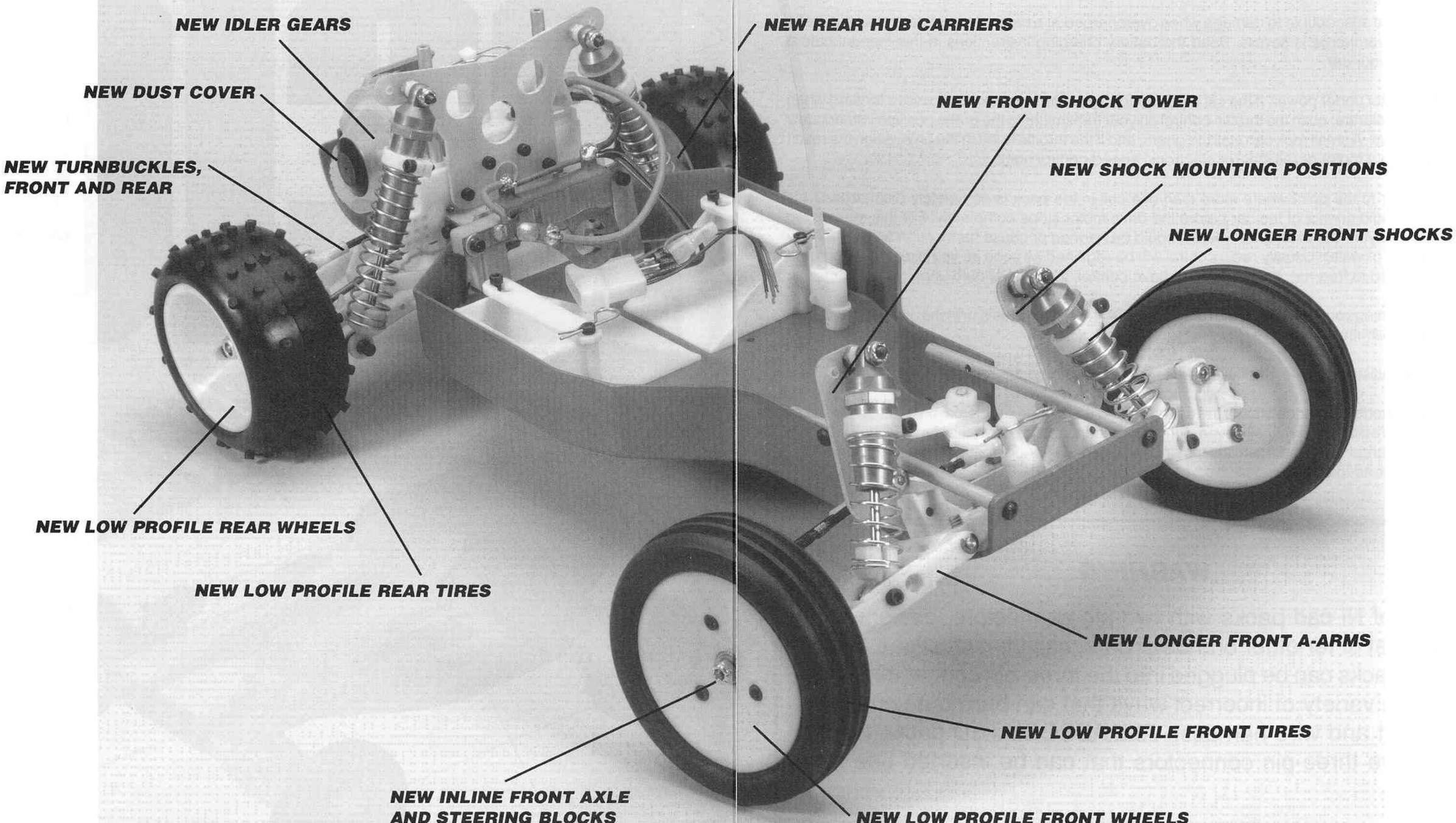
The New RC10's Latest Technology



Advanced, Competition Version of the RC10

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CAUTION

Ni-cad batteries are susceptible to damage when overcharged at a high rate, and can release caustic chemicals if the overcharge is severe. Read the battery charging instructions in this manual before attempting to run your car.

Do not stall the motor under power. If the car stops suddenly on the track, or fails to move forward when you attempt to accelerate, push the throttle control on your transmitter to the brake position immediately and attend to the car. A small rock can stall the gears, and if the throttle is left in the on position the result can be a burned out motor or resistor (or electronic speed control unit).

If you run your car to the point where more than one cell in the pack is completely discharged, it is possible to lose radio control of the car before the drive motor stops completely. For this reason you should not operate your car in an area where it could be harmed or cause harm, such as near a busy roadway or a pool of water. Usually radio control will be regained as soon as you pick up the car and the motor is allowed to free-run. If you still don't have control, then you should unplug the motor.

When you stop running your car, turn off the radio at the car first (with the resistor in the off position) before turning off the transmitter.

Be sure that the resistor is in the off position while you are charging the battery.

A burned-out or shorted motor can make the car appear to have radio problems. If the car slows down suddenly and the radio acts erratically even with a full battery charge, then the cause is probably the motor. Check the range of the radio with the motor unplugged. A shorted motor will draw extremely high current even under no-load conditions.

WARNING

The use of Ni-cad packs with two-pin connectors, designed for aftermarket or for other brands of cars, can be hazardous. Some of these packs can be plugged into the three-pin connector on the RC10 in a variety of incorrect ways that can burn out your radio equipment and wire harness. ALL ASSOCIATED packs for the RC10 have three-pin connectors that can be inserted one way only.

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FIRST, A WORD

Your new competition edition RC10 car is the latest state-of-the-art, 2WD off-road racer in the world. There is none better.

Our original RC10 car has won more IFMAR World Championships and ROAR Nationals combined than all the other 2WD off-road winning cars put together. It is by far the most popular 2WD off-road RACE car in the world. The READERS of RC CAR ACTION magazine voted the RC10 as CAR OF THE YEAR by a 6 to 1 margin over the 2nd place car! The racers know which car is best.

As great as the original RC10 is, we wanted something better, and we know you did too, so we've brought out the new RC10. At first glance it looks like a regular RC10. But it's much more than that. It has NEW, longer front A-arms with two NEW shock mounting positions. NEW inline front axle and steering blocks which greatly improve the steering. NEW front shock towers which give more ideal shock mounting positions. NEW rear hub carriers with more toe-in for greater stability. NEW turnbuckles for easier adjustments. NEW idler gears which are strong enough even for monster trucks. NEW low profile front and rear wheels and tires, giving more steering in the front end and more traction in the rear end. Which all adds up to give you the best 2WD car in the world.

You'll find the photos in the instructions so easy to follow that you may be tempted to put the car together from the photos alone. However, although you have the best car kit, if you want the best COMPLETED model race car, then you will want to put it together correctly--by following these instructions. All that's required is to read the few lines of text near each photo.

DON'T OPEN ANY OF THE PARTS BAGS UNTILTHESE INSTRUCTIONS TELL YOU, otherwise you'll get the parts mixed up and then you will have trouble assembling your car.

While you are building the car you will sometimes be working with several parts bags at the same time. These bags are referred to by number in the instructions, and you will find a number label on each of the main parts bags. There are also more bags inside the main parts bags; these are not numbered and belong to the bag they came out of. See pages 54-56 for the list of parts and bags in your kit.

Bags and parts will start multiplying like rabbits as you build, so try to keep the bags separate. One good way is to use large paper plates (picnic plates with partitions are best). Mark the plates with bag numbers and dump the parts into them. When the parts are used up, relabel the plate for another bag. It's much easier to find the part you need if it's spread out where you can see it.

TOOLS. The kit contains the shock wrench and all the Allen wrenches you'll need, but you will have to supply the following:

#2 Phillips screwdriver (Associated #SP76)
A needle-nose pliers
A hobby knife, such as an X-acto with a pointed blade.
A soldering iron (25 to 50 watts), and a small amount of ROSIN (not acid) core 60/40 solder.

The kit can be assembled even easier if you have the following:

3/32" straight Allen wrench with handle. Will make installing the Allen screws much faster and easier (Associated #SP73)
A ruler with decimal inches or metric measure
A 3/16" nut driver will make installing the ball ends easier (Associated #SP86)
A 1/4" nut driver will speed up installing the 1/4" nuts (#SP85)
Socket or open-end wrench
Small screwdriver
Thread-locking compound
ZAP or Hot Stuff (cyanoacrylate adhesive)
Vise
File
Drill with #43 (2.3MM) bit
WARNING! Do not use a power screwdriver. They spin too fast, causing screws to heat up when being driven into plastic and will strip out.

