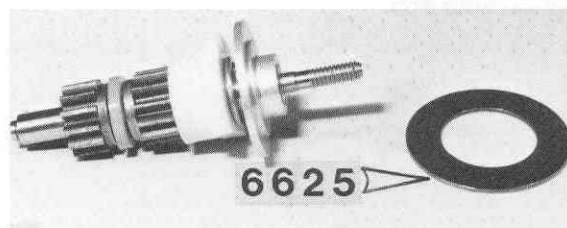


Fig. 67

☐ **Fig. 68** Slip the ring on the hub, as shown.

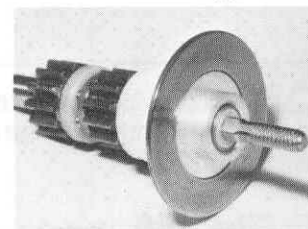


Fig. 68

☐ **Fig. 69** Take the #6626 balls out of the bag. In bag #6-15, take the plastic spur gear.

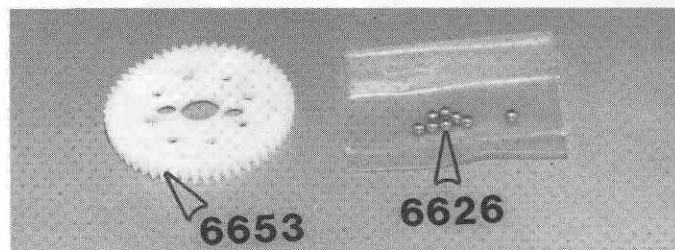


Fig. 69

☐ **Fig. 70** Push the 8 balls into the square holes in the gear as shown.

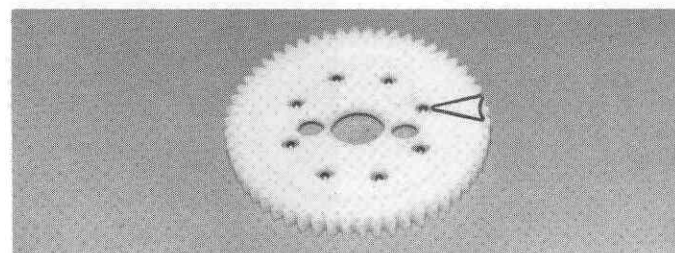


Fig. 70

☐ **Fig. 71** Take the #6636 Associated dif lube.

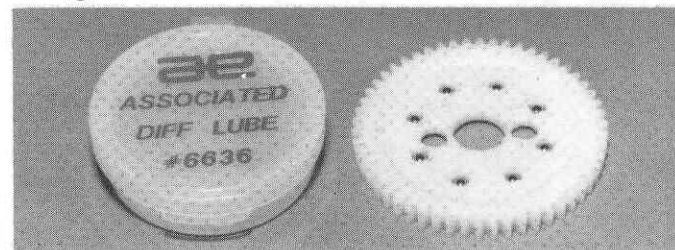


Fig. 71

☐ **Fig. 72** Apply a small amount of this special lube to the balls on both sides of the gear. NEVER use any other type of lube on the balls, otherwise the dif will slip.

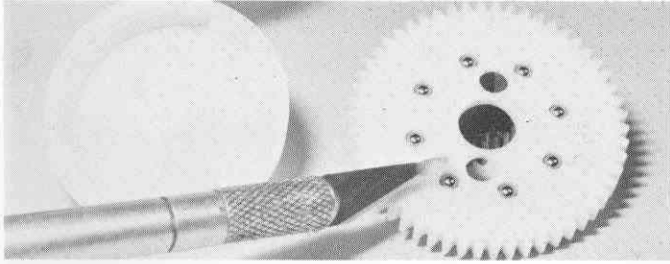


Fig. 72

☐ **Fig. 73** Apply a small amount of the #6636 Associated dif lube to the center hole of the gear. DO NOT use this dif lube anywhere else on the car for metal to metal lubrication. (It's intended as a plastic to metal or plastic to plastic lubricant.)

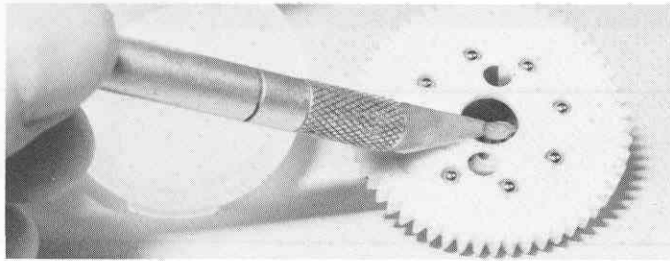


Fig. 73

☐ **Fig. 74** Take the dif shaft assembly and spur gear.

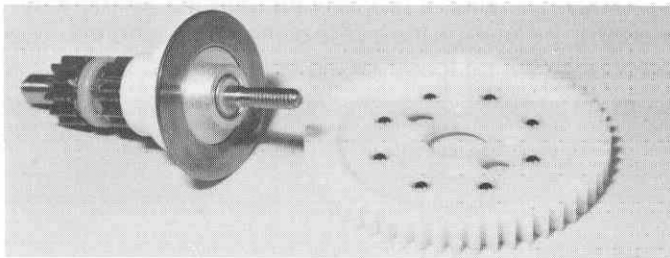


Fig. 74

☐ **Fig. 75** Slip the spur gear on the shaft. Take the other drive ring.

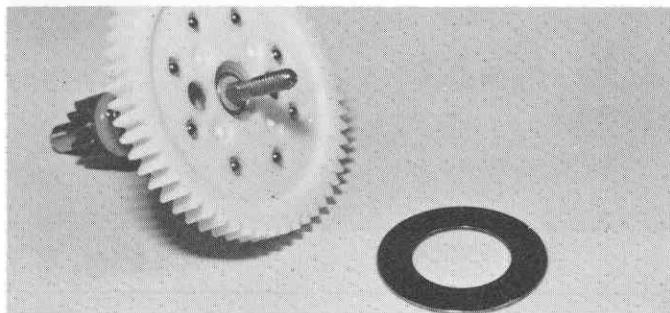


Fig. 75

☐ **Fig. 76** Slip the drive ring on the shaft and take the #6624 dif outer hub.

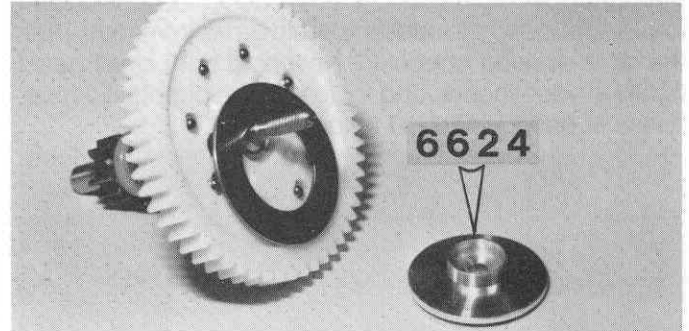


Fig. 76

☐ **Fig. 77** The outer dif hub has a notched hole to match the flat spots on the shaft. Align the two and slip the hub on the shaft. Check that both drive rings are centered and seated against the aluminum hubs. Take out the #6628 dif spring and nut.

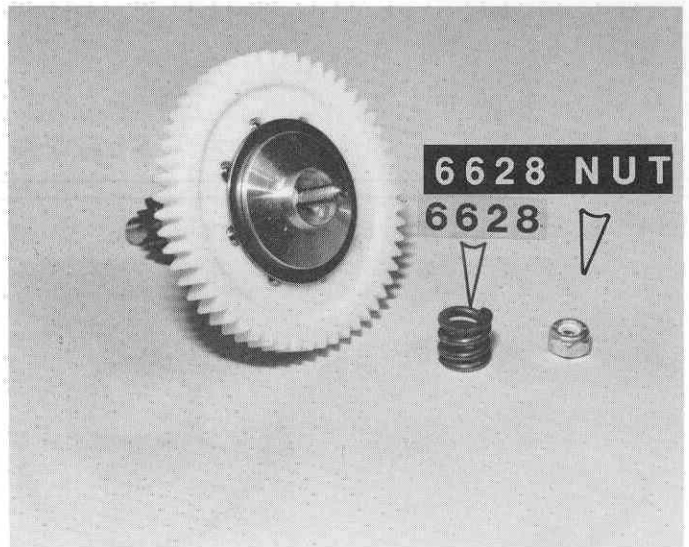


Fig. 77

☐ **Fig. 78** Slip the spring on and screw the nut on. You'll have to hold the small gears from turning while screwing the nut on. Screw the nut on until the end of the nut is even with the end of the shaft, as shown.

