

1:10 SCALE NITRO TRUCK INSTRUCTION MANUAL

RC10GT

PART 1



RC10GT'S COME OUT ON TOP--AGAIN!

Billy Easton and his RC10GT win the 1999 Silver State Nitro Challenge; Dvorak's GT TQ's!
8 out of 10 RC10GT's in the A-Main!



Mark Pavidis
'94 Electric
Champion
NORRCA
World Cup



Mark Pavidis
'94 Gas
Champion
NORRCA
World Cup



Mark Pavidis
'96 Electric
Champion
NORRCA
World Cup



Richard Saxton
'96 Gas
Champion
NORRCA
World Cup



Richard Saxton
'98 Electric
Champion
NORRCA
World Cup



Richard Saxton
'98 Gas
Champion
NORRCA
World Cup



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Richard Saxton's World Cup winning RC10GT

ABOUT THE RC10GT

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 and 1992 NORRCA Nationals and the 1992 and 1993 ROAR Nationals. Associated has since progressed to new technology with its RC10T2 and T3.

The RC10GT gas truck was released to meet the need of those racers who were converting their electric trucks to gas. Although the GT has been released as early as 1993, it has never ceased to be a dominant force in the R/C racing scene. Under the skillful hands of Mark Pavidis and Richard Saxton, it continues to win the NORRCA Gas Truck Nats and other national races. Important advances in technology, which were borne out in intensive testing in real-world race conditions with the RC10T, T2 and T3, were transferred to the RC10GT kits to enhance an already powerful machine born to win! A brief listing of those changes will be found right after the shock section.

TOOLS

Tools supplied in kit:

- Allen wrenches, .050", 1/16", 5/64", 3/32".
- Shock assembly tool.
- Associated shock, turnbuckle and axle nut molded wrenches.

Extra tools needed:

- 1/8" flat blade screwdriver. (*Do not use a power screwdriver to install screws into nylon parts. You can too easily strip out the hole.*)
- #2 Phillips screwdriver.
- A hobby knife, such as an X-acto, with pointed blade.
- 5/16" nut driver or deep reach glow plug wrench.
- Needle nose pliers.
- Small hammer.
- A ruler with decimal inches or metric measure.
- Locktite threadlock #242.
- Blue Super Glue (cyanoacrylic adhesive)

Extra parts needed:

- 2 channel R/C surface radio system.
- .12 ci. glow fuel R/C engine (with or without pull start).
- Receiver battery pack.
- Battery charger (if receiver pack is ni-cad batteries then you will need a charger for this pack).
- Glow plug igniter.
- Fuel tank bottle for refueling tank.
- Starter box or electric hand starter with car starter donut (for non pull start engines).
- 12 volt battery for starter system (for non pull start engines).
- R/C car glow fuel (we recommend Blue Thunder or O'Donnell racing fuels).

BEFORE BUILDING

Please observe these notes when building your kit.

- Open the parts bags when the step specifies, not before.
- Don't mix parts from one bag with parts from another bag, because this manual refers to parts from specific bags.
- Check the bags for kit updates that replace the instructions. For your convenience, they are labeled "Supplementary Sheets" at the top.
- This manual has been revised and updated to incorporate the many enhancements to the GT over the years. You will notice several steps and pages skipped throughout the manual. Those steps are no longer needed.
- The driver's side in the instructions refers to the left side of the truck with the truck's front pointing away from you. (Sorry, England!)
- Read the words AND see the pictures. The pictures alone do not convey the whole story.
- Save this manual. The parts numbers and names will help you when ordering new parts.
- Colors and appearance in photos do not always match actual parts.



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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.)

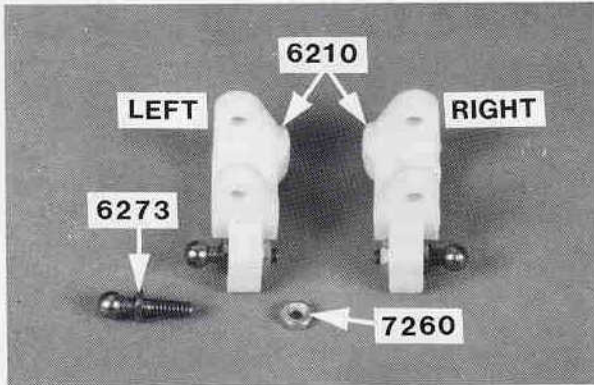


Fig. 1

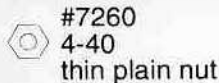
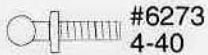


Fig. 2 Go to bag #7-1 again and remove the two #6221 nylon steering blocks. From bag #6-14 remove two of the #6273 long steel ball ends, two #7260 4-40 thin plain nuts, and four #6936 #4 aluminum flat washers. (1) Place two washers onto each steel end. (2) Screw one ball end into each steering block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

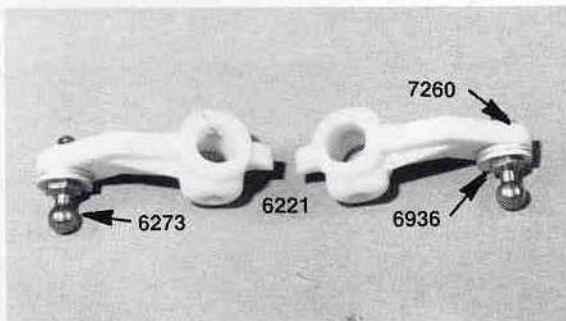
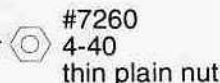
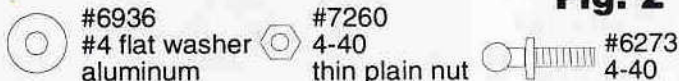


Fig. 2



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.

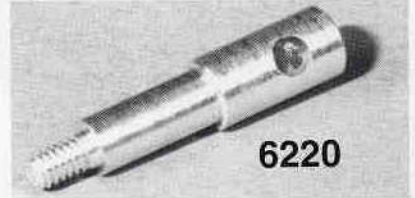


Fig. 3

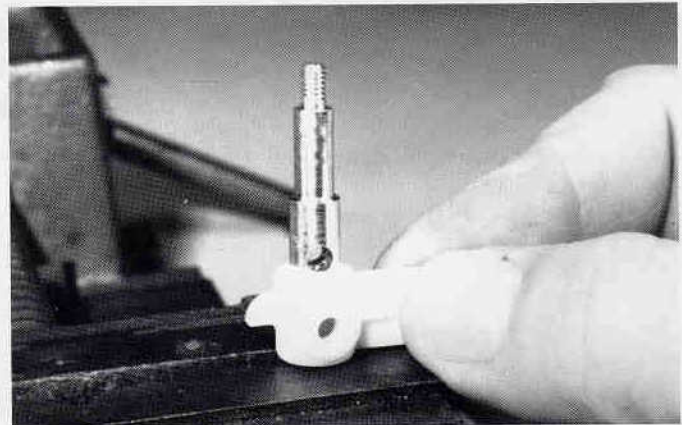


Fig. 3A

Fig. 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.

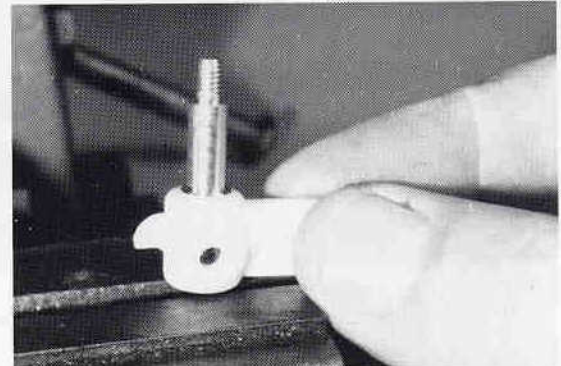


Fig. 4

□ **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.