Take your time assembling the car. It's not a race to see how fast you put the car together; it's how well you put it together that determines how fast you'll be able to race.

Boxes at each step are provided so you can put a checkmark for each assembly after each step is completed. So when you stop during assembly time, you'll be able to come back and start in the correct step.

One final note for you experienced, new builders and racers: **please build the car our way first!!** The RC10 is a remarkably fast car right out of the box. There's a reason for everything on the car, and very few compromises were made in its design. Work with the car first and see what it can do before you experiment or make changes.

Clear off your workbench, line up some paper plates, grab a sandwich, and let's begin...

❑ **Fig. 1** We'll start with Fig. 1. Only take the parts out of the bag that we tell you, and no others. Look for bag #6-4 and take the #6310 gold anodyzed nose piece out of the bag, as shown in the photo and the shortest Phillips flat head screw, as shown. DO NOT take anything else out of the bag. Now take the 2 Phillips screws out of bag #6-2, but nothing else.

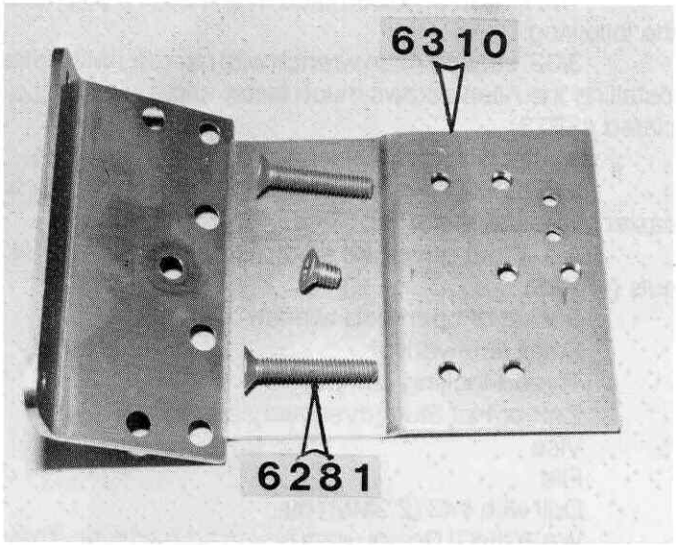

Fig. 1

❑ **Fig. 2** Take the gold aluminum chassis #6300 and install the nose piece as shown, with the #2 Phillips screwdriver. Note that all the chassis screws are aluminum and can be easily damaged by a worn screwdriver Be sure yours is in good conditiion.

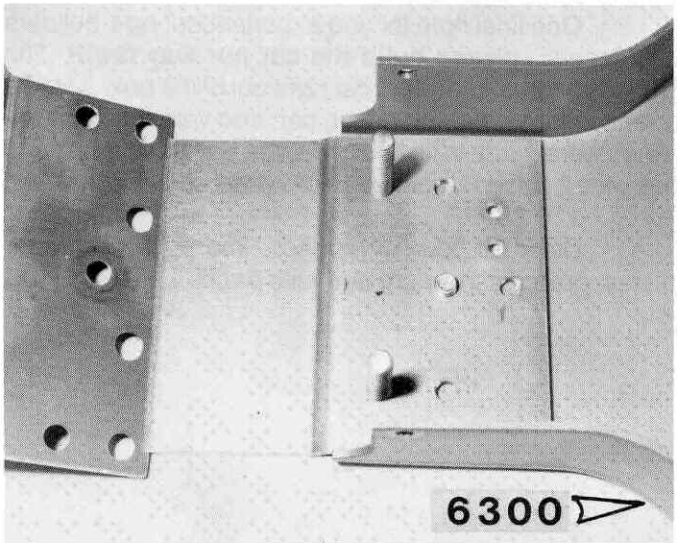

Fig. 2

❑ **Fig. 3** In bag #6-5, take one #6330 body mount, 2 washers and one short screw. (The long screw is used to extend the body mounts for other body styles.)

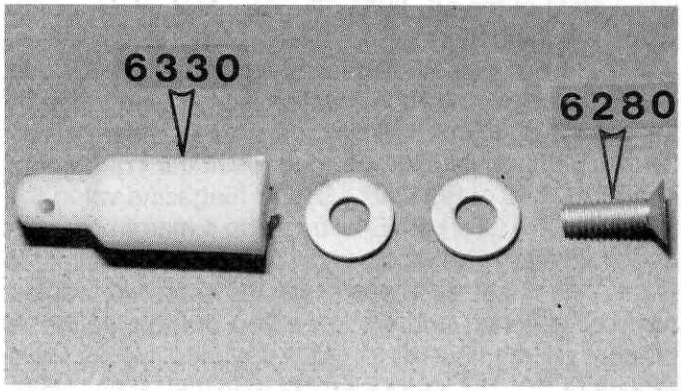

Fig. 3

❑ **Fig. 4** Install body mount as shown with body clip hole going left to right.

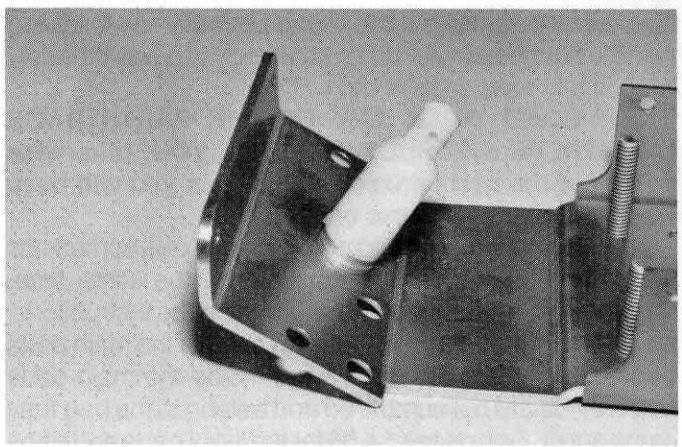

Fig. 4

❑ **Fig. 5** In bag #6-1, take out the left hand front suspension mount #6207. This mount will have the letter L on the bottom. The left or right hand side of the car is determined by the driver as he sits in the car. His left hand will be the left side of the car and his right hand the right side.

NOTE: The left and right front suspension mounts are attached together by a thin "runner" that must be removed with scissors or a knife.

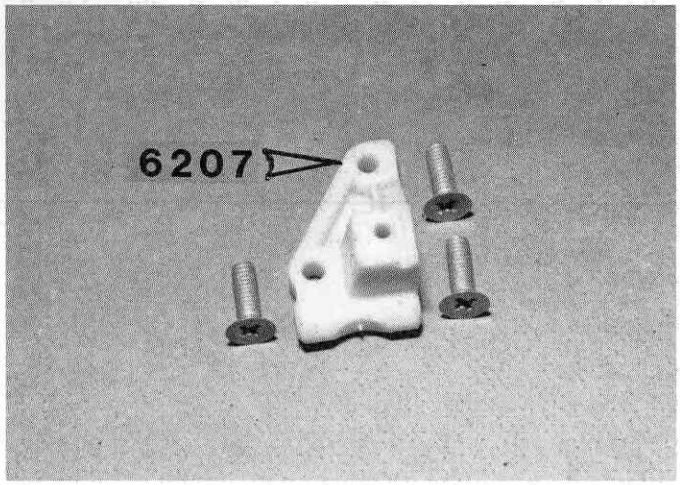

Fig. 5

❑ **Fig. 6** Install the L.H. suspension mount, as shown, with the 3 Phillips screws. Now, install the right hand mount.

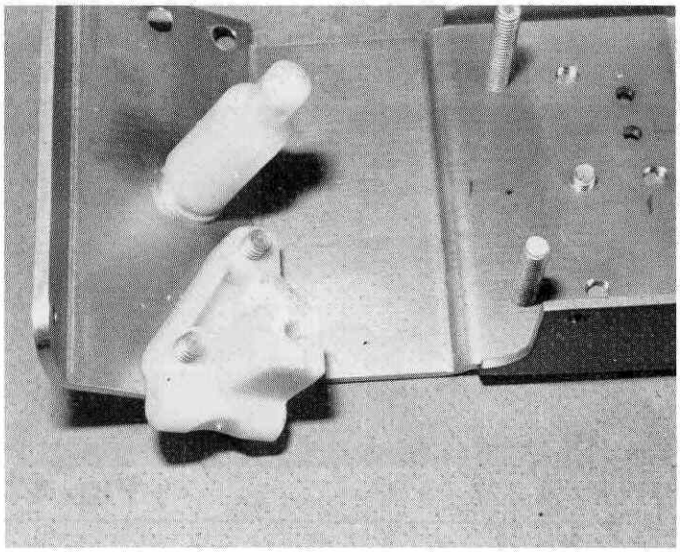

Fig. 6

❑ **Fig. 7** In the same bag, take out the #6206 L.H. front A-arm, the #6226 inner pin and the package of "E" clips, as shown.

