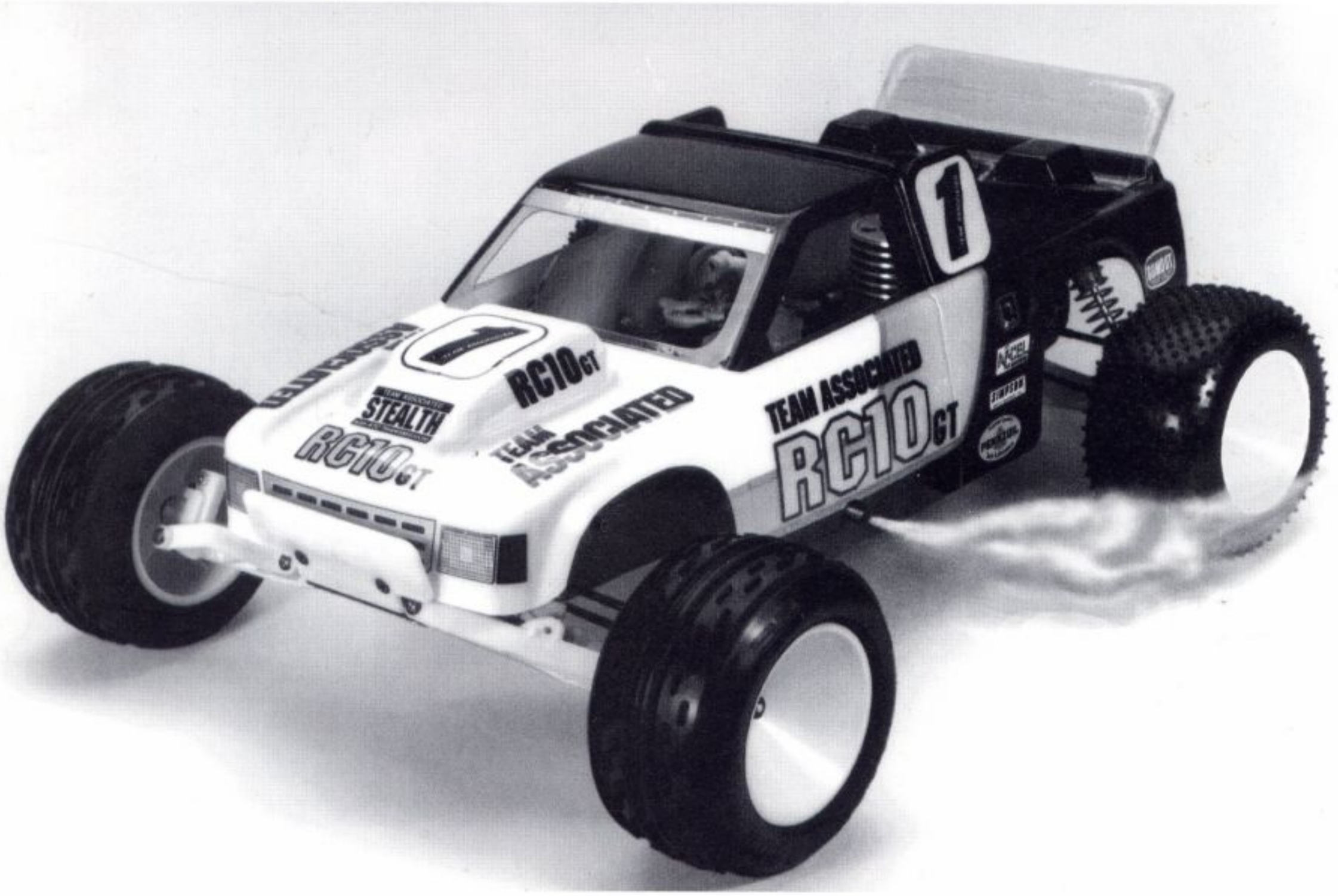
TEAM ASSOCIATED

RC10GT

1/10 SCALE GAS OFF ROAD TRUCK



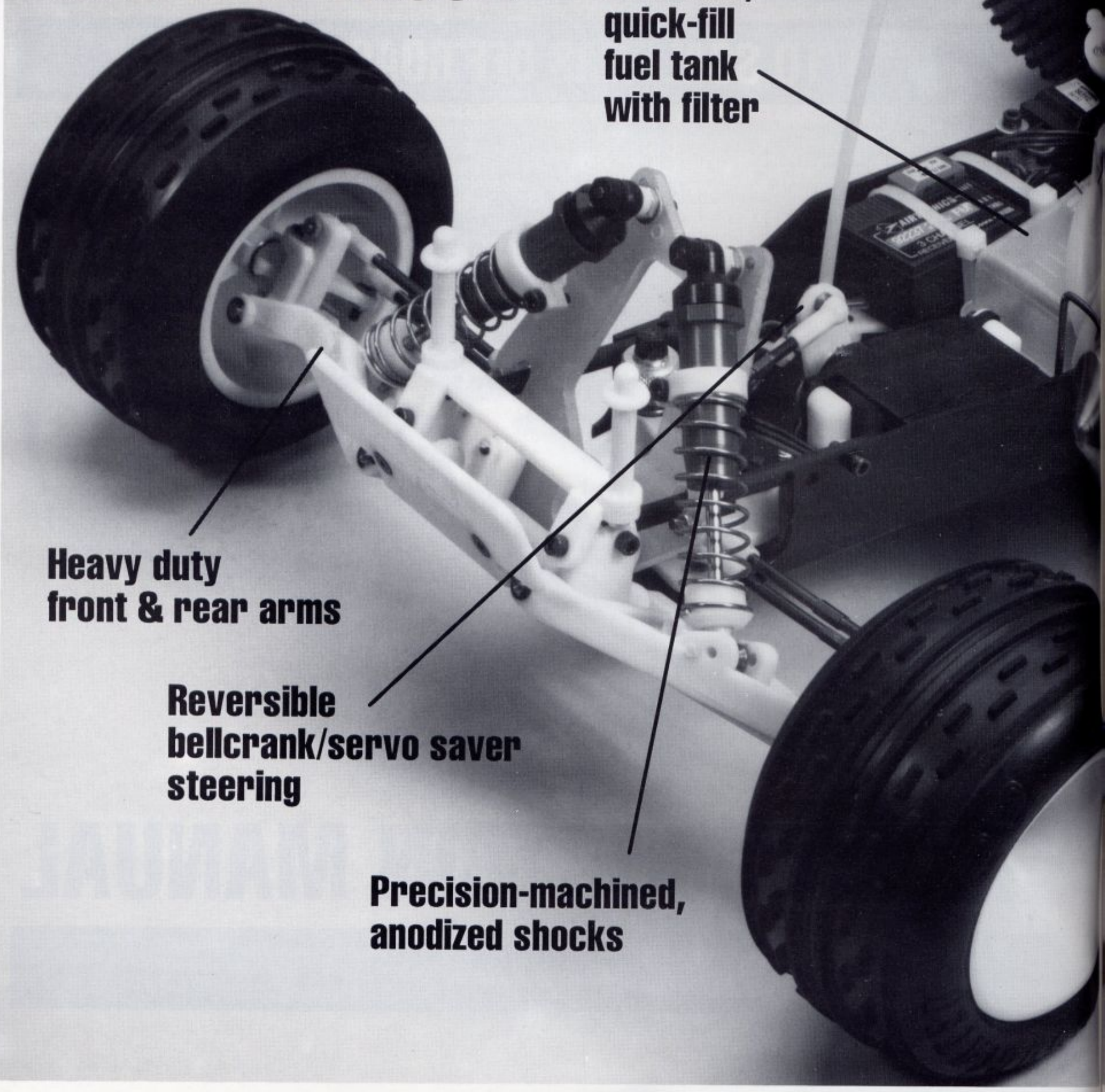
KIT INSTRUCTION MANUAL

THE NEW RC10GT 1:10 GAS TRUCK

Powerful
rear disc brakes

Adjustable clutch

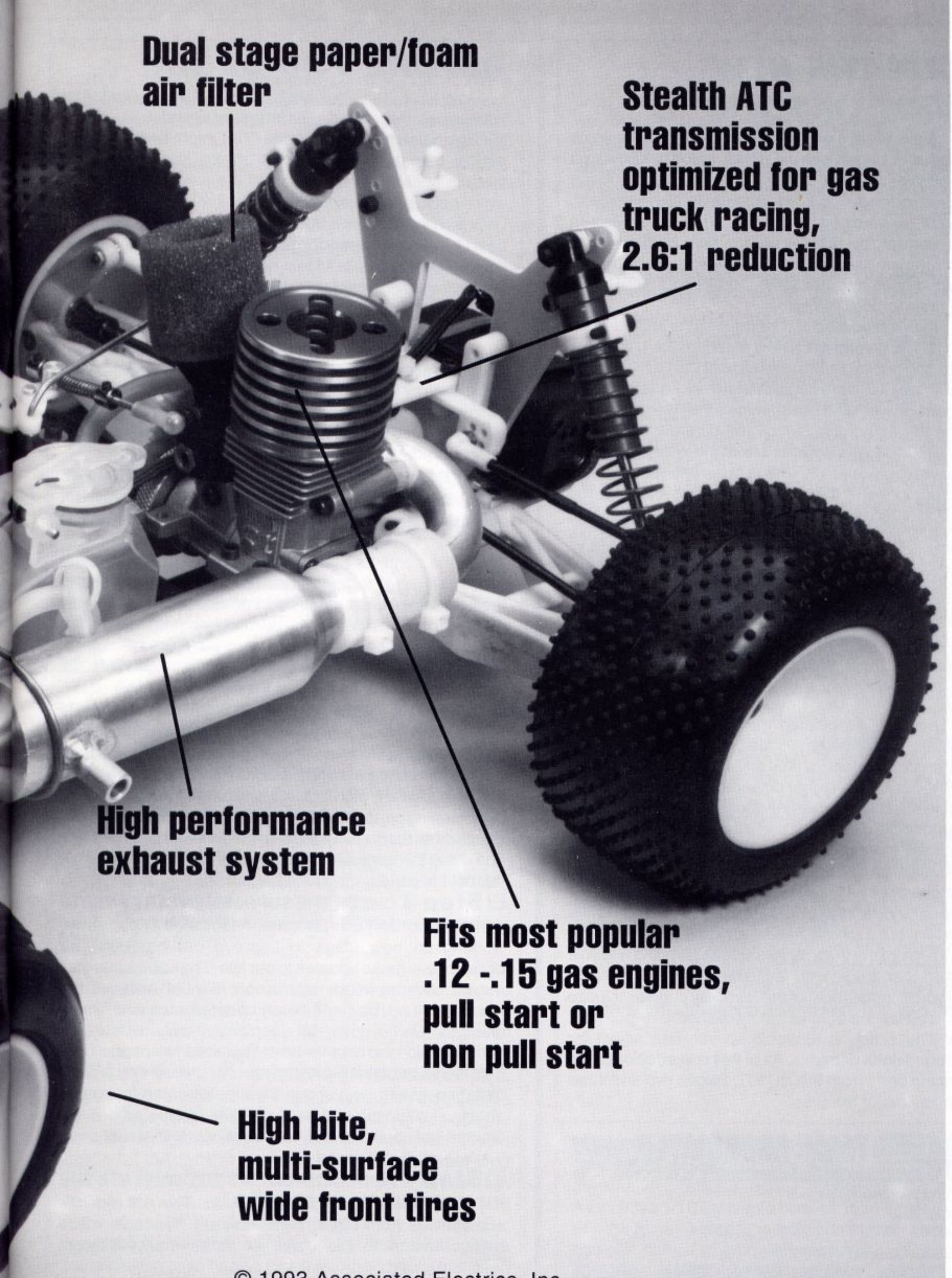
2-second,
quick-fill
fuel tank
with filter



Heavy duty
front & rear arms

Reversible
bellcrank/servo saver
steering

Precision-machined,
anodized shocks



The truck shown here is just one of the different kits available.
Kits come in a variety of configurations.

ABOUT THE NEW RC10GT GAS TRUCK

Team Associated's original involvement in 1/10 scale off road vehicles began with the RC10, which has now won four IFMAR World Championships, including the 1993 race in Basildon, England. Focusing on continued development, Associated developed the now legendary Stealth Transmission for the IFMAR Worlds held in Australia in 1989. This transmission has contributed to three of the four RC10 World titles and the 1990, 1992 and 1993 ROAR National titles for 2WD buggies.

When Associated first introduced the RC10T truck in early 1991, it helped set a new standard for 1/10 scale electric racing trucks. Until the release of the RC10T, most of the early truck kits were buggies with truck parts installed. The suspension was still limited because they were designed according to buggy rules, which are different from truck rules. The RC10T was designed from the ground up to be a truck so we could take advantage of the differences in the rules and components that apply to the trucks and not to the buggies. Our success with the RC10T has proven itself on the race track. In the short time the truck has been out it has won the 1991 & 1992 NORRCA Nationals and the 1992 & 1993 ROAR Nationals.

Now Associated has taken the race winning features from our RC10T and applied them to our newest vehicle, the RC10GT gas truck. There has been a growing number of people who have been converting their 1/10 scale electric racing trucks to gas power. The RC10GT was designed to meet the needs of these customers.

This new Associated truck features a new gas truck chassis, new servo saver design, a new laydown case Stealth transmission with a final drive ratio of 2.60:1, and a larger diff to handle the higher powered gas engines. It also includes an Associated-designed constant pressure, quick fill fuel tank, single disk brake, and a tuneable clutch design. This truck will have the same handling and performance characteristics as our electric versions, but with the run time and power of gas. You will find some changes in the basic appearance and layout due to the gas engine and fuel tank location, but it will still handle and feel like the electric RC10T. To make the truck as versatile as possible we have engineered our truck with adjustable engine mounts, allowing you to install most of the currently popular .12 size engines. You will be able to mount standard or pull start engines. The clutch is tuneable so you can adjust for different conditions or tracks. All of this is in addition to the race-winning parts from the RC10T. Pages two and three picture these major features.

TEAM ASSOCIATED

ASSOCIATED ELECTRICS, INC.
3585 Cadillac Ave.
Costa Mesa, CA 92626

BEFORE YOU BEGIN:

We have done our best to give you easy-to follow instructions, including a separate manual and VHS video in the Engine Accessory Package. You might be tempted to put the truck together from the photos alone. However, there is additional information in the written instructions which could affect the quality of your final assembly. While you have the best gas truck kit available, if you want the best COMPLETED model gas truck, then you will want to just read the few lines of text near each photo. Take your time assembling your truck. It's not a race to see how fast you can put your truck together; it's how well you put your truck together that will determine how fast you race.

This manual covers all the different Sport (bushing) and Team (bearing) models of the gas truck. We have made it easy for you to follow your own truck version by noting their differences in the text; also, there will be either clearly marked photos showing the different part numbers for each model, or separate assembly sections.

❑ **Step 1 OPEN THE PARTS BAGS WHEN THE STEP SPECIFIES, NOT BEFORE,** otherwise you'll get the parts mixed up and then you will have trouble assembling your truck. When you open each main bag for the first time, check the contents against the separate parts list sheet (accompanying the manual) for that bag. This sheet shows the contents of each bag by part number and quantity. All parts bags are referred to by number or name in the instructions. But only the main parts bags are numbered. The unlabeled bags inside the main parts bags share the same bag number as the bag they came out of.

❑ **Step 2 KEEP THE PARTS SEPARATE.** While building the truck you will sometimes be working with several bags at the same time. Try not to get the parts from one bag confused with the parts from another. Large paper plates (especially picnic plates with partitions) are ideal for both keeping parts separate and spreading them out where you can find them easily. Mark the plates with bag numbers and dump the parts into them. When the parts are used up, relabel the plate for the next bag.

❑ **Step 3 CHECK THE SUPPLEMENTARY SHEETS FOR KIT UPDATES.** Because Associated is constantly working on new ideas to improve our products, we occasionally make updates to our kits. These updates may not be covered in the instruction manual because the manuals cannot be immediately updated each time. These changes will be noted by supplementary sheets which explain which parts have been replaced or changed. So before you begin assembling your kit, please check each parts bag to see if they contain any supplementary instruction sheets. If so, locate the section of the manual where this change first applies and attach the sheets to that section so you will not forget them.

❑ **Step 4 ADDITIONAL ITEMS TO COMPLETE THE KIT OR MAKE IT OPERATIONAL:** This kit requires components from other manufacturers. We have made every attempt to have our kit fit as many different

manufacturers' components as possible, but it is the buyer's responsibility to make sure the items will fit our kit.

❑ 2 Channel R/C surface radio system
❑ .12 ci. Glow fuel R/C motor (with or without pullstart)
❑ Receiver battery pack
❑ Battery charger (if receiver pack is Ni-Cad batteries then you will need a charger for this pack)
❑ Glow plug igniter system
❑ Fuel tank fill bottle
❑ Starter box, or electric hand starter with car starter donut (for non pull-start motors)
❑ 12 volt battery for starter system (for non pull-start motors)
❑ R/C car glow fuel (we recommend only Blue Thunder or O'Donnell racing fuels)
❑ Associated Engine Accessory Pack (kits #7050, 7060).

❑ **Step 5** **TOOLS.** You will need to supply the following:

❑ 1/8" flat blade screwdriver
❑ #2 Phillips screwdriver
❑ #1 or #0 Phillips screwdriver
❑ A hobby knife, such as an X-acto©, with a pointed blade
❑ 5/16" nut driver (Associated #SP-78) or deep reach glow plug wrench
❑ Needle-nose pliers
❑ Small hammer (brass head or ball peen preferred)
❑ A ruler with decimal inches or metric measure
❑ Locktite threadlock #242
❑ blue Super Glue (cyanoacrylic adhesive)
❑ 3/32" drill bit to drill motor
❑ Plastic sandwich bag
❑ .126 reamer
❑ Dremel tool with reinforced cutoff blade #426.

This kit contains a shock/turnbuckle wrench and four Allen wrenches. You will find the following screwdriver handle-type tools (except the vise) are easier to use and can replace them:

- 3/16" nut driver (will make installing the ball ends and small pattern 4-40 nuts easier) (Associated #SP-86)
- 1/4" nut driver (will make installing the standard 4-40 nuts faster and easier) (Associated #SP-85)
- 11/32" nut driver (for installing 8-32 rear axle locknuts) (Associated #SP-82)

❑ Small vise.

WARNING! *Do not use a power screwdriver to install screws into nylon parts. The rotation speed is too fast, and will cause the screws to heat up when being driven into plastic or nylon, and they will strip out.*

❑ **Step 6** **IF DYEING YOUR PARTS.** The nylon parts in your kit are made from virgin material, so they can be dyed. Observe the following precautions: **(1)** To keep the color consistent on all of the parts, the container should hold all of the parts at the same time. **(2)** Use Dylon (true nylon or plastic dye) or clothing dyes (liquid or powder). Follow the dye companies' safety precautions and instructions. **(3)** To prevent warpage of any critical parts, leave the runners on the suspension arms and bolt the transmission case halves together. After dyeing has been completed, the runners can be removed from the suspension arms and the case halves unbolted. Your kit will have our new black suspension arms, which cannot be dyed.

❑ **Step 7** **FINAL NOTES.** **(1)** Experienced builders and racers: PLEASE BUILD THE TRUCK OUR WAY FIRST!! The RC10GT is a remarkably fast truck right out of the box. There's a good reason for everything on the truck, and very few compromises were made in its design. If you build it our way first you can see what the truck is capable of before you make changes and you will then have something to compare against. **(2)** Put a check mark in the box (❑) at the beginning of each step after you finish it. Then when you stop during assembly, it will be easier to find where you need to continue from. **(3)** To help you identify certain parts, occasionally an actual-size drawing will accompany the photo. (See example in fig. 1.) You can place your part on top of the drawing to be sure you have picked up the right part. You will end up with some spare parts and fasteners because we have given you extra ones. **(4)** We have used some special abbreviations throughout this manual for the various types of screws used. The following list identifies what the abbreviations stand for:

- FHMScrew: Flat Head Machine Screw. Requires a Phillips screwdriver.
- FHSScrew: Flat Head Socket Screw. This and the following two screws require an Allen wrench or driver.
- BHSScrew: Button Head Socket Screw.
- SHCScrew: Socket Head Cap Screw.

(5) In order to keep a sense of direction when building the truck we use the following descriptions to standardize the right and left sides of the vehicle. The driver's or left side: with the driver sitting in the driver's seat facing the front of the truck, his left hand side is the driver's side. The passenger or right side will be the driver's right hand side. **(6)** The three following types of special instructions, *in italics,* will be used throughout the manual:

Racer's Tip: *This is a trick used by some of the Team Drivers to improve their truck's handling, performance and maintenance.*

Note: *Alternate ways to assemble the kit, including tips for smoothing out difficult assemblies.*

WARNING! *This alerts you to be careful to prevent damage to parts or use of wrong parts that may reduce performance.*

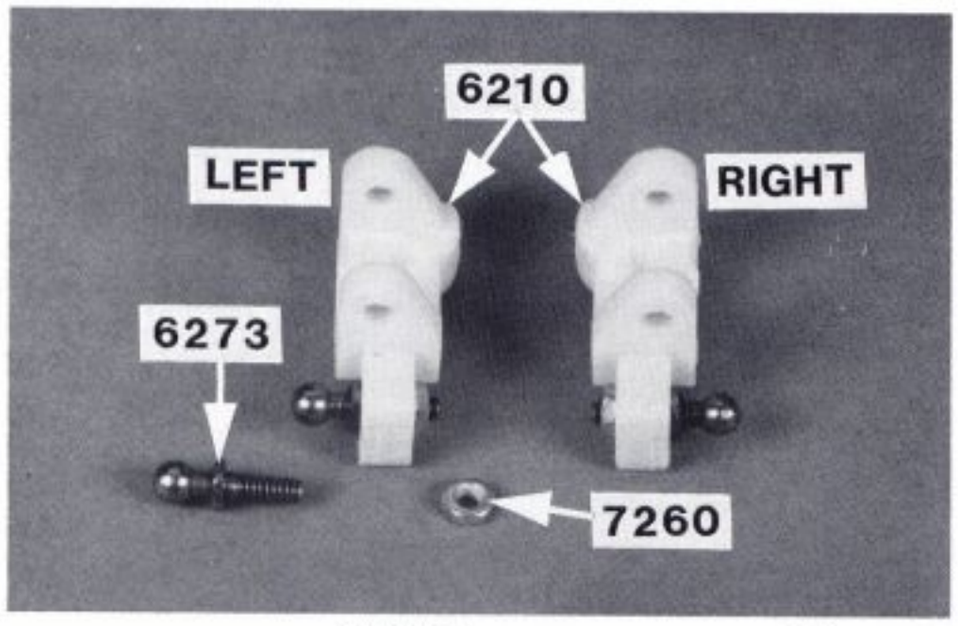
Now clear off your workbench, line up some paper plates, grab a drink and a sandwich, and let's begin!

SAVE THIS MANUAL! This is more than an instruction manual. It is also a handy supplement to the Team Associated 1/10 scale gas truck off road catalog. You can use the manual photos to help you identify part numbers and part names when ordering parts.

All kits follow the instructions below until otherwise indicated.

FRONT END ASSEMBLY

❑ **Fig. 1** *Read pages four and five entirely before proceeding!* From bag #6-14 remove two #6273 long ball ends and two #7260 4-40 small thin plain nuts. Now open bag #7-1 and remove the #6210 30° front carrier blocks. **(1)** Remove the carrier blocks from the small molded runner with your X-acto© knife. **(2)** Screw one of the #6273 ball ends into each carrier block as shown. **(3)** Thread on the #7260 thin plain nuts. (A 3/16" nut driver installs the steel ball ends easier.)



#6273 4-40

#7260 4-40 thin plain nut

Fig. 1

❑ **Figs. 3 & 3A** You will find the two #6220 aluminum inline front axles in bag #7-1. Your axles will look like fig. 3. We are going to install one axle in each #6221 nylon steering block (fig. 3A), making sure that the hole in each axle lines up with the hole in the steering block. The parts should push together with your fingers; if not, you may use a 1/4" nut driver to fit over the threaded end of the axle and then push the axle into the steering block. ***WARNING!*** *Remember the threads on the end of the axle are aluminum and can easily be damaged by the nut driver.* Repeat the process for the second axle and steering block.

Fig. 3

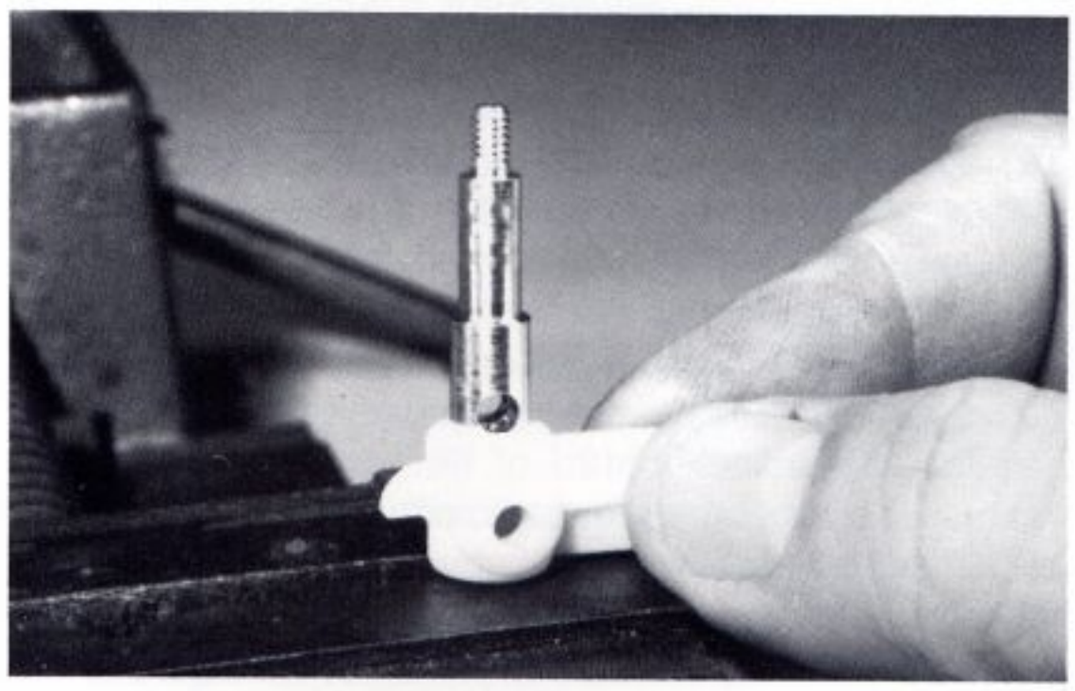


Fig. 3A

❑ **Fig. 2** Go to bag #7-1 again and remove the two #6221 nylon steering blocks. From bag #6-14 remove two of the #6273 long steel ball ends, two #7260 4-40 thin plain nuts, and four #6936 #4 aluminum flat washers. **(1)** Place two washers onto each steel end. **(2)** Screw one ball end into each steering block as shown. **(3)** Thread on the plain nut from the back side.

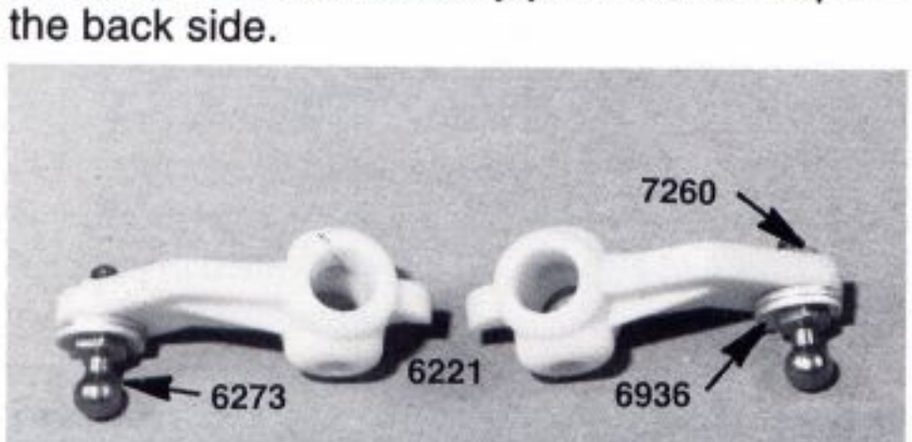


Fig. 2

#6936 #4 flat washer aluminum

#7260 4-40 thin plain nut

#6273 4-40

❑ **Fig. 4** The axle is round and will be fairly tight in the steering block so align the hole in the #6220 axle with the hole in the #6221 nylon steering block as you are assembling the parts. ***WARNING!*** *Do not use pliers on the bearing surface of the axle for this can damage the axle surface so the bearings no longer fit.* The larger diameter of the axle will still be sticking out of the steering block slightly, but that's O.K. Just make sure the holes line up.

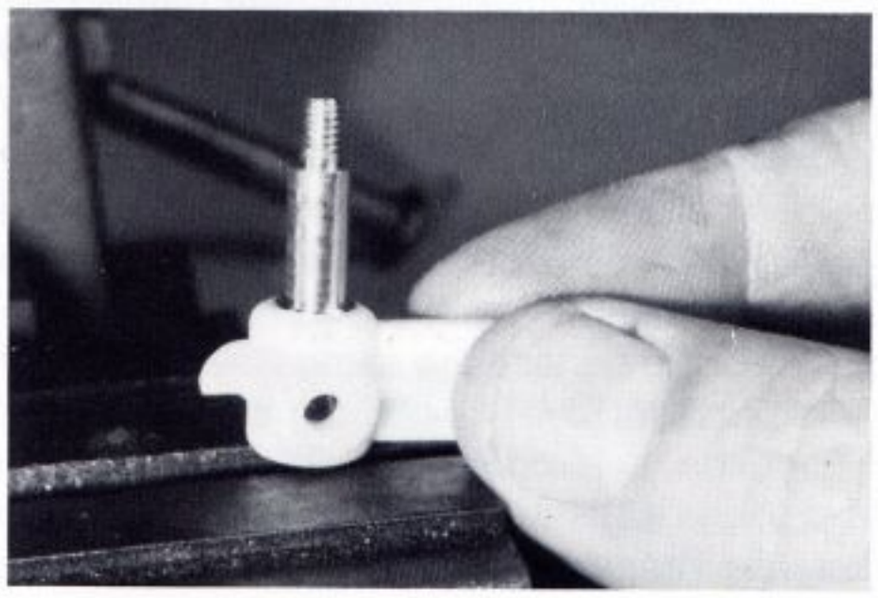
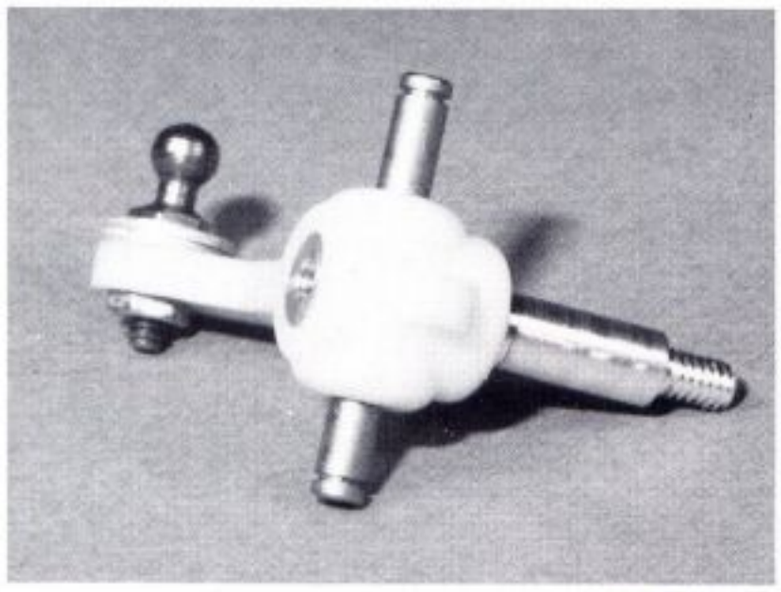


Fig. 4

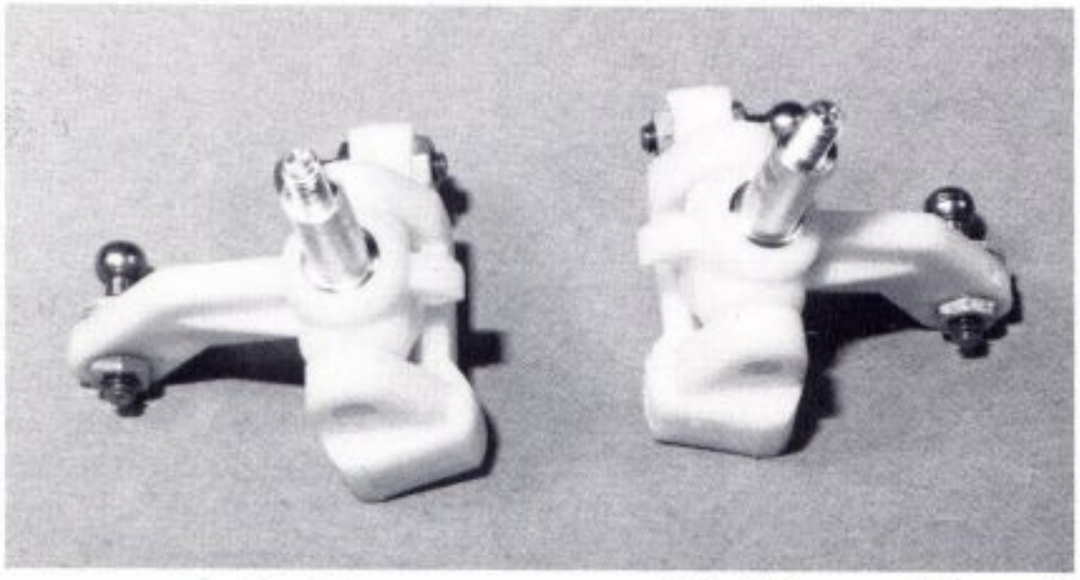
❑ **Fig. 5** In bag #7-1 you will find two #6223 kingpins. Match the pins to the actual size drawing at the bottom of the photo. We now want to check that each kingpin will go through both steering blocks and axles. If you don't do this it will be almost impossible to get the kingpin to go through the #6210 carrier block and the steering block and axle when we assemble them. Once you have checked the fit of the kingpins, remove them again.



#6223

Fig. 5

❑ **Figs. 6, 7, 7A, & 8** **(1)** Take the two #6210 carrier blocks and install the steering blocks and axles into each one. Both ball ends will be on the same side when installed correctly and the raised side of the angle on the bottom of the #6210 carrier block will be away from the ball side. **(2)** Now reinstall one of the #6223 kingpins thru each of the carrier block/axle assemblies as shown in 7 and 7A, trying to center the kingpins. Fig. 8 shows a package of #6299 1/8" E-clips that came from bag #7-1. **(3)** Remove two e-clips and install one into the grooves of the kingpin at each end. **(4)** Now take out two more E-clips and install them on the other kingpin.



right side *left side*

Fig. 6

#6223

#6299
e-clip
1/8 shaft

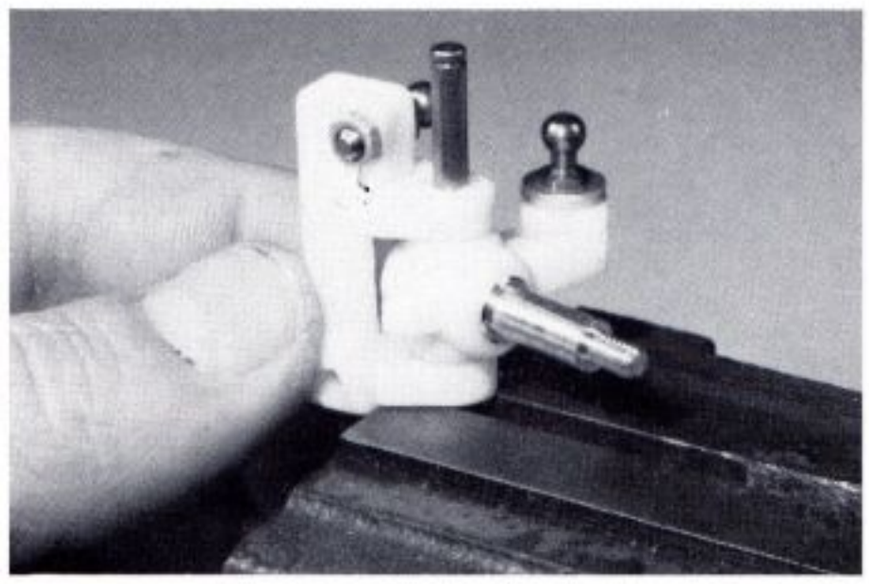


Fig. 7

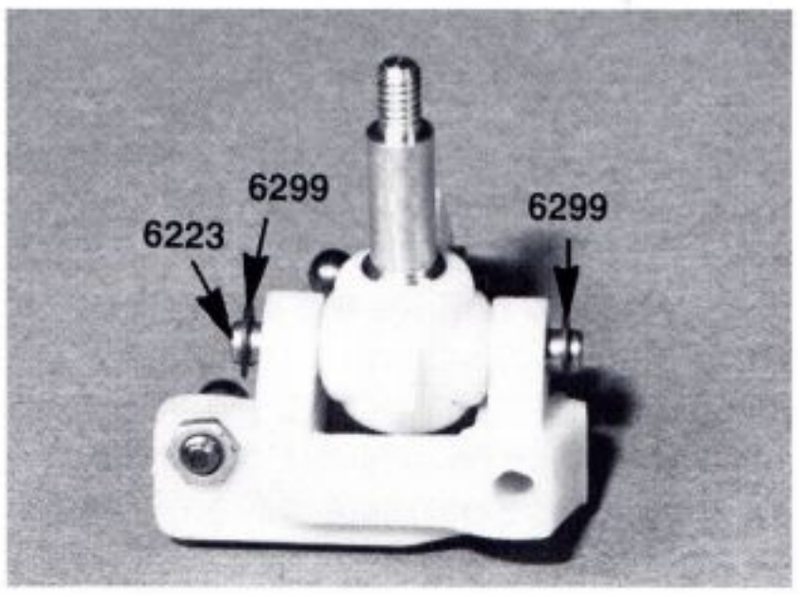
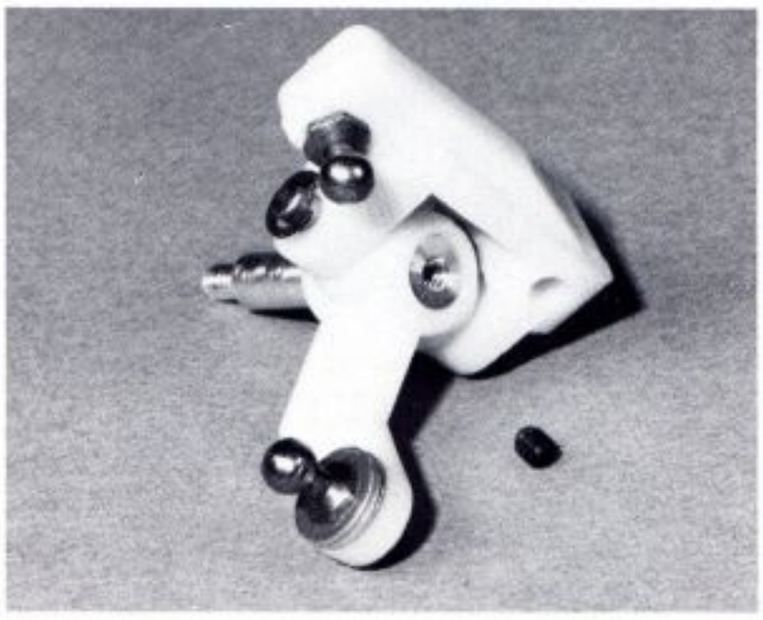


Fig. 7A

E-clips.

Fig. 8

❑ **Fig. 9** In bag #7-1 you will find two small #6951 4-40 x 1/8" set screws. Locate your #6950 tool bag, which is in the large master parts bag. Take out the smallest Allen wrench (.050") which we will use to install the two set screws into the #6221 aluminum front axles. Rotate the steering blocks in the block carriers so you can see the threaded hole on the back side of the #6221 aluminum front axle. Slide one of the set screws onto the Allen wrench and carefully thread the set screw into the back of the front axle until it tightens down on the kingpin as shown in fig. 9. Do the same with the other axle assembly.

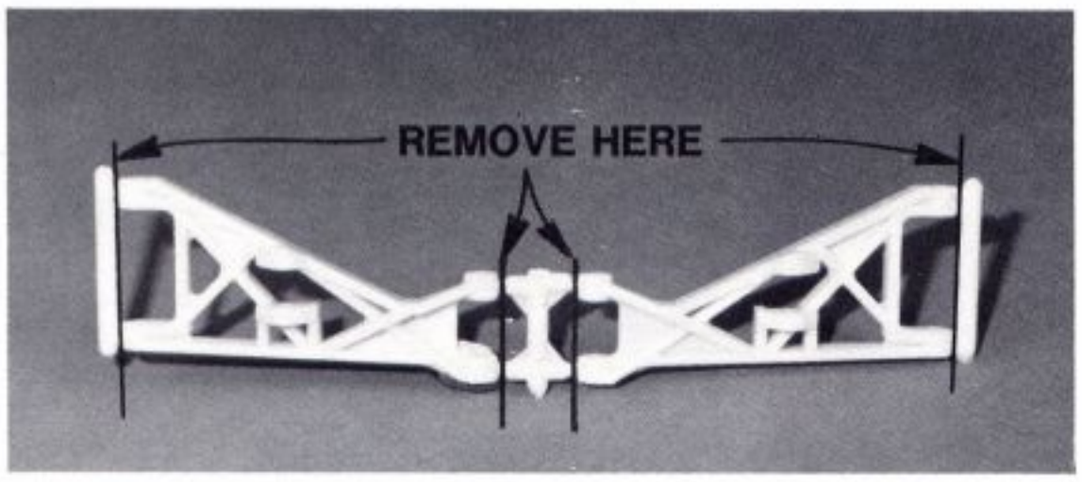


#6951
set screw

Fig. 9

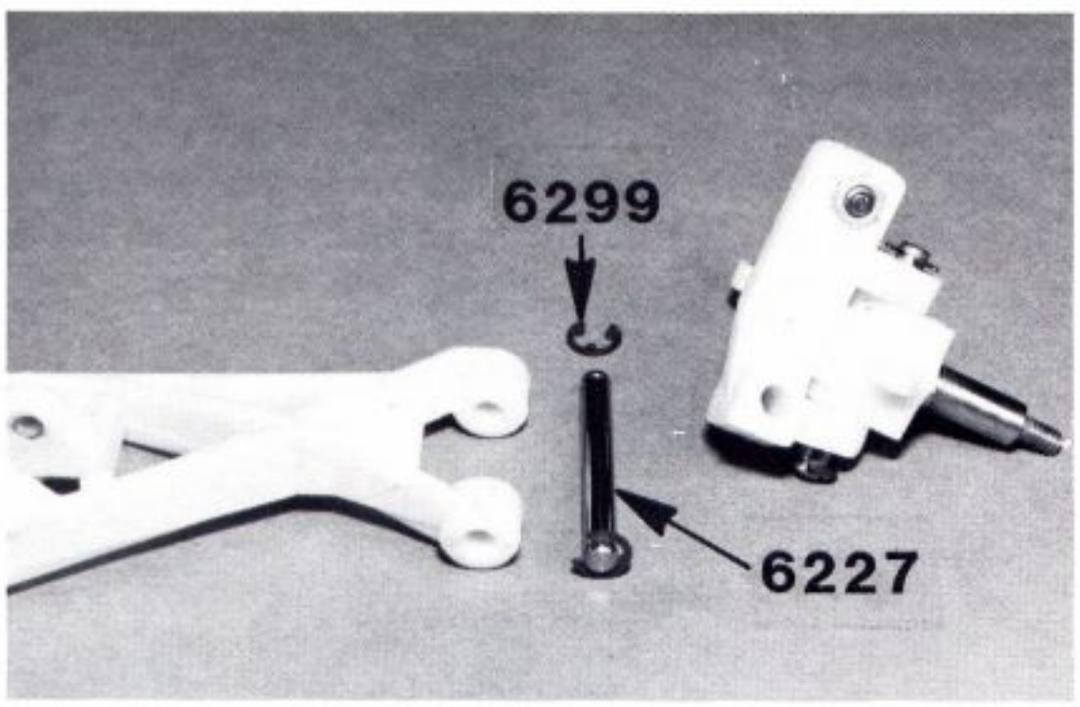
❑ **Figs. 10, 11, 11A & 11B** Remove the bag containing the black suspension arms. Remove the #7206 front arms that look like fig. 10. This photo shows you which arm is right and which is left and it shows you where to trim the runners from the arms. The material is tough enough that you must remove the arms with a pliers. Then trim any remaining runner pieces with your X-acto© blade.

(2) From bag 7-1 locate the two #6227 outer hinge pins (match them against the scale drawing). Install one of the hinge pins through the holes in the outside end of the A-arm, hold the pin, and see if the arm will swing freely on the pin. ***Racer's tip:*** *Most racers keep a .126" and a #30 (.1285") reamer in their toolbox to free up or clean A-arm holes so they will pivot smoothly.)* **(3)** Using the same pin, check the fit in the #6210 left front carrier block. We want the pin to fit tight, so do not ream out this hole. **(4)** Now remove the outer hinge pin and install the left carrier block assembly to the left outer A-arm location using the #6227 hinge pin. **(5)** Install a #6299 E-clip on each end of the hinge pin. Both of the ball ends will be on the back (or straight) side of A-arm when installed correctly, and the #6210 carrier block will be angled towards the front, as shown in fig. 11A. **(6)** Now repeat the above steps for the right side A-arm; it will be a mirror image of the left.



#7206 right A-arm ↑ ↑ *#7206 left A-arm*

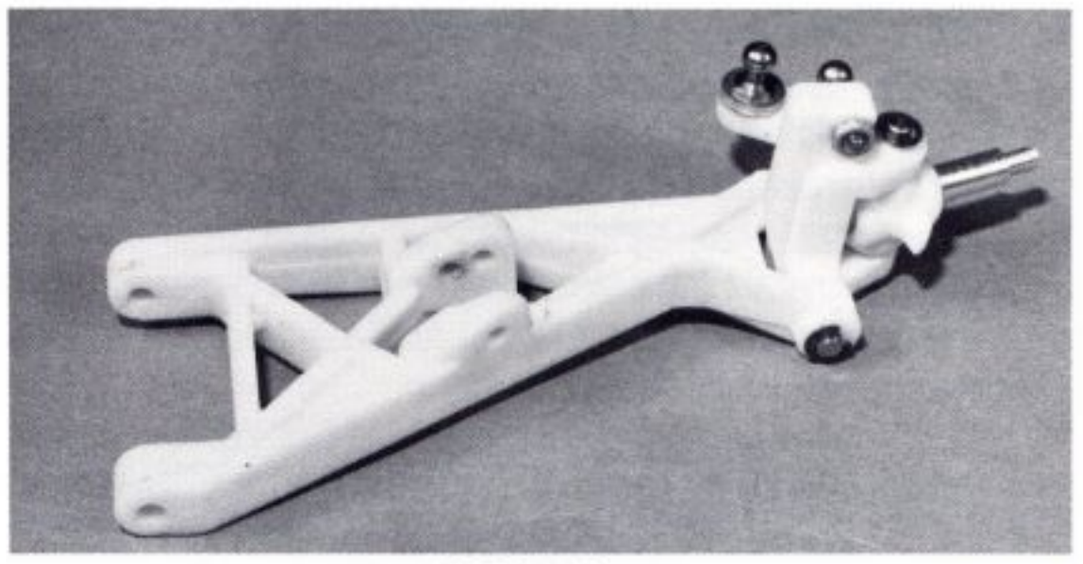
Fig. 10



#6227

Fig. 11

#6299
e-clip
1/8 shaft



#7206 left arm

Fig. 11A

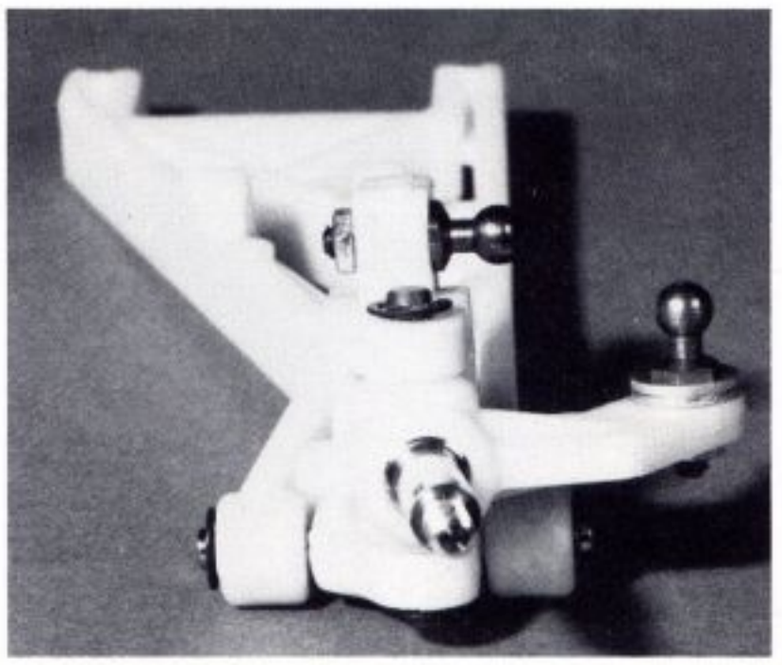


Fig. 11B

❑ **Figs. 12, 13 & 13A** Go back to bag 7-1 and remove the #7207 front bulkhead, the #7208 front bulkhead aluminum support, and the two #7209 front inner hinge pins. Match the hinge pins to the scale drawing. Fig. 12 shows you the front bulkhead alone to make it easier to identify the front and rear sides of the bulkhead. Check the fit of the hinge pins in the A-arms the same way we did for the front A-arms. Free them up if necessary. We want the pins to be tight in the front bulkhead, but free in the arms.

(1) Starting with the left A-arm, install the inner hinge pin through the back half of the A-arm and the #7207 front bulkhead. **(2)** Now line up the #7208 aluminum bulkhead support between the front side of the bulkhead and the front of the left A-arm (fig. 13A) and push the hinge pin the rest of the way through. **(3)** Secure the hinge pin with a #6299 E-clip on each end. **(4)** Now assemble the right side suspension the same way. Fig. 13A shows the front bulkhead assembly completed.

#7209

#6299
e-clip
1/8 shaft

E-clips are found in bags #7-1, #7-8, #7-9 and #7-10.

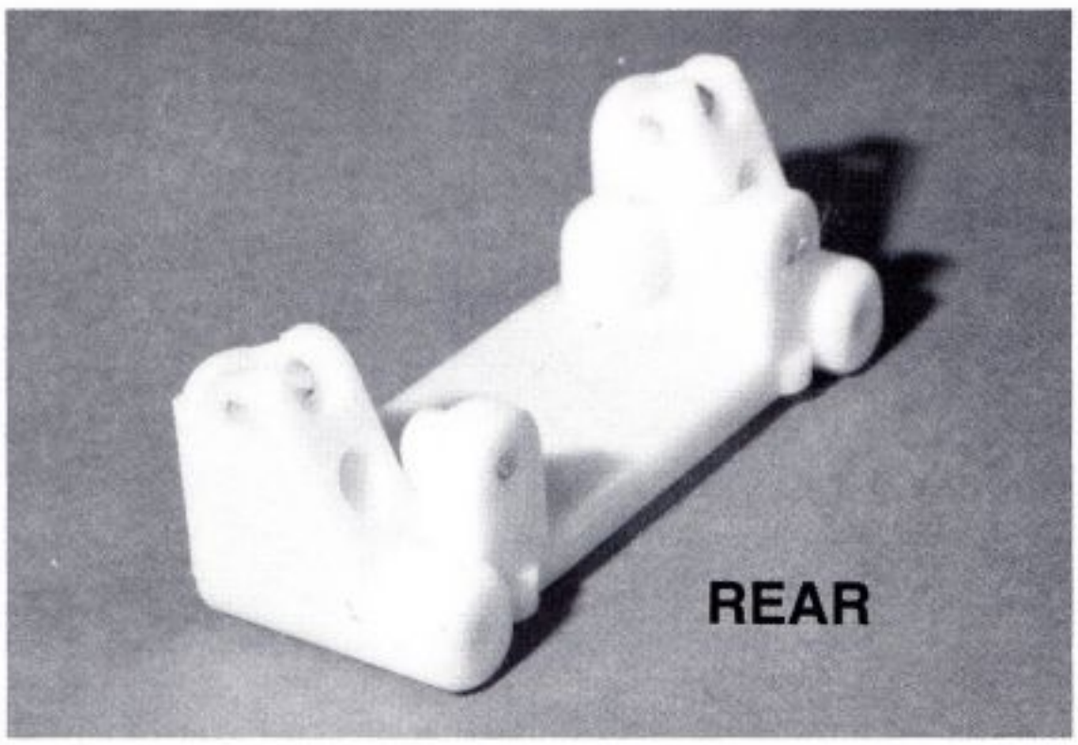


Fig. 12

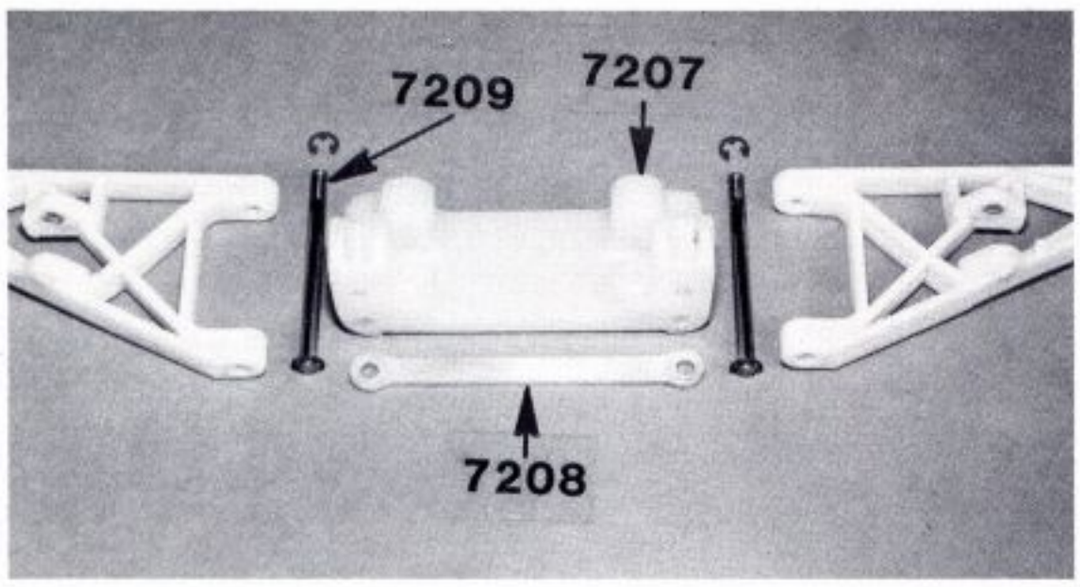


Fig. 13

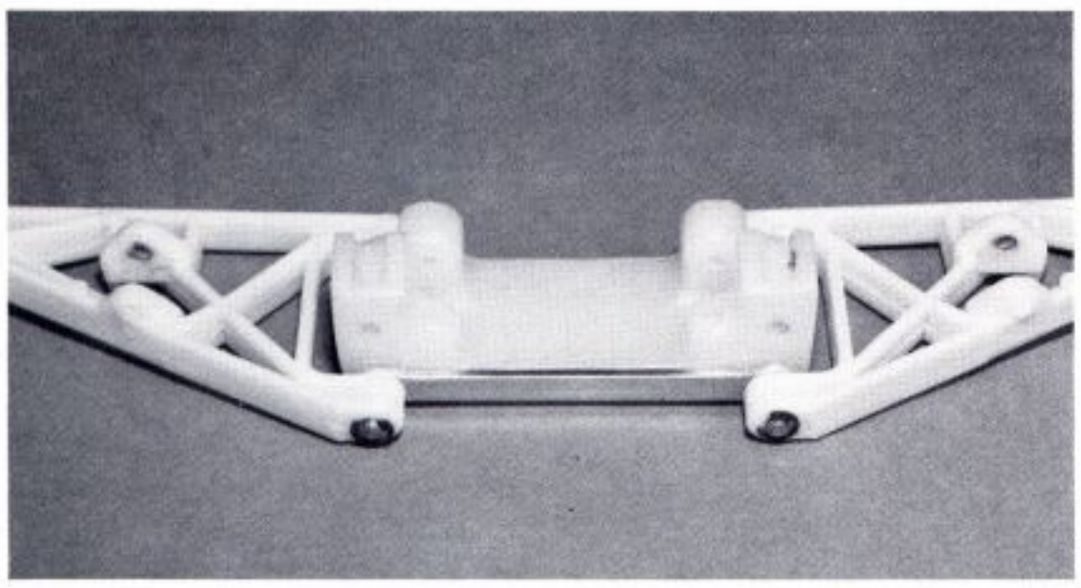
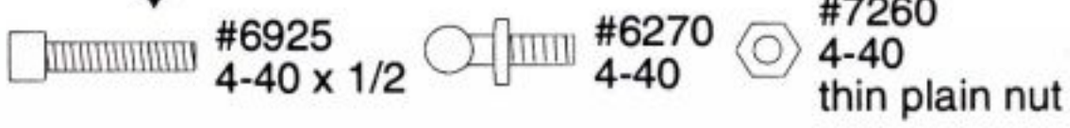


Fig. 13A

❑ **Figs. 14, 15 & 16** From bag #6-14 remove two #6270 short steel ball ends and two #7260 4-40 thin plain nuts. Now take the #7214 fiberglass front shock strut and two #6925 4-40 x 1/2" SHCScrews from bag #7-1. **(1)** Install the ball ends in the location shown (if your strut has two holes use the lower hole). At this time it does not matter which side of the shock strut you use. **(2)** Tighten the ball ends, then install and tighten the two plain nuts on the exposed threads of the ball ends. **(3)** Go back to your #6950 tool bag and take out the largest Allen wrench (3/32"). **(4)** Install the #7214 shock strut using the two 4-40 x 1/2" SHCScrews. Mount the shock strut on the back side of the #7207 front bulkhead, making sure that the ball ends are on the back side facing away from the bulkhead (see fig. 15).

(5) Open bag #7-10 (the front shock bag) and remove two each #6927 4-40 x 3/4" SHCScrews, #6295 4-40 plain nuts, and #6936 #4 aluminum flat washers. **(6)** Install and tighten the #6927 screws in the upper middle hole (if a 3 hole strut; otherwise outside hole if a 2 hole strut) at the top of the front shock strut (see fig. 15). You need to install the screws from the back side so the screw heads are on the same side as the ball ends. **(7)** Now place a #6936 flat washer over the threads of each screw. **(8)** Next install and tighten a #6295 nut onto the threads of each screw as shown (see fig. 16). If everything is installed correctly the threads will be on the front side of the shock strut over the front bulkhead.

Associated's #6960 3/32" Allen wrench will make installing the #6925 screws easier and quicker.



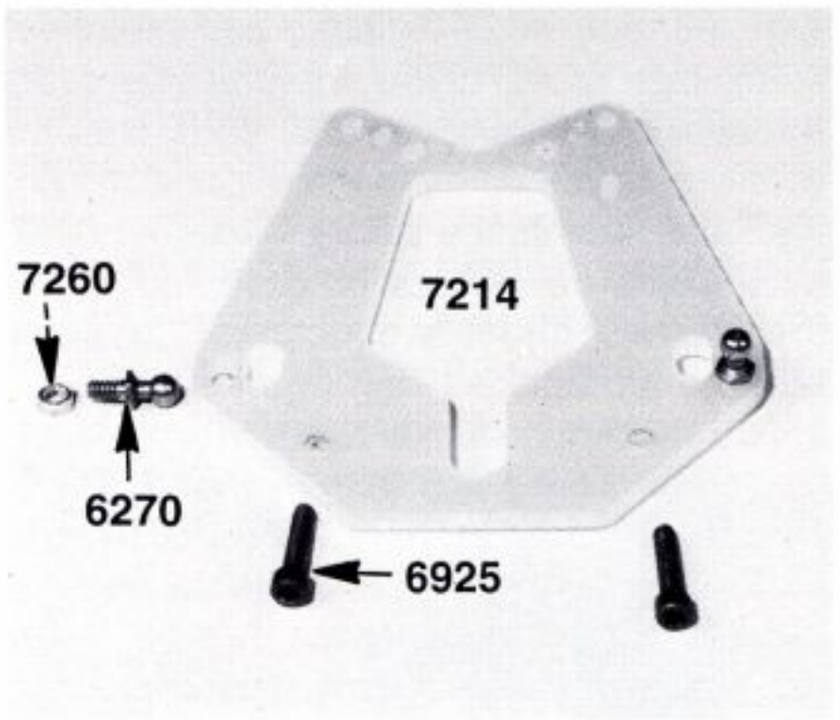


Fig. 14

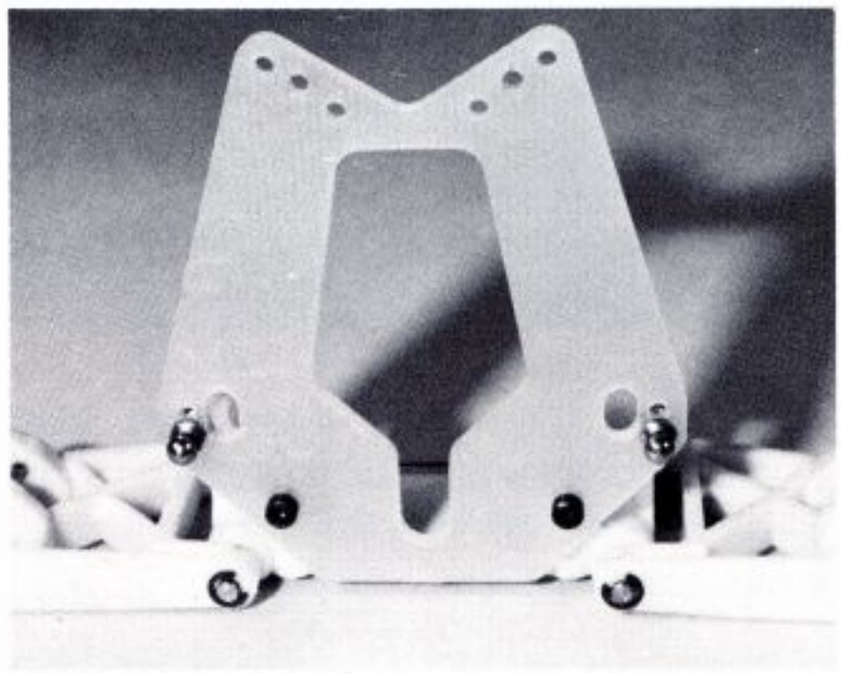
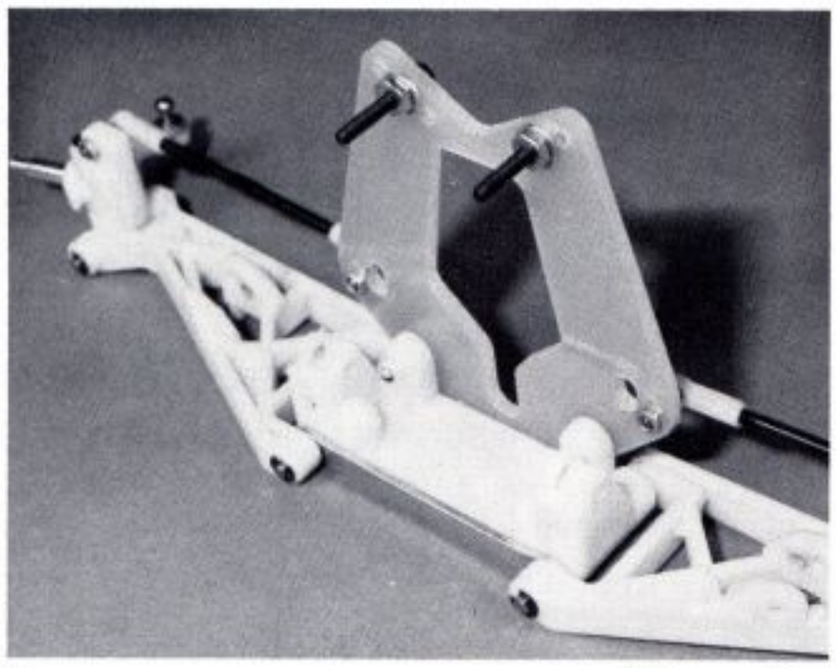


Fig. 15



#6295
4-40 nut
plain

Fig. 16

#6927
4-40 x 3/4

#6936
#4 flat washer
aluminum

❑ **Fig. 18** Using a pair of slip joint or needle nose pliers, snap the plastic ball end caps onto the steel ball ends as shown.

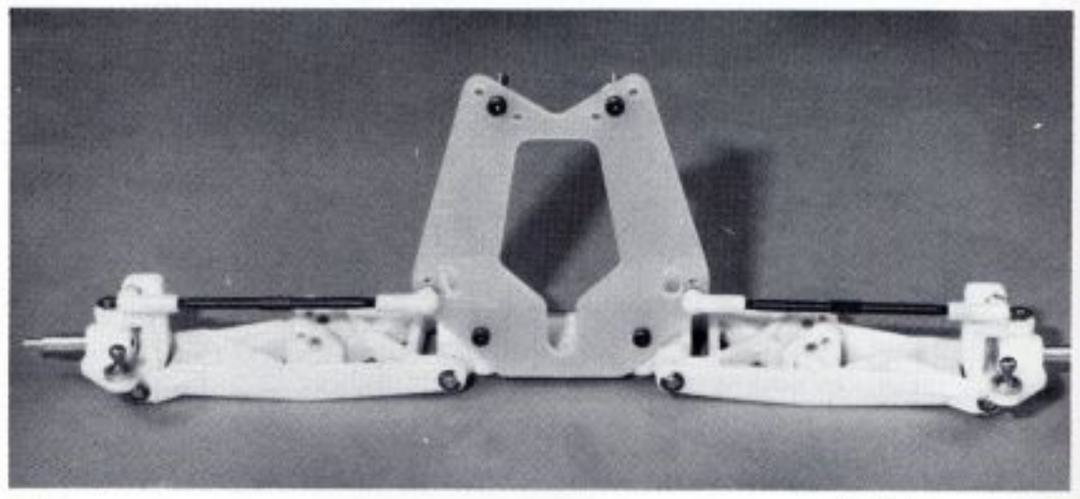
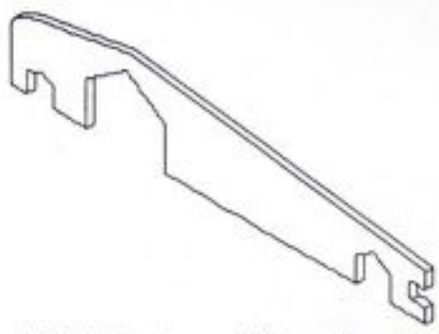


Fig. 18



#6955 shock/turnbuckle wrench, not to scale.

❑ **Fig. 17** In bag #6-14 you will find a molded tree with fourteen #6274 plastic ball ends; remove four of them. In bag #7-1 you will find two #7253 2.62" long turnbuckles. Thread the ball ends onto the turnbuckles evenly until you come to the dimensions shown in fig. 17, the cups facing the same direction. The turnbuckles, having different threads on each end, will cause the cups to screw on in opposite directions. This allows us to simply turn the turnbuckles from the hex center section of the #6955 shock/turnbuckle wrench to make our adjustments.

THESE DIMENSIONS ARE TO THE CENTER OF THE BALL CUP, NOT TO THE END OF EACH BALL CUP. These upper suspension links are used to adjust the camber of the front wheels.