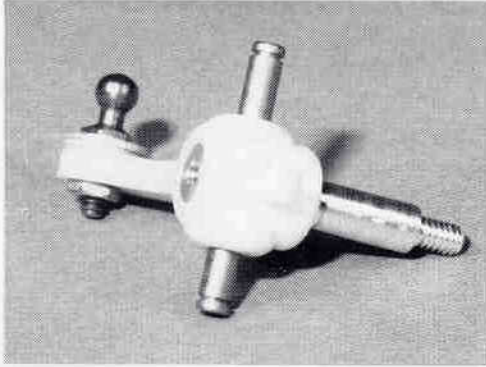

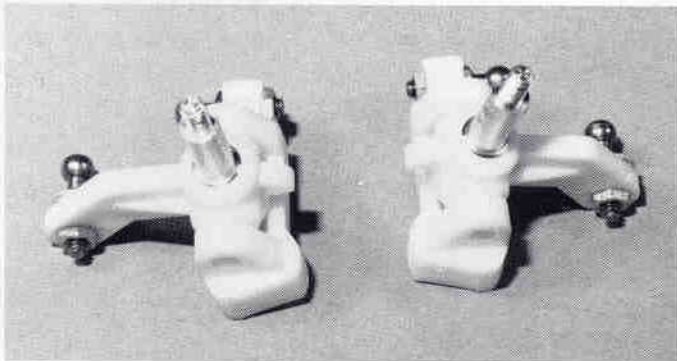


Fig. 5

 #6223

□ **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

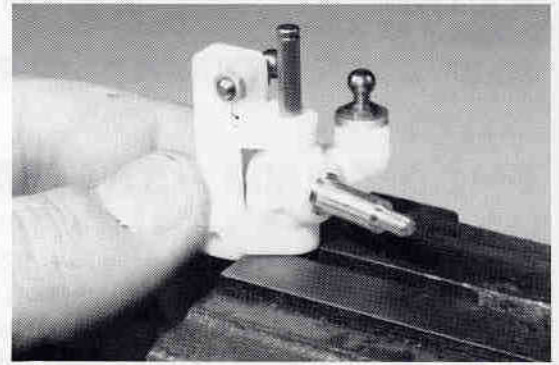


Fig. 7

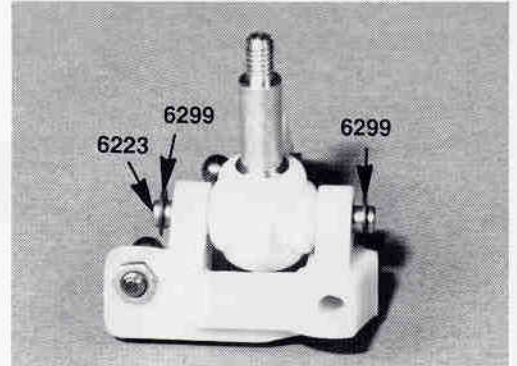
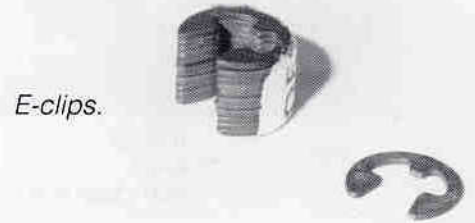


Fig. 7A



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.

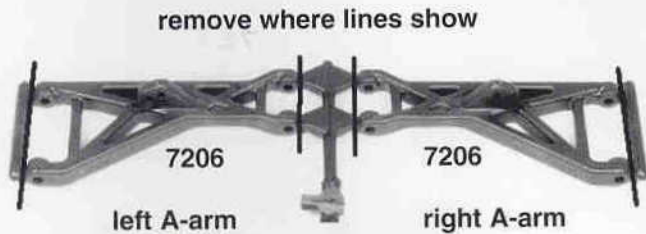


Fig. 10

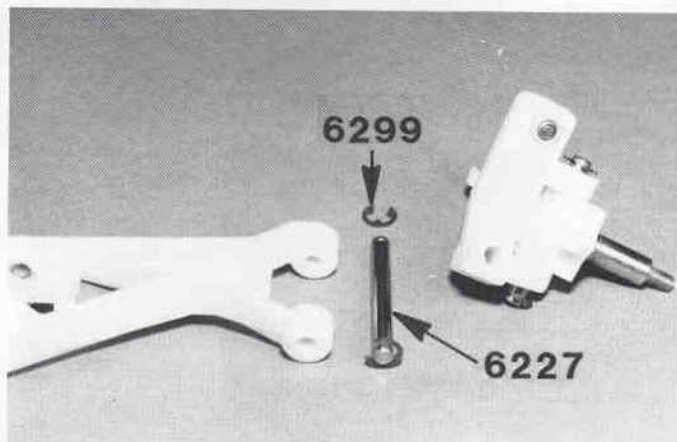


Fig. 11

▬ #6227

⊕ #6299
e-clip
1/8 shaft



#7206 left arm

Fig. 11A

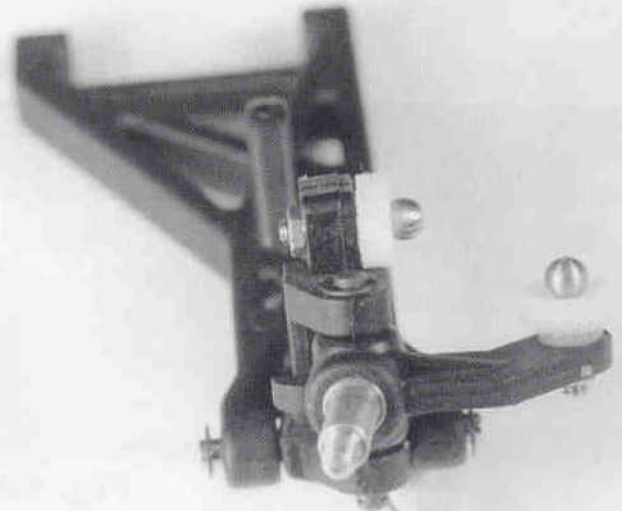


Fig. 11B

□ **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.

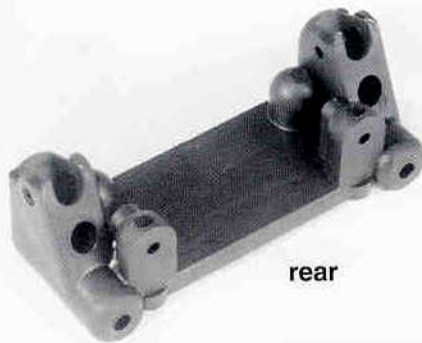


Fig. 12

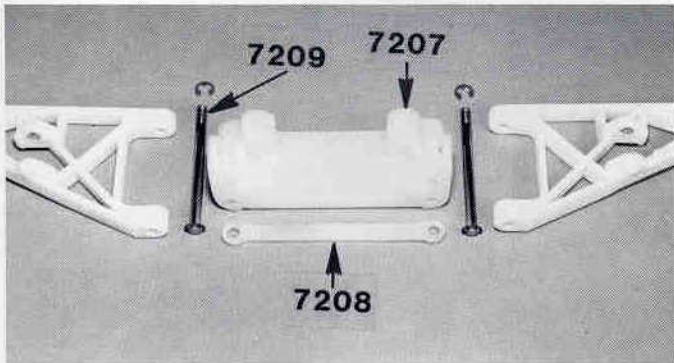


Fig. 13

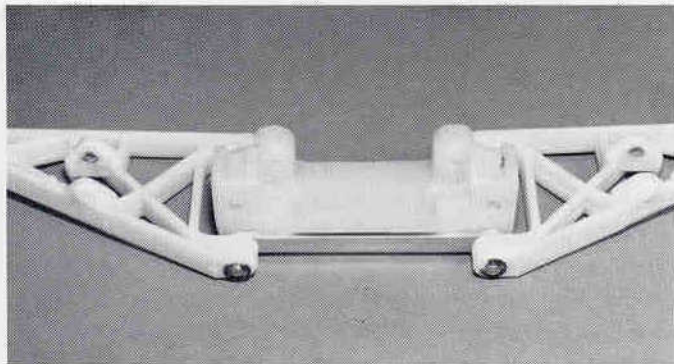


Fig. 13A

□ **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.