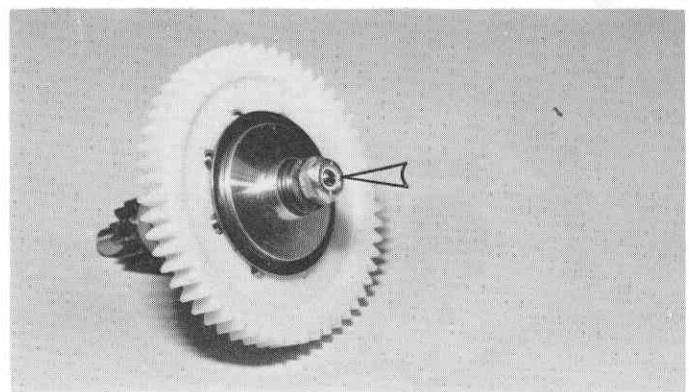


Fig. 78

□ **Fig. 79** Hold the dif assembly in your hands, as shown. Hold the outside small gear still, and slowly rotate the big plastic spur gear. The inside small gear should rotate, and the whole rotation should be very smooth. Then the dif is working correctly. Now hold both small gears tightly in your fingers, and try to turn the big plastic gear. It should be VERY HARD to turn.

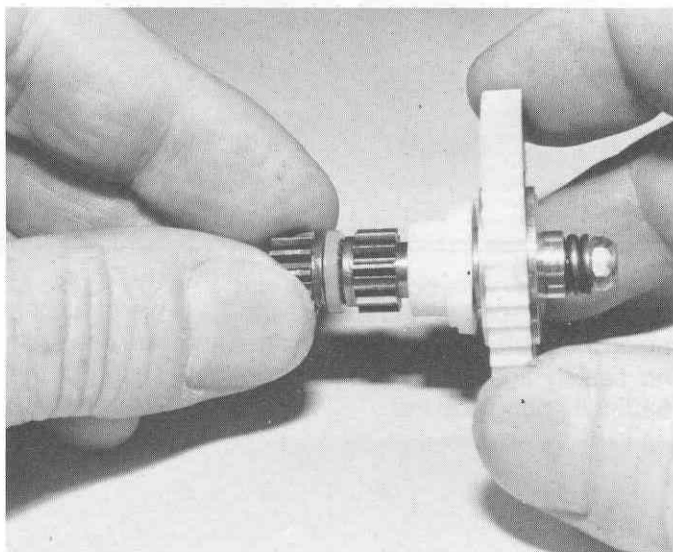


Fig. 79

□ **Fig. 80** Take the #6607 motor mount out.

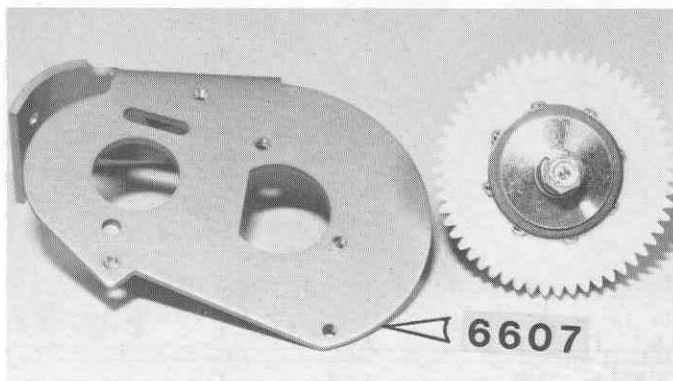


Fig. 80

□ **Fig. 81** Slip the dif into the motor mount, as shown.

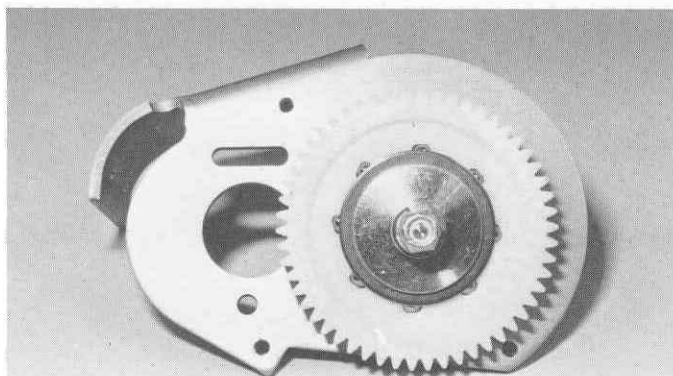


Fig. 81

□ **Fig. 82** Make sure the bearing adaptor is properly seated in the motor mount. Take out the #6605 transmission housing, as shown.

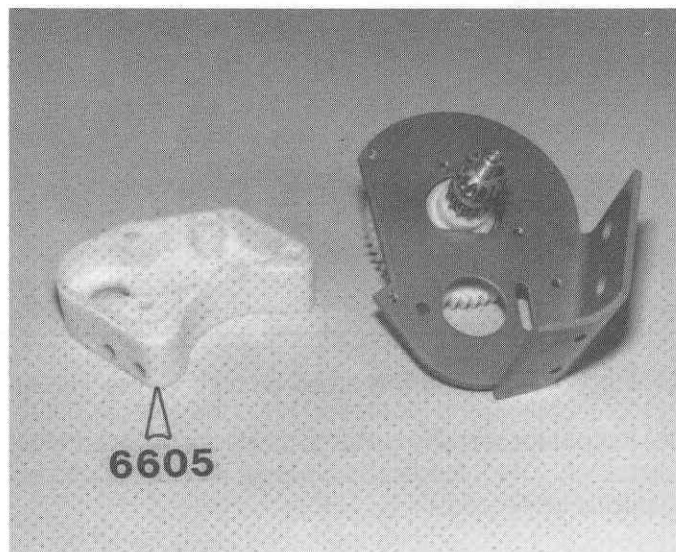


Fig. 82

□ **Fig. 83** Slip the R.H. half of the housing onto the dif.
NOTE: There is a flat on the adapter that MUST match a flat in BOTH the motor mounting plate and the transmission case. The adapter is a tight fit in the transmission case, so you'll have to work to get it started. If you have installed it properly the adapter will be in far enough to be flush on the inside of the case half-shell. The motor plate will be loose for the next 9 steps.



Fig. 83

- ☐ **Fig. 84** Take the idler gear assembly.

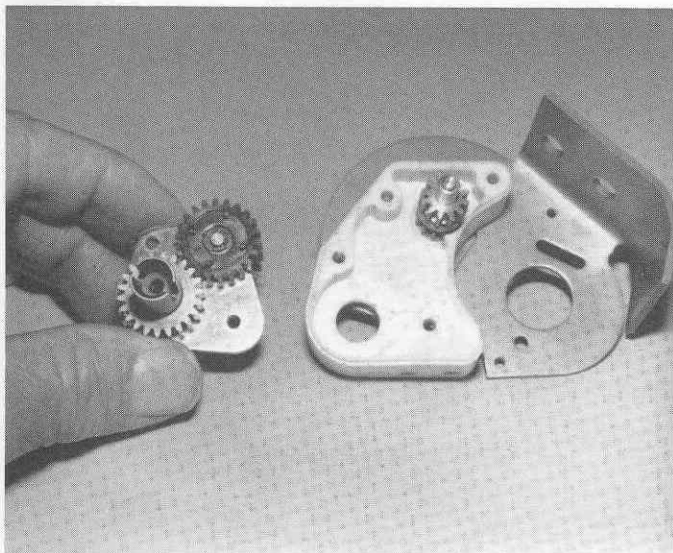


Fig. 84

- ☐ **Fig. 85** Set the idler gear assembly into the housing, as shown.