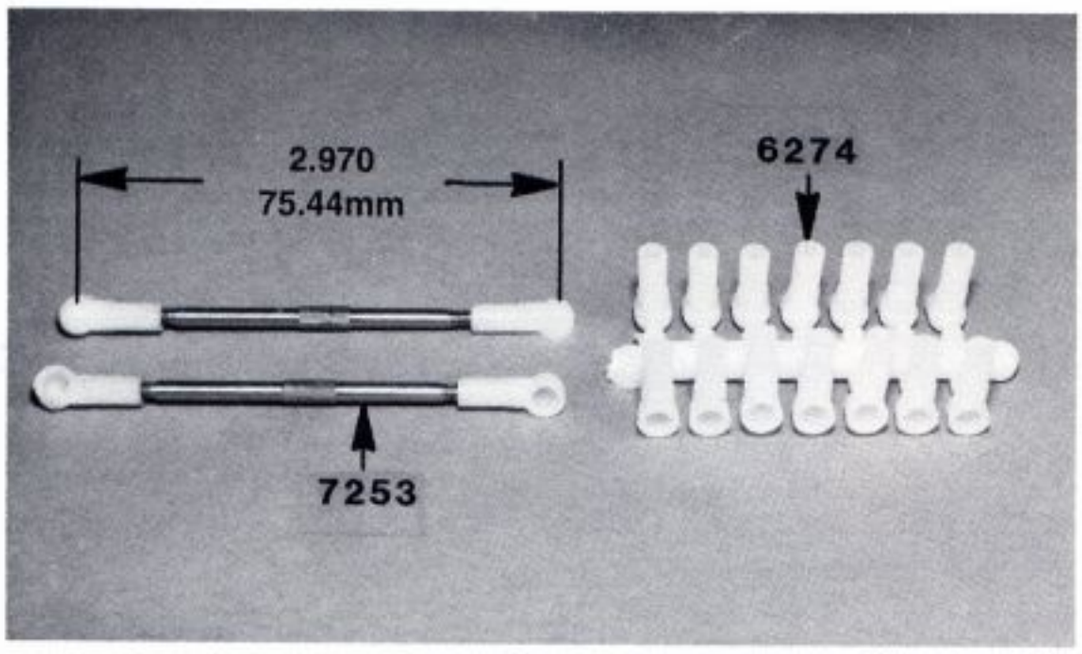
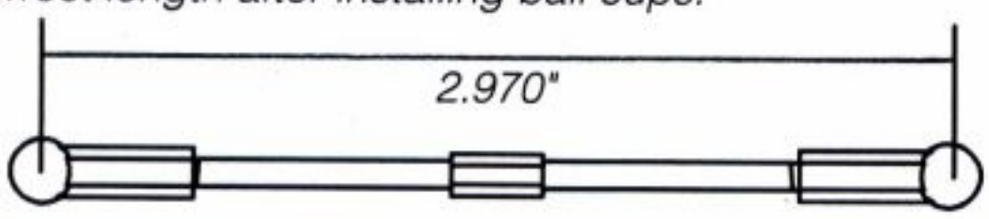


Fig. 17

#7253
2.62"

correct length after installing ball cups:



❑ **Fig. 19** The plastic ball end caps can be removed quite easily from the balls by holding the plastic ball end caps close to the ball, as shown, and twisting the plastic ball end cap off of the steel ball end as fig. 19 shows.

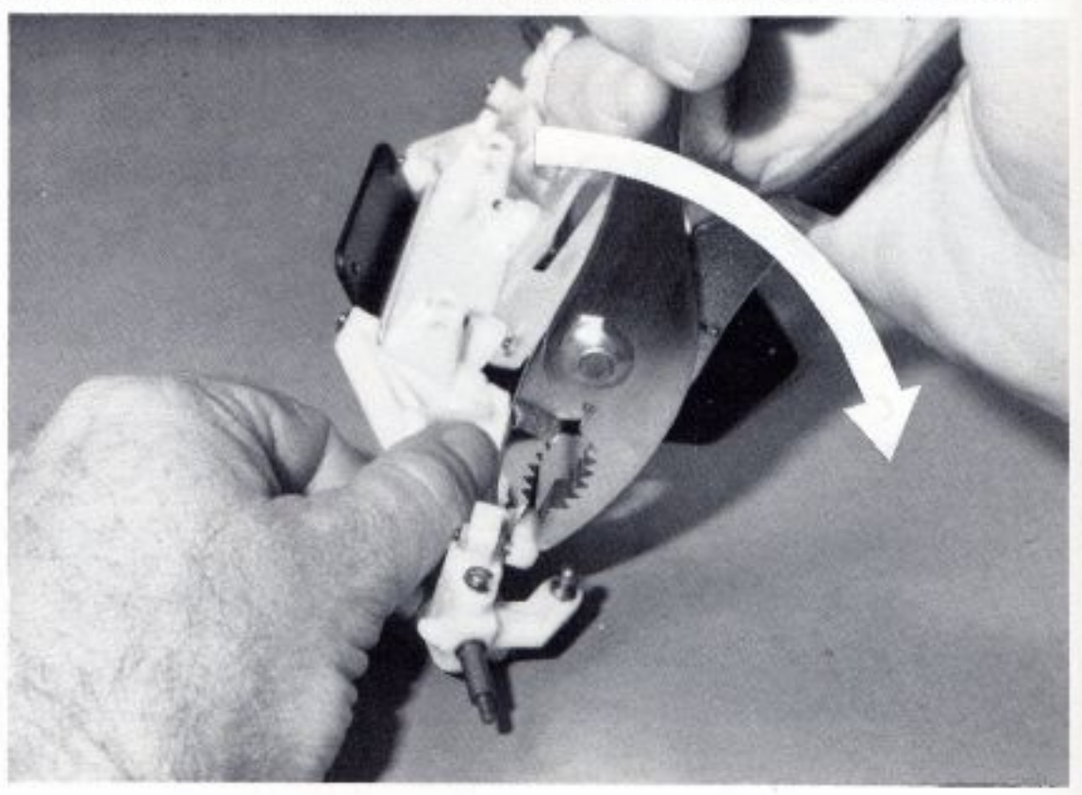
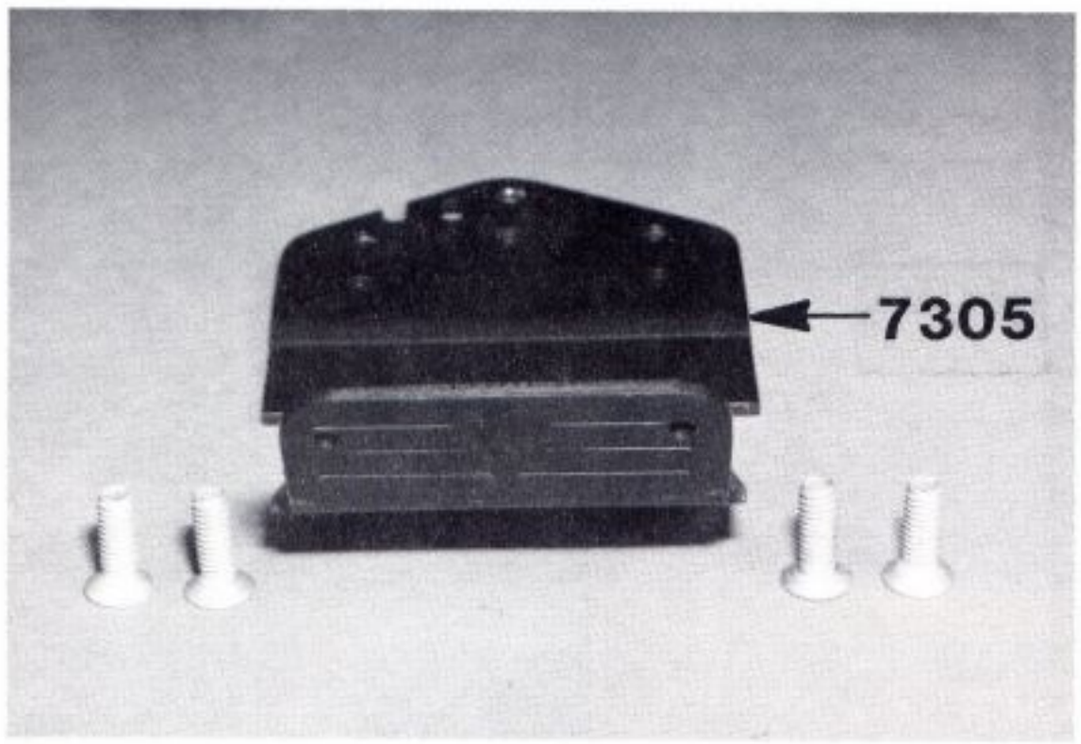


Fig. 19

❑ **Figs. 20, 21 & 21A:** Open bag #7-4 and remove the #7305 black aluminum chassis nose plate. Back in bag #7-1 you will find four #6280 8-32 x 1/2" aluminum FHMScrews. Using a #2 Phillips screwdriver we are going to install the front bulkhead assembly to the #7305 nose plate. When you are done, your front end will look like fig. 21A. **DO NOT OVERTIGHTEN.** Tightening them too tight will strip out the nylon.



#6280
8-32 x 1/2
aluminum

Fig. 20

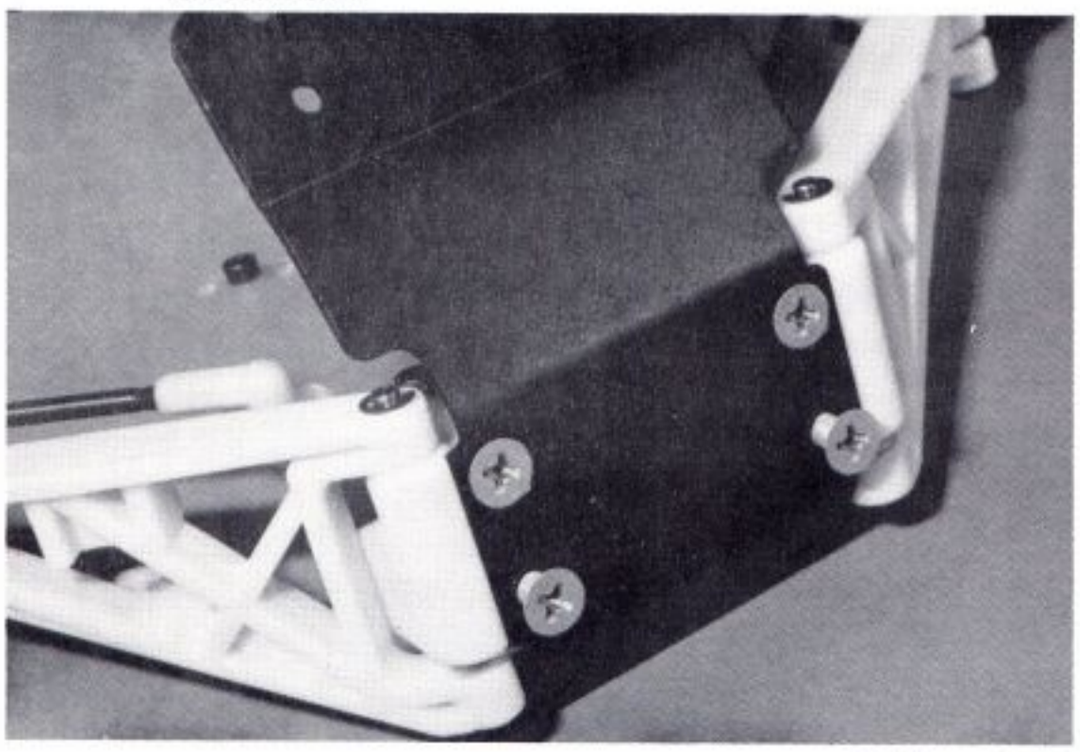


Fig. 21

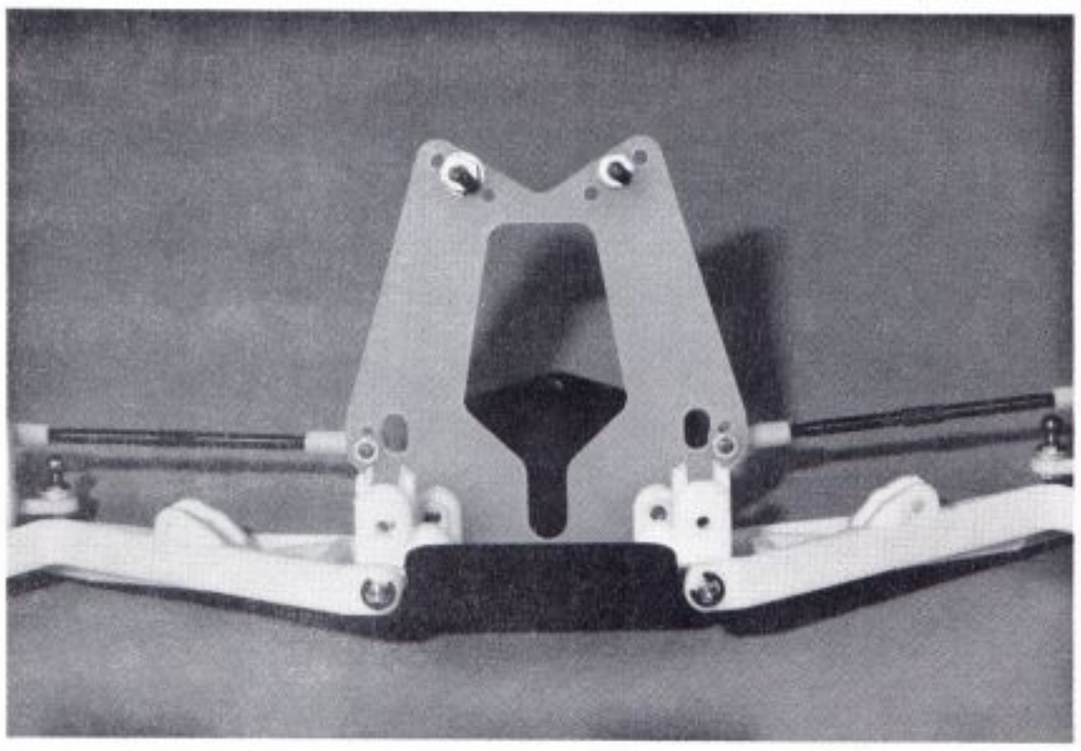


Fig. 21A

❑ **Fig. 22** From bag 7-4 remove the silver colored #6931 8-32 x 1/4" steel FHMScrew, then open up bag 7-2 and remove the two #7306 special black steel servo saver screws.

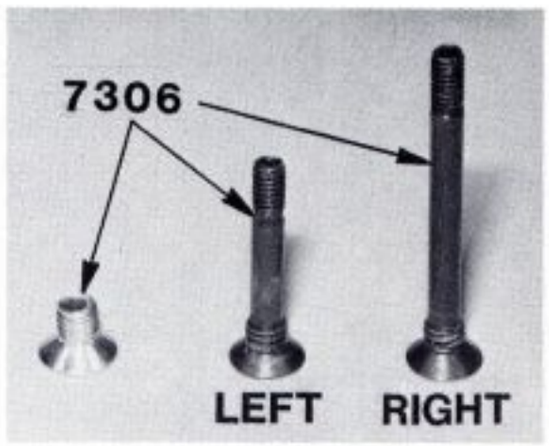


Fig. 22

#6931
8-32 x 1/4
steel

#7306
7/8
special
left

#7306
1 3/8
special
right

❑ **Figs. 23, 23A & 23B** **(1)** Take the #7525 black anodized aluminum chassis from the kit box. **(2)** Line up the #7305 black nose plate and front end assembly over the front of the chassis as shown. **(3)** Line up the #7305 black nose plate over the front of the chassis as shown. **(4)** Install the small #6931 8-32 x 1/4" FHMScrew from the bottom of the chassis using the center chassis hole and thread it into the back center hole of the nose plate. Do not tighten this screw yet. **(5)** Install the longer #7306 screw into the right front hole of the chassis from the bottom. It should then thread into the right forward hole of the nose plate. Do not tighten this screw yet. **(6)** Install the smaller #7306 screw into the left front hole of the chassis. **(8)** Now tighten the three screws.

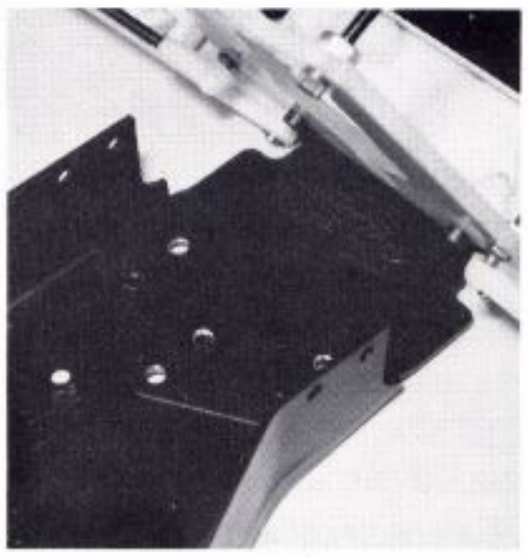


Fig. 23A

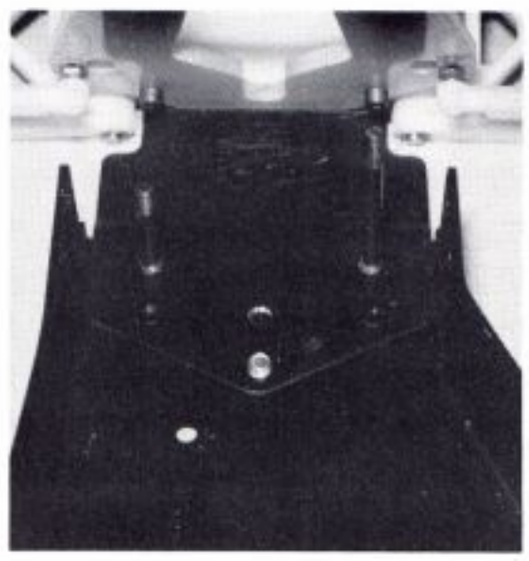
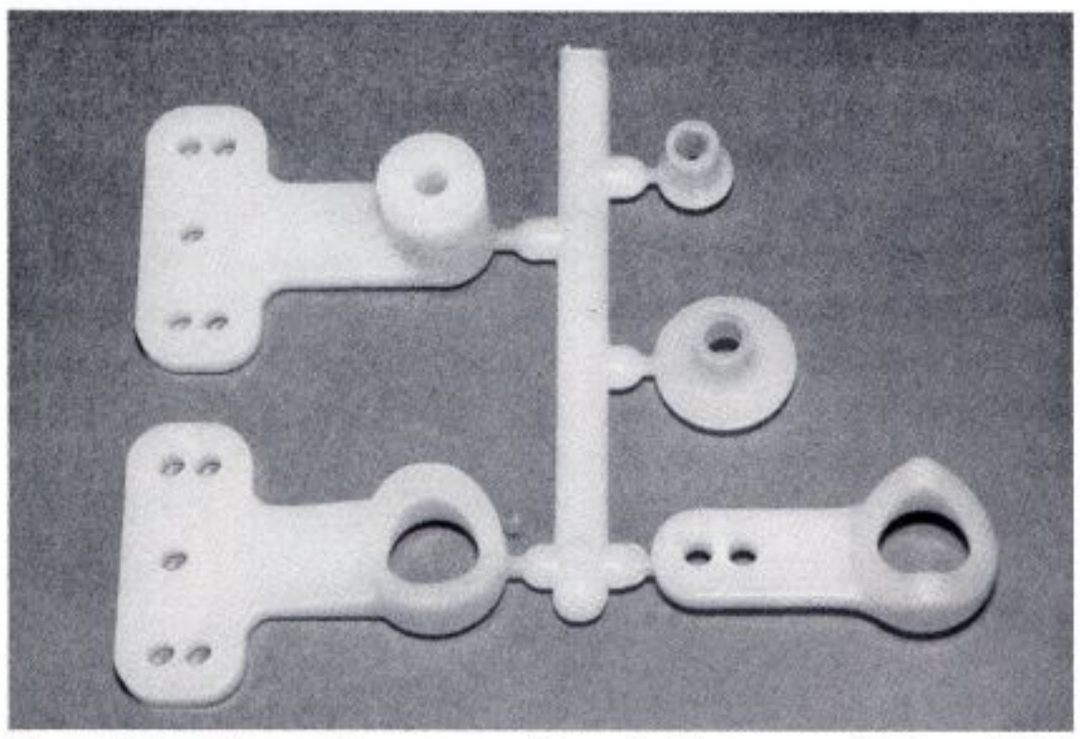


Fig. 23B

❑ **Figs. 24, 25 & 26** In bag #7-2 you will find the #7531 plastic servo saver parts on a molded tree (labeled in fig. 24). In the same bag you will find the #7258 aluminum servo saver tube. Remove the two servo tube bushings from the plastic parts tree, and install them in the aluminum tube as shown. ***Note:*** *A complete replacement set of plastic servo saver parts is #7531.* Fig. 26 shows the servo saver tube with the bushings installed.



Top left: left hand servo saver arm.
Bottom left: right hand servo saver arm.
Top right: upper bushing.
Middle right: lower bushing.
Bottom right: servo arm.

Fig. 24

Fig. 25

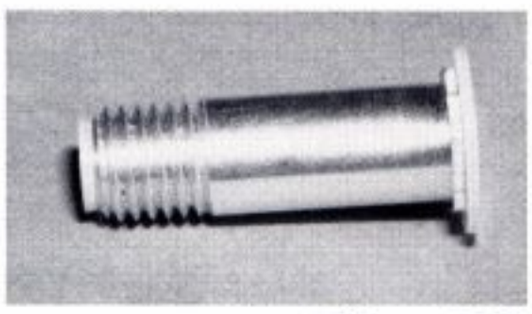


Fig. 26

❑ **Figs. 27 & 28** Remove the #7531 right hand servo saver arm and the #7531 servo arm from the parts tree in bag #7-2. The right hand servo saver arm is the one with a large hole and V-groove on one end. **(1)** Slip the right hand servo saver arm over the aluminum tube assembly and slide it all the way down. **(2)** Now slide the servo arm over the aluminum tube and line up the two V-groove halves. ***Racer's Tip:*** *Team drivers coat the V-groove portion of the servo saver with a very small amount of #6588 black grease to improve its performance.* ***Note:*** *If you are using a radio with an extremely large receiver you may have to mount the servo saver and steering servo on the opposite (left) side of the truck, than the standard setup, so that the larger receiver will fit on the right side.* The servo saver arms are reversible but the servo arm must always be facing the center of the truck.

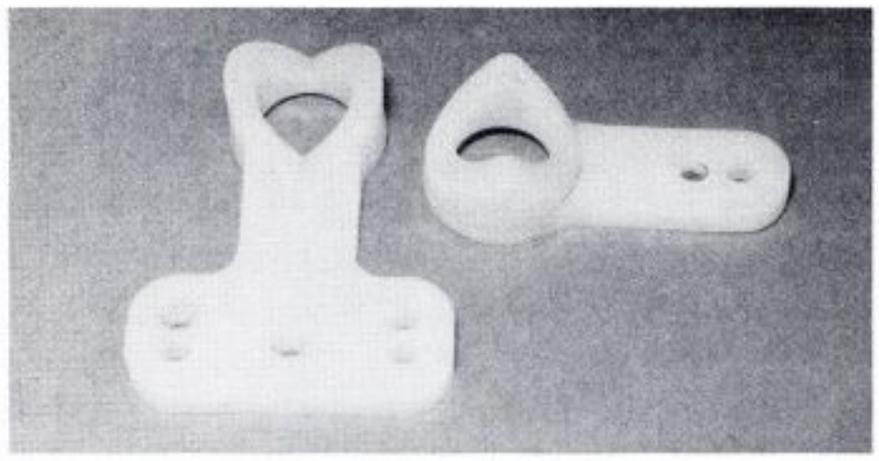


Fig. 27

#7351 right hand servo saver arm ↑ ↑ *#7351 servo arm*

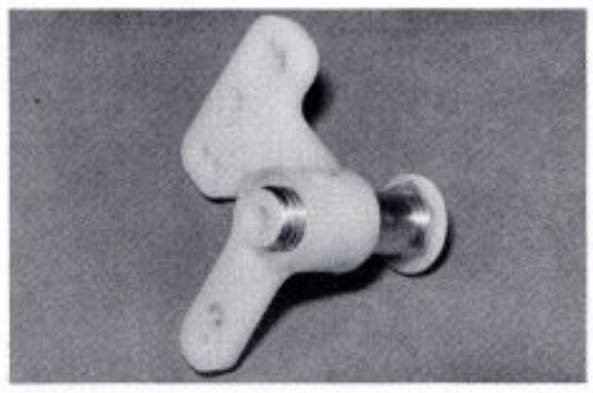


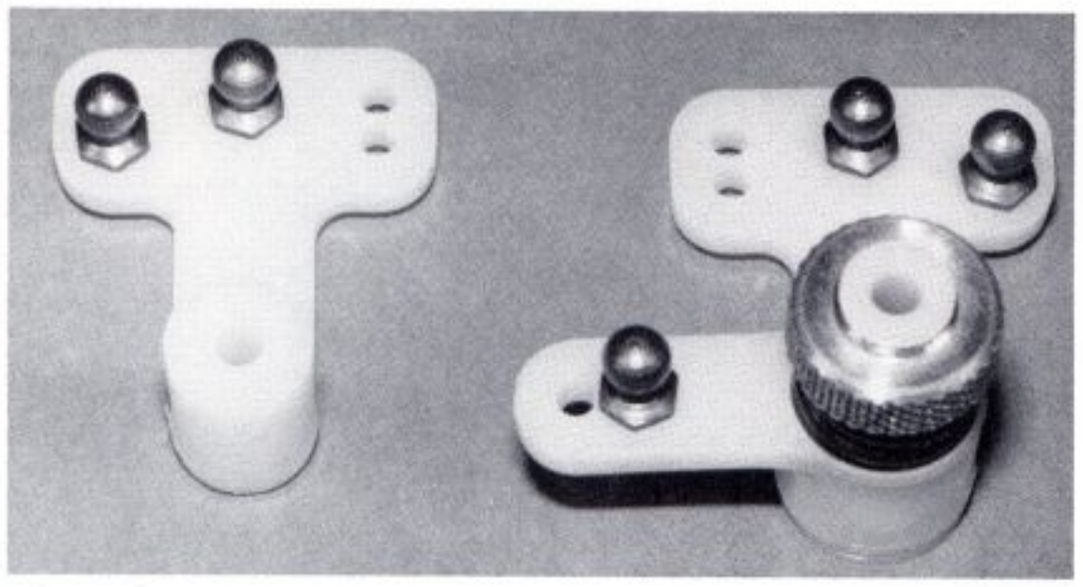
Fig. 28

❑ **Figs. 29 & 30** From bag #7-2 again, remove the #7257 servo saver spring and spring adjusting nut. **(1)** With the right hand servo saver arm and servo arm pushed all the way down on the aluminum tube, install the #7257 servo saver spring over the tube. There is a groove in the top of the servo arm that the spring will fit into. **(2)** Now thread on the #7257 spring adjusting nut. (The spring seats into a recess on one side of the spring adjusting nut.) **(3)** Install the adjusting nut recess side first and tighten until the top of the nut is flush with the top end of the aluminum tube as shown in fig. 30. ***Racer's Tip:*** *The servo saver can be adjusted by tightening or loosening the aluminum adjusting nut which changes the tension on the servo saver spring.*

Fig. 29

Fig. 30

❑ **Fig. 31** Go back to bag #6-14 and remove five #6270 short steel ball ends. Remove the #7531 left hand servo arm from bag #7-2. Line up both servo saver arms as shown in fig. 31 and then thread the five #6270 steel ball ends into the locations shown. Install the steel ball in the inside hole of the servo arm. ***Note:*** *You do not need to install nuts on the bottom of these five ball ends.*



#6270
4-40

Fig. 31

❑ **Figs. 32 & 33** In bag #7-2 you will find one #7251 1.0" turnbuckle and two #7253 2.62" turnbuckles. From bag #6-14 remove six #6274 plastic ball end caps. Thread one plastic ball end cap onto each end of the three turnbuckles. ***Note:*** *Remember the turnbuckles have both left and right handed threads and that on one end of each turnbuckle the plastic ball caps will thread on the opposite way.* Below shows the assembled dimensions of all three turnbuckles measured from the center of one ball cup to the center of the other ball cup. On these turnbuckles the plastic ball end caps all should face the same direction.

Fig. 32

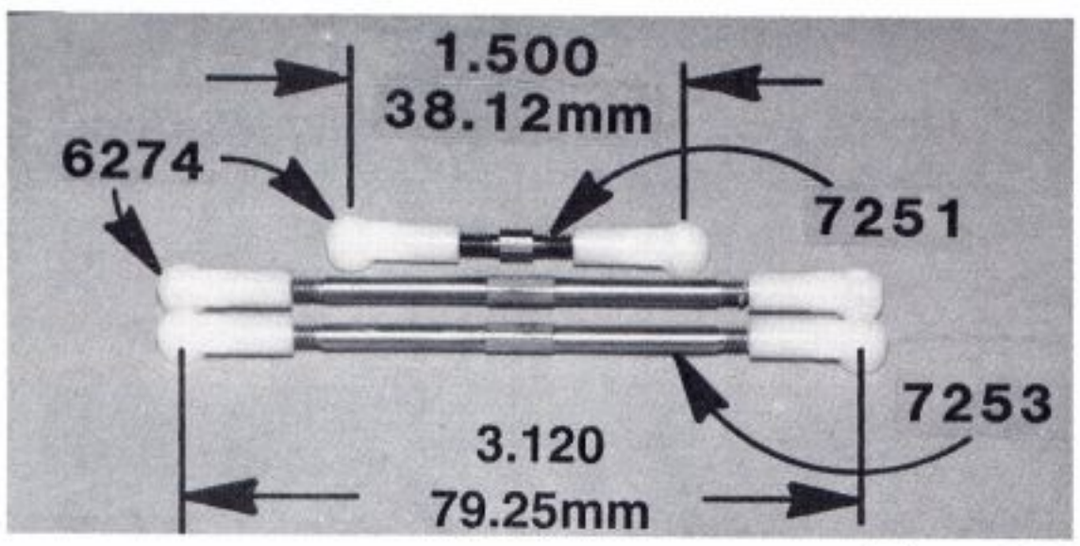
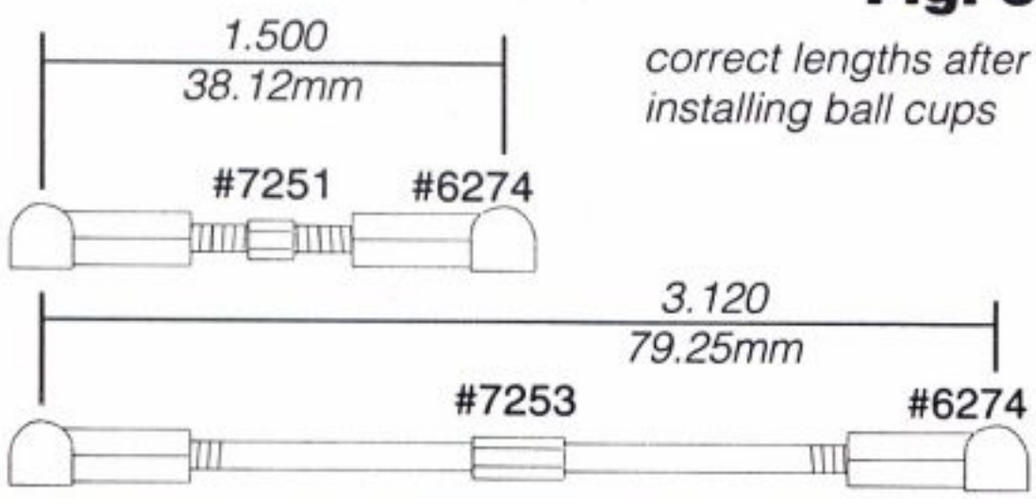
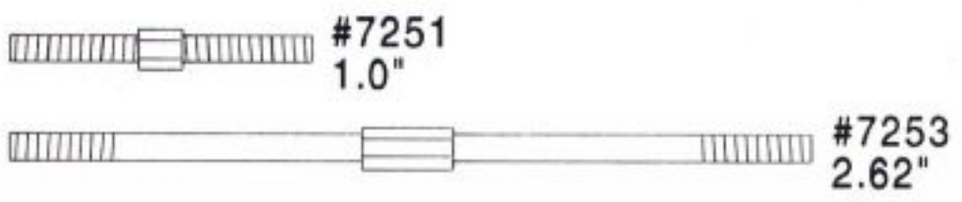


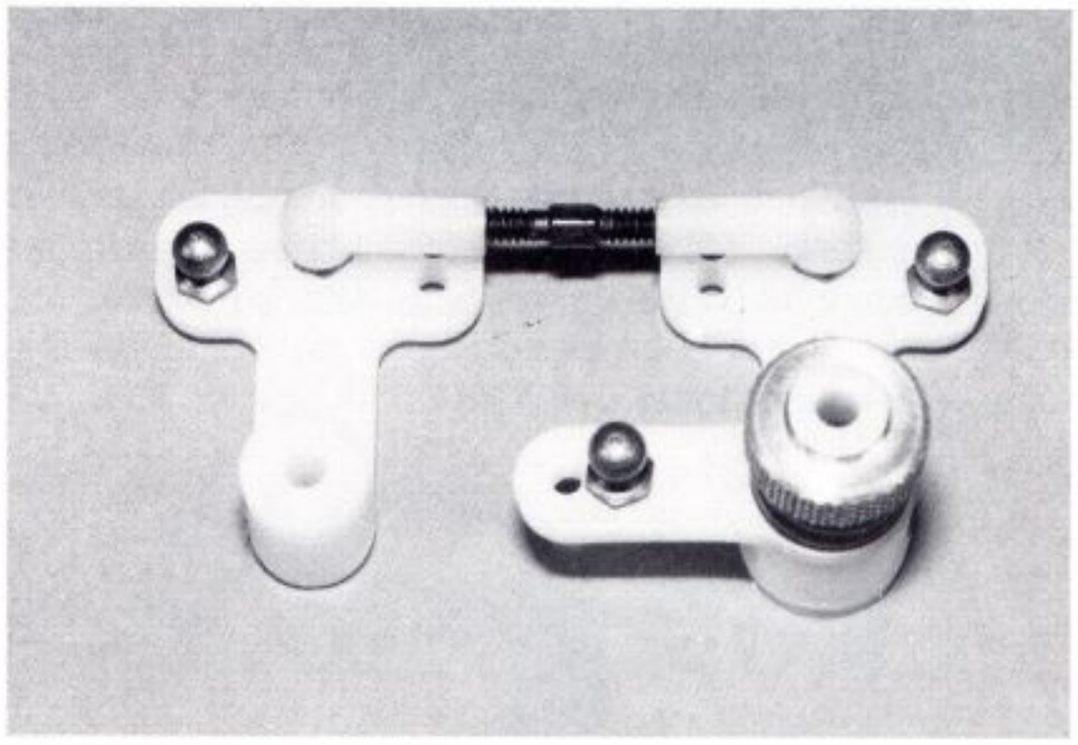
Fig. 33



correct lengths after installing ball cups



❑ **Fig. 34** Take the short assembled turnbuckle and snap it onto the two inside ball ends on each of the servo saver arms as shown. Your needle nose pliers will work well here.



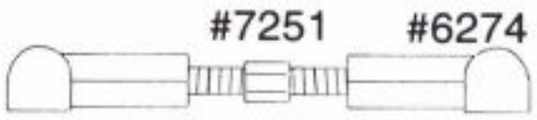


Fig. 34

❑ **Fig. 35** **(1)** Slip the completed servo saver assembly down onto the two #7306 servo saver mounting screws (that bolt the nose plate assembly to the chassis). **(2)** From bag #7-2 take out two #6222 4-40 black self-threading nylon locknuts. Thread one onto each of the servo saver mounting screws. Tighten the nuts down just enough to remove any excess up and down play in each servo saver arm, but NOT TOO TIGHT. The servo saver arms should be able to swing to the left and right very freely. The servo saver arms should also be parallel when installed.

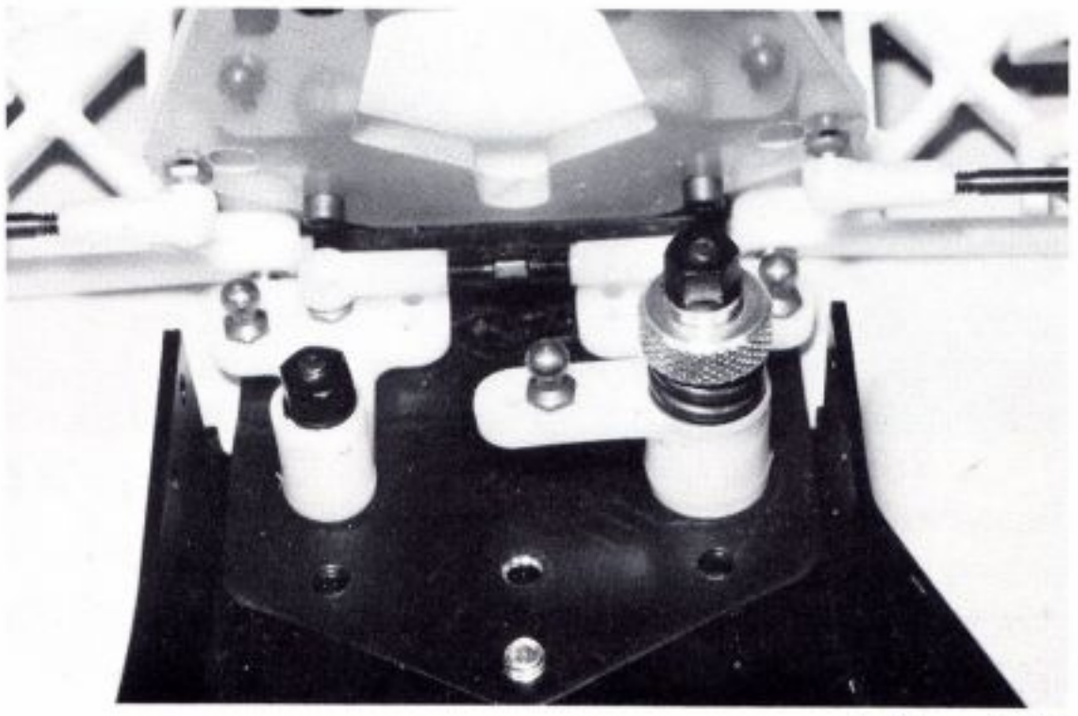


Fig. 35

❑ **Figs. 36 & 37** From bag 7-4 remove the two #7315 black anodized nose brace tubes. Remove two #6925 4-40 x 1/2" SHCScrews and #6285 4-40 x 1/4" SHCScrews. Install the tubes so the unthreaded screw holes (closest to one end of the tube) will be installed towards the front of the truck.

(1) Slip the unthreaded hole end through the oval shaped hole on the passenger side of the fiberglass shock strut. Align the hole in the tube with the hole in the saddle of the front bulkhead.

(2) Install one of the #6925 4/40 x 1/2" SHCScrews in the front hole but do not tighten it down all the way. **(3)** Now line up the back hole in the nose brace tube with the hole in the chassis. Install one #6285 4/40 x 1/4" SHCScrew from the outside as shown. Do not completely tighten down the screw. **(4)** Now repeat the above steps for the nose brace tube on the drivers side. After both tubes and their screws have been installed you can tighten all four screws. Be sure not to overtighten the screws.

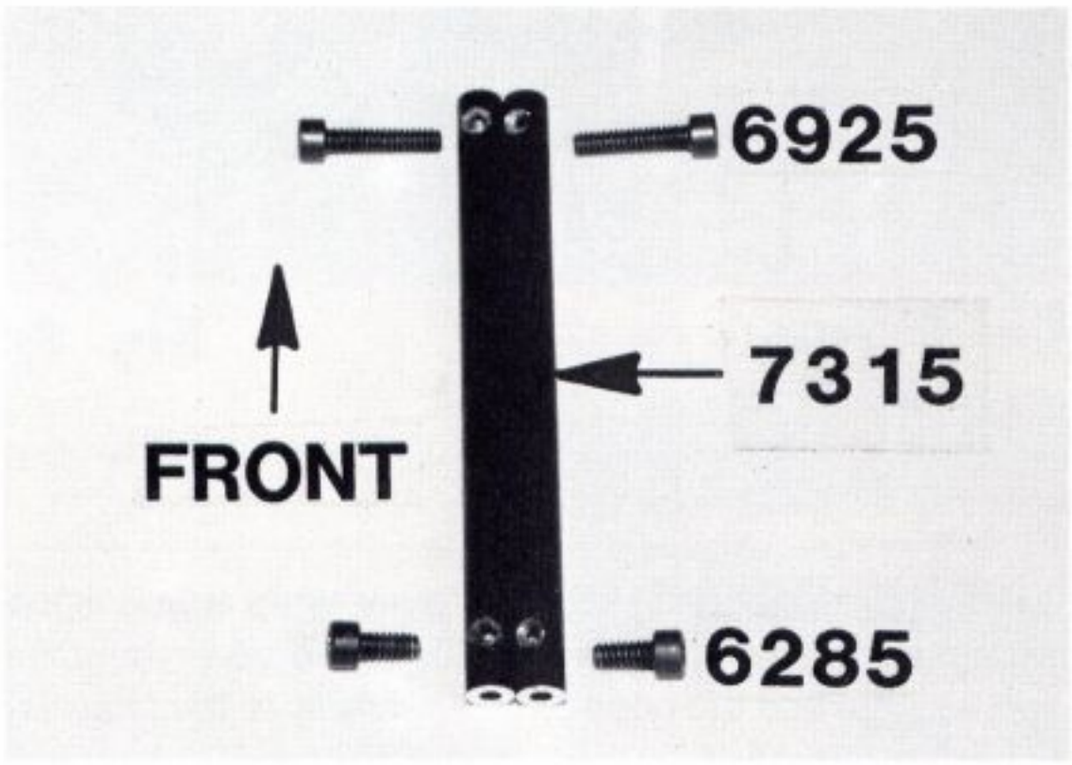


Fig. 36

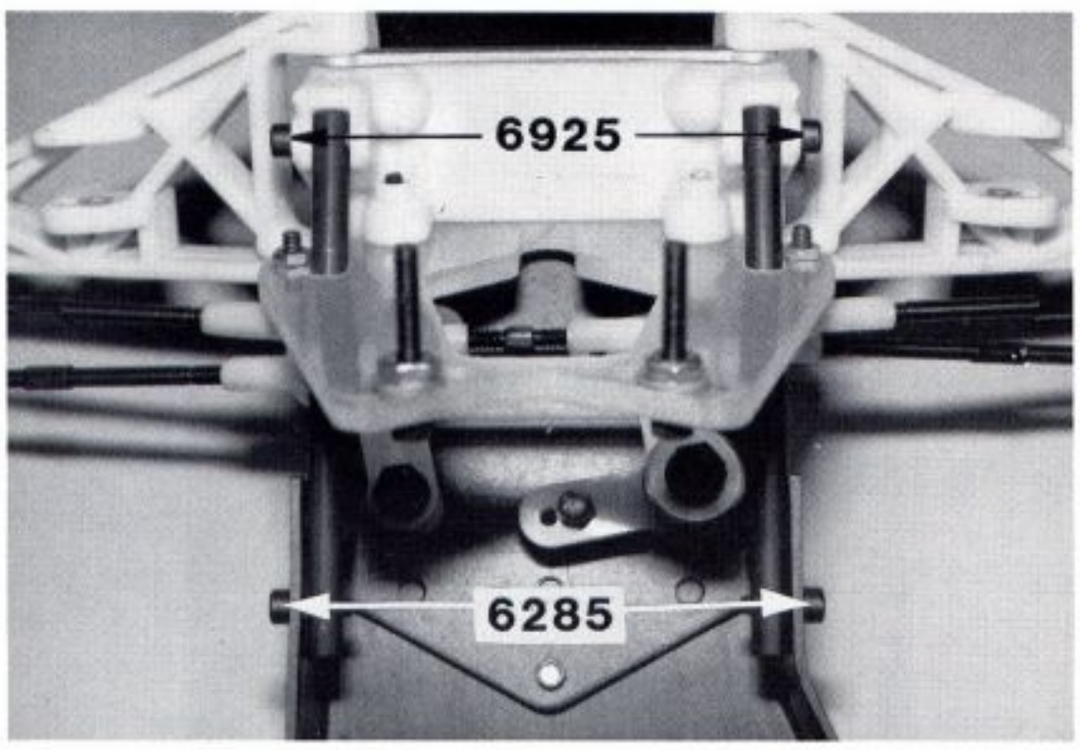


Fig. 37

#6285 4-40 x 1/4 steel

#6925 4-40 x 1/2

❑ **Fig. 38** Using your needle nose pliers install both of the longer steering turnbuckles onto the servo saver ball ends and the steering arm ball ends.

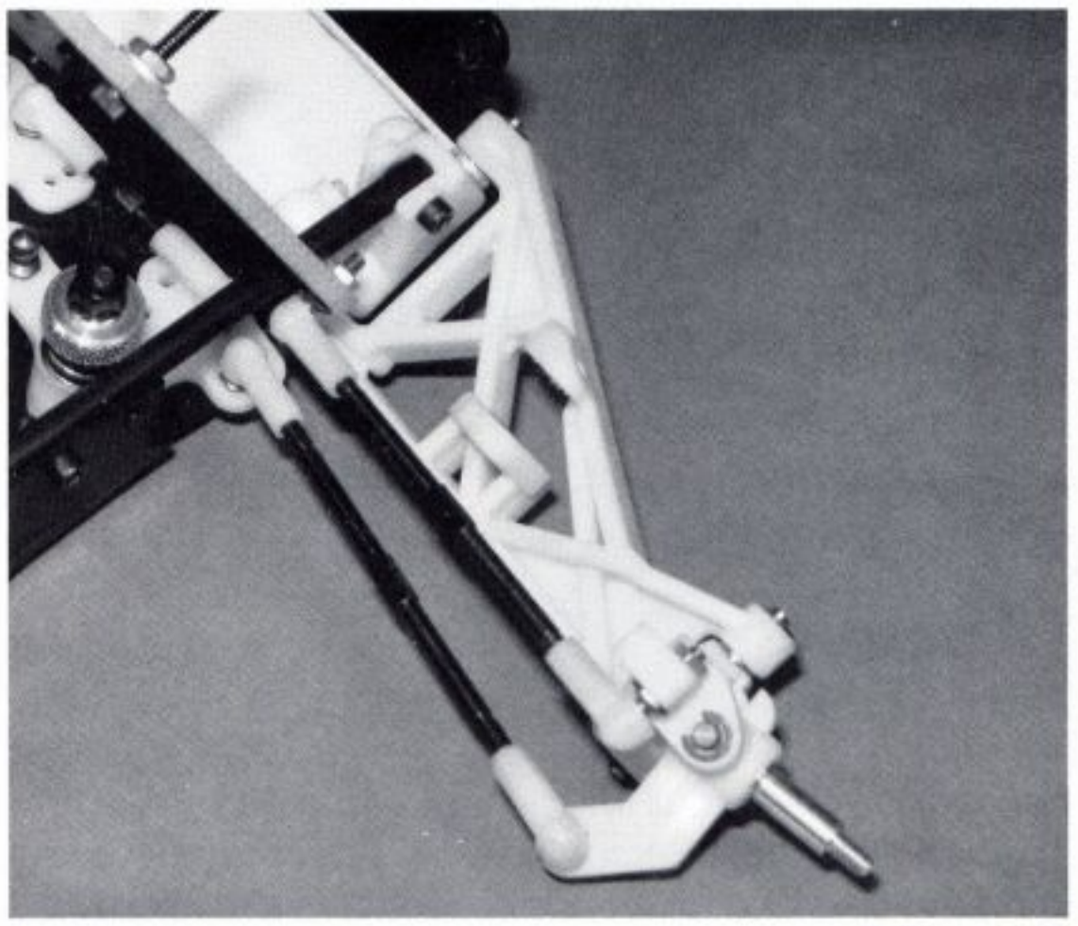


Fig. 38

❑ **Figs. 39, 40 & 40A** (1) Locate bag #7-5 then remove body mount tree. (Fig. 39 shows the location of the front and rear body mounts on the parts tree.) **(2)** Remove the two #7319 front body mounts. **(3)** Go back to bag #7-5 and remove the #7318 front body mount brace and the two #6918 4-40 x 1/2" BHSScrews. **(4)** Using the two #6918 screws, mount the #7319 front body mounts onto the #7318 front body mount brace as shown in fig. 40. ***Note:*** *Install a #6332 body clip in its mounting hole to hold the mount while you tighten the screw.* **(5)** The small body clip holes should point to the left and right. **(6)** Tighten the screws, but not too tight. **(7)** Now we install the front body mount brace assembly to the front bulkhead. Take two #6924 4-40 x 3/8" SHCScrews from bag #7-5. **(8)** Install the body mount brace over the front bulkhead, facing towards the back. This will put the body mounts over the bulkhead as well and they will be pointing straight up, not at an angle, when properly installed as shown in fig. 41.

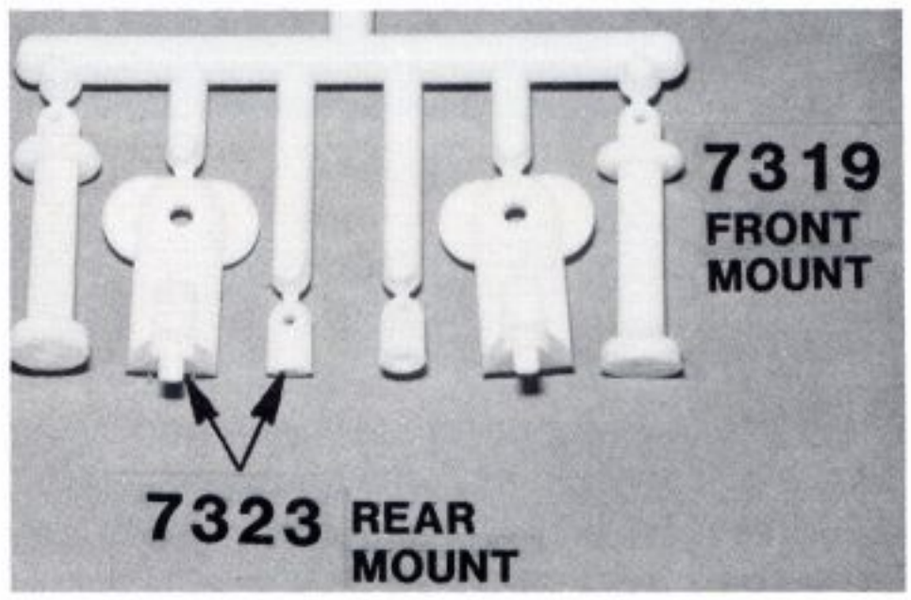


Fig. 39

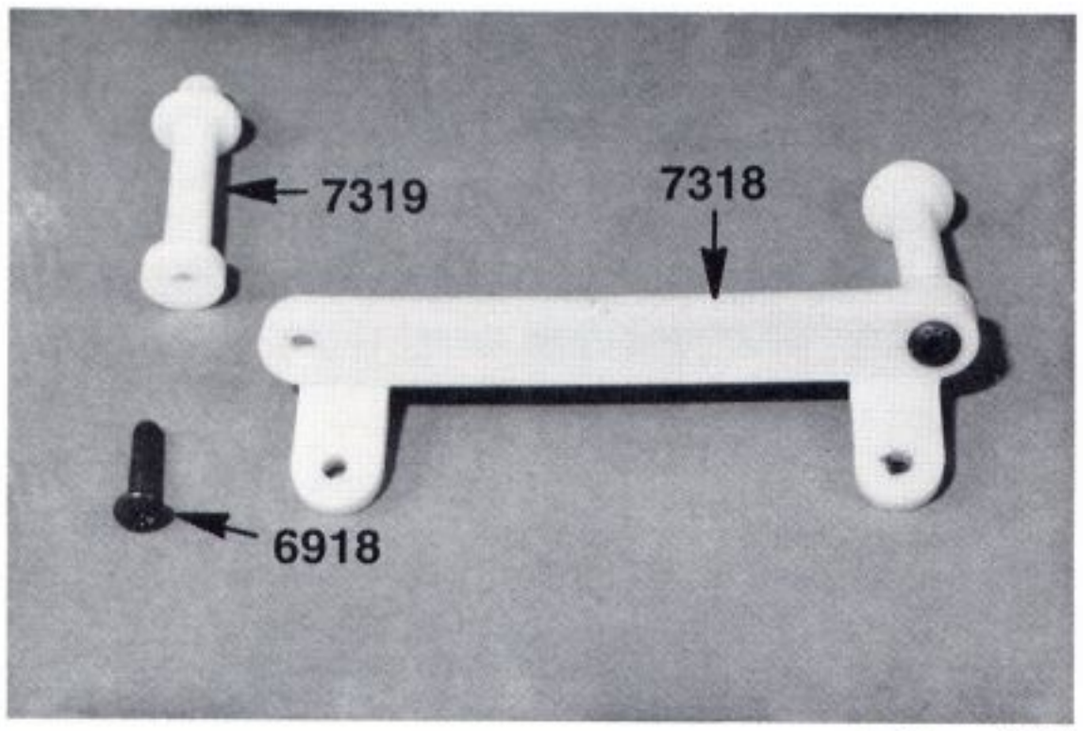
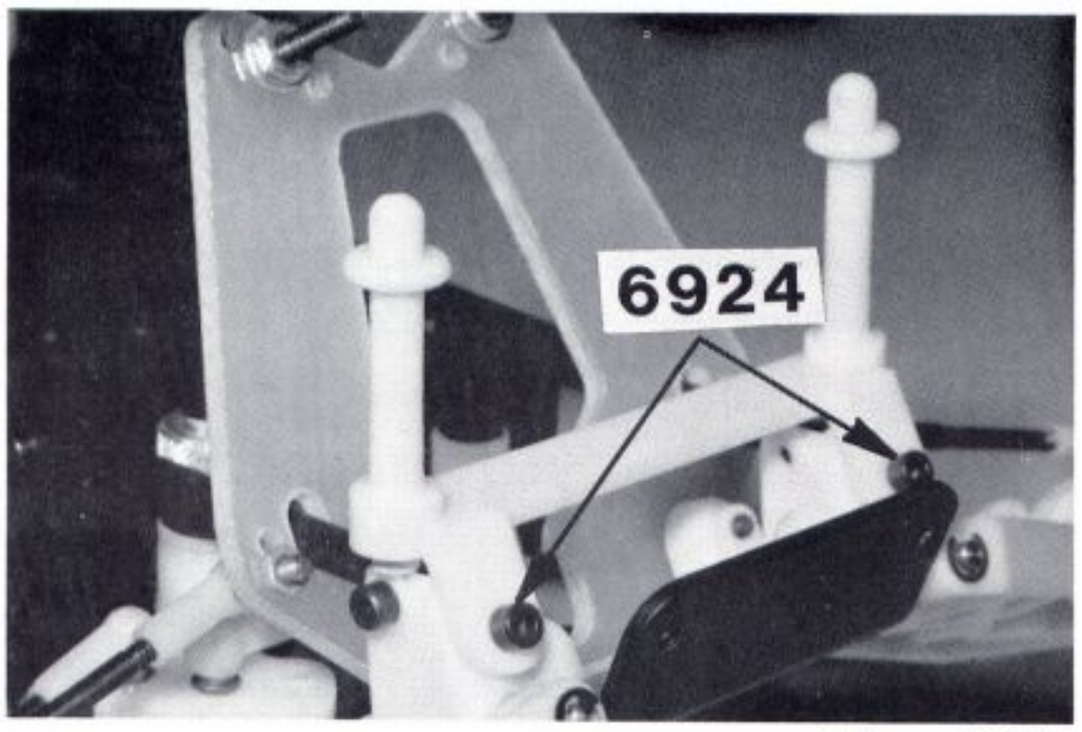


Fig. 40

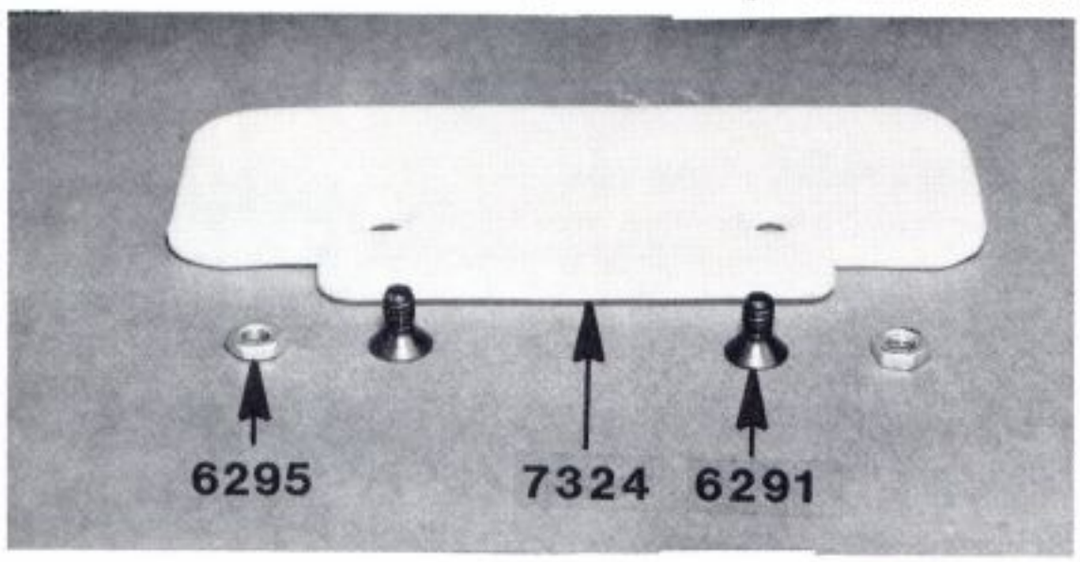


#6918
4-40 x 1/2

#6924
4-40 x 3/8

Fig. 40A

❑ **Figs. 41 & 42** You will find the #7324 front bumper in bag #7-4. Take two #6291 4-40 x 1/4" FHSScrews and two #6295 4-40 plain nuts from the same bag. The front bumper is recessed on one side so it will fit over the black aluminum nose plate. The front of the bumper has two countersunk holes where you will install the two #6291 flat head screws. Now thread on the two #6295 4-40 plain nuts on the back side of the nose plate and tighten them down.



#6291
4-40 x 1/4

#6295
4-40 nut
plain

Fig. 41

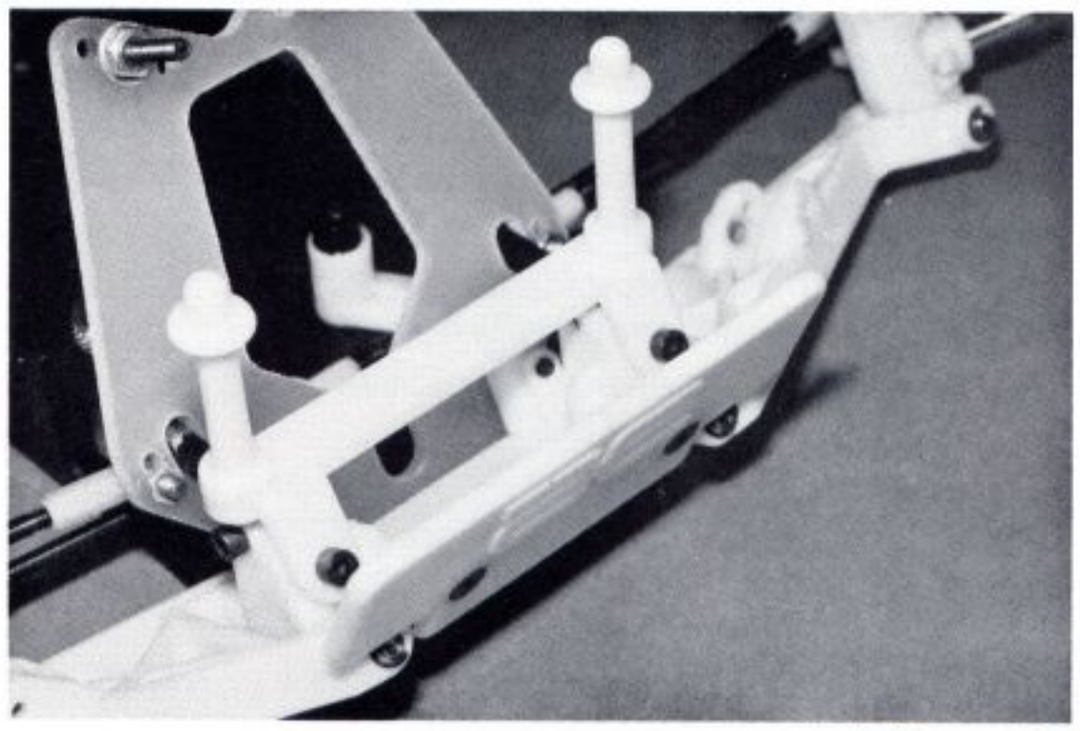


Fig. 42

STEALTH TRANSMISSION

Your gas truck transmission is based on our original Stealth transmission which we feel is the best design in the world. Our original Stealth transmission has enabled Team Associated to win the 1989, 1991, and 1993 2WD off road World Championships. We have also placed 1st, 2nd, & 3rd at the 1990 and 1993 ROAR Nationals and 1st and 2nd at the 1992 ROAR Nationals. In the RC10T we have won the 1991 and 1992 NORRCA Truck Nationals as well as the 1992 and 1993 ROAR Truck Nationals.

Now we have built a whole new Stealth transmission just for the RC10GT gas truck. However, the reduction in the RC10GT Stealth transmission is 2.6:1. With this transmission your gas truck will be more reliable and easier to drive than any other gas powered truck. The consistency of this transmission can enable you to cut your lap times by a considerable amount. But it all depends, of course, on how well you assemble and maintain your transmission. So take your time and do it well.

❑ **Figs. 43, 44 & 45** **(1)** Open the Stealth transmission bag and locate bag A, the diff assembly. **(2)** From bag A remove the #7664 diff gear and the bag containing the twelve #6581 3/32" carbide diff balls (these are the larger of the two ball sizes). These carbide balls are the best available. They will outlast the diff drive rings at least ten times (if the diff is kept clean and lubed).

(3) Look at the center hole of the #7664 diff gear; if there is any flash on the inside hole you will have to remove it. Carefully trim the flash from the center hole with the tip of your X-acto© knife (which will turn easier when removing the flash), to make sure you do not remove any of the gear itself.

WARNING! NEVER replace your diff balls with any other balls except our #6581 carbide diff balls. The tolerances we use are tighter than most other companies. Due to these tight tolerances and careful packaging of matched balls, when replacing lost or worn 3/32" diff balls, you MUST replace ALL 3/32" balls at the same time with new balls from the same package. This means you cannot even mix balls from two separate #6581 packages.

(4) From the Stealth transmission bag remove the #6591 Stealth white silicone diff lube. ***WARNING! DO NOT substitute any other type of diff lube on the balls. It took us countless hours of testing to find the correct silicone diff lube to make the diff work correctly. Do yourself a favor: use what comes in this kit!***

(5) Fill the twelve ball holes in the diff gear with silicone diff lube. **Warning! Do not use the #6588 black grease on the #6581 3/32" diff balls. (6)** Push the twelve 3/32" balls into the holes. **(7)** After all the balls are installed wipe the excess lube back into the ball holes with your finger. Fig 46 shows your completed diff gear. **(8)** Carefully clean all of the silicone lube off your hands.

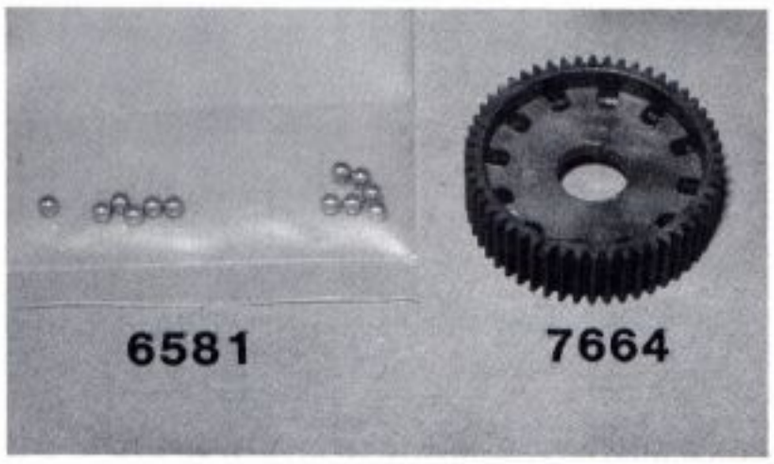


Fig. 43

Fig. 44

Fig. 45

❑ **Figs. 46 & 47** Next open bag B from the Stealth transmission bag. In this bag you will find a total of eight bearings and one bushing in the Team kits, and nine bushings in the Sport kits, which are only for the transmission (fig. 46). Take out the two 5/32" x 5/16" #6589 bearings or #6597 bushings. ***(WARNING!** In the bushing kits there are three bushings with an outside diameter of 5/16"; only two have the smaller 5/32" inside diameter for this step. Take the three small bushings and test fit them on the shaft of the #7668 left diff outdrive hub (see fig. 47). Two of them will fit smoothly onto the shaft; the third one will be loose.* ***The loose one is a #6596 3/16" x 5/16" bushing; set it aside;*** *we will not need it until the end of the transmission section. If you fail to keep it separate, then when you get to the torque clutch assembly later, the remaining bushing will not fit over the shaft and you will have to disassemble the transmission to locate the correct bushing inside the diff, swap and then reassemble all of the parts.*

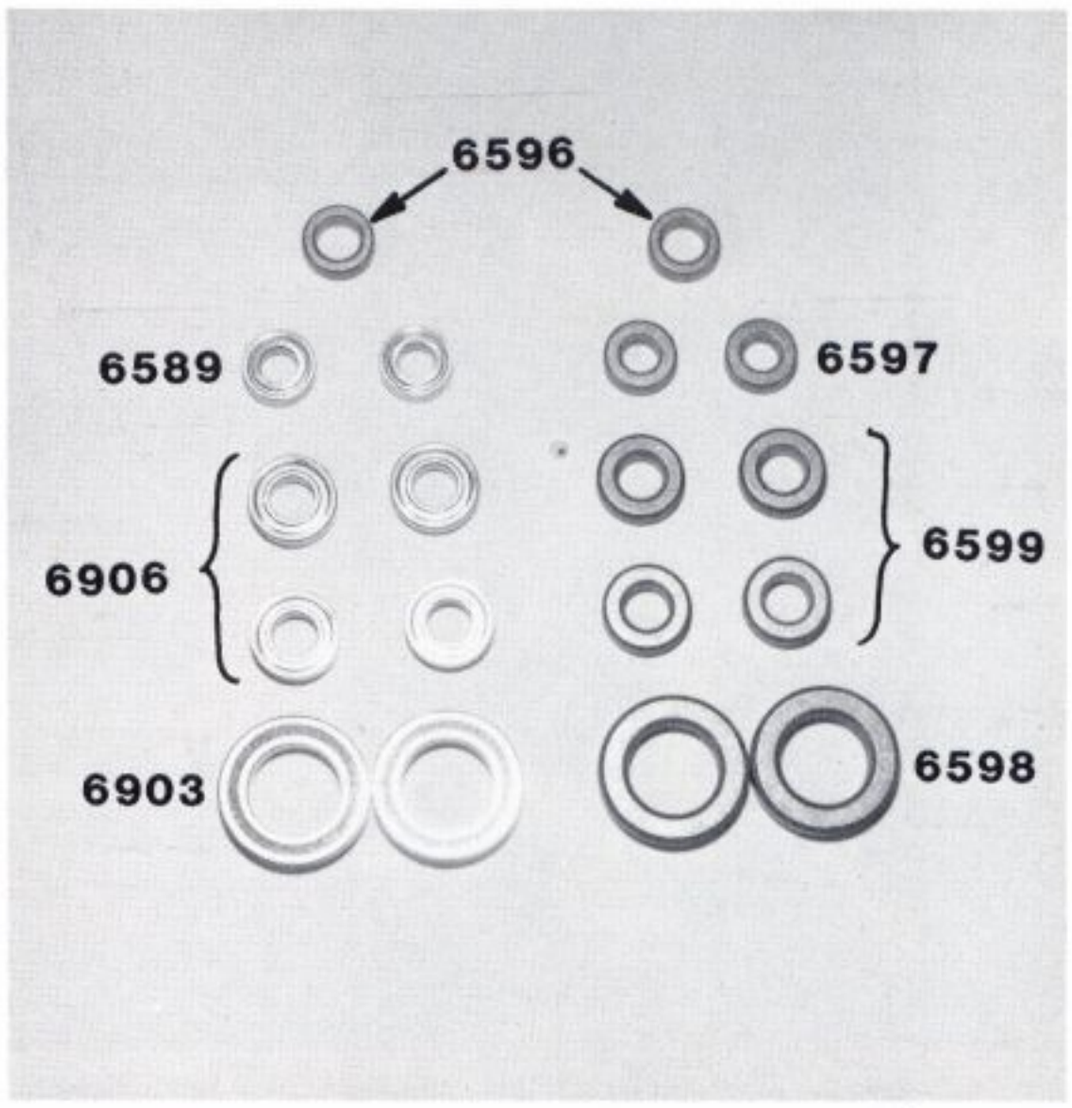


Fig. 46

#6589
5/32 x 5/16
plain bearing
(for ball bearings kits)

#6597
5/32 x 5/16
plain bushing
(for bushing kits)

#6596
3/16 x 5/16
plain bushing
(set this one aside)

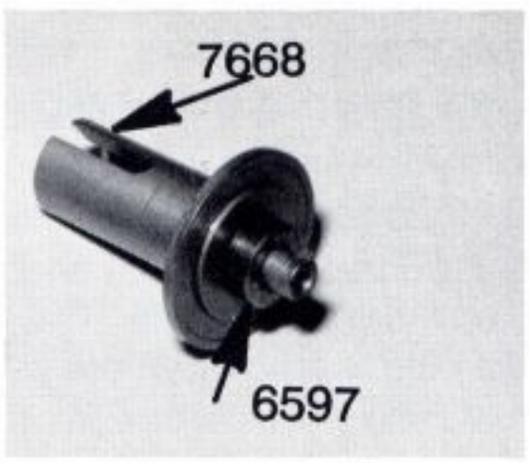


Fig. 47

❑ **Fig. 48** Take one of the #6589 bearings or #6597 bushings and place it inside the center hole of the #7664 diff gear as shown. Set the second #6589 bearing or #6597 bushing aside for a few steps as we will be using it shortly.