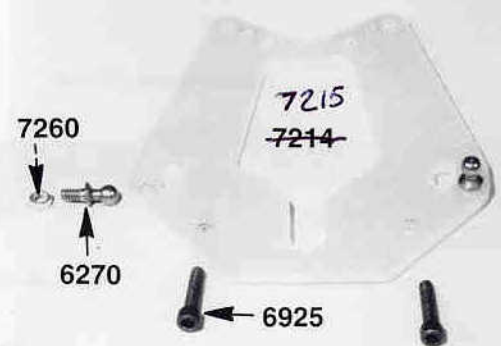
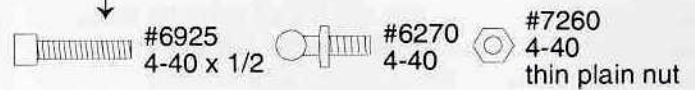


Fig. 14

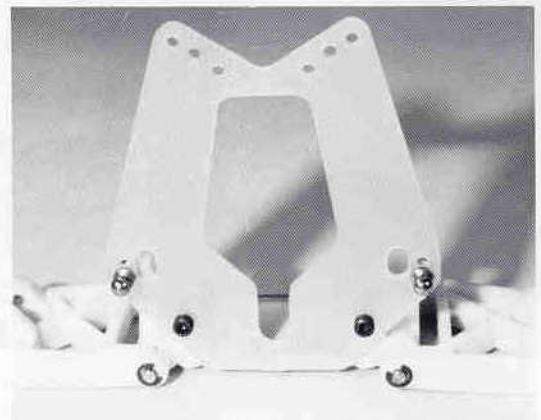


Fig. 15

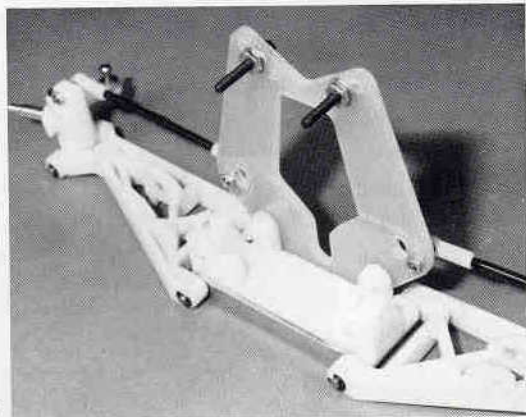


Fig. 16

#6295
4-40 nut
plain

#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.

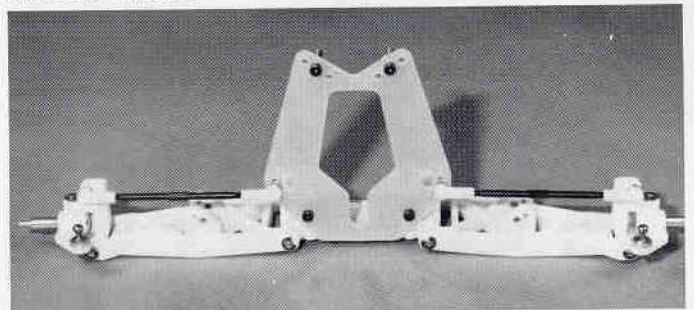
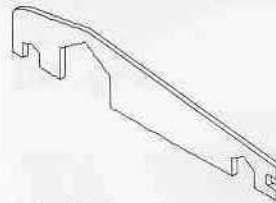


Fig. 18



#6955 shock/turnbuckle wrench, not to scale.

Fig. 17 In bag #6-14 is a molded tree with fourteen #6274 plastic ball ends; remove four of them. In bag #7-1 are two #7253 2.62" long turnbuckles. Thread the ball ends onto the turnbuckles to the dimensions below. The turnbuckles will screw on in different directions. **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 front camber.

In bag #6-14 is a foam strip with pre-cut round #6272 ball end dust covers. Remove four and place them over the ball ends on the strut and over the steering block ball ends. Do this every time you place a turnbuckle on a ball end.

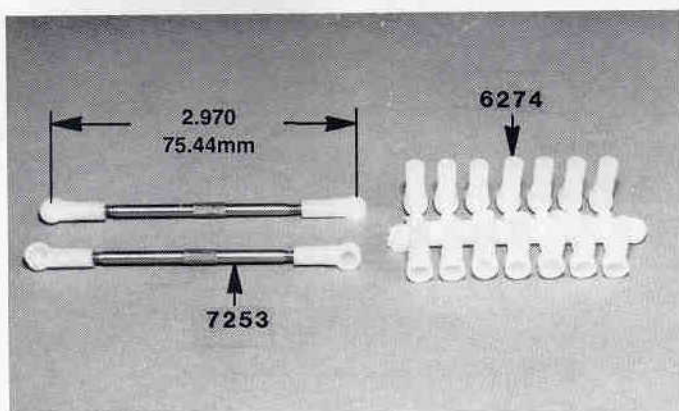


Fig. 17

#7253
2.62"
correct length after installing ball cups:

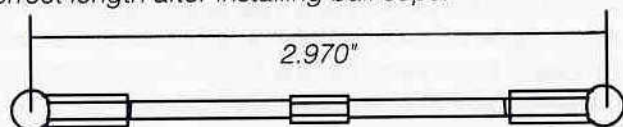


Fig. 19 The plastic ball end caps can be removed quite easily from the balls by holding the plastic ball end caps close to the ball, as shown, and twisting the plastic ball end cap off of the steel ball end as fig. 19 shows.

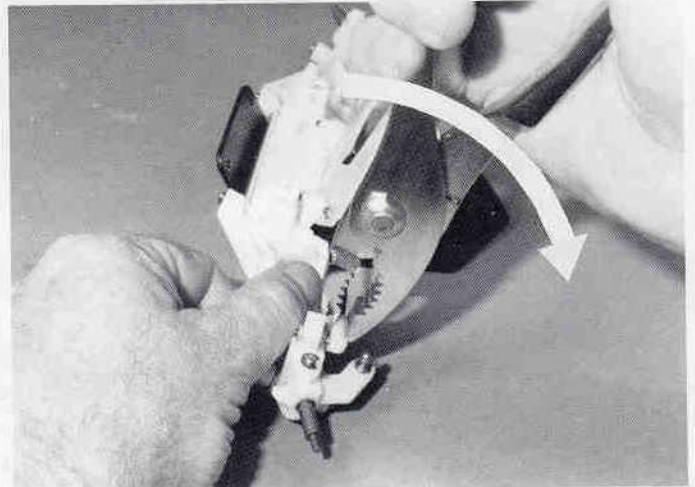


Fig. 19

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.