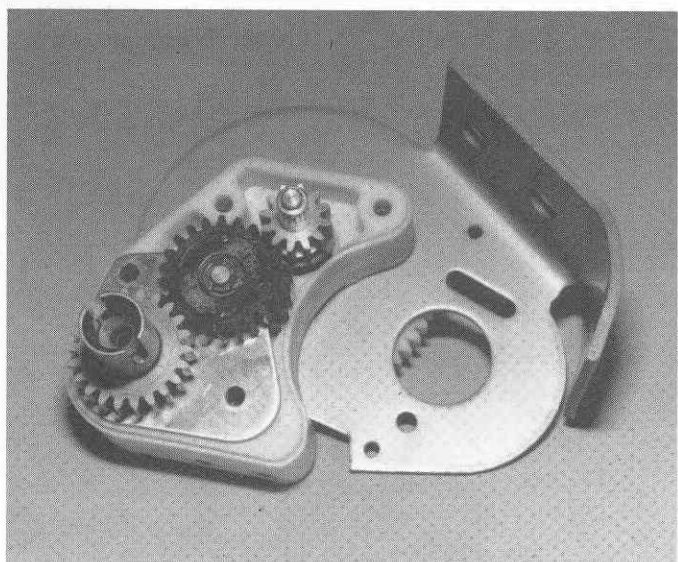


Fig. 85

- ☐ **Fig. 86** Take the L.H. side of the housing and push it onto the R.H. side. It will snap together with finger pressure.

NOTE: The seam between the two halves of the case should close completely with no more than a few thousandths of an inch gap showing (usually on the bottom of the case). If you cannot close the case completely look for something wrong inside.

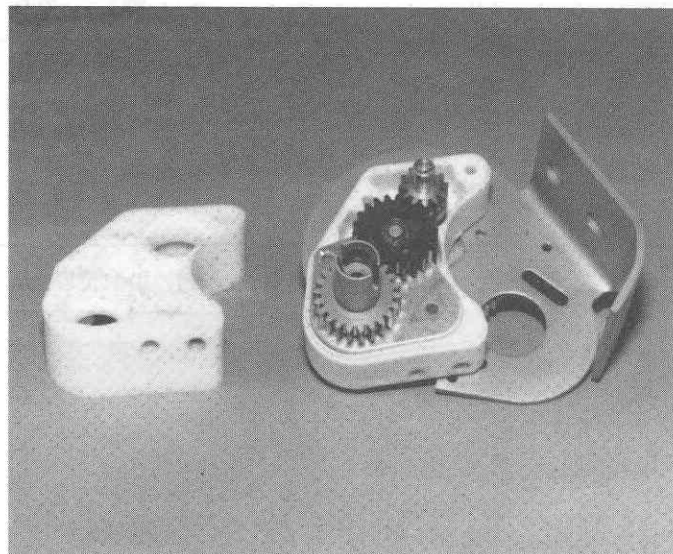


Fig. 86

- ☐ **Fig. 87** Take the other bearing adaptor and cut a small notch in the edge, as shown. This will make installing and removing the "E" clip a lot easier.

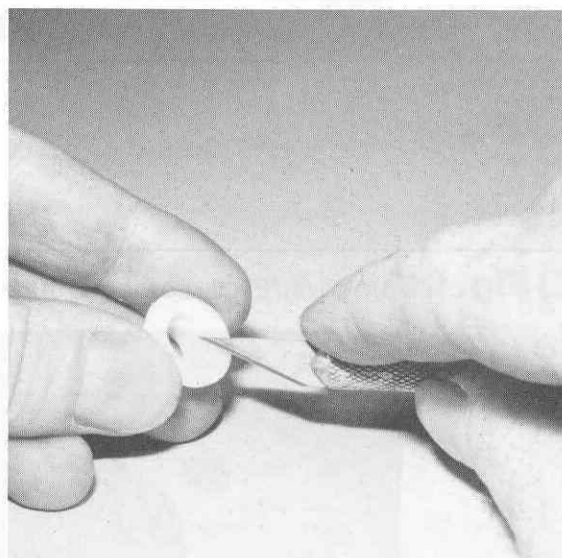


Fig. 87

- ☐ **Fig. 88** Install the bushing or ball bearing into the adaptor.

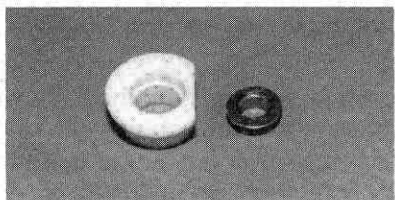


Fig. 88

- ☐ **Fig. 89** Oil and install the adaptor onto the dif shaft.

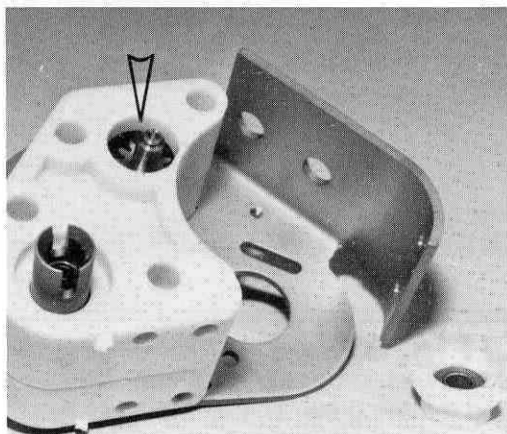


Fig. 89

- ☐ **Fig. 90** Install an "E" clip on the end of the dif shaft.

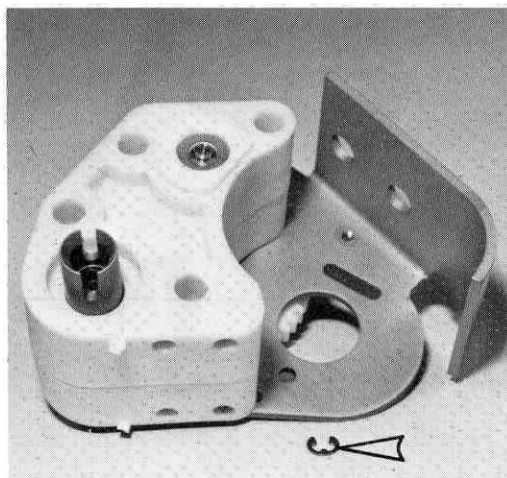


Fig. 90

- ☐ **Fig. 91** Make sure the "E" clip is seated correctly.

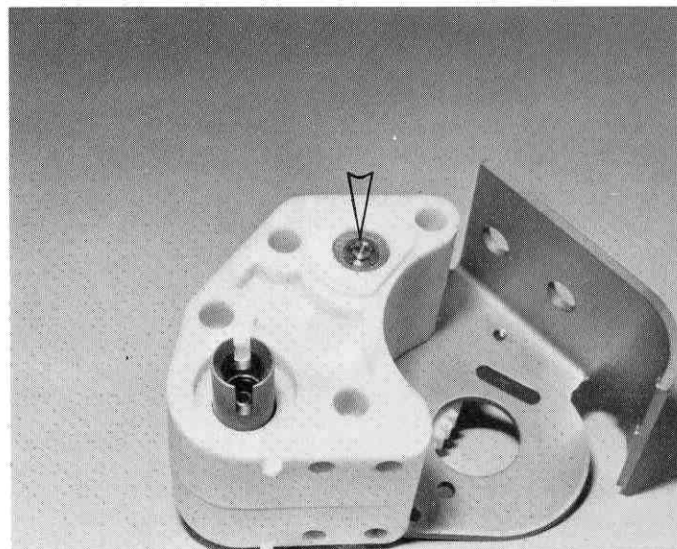


Fig. 91

- ☐ **Fig. 92** Take the 3 long Allen screws, as shown, and screw them into the motor mount.

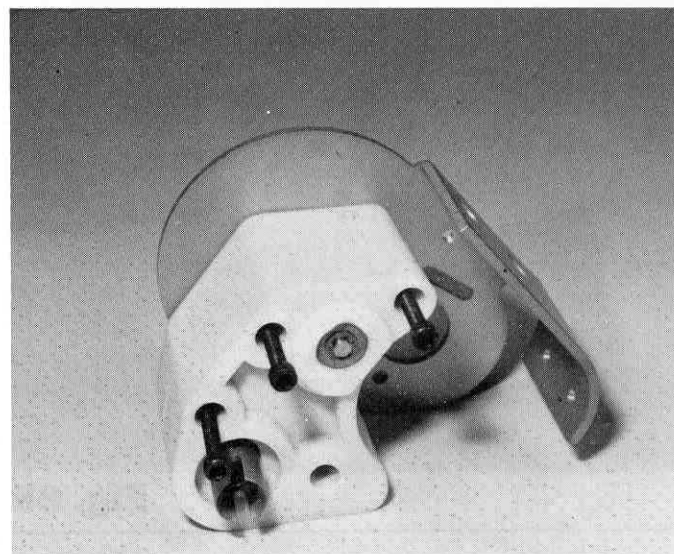


Fig. 92

□ **Fig. 93** Take the other short screw, then slip a 4/40 nut into the hex hole, as shown, and tighten this screw.