Fig. 48

❑ **Fig. 49** In bag A you will find the #6575 T-nut and diff thrust bolt cover. Remove the T-nut from the nylon runner (the T-nut has a steel insert molded into it). Trim the diff thrust bolt cover off the same molding tree and set it aside. We will use it in fig. 100. ***WARNING!*** *Make certain that you do not cut off the "ears" on the T-nut or the thrust bolt cover.*

cut carefully at black lines

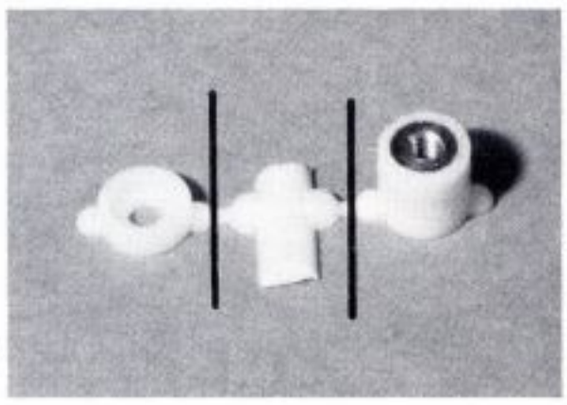
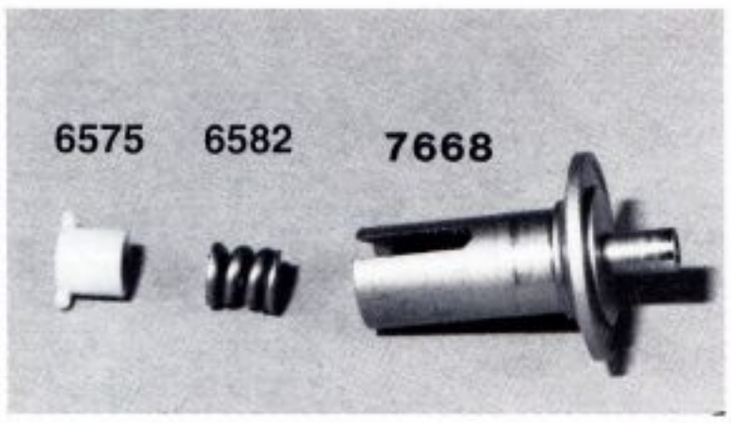


Fig. 49

❑ **Figs. 50, 51 & 52** Also in bag A you will find the #7668 left diff outdrive hub and the #6582 diff thrust spring. **Make sure that the left drive hub is clean and free of all burrs or residue inside and out, which could reduce the performance of the diff.** Carefully install the spring into the left diff drive hub. It should go into the bottom of the slot easily. Now align the #6575 nylon T-nut, from the last step, with the slots in the #7668 left diff hub and push in the T-nut, steel inset end first, until it contacts the springs. ***WARNING!*** *Make certain that you do not mix up the #6582 diff thrust spring with the #6587 torque control spring, used later in the manual. The torque control spring is slightly larger in diameter and will jam inside the diff outdrive hub if forced in and the diff spring will not fit over the #6571 drive gear shaft.*

There should now be approximately a 3/32" (2.4mm or .100") gap between the ears on the T-nut and the bottom of the diff outdrive slot, as shown in fig. 52. Fig. 53 shows an end view of the left diff outdrive hub after the spring and T-nut was installed.

Fig. 50



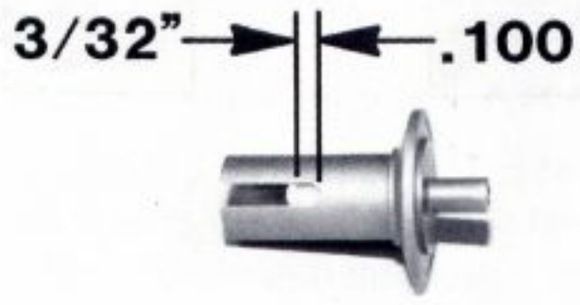


Fig. 51

Fig. 52

❑ **Fig. 53** Take your X-acto© knife and trim off any of the plastic T-nut that extends outside of the slots in the outdrive hub as shown. This is necessary so that it will fit through the bearing, in the case half, later on.

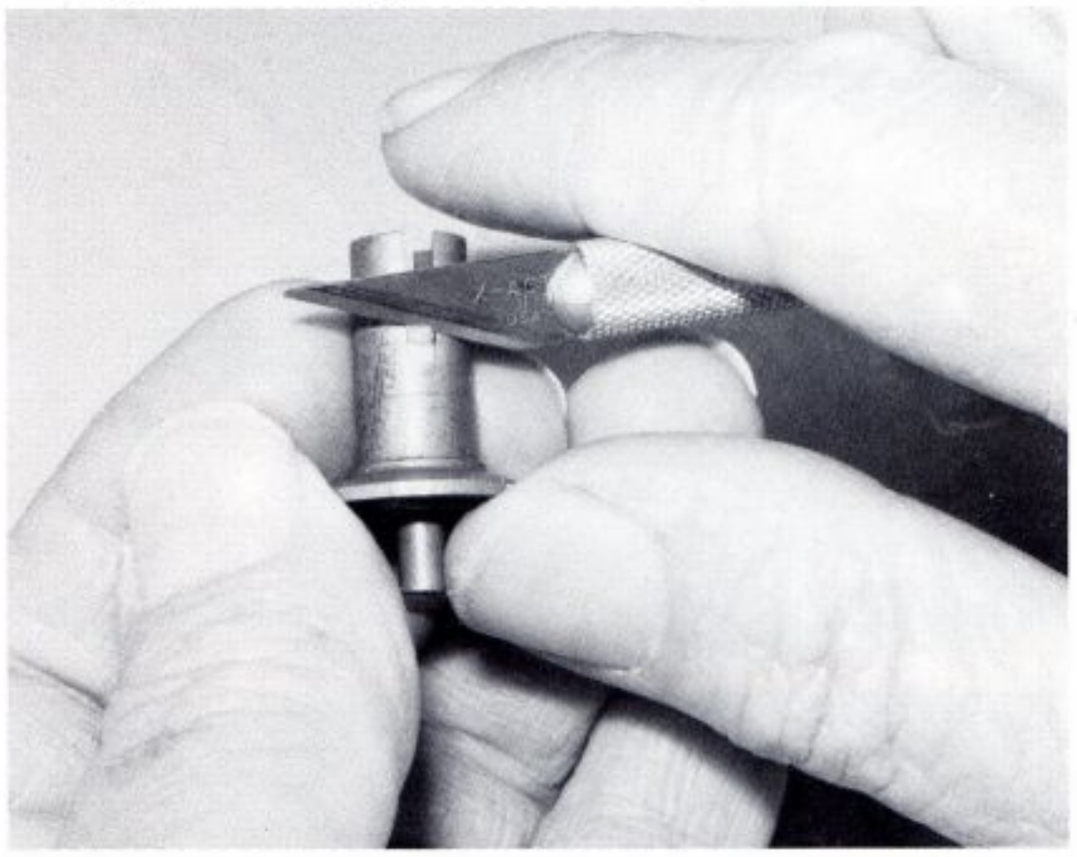


Fig. 53

❑ **Fig. 54** In bag A you will find a little bag containing the six smaller #6574 5/64" precision thrust balls. In another little bag you will find the #6575 2-56 diff thrust bolt and the two #6573 diff thrust washers.

WARNING! NEVER replace your thrust balls with any other balls except our #6574 thrust balls. The tolerances we use are tighter than most other companies. Due to these tight tolerances and careful packaging of matched balls, when replacing lost or worn 5/64" thrust balls, you MUST replace ALL 5/64" balls at the same time with new balls from the same package. This means you cannot even mix balls from two separate #6574 packages.

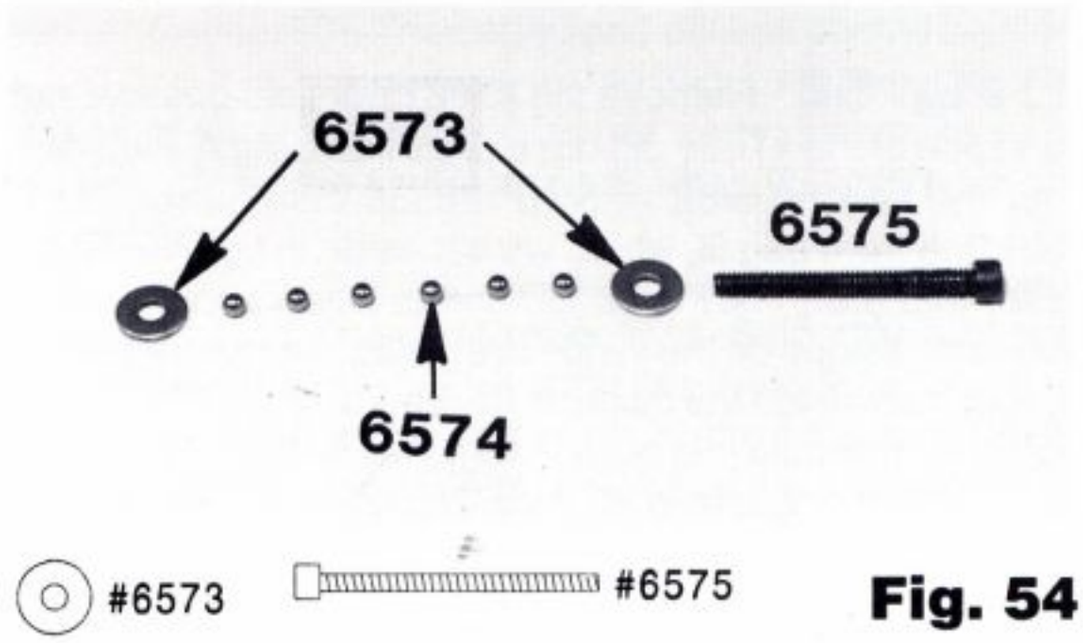


Fig. 54

❑ **Figs. 55 & 56** Slip the two #6573 thrust washers onto the #6575 diff thrust bolt as shown. Locate your #6588 black grease and place a small amount between the two #6573 thrust washers (just enough to hold the six balls in place). ***WARNING! Do not use the #6591 Stealth diff lube on the six #6574 5/64" diff thrust balls.***

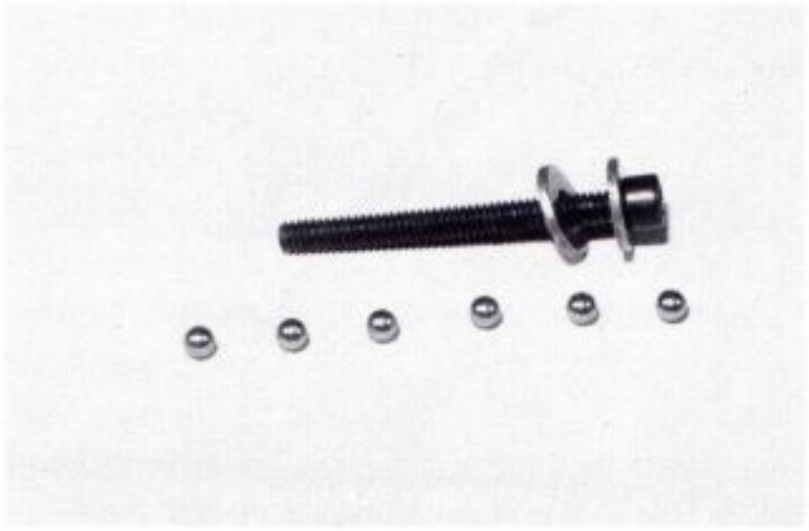


Fig. 55

Fig. 56

❑ **Fig. 57** Now place the six #6574 thrust balls between the two #6573 thrust washers (the black grease should hold them in place for you). ***Note:*** *Make sure you have all six balls installed between the washers, because more balls will cause the diff to loosen up and less can cause the thrust washers to crack.*

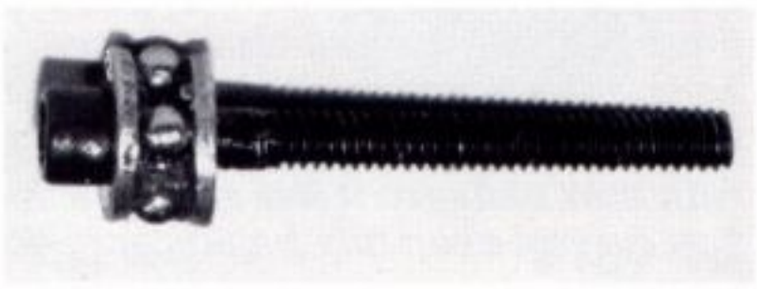


Fig. 57

❑ **Fig. 58** Remove the #7667 right diff outdrive hub and one of the #7666 diff drive rings from bag A. Now take out the second 5/32" x 5/16" #6589 bearing (or #6597 bushing from bag B, which we set aside in fig. 48). Make sure that the #7667 right diff hub is clean and free of all burrs or residue on the inside or outside. Install the bearing or bushing inside the cavity in the center of the #7667 right diff hub. It should just push in with your finger. Never drive the bearing or bushing in! Now place the #7666 diff drive ring onto the right diff hub. ***Racer's Tip:*** *The Team Drivers always check the diff drive rings for the side that is more rounded on the edge and place this side against the hub, giving you the best diff action possible.*

#6589
5/32 x 5/16
plain bearing
(for ball bearings kits)

#6597
5/32 x 5/16
plain bushing
(for bushing kits)

Fig. 58

❑ **Fig. 59** These photos show the #7667 right diff hub with bearing or bushing and drive ring installed. ***WARNING! Do not try to pin the drive ring to the hub. This hub and ring system are designed to lock the drive ring without pinning. Please leave it AS IS.***

Fig. 59

❑ **Fig. 60** Locate your 5/64" Allen wrench from your #6950 tool bag. Now slip the long end into the head of the #6575 diff thrust bolt. You are going to insert the bolt, washers and ball assembly into the center of the #7667 right diff hub, as shown.

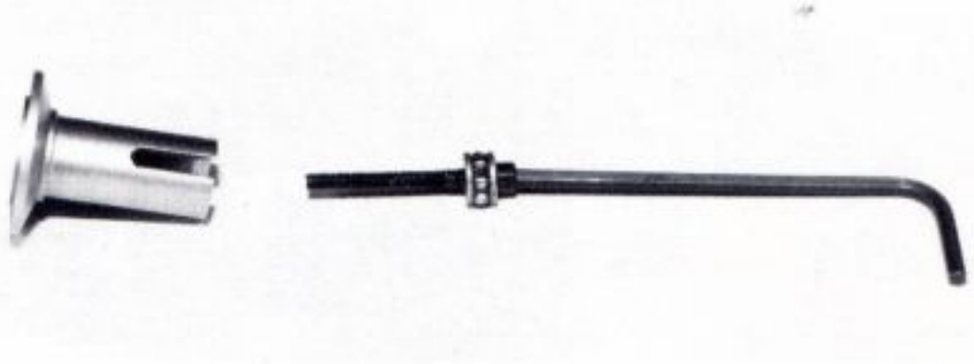


Fig. 60

❑ **Fig. 61** With the Allen wrench still in the diff bolt, turn the hub assembly upright so that the wrench is on the bottom. Make sure that the #7666 diff drive ring is still on and centered. Now pick up the #7664 diff gear with the balls and bearing or bushing installed and slip it over the #6575 diff thrust bolt onto the drive ring and hub.

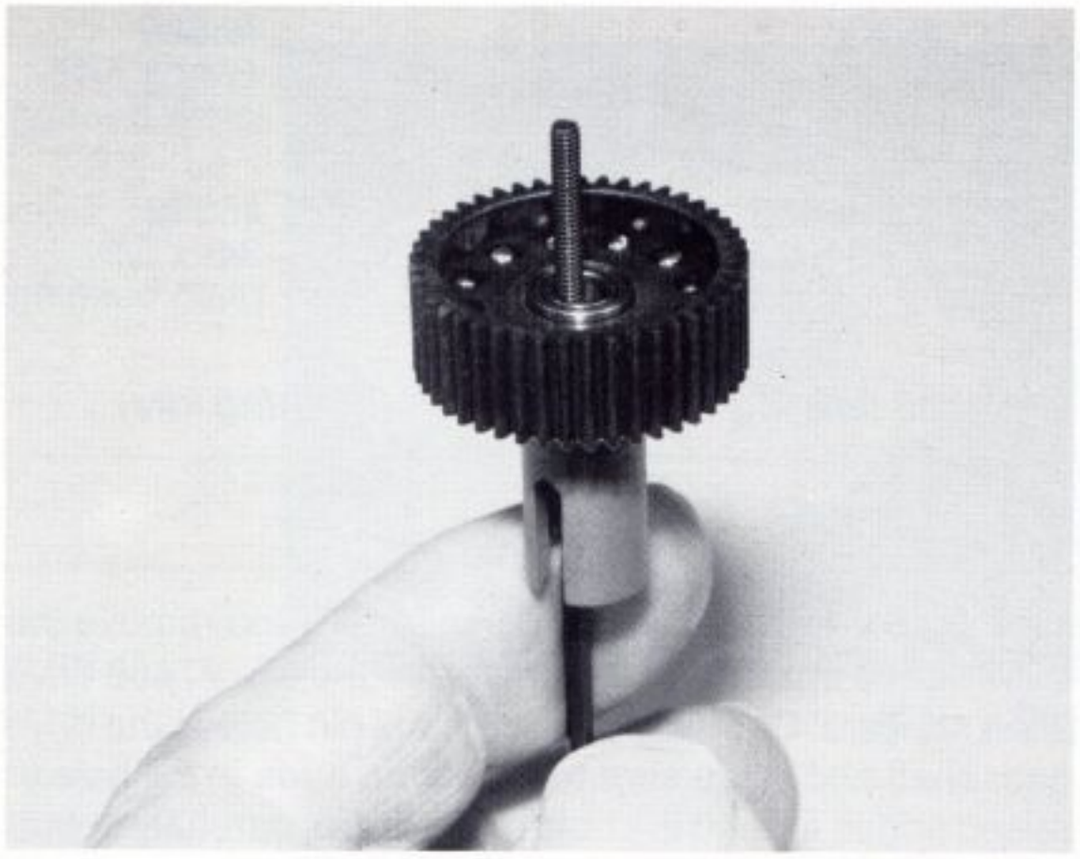


Fig. 61

❑ **Fig. 62** Now go back to bag A and take out the second #7666 diff drive ring. Install this second drive ring on the top side of the diff gear (over the diff balls) and center it as best as you can. (If you are doing the racers setup, the rounded side will be up.) ***WARNING!*** *If you remove the gear at any time before you completely assemble the diff halves, always double check to make sure you do not have both drive rings on the same side. This can be easy to do because one drive ring may stick to the diff gear and the other could be stuck to the diff outdrive hub.*

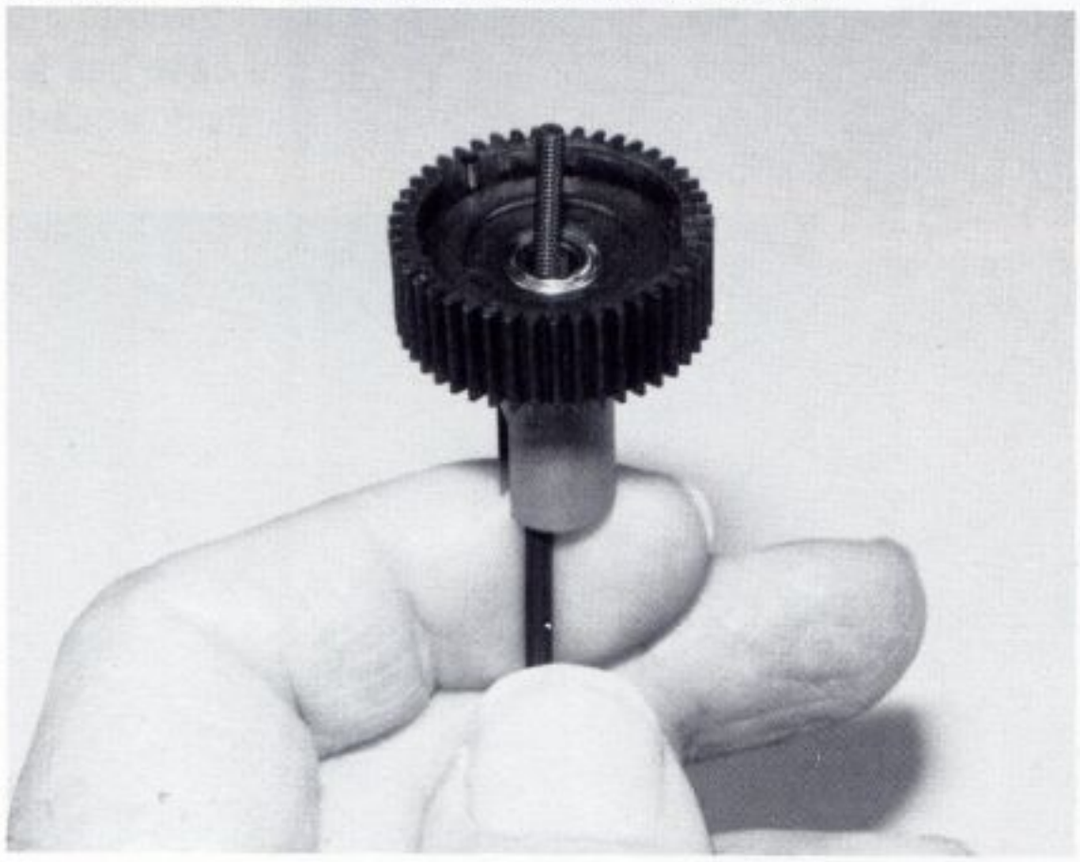


Fig. 62

❑ **Figs. 63 & 64** Now install the #7668 left diff drive hub assembly over the #6575 diff bolt until it seats on the #7666 diff drive ring. Make sure that the hub centers on the diff drive ring. THIS IS VERY IMPORTANT.

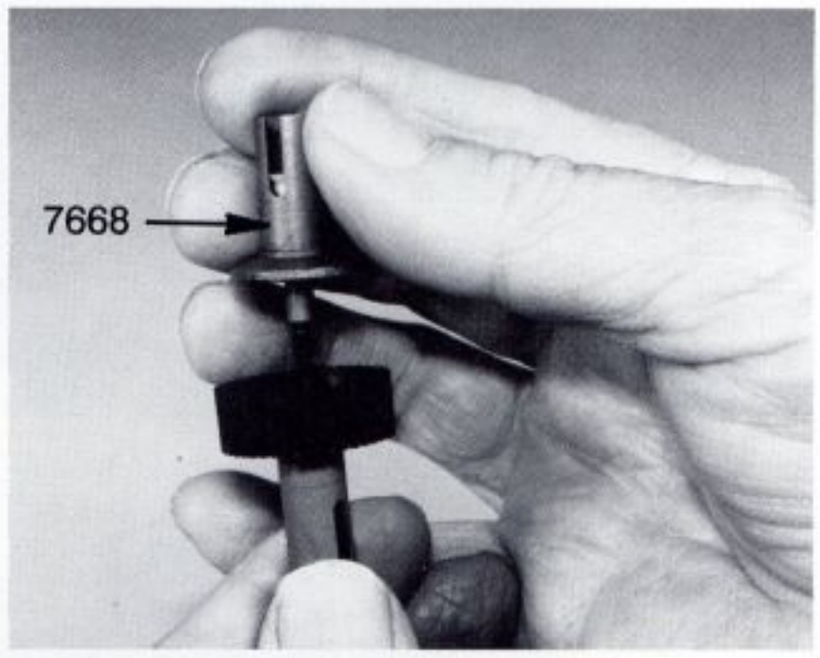


Fig. 63

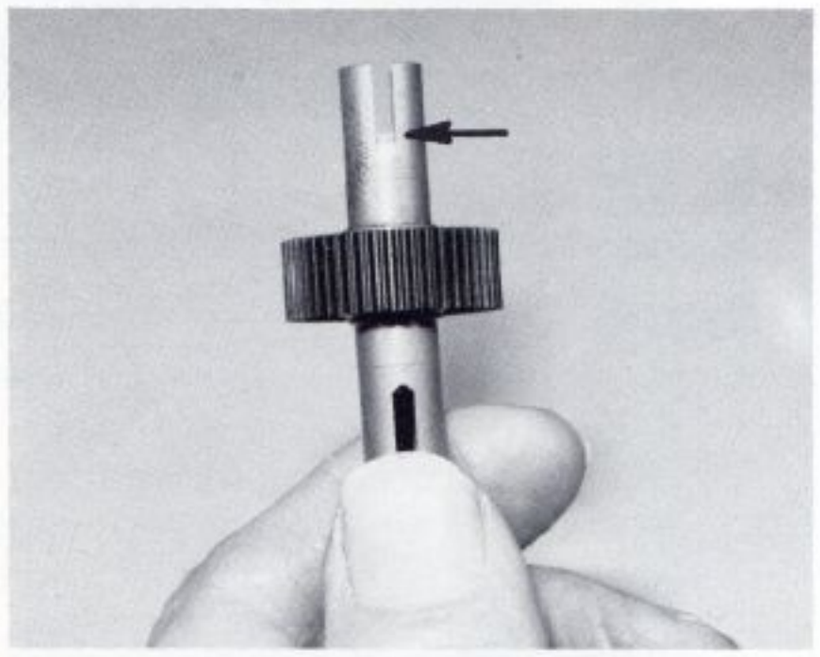


Fig. 64

❑ **Figs. 65 & 66** You will now need to tighten the diff bolt using the Allen wrench, making sure that the hubs and diff drive rings stay centered. Once you have lightly snugged the two halves together you can turn the diff assembly sideways, as shown, and tighten the diff screw. You will want to tighten the bolt until the spring collapses fully and the screw bottoms out. **DO NOT OVERTIGHTEN!** Correct adjustment is bottoming out the spring and bolt and then backing off the screw 1/4 of a turn. As you are tightening the diff bolt, you will notice the ears on the T-nut moving closer and closer to the bottom of the slot in the diff hub (arrow, fig. 66). The spring and diff bolt should bottom out at about the same time as the T-nut ear reaches the bottom of the slot, but if not, do not worry, just make sure you bottom out the spring and bolt, then you can back off 1/4 of a turn.

Your diff should operate very smoothly when turning the hubs in opposite directions. Smoothly does not mean "free spinning". The parts are held together very tightly but the ball rolling motion (when the diff is turned) will feel smooth, not rough. After you have driven the truck a few minutes, recheck the diff setting. There is never a need to adjust the diff in any other way.

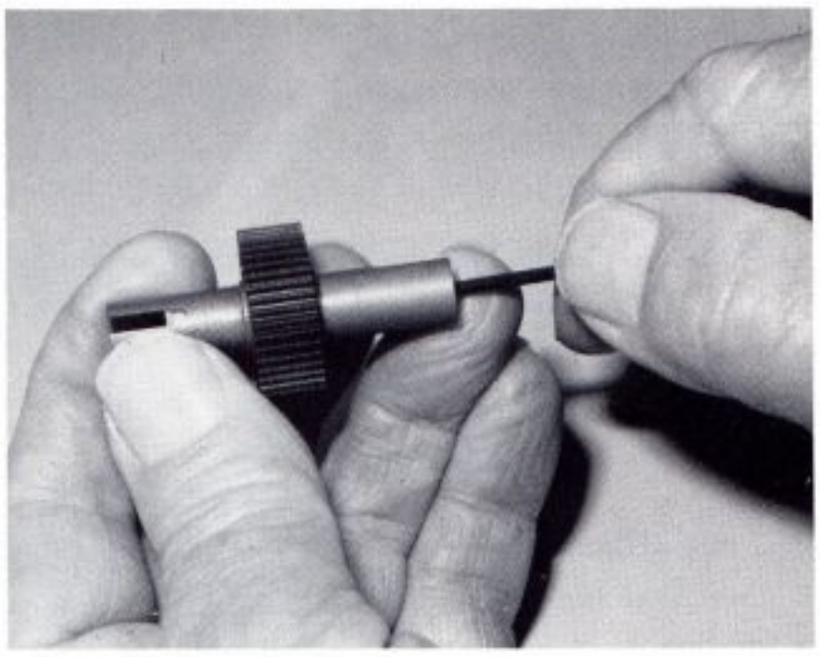


Fig. 65

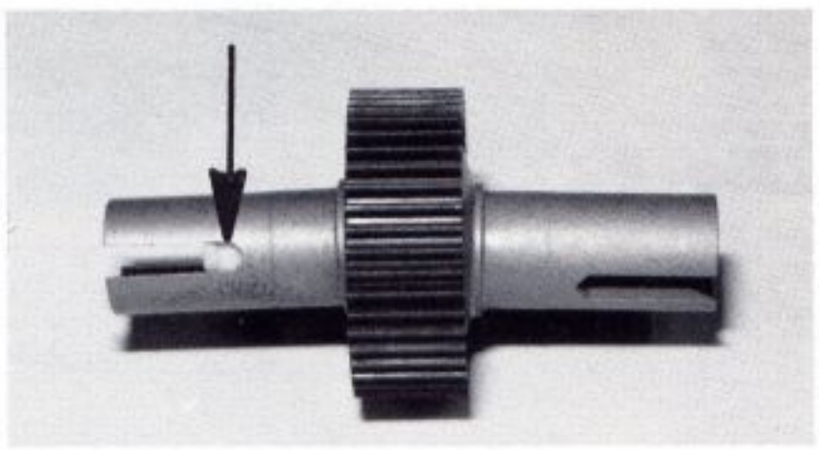
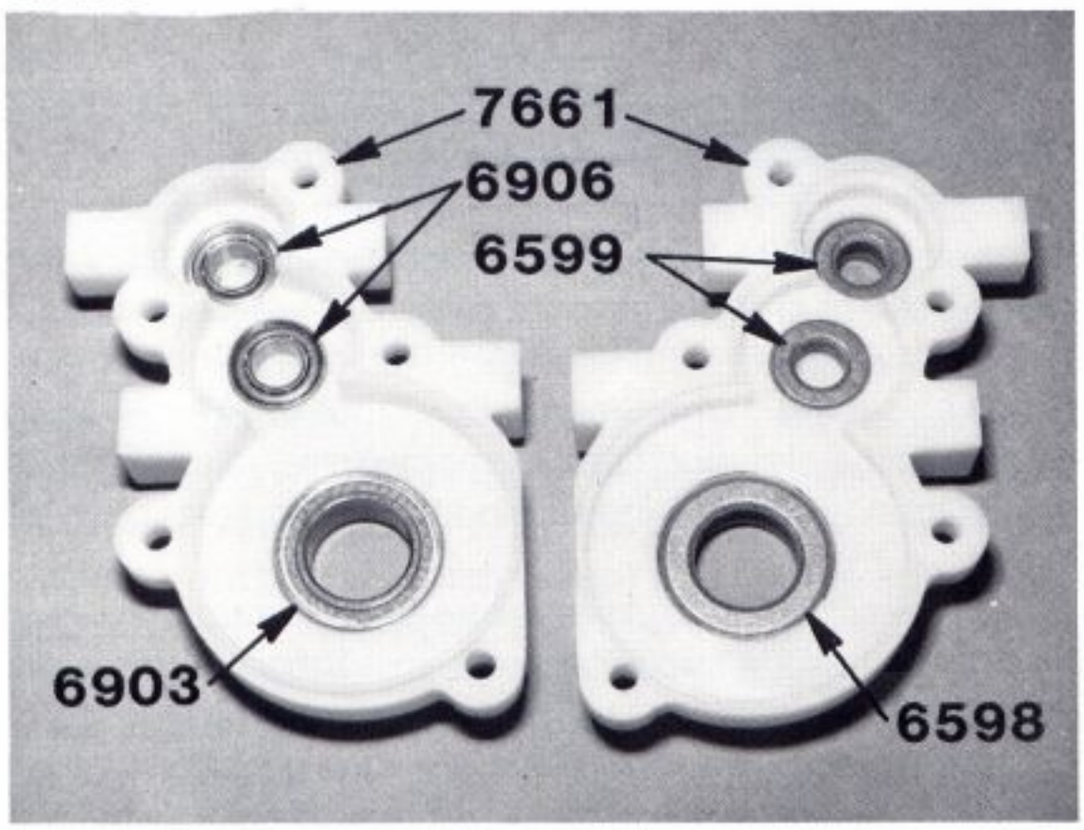


Fig. 66

❑ **Fig. 67** Open bag C and remove the #7661 left and right transmission halves. Remove any flashing from the case halves.

For the ball bearing kits: From bag B remove four #6906 3/16" x 3/8" plain bearings and two #6903 3/8" x 5/8" sealed bearings. Fig. 67 shows the bearings in the left case half. Install your bearings the same in both case halves. Match the bearing size to the cavity size as shown.

For the bushing kits: From bag B remove four #6599 3/16" x 3/8" bushings and two #6598 3/8" x 5/8" bushings. Fig. 67 shows the bushings in the right case half. Your bushings will be installed the same way in the other case half. Install your bushings the same in both case halves. Match the bushing size to the cavity sizes as shown.



(ball bearing kits) *(bushing kits)* **Fig. 67**

#6906
3/8 x 3/16
plain bearing

#6903
3/8 x 5/8
plain bearing

(ball bearing kits)

#6589
5/32 x 5/16
plain bearing

#6598
3/8 x 5/8
plain bushing

(bushing kits)

❑ **Figs. 68 & 69** Open bag D and remove the #6571 drive shaft/gear assembly and the two #7669 drive shaft spacers. Carefully check the roll pin hole in the drive gear shaft and make sure there are no burrs in the hole or raised edges around the hole. If there are, carefully deburr the hole and remove any raised edges. Be sure to check both sides of the hole. Now take the #6571 drive gear and install one of the #7669 spacers onto the threaded shaft end. Push the spacer all the way down against the gear.

#7669
spacer

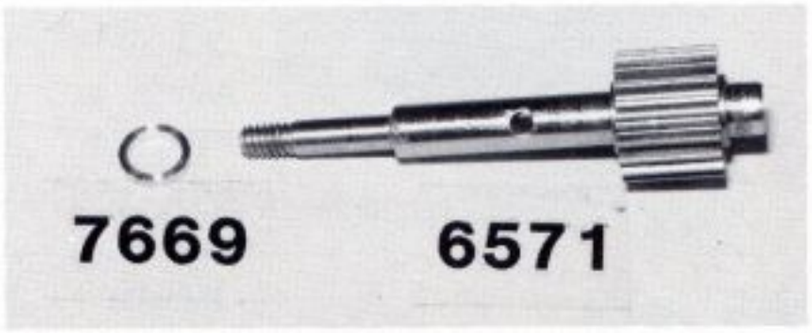


Fig. 68

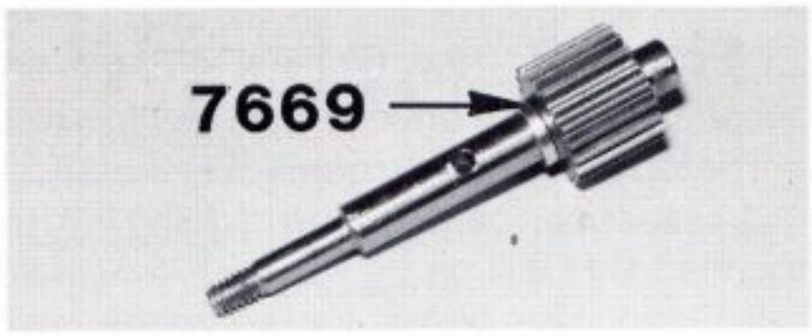
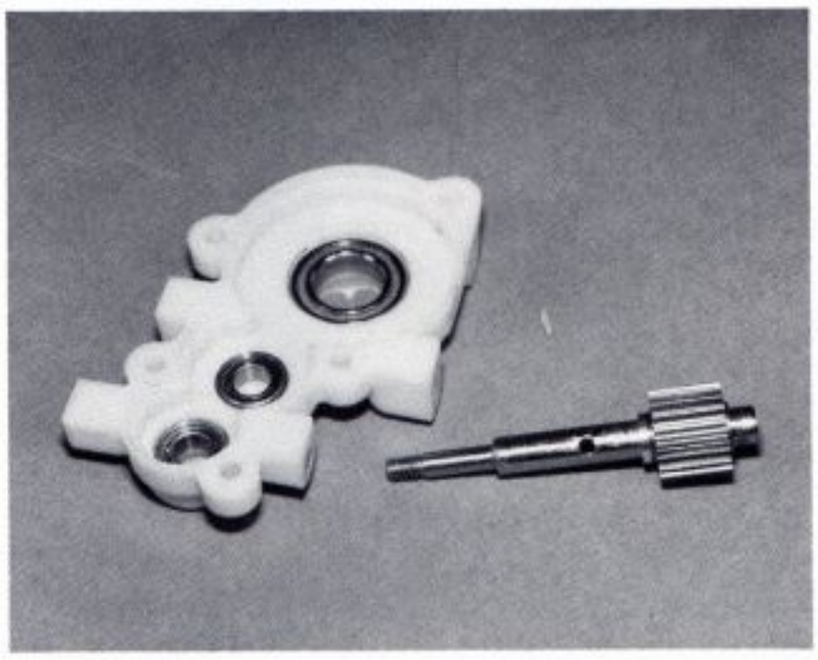


Fig. 69

❑ **Figs. 70 & 71** Insert the shaft through the upper bearing or bushing of the #7661 right case half so that the shaft is to the outside and the gear is inside against the bearing as shown in fig. 71.



(ball bearing kits) **Fig. 70**

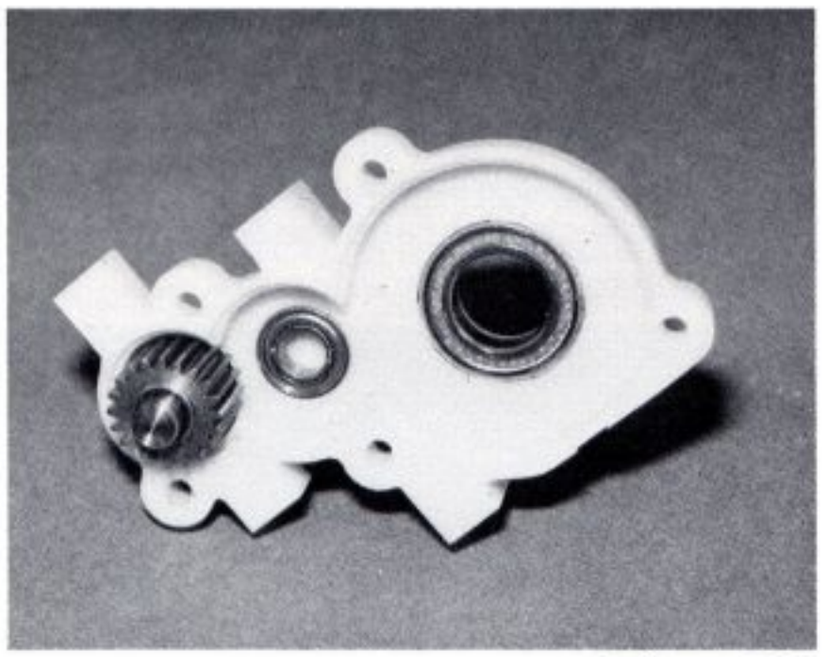


Fig. 71

❑ **Figs. 72 & 73** Open bag E and remove the #7665 .078" x 7/16" roll pin. Now using a pair of needle nose pliers, squeeze the roll pin into the hole in the #6571 drive shaft (as shown) and center the pin to the best of your ability.

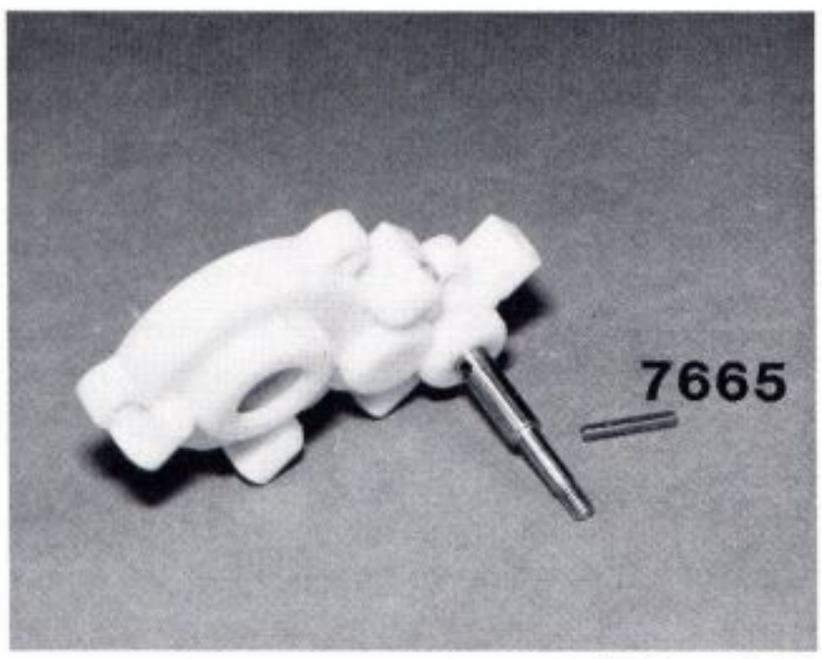


Fig. 72

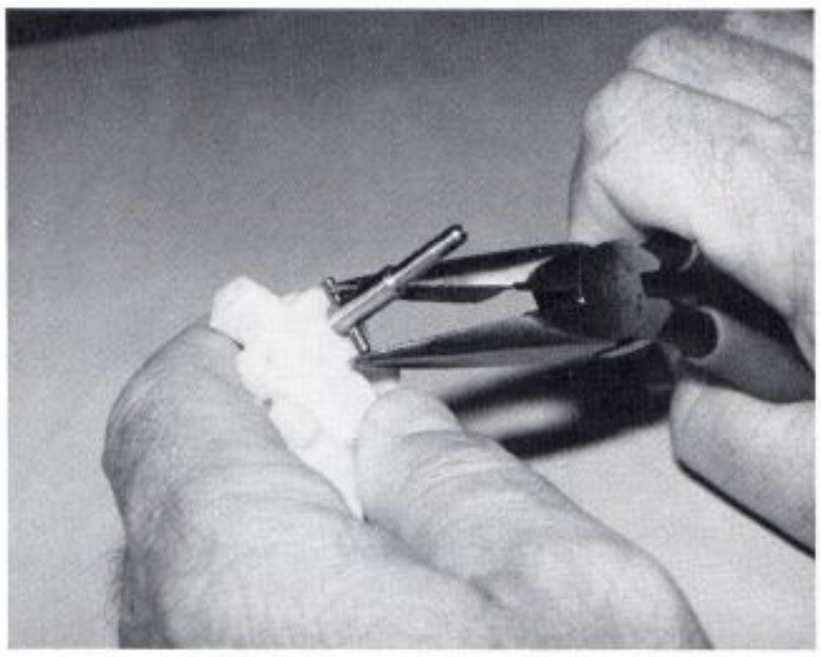


Fig. 73

❑ **Figs. 74 & 75** Take the second #7669 drive shaft spacer that we took out in fig. 69 and install it onto the drive gear shaft. Slide it all the way down next to the drive gear.

#7669 spacer

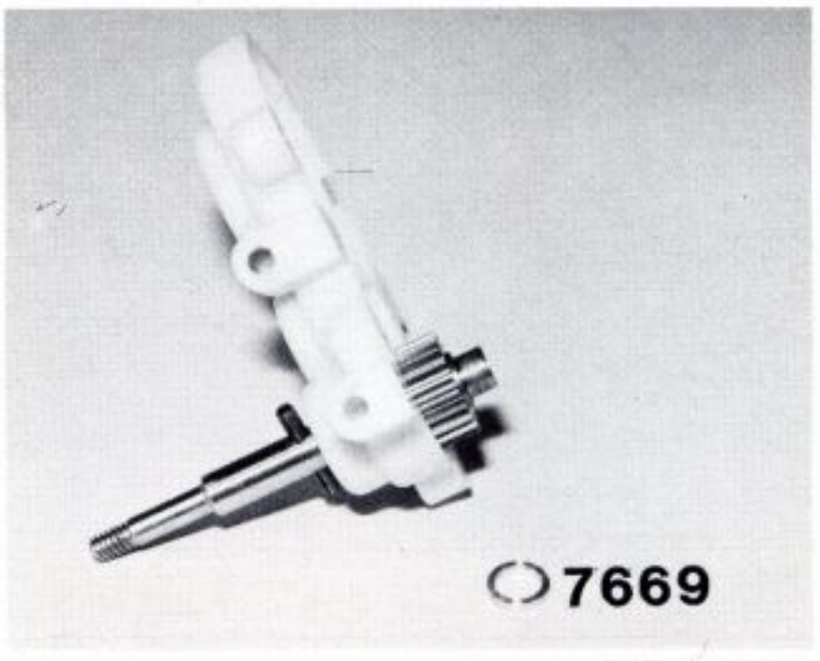


Fig. 74

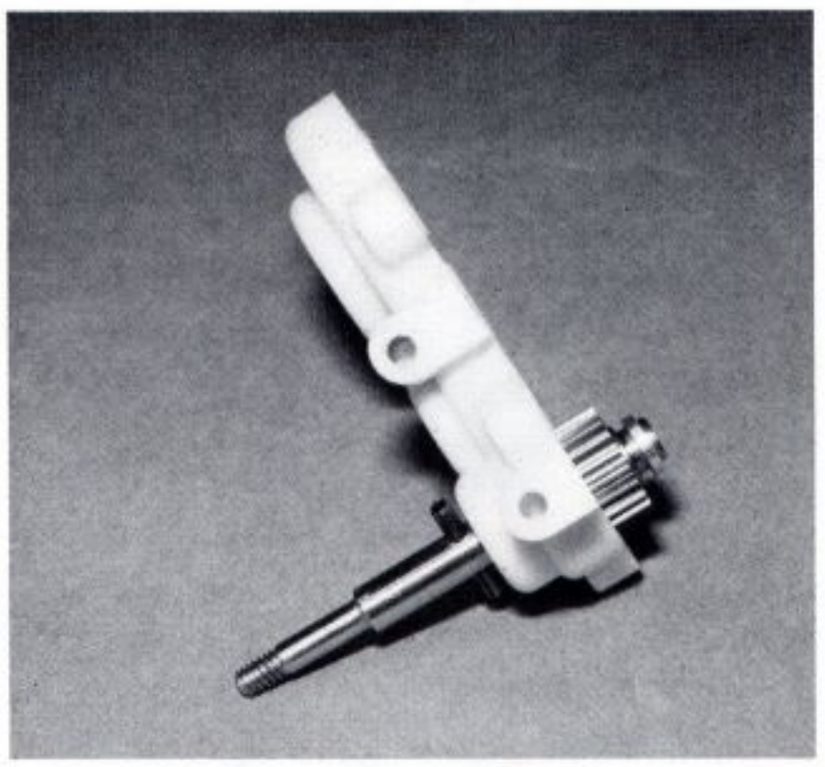


Fig. 75

❑ **Figs. 76 & 77** Install the assembled diff into the right case half lower bearing or bushing as shown in fig. 77. ***Note:*** *Make sure that you install the diff bolt head side through the right case half. If you install the bolt head so that it is on the driver's side of the transmission you may have a problem with the diff bolt backing off.*

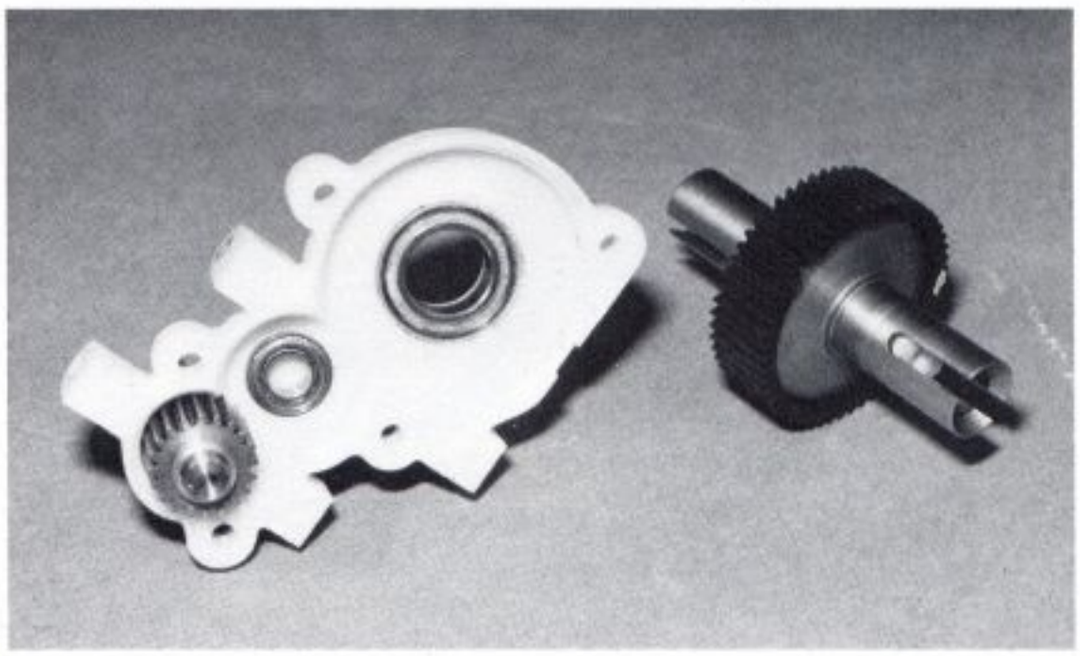


Fig. 76

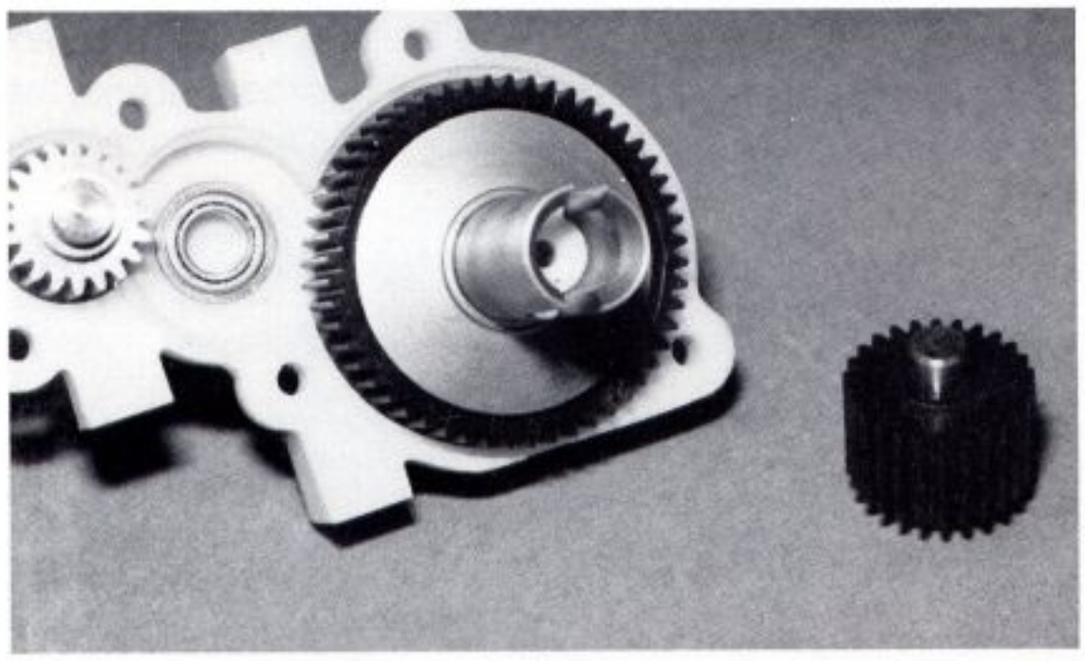


Fig. 77

❑ **Figs. 78 & 79** Locate the #6570 idler gear and shaft from bag D and install it into the center bearing or bushing location in the right transmission case half. There is no right and left so the gear can go in either way. Fig. 79 shows the right hand case half with all three gears installed.

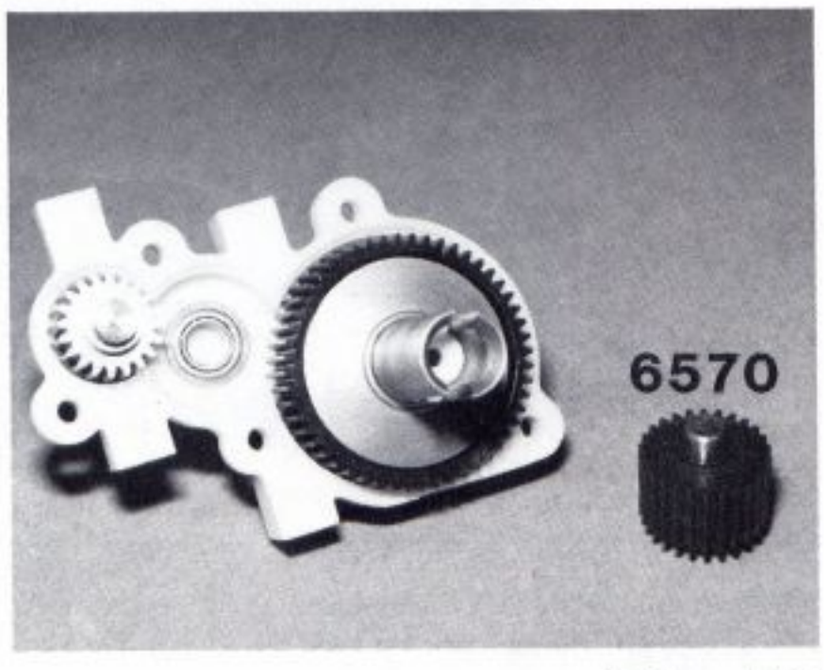


Fig. 78

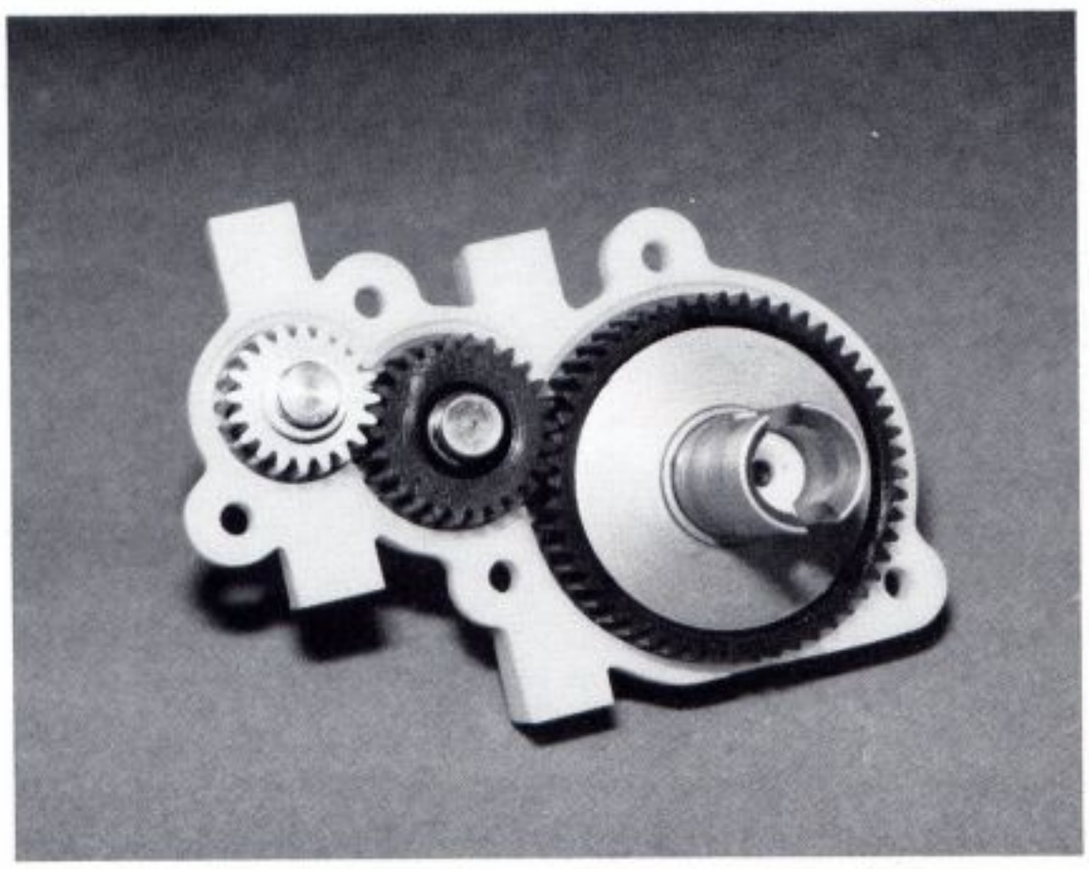
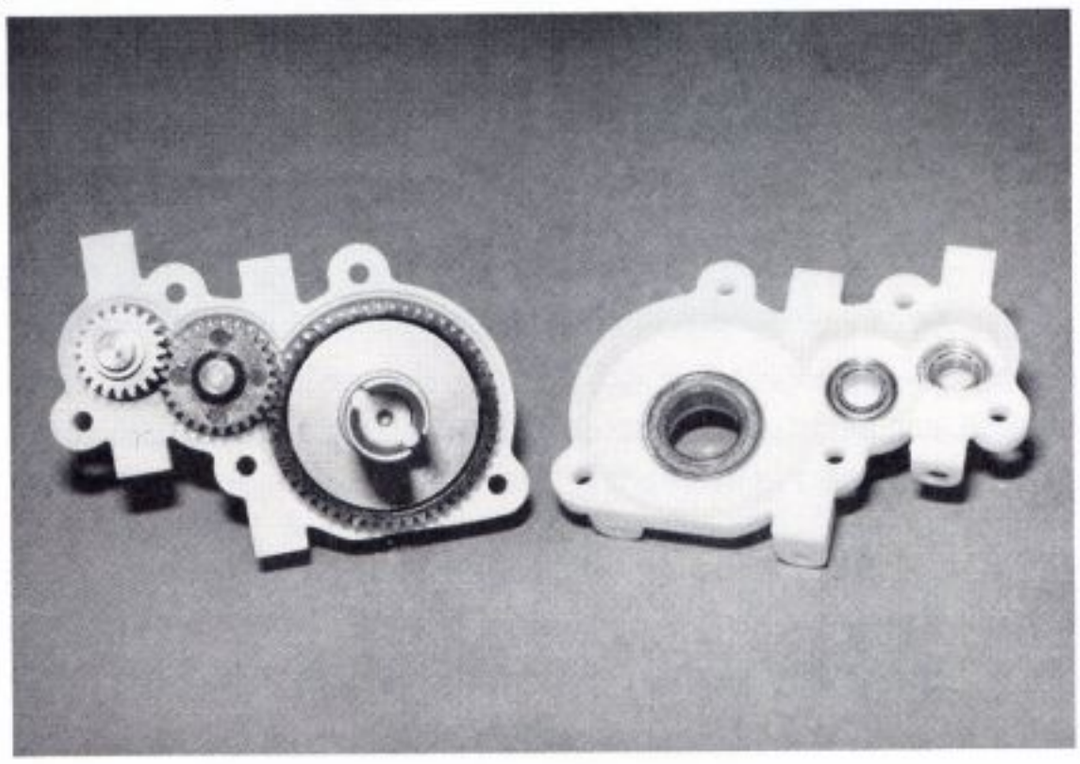


Fig. 79

❑ **Fig. 80** The photo shows the right case half with gears installed and the left hand case half with bearings or bushings installed. Now take the left hand case and install it onto the gears with the right hand case half. Make sure the drive gear spacer and the bearings or bushings stay in place during assembly.



right hand case *left hand case*

Fig. 80

❑ **Fig. 81** Open bag F and remove five #6924 4-40 x 3/8" SHCScrews. With the left hand case half mounted over the gears making sure that each gear fits correctly into the appropriate bearing or bushing, install the five #6924 screws into the left hand case half and thread them into the right hand case half. Go ahead and tighten down all four screws but don't overtighten them. Now check to see if all the gears turn freely by spinning the diff assembly.

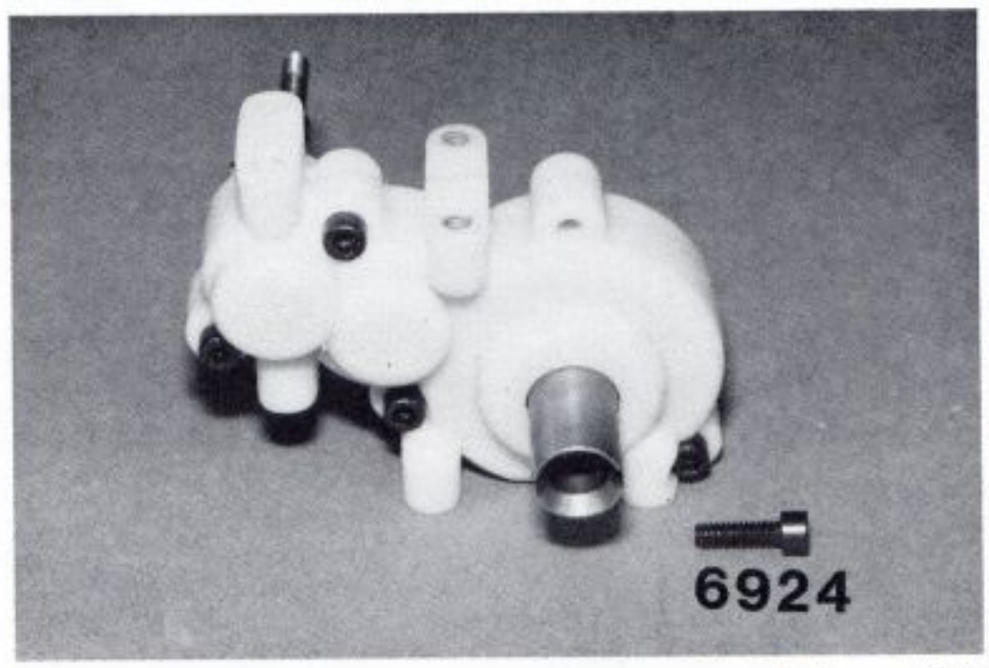
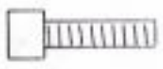


Fig. 81



#6924
4-40 x 3/8

❑ **Figs. 82, 83 & 84** **(1)** Now we are going to start assembling the Associated Torque Control clutch and disk brake assembly. From bag E remove the #6583 inner torque control hub (with the slot on the back side as shown in fig. 82). **(2)** Now open up bag 7-13, the brake bag, and remove the #7554 plastic disc brake adapter (fig. 82). **(3)** Install the brake adapter onto the inner torque clutch hub with the notches facing up and lining up. **(4)** Go back to bag 7-13 and remove the #7553 brake disc (see fig. 83). **(5)** Install the disc as shown in fig. 84.

***(NOTE:** If the brake disc is not inside bag #7-13, try the Master Bag.)*

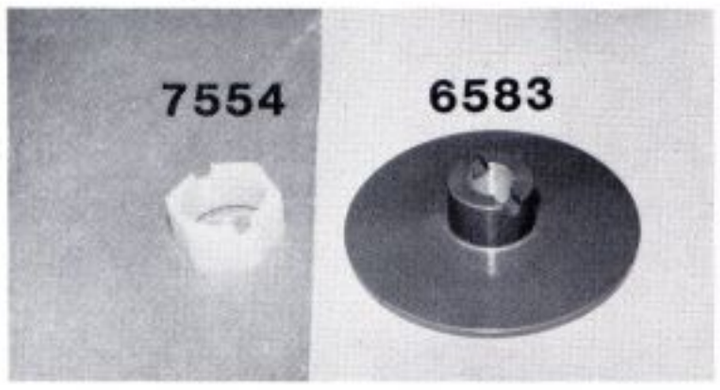


Fig. 82

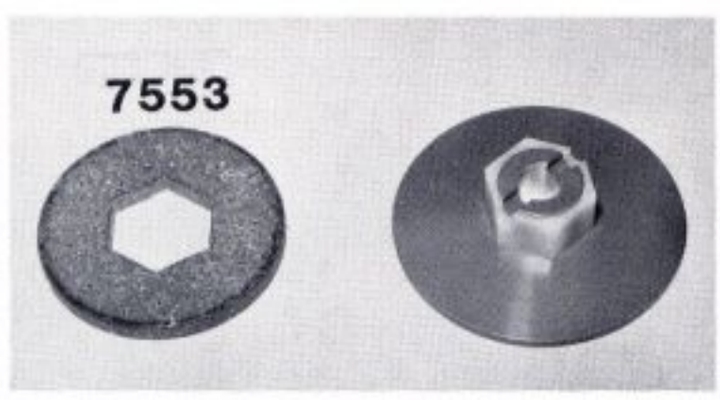


Fig. 83

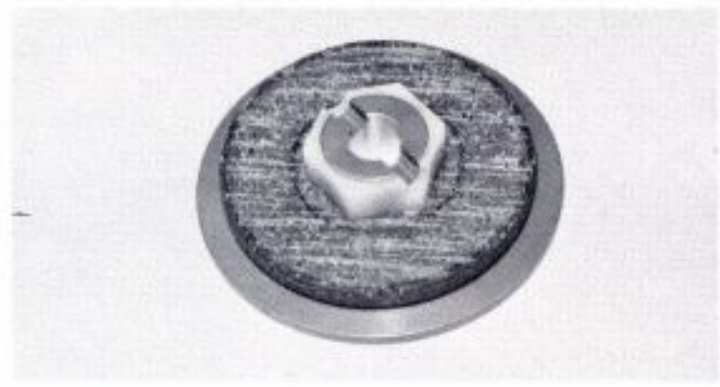


Fig. 84

❑ **Figs. 85 & 86** Now we need to install the inner torque clutch hub and brake disk assembly onto the #6571 drive gear shaft. The brake disk adapter side of the clutch hub will go onto the shaft first. The clutch hub slot and the notches in the plastic brake disc hub go onto the #7665 drive shaft roll pin. Fig. 86 shows the brake disc and clutch installed.