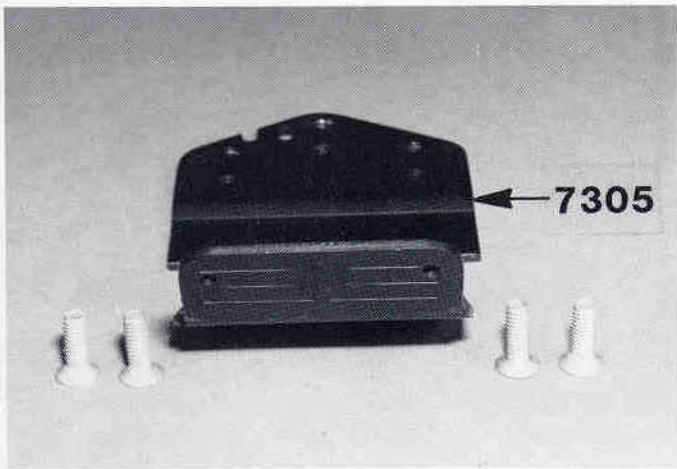


Fig. 20

#6280
8-32 x 1/2
aluminum

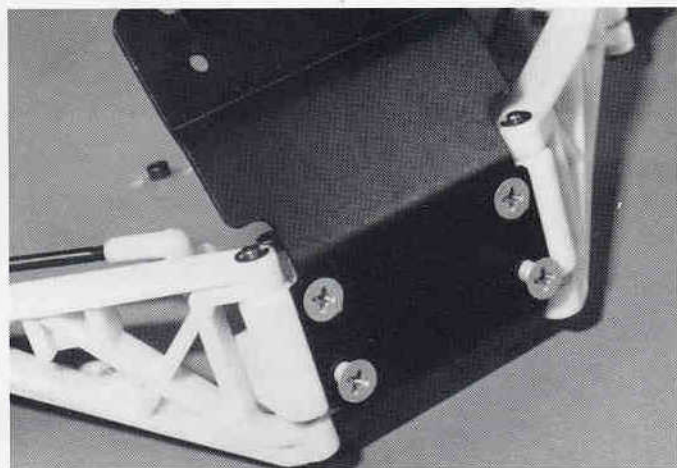


Fig. 21

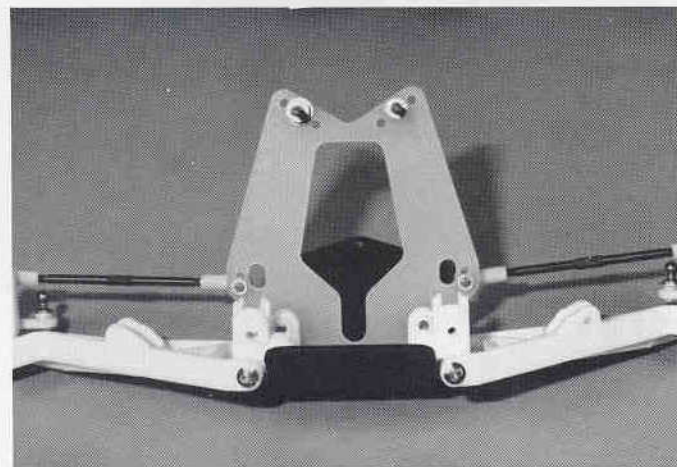
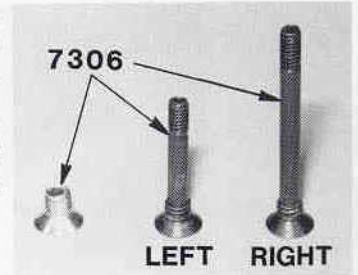


Fig. 21A

□ **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.



#6931
8-32 x 1/4
steel

#7306
7/8
special
left

#7306
1 3/8
special
right

Fig. 22

□ **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.

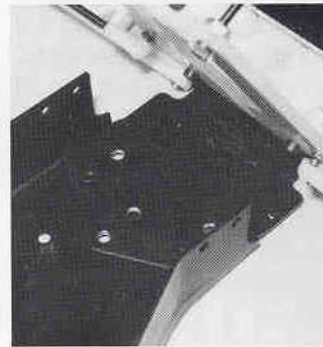
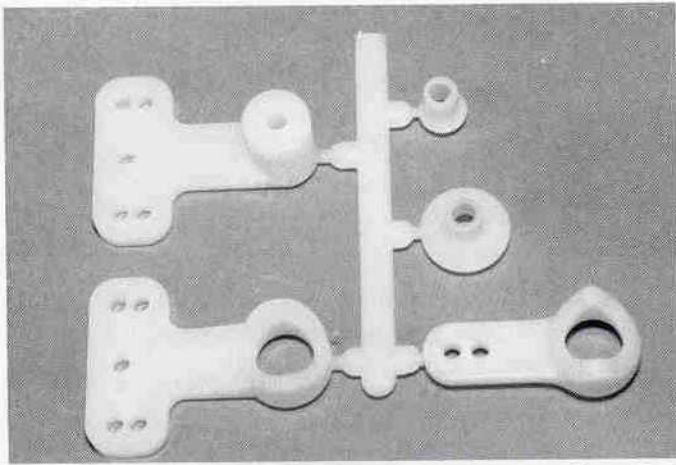


Fig. 23A



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 **Fig. 24**
bushing.
Middle right: lower bushing.
Bottom right: servo arm.

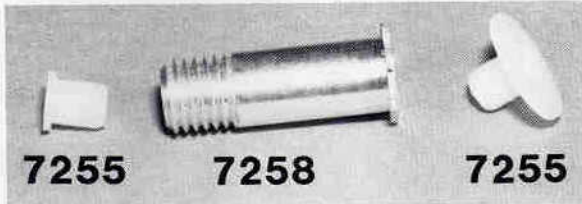


Fig. 25

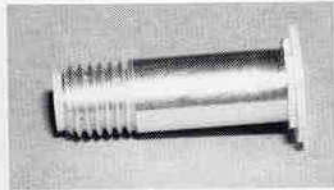


Fig. 26

□ **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

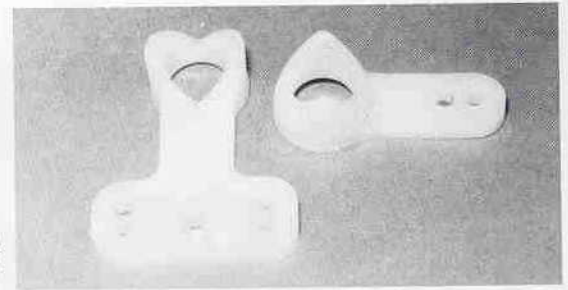
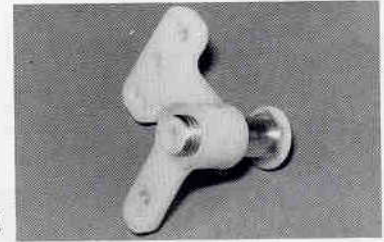


Fig. 28



□ **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 #6265 molded drag link and two #7253 2.62" turnbuckles. From bag #6-14 remove four #6274 plastic ball end cups. Thread the ball cups onto the two turnbuckles to the dimension shown below. **THESE DIMENSIONS ARE TO THE CENTER OF THE BALL CUP, NOT TO THE END OF EACH BALL CUP.** The cups should face the same direction.

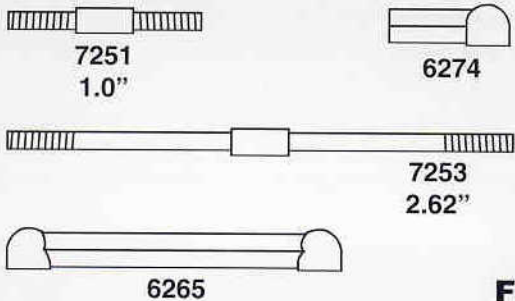


Fig. 32

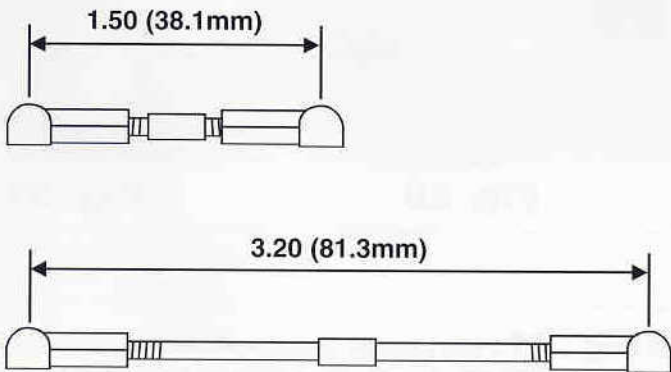


Fig. 33

□ **Fig. 34** Take the drag link and snap it onto the two ball ends 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 4-40/5-40 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 and be parallel when installed.

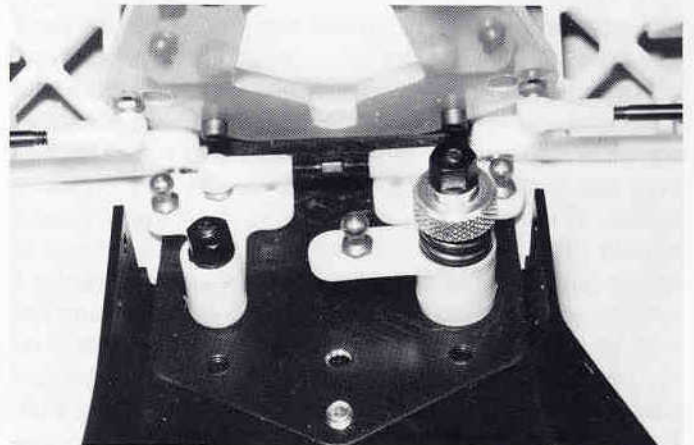


Fig. 35

□ **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.