NOTE: The package of "E" clips is in the form of a "stack" or short roll with white paper glued around the outside (see Fig. 7a). There is a roll of "E" clips in three different bags. You will have more than enough to complete your car. Slip the pin into each end of the front A-arm #6206 to check the pin fit. The A-arm should be able to swing freely on the pin. Most racers keep a .126" and a .128" reamer in their toolbox to free up A-arms and to clean them after racing. We want the pin to fit tight in the mount #6207.

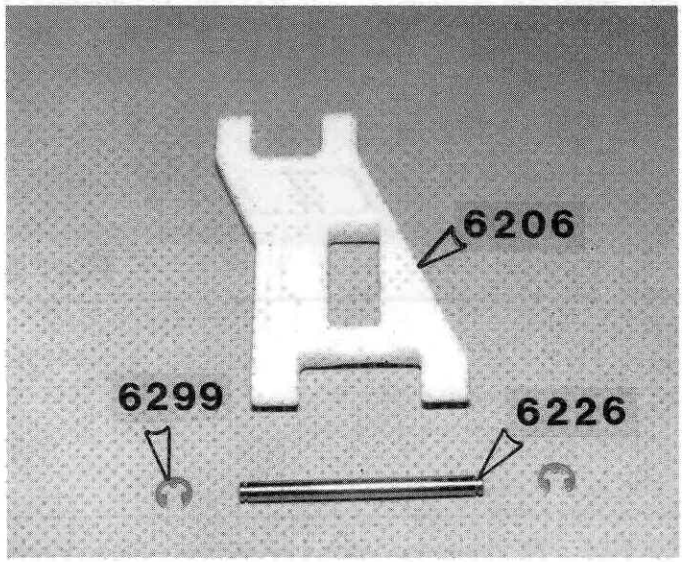

Fig. 7

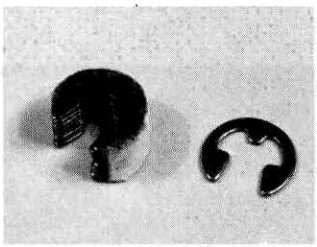

Fig. 7a

❑ **Fig. 8** Line up the A-arm with the mount and push the pin through. Using a small screwdriver, install an "E" clip on each end of the pin. Now, install the R.H. side.

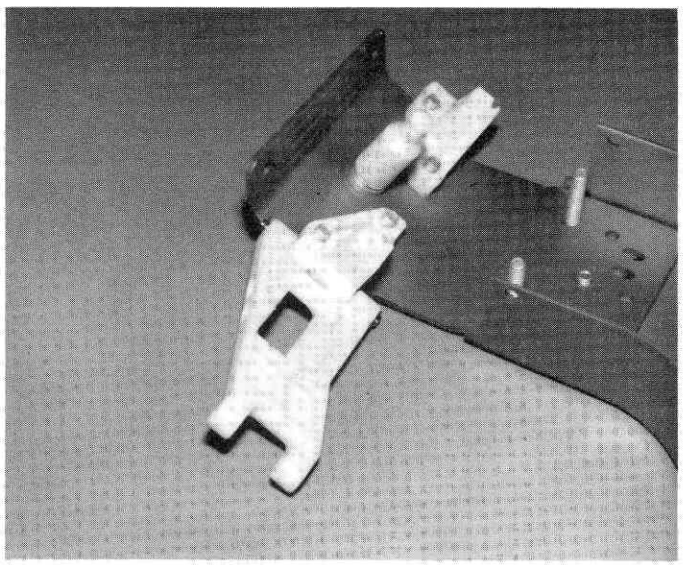

Fig. 8

❑ **Fig. 9** From bag #6-14 screw the long ball end #6273 into the left hand front block carrier #6213 as shown, then screw on the locking nut. Assemble the right hand parts.

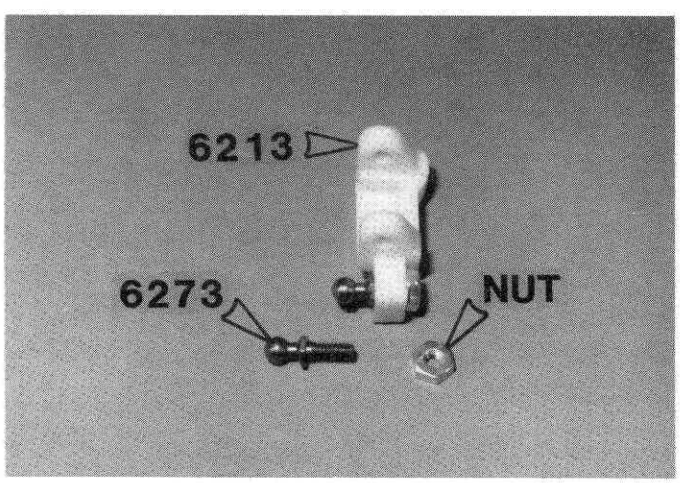

Fig. 9

❑ **Fig. 10** Screw the short ball end #6270 into the #6217 steering block and secure it with the nut as shown. Assemble the right hand side, which will be inserted into the opposite side shown in Fig. 10.

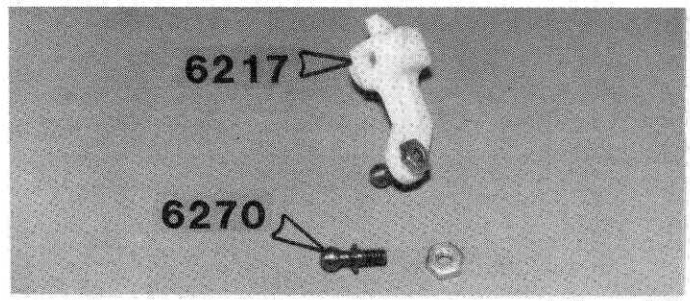

Fig. 10

❑ **Fig. 11** Push the front axle #6218 into the steering block #6217 as shown so the hole in the axle lines up with the hole in the steering block. It may push together with your fingers. If not, LIGHTLY tap it into the hole. Assemble the right hand side in the same way.

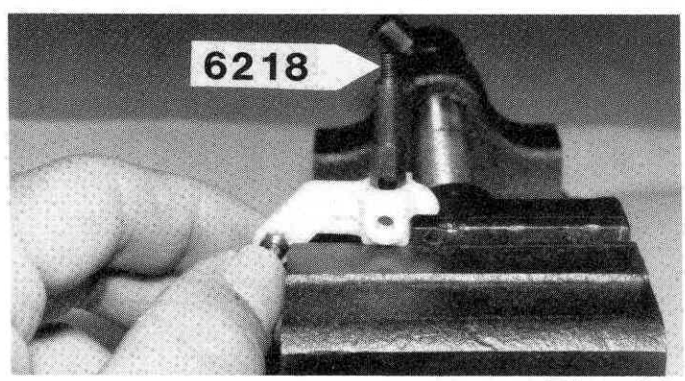

Fig. 11

❑ **Fig. 11a** You'll notice that the hex part of the axle does not go all the way into the steering block. That's O.K. Just make sure the hole in the axle is lined up with the hole in the steering block.

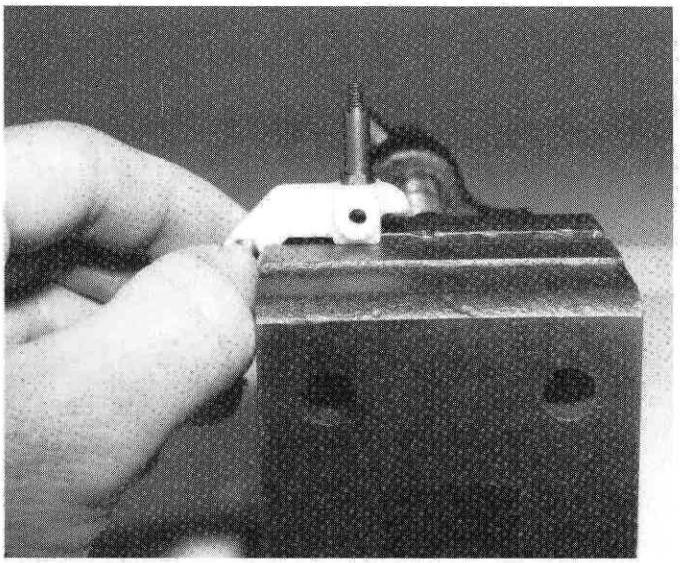

Fig. 11a

❑ **Fig. 12 - 12a** Line up the steering block in the block carrier, as shown, and push the #6223 king pin through. Now, install "E" clips on the top and bottom ends of the pin. If you run out of "E" clips, there are extras in the shock bags. Install the R.H. steering block.