NOTE: After assembling the transmission with bushings for the first time the large gear may be hard to turn. You can free things up by giving a sharp blow to each END of the dif shaft using the plastic handle of a screw-driver as a hammer. A few raps on the adjustment nut followed by a few against the adaptor on the other side will help to align the bushings. Once you start running the car the bushings will free up completely.

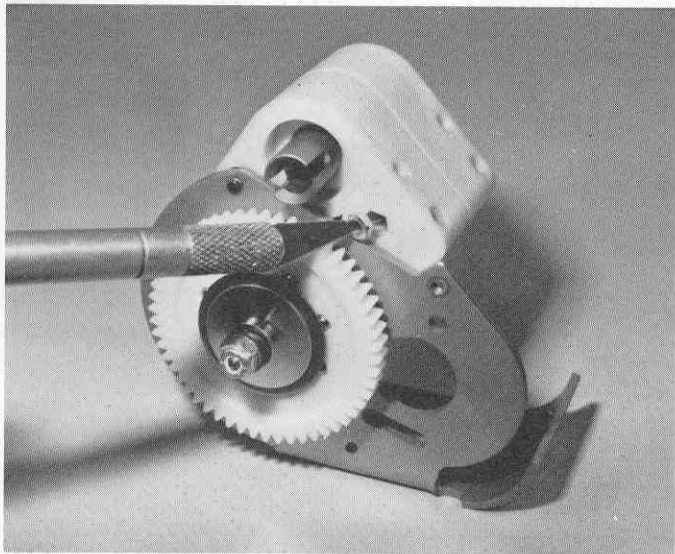


Fig. 93

□ **Fig. 94** On the bottom of the transmission case, as shown, are 2 molding lugs. Cut these off flush with an X-acto knife.

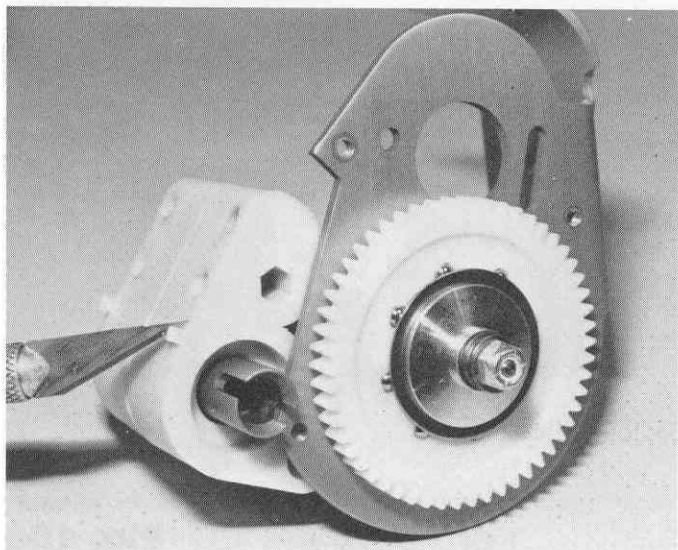


Fig. 94

□ **Fig. 95** Take the 2 #6633 felt seals out and slip them on the hubs, as shown.

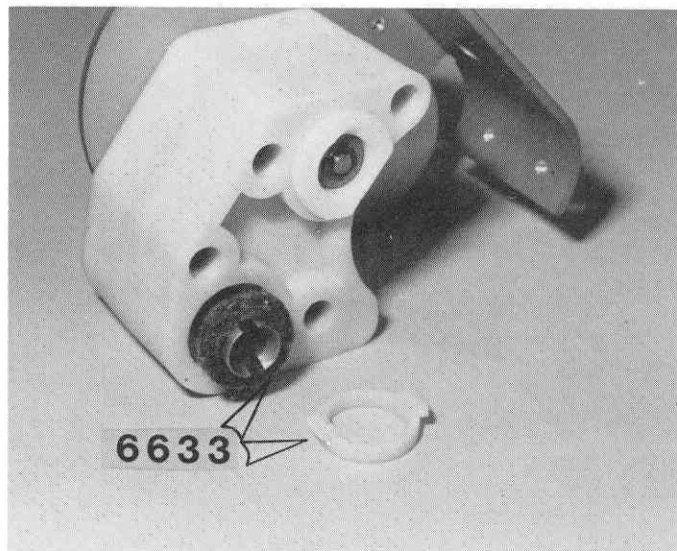


Fig. 95

□ **Fig. 96** Now push the 2 felt retainers on. They should snap in. "Ears" should be horizontal. If they're loose, use a drop of contact cement to hold them in.

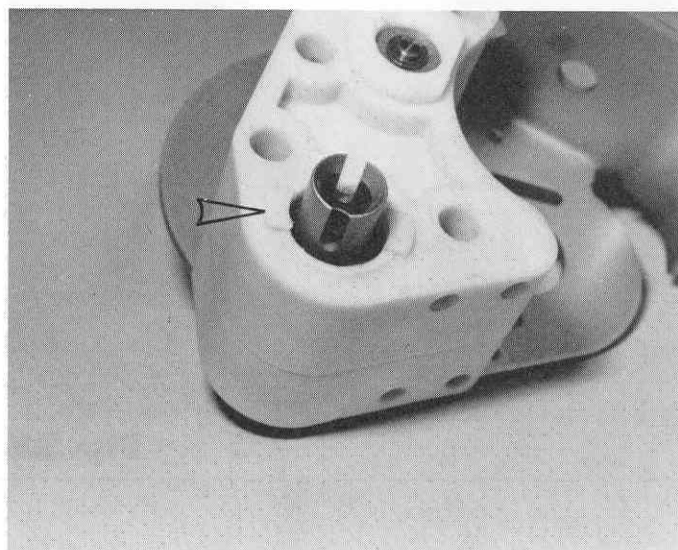


Fig. 96

□ **Fig. 97** Take the sheet of double sided contact tape and cut a piece, as shown.

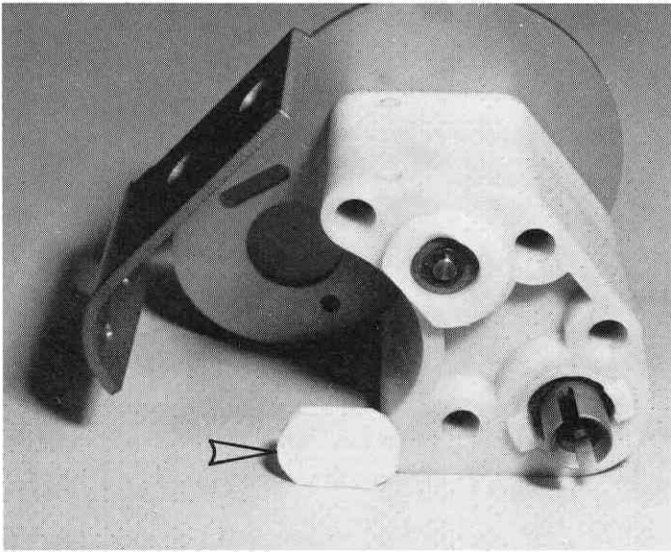


Fig. 97

□ **Fig. 99** 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.