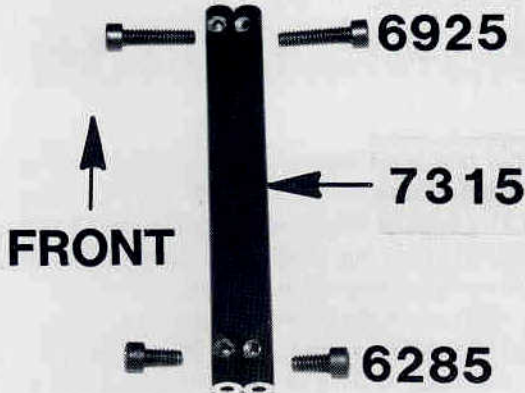


Fig. 36

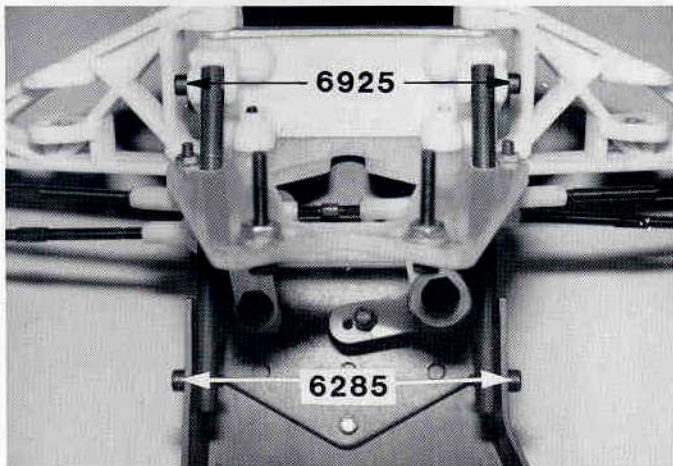


Fig. 37

□ #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.

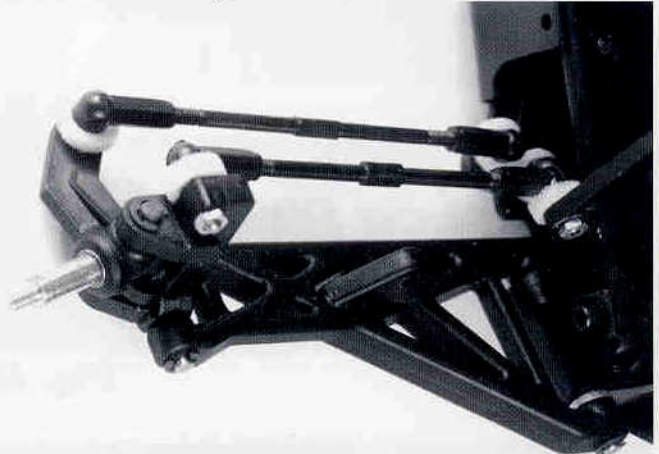


Fig. 38

□ **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. 40A.

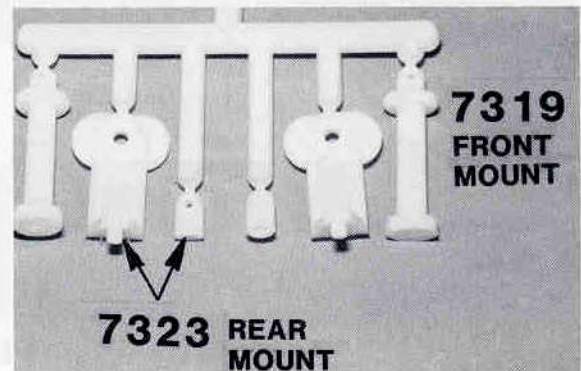


Fig. 39

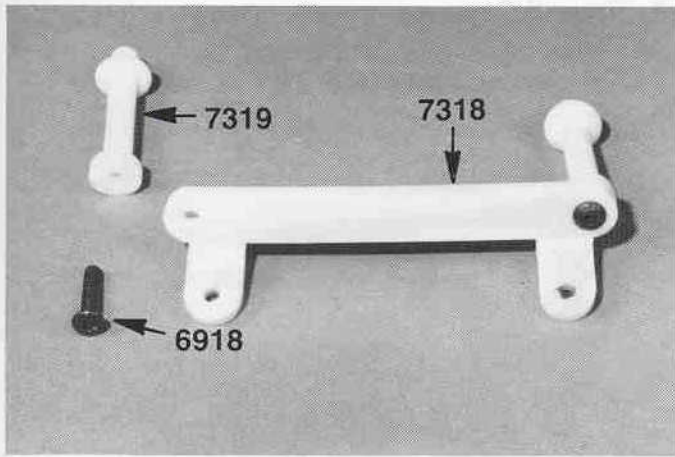


Fig. 40

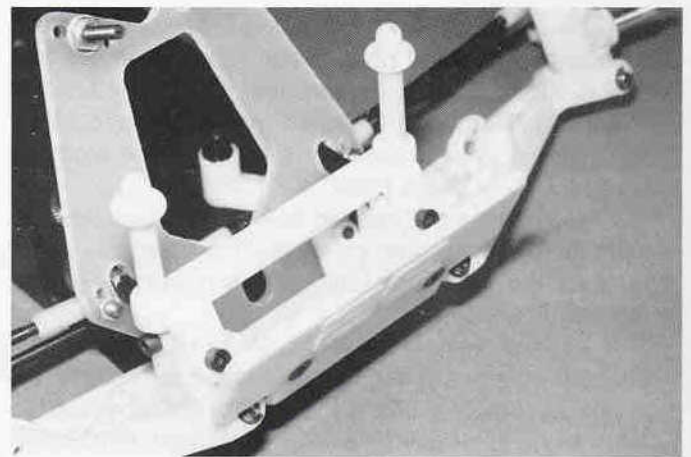


Fig. 42

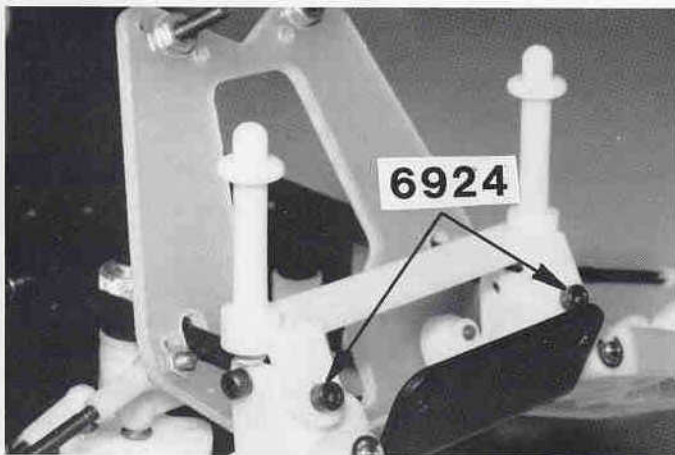


Fig. 40A

 #6918
 4-40 x 1/2
  #6924
 4-40 x 3/8

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.

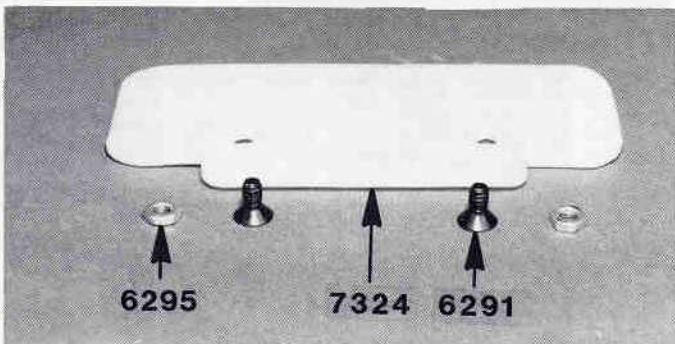
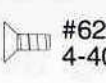
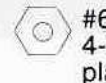


Fig. 41

 #6291
 4-40 x 1/4
  #6295
 4-40 nut
 plain

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.

□ **Fig. 43** (1) From bag A remove the #7664 diff gear and the bag containing the twelve #6581 3/32" carbide dif balls. Trim the flash from the center hole of the gear, if necessary. (2) Add a generous amount of #6591 diff lube to the gear ball holes and push in the twelve diff balls. (3) Insert one #6589 bearing or #6597 bushing into the center hole.

○ #6597 5/32" x 5/16" bushing
○ #6589 5/32" x 5/16" bearing

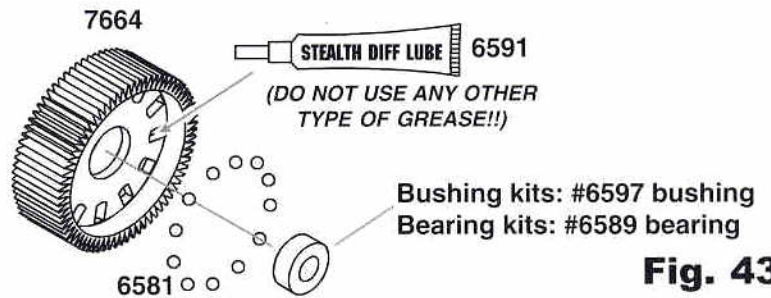


Fig. 43

□ **Fig. 44** (1) From bag A remove the #7668 left diff outdrive hub and the #6582 diff thrust spring. Push the spring into the outdrive. (2) Carefully trim the #6575 nylon T-nut from the parts tree so you do not cut off the "ears." Push the T-nut into the outdrive.