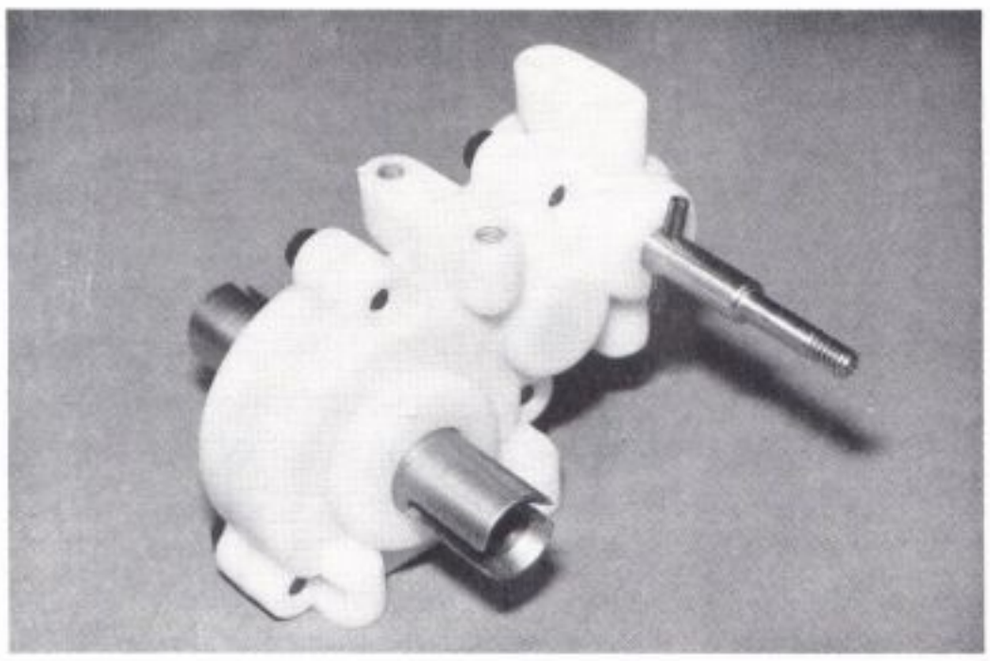


Fig. 85

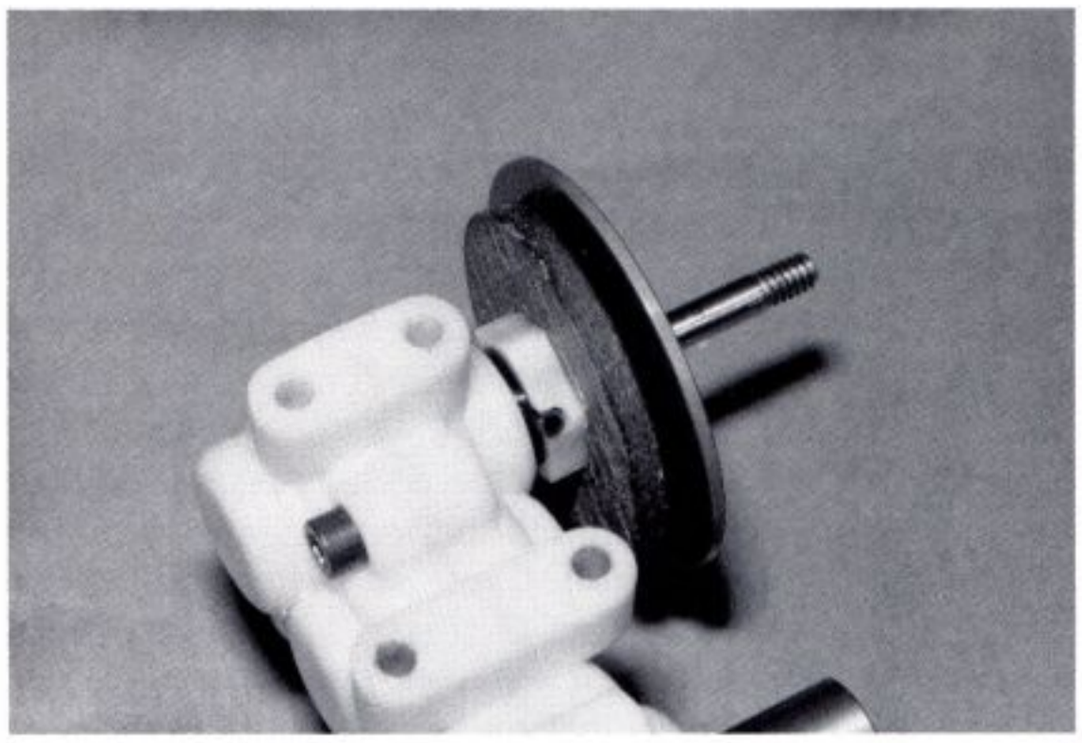


Fig. 86

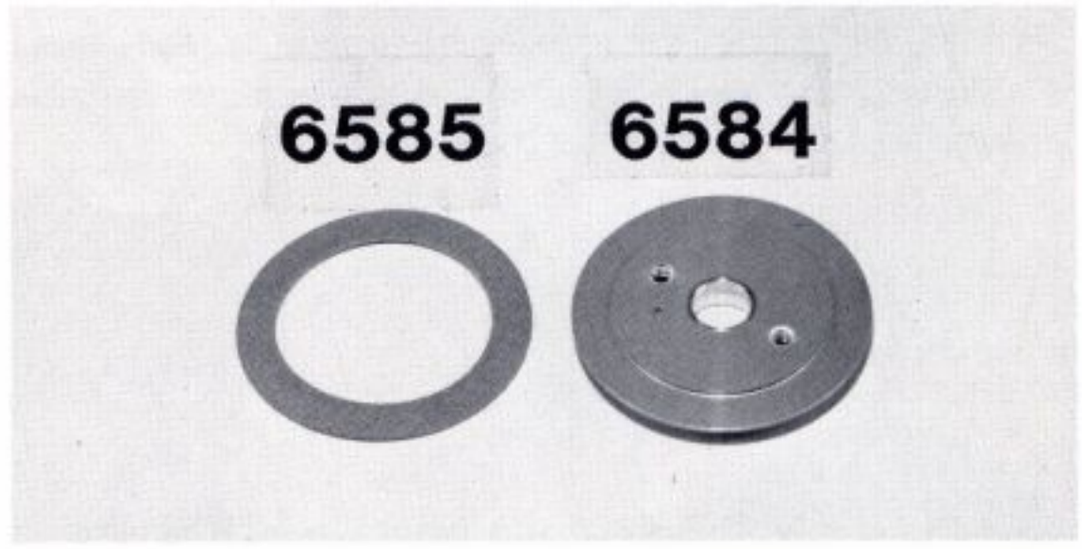


Fig. 87

❑ **Figs. 87 & 88** Install the #6585 clutch disk (bag F) onto the inside of the #6584 outer Associated Torque Control Hub (bag F) as shown in fig. 88.

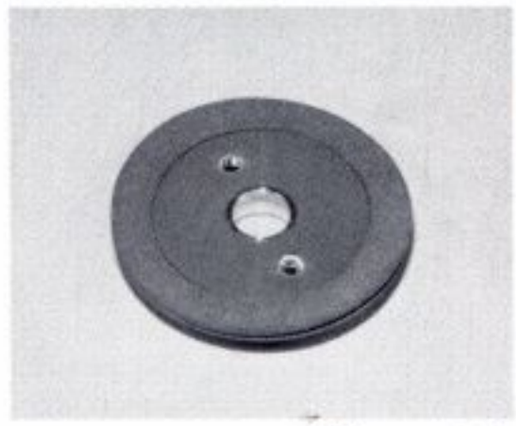
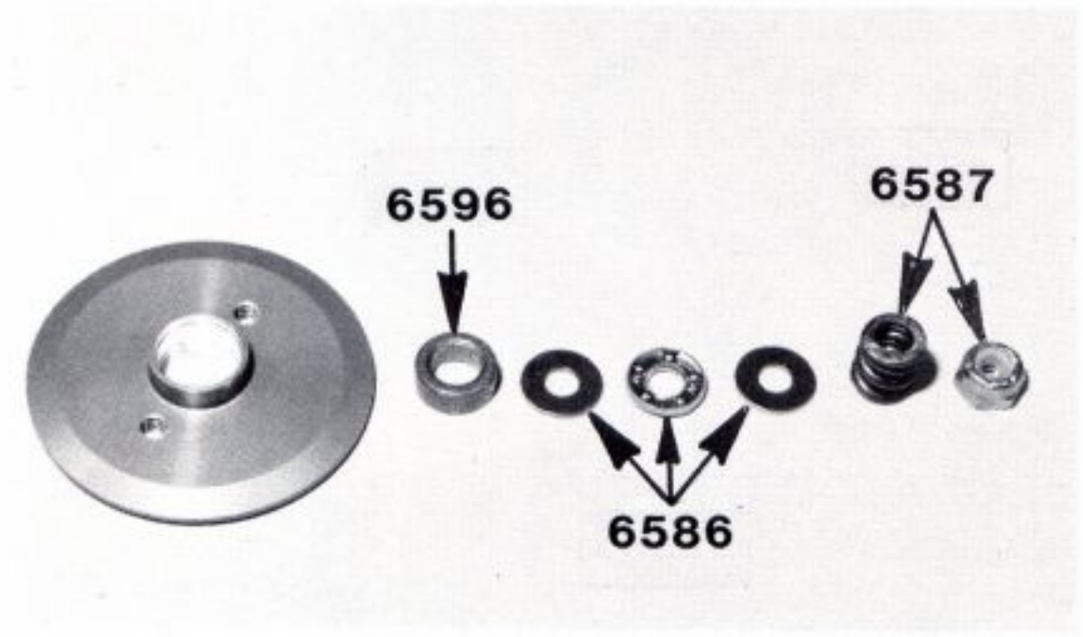


Fig. 88

❑ **Fig. 89** Fig. 89 shows the order in which the main portion of the Associated torque clutch parts will be placed on the drive shaft as we assemble the clutch. **(1)** Locate the #6596 3/16" x 5/16" bushing from Bag B. ***Note:** We have replaced the bearing we used to use in this location with a bushing, in the bearing kits, because our tests have shown that the bushing actually works better. This bushing is pre-oiled through a special manufacturing technique so no oil is needed during assembly.* **(2)** Install the #6596 bushing inside the raised center of the #6584 outer clutch hub. **(3)** Next, install the clutch hub with the bushing and clutch disk onto the gear shaft, making sure that the clutch disk stays centered on the hub. You will also need to make sure that the bushing goes onto the larger portion of the gear shaft and that it is slightly below the surface of the clutch hub when fully installed.

(4) From bag E remove the #6586 thrust bearing and its two steel thrust bearing washers. **(5)** Remove the #6587 torque control spring and #6629 gold colored 5-40 locknut. ***(Note:** Associated package #6687 is a diff thrust spring with one #6629 gold 5-40 locknut. Associated package #6629 is a bag of replacement 5-40 gold locknuts).* **(6)** Take one of the #6586 washers and slide it onto the drive shaft. **(7)** Now install the #6586 brass carrier thrust bearing **(8)** and the second #6586 washer. ***(Racers Tip:** You can use a tiny amount of the #6588 black grease on the thrust bearing to improve its performance and life.)* ***WARNING!** Make sure that you do not get the thrust bearing washers from bag E mixed up with any other washers. Use of any other washers from the kit will possibly cause the clutch assembly or thrust bearing to fail.* **(9)** Now install the #6587 torque control spring and **(10)** the #6629 gold colored 5-40 locknut. **(11)** Very carefully tighten the nut, to collapse the spring, until you run out of threads on the shaft. Now you want to back off the nut 1/2 turn. This is a starting adjustment; we will check the clutch function later in the tuning section of the manual.



#6596
3/16 x 5/16
plain bushing

#6586
washer

#6629
5-40 locknut

Fig. 89

❑ **Fig. 90** Here is the completed torque clutch and brake disc assembly.

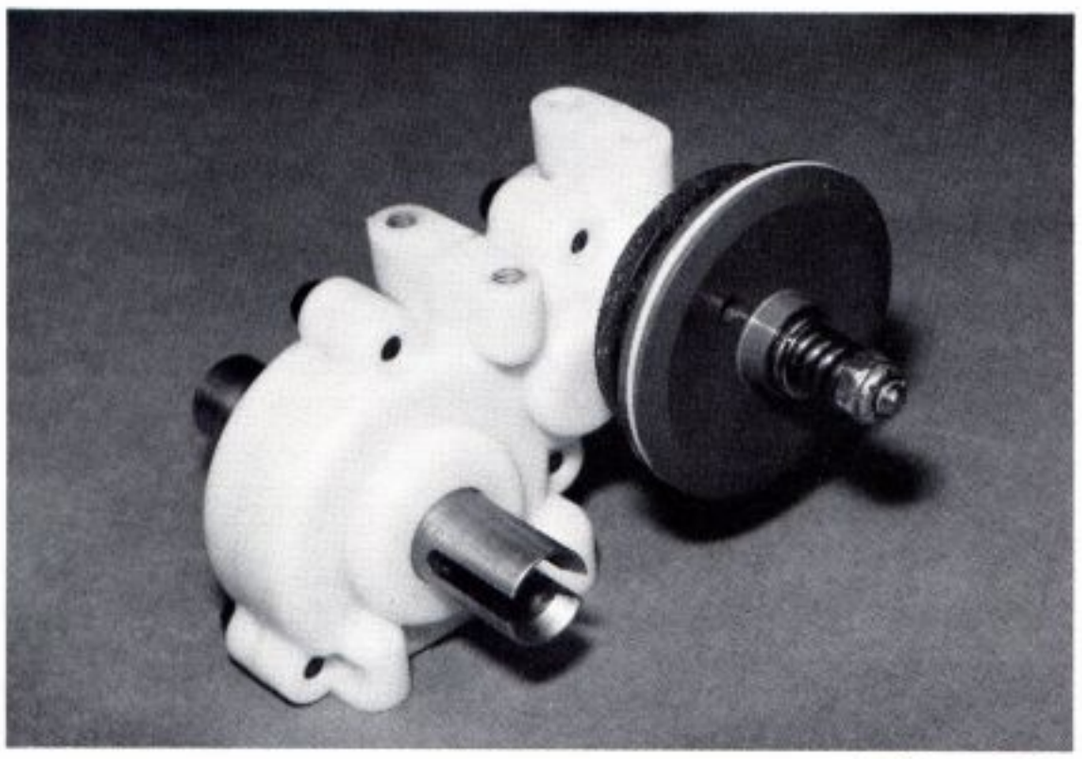


Fig. 90

❑ **Fig. 91** From bag 7-13 remove the #7551 steel brake bracket and #7552 steel brake shoe.

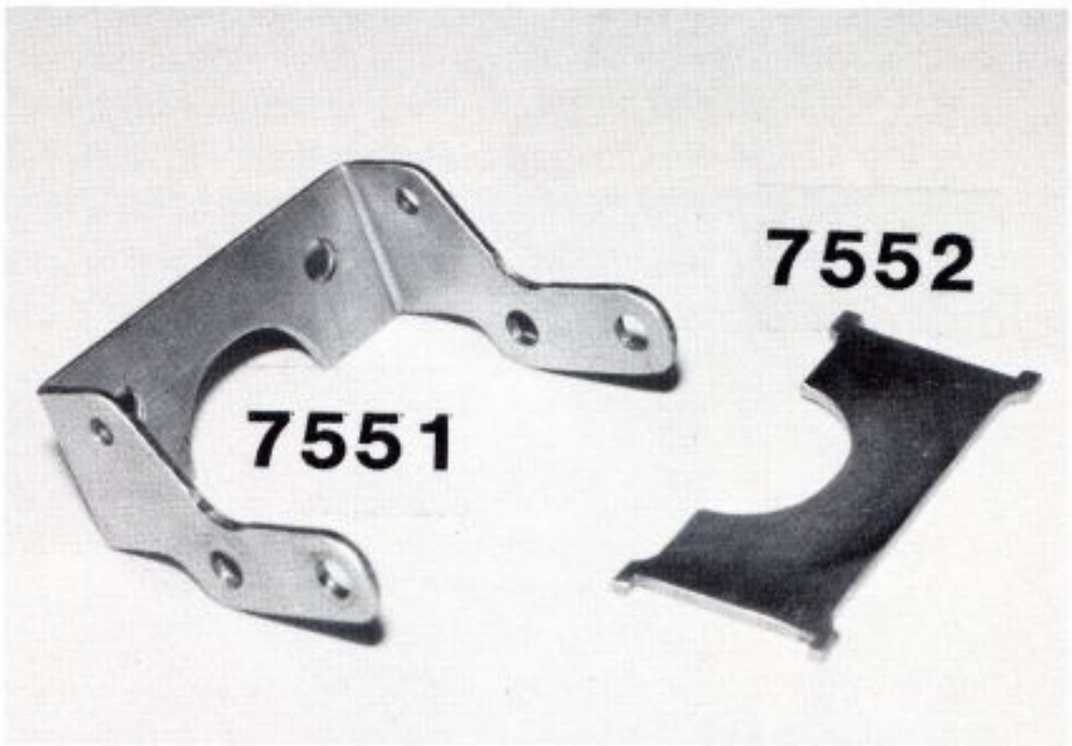
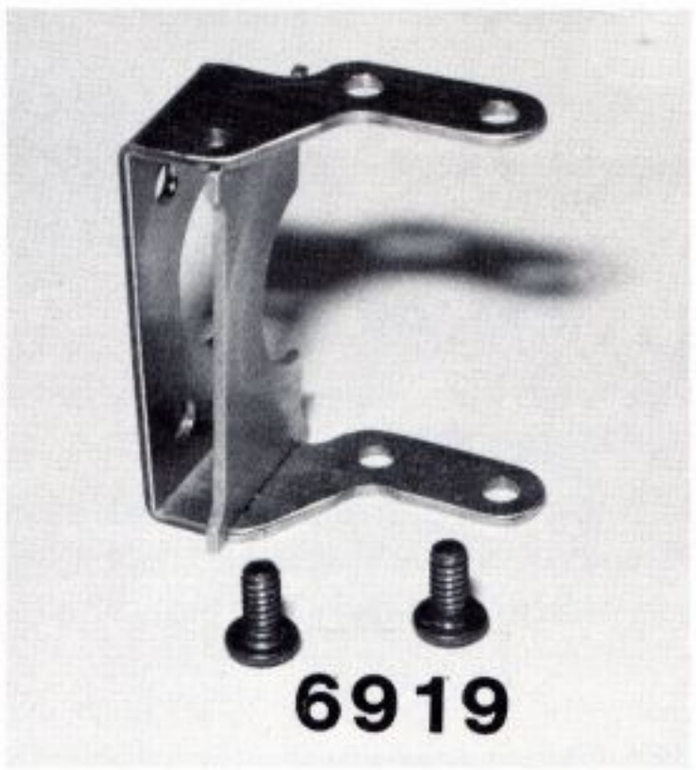


Fig. 91

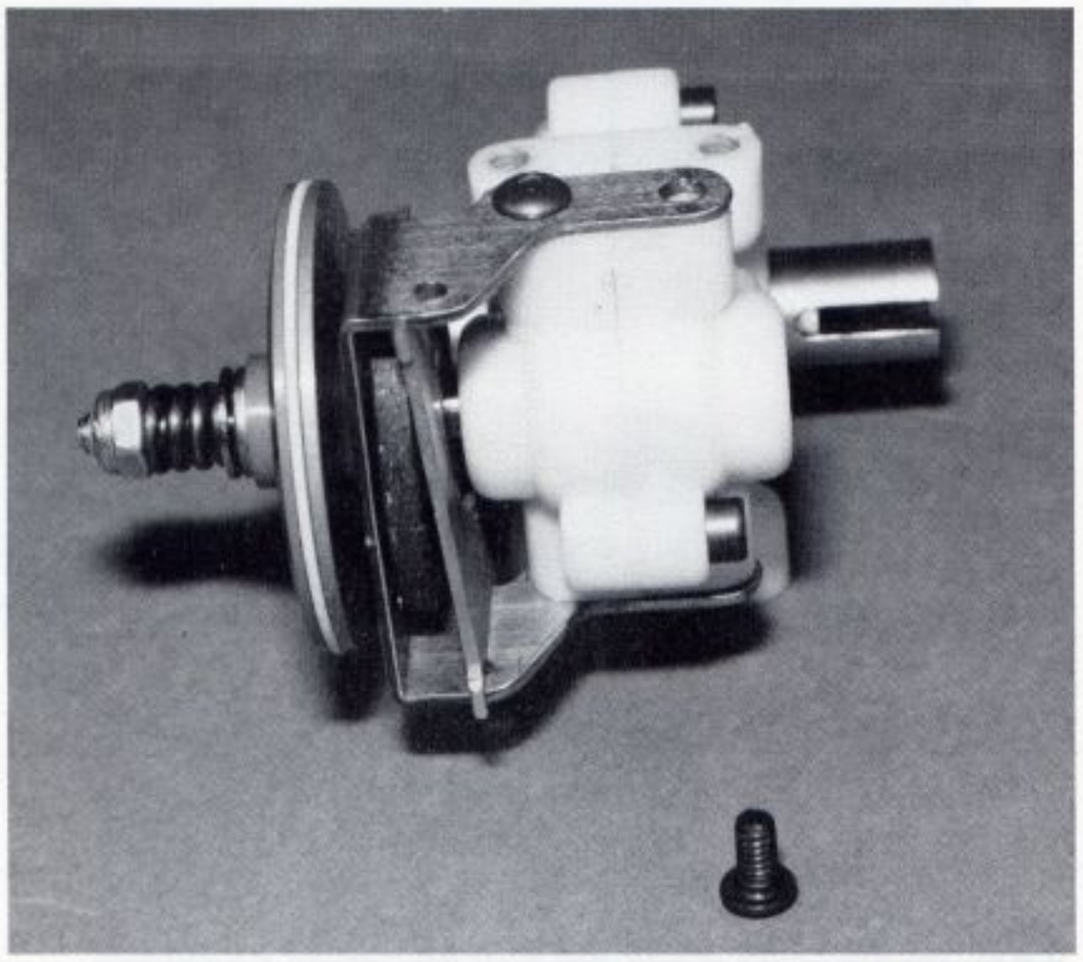
❑ **Fig. 92** Remove the two #6919 4-40 x 5/16" BHSScrews from bag 7-13. If you look closely at the steel brake shoe you will see that each corner of the shoe has a little tip designed to hold the shoe onto the steel brake bracket without hardware. The brake shoe has sharp edges around one side. This side should face the disk. Slide the brake shoe onto the brake bracket so that the side with the rounded notch in the center is on the same side as the matching notch in the brake bracket.



#6919
4-40 x 5/16

Fig. 92

❑ **Figs. 93 & 94** Mount the brake bracket and shoe onto the transmission. The bracket will be on the outside of the brake disc and the steel brake shoe will be on the inside of the brake disc. The rounded notch in the bracket and shoe are there to clear the brake disc hub. Bolt the bracket to the transmission as shown in the top mounting holes of the brake bracket using the two #6919 BHSScrews.



#6919
4-40 x 5/16

Fig. 93

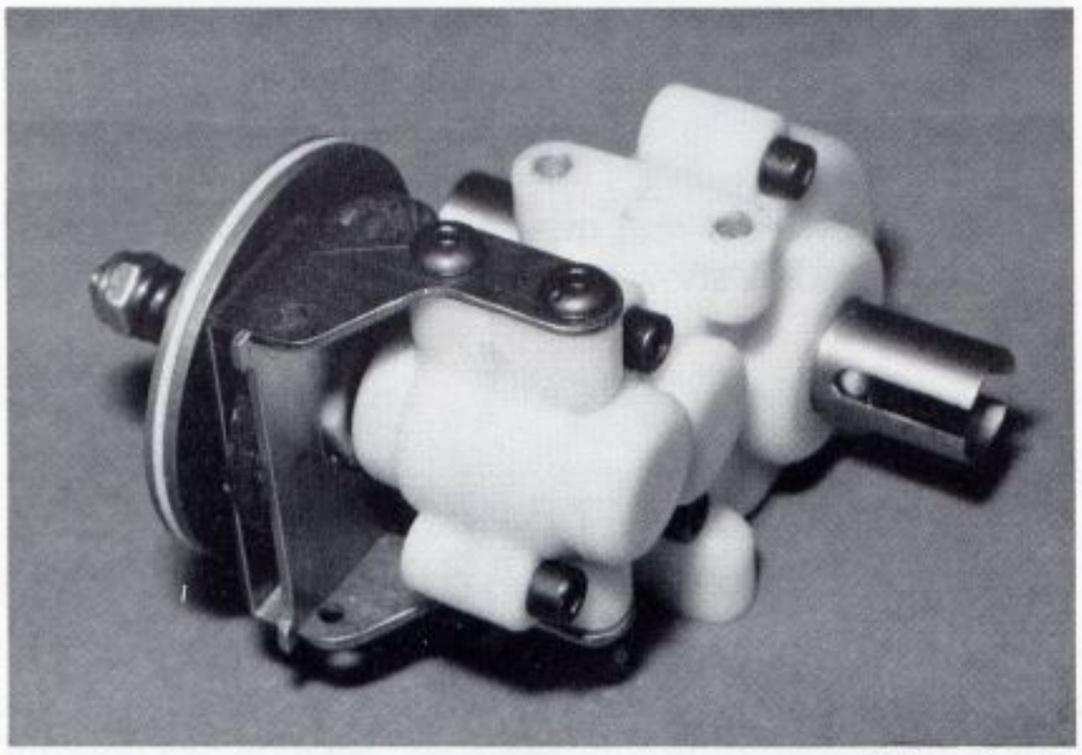


Fig. 94

❑ **Figs. 95, 96 & 97** From bag 7-13 remove the #7555 disc brake cam and the #7556 brake cam clip. ***WARNING!*** *There is another brake cam clip in bag #7-15, the throttle bag, which is a different size and style. DO NOT get the two mixed up.* Push the disc brake cam through the hole on the top side of the bracket and then through the hole in the lower end of the bracket.

#7556
brake cam clip

With the brake cam clip's raised center hole away from the brake cam shaft, install it onto the shaft end (fig. 96) until it almost touches the brake bracket, allowing the brake cam some up and down movement. The best way to install the clip is by using a 3/16" nut driver and pushing down on the clip around the outer edge. ***WARNING!*** *The brake cam clips are designed to be installed and not easily removed. If you make a mistake during installation it may be necessary to destroy the brake cam clip in order to remove it from the brake cam.* Take your time and do it right. Fig. 97 shows the cam removed with a brake cam clip installed for clarity.

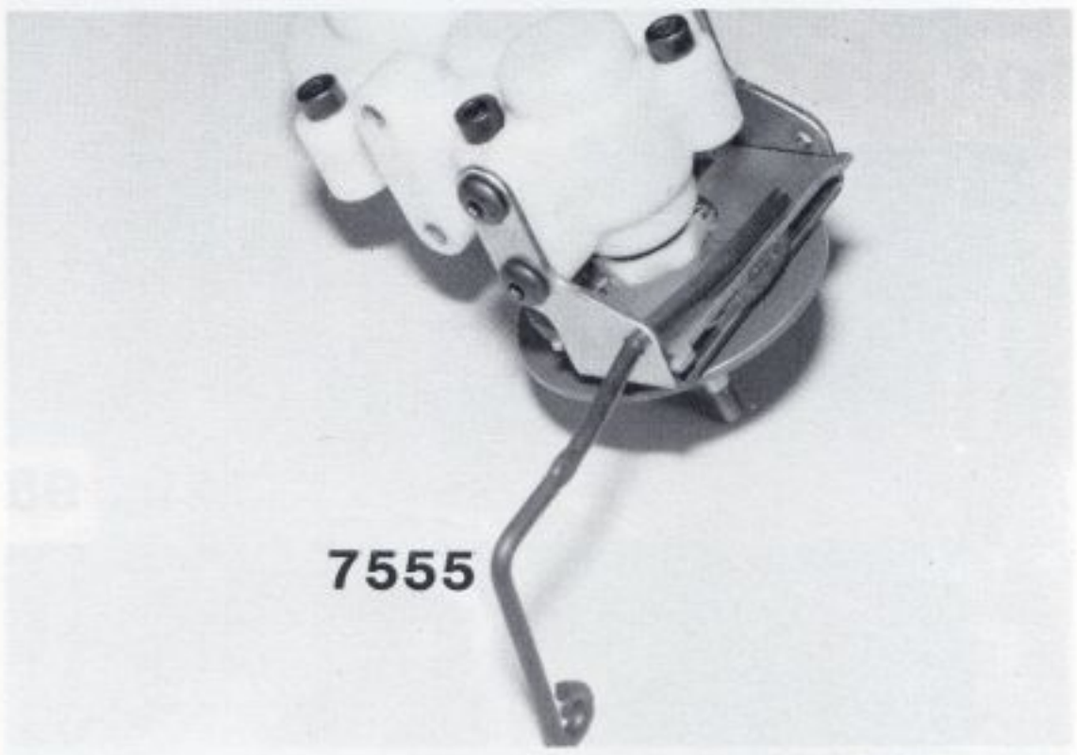


Fig. 95

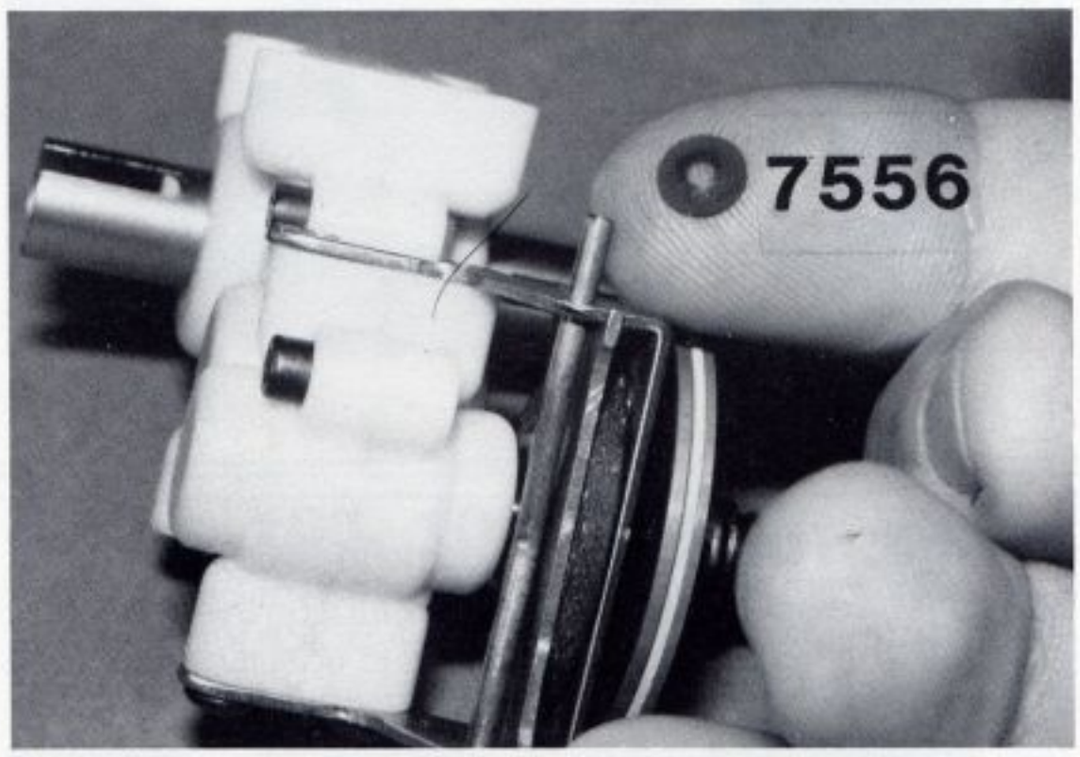


Fig. 96

Fig. 97

❑ **Figs. 98 & 99** Open bag 7-15 and remove the #7663 66 tooth 32 pitch spur gear. Go back to bag F and locate the two #6568 4-40 x 3/16" BHCScrews. If you look at the spur gear you will see one side has a recessed center section and the other side is flat all the way across. Mount the spur gear on the hub with the recessed side contacting the hub. Your installed spur gear should look like fig. 99 when properly installed and secured.

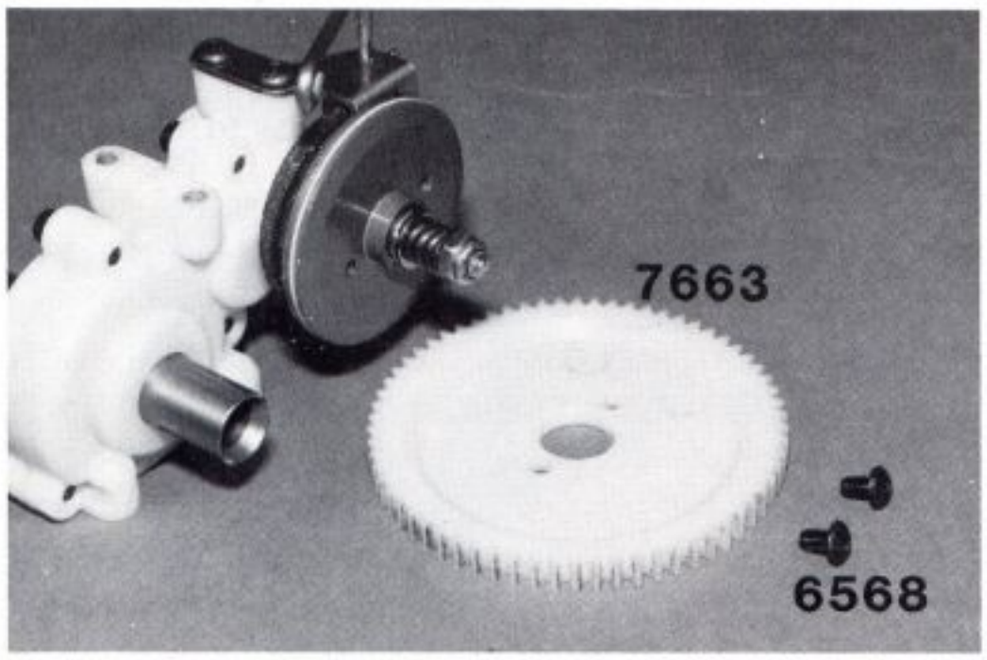
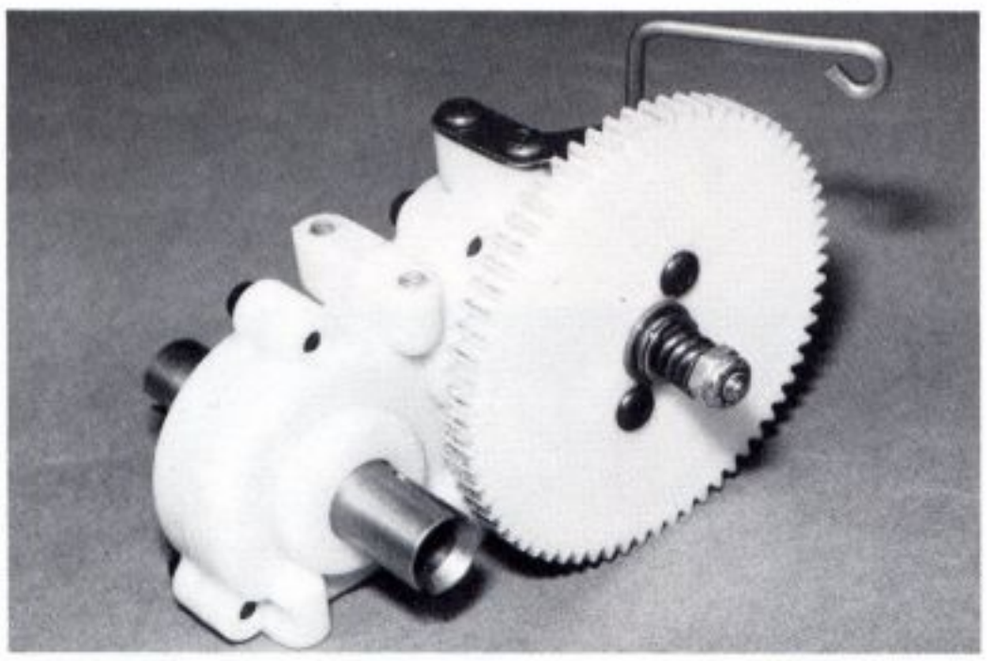


Fig. 98



#6568

Fig. 99

❑ **Figs. 100 & 101** Locate the #6575 diff thrust bolt cover we set aside in fig. 49. Install it on the right hand side with the flat side out, pushing it in until it bottoms out in the outdrive hub.

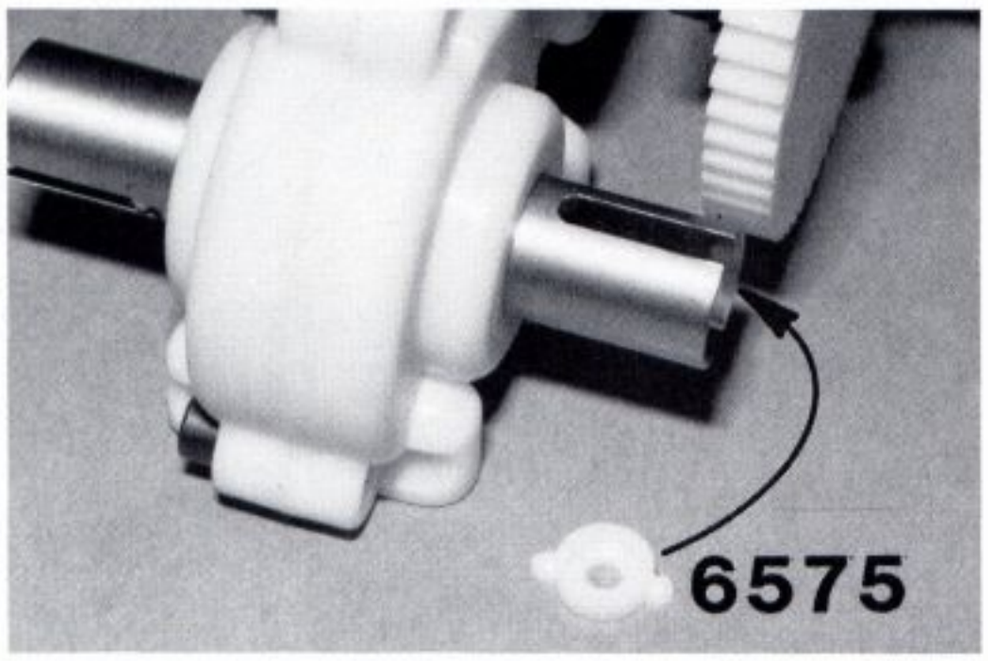


Fig. 100

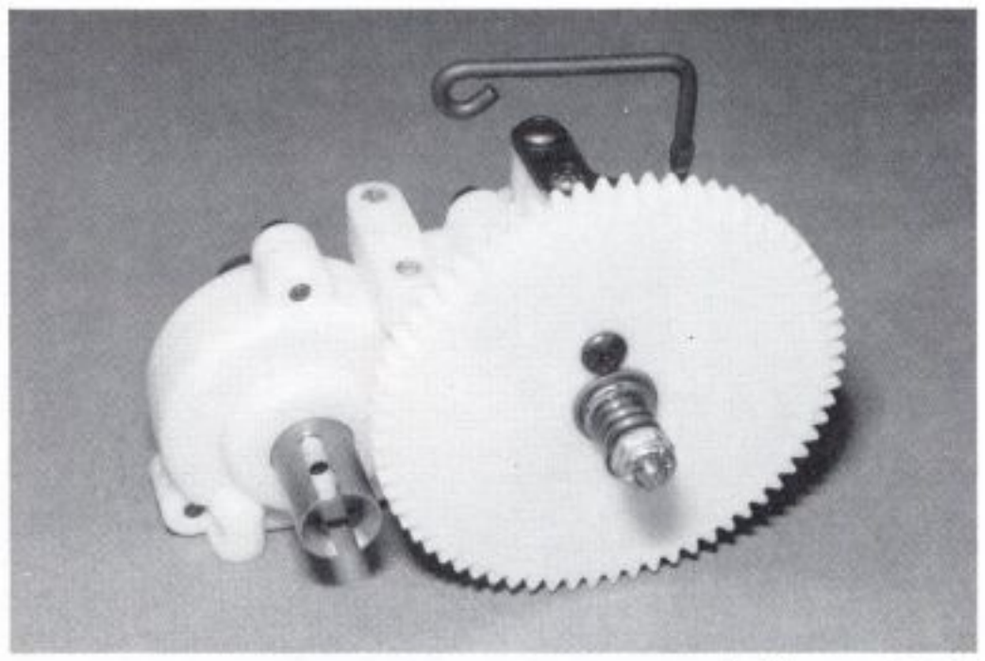


Fig. 101

REAR END ASSEMBLY

❑ **Figs. 102, 103, 104 & 104A** Open the engine mount bag #7-16 and take out the two #7625 black engine mounts. Also take out three #6292 4-40 x 3/8" FHSScrews. Fig.102 shows the rear engine mount and the three #6292 FHSScrews used to mount it to the chassis. Fig. 103 shows the rear mount installed on the chassis. Figs. 104 & 104A show the three #6292 screw mounting locations.

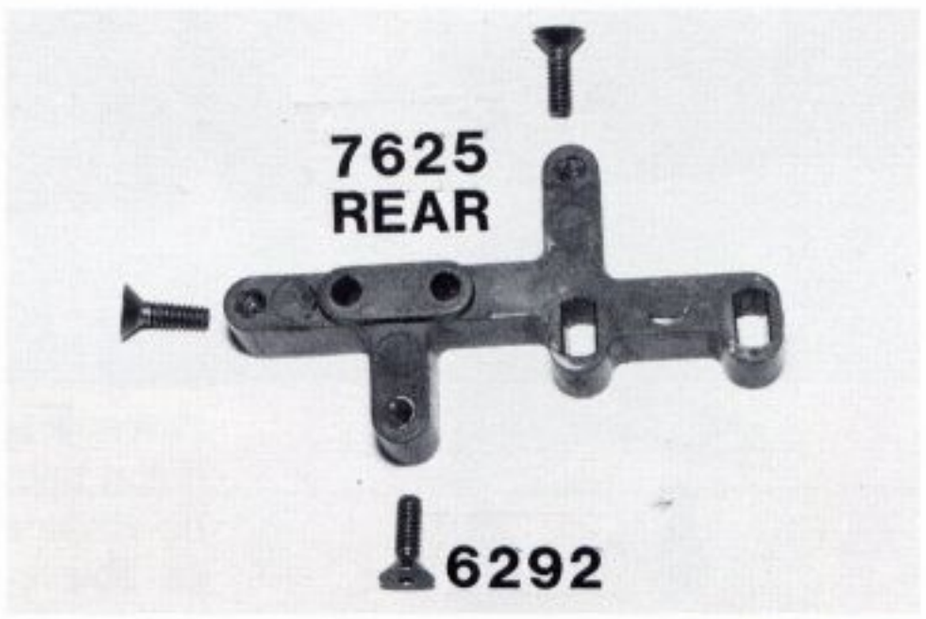


Fig. 102

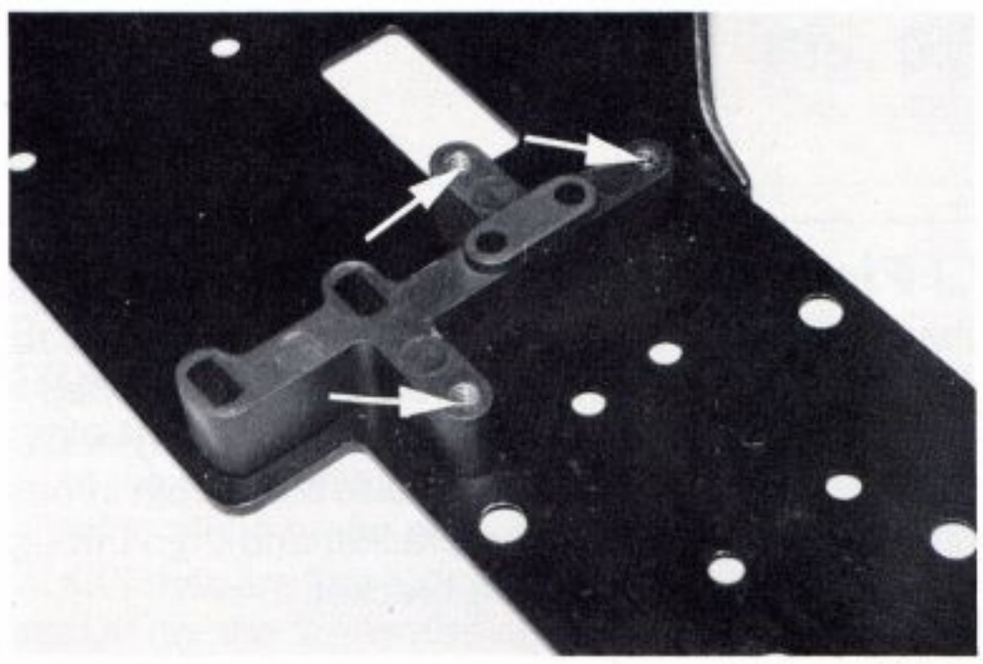
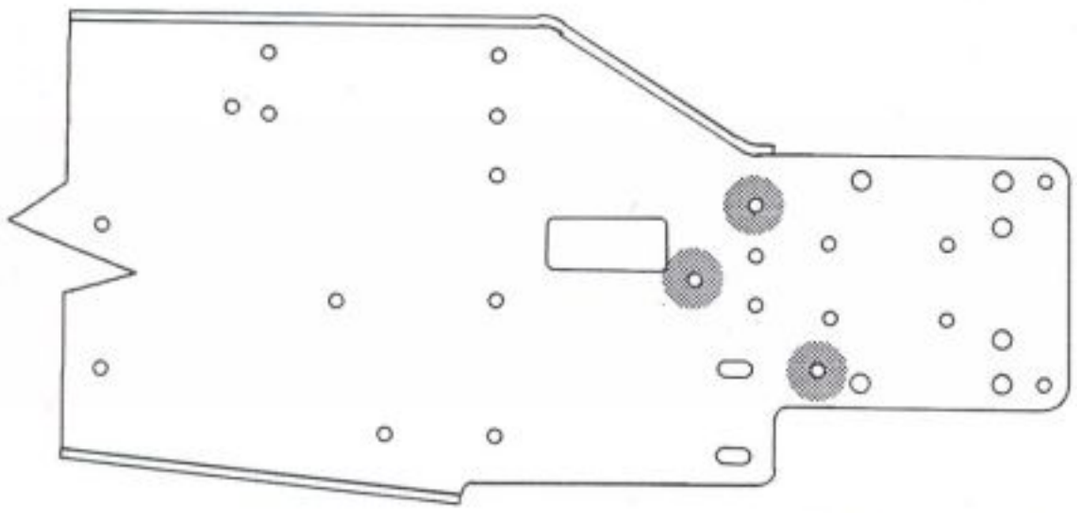
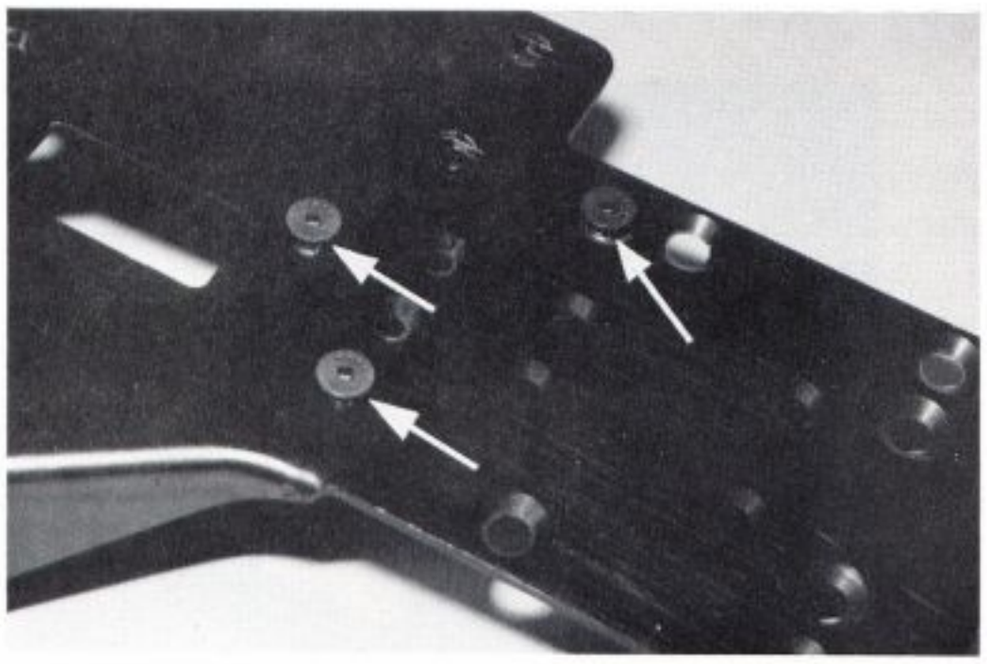


Fig. 103



Mounting hole locations
(TOP VIEW SHOWN)

Fig. 104



(BOTTOM VIEW SHOWN)

Fig. 104A

#6292
4-40 x 3/8

❑ **Figs. 105, 106 & 107** Now go back to bag #F of the transmission and remove the four #7673 4-40 x 5/16" FHSScrews. Fig. 105 shows the four screws installed through the chassis. Now mount the transmission to the chassis as shown in fig. 106. Do not completely tighten the four screws yet. Now take the two #7672 4-40 x 7/8" FHSScrews from bag #7-16. We are going to install these screws through the chassis first as shown in fig. 107. You can now go ahead and tighten all six transmission mounting screws.

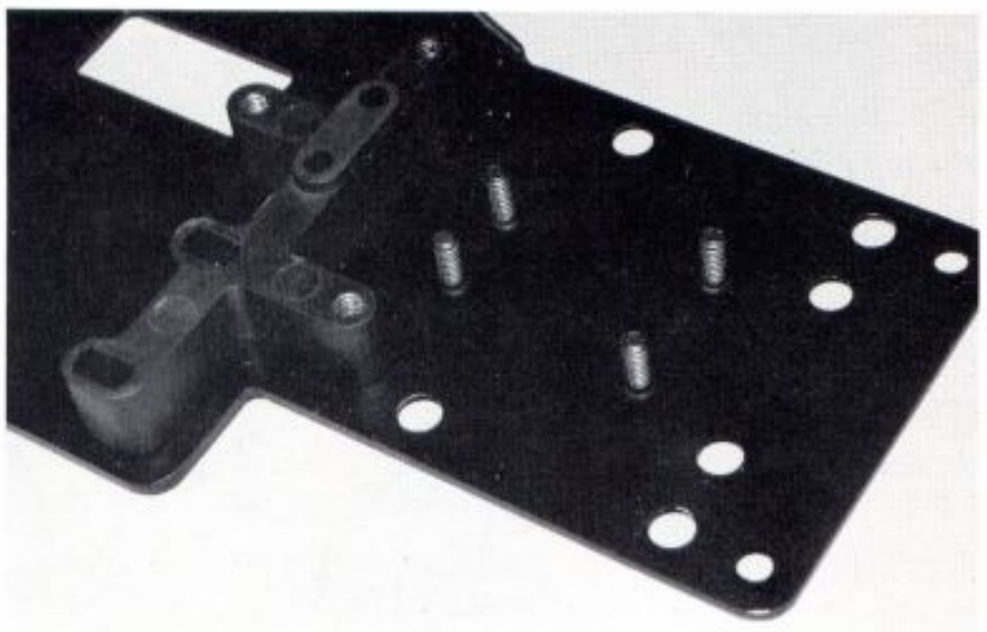


Fig. 105

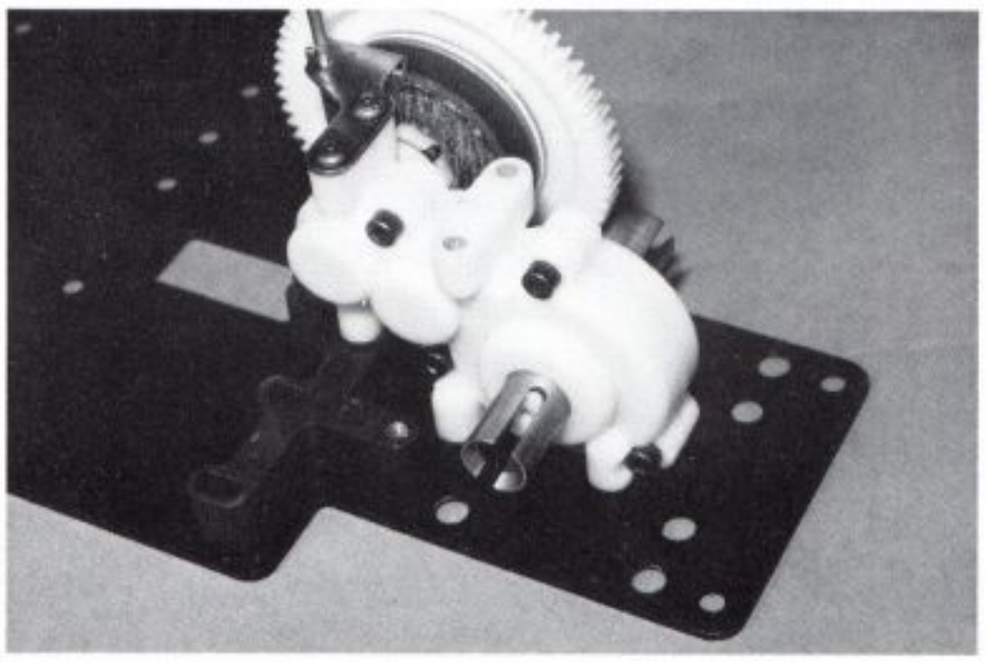
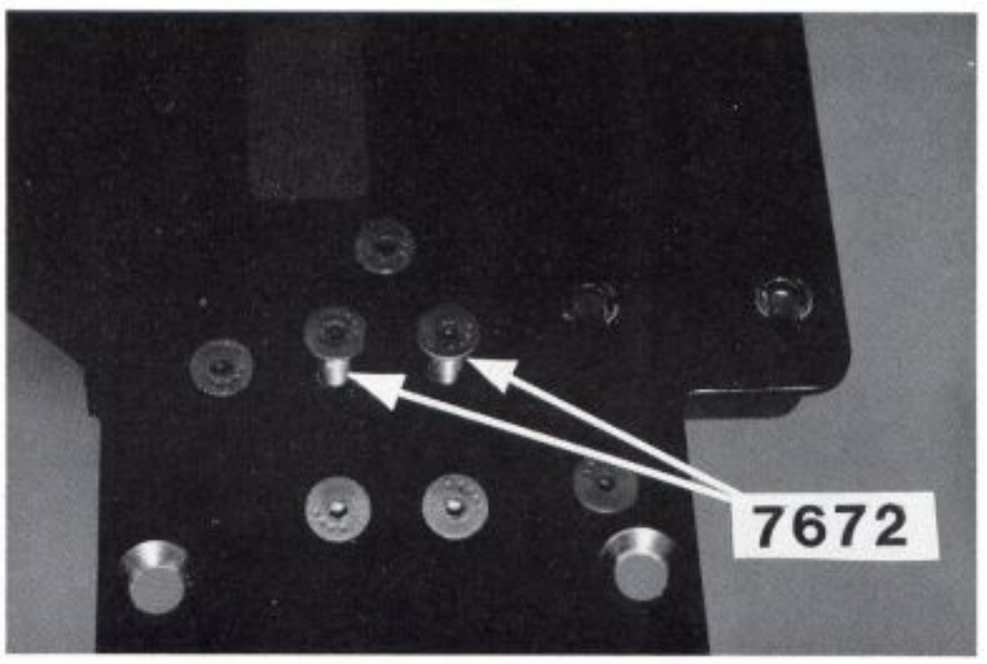


Fig. 106

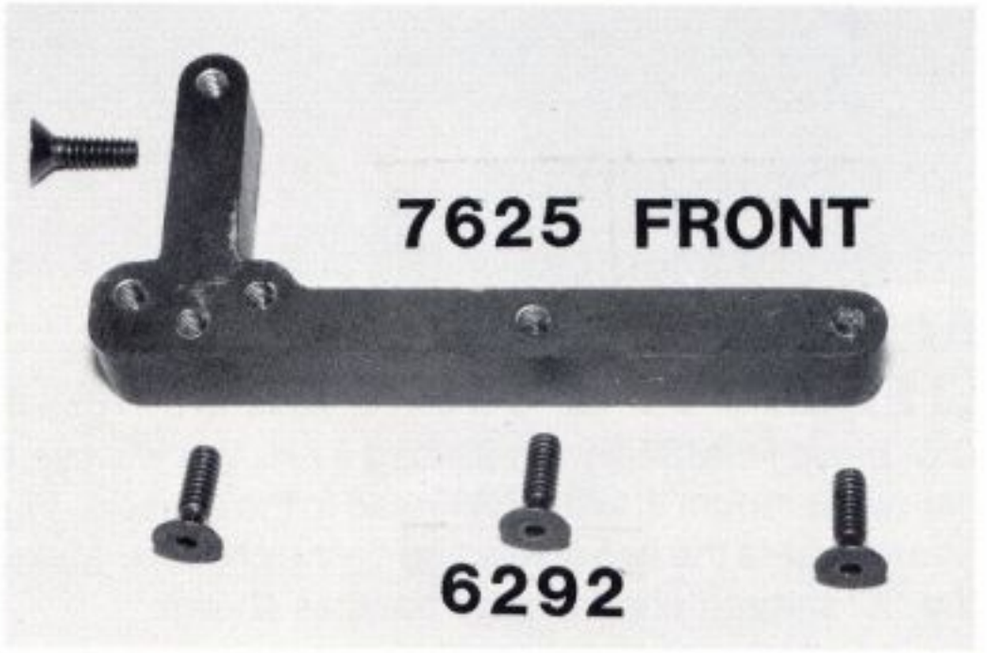


#7672
4-40 x 7/8

#7673
4-40 x 5/16

Fig. 107

❑ **Figs. 108, 109 & 109A** Remove the #7625 front black engine mount that we set aside in fig. 102, and four #6292 4-40 x 3/8" FHSScrews from bag #7-16. Fig. 109 shows the #7625 front engine mount installed.



#6292
4-40 x 3/8

Fig. 108

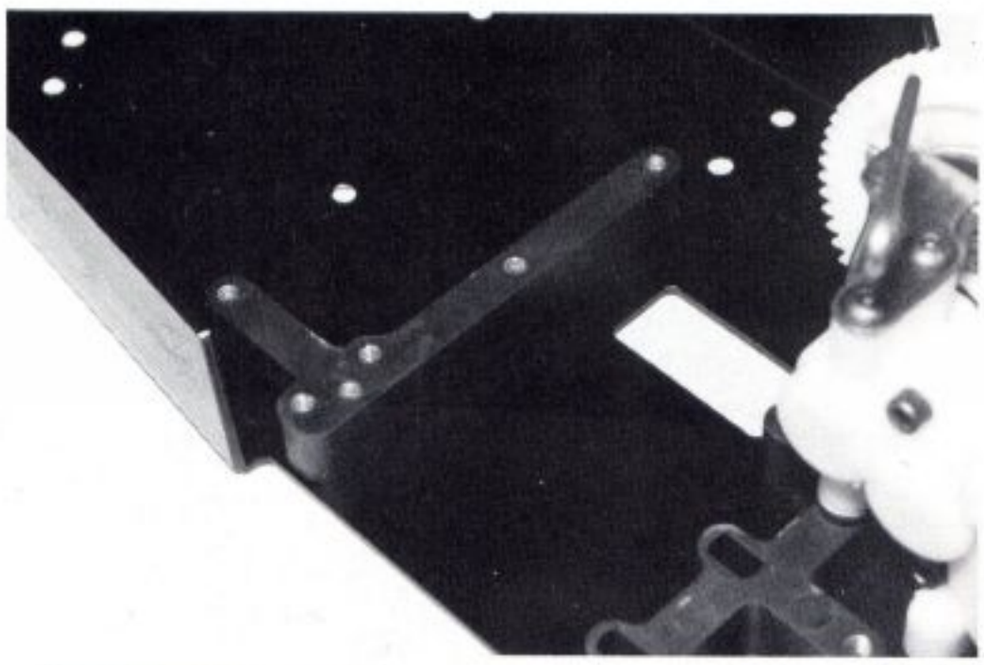
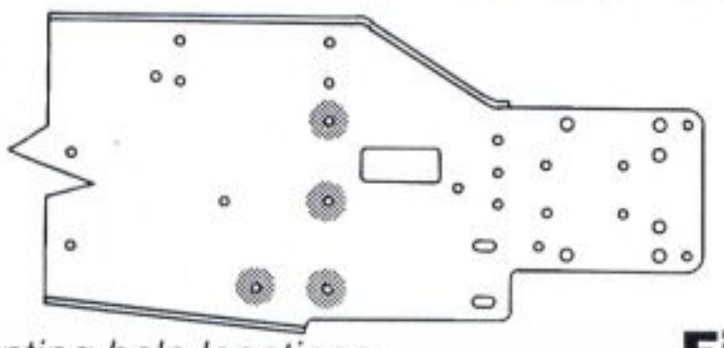


Fig. 109



Mounting hole locations
(TOP VIEW SHOWN)

Fig. 109A

❑ **Fig. 110** Remove the #7526 rear bulkhead from bag 7-4. You will also need to remove two #6273 long steel ball ends and two #7260 small pattern 4-40 plain nuts from bag #6-14. Thread the steel ball ends on the front side of the bulkhead using the bottom inside hole of the four holes available. The front side of the bulkhead is the side WITHOUT the "X" shaped reinforcing ribs (fig. 110). Now turn the bulkhead over and thread on the two small plain nuts.

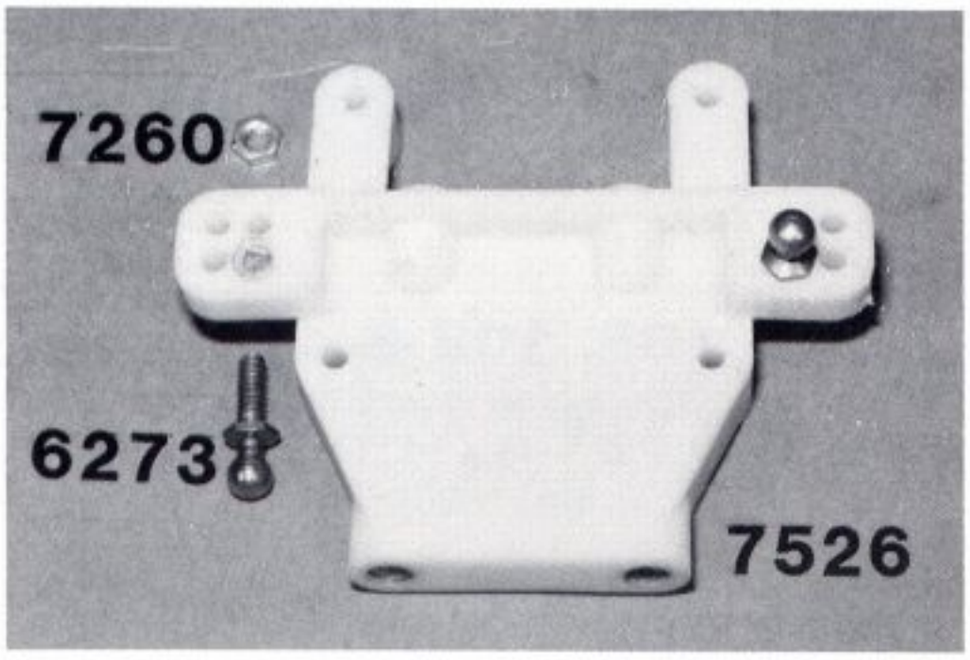


Fig. 110

#7260
4-40
thin plain nut

#7658
8-32 x 3/8

#6273
4-40

❑ **Figs. 111 & 112** Remove two #7658 8-32 x 3/8" black FHMScrews from bag #7-4. We will use these screws to mount the rear bulkhead to the chassis. Fig. 111 shows where the two screws go on the chassis. Make sure the "X" shaped ribs face the back as shown.

#7658
8-32 x 3/8

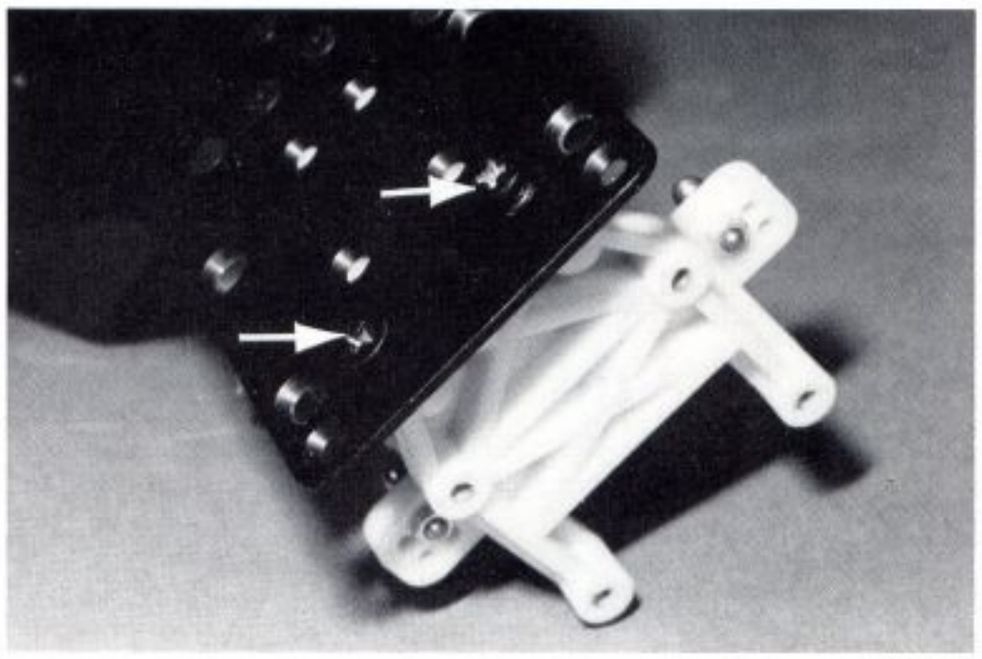


Fig. 111

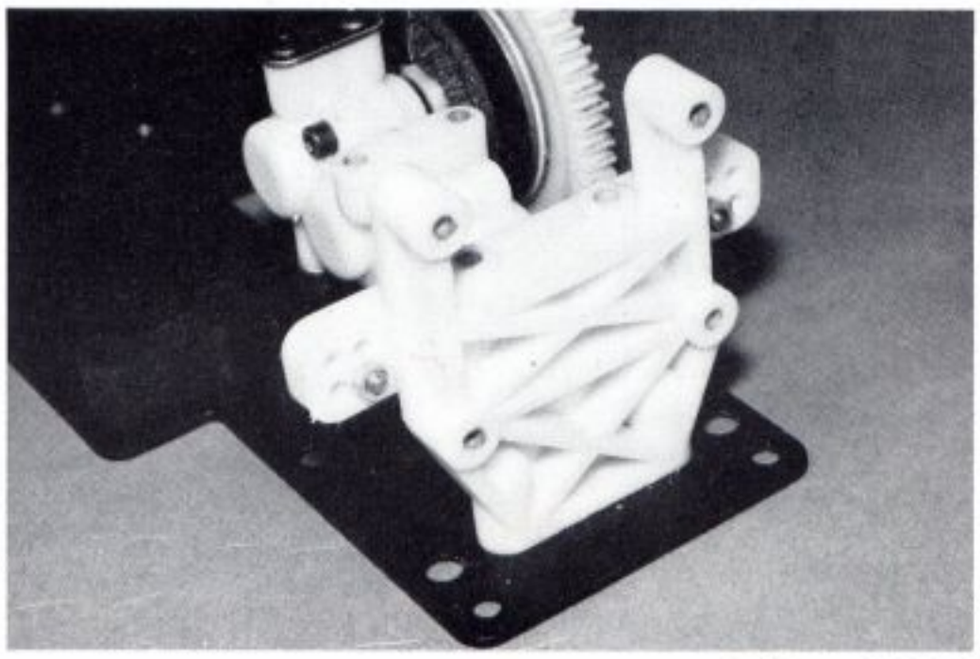


Fig. 112

❑ **Figs. 113 & 114** Go to bag #7-4 and remove the #7670 plastic transmission brace and four #6924 4-40 x 3/8" SHCScrews. Mount the transmission brace on top of the rear bulkhead and transmission. It will sit with the small end forward and the raised side on top. Thread your four #6924 screws into the brace as shown in fig. 113. Your completed assembly will look like fig. 114.