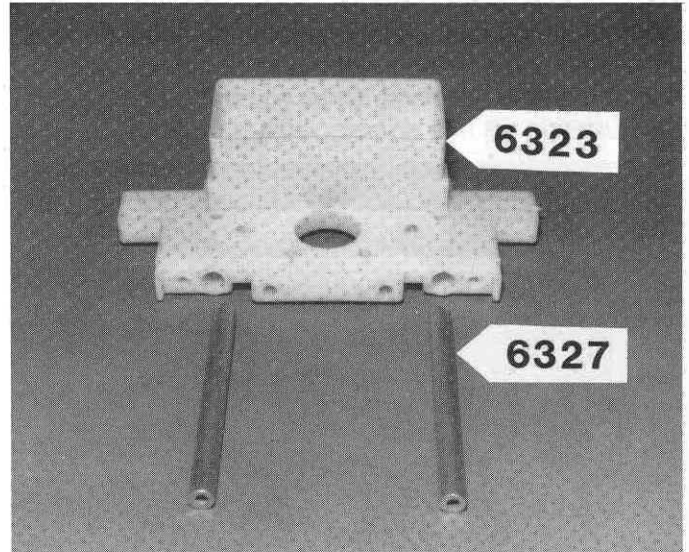


Fig. 99

□ **Fig. 98** Pull the easiest to remove side of the tape off and stick the tape to the housing to act as a dust cover.

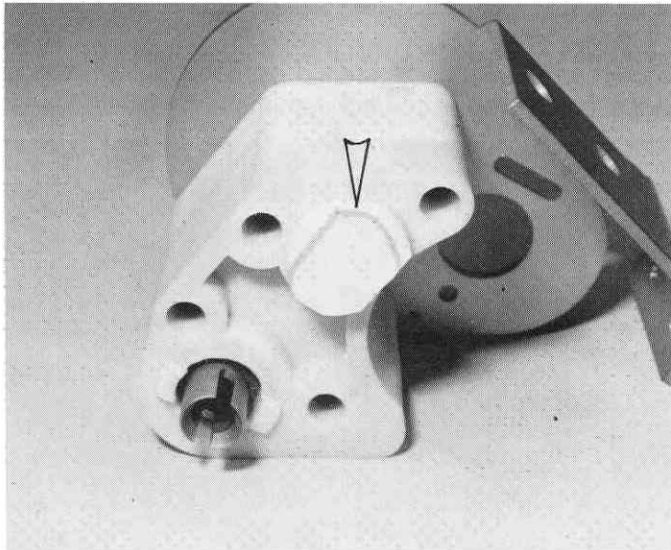


Fig. 98

□ **Fig. 100** Take the 2 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 2 4/40 Allen screws, as shown, but do not tighten these down yet. We'll be tightening these 4 screws down later.

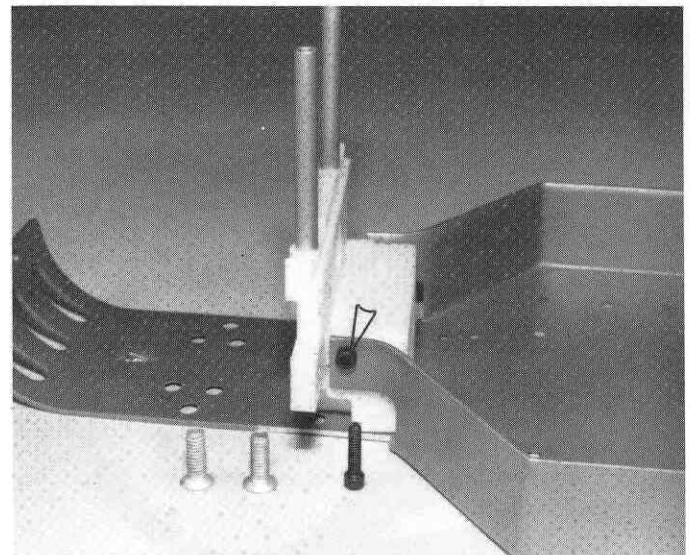


Fig. 100

☐ **Fig. 101** Install 2 ball ends into the upper, inner holes, as shown.

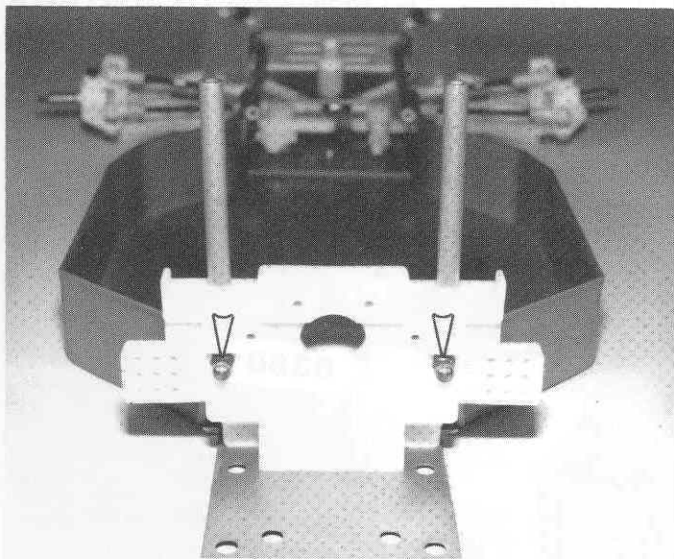


Fig. 101

☐ **Fig. 103** These 6 screws should be loose yet.

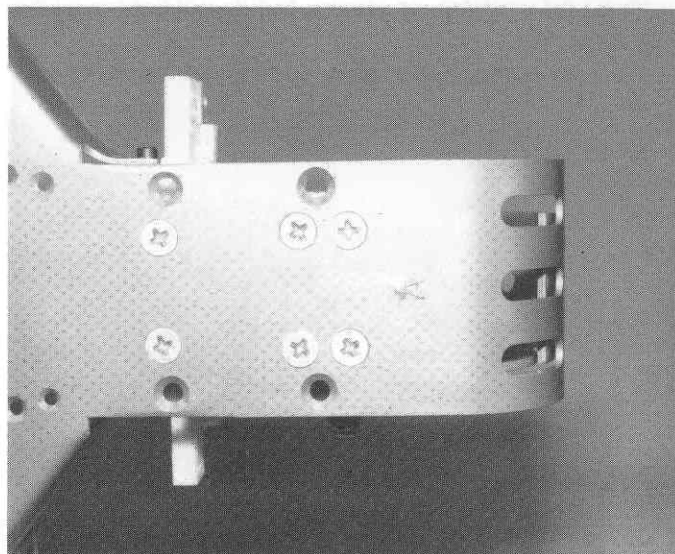


Fig. 103

☐ **Fig. 102** Take the transmission housing and install it with 4 Phillips screws. 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.

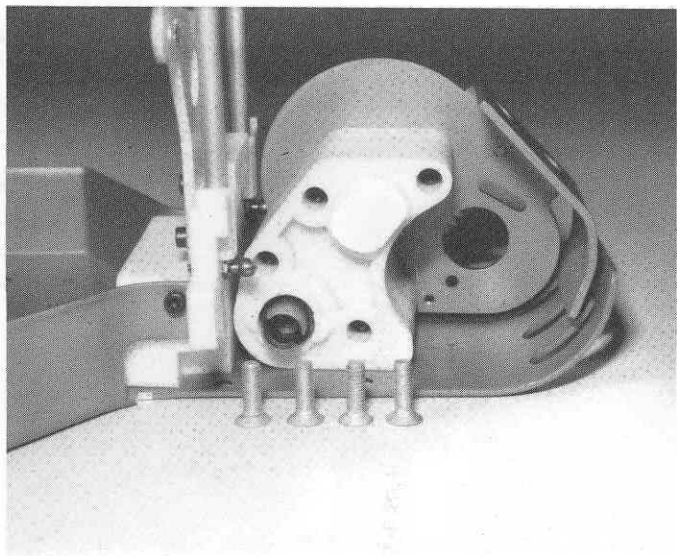


Fig. 102

☐ **Fig. 104** Take the #6325 transmission brace and install the rear body mount.