The pin will be loose in the block carrier but will be snug in the steering block, so you might have to lightly tap it in.

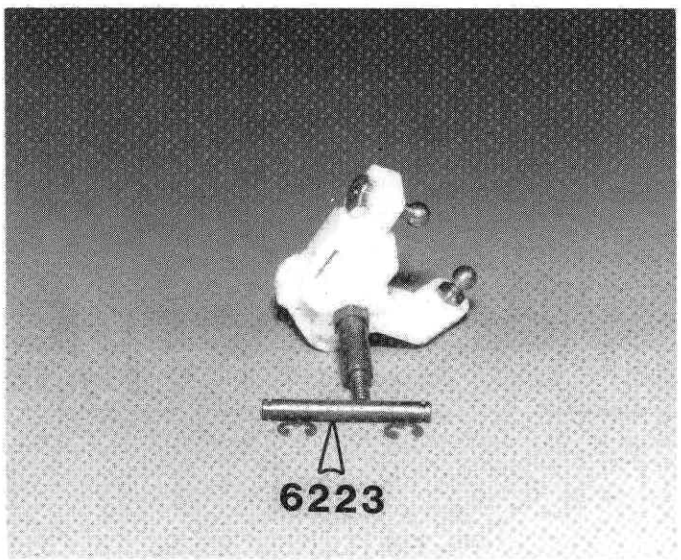

Fig. 12

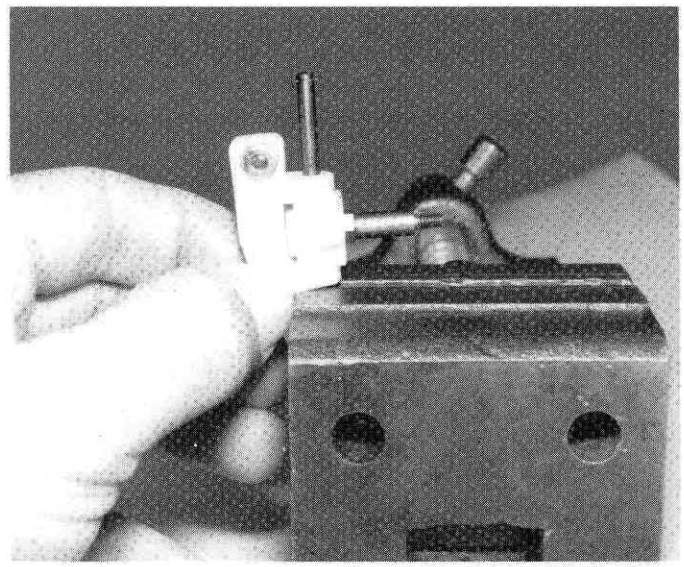

Fig. 12a

❑ **Fig. 13 - 13a** Line up the holes in the block carrier with the holes in the A-arm and push the #6227 outer pin into the arm. Install the "E" clips. Do the R.H. side.

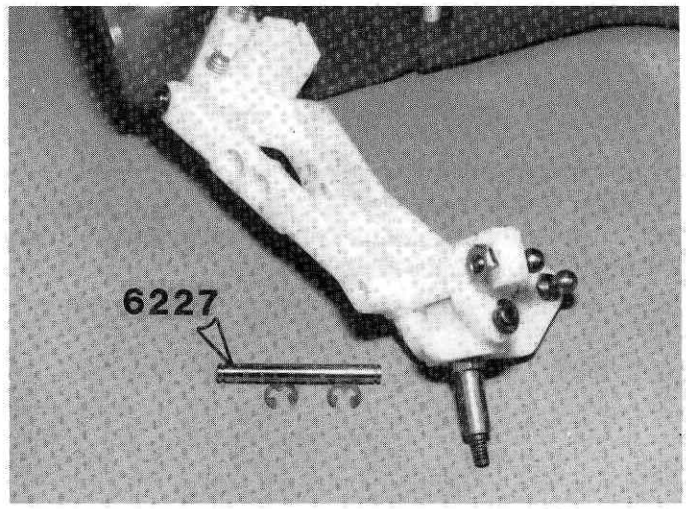

Fig. 13

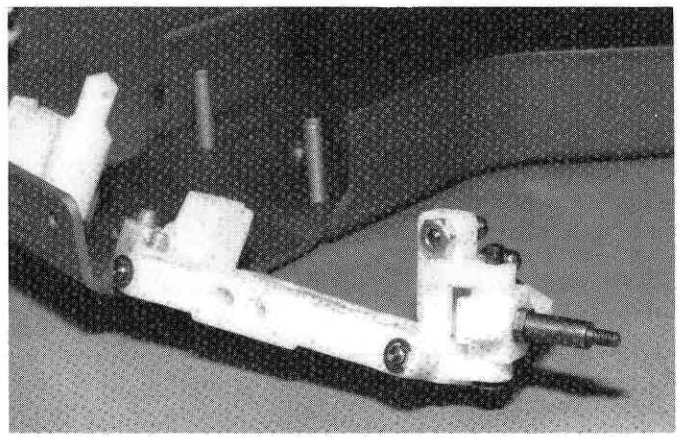

Fig. 13a

❑ **Fig. 14** Take the #6231 front shock strut out of the same bag. In bag #6-10 take out 2 of the 4/40 screws and install them in the shock strut in the locations shown.

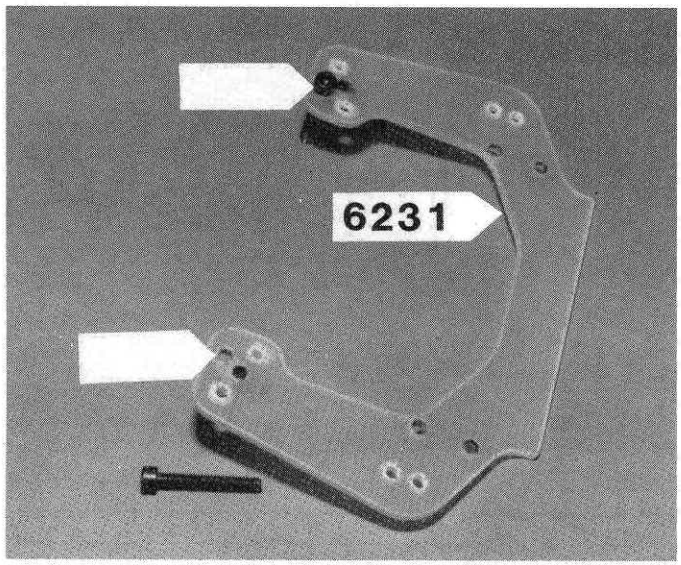

Fig. 14

❑ **Fig. 15** From bag 6-1 take the 2 short 4/40 screws and install the shock strut onto the 2 front suspension mounts. If the holes don't line up, loosen the aluminum screws in the chassis, align the parts and tighten all the screws.

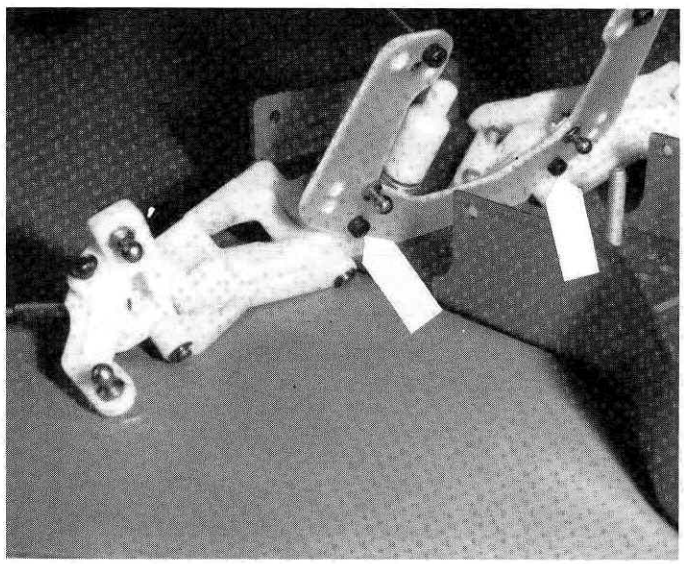

Fig. 15

❑ **Fig. 14a** Take 2 of the short #6270 ball ends and install them in the shock strut in the locations shown. Then install the 2 nuts on the other side.