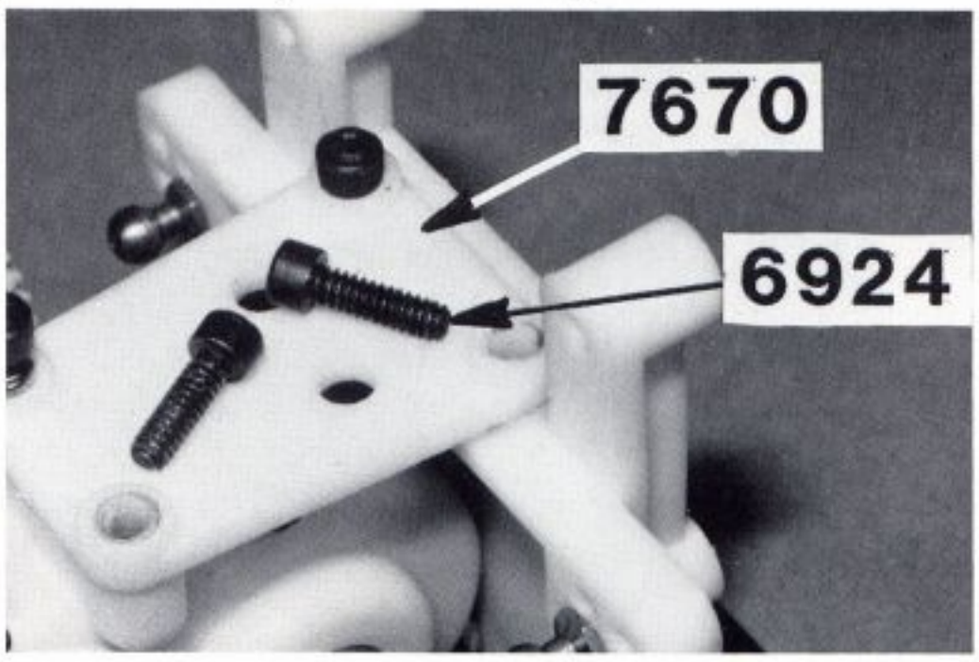


Fig. 113

#6924
4-40 x 3/8

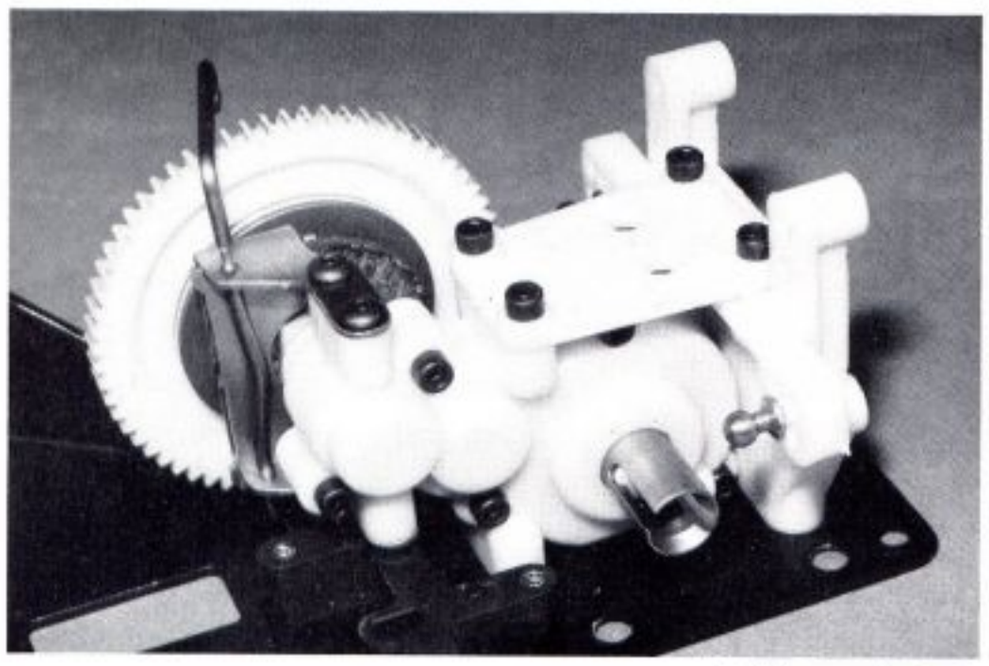


Fig. 114

❑ **Fig. 115** From bag #7-4 again remove the #7655 rear fiberglass shock strut. Now open up bag #7-9, the rear shock bag, and remove two #6927 4-40 x 3/4" SHCScrews and two #6295 4-40 plain nuts. There are three holes at the top of the shock strut. Thread the two #6927 bolts into the middle hole and then thread on the two 4-40 nuts and tighten.


#6927
4-40 x 3/4


#6295
4-40 nut
plain

Fig. 115

❑ **Figs. 116, 117, 118 & 119** Go back to bag #7-5 and remove the #7323 rear body mount parts, two #6285 4-40 x 1/4" SHCScrews, and two #6924 4-40 x 3/8" SHCScrews. Trim the four body mount parts from the mold runners. Use the #6285 1/4" screws to mount the small round posts to the rear body mounts as shown in fig. 116. The body clips' mounting holes point to the left.

Now pick up the #7655 fiberglass rear shock strut again. Install the rear body mounts to the rear shock strut on the opposite side of the #6927 screws using two #6924 4-40 x 3/8" SHCScrews from fig. 116. The mount is held in alignment by a small knob that goes in the bottom of the three rear shock strut body mounting holes. Thread the 3/8" SHCScrews into the middle mounting hole on the shock strut and into the body mount as shown. Fig. 118 shows the body mounts installed.

Remove four #6917 4-40 x 3/8" BHSScrews from bag #7-4. You will use these to mount the #7655 rear shock strut to the back of the rear bulkhead. Fig. 119 shows the shock strut mounted and the four #6917 screw locations. Tighten all four screws but be careful not to overtighten.

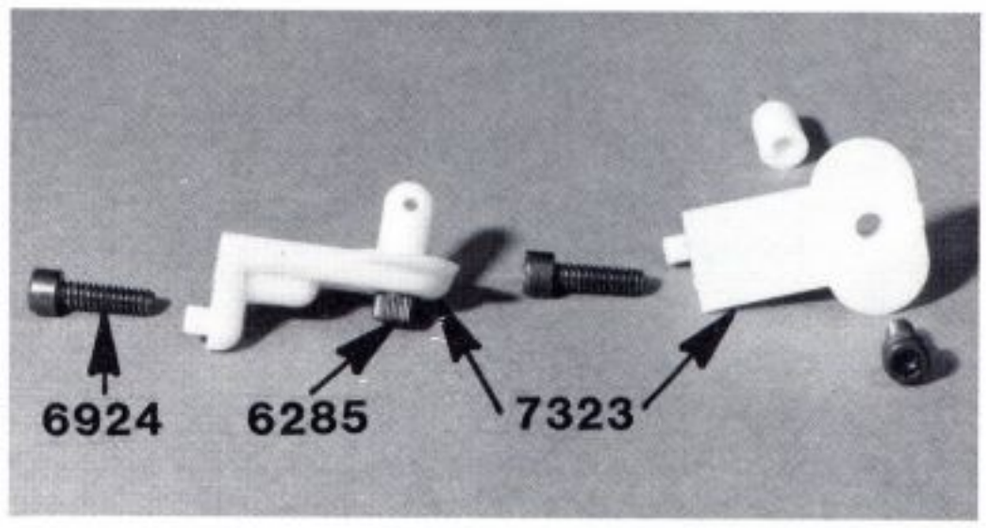


Fig. 116

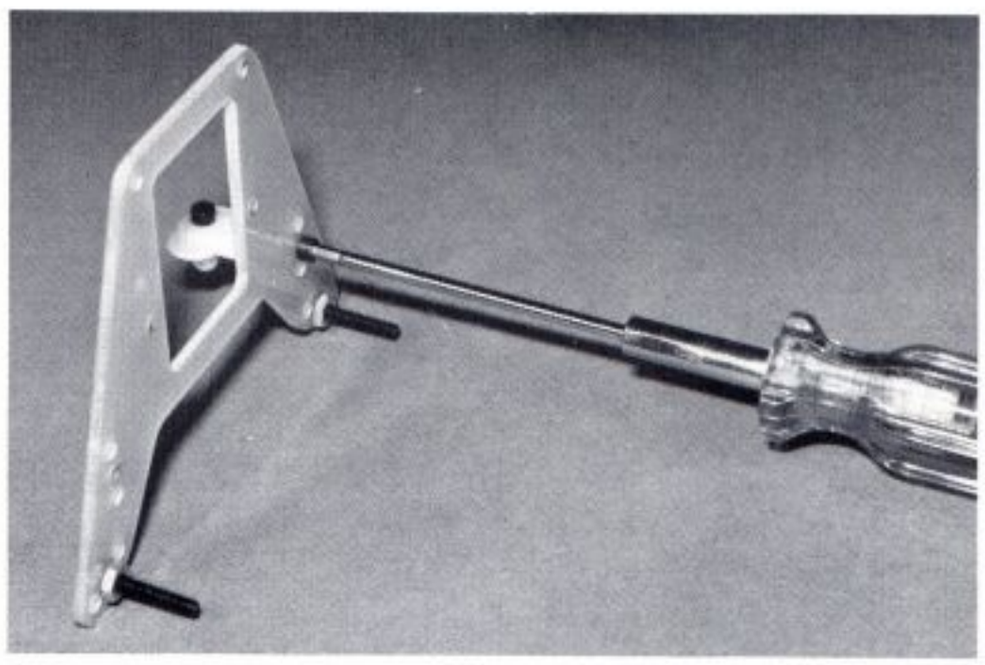


Fig. 117

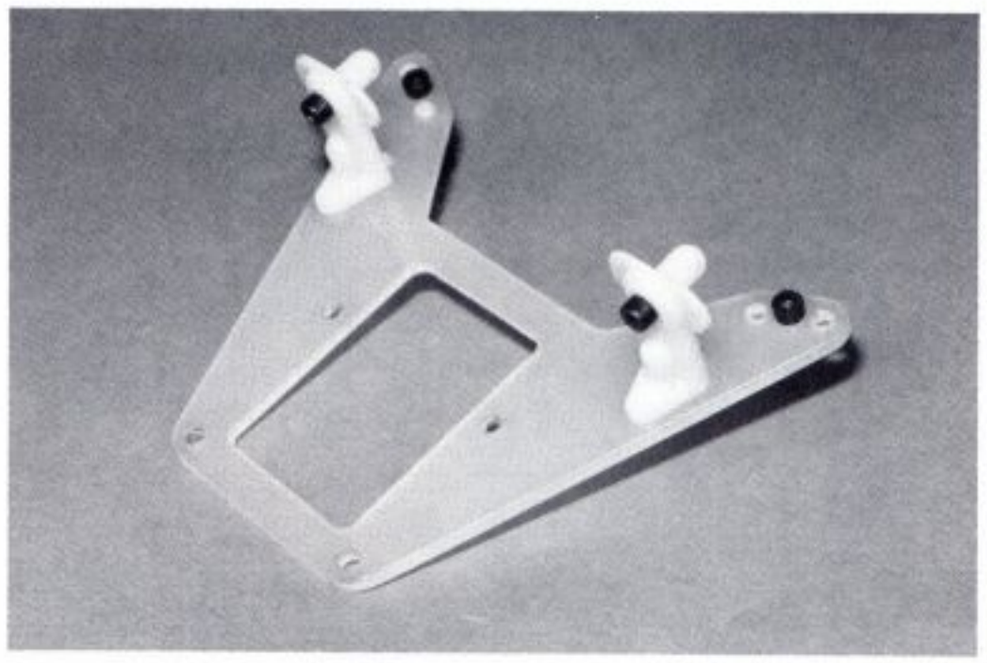
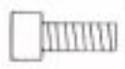


Fig. 118


#6285
4-40 x 1/4
steel


#6924
4-40 x 3/8

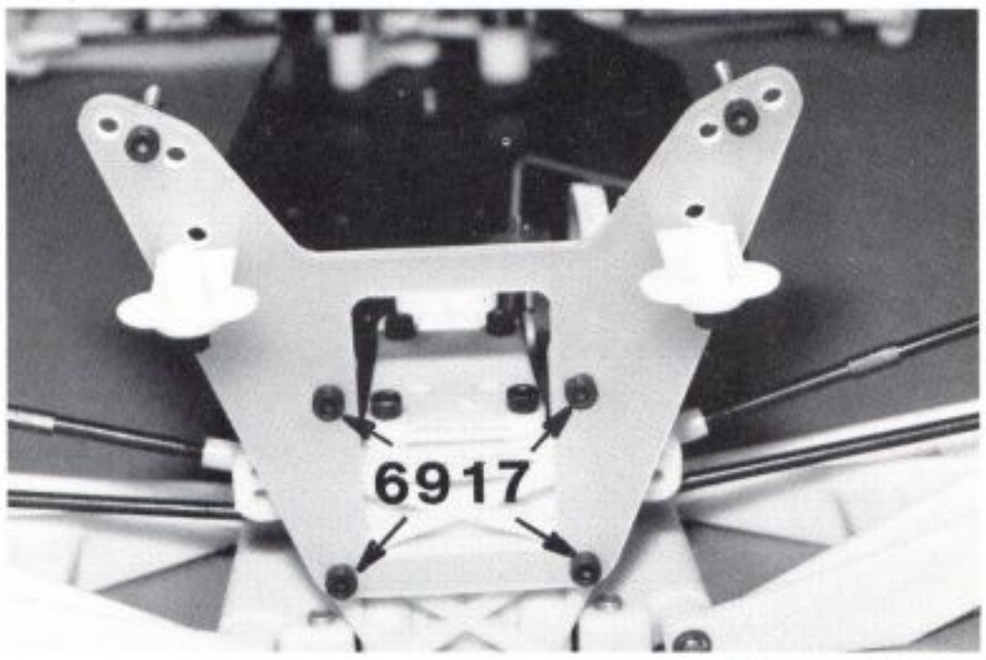


Fig. 119

❑ **Figs. 120 & 121** Go to bag #7-4 and remove the #7529 rear plastic bumper, two #7673 4-40 x 5/16" FHSScrews, and two #7260 4-40 small plain nuts. Mount the bumper on top of the rear of the chassis and thread the #7673 screws through the chassis into the bumper. Now thread the two #7260 nuts on top of the bumper.

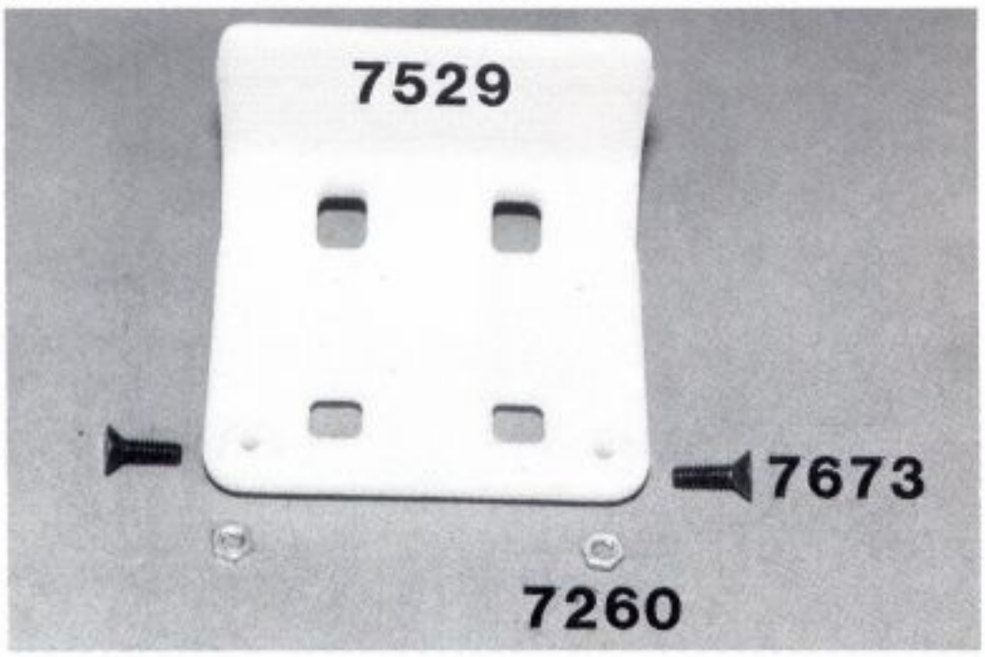


Fig. 120

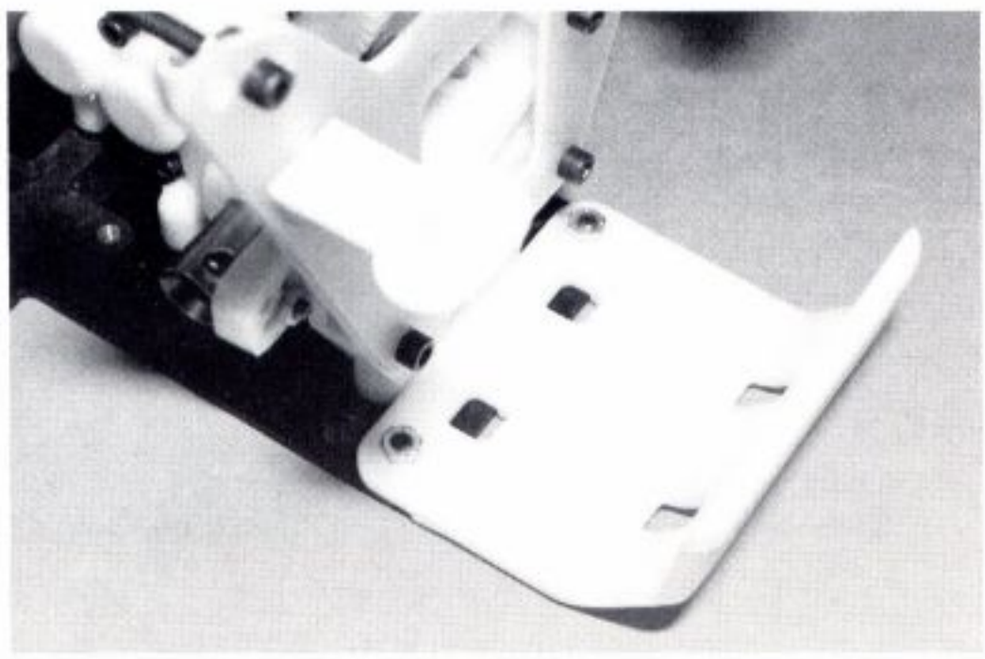


Fig. 121

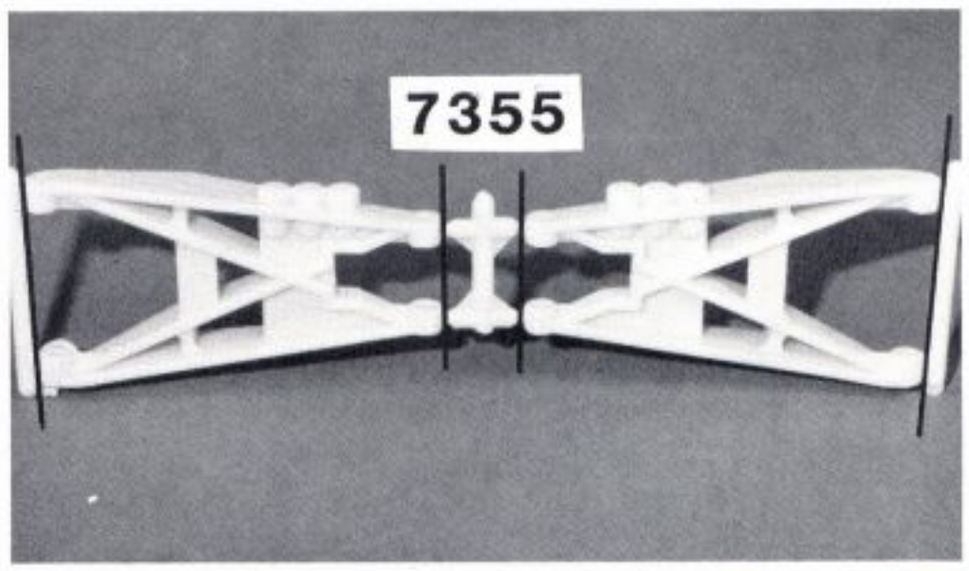
#7673
4-40 x 5/16

#7260
4-40
thin plain nut

❑ **Figs. 122, 123 & 124** (1) Take the #7355 rear suspension arms from the suspension arm bag. Fig. 122 shows you which arm is left and where to cut the arms from the molding tree.

(2) Now open bag #7-8 and remove the #7651 3° rear suspension mounts (see fig. 123), the two #7356 rear inner hinge pins and four #6299 1/8" E-Clips. **(3)** The left and right rear mounts are attached together by a thin "runner" that you will need to remove with your hobby knife. You can identify our new gas truck rear suspension mounts by the beveled edge on the top side of one mounting hole.

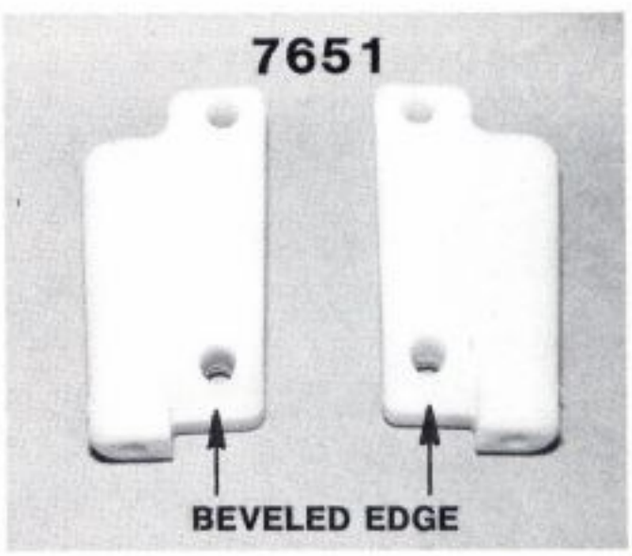
(4) We will assemble the left hand side mount and arm first. Take the #7355 left hand rear suspension arm and slide one of the #7356 inner rear hinge pins through the arm; make sure that the arm can swing freely. We will still want the pin to be tight in the rear mount. **(5)** Now remove the pin and reinstall it with the mount in between the mounting points on the rear arm. Make sure that you connect the left hand arm to the left hand mount. **(6)** Install a #6299 1/8" E-clip on each end of the #7356 hinge pin. Your completed arm and mount assembly (see fig. 124) will have the beveled edge forward and the three shock mounting holes towards the rear. **(7)** Now repeat the same steps for the right hand arm and mount parts.



Cut carefully at black lines.
Left suspension arm is at left. ↑

Fig. 122

right side mount



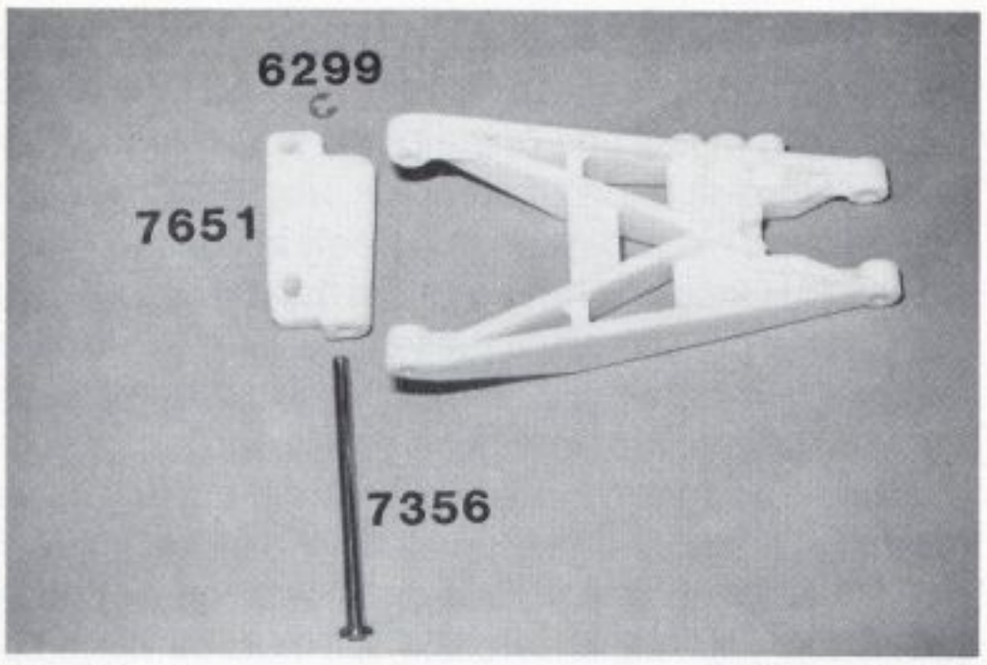
left side mount

Fig. 123

#7356
2.084

#6299
e-clip
1/8 shaft

E-clips are found in bags #7-1, #7-8, #7-9 and #7-10.



driver's side shown

Fig. 124

❑ **Figs. 125 & 126** Remove four #7658 8-32 x 3/8" FHMScrews from bag #7-8. We now want to mount your left suspension arm assembly to the chasssis using two #7658 FHMScrews. Remember the beveled edge of the mount will be towards the front when mounted. Fig. 126 shows the left arm assembly mounted to the chassis. Now go ahead and mount the right suspension arm parts.

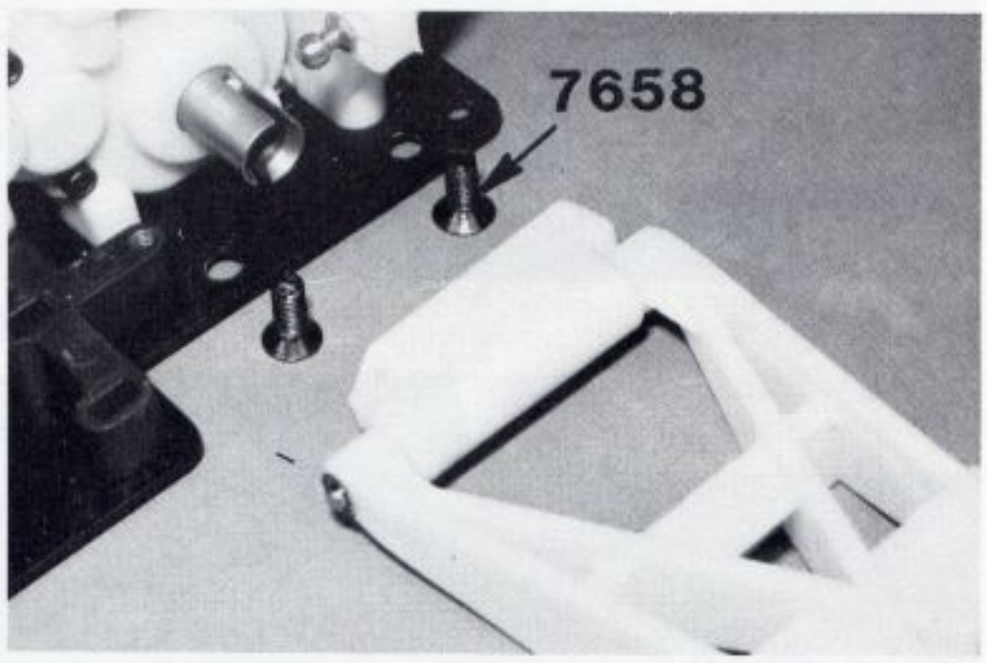


Fig. 125

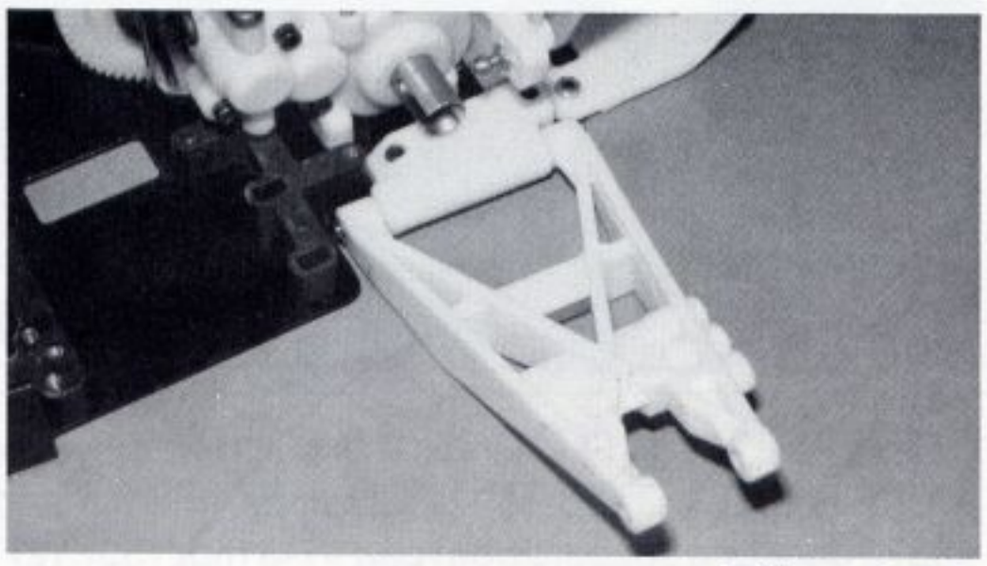


Fig. 126

#7658
8-32 x 3/8

Figs. 127-135 are the rear suspension instructions for the bushing kits.
For the bearing kits, skip ahead to fig. 136.

❑ **Figs. 127, 128 & 129** **(1)** In bag #7-8 you will find the two #7365 zero degree rear hub carriers, four #7360 1/4" x 3/8" bushings, two #6374 rear stub axles, two #6388 cone washers, and two #6375 roll pins. **(2)** Remove the hub carriers from the mold runner (there is no left or right). **(3)** Now take the bushings and install one bushing into each side of each of the rear hub carriers. **(4)** Fig. 127 shows the parts that are to be assembled together and the direction each part will be facing when installed correctly. Now slide the #6374 rear stub axles through the bushing in the #7365 rear hub carriers. **(5)** Now on the front of the axle install the #6388 cone washer with the raised center hole against the bushing. **(6)** Install the #6375 rear axle split roll pin into the axle. **(7)** Take your needlenose pliers (fig. 128) or slip joint pliers (fig. 137) and squeeze the pin into the axle. If you are unable to use your pliers, you can use a vice and hammer as shown in fig. 129. Set the axle on your vise. With your pliers, hold the pin aligned over the hole in the axle. Lightly tap the pin into the axle until the pin is evenly spaced.

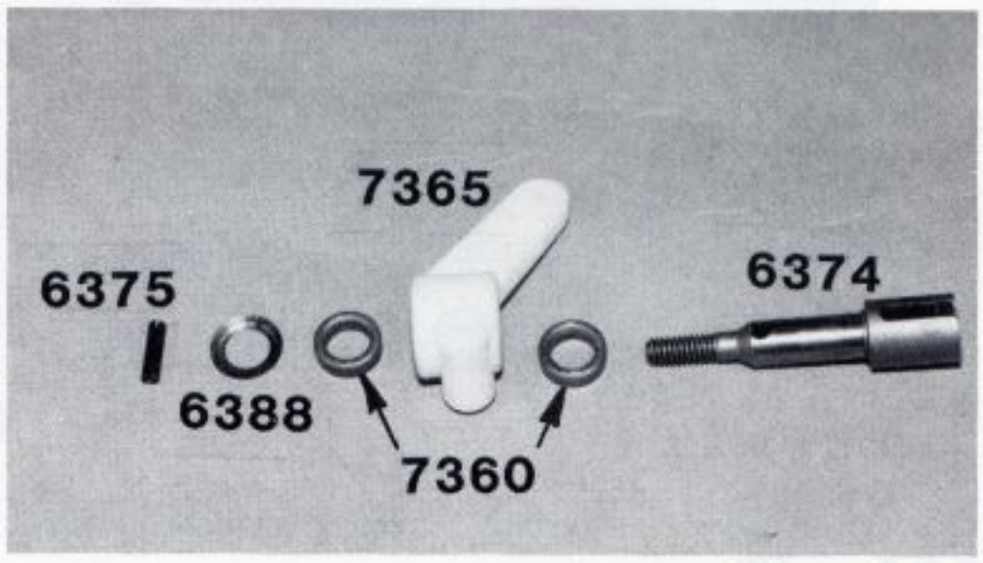


Fig. 127

#6388
1/4 x .400 x .006
cone washer

#7360
1/4 x 3/8
plain bushing

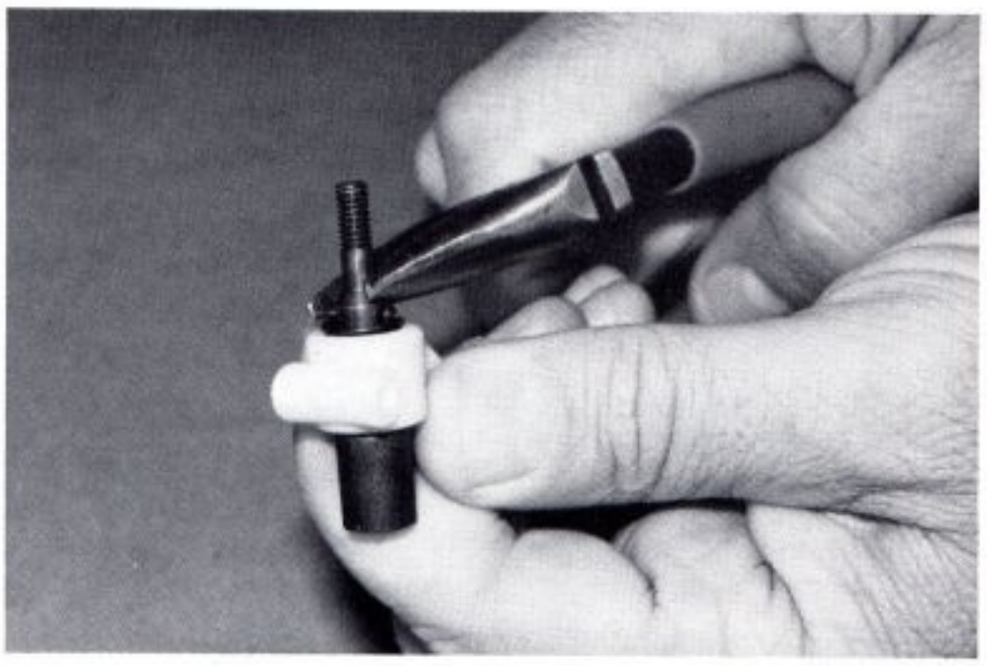


Fig. 128

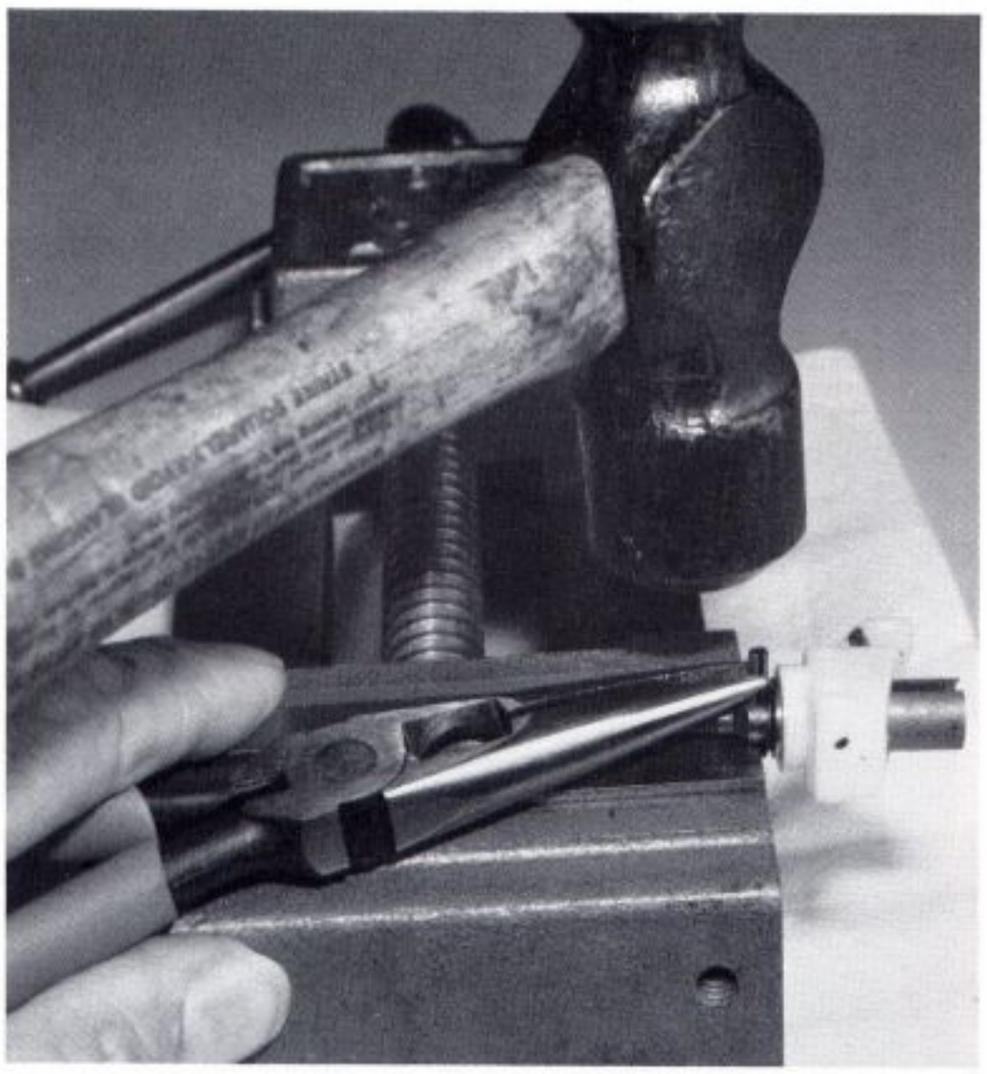


Fig. 129

❑ **Fig. 130** This photo shows a completed hub carrier and rear axle assembly. Now you can go back and repeat the steps to assemble the other rear axle/hub carrier parts.

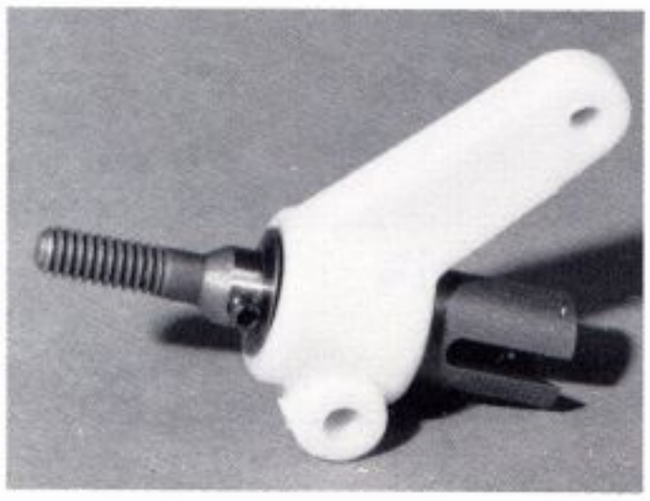


Fig. 130

❑ **Figs. 131 & 132** (1) Back in bag #7-8 you will find two #7357 outer rear hinge pins and four #6299 1/8" E-Clips. **(2)** Install one of the hinge pins into the outer pin holes of the left hand suspension arm. **(3)** Check to make sure that the hinge pin can turn freely inside the #7355 rear A-arm. **(4)** Once you have verified the pin can move freely, remove the pin and place the left rear hub carrier between the rear arm mounting points. **(5)** Now reinstall the pin through the rear arm mounting points and hub carrier. The pin should be tight in the rear hub carrier but free in the arm. **(6)** Install a #6299 E-clip on each end of the #7357 hinge pin. **(7)** Now go ahead and install the other hub carrier assembly. Fig.132 shows the left hub carrier/stub axle assembly installed on the arm.

#7357

#6299
e-clip
1/8 shaft

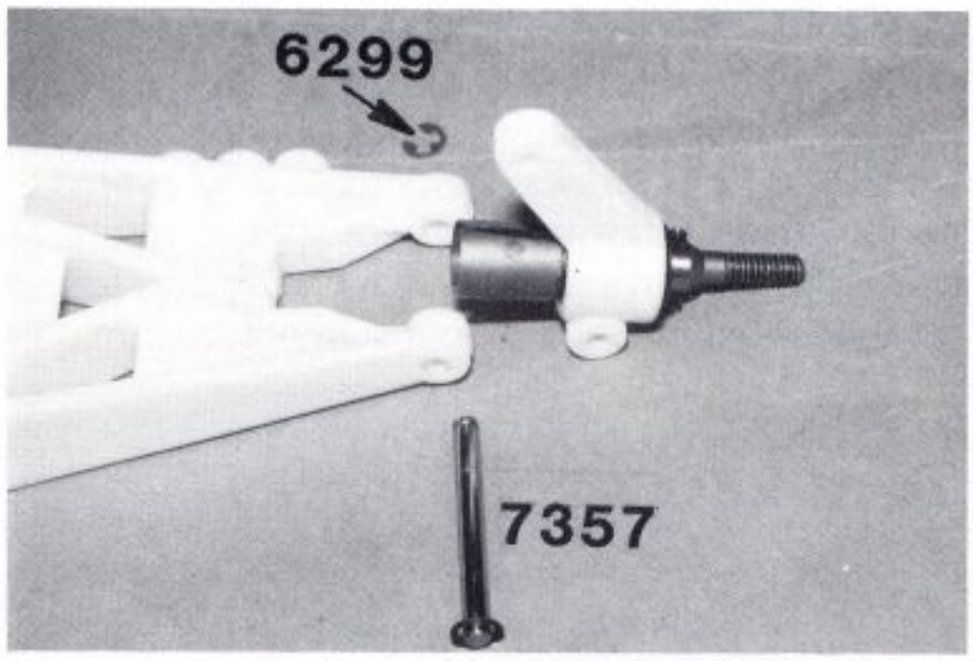


Fig. 131

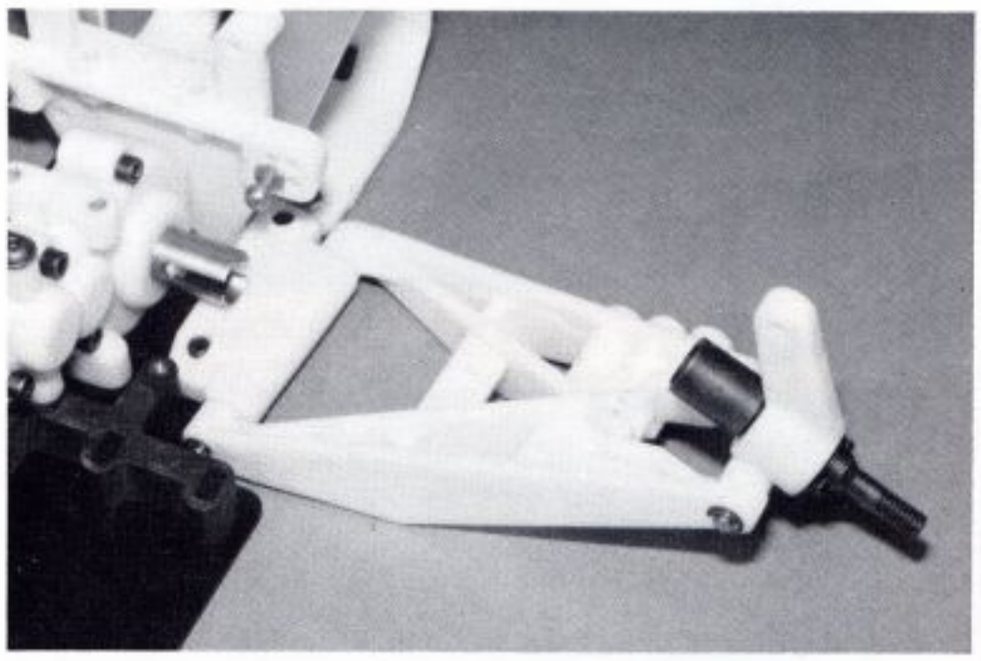


Fig. 132

❑ **Figs. 133, 134 & 135** (1) Remove the two #7361 dogbones, two #6372 dogbone springs and two #6372 dogbone spacers from bag #7-8 (fig. 133). **(2)** Take one of the dogbone spacers and install it inside the left hand diff outdrive hub. Push it in until it rests against the T-nut. **(3)** Now take one #6372 dogbone spring and install it inside the #6374 left rear stub axle. **(4)** Now install the dogbone into the slot in the left hand rear axle then **(5)** install the other end into the slots on the left hand diff outdrive, fig. 134. **(6)** Repeat the steps for the right hand side parts.

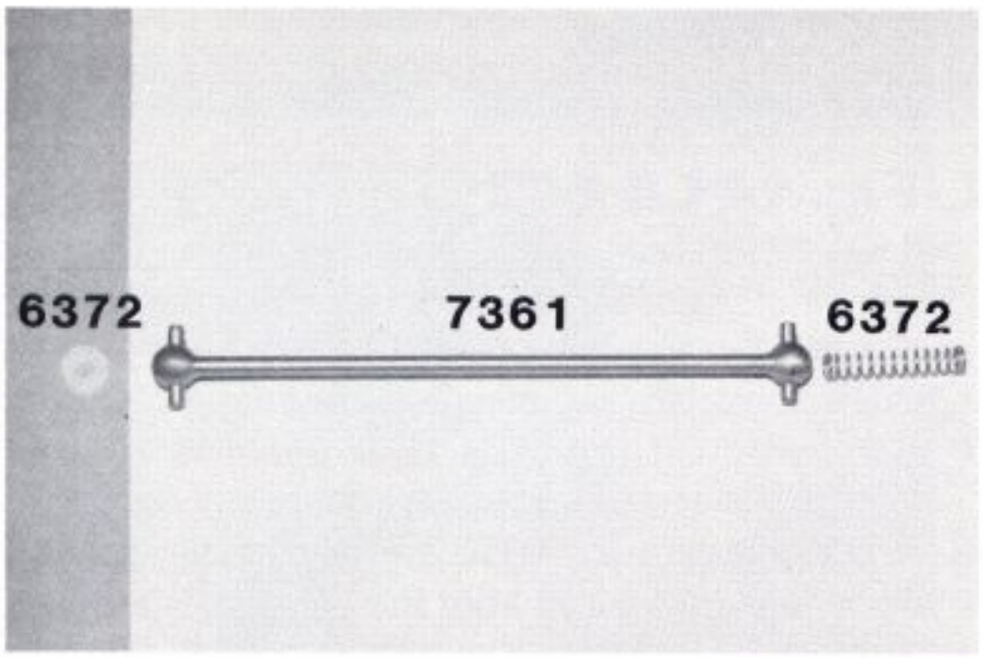


Fig. 133

#6372
spacer

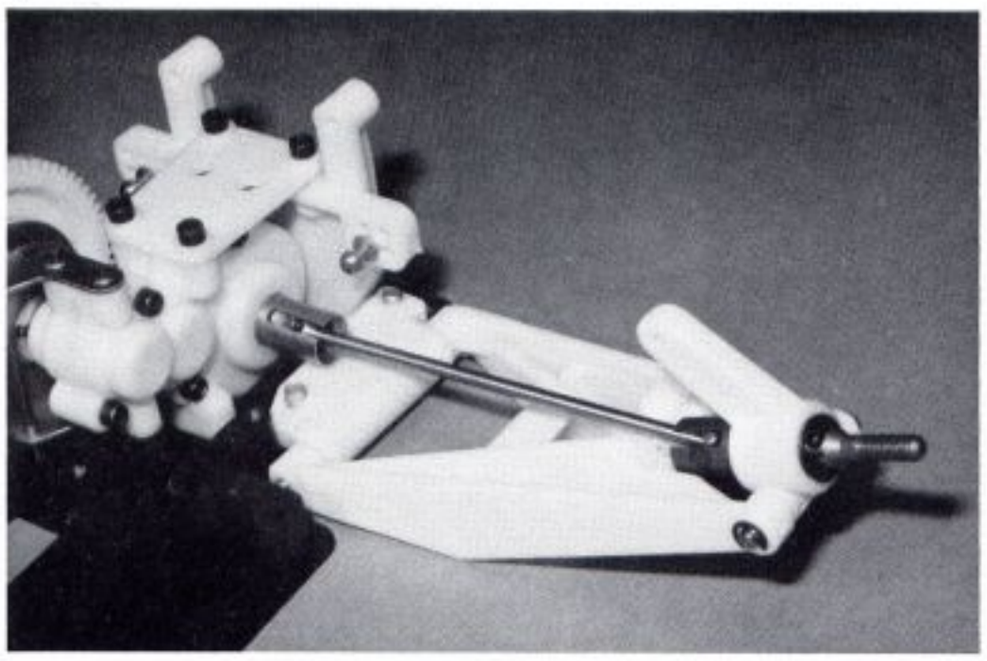


Fig. 134

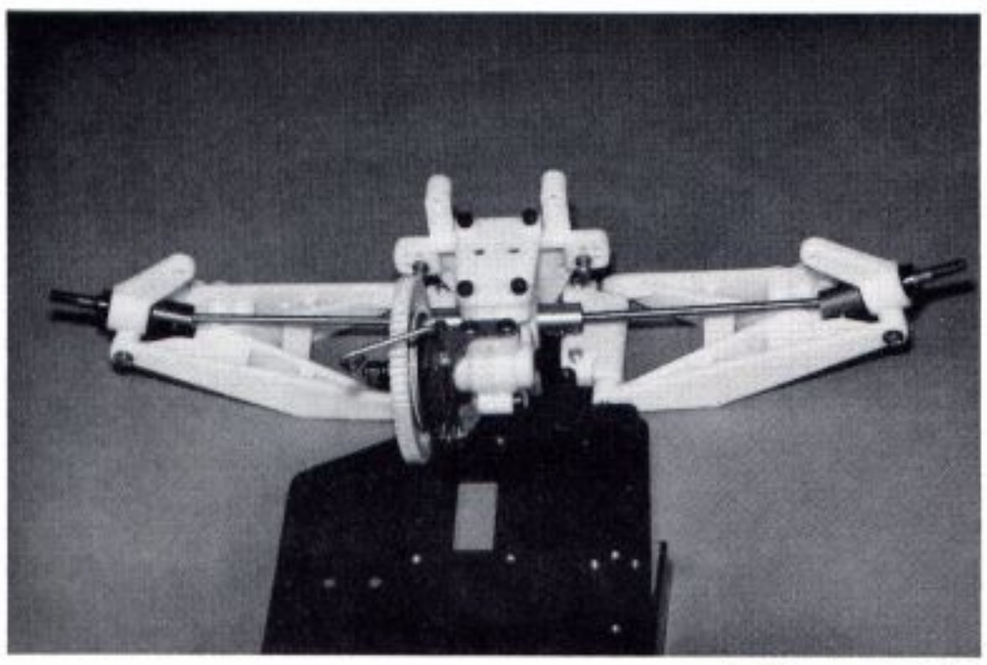


Fig. 135

❑ Figs. 136 & 137 **(1)** In bag #7-8 find the two #7365 0° rear hub carriers, four #7359 1/4" x 3/8" bearings, two #7362 truck universal axles, twelve #6373 1/4" rear axle shims, and two #6375 roll pins, fig. 136. **(2)** Remove the hub carriers from the mold runner (there is no left or right with this carrier). **(3)** Now install one bearing into each side of each of the rear hub carriers. **(4)** Fig. 136 shows the parts that are to be assembled together and the direction each part will be facing when installed correctly. Install four of the #6373 axle shims onto each universal axle. **(5)** Now slide the #7362 universal axle (with shims) through the bearings in the #7365 rear hub carrier. **(6)** Now on the front of the axle install the two #6373 axle shims. **(7)** Now install the #6375 rear axle split roll pin into the axle. **(8)** Take your needlenose pliers (fig. 128) or slip joint pliers (fig. 137) and squeeze the pin into the axle. If you are unable to use your pliers, you can use a vice and hammer as shown in fig. 129. Set the axle on your vise. With your pliers, hold the pin aligned over the hole in the axle. Lightly tap the pin into the axle until the pin is evenly spaced. **(9)** You should have a small amount of play in the axle, allowing you to move it back and forth between the bearings slightly. If you have no play then you will need to remove one shim from behind the roll pin and then reinstall the roll pin. ***WARNING!*** *changes to shock mounting locations from stock settings may require repositioning of shims to prevent damaging universal axles.*

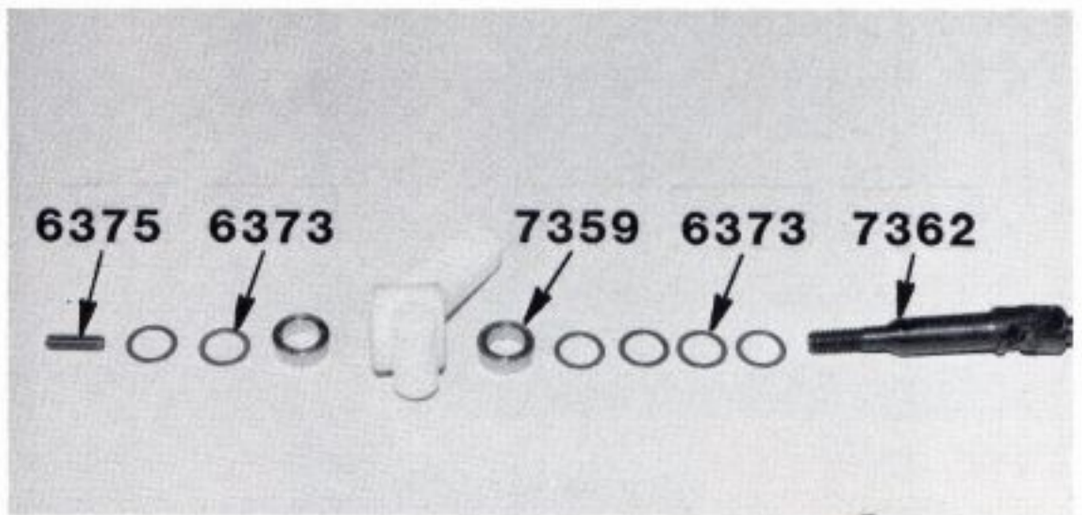


Fig. 136

#7359
1/4 x 3/8
plain bearing

#6373
spacer

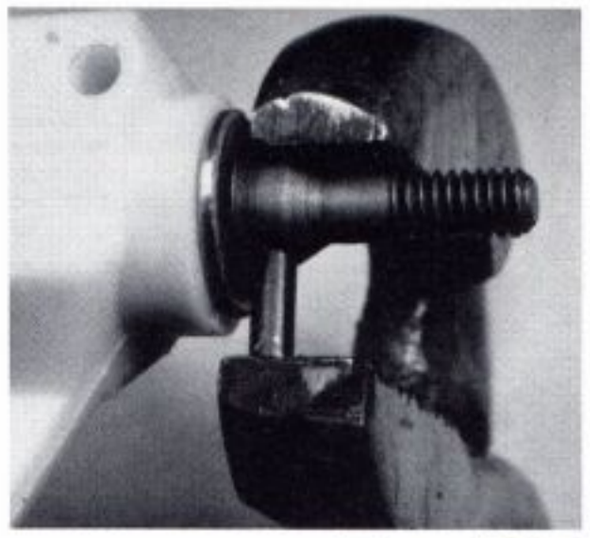


Fig. 137

Figs. 136-140 are the rear suspension instructions for the bearing kits.
For the bushing kits, skip ahead to fig. 141.

❑ **Fig. 138** This photo shows a completed hub carrier and rear universal axle assembly. Now you can go back and repeat the steps to assemble the other rear axle/ hub carrier parts.

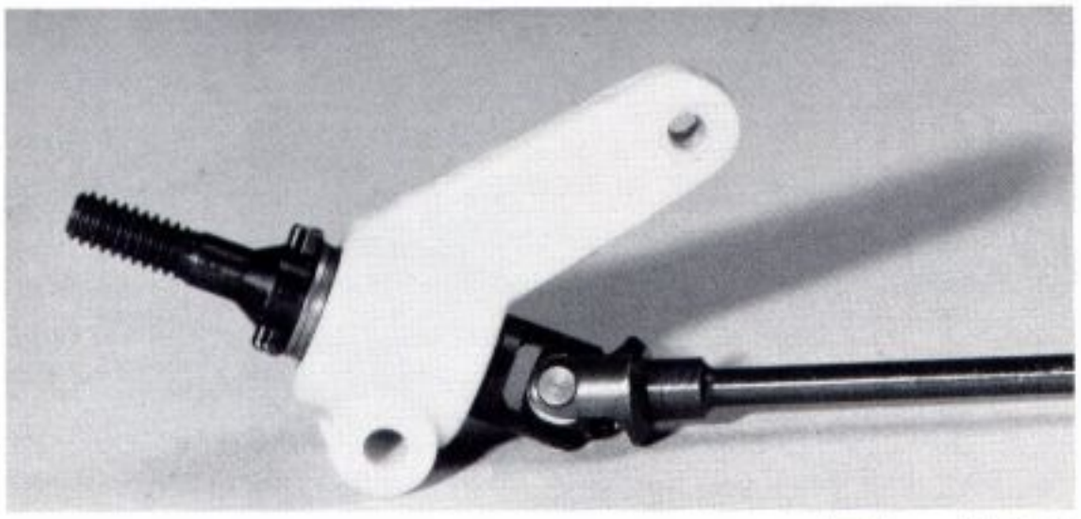
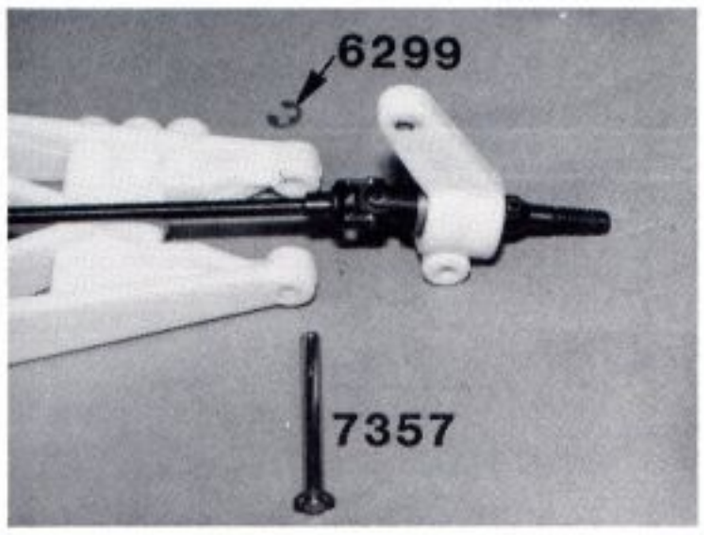


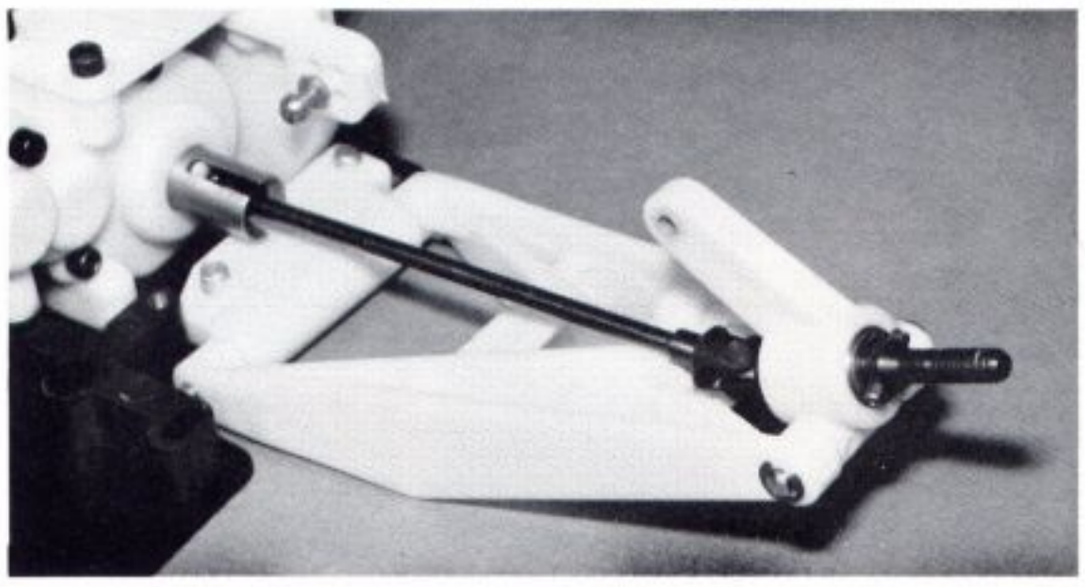
Fig. 138

❑ **Figs. 139 & 140** **(1)** Back in bag #7-8 you will find two #7357 outer rear hinge pins and four #6299 1/8" E-clips. **(2)** Install one of the #7357 hinge pins into the outer pin holes of the left hand suspension arm. **(3)** Check to make sure that the #7357 hinge pin turns freely inside the #7355 rear A-arm. **(4)** If it does, remove the pin and place the left rear hub carrier between the rear arm mounting points. **(5)** Now reinstall the #7357 hinge pin. The pin should be tight in the rear hub carrier but free in the arm. **(6)** Install a #6299 E-clip on each end of the #7357 hinge pin. **(7)** Now check the fit of the other hinge pin and then install the other hub carrier assembly. **(8)** Line up the ball and pin end of the universal axle so that the ends of the pin line up with the slots in the outdrive hubs on the transmission. **(9)** Insert the pin end into the outdrive hub. Fig. 140 shows the left hub carrier/universal axle assembly installed on the arm.

Fig. 139



#6299
e-clip
1/8 shaft



#7357

Fig. 140

All kits continue with the instructions below until otherwise indicated.

❑ **Fig. 141 & 142** Take the two #7253 turnbuckles and two #7660 rear shock/turnbuckle steel ball ends with nylon eyelets from bag #7-8 then take two #6274 plastic ball end caps from bag #6-14. Thread one #6274 plastic ball end cap onto each turnbuckle. Now take the #7660 nylon eyelet and thread it onto the other end of each turnbuckle. Thread on the plastic and nylon ends evenly and adjust the turnbuckle length to 3.050". The overall length of the turnbuckle is measured from the center of the plastic ball end cap to the center of the nylon eyelet as shown. Place the #7660 steel ball end on the table then place the nylon eyelet over the ball end and press it on. You may use a 1/ 4" nut driver to press it on. Compare your part to the actual size drawing at the bottom. Your completed turnbuckle assembly will look like fig. 142.

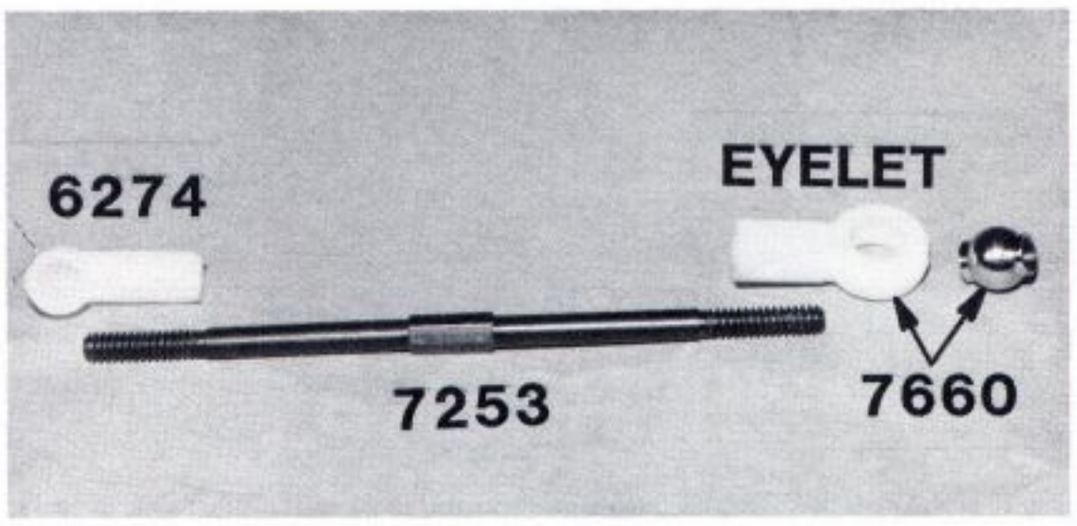


Fig. 141

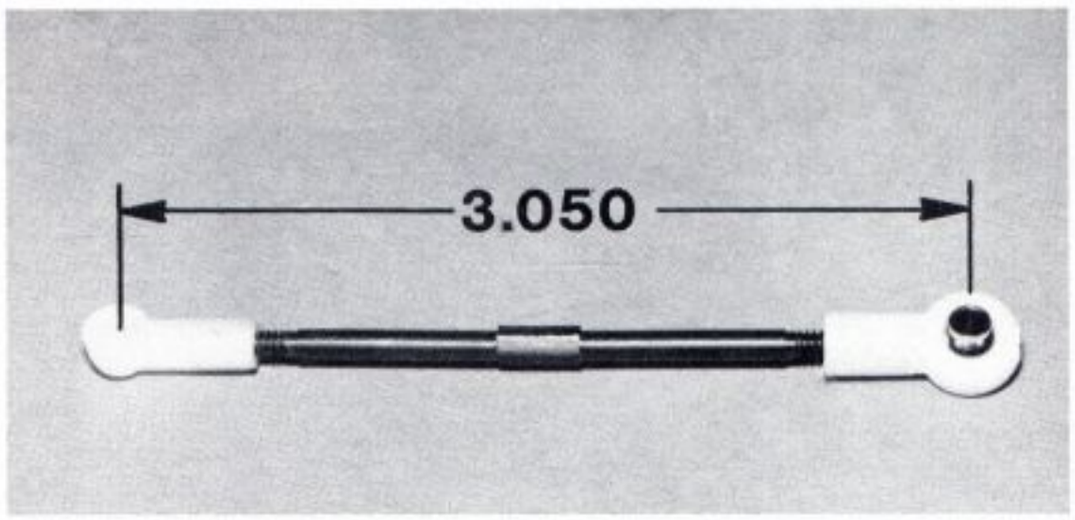
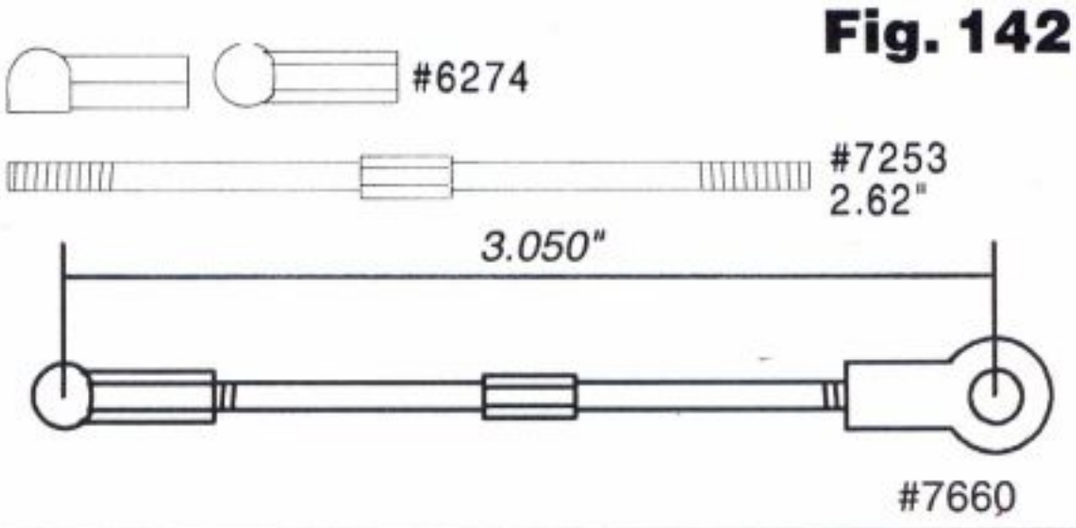


Fig. 142



❑ **Figs. 143 & 144** In bag #7-8 you will find two #6925 4-40 x 1/2" SHCScrews and two #7260 4-40 small plain nuts. Take one of the assembled turnbuckles and snap the plastic ball end cap onto the #6273 steel ball end

the #7260 4-40 small plain nuts on the other end and tighten it down. Take the second turnbuckle and mount it the same way on the right side of the truck. Now install the right side turnbuckle the same way.