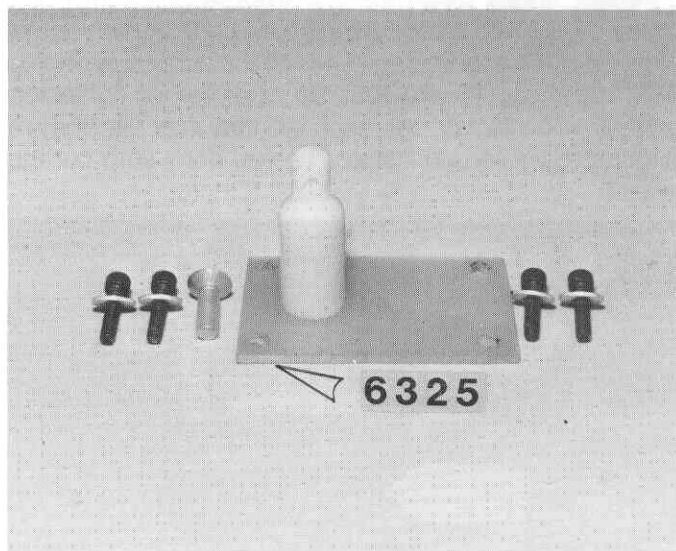


Fig. 104

Fig. 105 Install the transmission brace with 4 Allen screws and washers, as shown, but do not tighten all the way down yet.

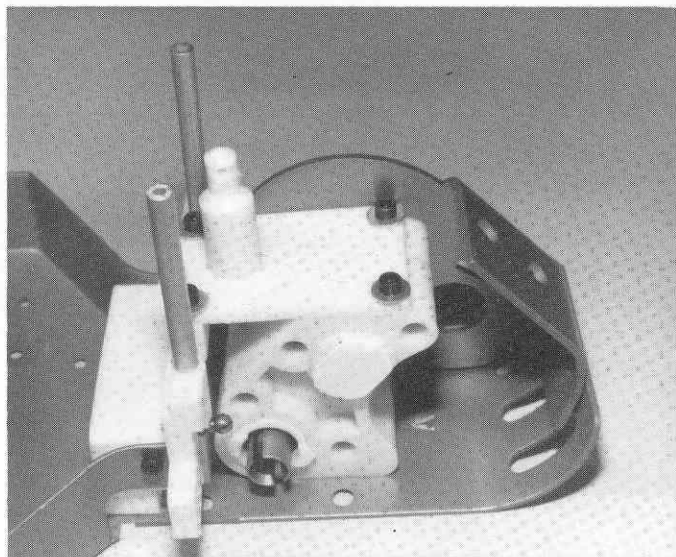


Fig. 105

Fig. 106 Attach the rear of the chassis plate to the motor mount with 2 short Allen screws and tighten down. Now go back and tighten down all the screws in photos #99, 100, 102, 103 and 105. 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.

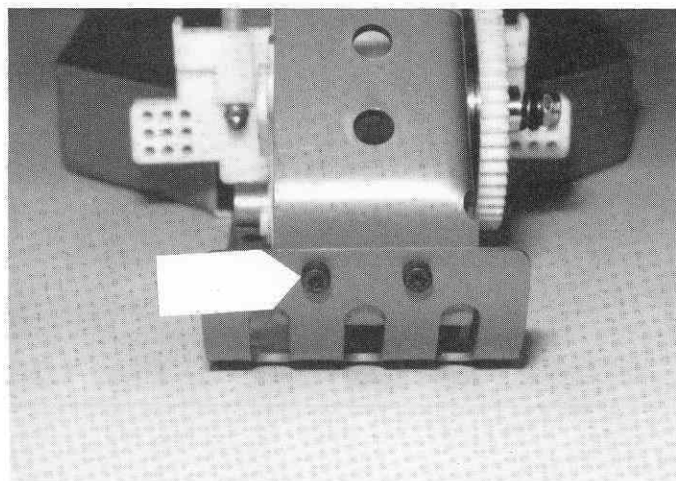


Fig. 106

Fig. 107 Take the #6360 rear suspension mount, out of bag #6-8, with the letter "L" on the bottom, the #6355 L.H. rear "A" arm and the #6380 inner hinge pin. Line up the holes in the arm and mount and install the pin. Install the 2 "E" clips.

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

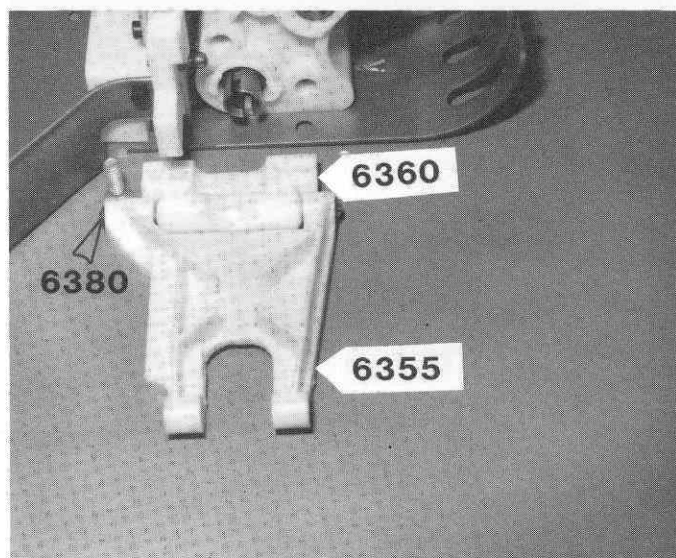


Fig. 107

Fig. 108 Install the L.H. mount to the chassis with 2 Phillips screws as shown. Now, install the R.H. arm.

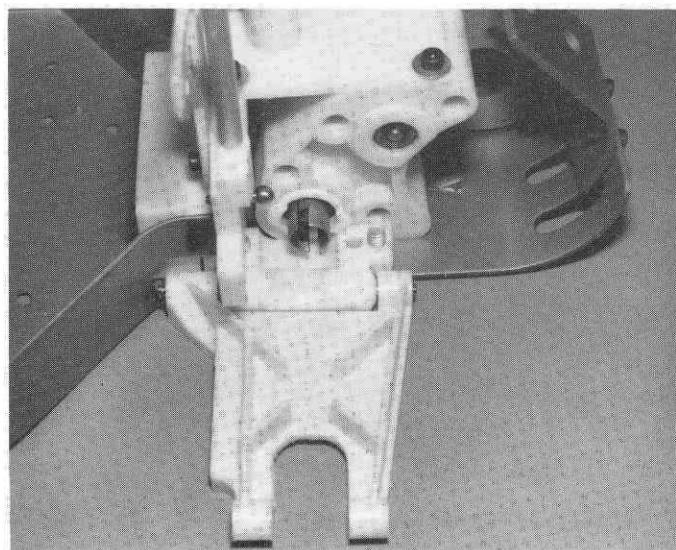


Fig. 108

❑ **Fig. 109** Before proceeding with the assembly of the rear hub carrier it's a good idea to check fit of the dogbone in the stub axle. If it does not slide and swivel freely then check for burrs around the dogbone pins or heat treating residue inside the stub axle. Also check that the 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.

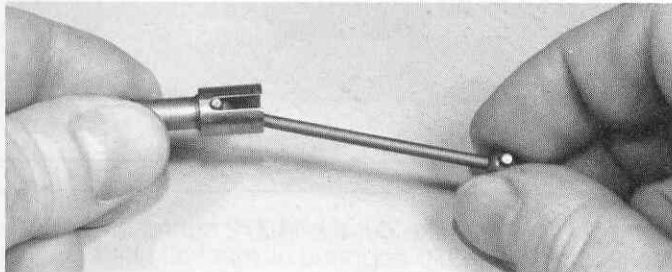


Fig. 109

❑ **Fig. 110** Take the #6374 rear stub axle and slip the flat washer, as shown, onto the axle. Install the bushing into the #6366 LH rear hub carrier in the direction shown. If you're installing ball bearings, install one of the large #897 bearings on each side of the #6366LH hub carrier, and remove the flat washer from the axle. It is only used with bushings. Oil the bushing and slip the axle into the bushing. Now take the cone washer, the one that is not flat, and slip it on the shaft so that the part that touches the bearing is the center of the washer.

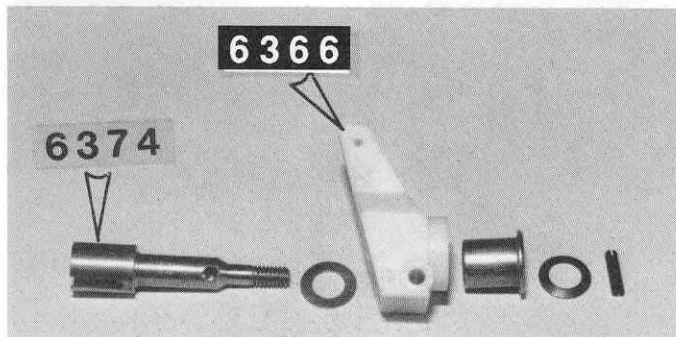


Fig. 110

❑ **Fig. 111** 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.