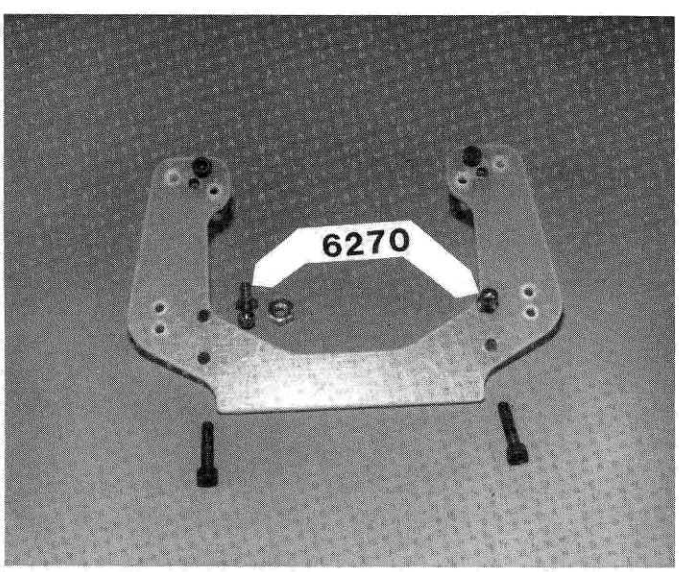

Fig. 14a

❑ **Fig. 16** In bag #6-1 take out the 2 #6259 threaded turnbuckles, and from bag #6-14 take out the #6274 plastic ball rod ends, as shown. Twist the rod ends and take 4 of them off.

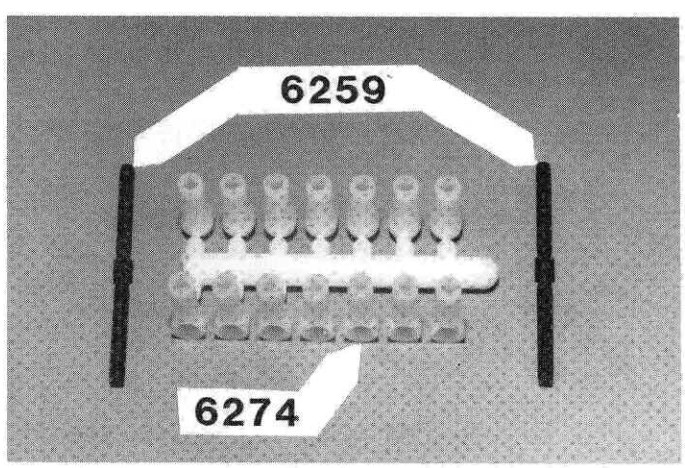

Fig. 16

❑ **Fig. 17** Screw the plastic ball rod ends onto the rods, as shown. The rods have a LH thread on one end and a RH thread on the other end, so they will screw on in different directions. Screw them on evenly to the dimension shown, which is measured from the center of the ball cup.

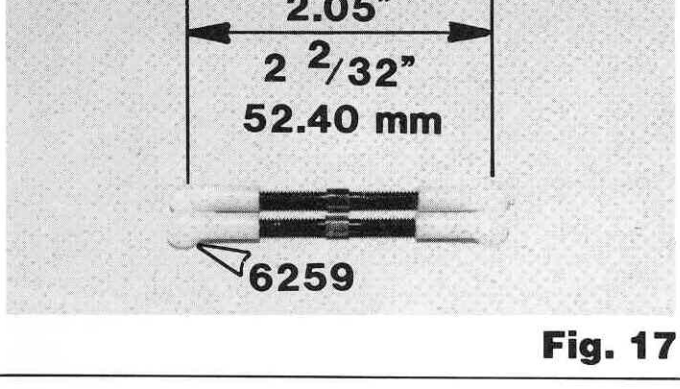

Fig. 17

❑ **Fig. 18a** The rod ends can be removed quite easily from the balls by holding the rod end with a pliers, as shown, and twisting the rod end off the ball, as shown.

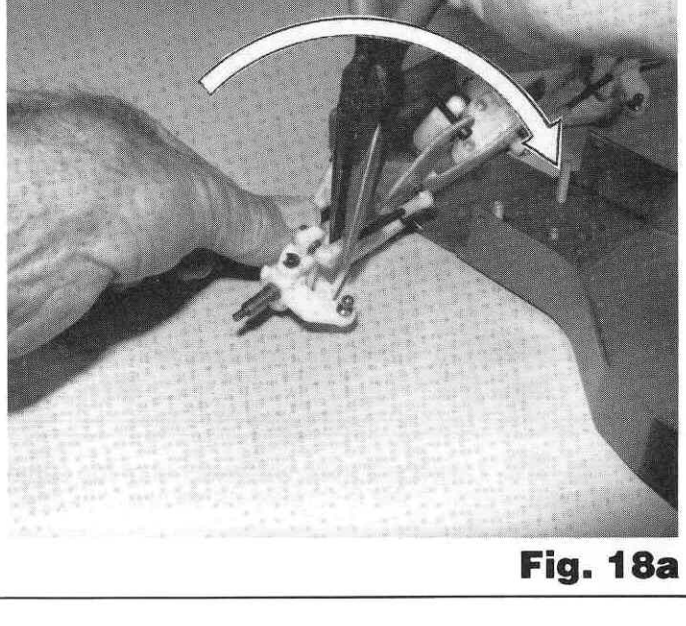

Fig. 18a

❑ **Fig. 18** Snap the rods on the metal balls, as shown. You'll probably have to use pliers. Do the R.H. side.

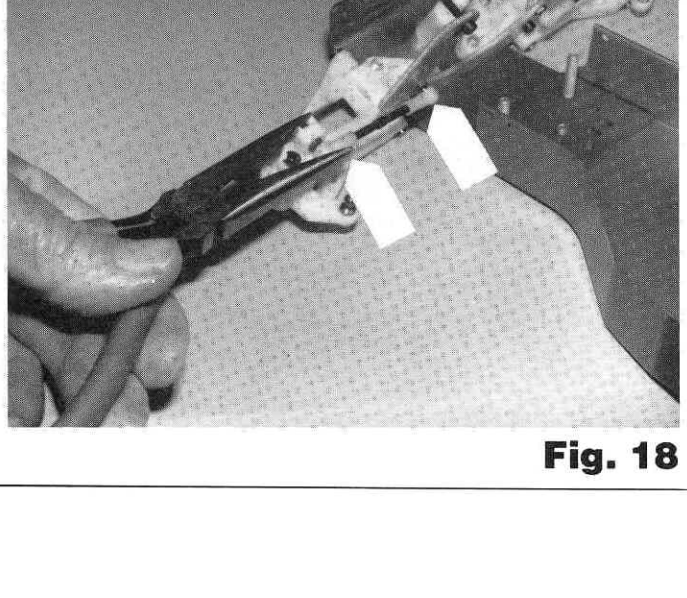

Fig. 18

❑ **Fig. 19** In bag #6-2, take the #6255 servo saver parts out, and install the 4 short ball ends, as shown.

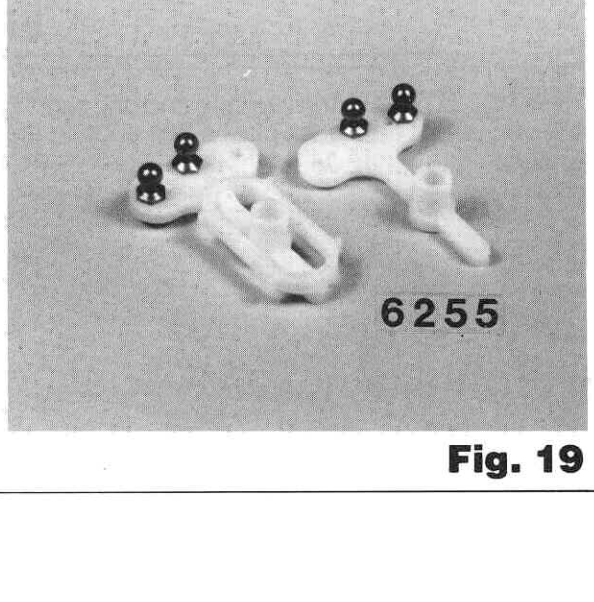

Fig. 19

❑ **Fig. 20** Locate the servo saver arm...
❑ **Fig. 21** And install it to the servo saver, as shown.