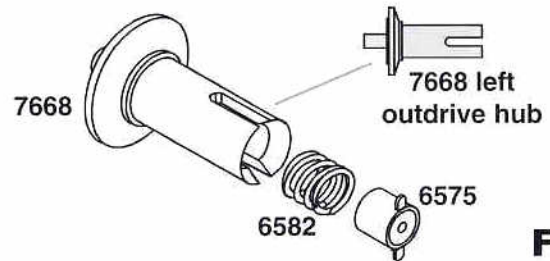


Fig. 44

□ **Fig. 45** (1) Remove the #6575 2-56 diff thrust bolt and two #6573 diff thrust washers and #6574 precision thrust balls shown from two different bags. (2) Locate your 5/64" Allen wrench from the #6950 tool bag. (3) Slide one washer onto the bolt. Apply a generous amount of #6588 black grease to the washer on the side facing away from the bolt head. (4) Stick six balls into the grease against the bolt and washer. Add the other washer. The grease will hold the balls in place during assembly. (5) Insert your Allen wrench into the diff bolt head and slide the assembly into the #7667 right outdrive hub, being careful not to lose any of the balls. (6) Insert the #6575 bolt cover.

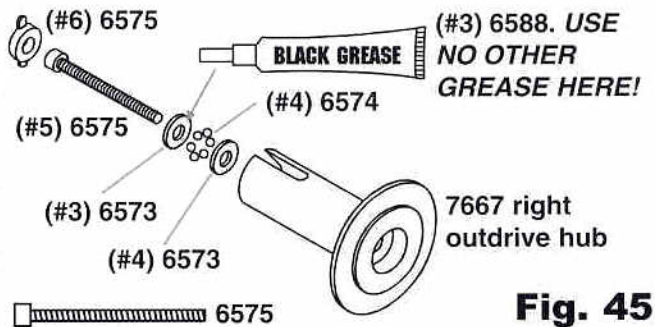


Fig. 45

□ **Figs. 46, 65 & 66** (1) Remove one #7666 diff drive ring from bag A. Remove your 5/32" x 5/16" #6589 bearing or #6597 bushing and install it into the right outdrive hub. (2) Add a light coat of #6591 diff lube to right hub where shown. (3) Place a #7666 dif drive ring and then the gear assembly on the hub. (4) Add a light coat of #6951 diff lube to left hub where shown. (5) Place a #7666 dif drive ring on the hub. (6) Push the #7668 left hub over the diff bolt and center the hub.

(7) Now tighten the diff bolt using the Allen wrench, fig. 65. Once you have lightly snugged the two halves together, turn the diff sideways and tighten the diff screw 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 of the T-nut moving closer to the bottom of the slot, 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 back off 1/4 of a turn.

Your diff should operate very smoothly, not free spinning, when turning the hubs in opposite directions. 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.

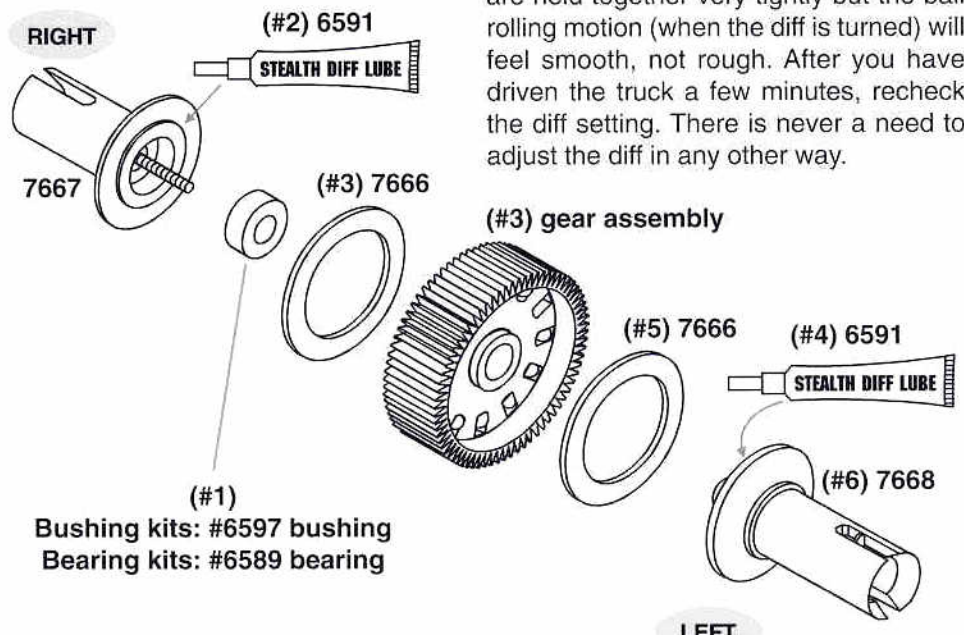


Fig. 46

○ #6597 5/32" x 5/16" bushing
○ #6589 5/32" x 5/16" bearing

Fig. 65

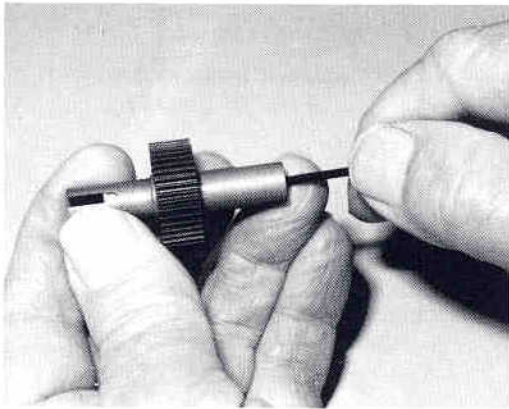
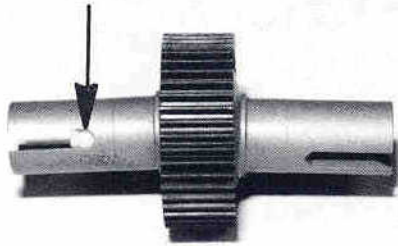


Fig. 66



□ **Fig. 67** open bag C and remove the #7661 left and right transmission halves. Remove any flashing from them.

For the ball bearing kits: From bag B remove four #6906 3/16" 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 two #6599 3/16" x 3/8" bushing, two #7659 ball bearings, and two #6598 3/8" x 5/8" bushings. Fig. 67 shows the bushings in the right case half. Install your bushings the same in both case halves.



Fig. 67

- | | | |
|--------------------------|--|---------------------|
| 6906, 3/16" x 3/8" | | 6599, 3/16" x 3/8" |
| ball bearing kits | | bushing kits |
| 6903, 3/5" x 5/8" | | 6598, 3/5" x 5/8" |

□ **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.



Fig. 68

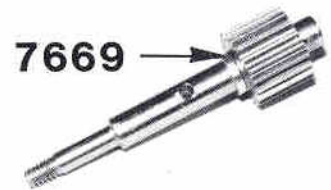
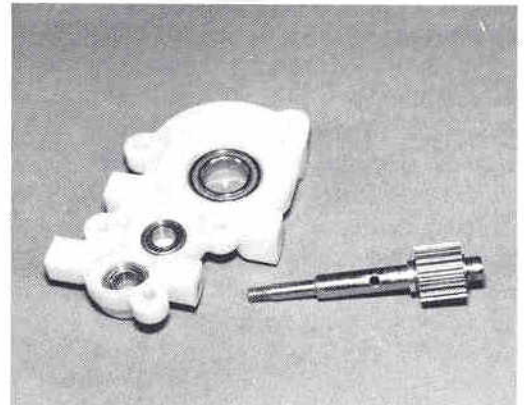


Fig. 69

□ **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

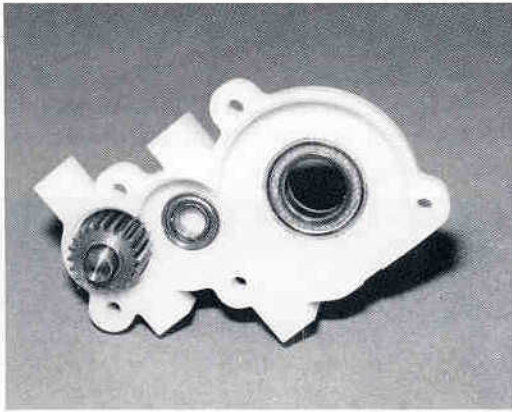


Fig. 71

□ **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.