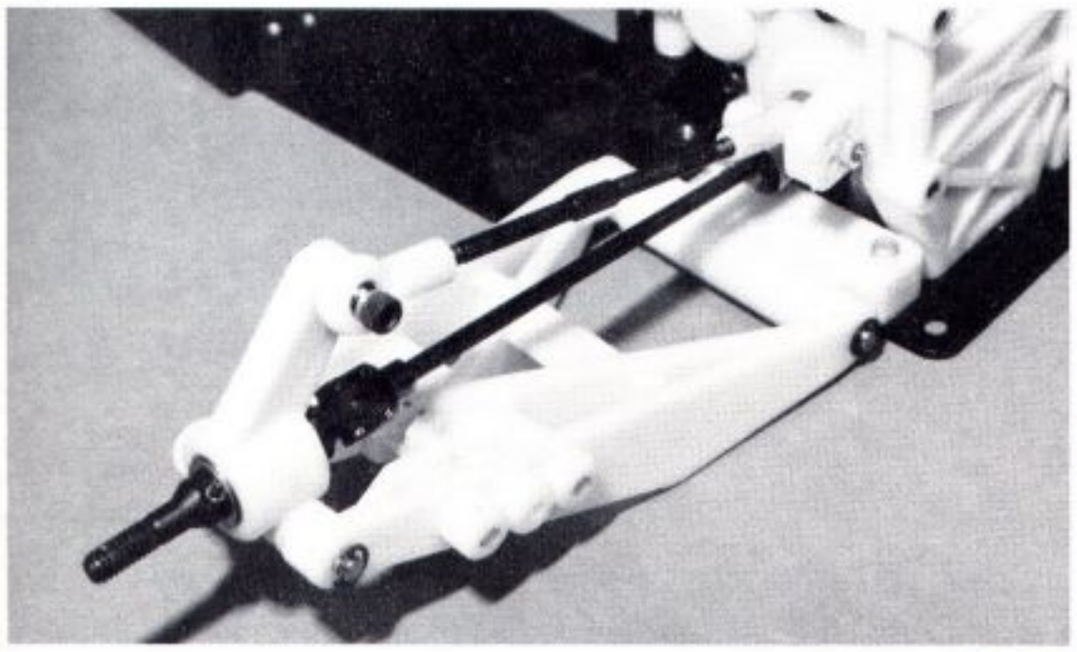


Fig. 143

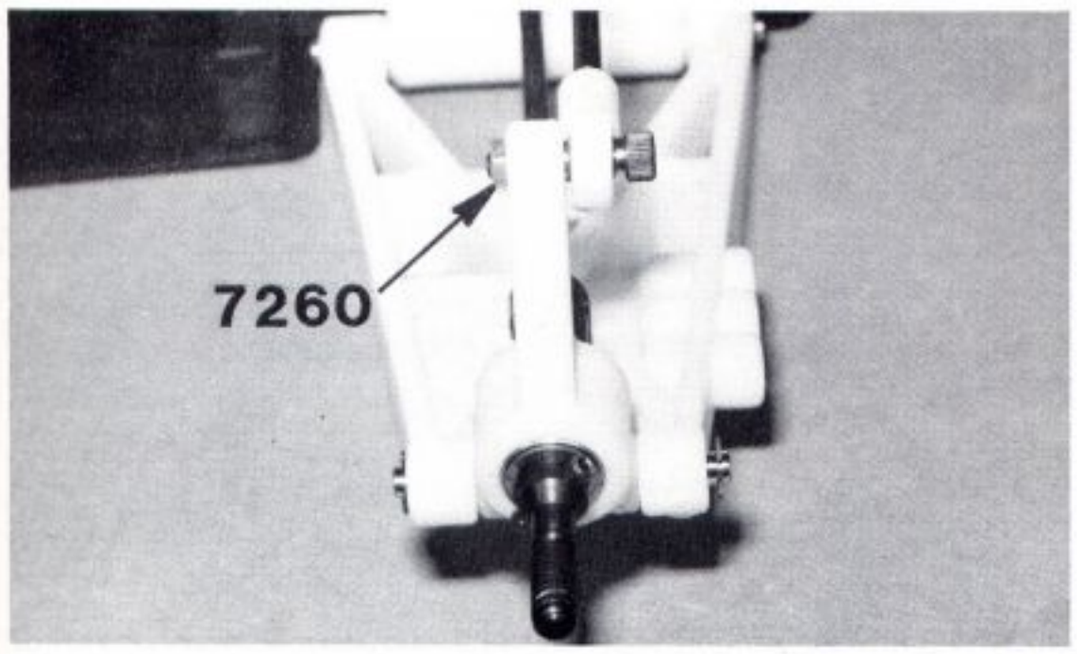


Fig. 144

#6925
4-40 x 1/2

#7260
4-40
thin plain nut

SHOCK ASSEMBLY

We have made several major improvements to our new improved shocks with the addition of new molded Teflon shock pistons and new molded internal shock seal assembly parts. **PLEASE FOLLOW THE NEW ASSEMBLY INSTRUCTIONS CAREFULLY!**

❑ **Fig. 145** In the master bag you will find bag #7-9. Remove the two #6458 rear shock shafts from this bag. In the same large bag you will find bag #7-10. Remove the two #6459 front shock shafts from this bag. The front and rear shocks are assembled almost exactly the same, so it is easier if you assemble all four shocks at the same time. Install one #6299 1/8" E-clip on each shock shaft in the lower groove (closest to the threaded end as shown in fig. 145).

E-clips. Found in bags #7-1, #7-8, #7-9 and #7-10.

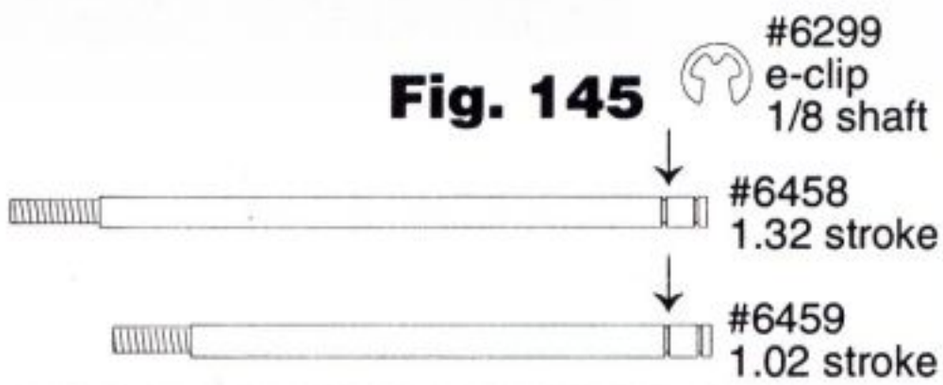


Fig. 145

❑ **Figs. 146 & 147** In a separate bag inside the large shock bag you will find the #6465 new Teflon shock piston set. You will find four each of #1, #2, and #3 shock pistons on this piston parts tree. The #1 piston is the lightest damping and the #3 piston is the heaviest damping.

The new pistons are molded to help prevent creating burrs when you break them off. Twist the piston up as shown in fig. 147. For the truck you will need to remove two #2 pistons and two #3 pistons from the parts tree. If there are any remaining burrs, **carefully** remove them with a sharp hobby knife.

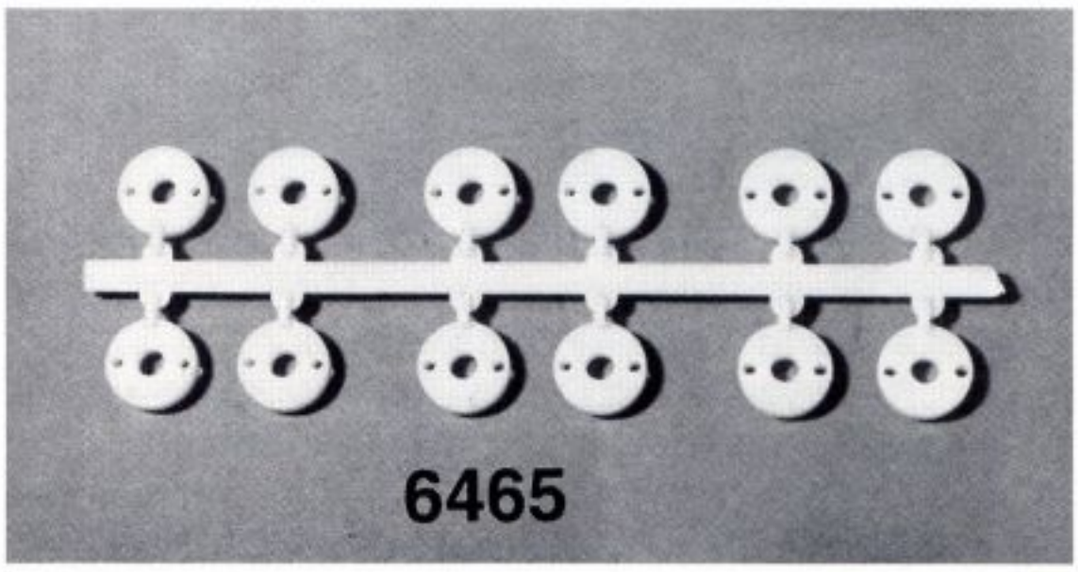


Fig. 146

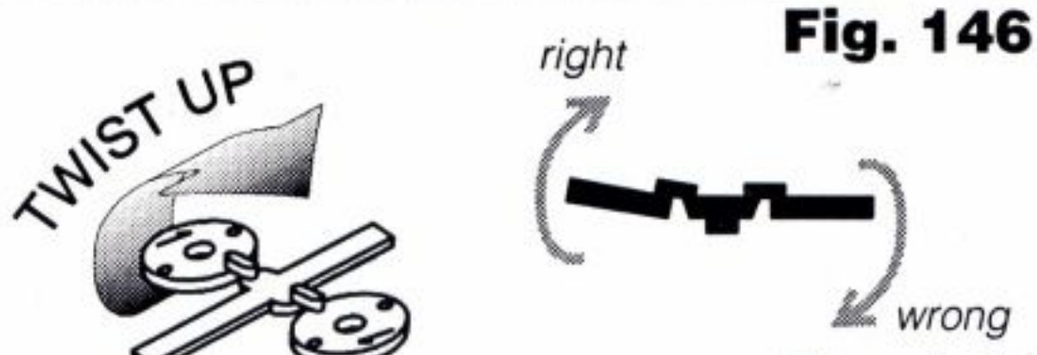
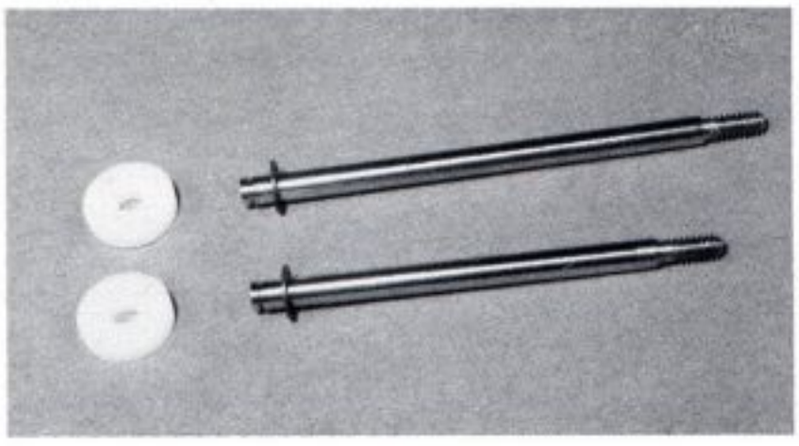


Fig. 147

❑ **Figs. 148 & 149** We are going to install the two #6465 (#2) shock pistons on the two #6458 rear shock shafts (the longer shafts). Secure each piston to the shaft with an E-clip. Install the two #6465 (#3) shock pistons onto the #6459 front shock shafts and secure them with an E-clip. Fig. 149 shows one shock shaft with piston installed. ***Racers Tip:*** *It does not matter which way you install the pistons, but we recommend having the number up so that it will be easier to see what piston you are using when you service your shocks.*



#6299
e-clip
1/8 shaft

Fig. 148

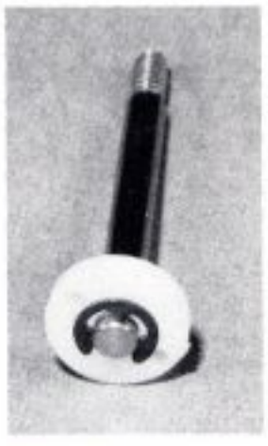


Fig. 149

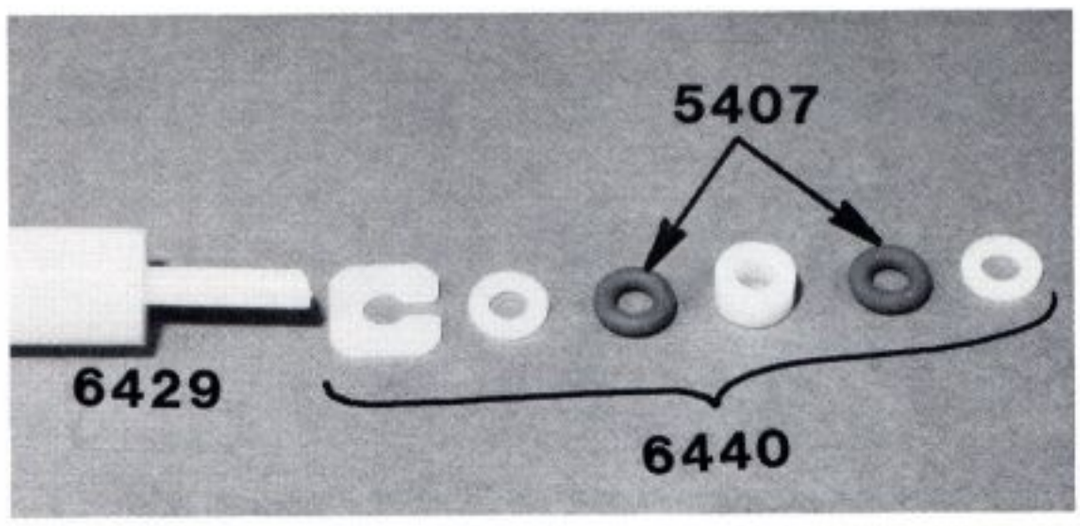
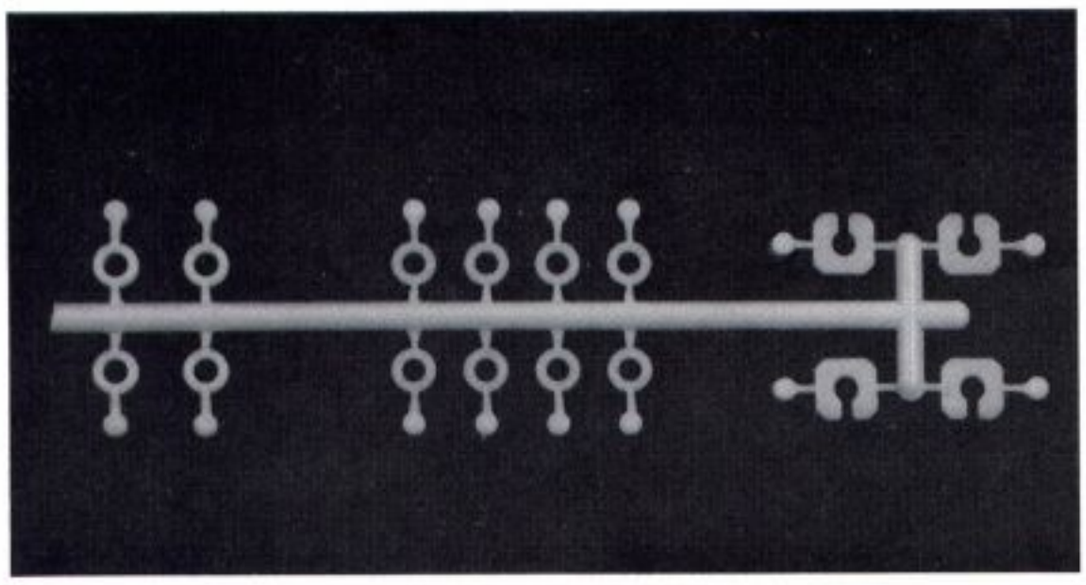


Fig. 151

❑ **Figs. 150 & 151** In another plastic bag you will find the new #6440 molded shock assembly parts and red and black O-rings. ***(Note:*** *Part number #6440 is a complete replacement set of O-rings and plastic assembly parts to rebuild four shocks.)* This parts tree contains only enough plastic parts to assemble four shocks, so be careful. Just below fig. 150 are their part names.

In the large shock kit bag you will find the #6429 shock assembly tool, fig. 151. ***WARNING! Because of the precision tolerances of these new parts, correct removal of the parts from the parts tree is CRITICAL! Using a hobby knife with a very sharp blade, carefully trim each part from the parts tree. It is EXTREMELY important that no part of the two molding runners (on each part) be left on the shock assembly parts. Any part of the mold runner remaining will bind the shock shaft and reduce performance of the shock. Use your finger on the edge of the parts to feel for burrs that you cannot see and carefully remove them.***

Remove the red O-rings from the same bag the plastic shock parts came out of. Install the parts on the tool in the following order: first the split locking washer, then one small nylon washer, red O-ring, large nylon spacer, red O-ring, and second small nylon washer. You can compare this sequence with the layout in fig. 164. Fig. 165 shows a cutaway drawing of the shock body with the internal seal parts installed.



Left: 4 large nylon spacers
Center: 8 small nylon washers
Right: 4 split washers

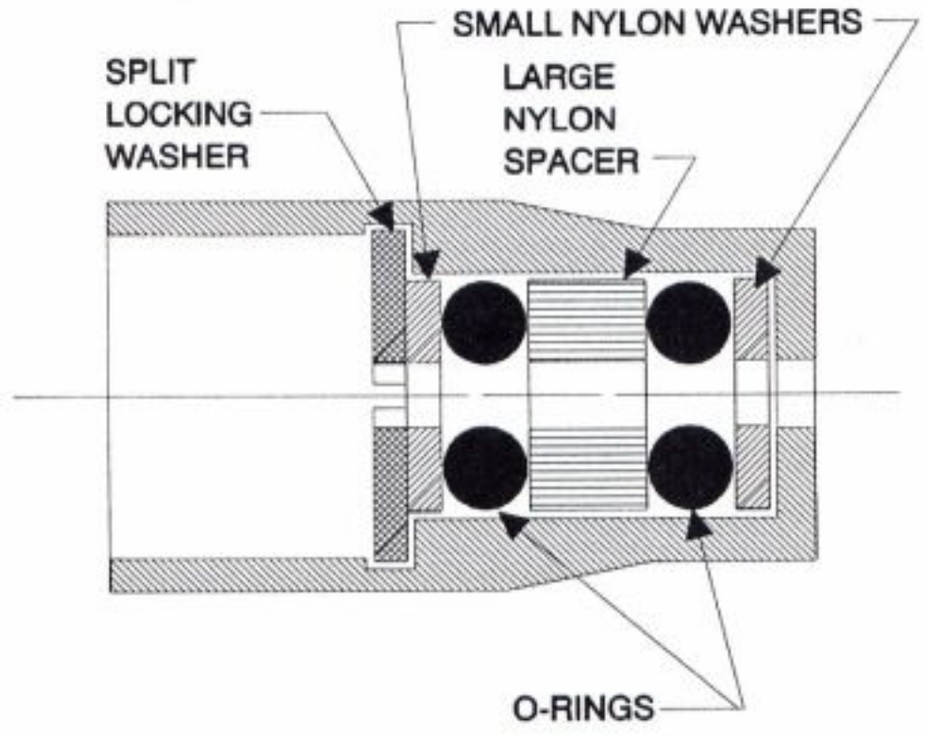
Fig. 150

#5407
red O-ring

❑ **Figs. 152 & 153 HOW TO DISMANTLE THE SHOCK SEAL PARTS** Skip this step until you need to dismantle your shocks.

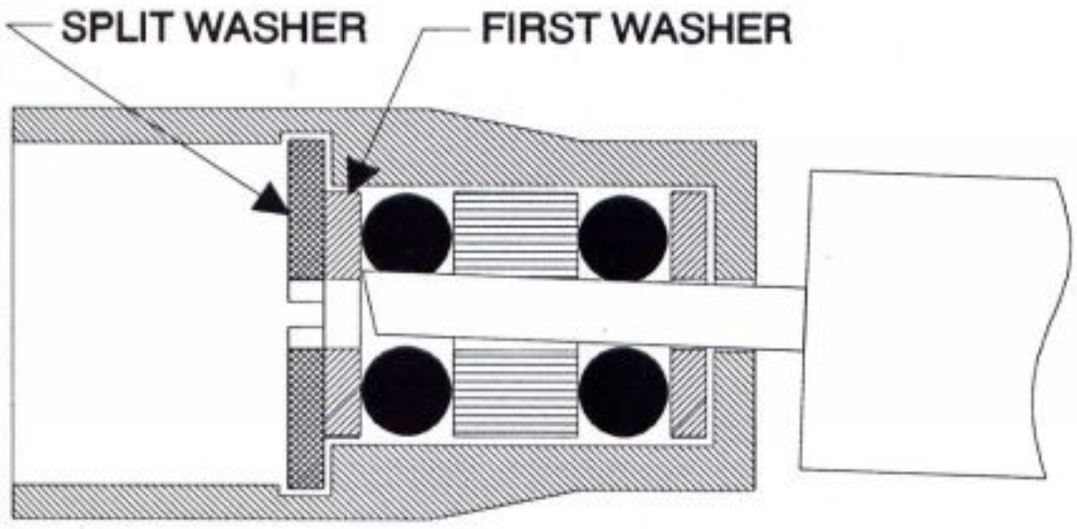
Fig. 152 shows a cutaway of the bottom portion of the shock showing how all of the parts fit into the shock seal cavity. Fig. 153 is the same cutaway drawing which depicts the shock assembly tool being used to remove the shock seal parts.

In order to dismantle the shock seal parts you must **(1)** remove the shock cap, **(2)** drain the shock oil, and **(3)** remove the shock shaft with piston. **(4)** Insert the small, angled tip of the shock tool into the bottom of the shock. First slide the tool all the way in until the tool bottoms out against the shock body. **(5)** Now angle the tool slightly, and slowly slide the tool down until the tip slides over underneath the split washer and first small nylon washer. **(6)** With the pointed tip of the tool under one side of the split locking washer, push firmly up until the split washer snaps out of its groove. **(7)** Then pull the tip of the tool down and use it to push the rest of the internal parts up and out of the cavity.



(NOT ACTUAL SIZE)

Fig. 152



(NOT ACTUAL SIZE) **Fig. 153**

❑ **Fig. 154** Open bag #7-11 and remove the container of 30 weight silicone shock oil. This is the recommended starting weight oil with the new shock pistons. (When you run out of silicone oil its replacement number is #5422.) Apply a liberal amount of silicone oil to the internal seal parts on the assembly tool as shown.

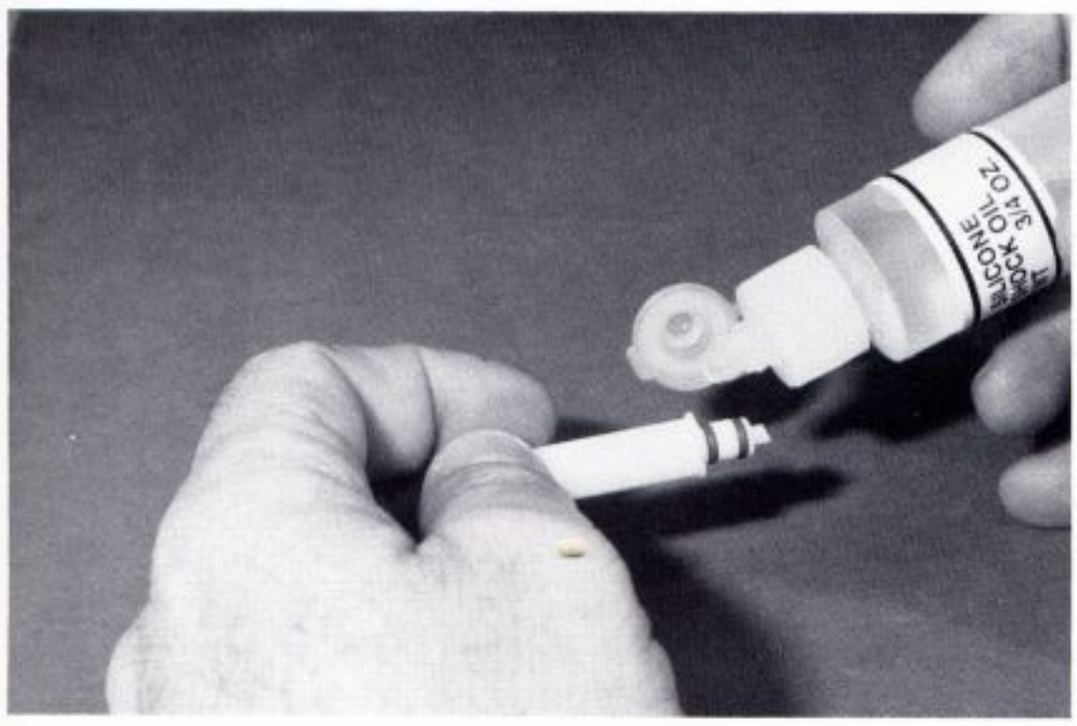
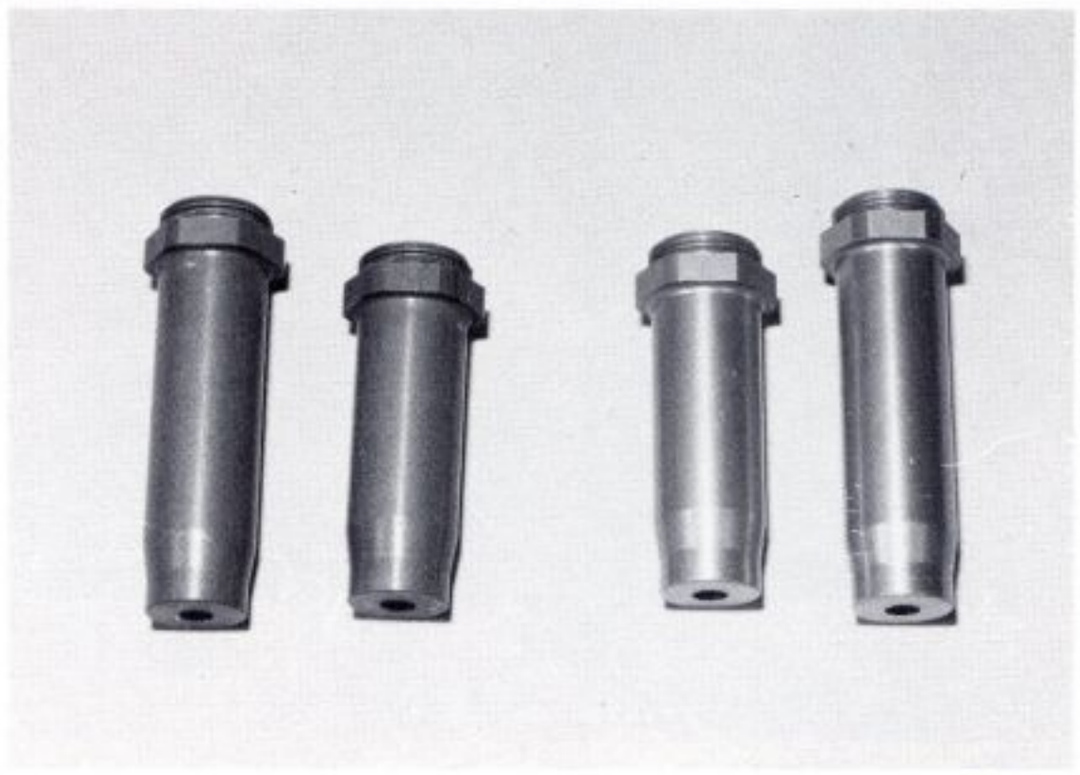


Fig. 154

❑ **Figs. 155 & 156** **For the ball bearing kits:** Take out the two #6435 green or grey hard anodized rear shock bodies from bag #7-9, then remove the two #6436 green or grey hard anodized front shock bodies from bag #7-10.

For the bushing kits: Take out the two #6424 standard gold anodized rear shock bodies from bag #7-9, then remove the two #6425 standard gold anodized front shock bodies from bag #7-10.

For all kits: Put a few drops of silicone oil into the bottom of all shock bodies. This lubrication makes installation of the internal parts easier. It is very important that we do not accidentally cut or damage the red O-rings while they are being installed. ***Note:*** *The rest of the shock assembly instructions will be the same for both the gold and green (or grey) shock sets.*



For ball bearing kits ↑ *For bushing kits* **Fig. 155**

Fig. 156

❑ **Fig. 157** Take one of the shock bodies and the #6429 shock tool, with the internal parts on it, and slowly insert the tool into the shock body until it bottoms out. If everything goes in smoothly, the shock tool tip will be even with or just slightly out of the bottom of the shock body. If not, you may need to rotate the shock body, as you are pushing, to help it seat the parts the rest of the way into the shock cavity. Now stand the shock tool on your workbench, with the shock body on top, and firmly push down on the shock body until you hear and feel the split washer snap into its groove. The new parts are of a harder material so it may take quite a bit of pressure before it will go in. When properly installed the end of the shock tool should be sticking out the bottom of the shock just about 1/8".

Once the parts have been properly snapped into place, pull the tool out. Look inside the shock body for any obvious signs that the parts did not go together correctly. **MAKE SURE THE WASHER IS FULLY SEATED IN ITS GROOVE.** If the parts are not seated correctly, the shock will leak or even come apart inside. Repeat the same steps for the other three shock bodies.

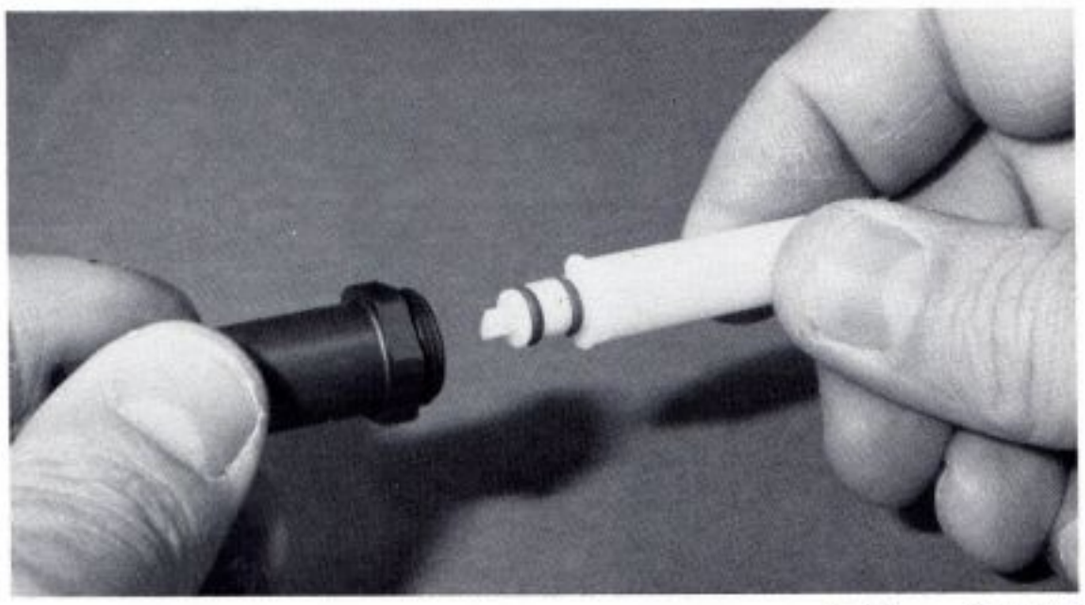
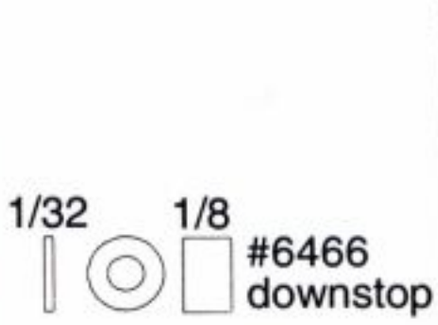


Fig. 157

❑ **Figs. 158 & 159** Go to bag #7-9 and remove two #6466 1/8" plastic downstops and two #6466 1/32 plastic downstops. We need to install one of each onto the long rear shock shafts. as shown in fig. 159.



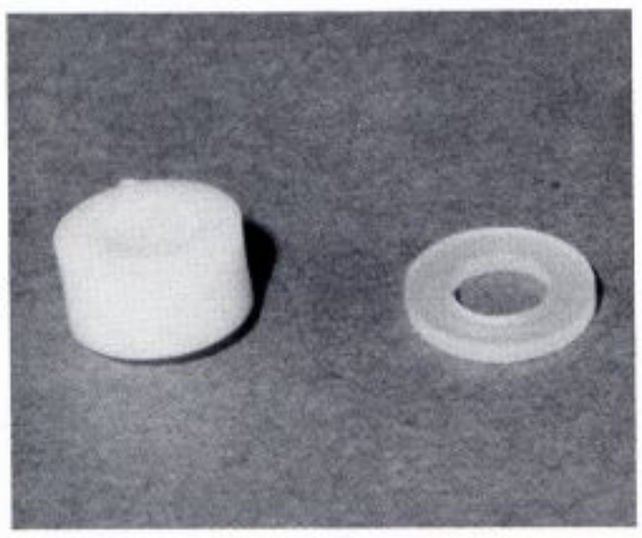


Fig. 158

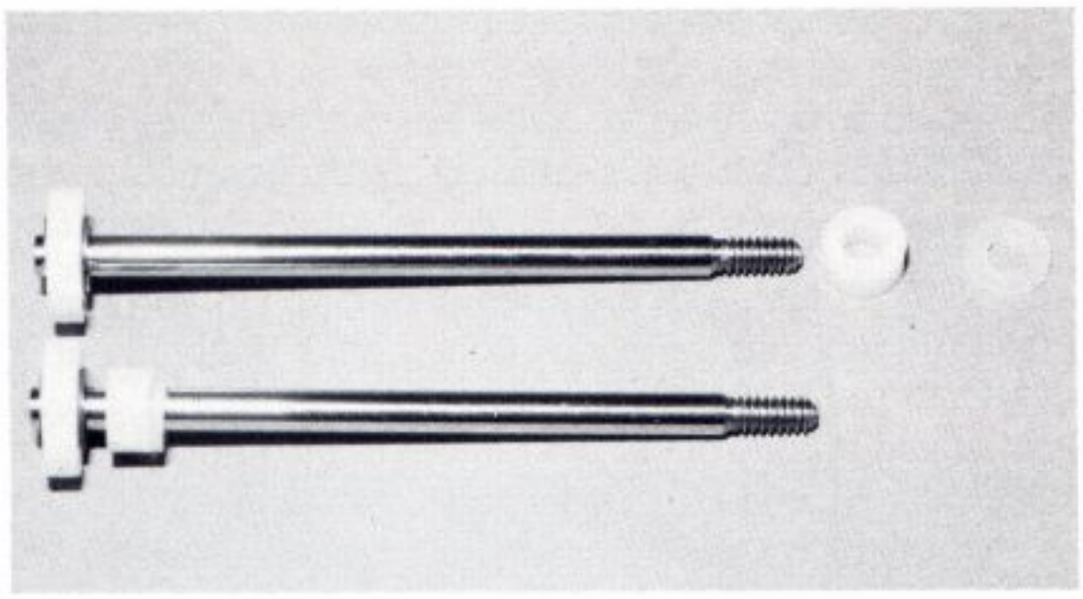


Fig. 159

❑ **Fig. 160** We will now install the shock shafts into the shock bodies. Place a couple of drops of oil on each shock shaft. Slowly install the *long* shock shafts with #2 pistons and #6466 downstops in the *long* rear shock bodies, and the *short* shock shafts with #3 pistons in the *short* front shock bodies. Pull the shaft down until the piston seats against the bottom of the shock body. ***WARNING!*** *Be careful inserting the shafts, otherwise you can damage the red O-rings and cause the shock to leak.*

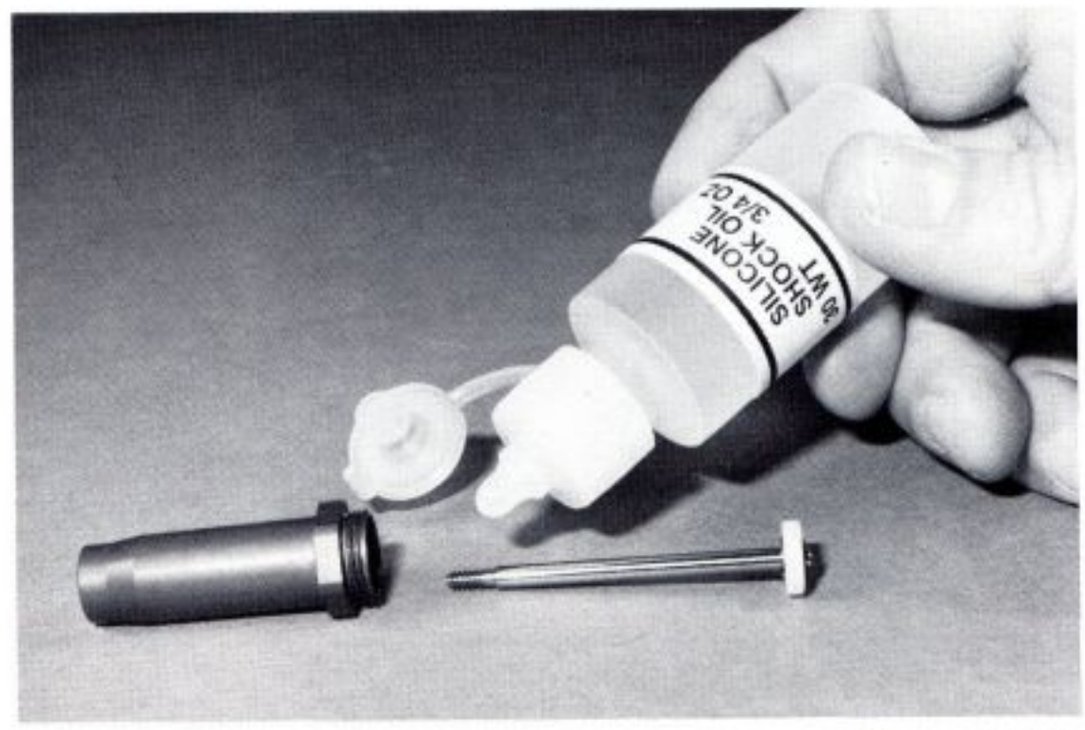


Fig. 160

❑ **Fig. 161** Locate the four #6469 black O-rings in the large shock bag. Install one on each shock over the threads on the shock body, and seat it flush in the pocket at the bottom of the threads.

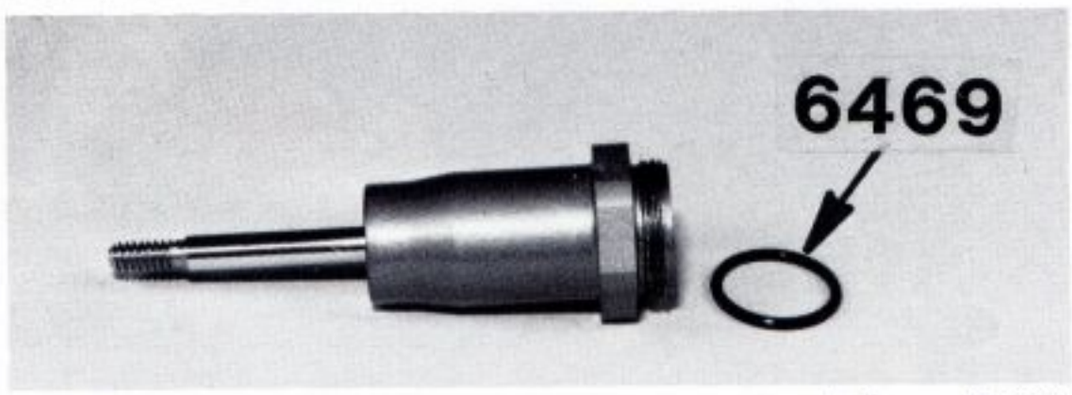


Fig. 161

#6469
black O-ring

❑ **Figs. 162 & 163**

For ball bearing kits: In bags #7-9 and #7-10 you will find four #6439 black aluminum shock caps.

For bushing kits: In bags #7-9 and #7-10 you will find four #6428 black plastic shock caps. You must lubricate the threads of each plastic shock cap with shock oil. ***WARNING! If you don't lubricate the cap threads, you will have trouble installing them and make it difficult to remove them.***

Note: *The rest of the shock assembly instructions will be the same for both the gold and green (or grey) shock parts.*

Fig. 162

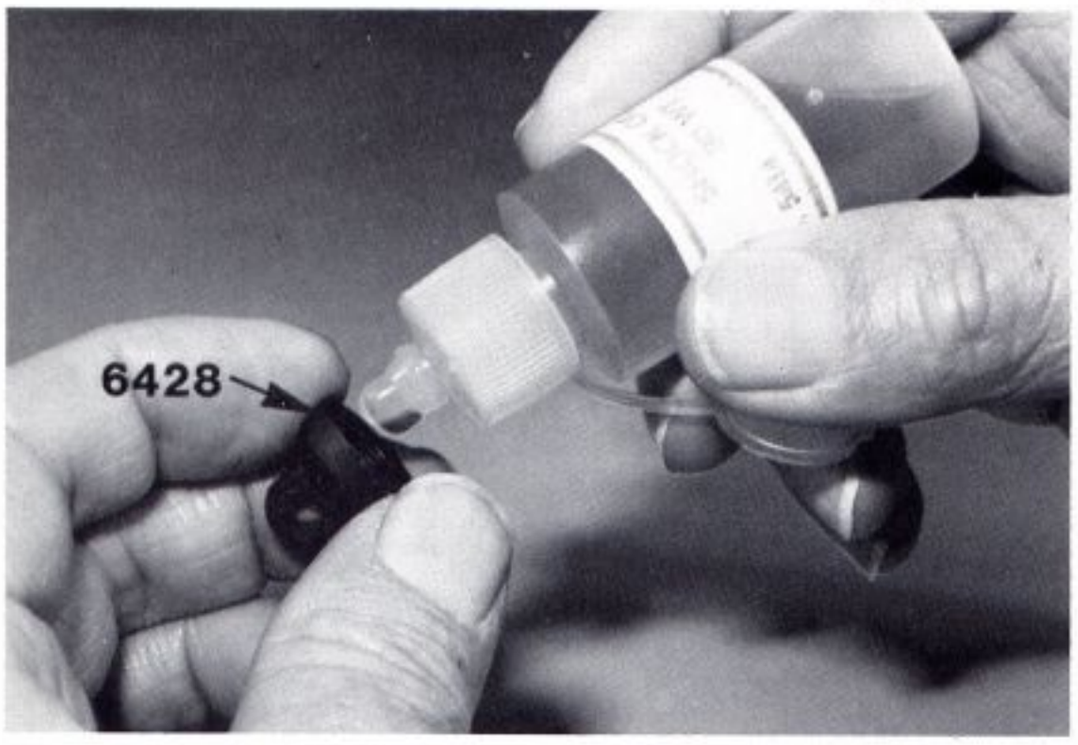


Fig. 163

❑ **Figs. 164 & 165** Now we fill each shock with shock oil. **(1)** Take your container of oil and fill the shock until it comes within 1/16" of the top of the shock body. **(2)** Now move the shock shaft up and down slowly several times to make sure that there are no air bubbles trapped under the piston. If there were air bubbles, refill the shock until it is within 1/16" of the top. **(3)** Now push the shock shaft up until the piston is close to the top of the shock but still covered with shock oil. **(4)** Take your #6439 or #6428 black shock cap and thread it onto the shock body. The cap needs to screw all the way down to the shock body. There should be no gap between the cap and the hex portion of the shock body (see arrow in fig. 165). The O-ring will actually be doing the sealing, so we must be careful not to overtighten the cap. As soon as the cap comes in contact with the body just turn a little bit further to seat it. **(5)** Now work the shock shaft up and down several times then press the shaft all the way in and let go of the shaft. We want the shaft to come back out of the shock about 1/4" on its own. This is the correct amount of rebound. If it comes out too far, remove the shock cap and bring the piston closer to the top before reinstalling the cap. If it does not come out far enough, repeat the above procedure, but start with the piston lower in the shock body.

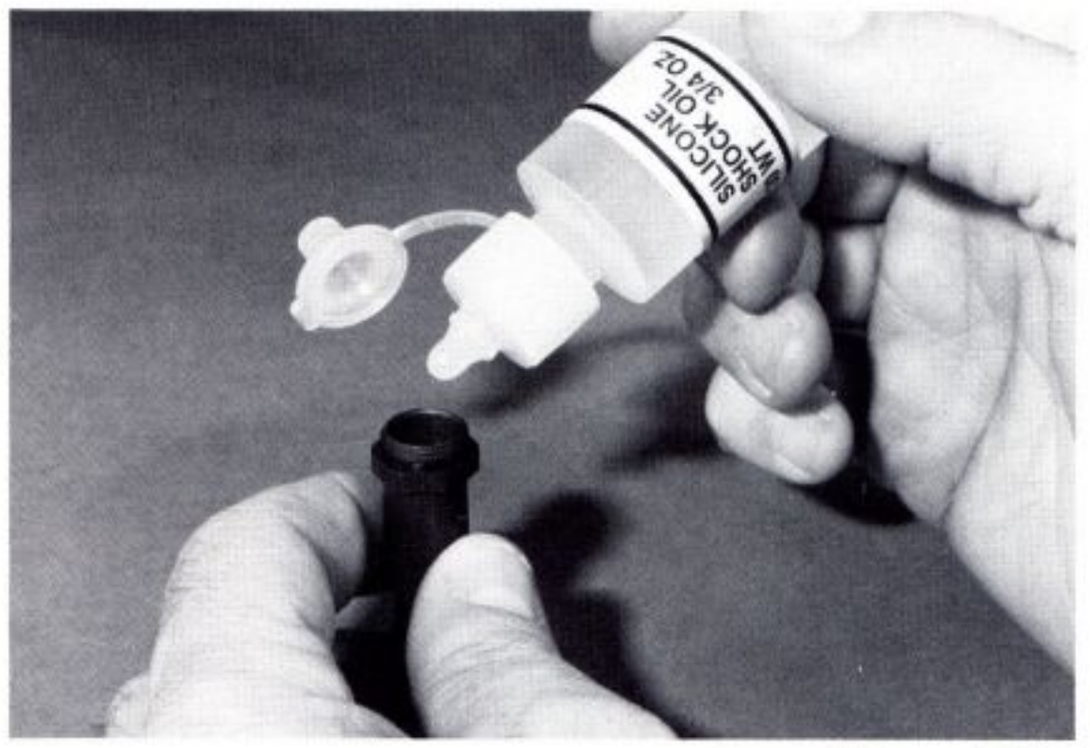


Fig. 164

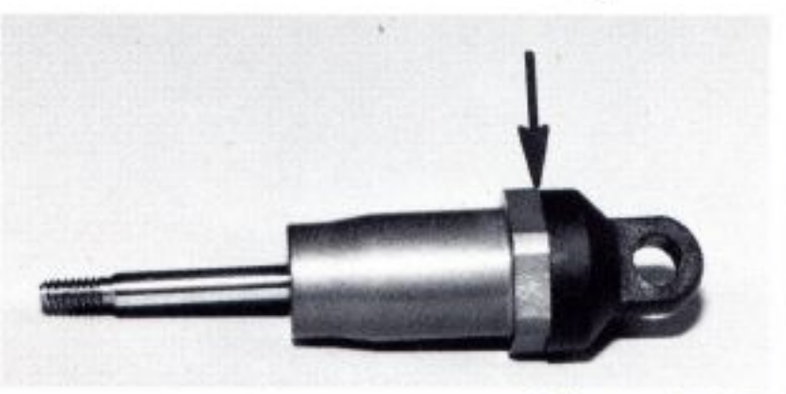
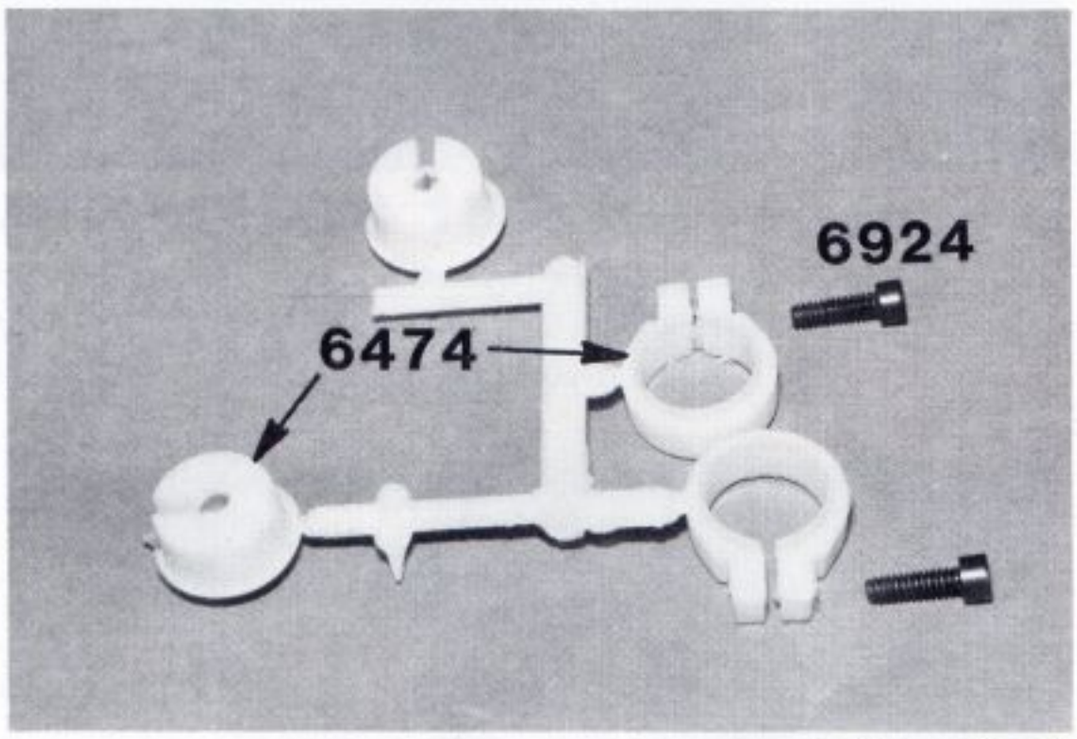


Fig. 165

❑ **Figs. 166, 167 & 168** (1) From bag #7-11 remove the two #6474 spring clamps and cups parts trees and four #6924 4-40 x 3/8" SHCScrews (fig. 166). **(2)** Now go back to bags #7-9 and remove two #7660 rear shock/turnbuckle steel ball ends and nylon eyelets (fig. 167). **(3)** From bag #7-10 remove the two #6471 nylon shock rod ends and .230 shock steel pivot ball ends (fig. 168). **(4)** Remove the shock spring clamp and cup parts from the parts trees. Each tree has both a left and a right spring clamp on it. **(5)** Slide the nylon spring clamps, from one parts tree, onto each front shock with the thin flange edge on the shaft side. **(6)** Then do the same for the rear shocks with the spring clamps from the other parts tree. **(7)** Each spring clamp has one hole that is slightly larger than the other. Install the #6924 screw through each larger hole and then thread it into the smaller hole. **(8)** Now slide the collar to the top of the shock body and tighten it just enough to keep the collar from moving.

(9) Now take one of the #6471 plastic shock rod ends and push it onto the steel shock pivot ball. The easiest way to do this is to place the metal ball end on a table or bench with the flat side against the table. Set the plastic rod end over the ball and push it into place with your 1/4" nut driver. You can also use pliers to squeeze the parts together, but you must be careful not to damage the nylon parts. Now do the same for the #7660 shock/turnbuckle steel ball end and nylon eyelet.

(9) Now thread the #6571 nylon shock rod ends and balls onto the front shock shafts. **(10)** Next, thread the #7660 shock/turnbuckle steel ball ends and eyelets onto the rear shock shafts. To keep the shock shaft from turning, you will have to hold the shaft with your needle nose pliers. ***WARNING!*** *Make sure you grab the shaft* ***only with the smooth part of the jaws*** *of your needle nose pliers, and as close to the threads as possible.* This is so we do not scratch the shaft where it will ride in the O-rings, which could damage them and cause the shock to leak. **(11)** Do the same for the other three shocks.



Left: spring cups.
Right: spring clamp collars

Fig. 166

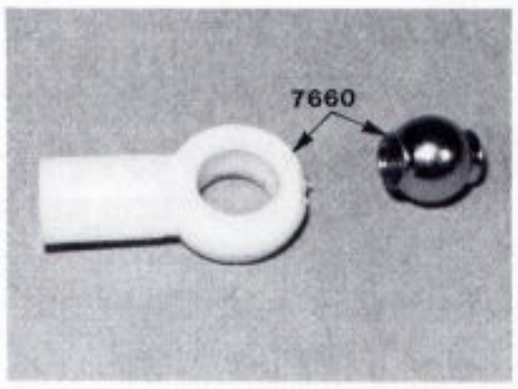


Fig. 167

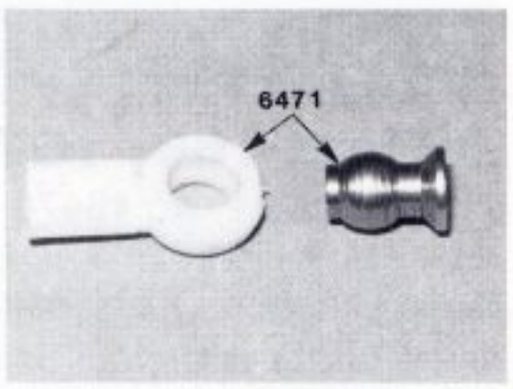


Fig. 168

#6924
4-40 x 3/8

❑ **Fig. 169** Remove the two long #7434 2.75" rear blue springs from bag #7-11. Install one spring onto each of the long rear shocks, sliding it up over the shaft end. Leaving the shaft extended compress the spring and slide one of the #6474 spring cups onto the shaft so that it will slip down over the #6471 shock rod end. For the rear shocks, adjust your spring collars so that there is a 15/64" (.225," or 5.7mm) gap between the hex portion of the shock body and the top of the shock collar (see fig. 169). Tighten the collar enough so it cannot be moved, but not so tight as to strip out the threads.

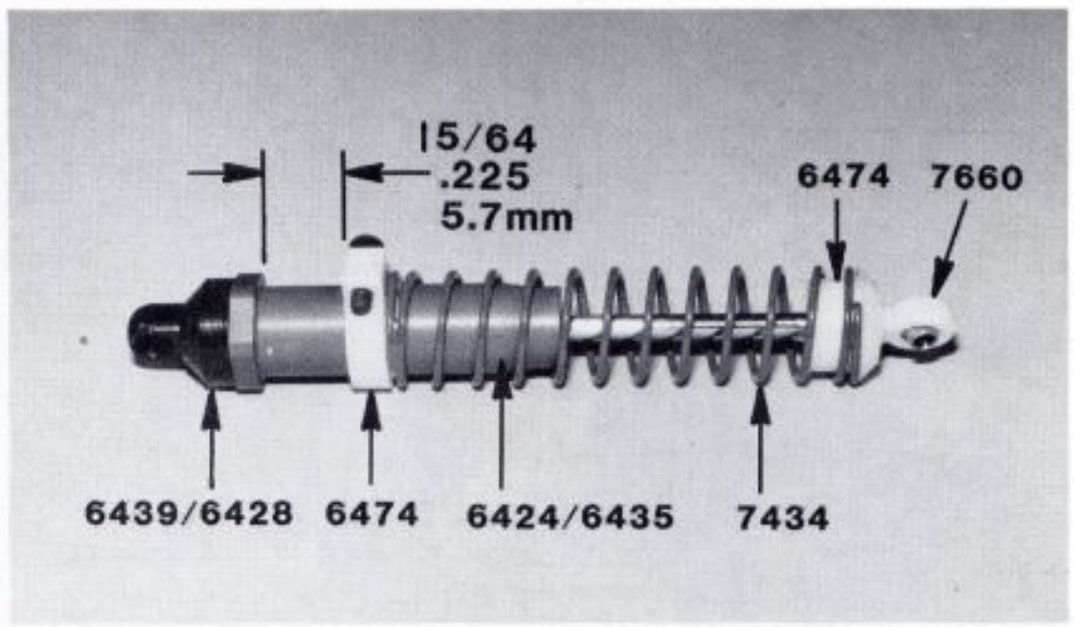


Fig. 169

❑ **Fig. 170** Remove the two remaining #7425 2.0" front gold springs from bag #7-11. Repeat the steps used in fig. 169 but using the #7425 springs and adjust your spring collars with a spacing of 4/10" (.400," or 10.25mm).

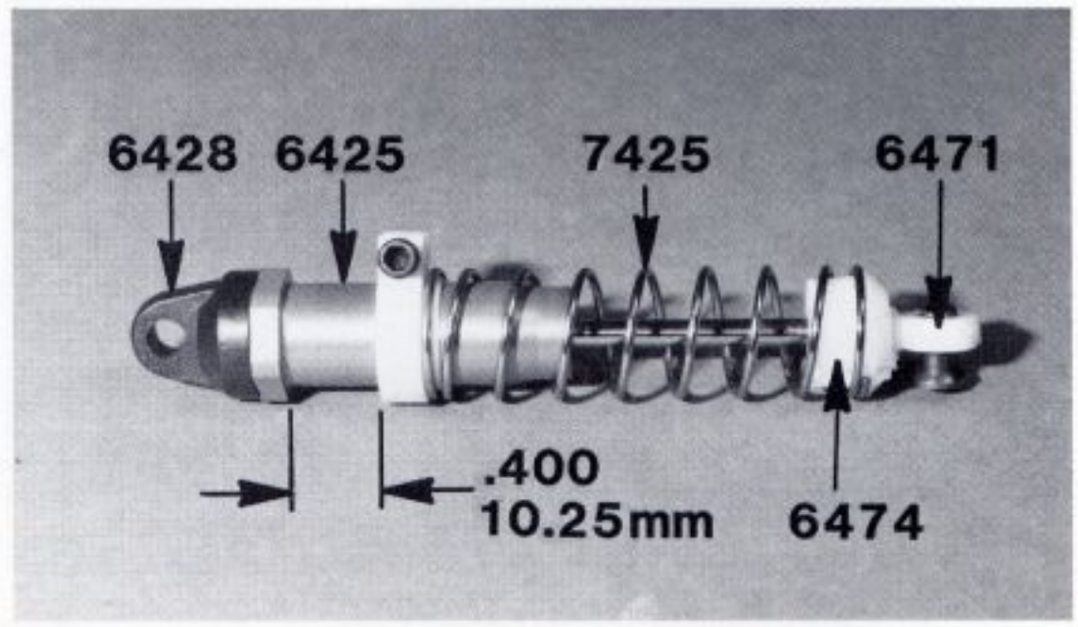


Fig. 170

❑ **Figs. 171 & 172** In bag #7-1 you will find two #7420 4-40 x 5/8" special SHCScrews. Next you will need to remove two #6473 nylon shock bushings, from bag #7-10, and install them onto the two screws on the top of the front shock tower (see fig. 172). Make sure that the flange of the bushing is against the 4-40 plain nut.

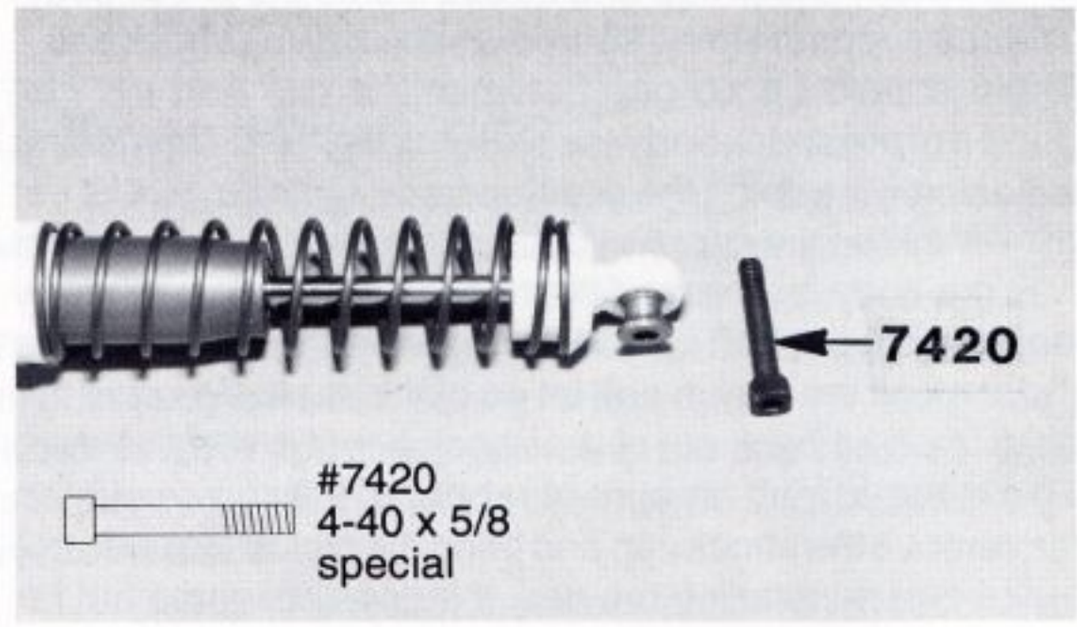


Fig. 171

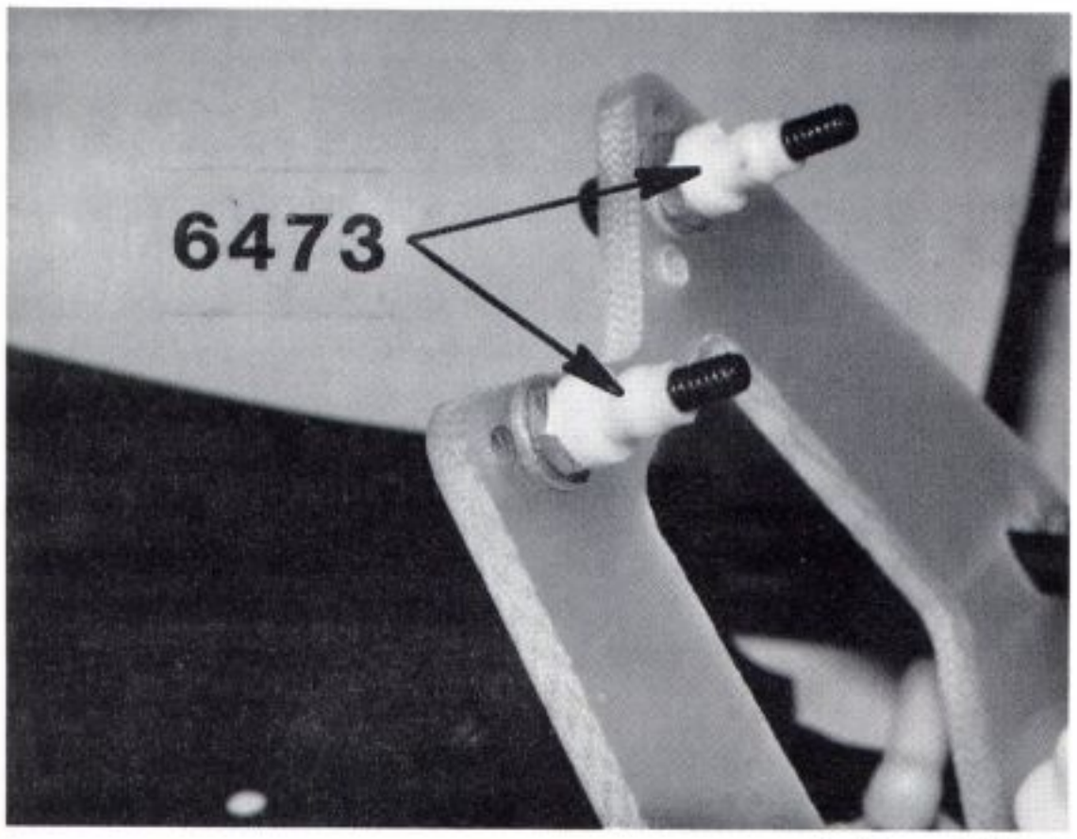


Fig. 172

❑ **Figs. 173, 174 & 175** Now take one front shock and slide the shock cap eyelet onto the #6473 shock bushing at the top of the shock strut. Fig. 173 shows installation of the passenger side shock. In bag #7-10 you will find two #6222 4-40 black self threading nylon nuts. Thread one of the nuts onto the upper shock mounting screw.

Now we are going to slide the shock pivot ball, on the bottom of the shock, into the front suspension arm mounting slot as shown in fig. 174. The suspension arms have two mounting locations; use the one closest to the chassis. Also make sure the flat side of the steel pivot ball is towards the rear of the A-arm. We can now install one of the #7420 special screws from the back side of the A-arm through the pivot ball, and then thread it into the front of the suspension arm.

Now go back and repeat the same steps for the other front shock. Fig. 175 shows both front shocks installed.

Fig. 173

#7420
4-40 x 5/8
special

#6222
4-40/5-40
nylon locknut

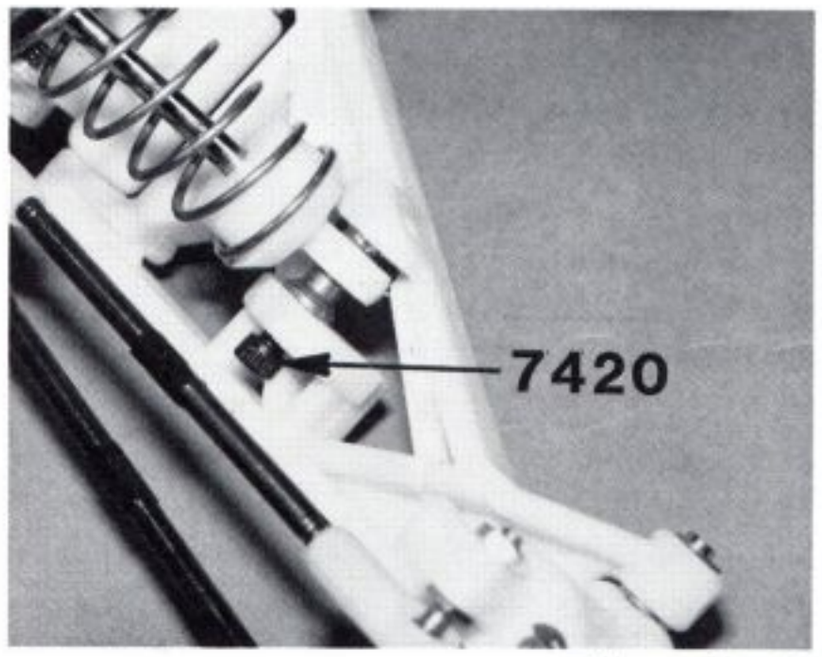


Fig. 174

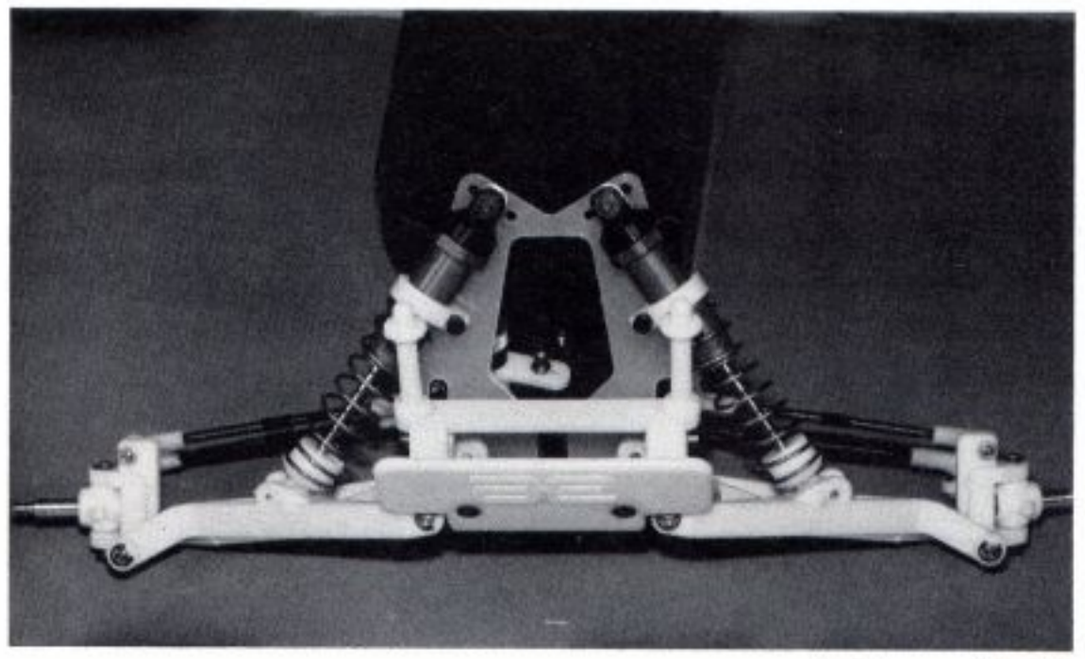


Fig. 175

❑ **Figs. 176 & 177** In bag #7-8 you will find two #7657 rear arm shock mounts and four #6925 4-40 x 1/2" SHCScrews. Take one of the arm shock mounts and two #6925 screws and install the mount to right hand suspension arm. Make sure the slanted side of the shock mount is on the chassis side. Now go ahead and install the other mount on the left hand suspension arm.