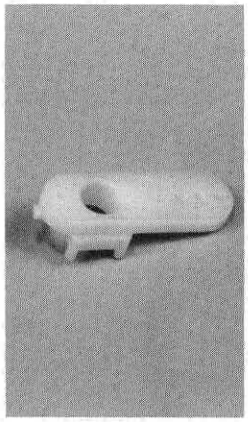

Fig. 20

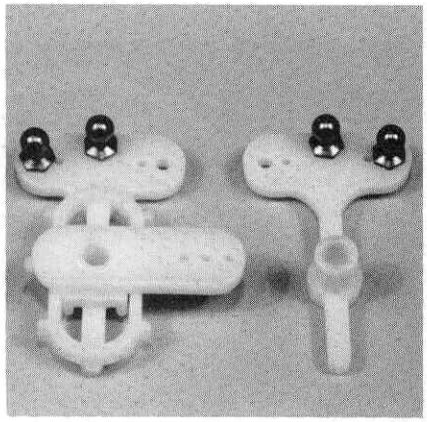

Fig. 21

❑ **Fig. 22** Take the 2 thick washers out of the same bag, and put them on the 2 screws, as shown.

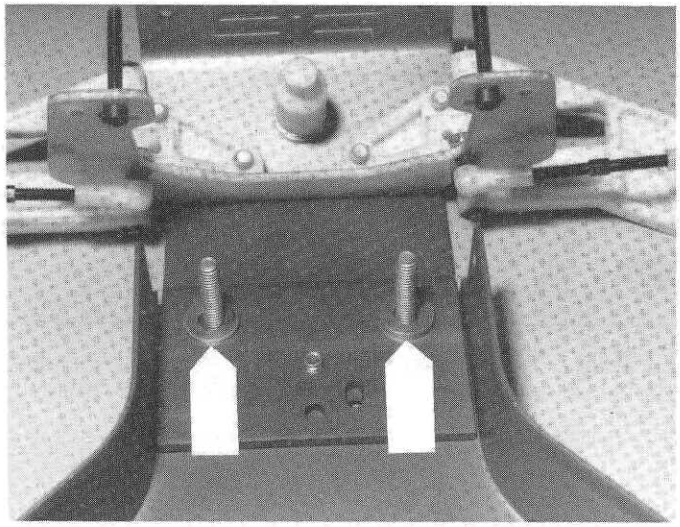

Fig. 22

❑ **Fig. 23** Take the two long and one short turnbuckles and screw on the six plastic ball cups to the lengths shown.

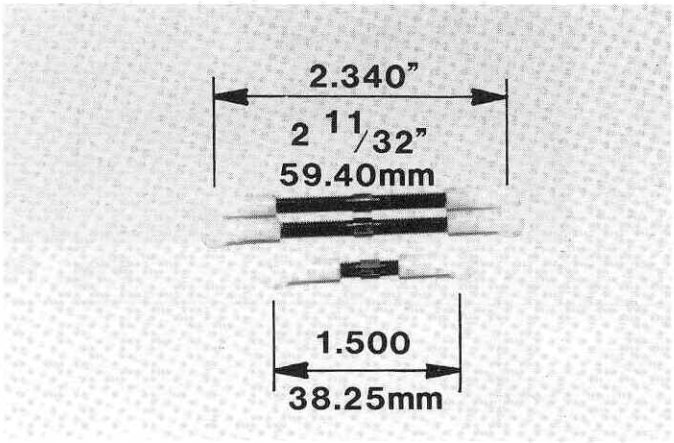

Fig. 23

❑ **Fig. 24** Take the short rod and pop it on the servo saver with a pliers, as shown.

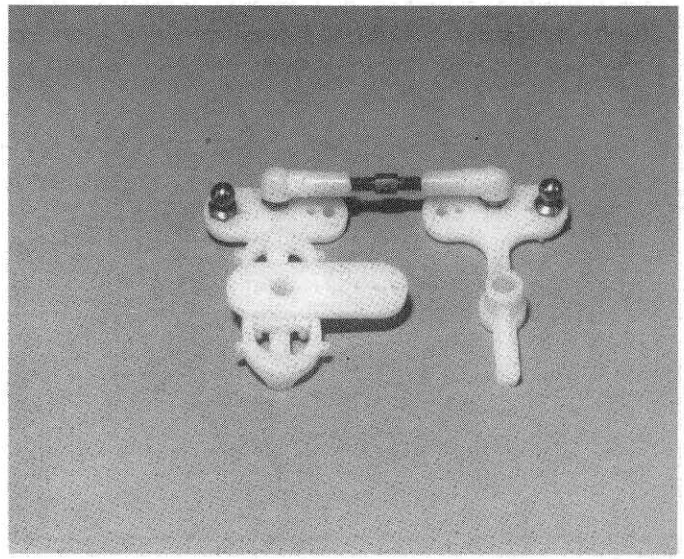

Fig. 24

❑ **Fig. 25** Place the servo saver onto the 2 screws, as shown. Take the 2 nylon nuts and screw them down until the servo saver starts to tighten, then back the nuts off about 1/2 turn until the servo saver arms pivot freely. (Ignore the tube struts shown in photo. They will be installed later.)

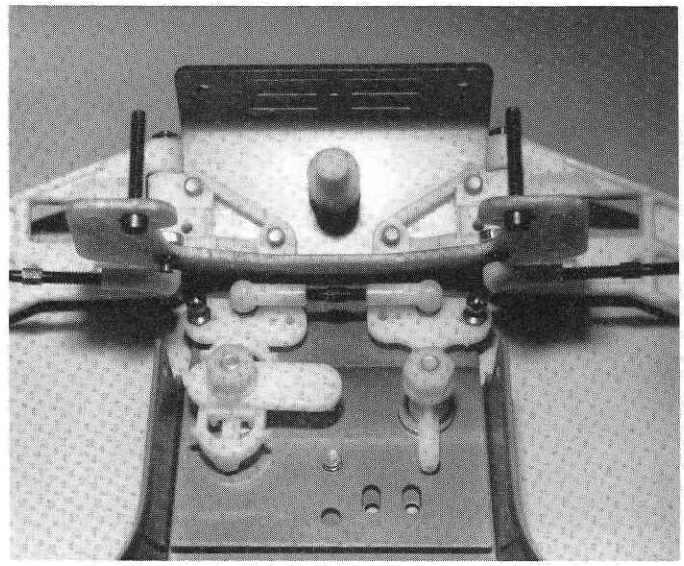

Fig. 25

❑ **Fig. 26** Snap the L.H. and R.H. tie rods on, as shown.

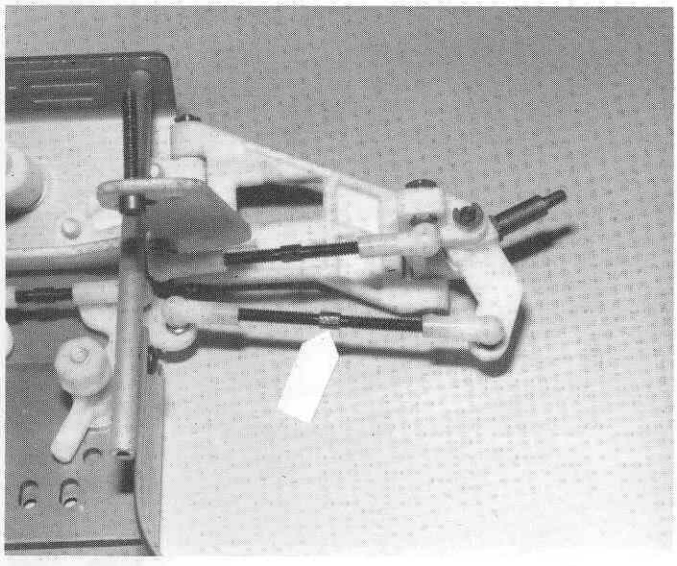

Fig. 26

❑ **Fig. 27** In the #6-12 bag, take out the #6609 drive gear pivot. Also in the #6-12 bag is a small bag with screws. In this bag is a small split roll pin. This pin goes into the hole in the pivot as shown. Use a needle nose pliers to hold the pin and lightly tap it into the hole.