— #7665
roll pin

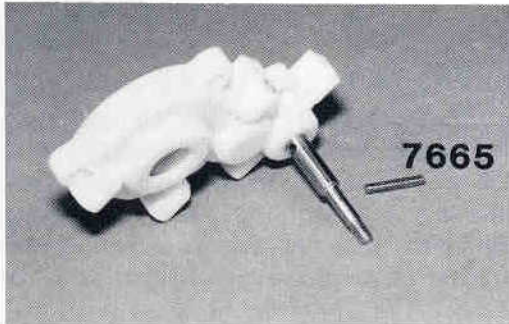


Fig. 72

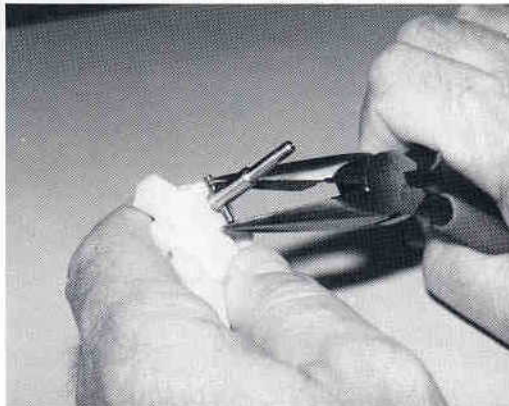
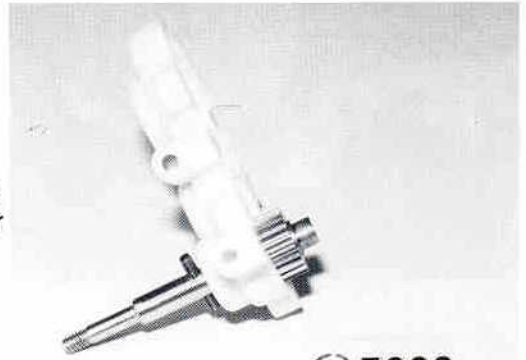


Fig. 73

□ **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



○ 7669

Fig. 74

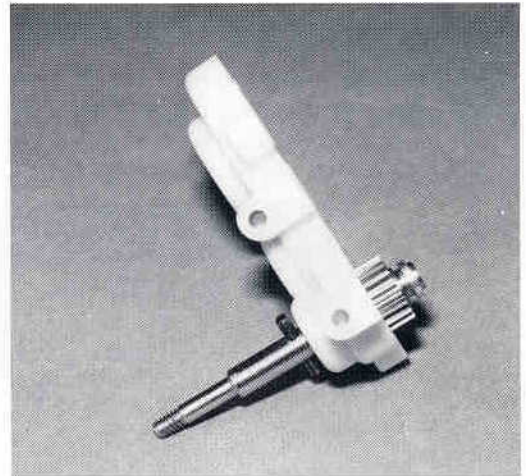


Fig. 75

□ **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.

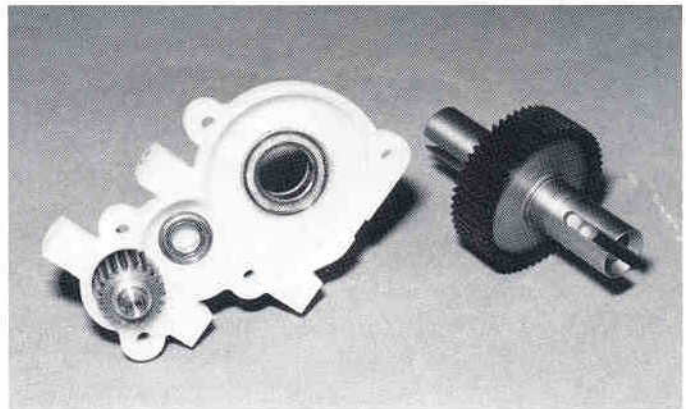


Fig. 76

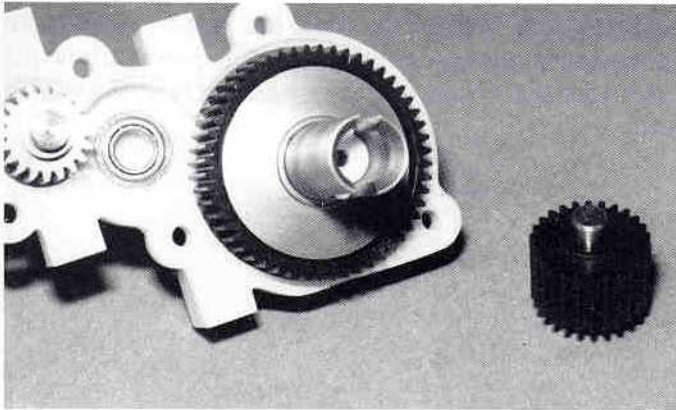


Fig. 77

□ **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.

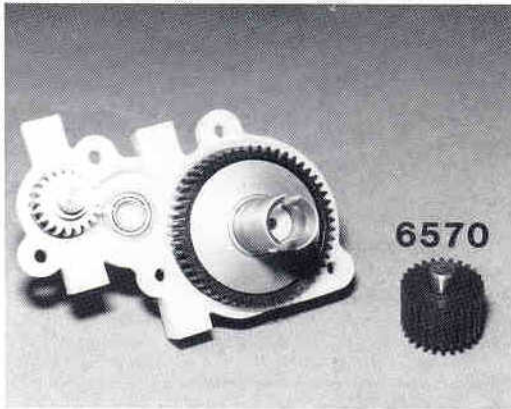


Fig. 78

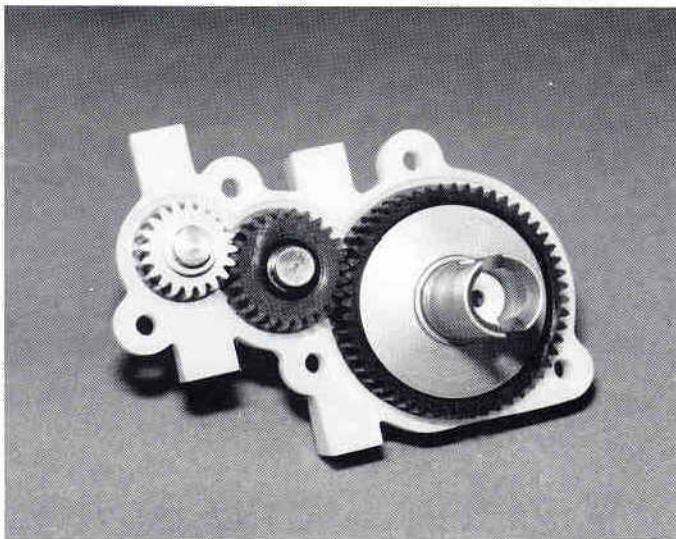
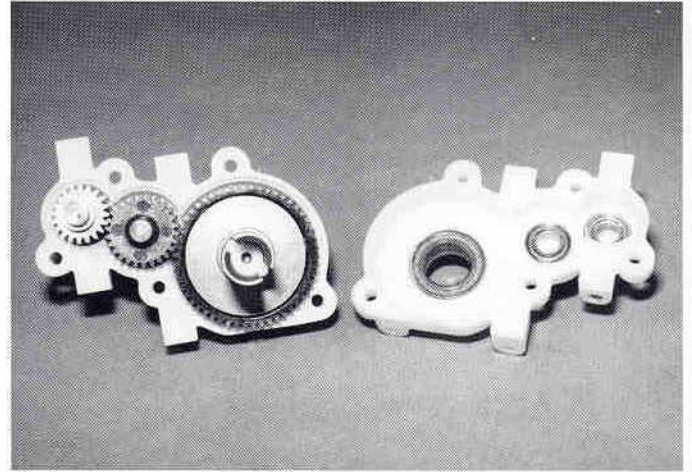


Fig. 79

□ **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.