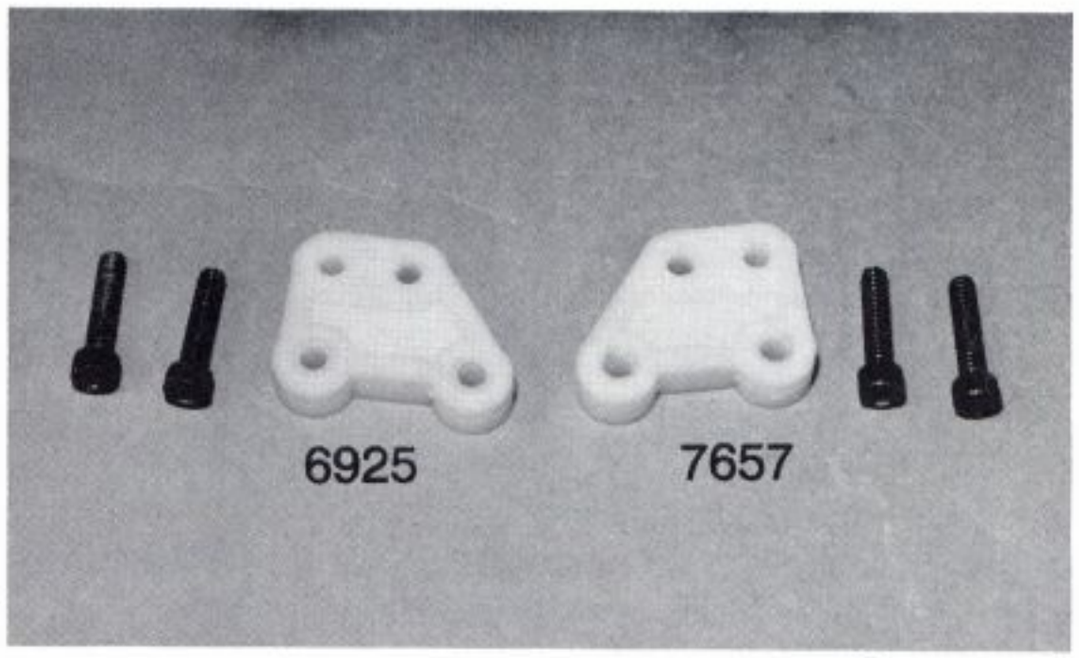
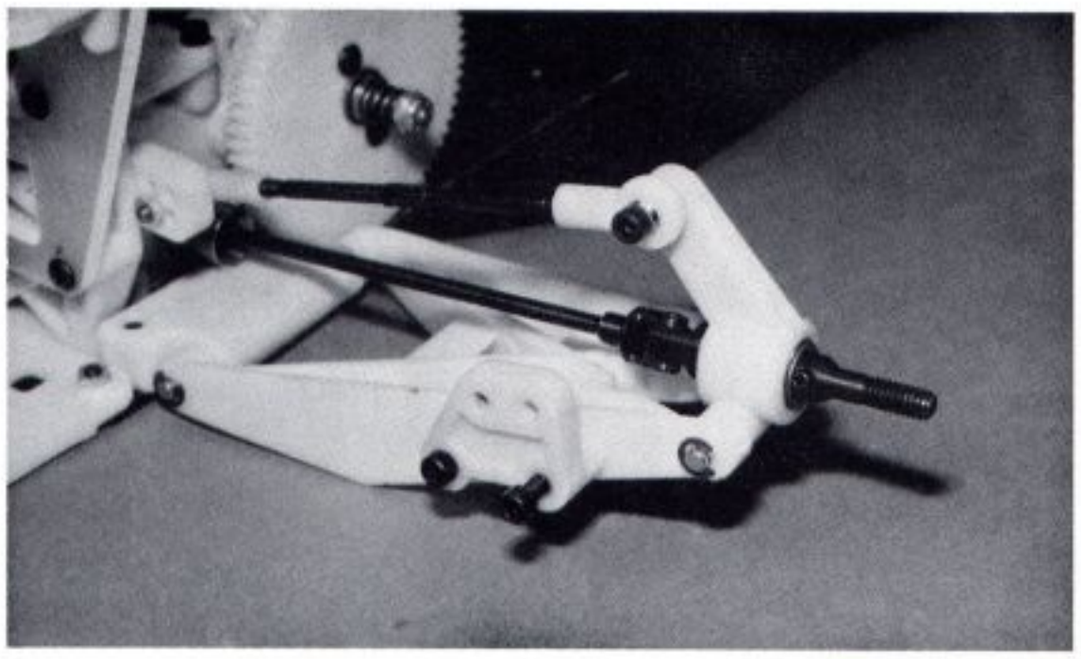


Fig. 176



#6925
4-40 x 1/2

Fig. 177

❑ **Figs. 178, 179, 180 & 181** Take the two #6473 nylon shock bushings, two #6925 4-40 x 1/2" SHCScrews, and two #6222 4-40 black self threading nylon locknuts from bag #7-9. We want to install the #6473 bushings onto the upper rear shock mounting screws with the flange against the 4-40 plain nut. Now slide the shock cap eyelet onto the shock bushing. Take one of the #6222 black locknuts and thread it onto the upper shock mounting screw as shown in fig. 179. Take the #6925 screws and install it through the #7660 rear shock/turnbuckle pivot ball, from the front, and then thread the #6925 screw into the innermost hole of the #7657 rear arm shock mount. Now go ahead and install the other shock the same way. Fig. 181 shows both rear shocks installed.

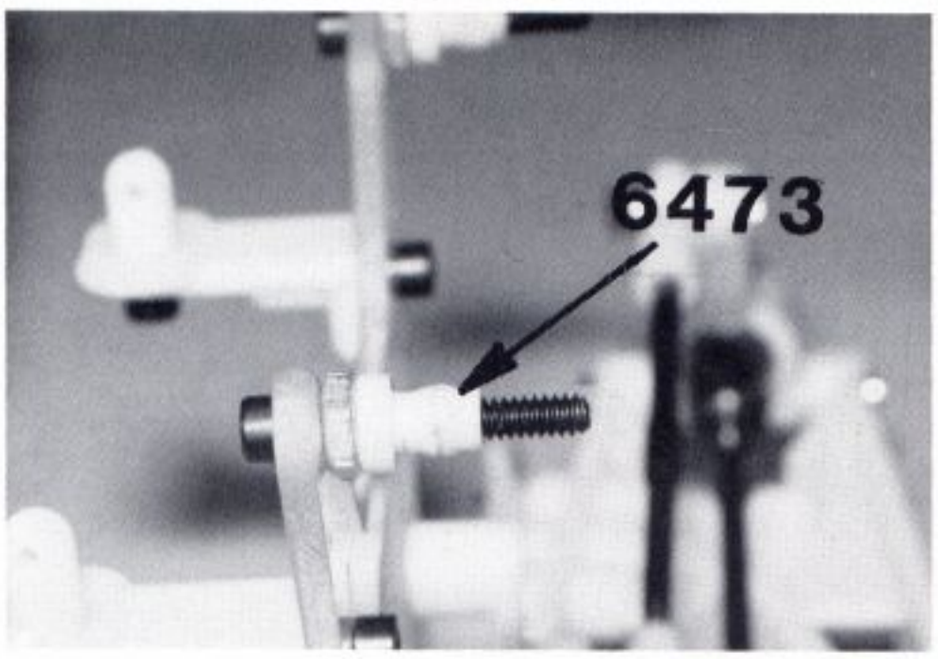


Fig. 178

#6925
4-40 x 1/2

#6222
4-40/5-40
nylon locknut

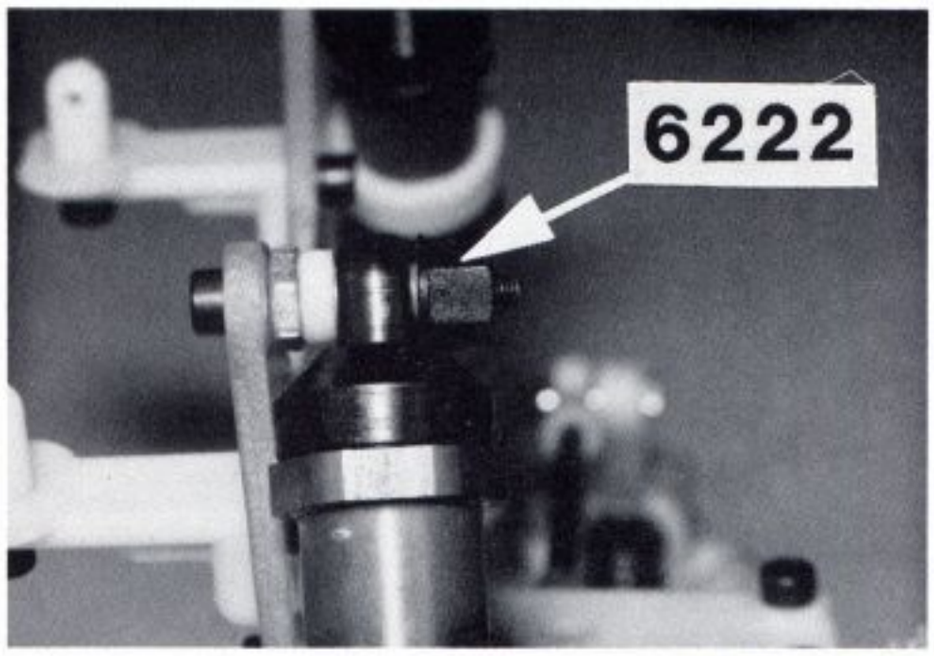


Fig. 179

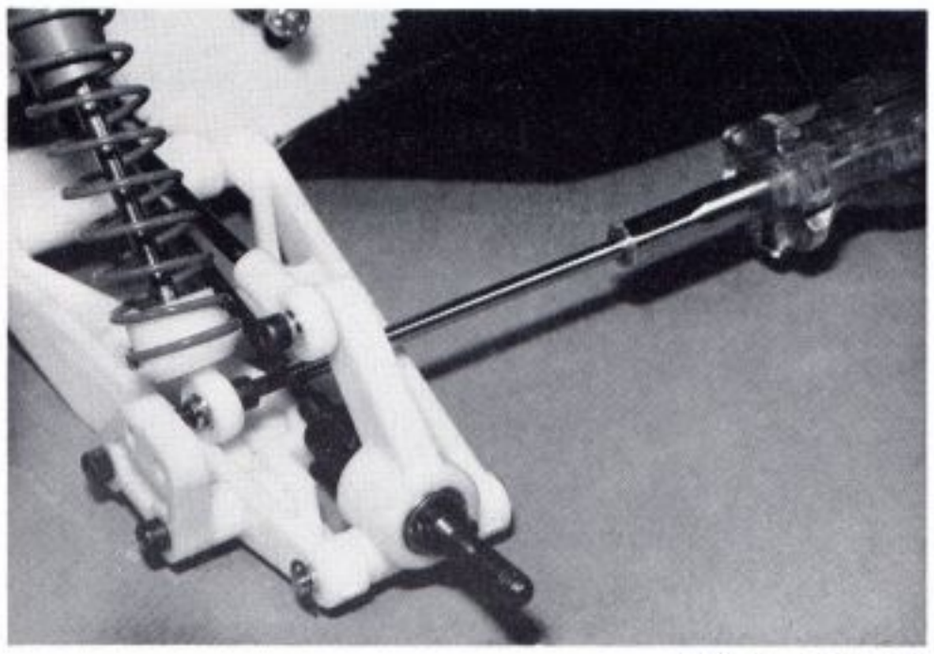


Fig. 180

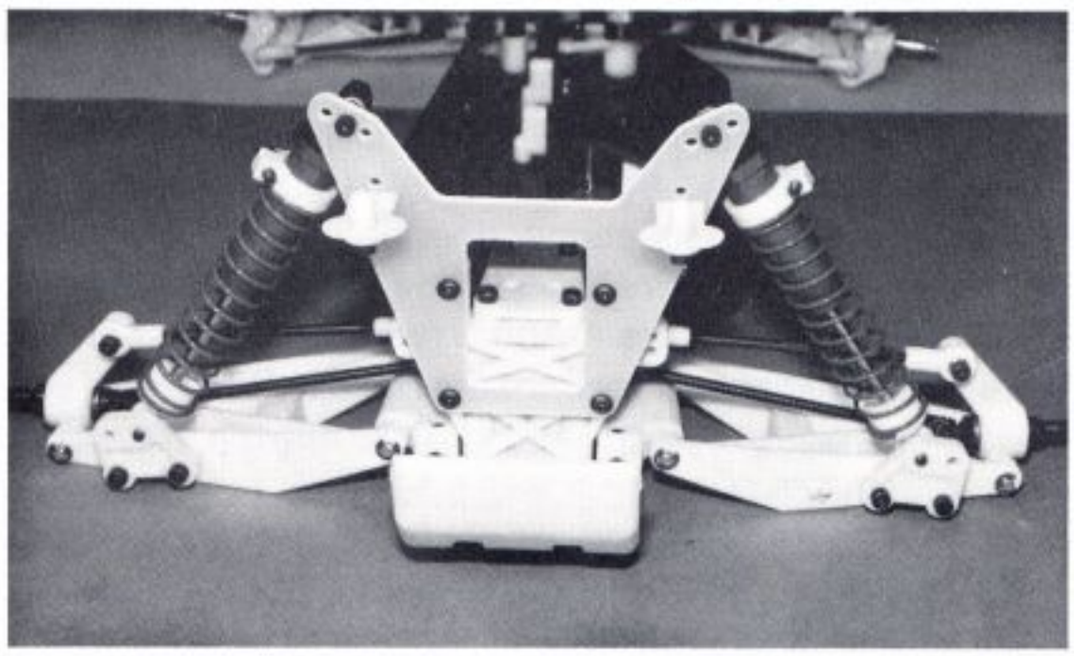


Fig. 181

Figs. 182-189 are the wheel and tire instructions for the bushing kits.
For the bearing kits, skip ahead to fig. 190.

WHEELS AND TIRES

NOTE: *THE TIRES IN YOUR KIT MAY VARY FROM THOSE SHOWN IN THE PHOTOS. ASSOCIATED IS CONSTANTLY WORKING TO UPGRADE THE KIT AND IF WE FIND TIRES THAT WE FEEL ARE BETTER, WE MAY CHANGE TO THEM.*

❑ **Figs. 182 & 183** Remove the rear tire/wheel bag from the kit box. Take out the two #7820 rear tires and the two inner sleeves from the #7800 rear wheels as shown in fig. 182. Insert one of the inner sleeves into each rear tire (fig. 183).

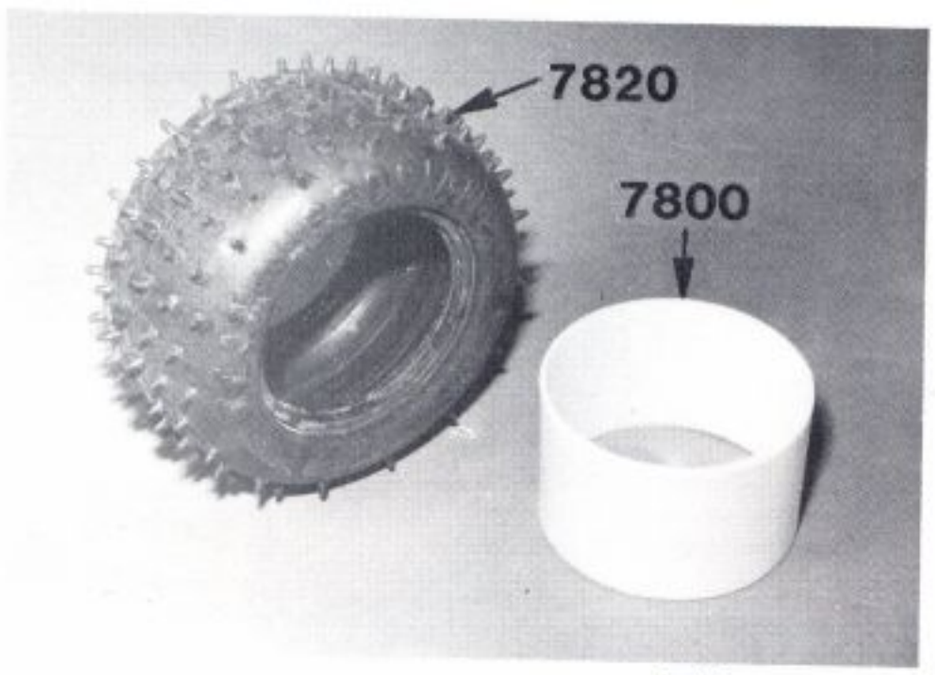


Fig. 182

Fig. 183

❑ **Figs. 184 & 185** Make sure the inner sleeves are centered in the tires. Starting with the outer half of the rear wheel (with the four recessed holes on the outer face), press one into each rear tire. Make sure you seat the tire evenly on the wheel. Now install the inner wheel half (with the large center hole) into the back side of the tire, making sure that the screw holes line in both wheel halves. Take four of the #6926 4-40 x 5/8" SHCScrews from the tire bag and install them through the outer wheel half so that they will thread into the back halves. Evenly snug down the four screws, but be careful not to overtighten them. You can now go back and finish the other rear tire and wheel.

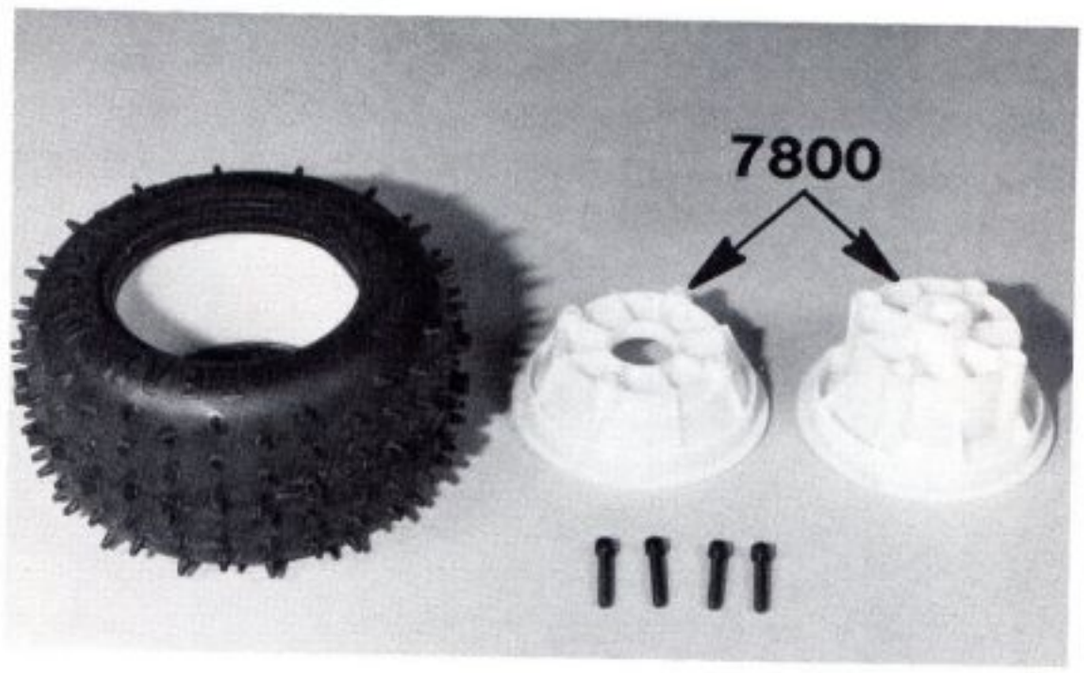


Fig. 184

Fig. 185

#6926
4-40 x 5/8

❑ **Fig. 186** Now take out the front wheel and tire bag from the kit box. Use the instructions in figs. 182-185 for the front tires. The only difference in parts will be the #7870 wide front tires and the #7840 wide front wheels outer wheel half. The rest of the parts are the same. Your finished front wheels and tires will look like fig. 199.

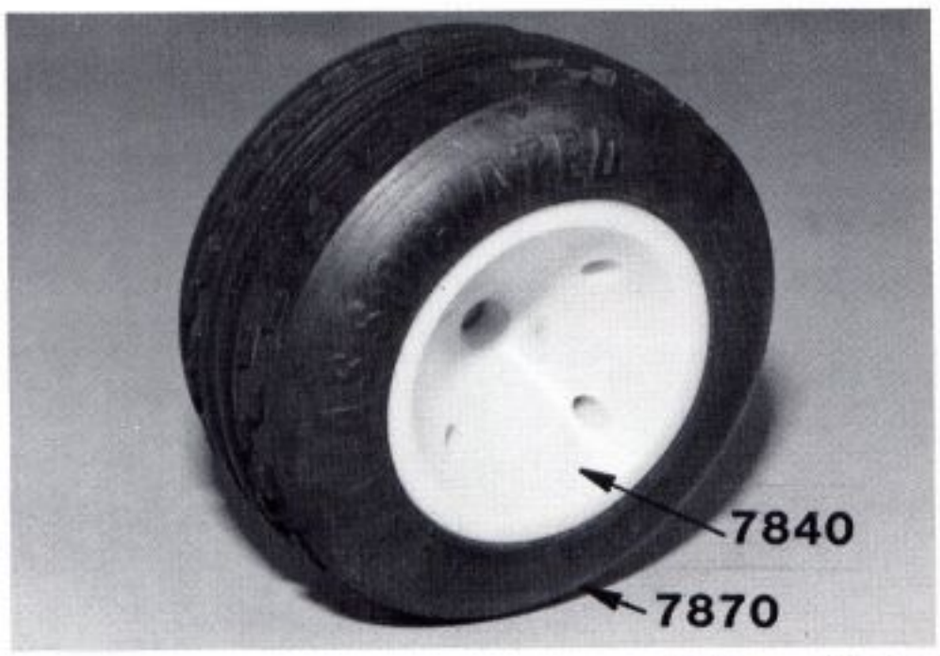


Fig. 186

❑ **Fig. 187** Line up the slots in the back of the rear wheel with the roll pin in the rear stub axle. Now press the wheel on until it seats over the rear roll pin. Do both wheels. Remove two #6296 8-32 nylock rear axle nuts from bag #7-8 and thread them onto the rear stub axles.

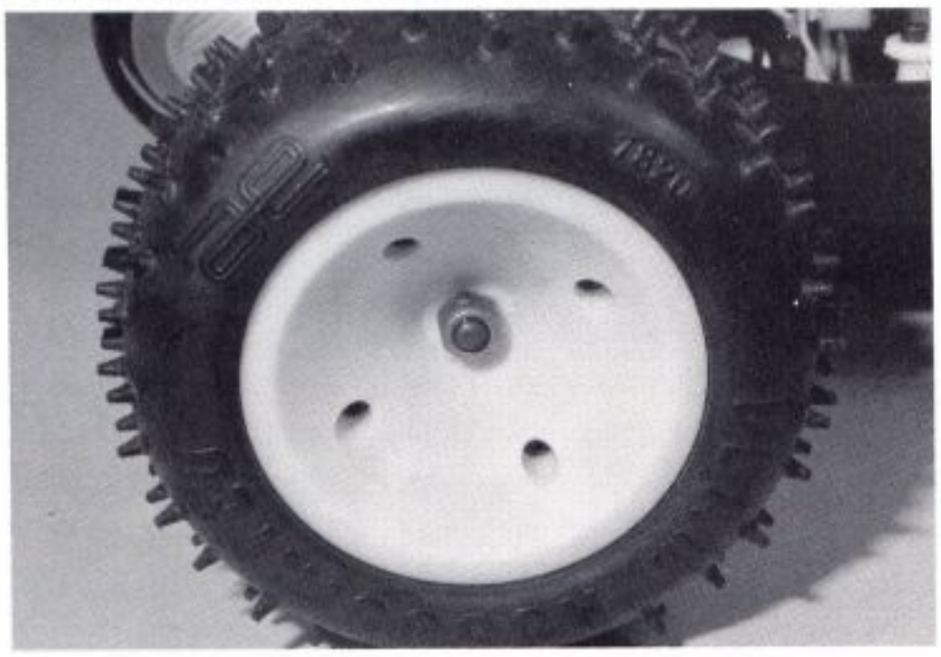


Fig. 187

#6296
8-32 locknut

❑ **Figs. 188 & 189** Four #6599 3/16" x 3/8" bushings are in the front tire and wheel bag inside a separate bag. ***Note:*** *Sometimes the small bushing bag can get caught inside the front tires while in the box. Check there if you cannot find it.* Push one bushing into each side of the front wheel. Slide the wheel onto one of the front axles. In bag #7-1 get two #6222 5-40 black self threading nylon locknuts. Thread the #6222 nut onto the front axle, taking up as much play as possible but making sure the wheel can still spin freely. Fig. 189 shows your front wheel and tire mounted. Go ahead and follow the same steps for the other front wheel and tire.

Fig. 188

Fig. 189

#6599
3/16 x 3/8
plain bushing

#6222
4-40/5-40
nylon locknut

Figs. 190-198 are the wheel and tire instructions for the bearing kits.
For the bushing kits, skip ahead to fig. 199.

WHEELS AND TIRES

NOTE: *THE TIRES IN YOUR KIT MAY VARY FROM THOSE SHOWN IN THE PHOTOS. ASSOCIATED IS CONSTANTLY WORKING TO UPGRADE THE KIT AND IF WE FIND TIRES THAT WE FEEL ARE BETTER, WE MAY CHANGE TO THEM.*

❑ **Figs. 190, 191 & 192** Remove the rear tire and wheel bag from your kit box. Take out both of the #7821 mini pin spike rear tires and both of the #7802 one piece rear wheels. Before we mount the tires on the wheels we want to put a couple of holes in each tire to allow the tire to vent. The holes only have to be about 1/8" in diameter and should be spaced fairly evenly around the tire. They can be cut in the tread or sidewall depending upon your

preference (it makes no difference). Mount both tires on the one piece truck wheels, seating the tires evenly all the way around. Very carefully pull back the tire and put some super glue where the tire and wheel come together; do this in about five or six places around the wheel and then let the glue dry. ***WARNING!*** *Always wear protective gloves and eyewear when using super glue.* Once the super glue is dry you can turn the tire and wheel over and repeat the process on the other side. Now go ahead and do the same for the other rear wheel and tire.

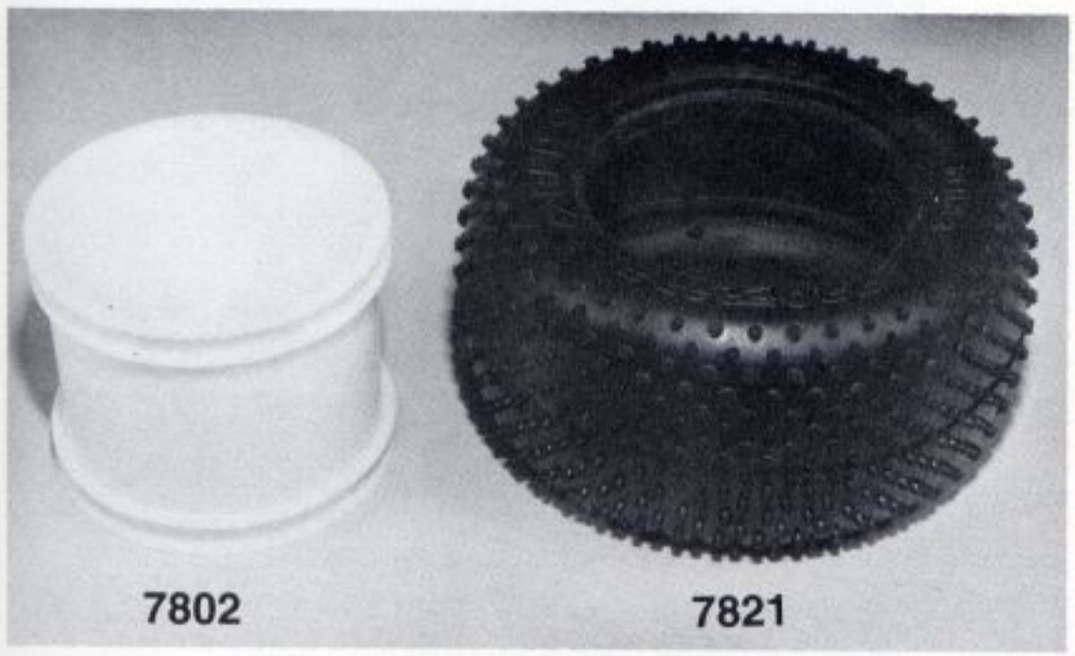


Fig. 190

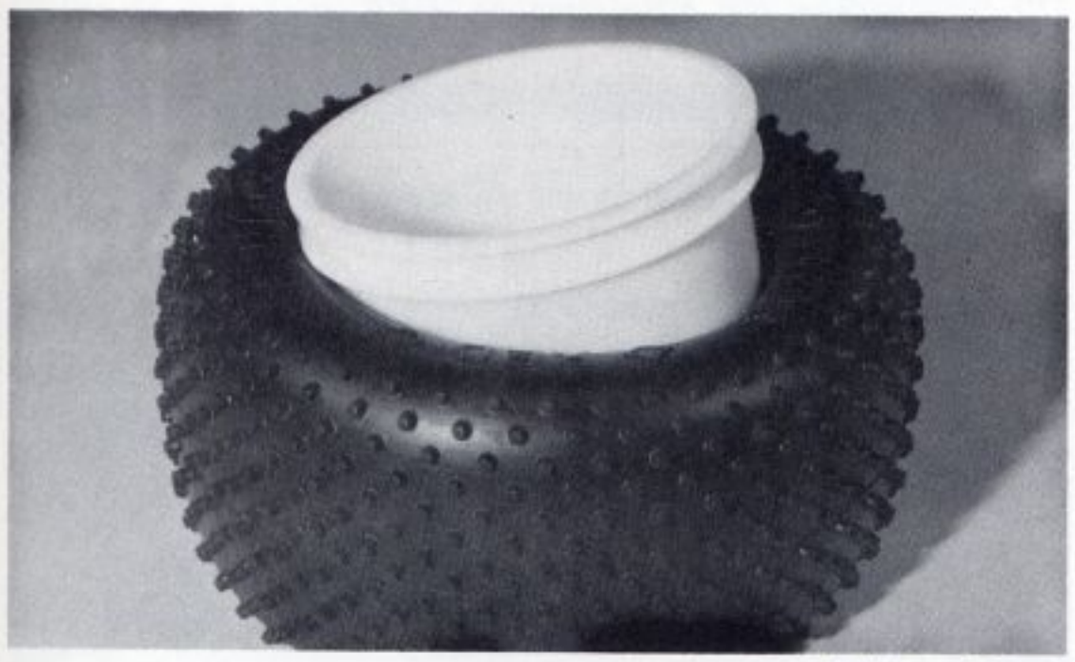


Fig. 191

Fig. 192

❑ **Fig. 193** When you are sure that the glue has dried on the rear tires and wheels, install them onto the rear axles. Line up the slots in the back of the wheel with the roll pin in the rear axle. Now press the wheel and tire on until the wheel seats over the roll pin in the axle. In bag #7-8 you will find two #6296 8-32 nylok rear axle nuts. Thread one locknut onto each rear axle after the tire and wheel have been installed.

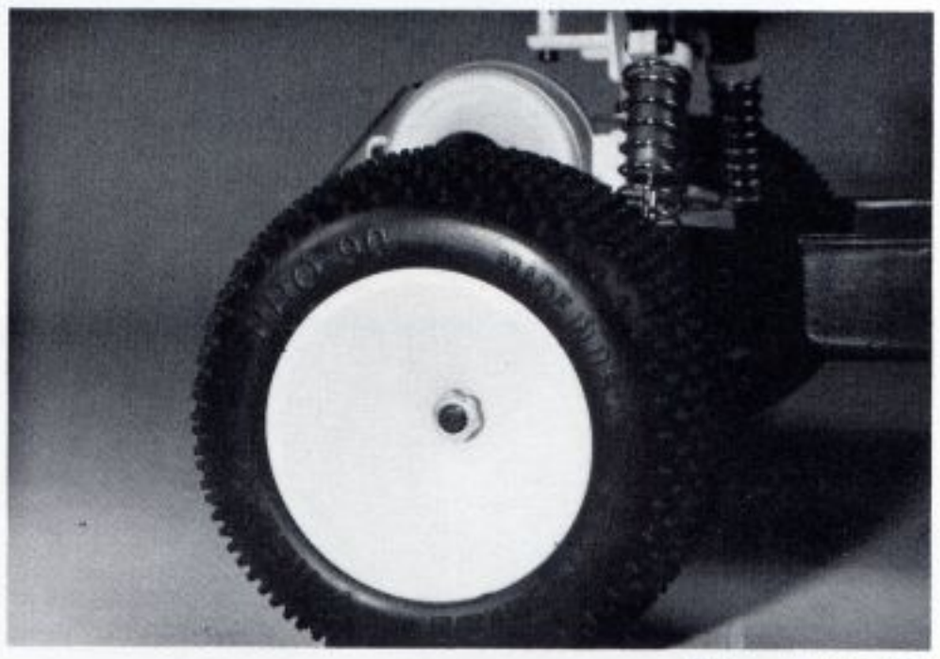


Fig. 193

#6296
8-32 locknut

❑ **Figs. 194, 195 & 196** Now remove the front tire and wheel bag from the kit box. Take out the two #7870 front tires and the two #7842 one piece front wheels. Vent your front tires the same way you did for your rear tires. Now repeat the steps used in figs. 190-192 to assemble and glue the front wheels and tires.

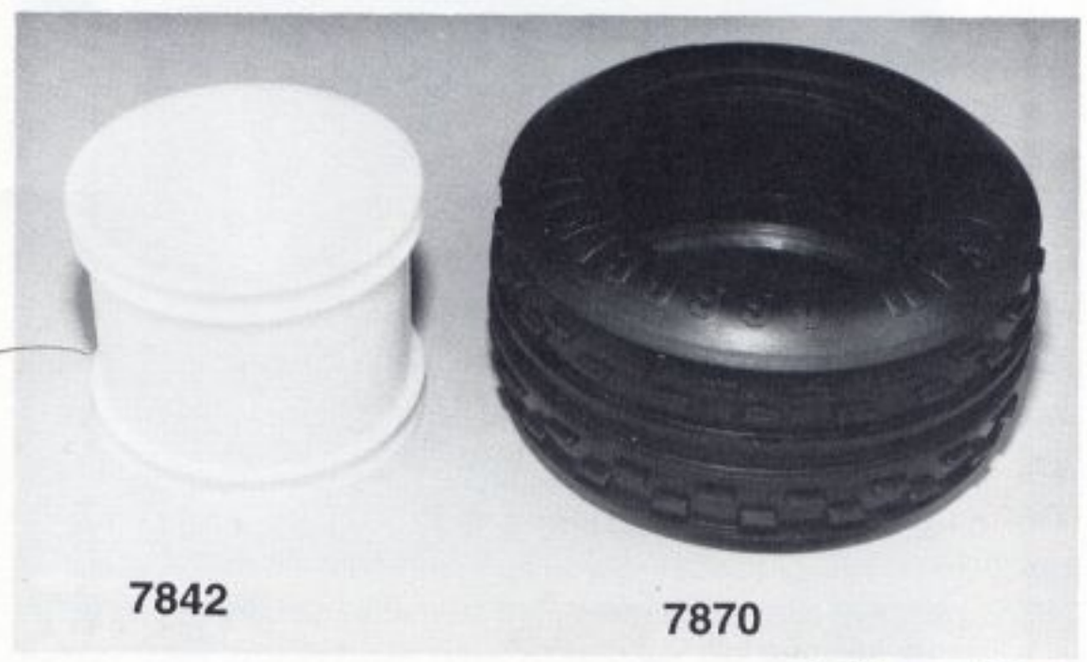


Fig. 194

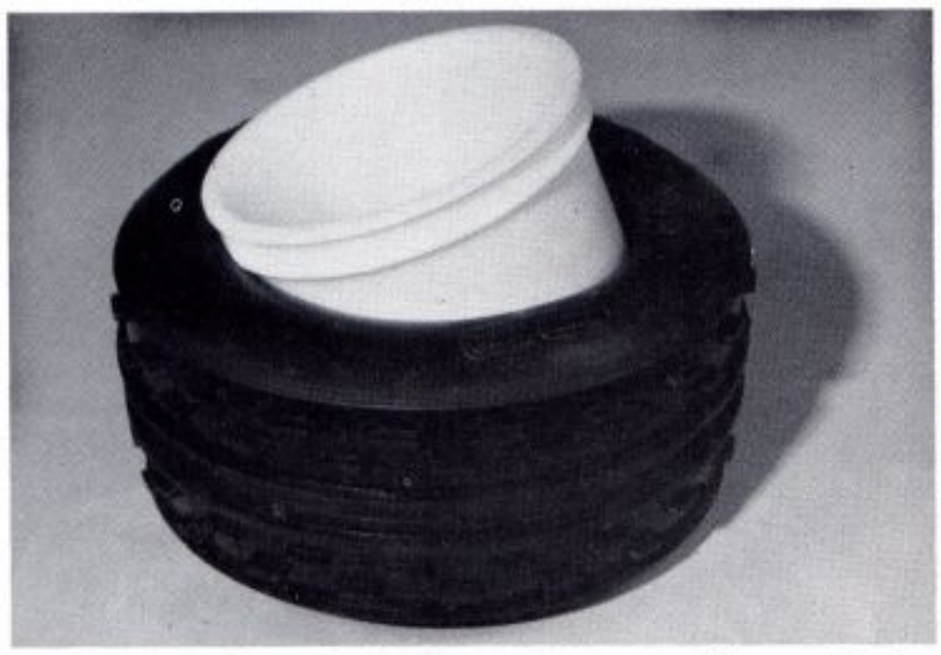


Fig. 195

Fig. 196

❑ **Fig. 197** In the front tire and wheel bag you will find a small plastic bag containing the four #6906 3/16" x 3/8' unflanged front wheel ball bearings. ***Note:*** *Sometimes the small bearing bag can get caught inside the front tires while in the box. Check there if you cannot find it.* Install one into each side of the front wheel making sure to fully seat the bearings into the bearing cavities. Do the same for the other front wheel.

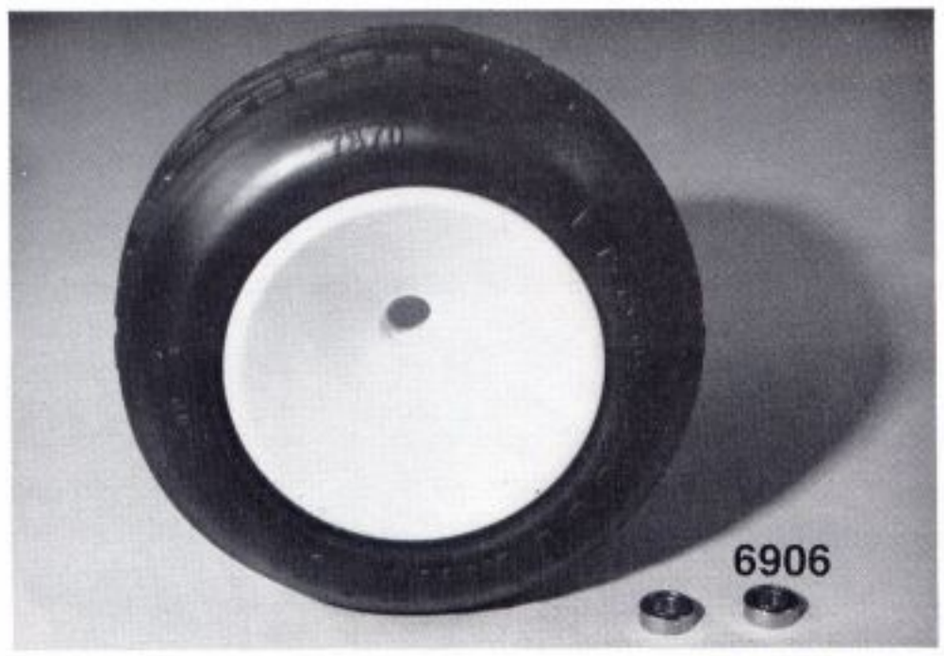


Fig. 197

#6906
3/8 x 3/16
unflanged bearing

❑ **Fig. 198** Now mount the front wheels and tires (with bearings installed) onto the front stub axles as shown. In bag #7-1 you will find two #6222 5-40 black self threading nylon locknuts. ***Note:*** *The #6222 black self threading nylon locknut fits both 4-40 and 5-40 threads.* Thread one onto each axle until the play on the front wheels is taken up. Make sure the nylon locknuts are not so tight that it will cause drag or binding on the front wheel bearings.

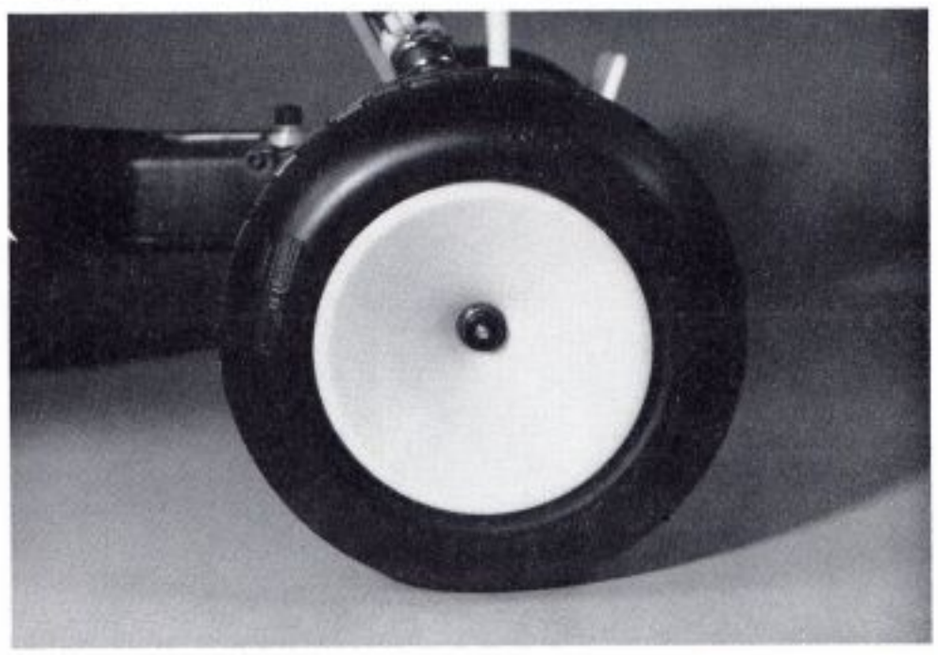


Fig. 198

#6222
4-40/5-40
nylon locknut

All kits continue with the instructions below until otherwise indicated.

❑ **Fig. 199** Your truck as completed so far should look like this.

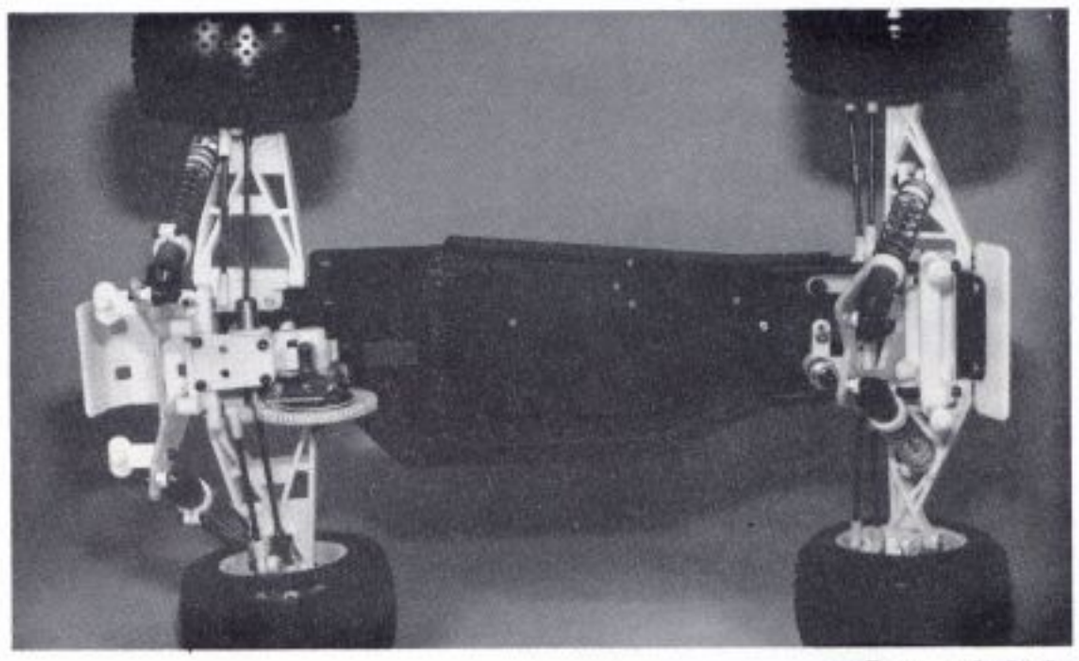


Fig. 199

STEERING SERVO INSTALLATION

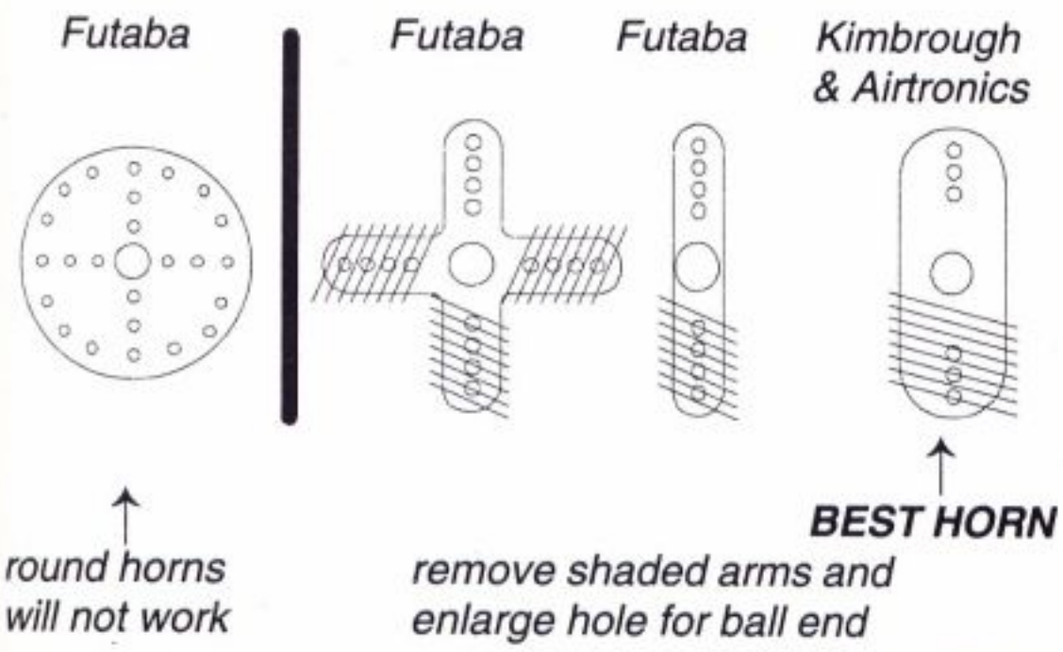
We are now ready to install the steering servo. If you have not purchased a radio yet, try to stay with a name brand like Futaba, Airtronics, JRpropo or KOpropo. However, many other radios, including stick models, can be used in the car.

Because of the additional load of wider and heavier tires on the steering system, the servo mounting system was designed only for medium sized servos. 42 oz. in. of torque is the minimum requirement for both steering and throttle/brake servos. Check your radio system's specifications to make sure your torque ratings reflect this. ***Racer's Tip:*** *If you want your truck to be able to perform a little better and more consistently, use a ball bearing servo for steering, and throttle/brake servo, which has at least 55 oz. in. of torque. This helps to provide smoother power and more consistent performance.*

The photos that follow show the installation of a Airtronics 94737 high torque medium sized ball bearing servo, or a #94151 high speed/high torque medium sized ball bearing servo (which has a longer case) for the steering servo. Some of the more popular ball bearing servos chosen by racers are the #94737, #94151, #94152 from Airtronics; #9301, #9302, #9401 from Futaba; and the #7435 from JRpropo.

❑ **Fig. 200** Some of the different styles of servo horns are shown in fig. 200. For the truck the aftermarket Kimbrough or Airtronics heavy duty servo horn is the preferred choice, but you can still use the stock "+" or "-" shaped servo horns. You must remove the shaded areas as shown in fig. 200. The round servo horn will not work.

TYPES OF SERVO HORNS



(NOT ACTUAL SIZE)

Fig. 200

❑ **Figs. 201 & 202** Take the #6270 short steel ball end, from bag #6-14, and mount it to the servo horn with the ball on the servo side as shown. Thread one of the #7260 4-40 small thin plain nuts from bag #6-14 onto the ball end. It may not be possible with the stock servo horn to mount the ball on the inside as in fig. 201 because it or the turnbuckle could hit the servo. In these cases, mount the ball and nut the opposite way. The stock Airtronics servo horn is an example of this problem. If the ball was mounted on the back side of the servo horn you would not have full travel for steering. Check the clearance of the ball and turnbuckle assembly when on the back side first, before you mount the ball on the front side of the servo horn.

Fig. 201

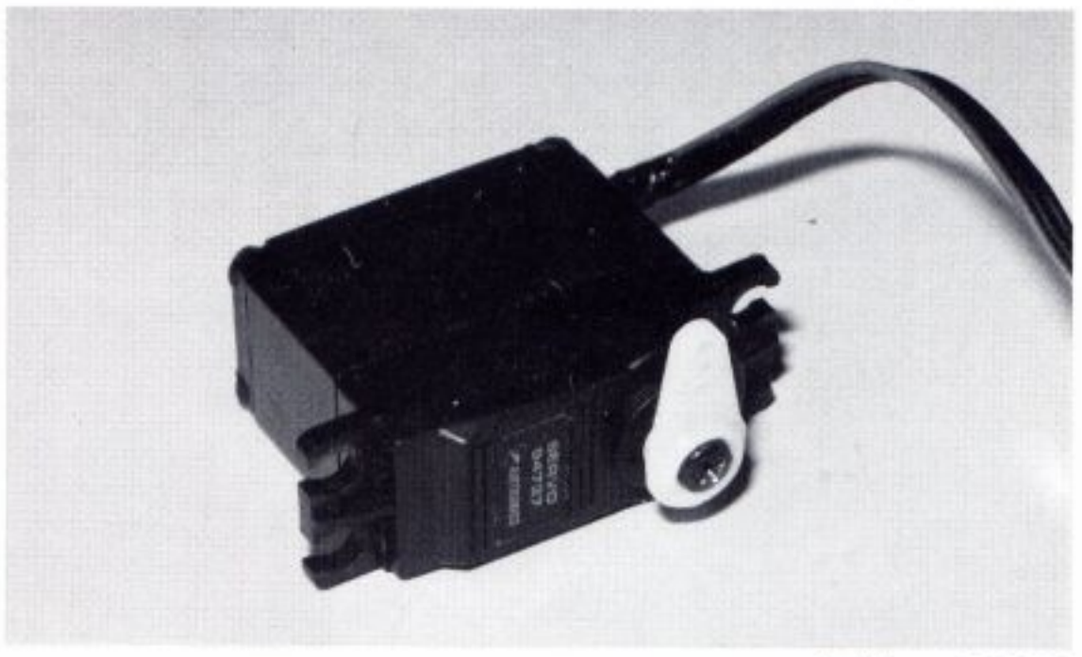


Fig. 202

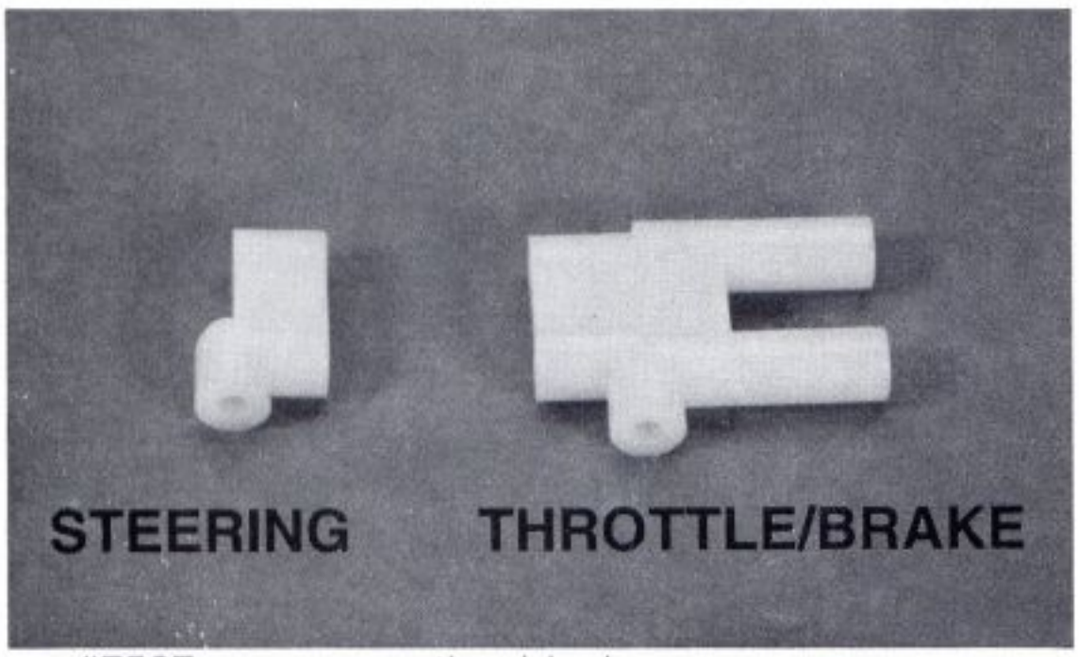
Fig. 202 shows stock Airtronics servo horn too short to mount ball on back as in fig. 201; mount ball on front for this servo.


#7260
4-40
thin plain nut


#6270
4-40

❑ **Figs. 203-207** In bag #7-6 you will find two different types of #7527 servo mounting blocks (they both have the same part number). The two steering servo mounts look like fig. 203. In the same bag you will find two #7673 4-40 x 5/16" FHSScrews. Install the #7527 servo mounts to the chassis with the #7673 FHSScrews, as in fig. 204. Fig. 205 shows the mounting locations from the bottom of the chassis.

We now want to check the fit of the steering servo in the chassis. Place the servo between the servo mounts with the mounting ears to the right of the servo mounts. Now push the servo towards the left side of the chassis. The servo should sit flat against the servo mounts before the bottom of the servo hits the left side of the chassis. See arrows in fig. 206. If it does not (see gap in fig. 207), then we will need to install the #7527 steering servo spacers when we bolt the servo to the servo mounts (see fig. 208). ***Note:*** *The servo horn was removed for clarity, so be sure to reinstall it before you finish installing the steering servo.*



↑ *#7527 servo mounting blocks both have the same part number.*

Fig. 203

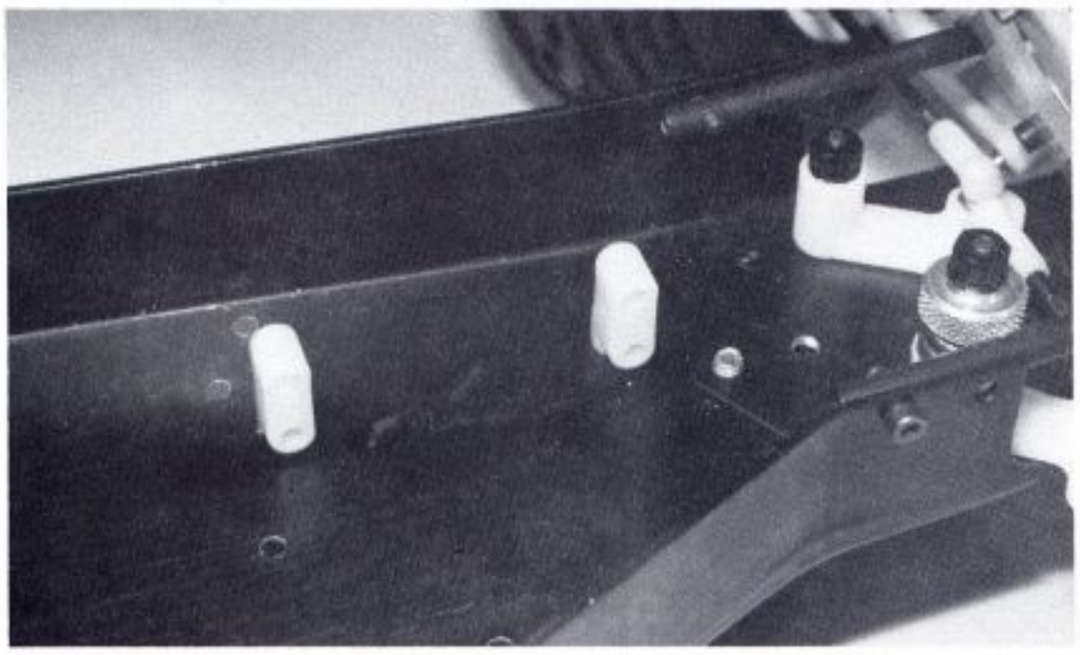


Fig. 204

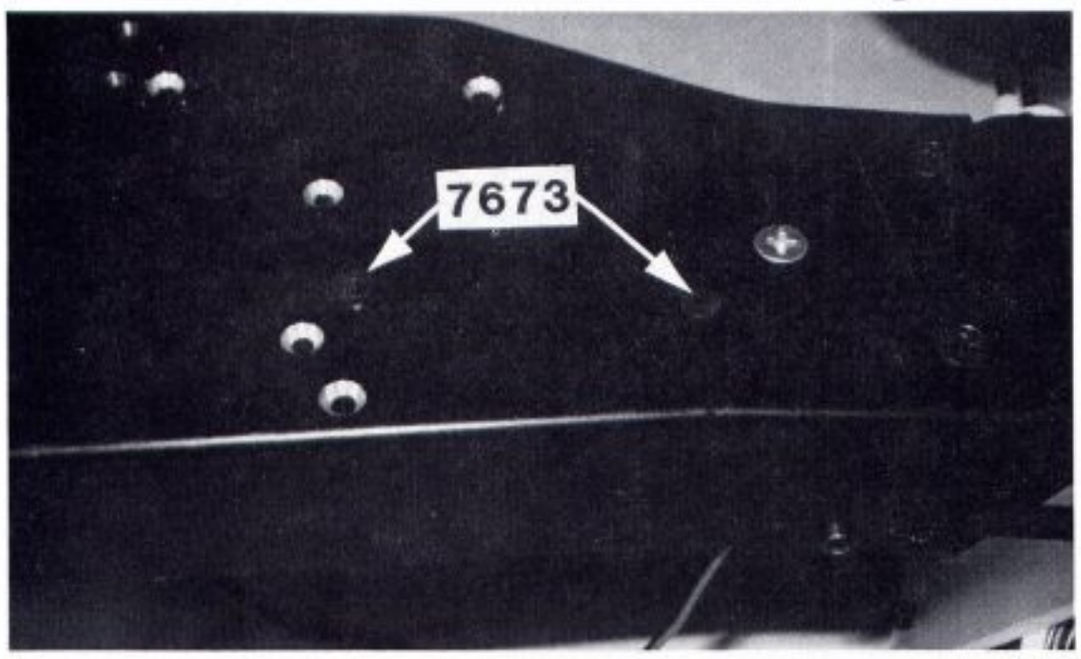


Fig. 205

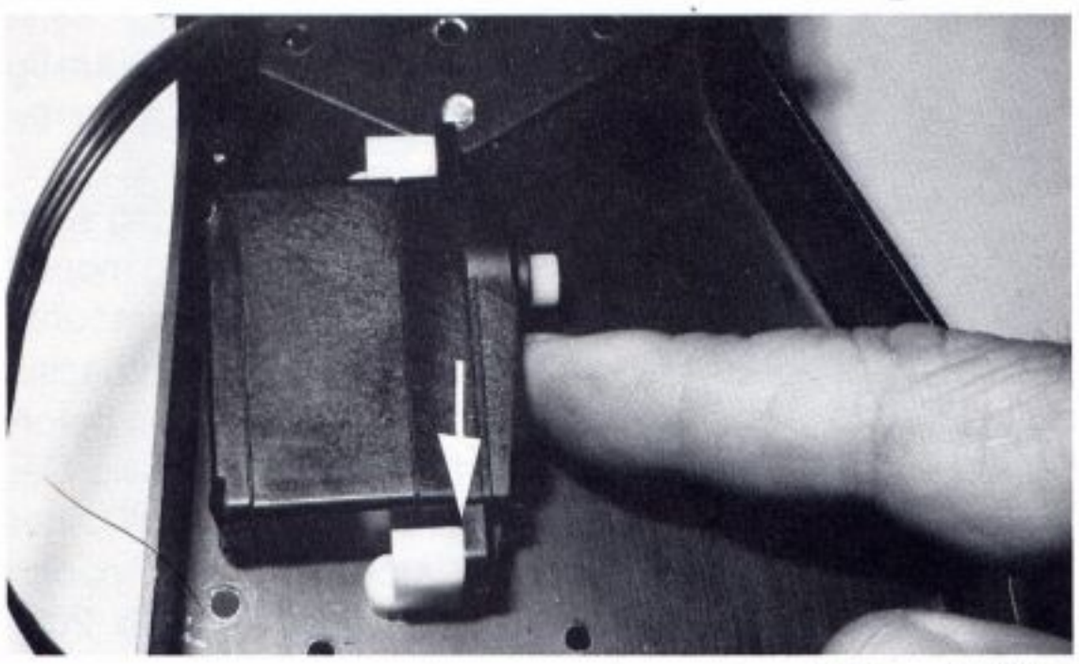
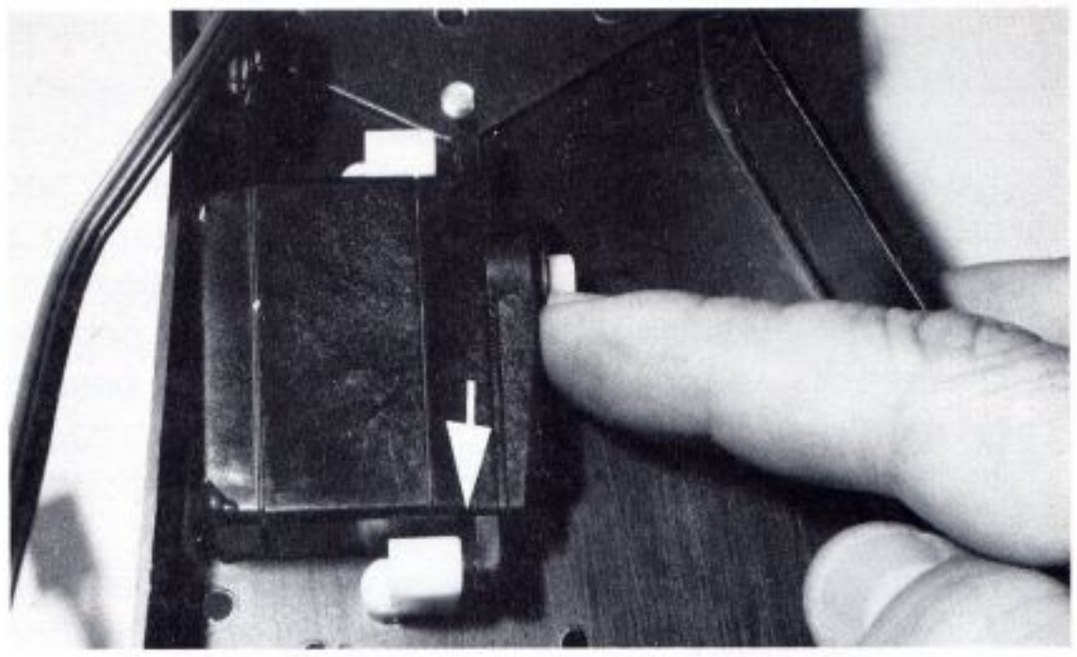


Fig. 206



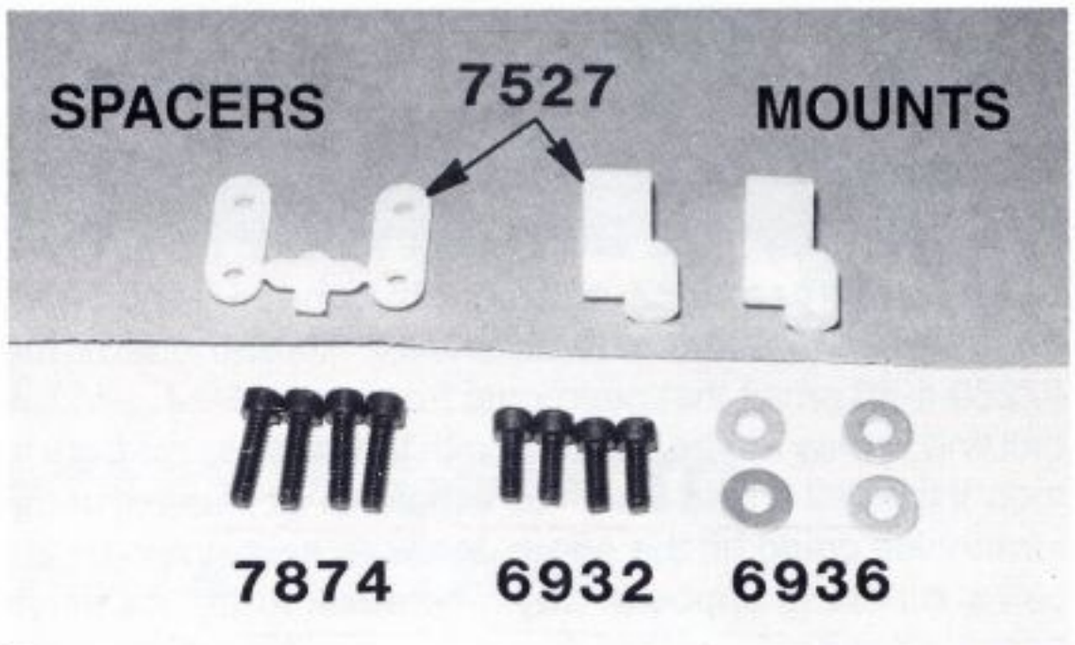
#7673
4-40 x 5/16

Fig. 207

❑ **Figs. 208, 209 & 210** Again from bag #7-6 get two #7527 steering servo spacers, four #6936 #4 aluminum washers, and four #6932 4-40 x 5/16" SHCScrews and four #7874 4-40 x 7/16" SHCScrews. Remove the #7527 steering servo mounts from the chassis.

If there was no gap between the servo and servo mounts, then place the four #6936 #4 washers on the four #6932 SHCScrews and fasten the mounts to the servo as shown in fig. 209.

If there was a gap between the servo mounts and the servo mounting tabs, then place the four #6936 washers on the four #7874 SHCScrews. Place the screws through the mounting holes on the servo and slide the two #7527 steering servo spacers onto the screws. You can then thread the screws into the servo mounts as shown in fig. 210. The parts you have not used are spare parts.