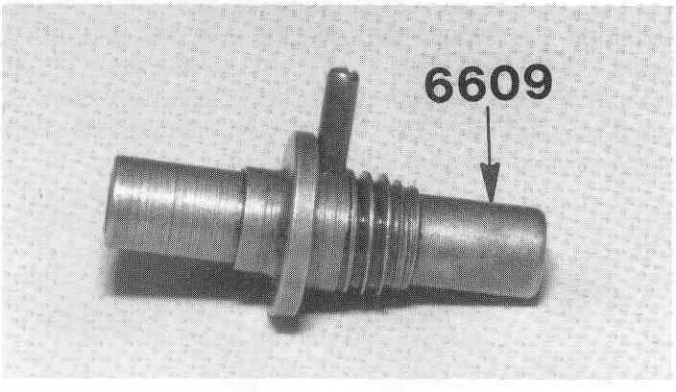

Fig. 27

❑ **Fig. 28** Tap the pin into the hole until it's evenly centered on both sides.

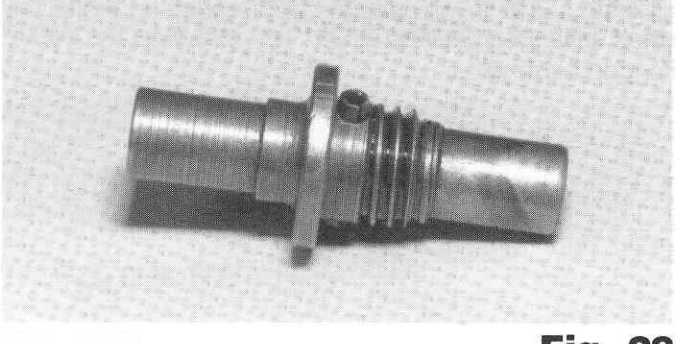

Fig. 28

❑ **Fig. 29** Take the #6611 aluminum spine plate out of the bag. Using a vise, or a piece of wood with a 1/4" hole in it, carefully tap the pivot into the plate. Make sure the pin is centered with the slots in the plate, and that the flange of pivot is flush against the surface of the plate.

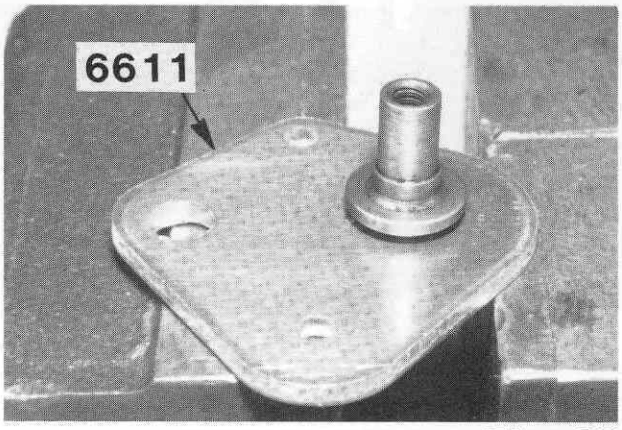

Fig. 29

❑ **Fig. 30** Take the large thin 1/4-28 hex nut out of the bag. Turn the plate over and install the nut. Tighten the nut with a socket or open-end wrench while holding the spine plate. You may want to put a drop of thread-locking compound on the threads to make sure the nut doesn't come loose.

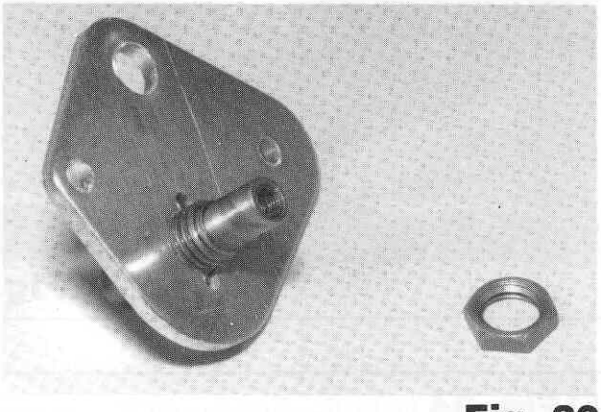

Fig. 30

❑ **Fig. 31** The pivot should look like this installed.

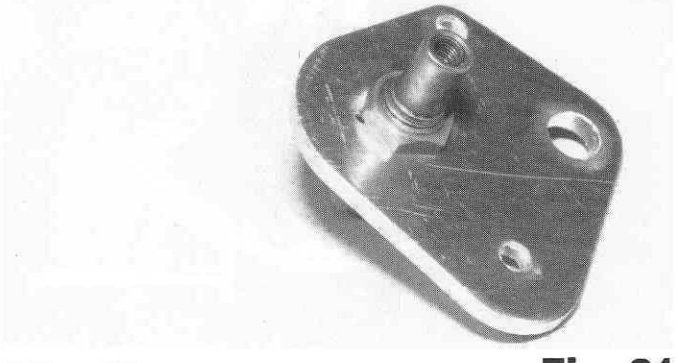

Fig. 31

❑ **Fig. 32** Take the #6610 idle gear pivot and gently tap it all the way into the aluminum plate, again making sure that the flange touches all the way around.

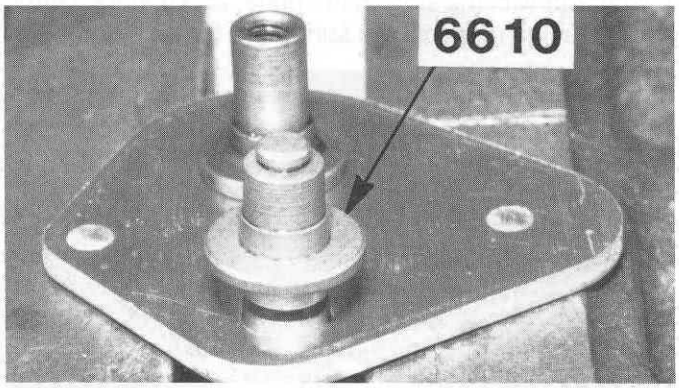

Fig. 32

❑ **Fig. 33** Turn the plate over and take the flat steel washer and slip it over the pivot as shown by the arrow.

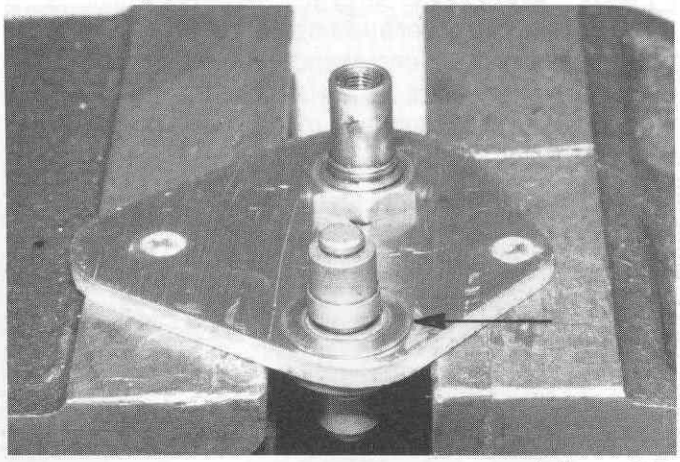

Fig. 33

❑ **Fig. 34** Install the large curved "E" clip, as shown, with the center up, and the ends down.

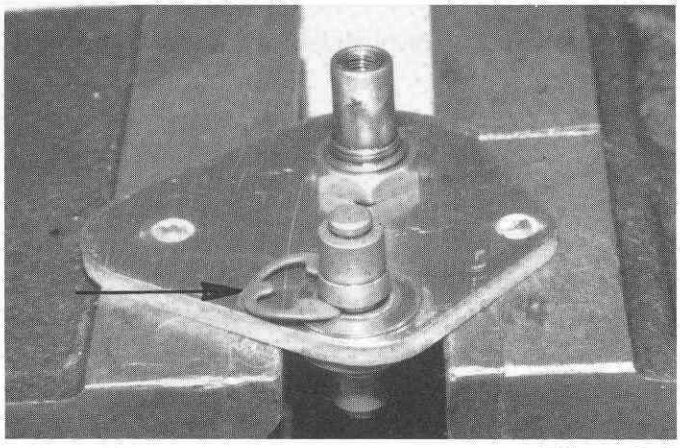

Fig. 34

❑ **Fig. 35** Install the clip all the way on. Make sure that it is fully seated.