An alternate method of installing the pin is shown in Fig. 111a, 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.

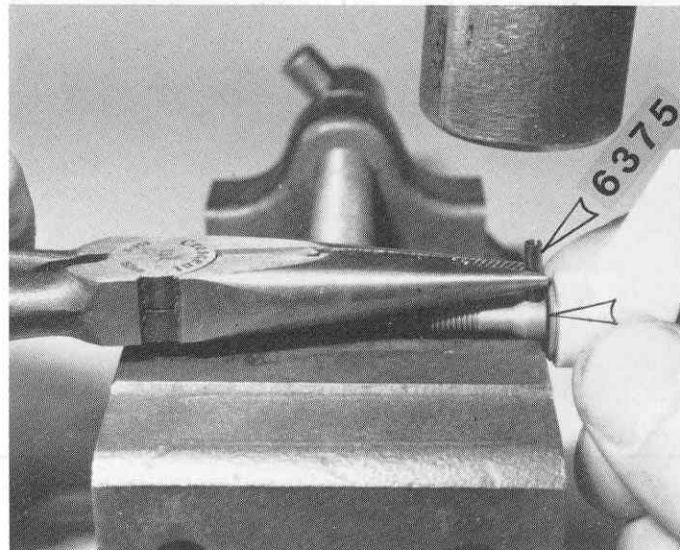


Fig. 111

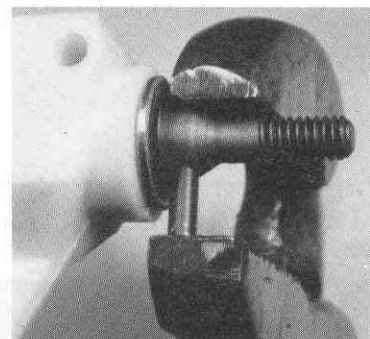


Fig. 111a

□ **Fig. 112** Install the LH hub carrier in the LH "A" arm with the #6381 outer hinge pin. Install 2 "E" clips. Install a long ball end in the forward side of the hub carrier, as shown, and install the nut. Install the R.H. hub carrier.

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.

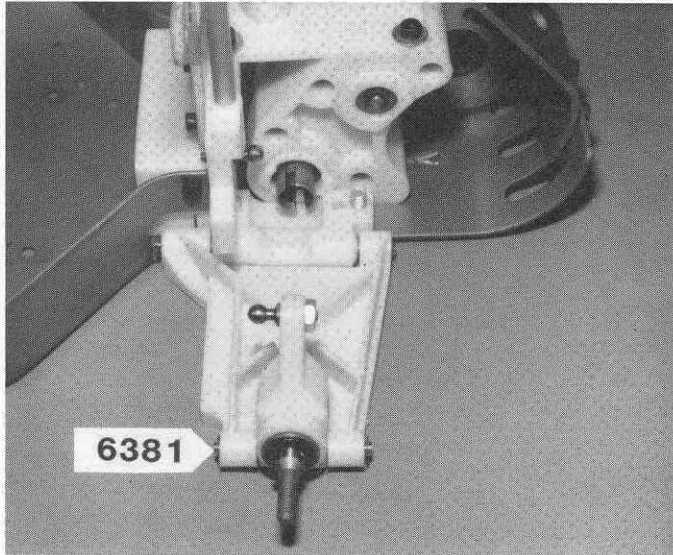


Fig. 112

□ **Fig. 113** Your L.H. rear end should look like this now.

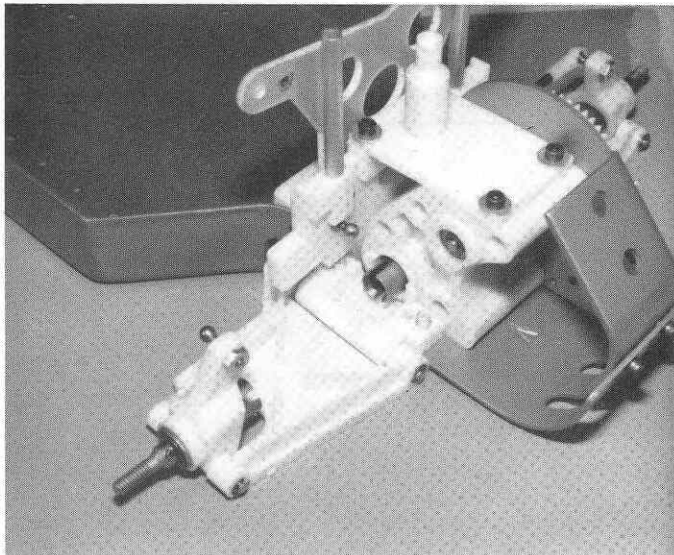


Fig. 113

□ **Fig. 114** Take the 2 threaded rods and screw 2 plastic rod ends on each to the dimension shown. Note that on this strut one ball faces forward and one faces to the rear.

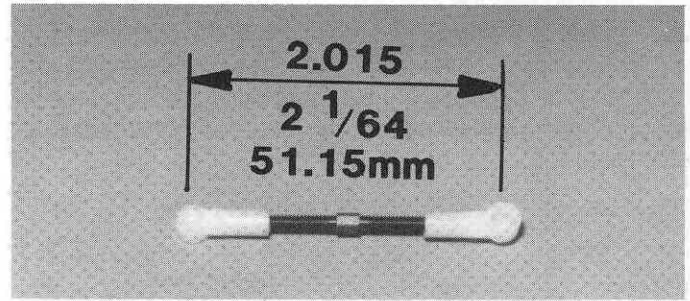


Fig. 114

□ **Fig. 115** Take out the #6372 spring and nylon washer and the #6370 dogbone or rear half-shaft. Push the nylon washer into the #6612 axle drive gear.

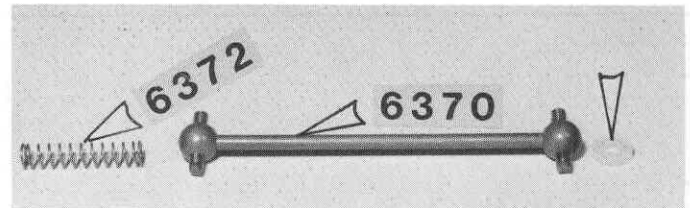


Fig. 115

□ **Fig. 116** 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.

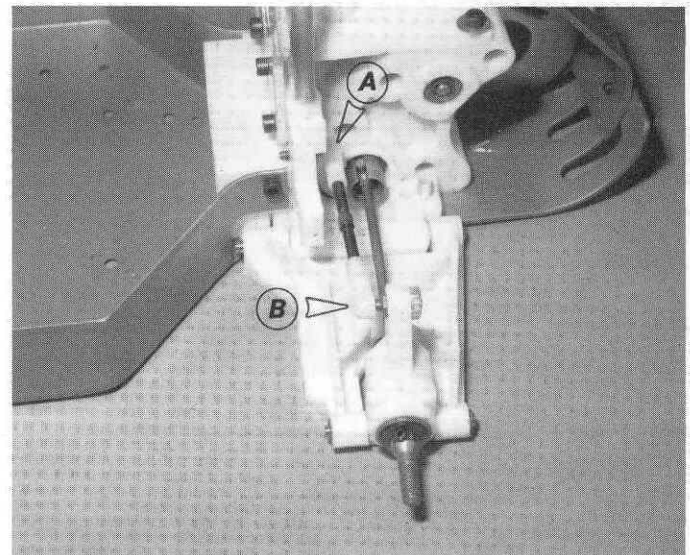


Fig. 116

☐ **Fig. 117** Take bag #6-9 and we'll assemble the rear shocks now. Take out the parts, as shown.

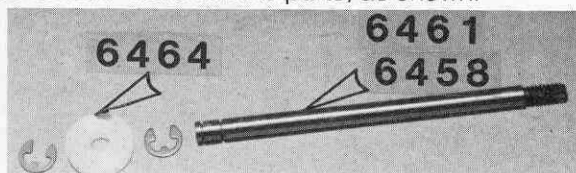


Fig. 117

☐ **Fig. 118** Slip on one "E" clip.