#6932
4-40 x 5/16

#7874
4-40 x 7/16

#6936
#4 flat washer
aluminum

Fig. 208

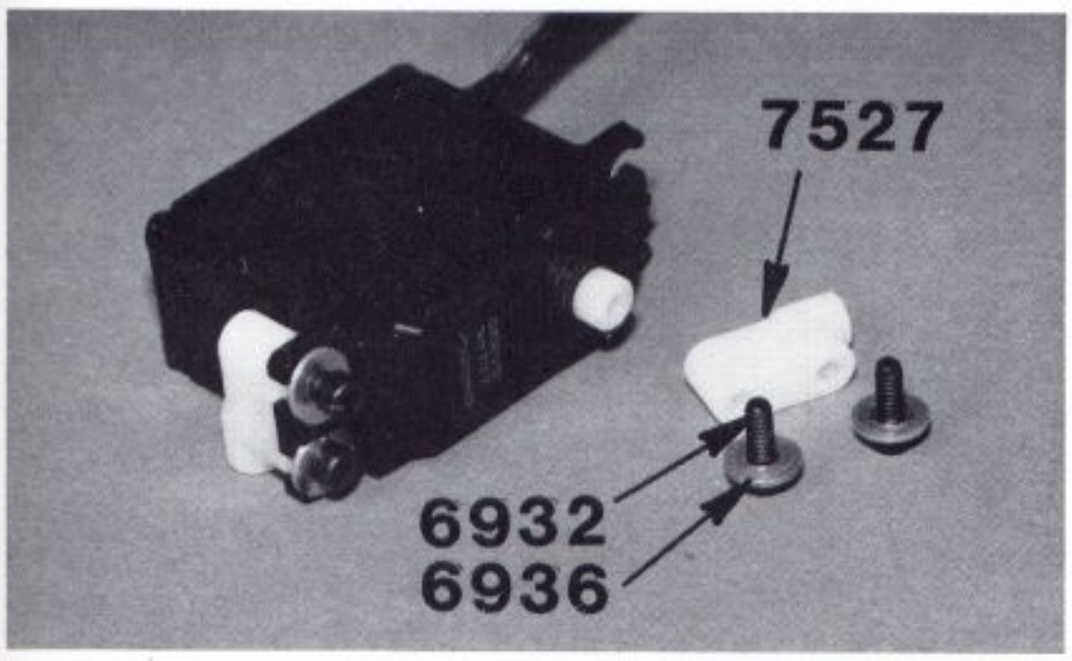


Fig. 209

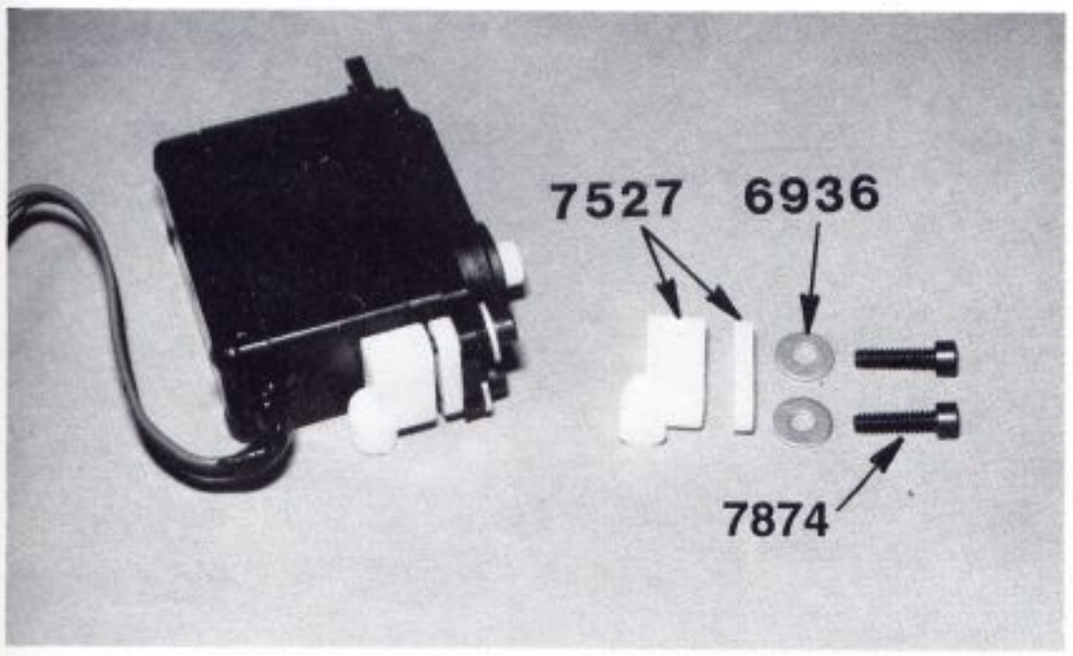
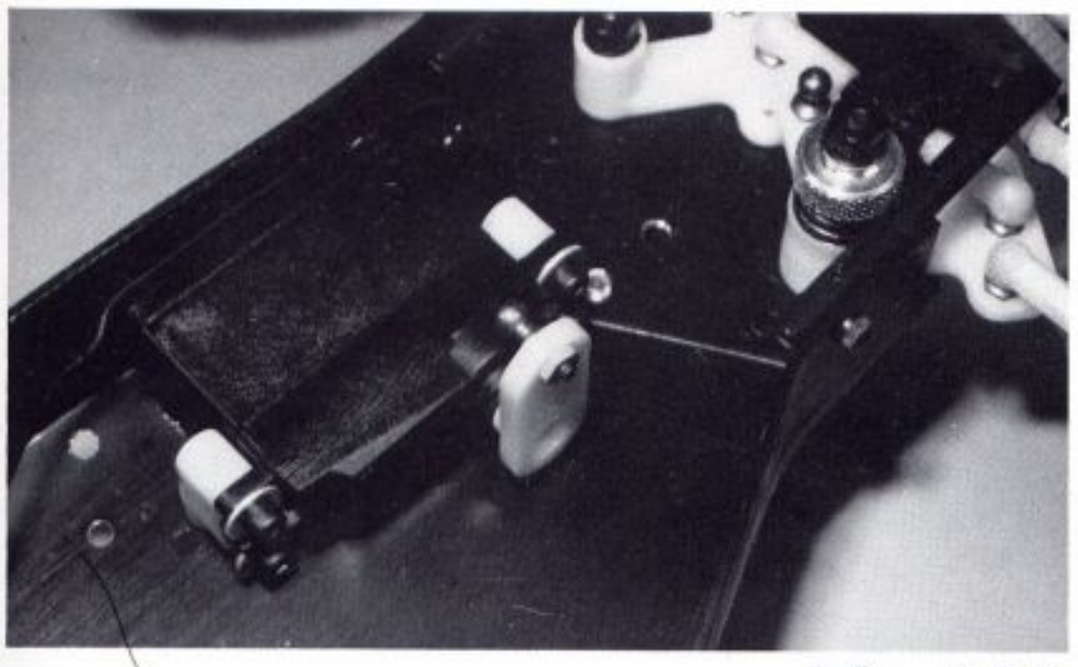


Fig. 210

❑ **Fig. 211** Refasten the steering servo mounts (with servo) to the chassis with the #7673 4-40 x 5/16" FHSScrews. Make sure the servo horn is installed on the servo.



#7673
4-40 x 5/16

Fig. 211

❑ **Fig. 212** Back in bag #7-2 take the #6261 1.25" length turnbuckle. In bag #6-14 take two remaining #6274 plastic ball end caps. Evenly thread the plastic end caps onto both ends of the turnbuckle. The type of servo horn used will affect the length of the turnbuckle, so we cannot give you a dimension.

The direction the plastic ball end caps point depends on which side you mount the steel ball end. If you are installing the steel ball end on the back side (over the servo), the left ball end cap faces down and the right cap opening faces away from you. If you have your steel ball end mounted on the outside (away from the servo), the left ball end cap faces down, and the right faces you.

After installing the caps, mount the turnbuckle between the servo horn and servo saver. The correct length for the turnbuckle will be established when the servo horn, on the servo, is facing straight up and both servo saver arms are centered in the chassis. Fig. 212 shows the servo turnbuckle installed.

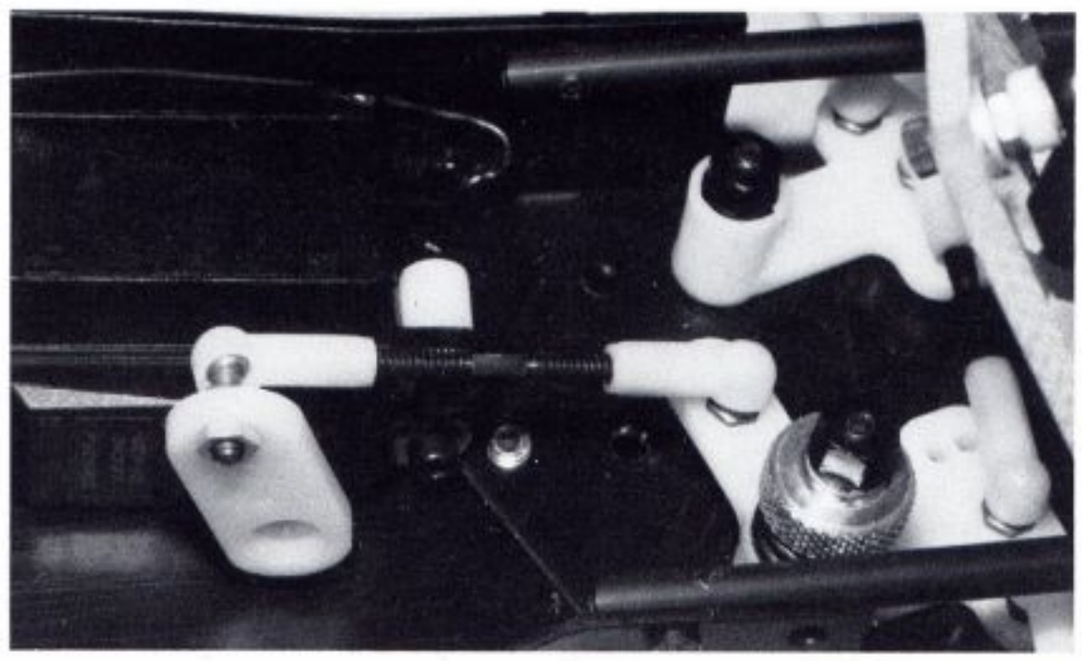
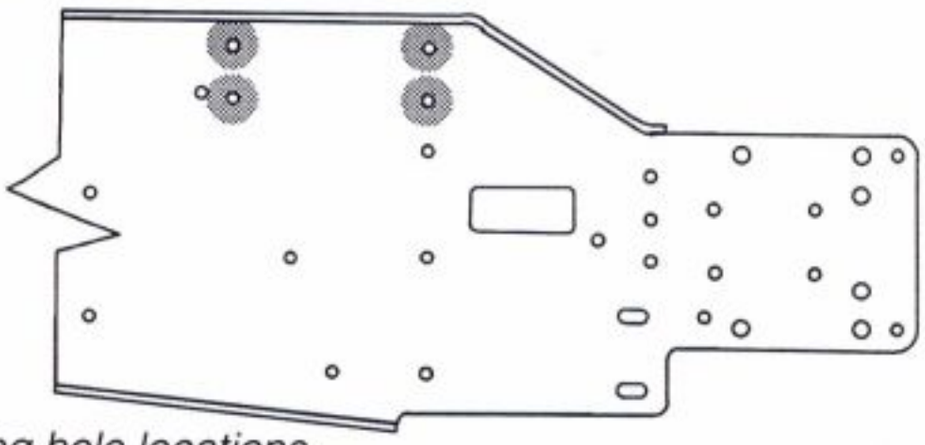


Fig. 212

THROTTLE/BRAKE SERVO INSTALLATION

The same specifications apply for the throttle/brake servo that applied for the steering servo. Read the beginning of the steering servo section to make sure you have the right setup.

❑ **Figs. 213, 214 & 215** Go back to bag #7-6 and remove the other #7527 throttle/brake servo mounts and four #7673 4-40 x 5/16" FHSScrews. Mount the throttle servo mount into the chassis so that the small extensions on the side of mounts go against the chassis (see fig. 214). Fig. 215 shows the location of the four chassis mounting holes, from the bottom, for the throttle/brake servo mounts.



Mounting hole locations
(TOP VIEW SHOWN)

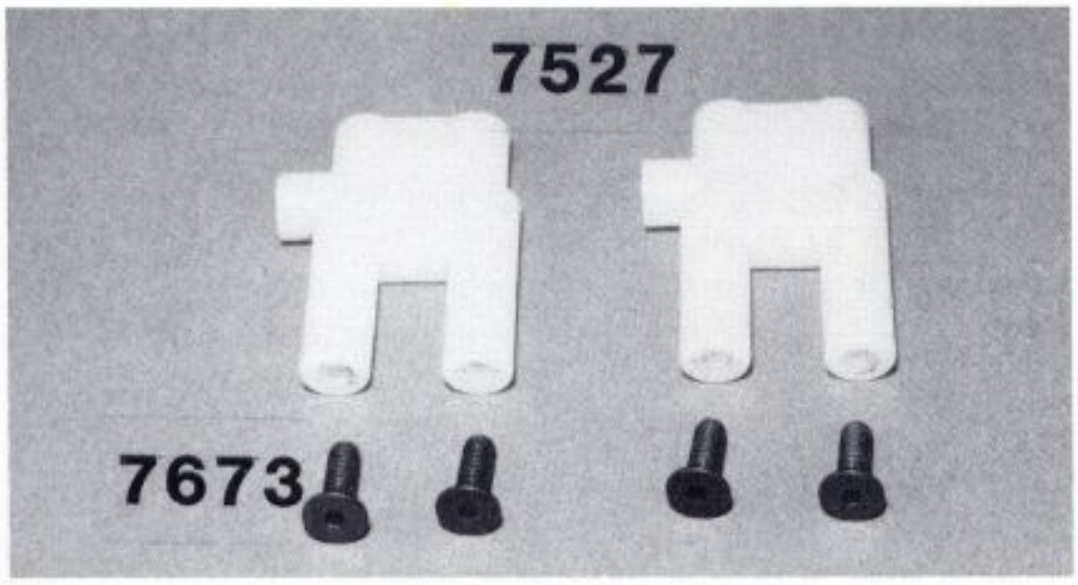


Fig. 213

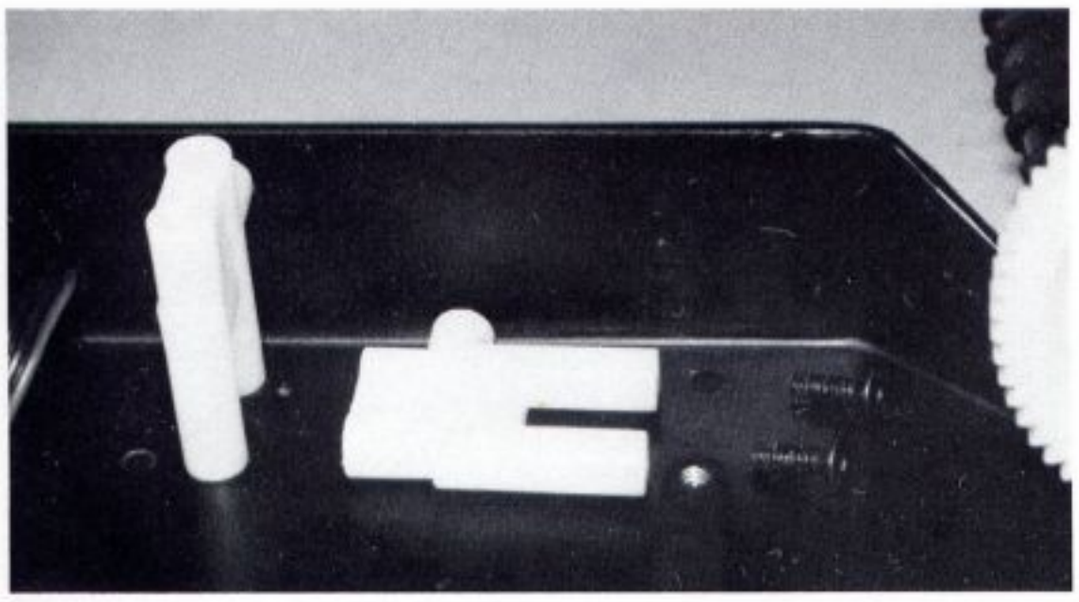
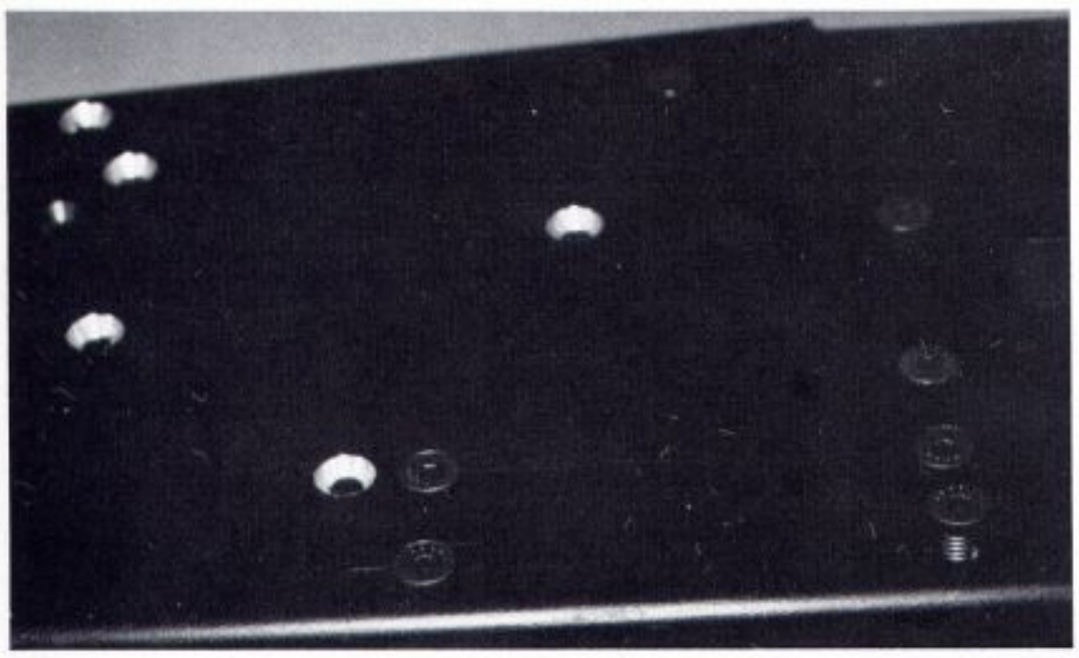


Fig. 214



#7673
4-40 x 5/16

Fig. 215

❑ **Figs. 216 & 217** Now take your throttle servo and mount it between the two #7527 throttle servo mounts. Make sure the output shaft is to the rear when the servo is mounted. Run your throttle servo plug wire through the rear mount (inbetween the two mount legs) from front to back. Now run it behind the two servo mounts next to the chassis (from back to front). Now go to bag #7-6 and remove four #6936 #4 aluminum flat washers and four #6932 4-40 x 5/16" SHCScrews. Use these four screws and washers to mount the servo to the mounts as shown in fig. 217.

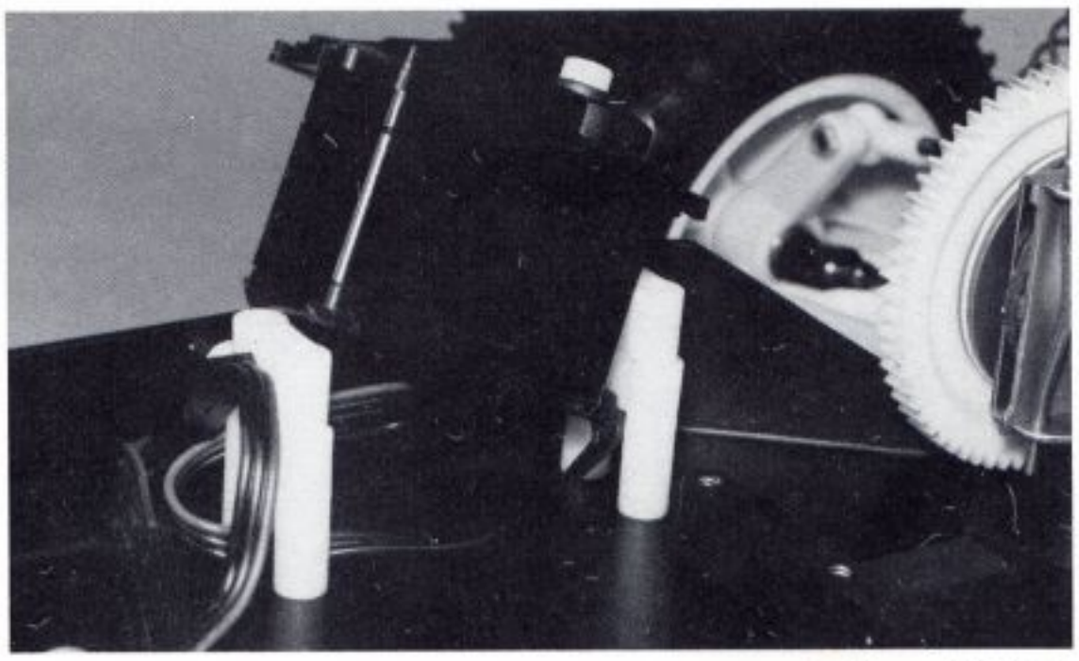


Fig. 216

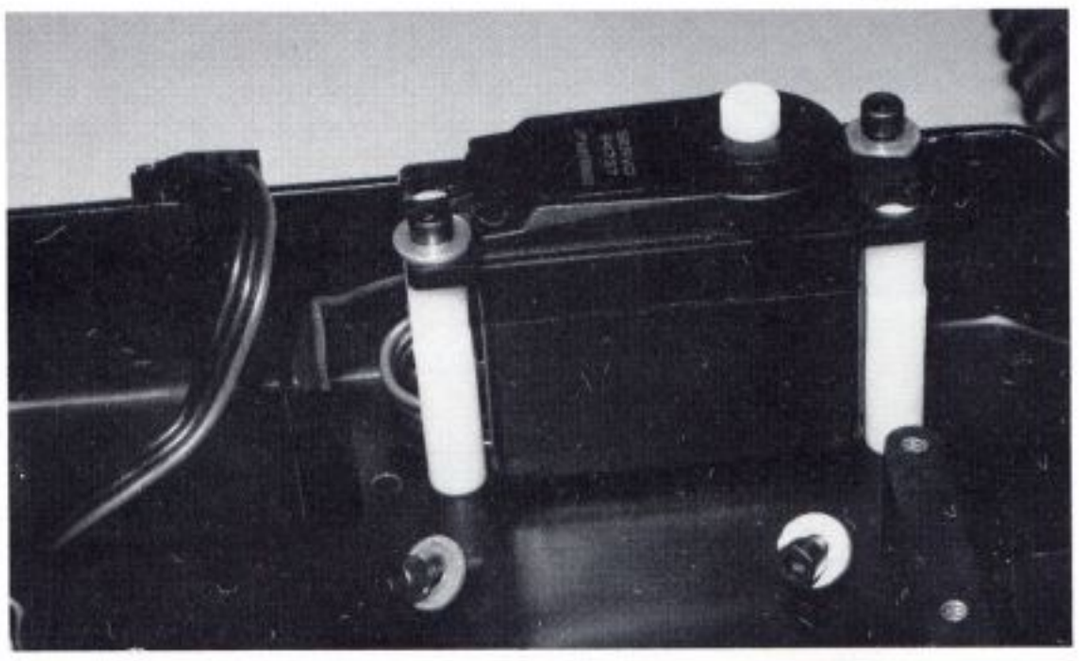


Fig. 217

#6936
#4 flat washer
aluminum

#6932
4-40 x 5/16

❑ **Figs. 218 & 219** Now open up bag #7-7, the Misc. Radio bag, and remove the #7528 plastic antenna/receiver mount and two #7673 4-40 x 5/16" FHSScrews. Fasten the antenna receiver mount to the chassis using the #7673 screws. From bag #7-7 remove a small rectangular piece of servo tape (double-sded sticky tape), peel one side's covering off, and place the tape on the #7528 antenna/receiver mount as shown in fig. 219. DO NOT remove the paper from the top of the servo tape just yet.

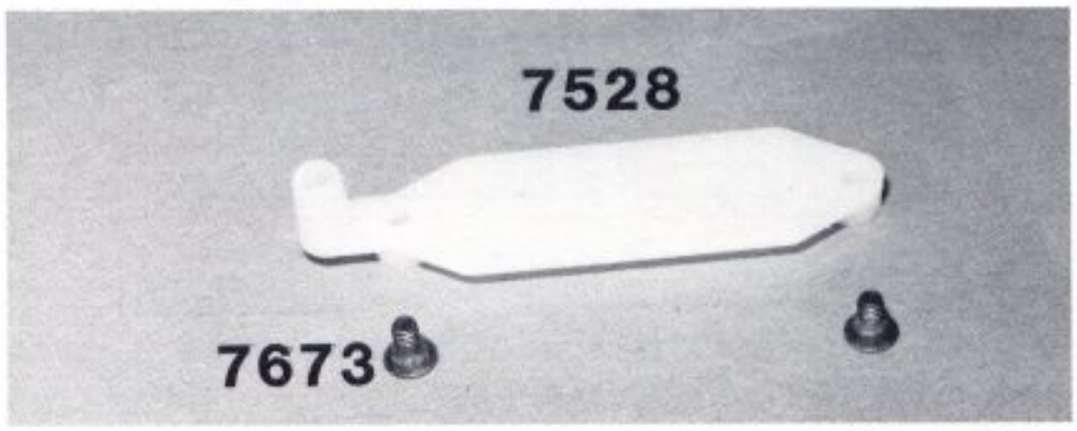


Fig. 218

#7673
4-40 x 5/16

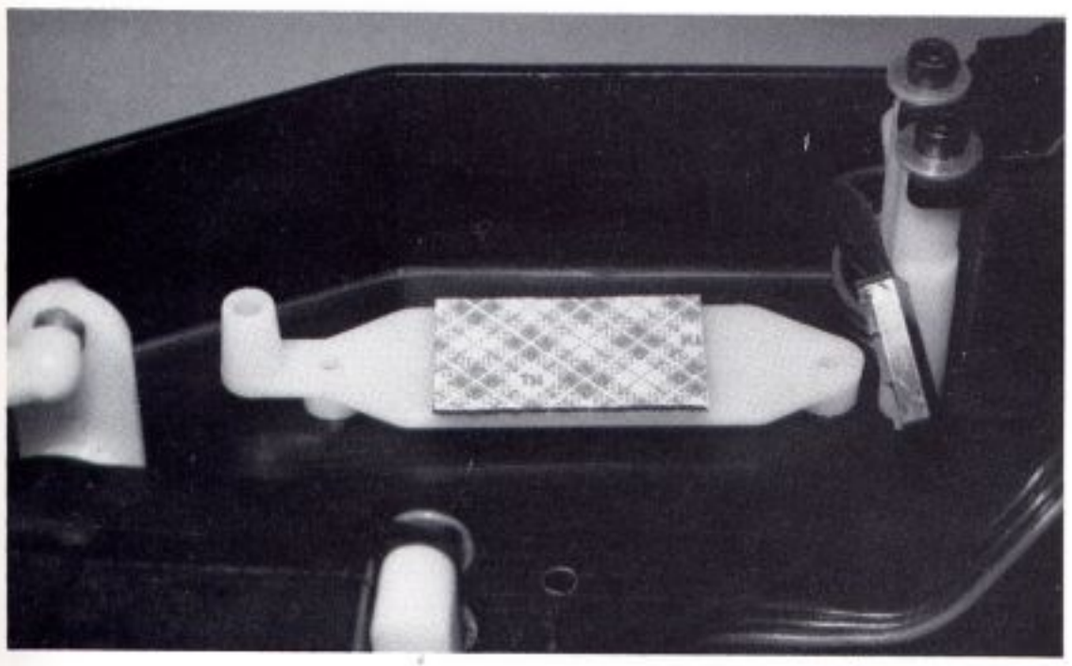


Fig. 219

❑ **Figs. 220, 221 & 222** Open up the Fuel Tank bag and remove the #7720 fuel tank, three #5407 red O-rings and three #7673 4-40 x 5/16" FHSScrews. We need to temporarily mount the fuel tank in the chassis so we can check the fit and alignment of the radio receiver. Find the tank's three matching holes on the chassis and push the screws through from the bottom and place an O-ring on each. Then install the tank onto the screws and tighten the screws just enough to hold the tank in place; do not overtighten! Now take your receiver and place it on the antenna/receiver mount to test the fit. There should be a small amount of space all around the receiver, nothing touching it. Then remove the receiver. Reinstall the receiver, using the servo tape on top of the antenna/receiver mount, keeping the same spacing you had during the trial fit, and press down firmly. ***Note:*** *the fuel tank was removed in fig. 221 for clarity.*

Remove the fuel tank and the mounting parts and put them back in the Fuel Tank bag. Unmount the #7528 antenna/receiver mount with receiver from the chassis. Feed your antenna wire up through the bottom of the mount. In bag #7-7 you will find two different sizes of plastic wire ties. Use the two large ones to hold the reciever to the mount.

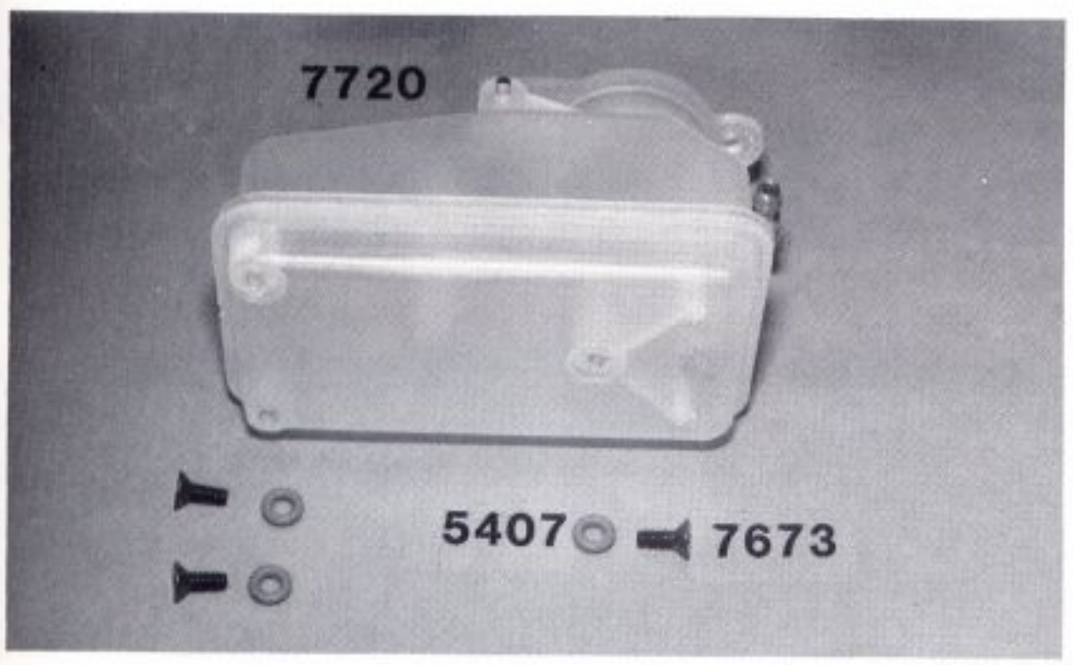


Fig. 220

#5407 red O-ring

#7673 4-40 x 5/16

Fig. 221

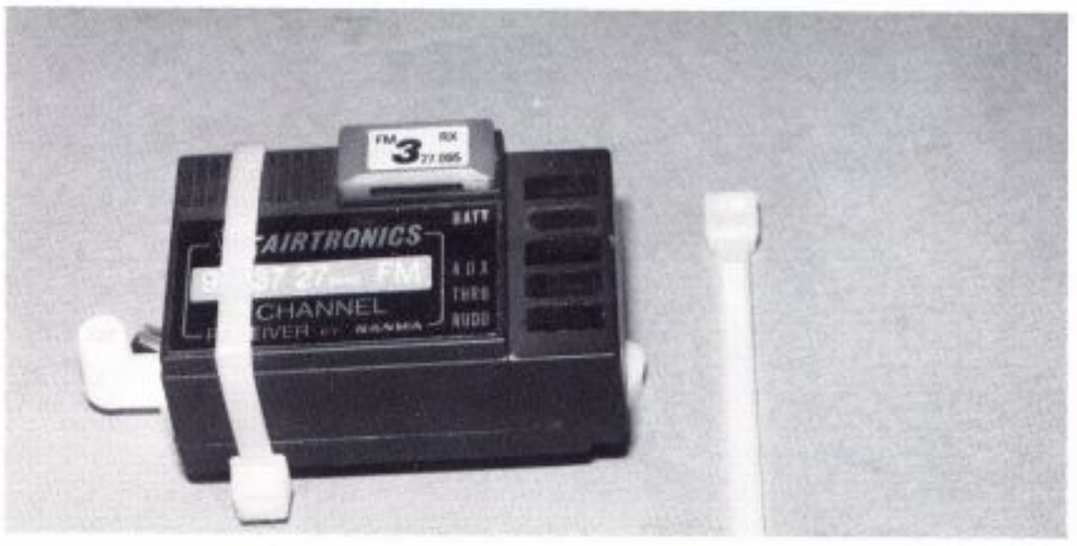


Fig. 222

❑ **Fig. 223** Now reinstall the antenna receiver mount to the chassis.

Fig. 223

❑ **Figs. 224 & 225** Open bag #7-15 and remove the #7559 special plastic servo horn adapter and two #3721 2-56 self tapping screws. Fig. 224 shows both a round and a "+" style stock servo horn as an example. ***Note:*** *The photo shows the removal of one side of the servo horn to clear the brake locking collar. Depending upon your servo horn, you may have to trim away more of the servo horn to clear the throttle pivot. You can determine this after you have test fitted the throttle pivot to the servo horn adapter, figs. 227 & 228.*

In the center of the #7559 servo horn adapter you will find four holes. Line up two of these holes with your stock servo horn and fasten the two 2-56 self tapping screws.

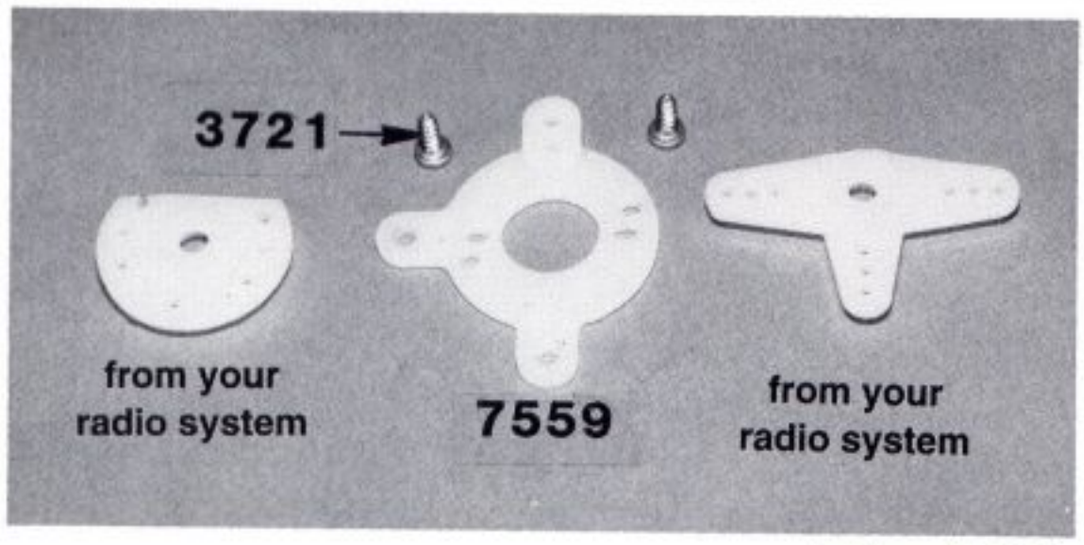


Fig. 224

#3721
2-56
self tapping

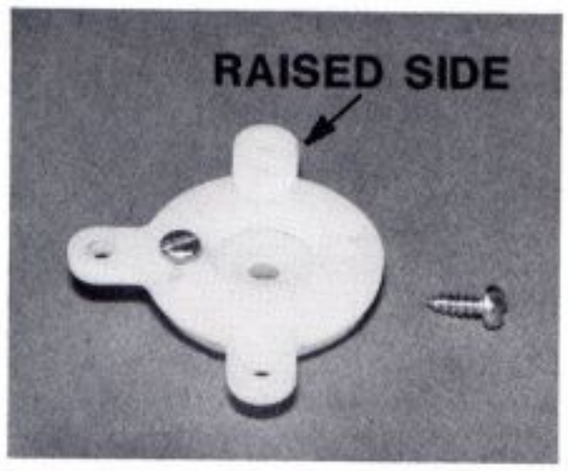


Fig. 225

❑ **Fig. 229** Install the servo horn assembly onto the servo so that the #7557 throttle pivot is facing the rear of the truck. Do not completely fasten the servo horn assembly just yet.

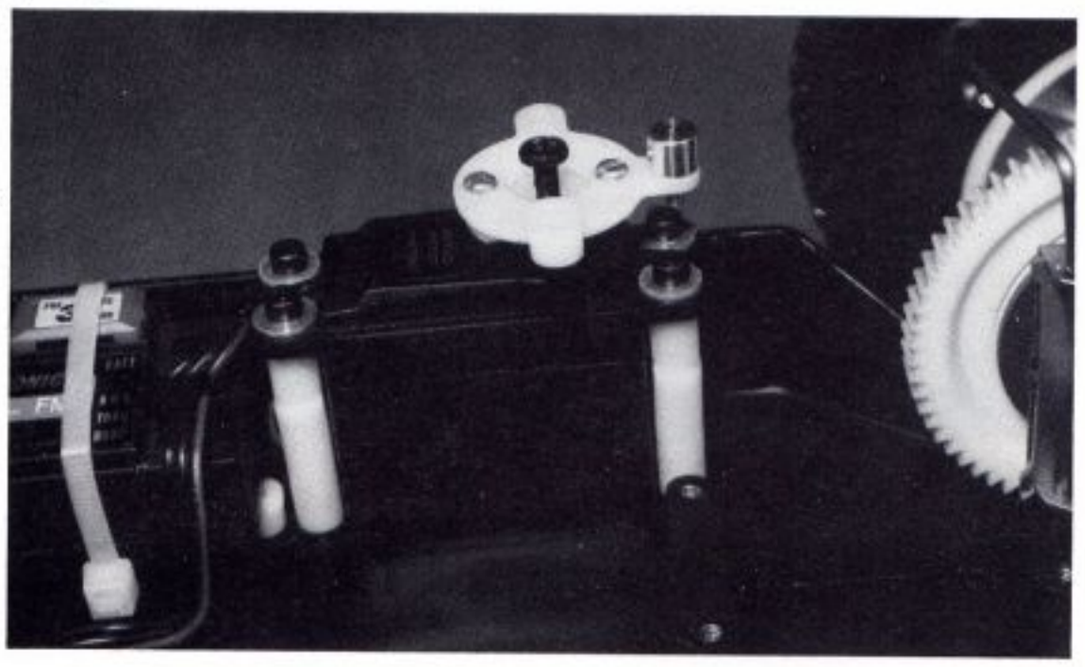


Fig. 229

❑ **Figs. 226, 227 & 228** In the same bag you will find the #7557 aluminum throttle pivot and the #7558 throttle pivot clip. Install the throttle pivot on the left hand side servo horn adapter as shown in fig. 227. Press the clip over the end of the throttle pivot so that the raised tabs in the center of #7558 clip are up, fig. 228. Do not push the clip on so far that the throttle pivot cannot rotate freely.

#7556
brake cam clip

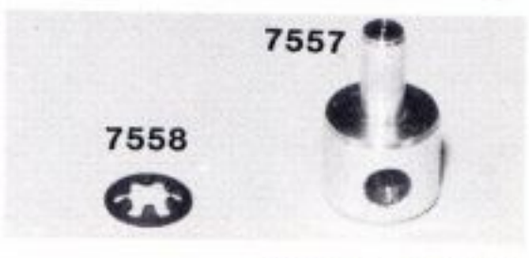


Fig. 226

Fig. 227

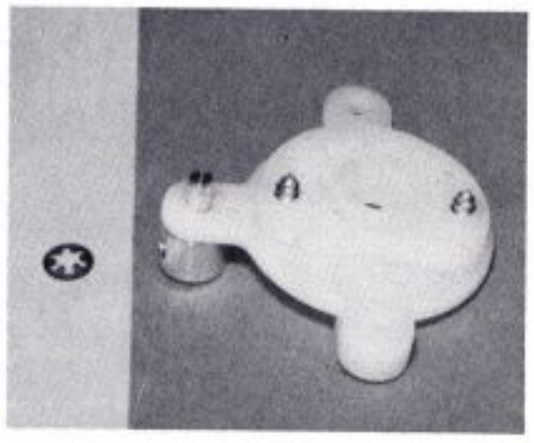


Fig. 228

❑ **Figs. 230 & 231** Now we need to connect the on/off switch and servo wires to the receiver. The steering servo plug will plug into channel #1 ("rudder" or "rudd") of the receiver. Bundle up any excess wire close to the steering servo to keep it out of the way and prevent radio interference. Plug your throttle/brake servo into channel #2 ("throttle" or "thro"). Bundle up any excess servo wire close to the servo, making sure it cannot get damaged by the throttle or brake linkage. Locate your radio on/off switch and plug the receiver plug end into the battery ("batt") plug. Run the switch wire over the top of the transmission top brace. Use the two holes in the transmission brace to wrap a wire tie to hold down the switch, fig. 230. The other end connector of the on/off switch will go through the rear bulkhead to the receiver battery pack plug. ***Note:*** *In the photos we used a extension cable instead of an on/off switch and plugged or unplugged the battery connector in order to turn the truck on or off. A switch harness would install the same way.*

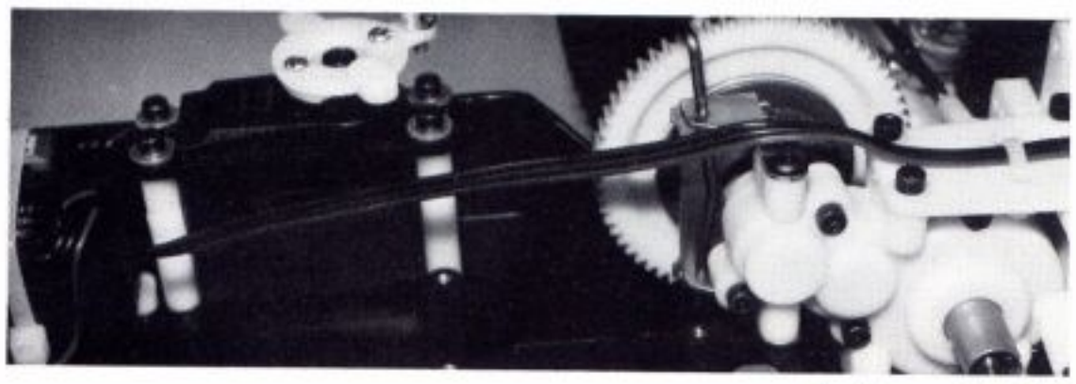


Fig. 230

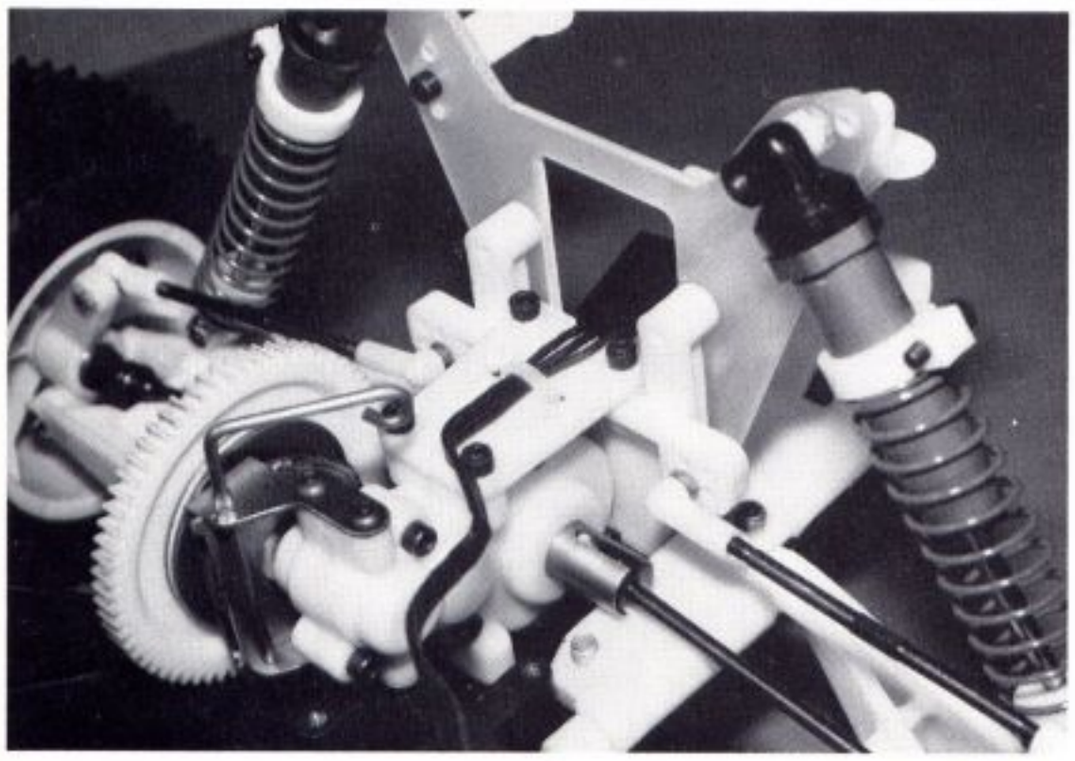


Fig. 231

❑ **Fig. 232** Go to bag #7-7 and remove two of the largest wire ties. We are going to secure the battery pack to the rear bumper. Take the tip of the wire tie and slide it through the center of the shock strut, then through the forward hole in the rear bumper, then up through the back hole as shown. Install the second wire tie the same way.

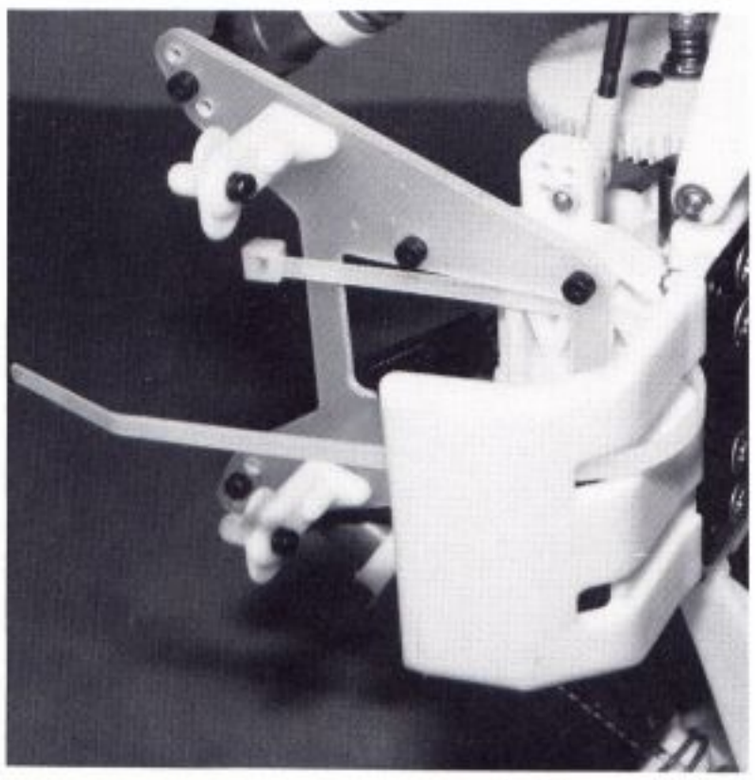


Fig. 232

❑ **Figs. 233, 234 & 235** In bag #7-7 you will find the #7530 black foam pad. Now locate your radio receiver pack. If you are going to use the stock four AA receiver pack that comes with most radios systems, and batteries, then stick the foam pad to the rear bumper. Cut out the parts of the foam pad where the wire ties are in order to install new wire ties easily.

If you are using any kind of ni-cad battery pack or ni-cad cells in the stock receiver pack, you can stick the foam pad to the receiver pack. Remove the paper backing of the foam pad by slicing the paper backing and flexing up the paper to peel it away. Then press the pad against the lower part of the rear shock strut and the rear bumper. Install the battery pack and wrap the ties around it, but before tightening, slide any excess wire under the wire ties, allowing enough loose wire to let you plug and unplug the battery connector easily. Now pull the wire ties tight and cut off the excess ends, fig. 235.

Now remove the plastic antenna tube from the kit box, slide it over the antenna wire and into the mount.

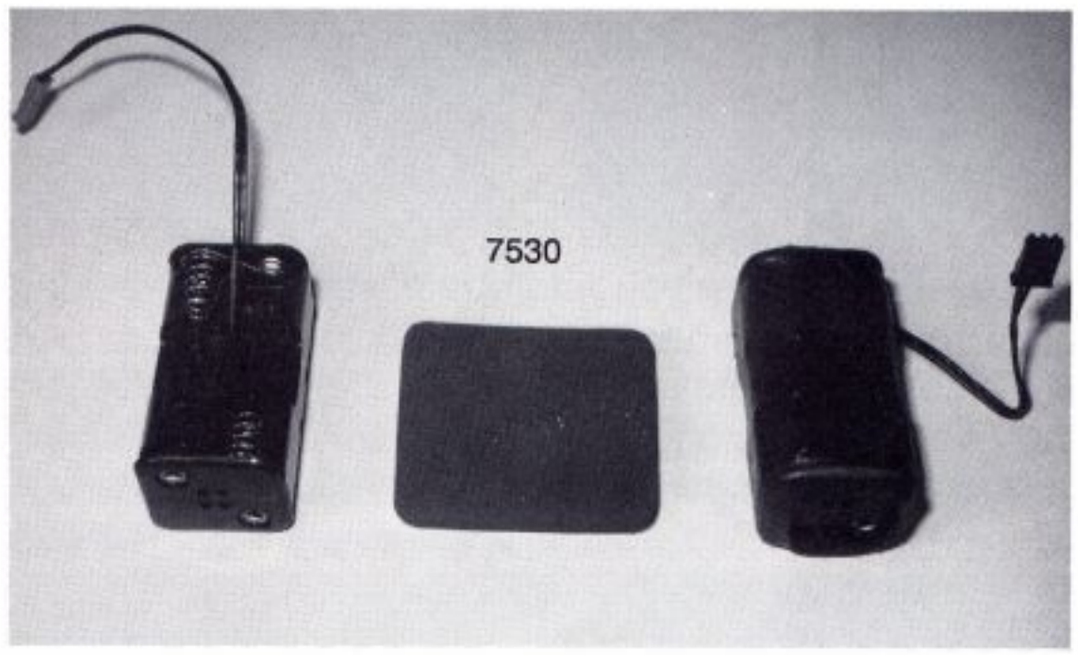


Fig. 233

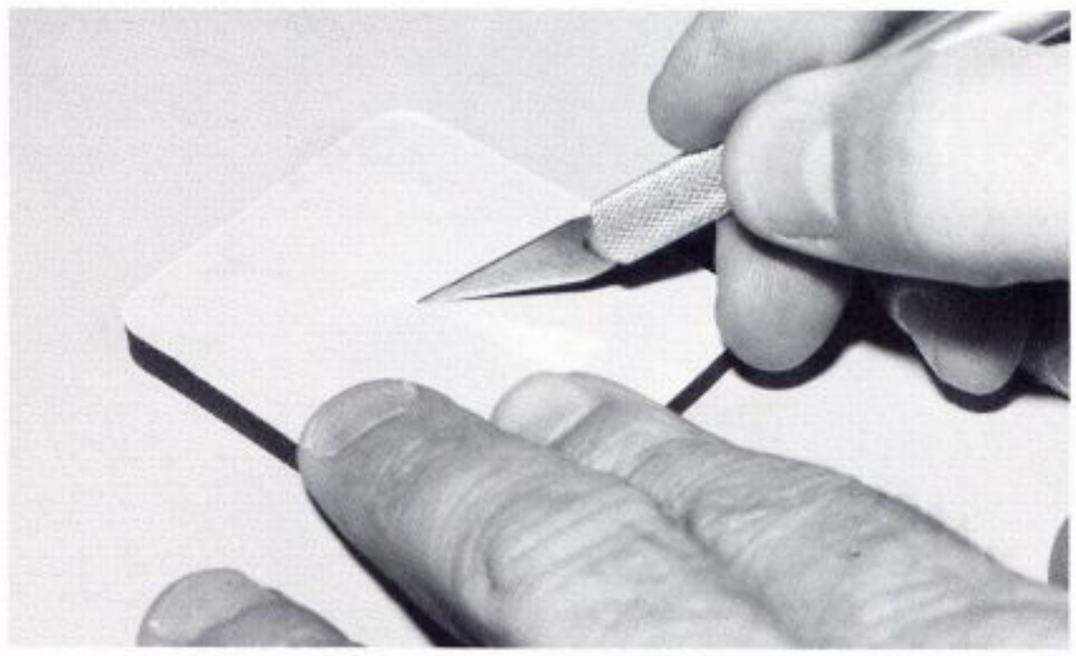


Fig. 234

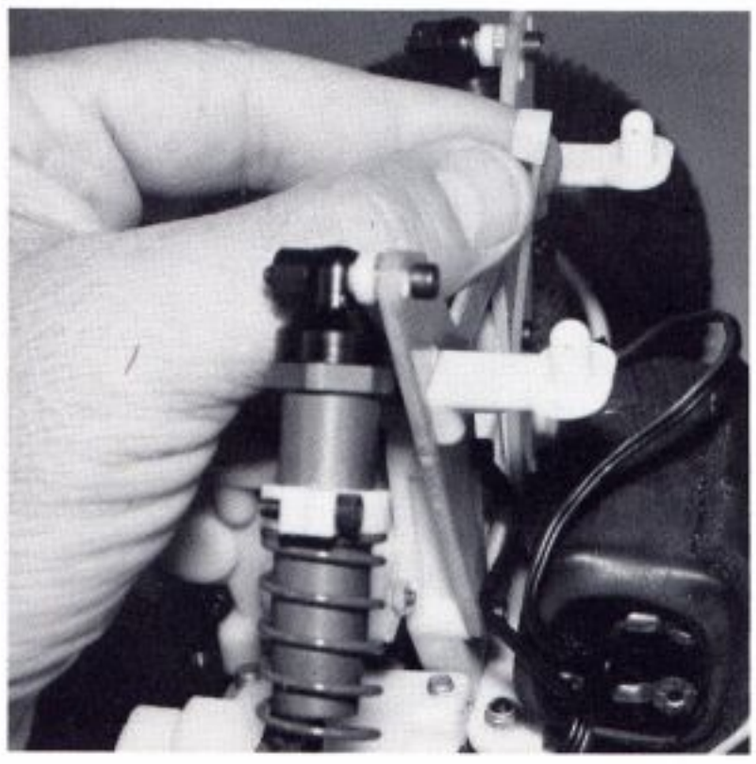


Fig. 235

LEXAN BODY PAINTING

The body can be painted before you mount it; however, it is easier to install the body while it is still clear because it will be easier to locate the holes for the body mounts and antenna tube to cut them out. Follow the directions below if you want to paint your body now. If you want to wait to paint until after you have installed the engine, fuel, and exhaust systems, then mark and cut your body according to below, then skip to fig. 239.

❑ **Figs. 236, 237 & 238** In the kit box you will find the #6131 Gas Truck body and the #7197 Gas Truck decal sheet.

MARK the body mounts and antenna holes accurately by mounting the body before you paint it. Use a marking pen.

SCORE the lines you just marked on the body, using a new X-acto© blade. Flex the body at the score line and peel off the part you want to remove. To prevent the body from tearing where it is not supposed to, flex around sharp corners carefully. If done correctly, this will give you the best-looking body finish. You can also use small, curved hobby scissors that are available in most hobby shops. Trim a little off at a time until it clears. Figs. 236-238 show the side, front and rear trim lines for the body.

CLEAN the body by using liquid dish soap and warm water. Thoroughly rinse the body and dry with paper towels or cotton cloth. The better quality paper towels tend to leave less lint. This helps to insure that the finished product will be as good and as long lasting as possible.

DESIGN your paint scheme. The truck body is made of Lexan polycarbonate and is painted on the inside. When painting, you will do the darkest colors first, and the lightest colors last. This prevents the dark color from "ghosting" through the lightest color. This means the first thing you mask off is the section which will be painted white. The next color you mask of is the lightest color next to white, and so on. Keep this in mind when you design.

MASK your body; the more time spent in masking the body the better the final results. Use automotive masking tape for the best results. Press all edges of the tape down with a Popsicle© stick or your fingernail. Put some masking tape on the outside of the body at the body mount and antenna tube holes to prevent overspray from getting on the outside of the body.

PAINT. The following information will help you if you are not familiar with painting Lexan bodies. There are two different ways to paint the body, by either brushing it on or spraying it on. Brushing the paint will always leave streaks in the paint job but will look satisfactory from a distance. Special Lexan or polycarbonate paints are available for brushing and spraying. If you want to spray the body, one of the best brands of spray paints for Lexan is Pactra R/C Car Racing Finish. This paint is available in most hobby shops.

Now go ahead and apply the paint in very thin coats, letting the paint dry between coats. ***Warning:*** *If the paint is sprayed on in heavy coats, the thinner in the paint will stay liquid and attack the Lexan, which then becomes brittle, and will crack easily.* After you have let it dry, you peel off the next layer of masking tape and paint the next color, and so on. Overlapping the paint edges from one color to the next is okay, but do not get carried away, because all the extra paint can add a lot of weight.

If you make a mistake applying paint, the only product that we have found that can remove the paint or overspray without damaging the Lexan is Synthetic Reducer (if used properly). It can be purchased through a automotive paint supply store. Fig. 236 shows a side view of this body after it has been painted and the decals added.

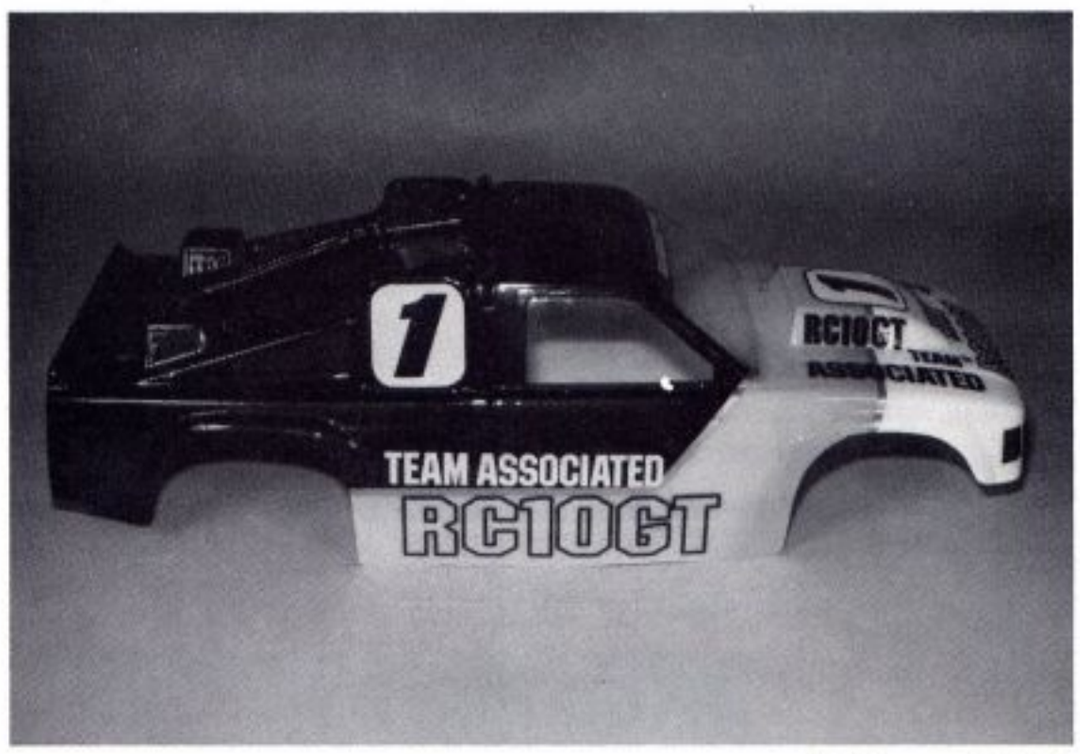


Fig. 236

Fig. 237

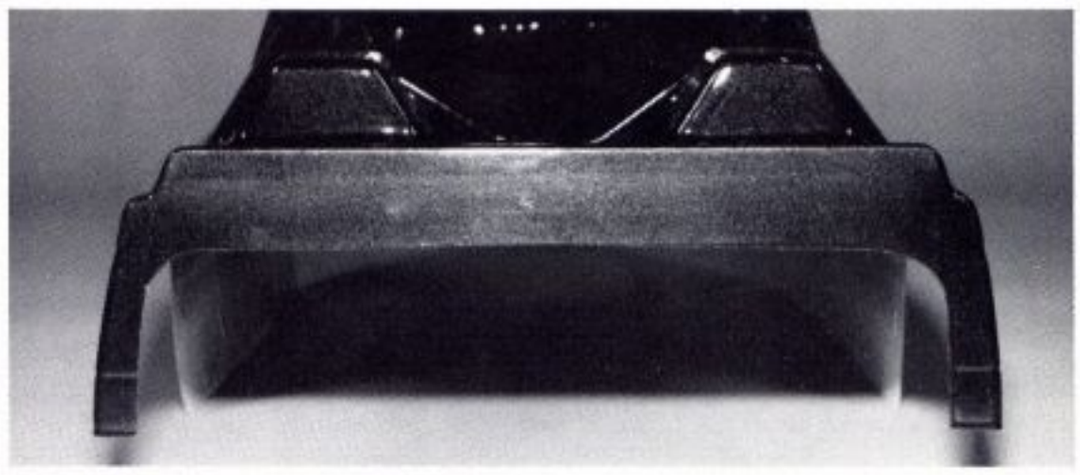


Fig. 238

❑ **Figs. 239, 240 & 241** We assume you have already cut out your body. In bag #7-5 you will find four #6332 body clips and four #7320 nylon body washers, fig. 239. Install the washers onto the four truck body mounts. (This helps prevent the body clips from pulling through the Lexan in a collision.) Now place the body onto the truck so that all four body mounts are coming through the body holes. Now install the four body clips through the four body mounts. Fig. 241 shows the front of the truck body with the body clips installed; fig. 240 shows the rear. Each of the above photos gives you some possibilities on decal locations and layout.

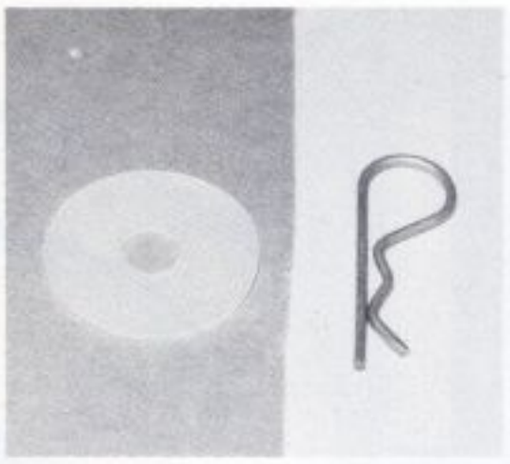


Fig. 239

#7320 washer

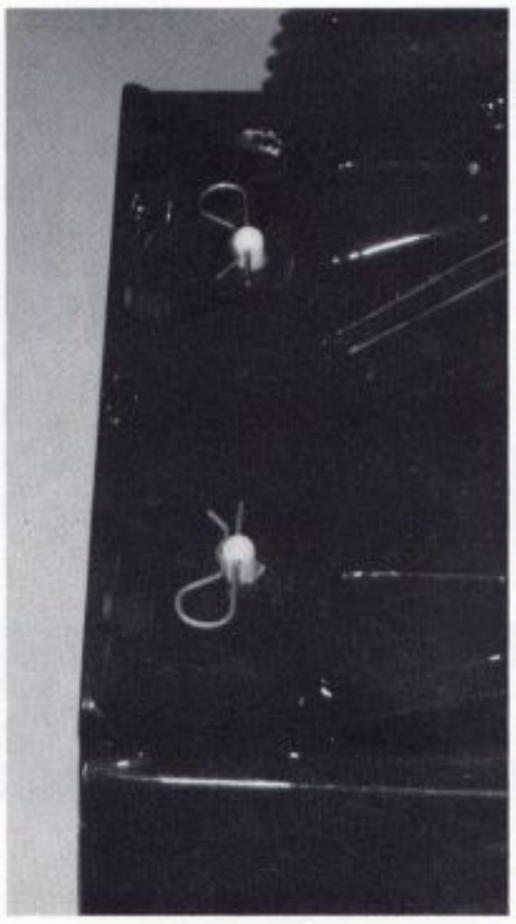


Fig. 240

Fig. 241

❑ **Fig. 242** This is what your truck should look like now. Congratulate yourself, **YOU DID FANTASTIC!**
For the #7050 and 7060 kits, get your Engine Accessory Package and follow its manual to install your engine.
For kits #7055, 7065 and 7066, turn right to the Engine Installation Manual to install your engine.

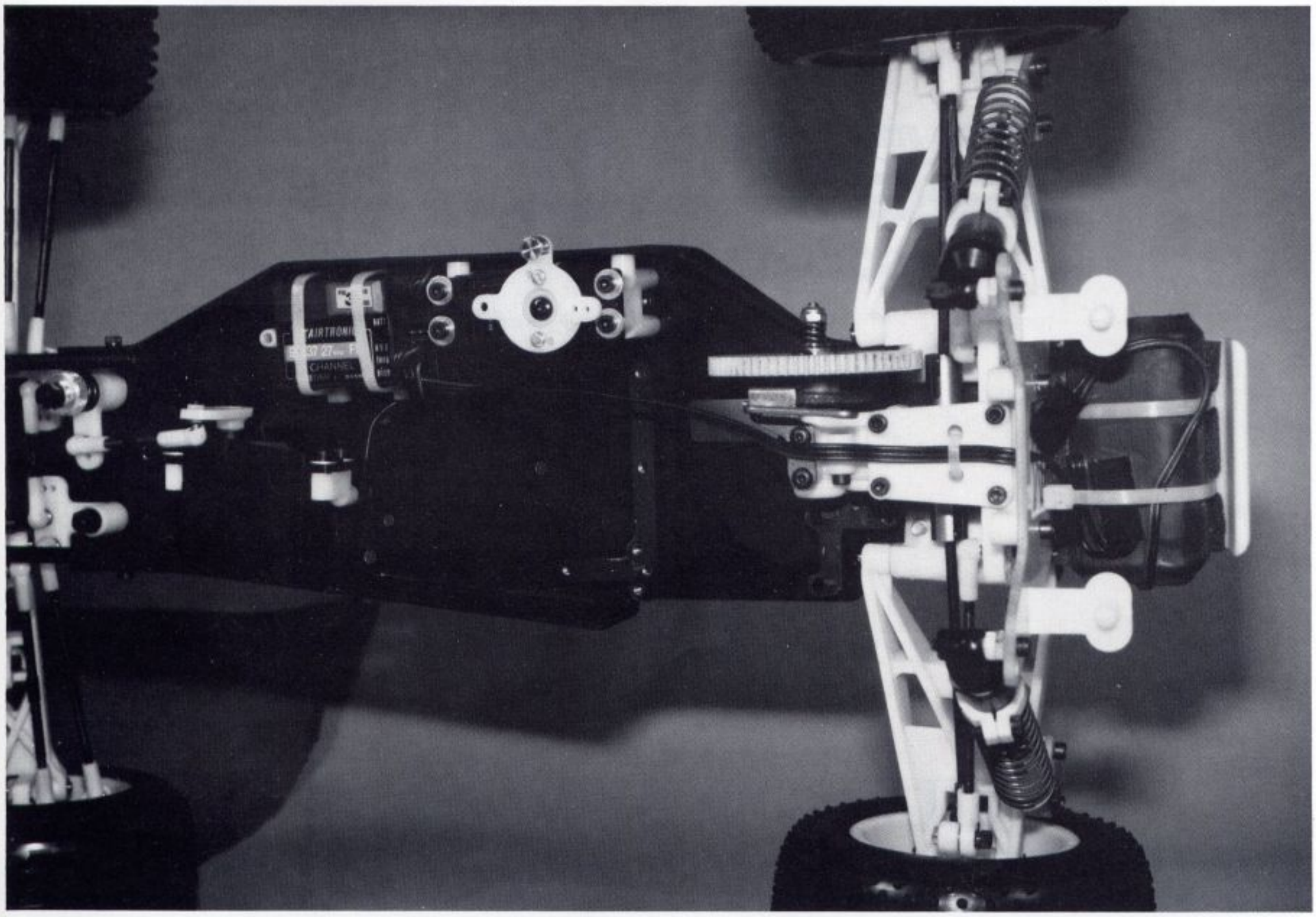


Fig. 242

RC10GT

1/10 SCALE GAS OFF ROAD TRUCK

TEAM ASSOCIATED

ASSOCIATED ELECTRICS, INC.
3585 Cadillac Ave.
Costa Mesa, CA 92626
(714) 850-9342
FAX (714) 850-1744

KIT INSTRUCTION MANUAL