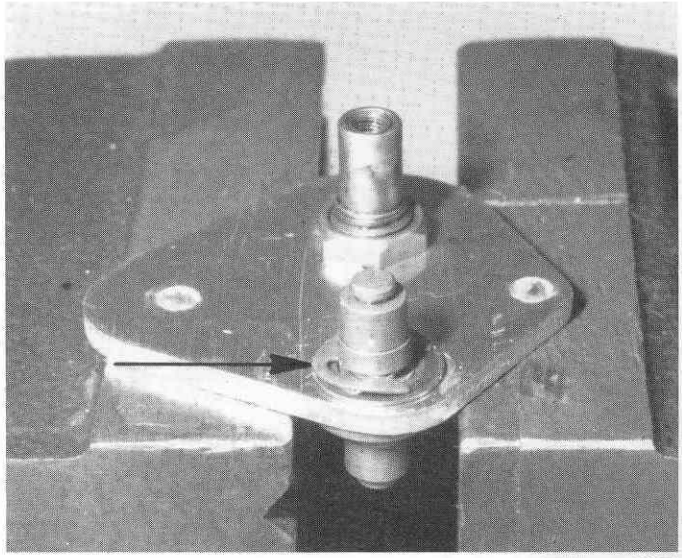

Fig. 35

❑ **Fig. 36** Associated makes a complete ball bearing package for the RC10, part #6900. We'll show you how to install the bushings, which come with the kit, and the ball bearings. They're both installed in almost the same manner. If you are using bushings then wipe off the bushings and install them into the 2 #6612 axle drive gears. They are a snug fit so it will be necessary to tap them in with a soft blunt object such as a wood dowel. Make sure they are seated all the way in so that the snap ring groove in the gear is exposed.

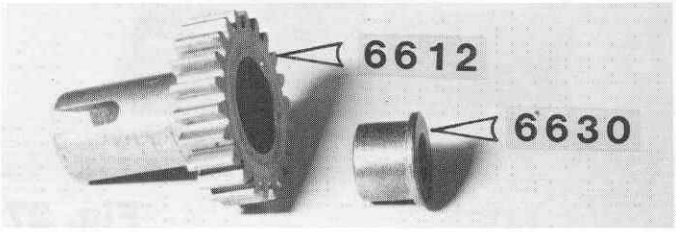

Fig. 36

❑ **Fig. 37** If you have the ball bearing kit, install the small unflanged bearing #6901 first and then the #6902 flanged bearing.

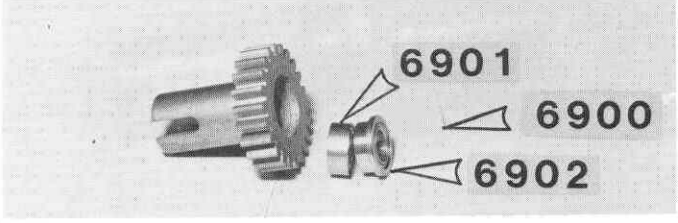

Fig. 37

❑ **Fig. 38** Install the inside "C" clip.

❑ **Fig. 39** Make sure the clip seats all the way.

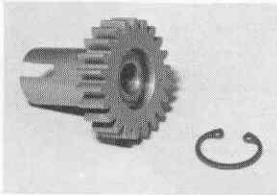

Fig. 38

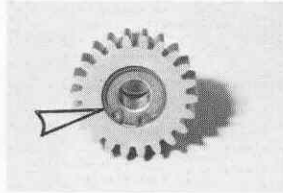

Fig. 39

❑ **Fig. 40** If you've installed ball bearings, now install the "C" clip.

❑ **Fig. 41** The installed clip should look like this.

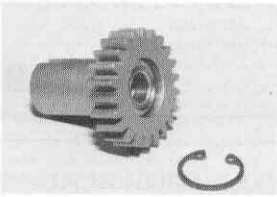

Fig. 40

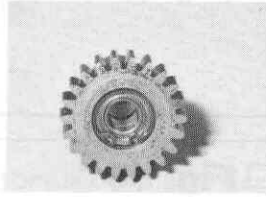

Fig. 41

❑ **Fig. 42** Now take the aluminum plate, and put a little oil on the bushing in one of the #6612 gears and install it onto the #6609 pivot, using one of the button head screws, as shown. Ball bearings will not require oiling.

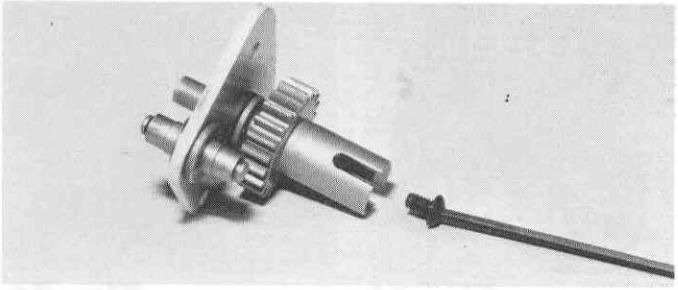

Fig. 42

❑ **Fig. 43** Turn the plate over and oil and install the other gear.

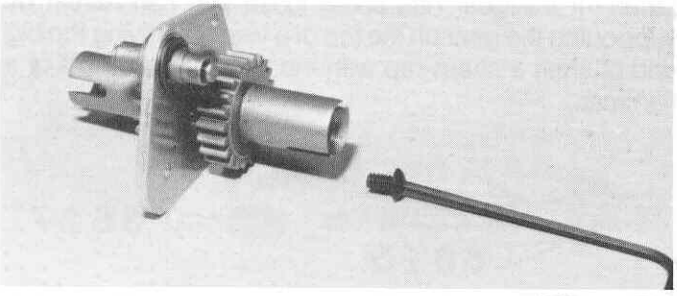

Fig. 43

❑ **Fig. 44** Take the 2 #6614 plastic gears out, and 2 of the short small bushings. With the flange of the bushing or ball bearing down flat against the table, hold the gear flat and push it down with your thumbs onto the bearing.

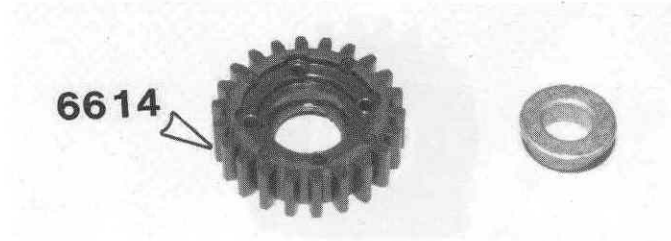

Fig. 44

❑ **Fig. 45** Install the bushings in the gears and then install the 4 small button head screws as shown. Only tighten the screws until they seat. Do not overtighten. Be careful because the screws are very small. If the wrench starts to slip it can be sharpened by cutting a small amount off the end with an abrasive cut-off wheel or grind stone.

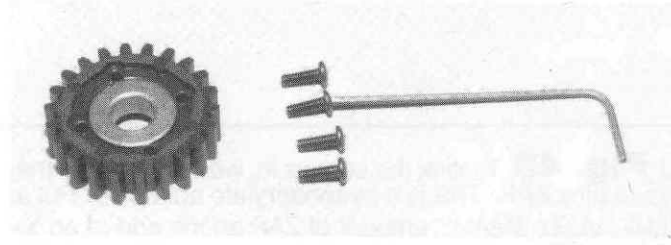

Fig. 45

❑ **Fig. 46** The completed gear.

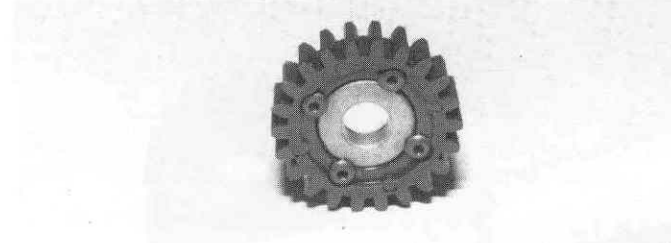

Fig. 46

❑ **Fig. 47** The ball bearing installs the same way.

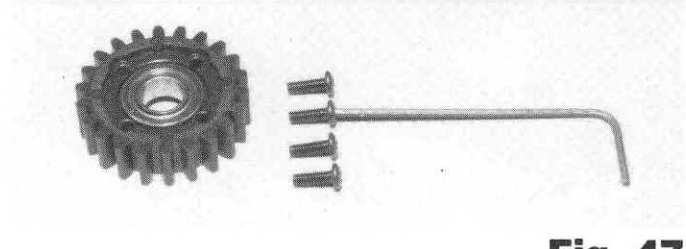

Fig. 47