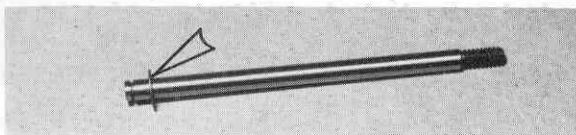


Fig. 118

☐ **Fig. 119** Slip on the #6464 piston and then another "E" clip. Make sure the "E" clips are fully seated. Take 3 of the plastic spacers, as shown, and slip them onto the shaft from the threaded end. Push the spacers all the way up to the piston. This will add a "downstop" to your rear shocks which will prevent the wheels from dropping down too far and possibly breaking a dogbone. Add the stop to the REAR SHOCKS ONLY.

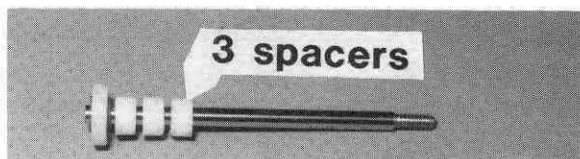


Fig. 119

☐ **Fig. 120** Take the #6452 and install the parts in the end in the order shown (see also Fig. 120a). First, push the small nylon washer in all the way to the stop. Next push in one red "O" ring. Then the nylon spacer, and now the 2nd red "O" ring. Then the large nylon washer. Now install the large inner "C" clip. Start one end of the clip in, hold it down with your finger. Now, with a small screwdriver, push the other end over and in. If you have trouble installing the clip try this other method: start one end of the clip in and hold it down with your left thumbnail. Now start working your right thumbnail around, pressing the ring into the hole as you go. By the time you get to the other end of the clip it will snap into the groove.

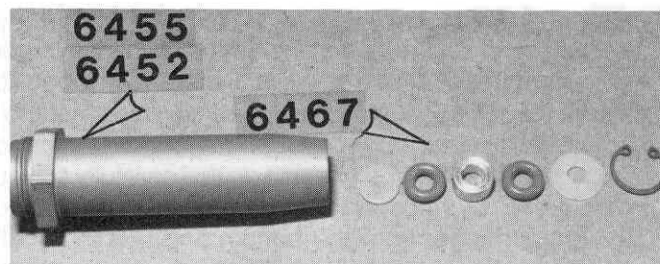


Fig. 120

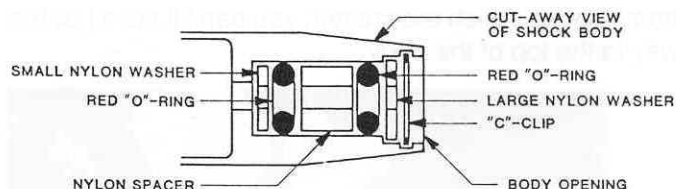


Fig. 120a

☐ **Fig. 121** Make sure the clip is fully seated.

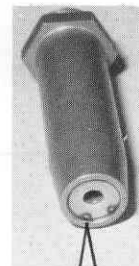


Fig. 121

☐ **Fig. 122** Your kit comes with the highest grade synthetic shock oil available. However, Associated also has available a better racing silicone shock oil (Fig. 122) used by the Team. If you're planning on using the silicone oil, it's better to use the silicone oil first instead of using the synthetic oil.



Fig. 122

☐ **Fig. 122a** While holding the shock body upright as shown, block off the hole at the bottom with your finger and put about 10 drops of oil into the shock body to lubricate the "O" rings. Now, very carefully and smoothly, push the shock shaft down through the shock body and through the "O" rings. You want to do this carefully so you don't cut the "O" rings which will make the shock leak. Release your finger from the bottom and pull the shaft SLOWLY all the way through until the piston bottoms out. While still holding the body upright, fill the body with the shock oil to within 1/32" (.79mm) of the top. Note - on the front shocks, which are shorter, you can fill the oil all the way to the top of the body.

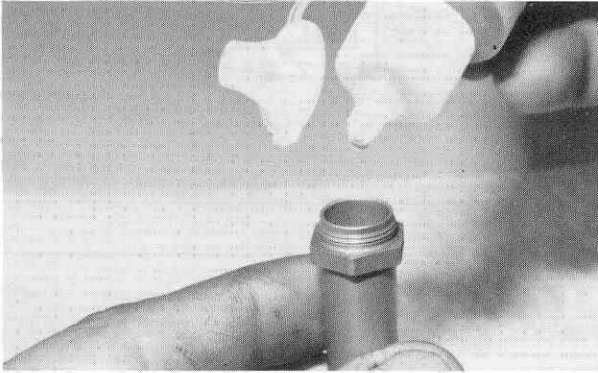


Fig. 122a

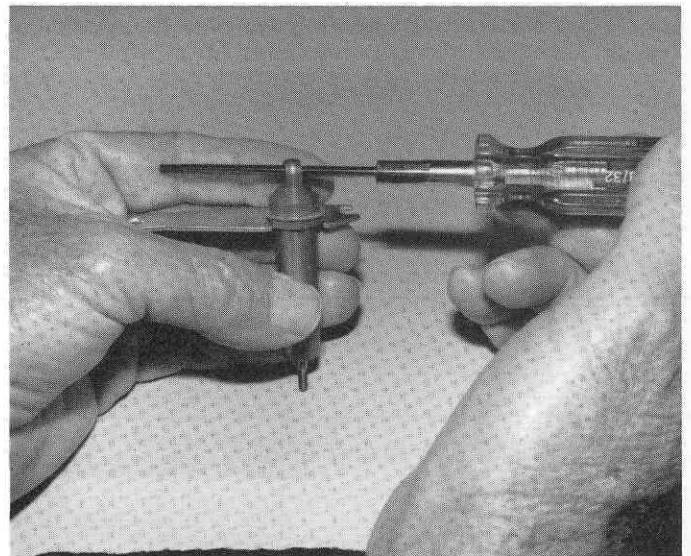


Fig. 124

☐ **Fig. 125** Your shock should look like this. Now do the other rear shock and the 2 front shocks in bag #6-10. Remember that the front shocks don't use the plastic stops.



Fig. 125

☐ **Fig. 123** While holding the body upright, slip the large nylon washer down over the threads. Now screw the #6463 cap down over the body.

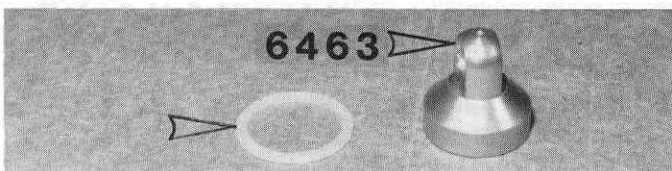


Fig. 123

☐ **Fig. 126** Your front and rear shocks should look like this, and they should all feel quite smooth when you move the shafts in and out.

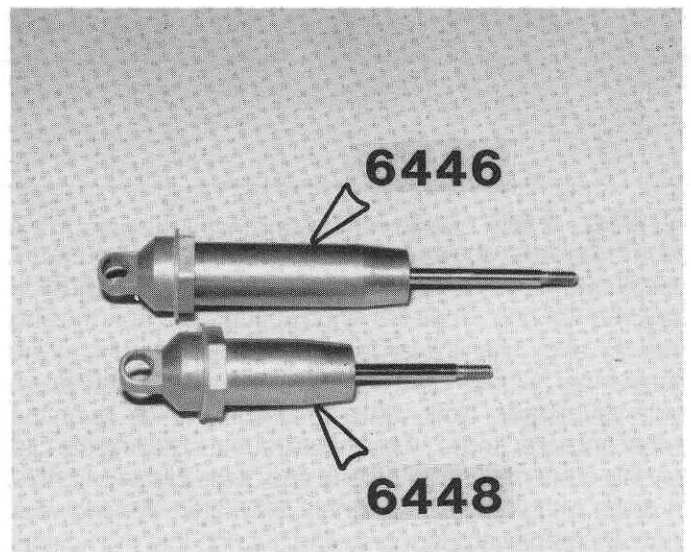


Fig. 126

☐ **Fig. 124** You can use a 1/2" wrench, or the Associated #6955 shock wrench to hold the nut, then stick a rod through the cap and tighten it down.