↑ *(ball bearing kits)* ↑ **Fig. 80**
right hand case left hand case

□ **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 five screws but don't overtighten them. Now check to see if all the gears turn freely by spinning the diff assembly.

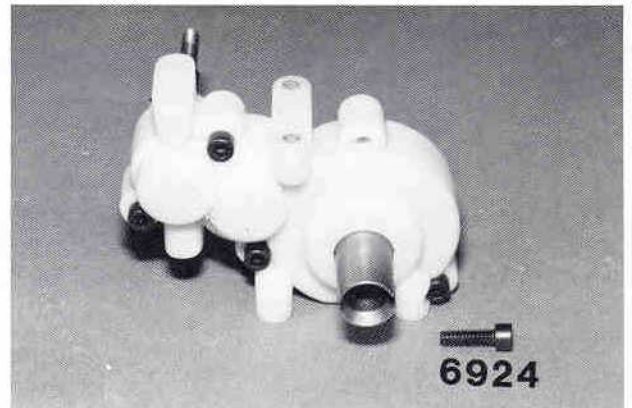


Fig. 81

□ #6924
4-40 x 3/8

□ **Figs. 82, 83 & 84** (1) Now we are going to start assembling the Associated Torque Control clutch and disc brake assembly. From bag E remove the #9251 inner torque control hub (with the slot on the back side as shown in fig. 82). (2) Now open up bag 7-13, 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) From bag 7-13 remove the #7553 brake disc, 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.

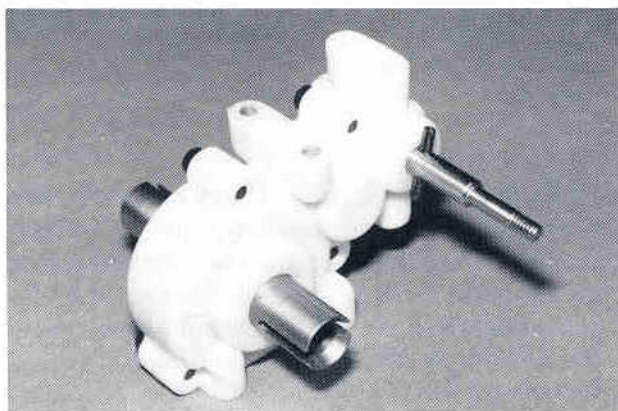


Fig. 85

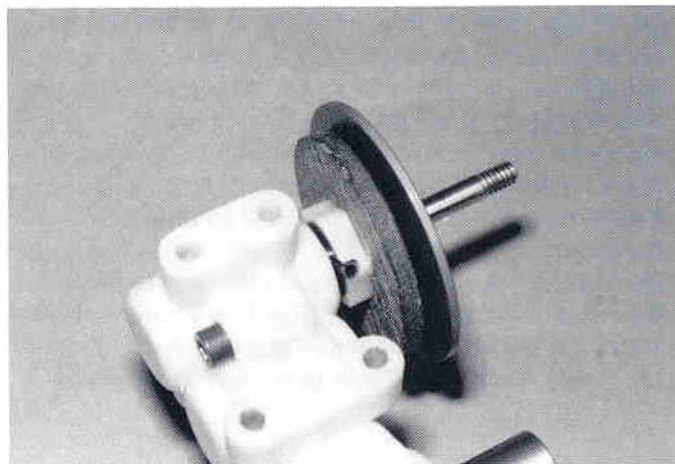


Fig. 86

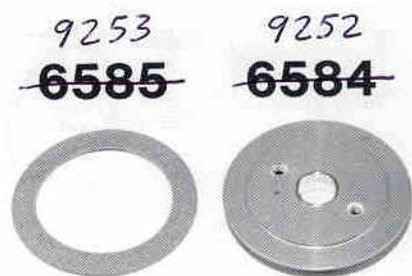


Fig. 87

□ **Figs. 87 & 88**

Install the #9253 clutch disc (above left) from bag F to the inside of the #9252 outer Torque Control Hub from bag F.



Fig. 88

- **Fig. 89** (1) Add the #9251 inner hub (the assembly of fig. 84) to the shaft, lining up the notch with the roll pin. (2) Install the #9253 clutch disc into the inner hub, then add the #9252 outer hub and #6599 bushing. (3) Install parts in the following order: #6594 (thin silver), #6594 (thick gold), #6594 (thin silver), #6587 black spring, #6629 locknut. (4) Orient the #7663 spur gear side facing out as shown and mount to #9252 with two #6568 screws. (5) Tighten the #6629 locknut so the end of the shaft is flush with the end of the nut. This is a good initial adjustment. For further info on the torque clutch, see the tuning section on page 16 of the Engine Installation Manual.

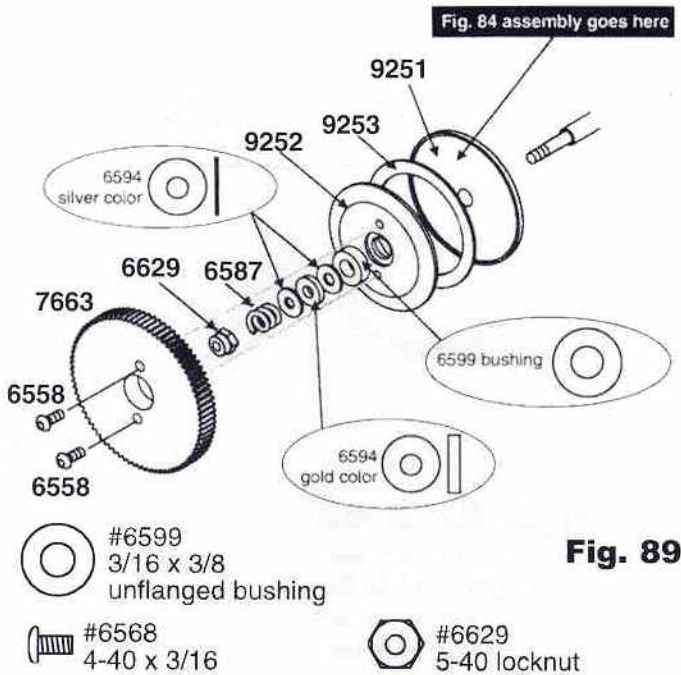


Fig. 89

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

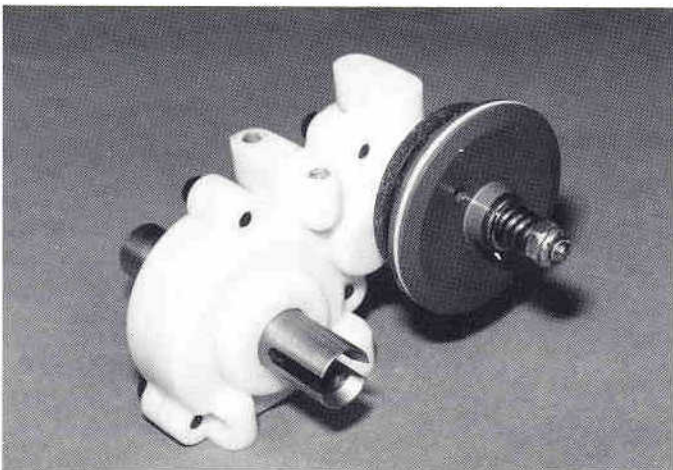


Fig. 90

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

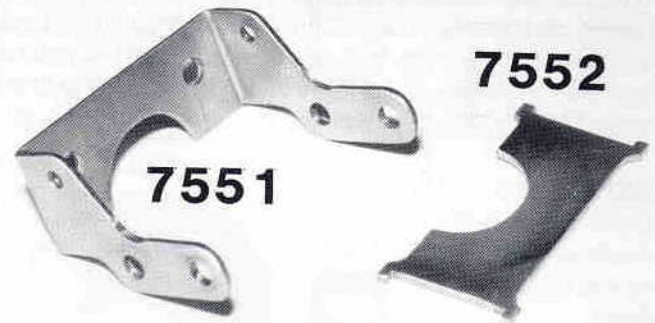


Fig. 91

- **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.

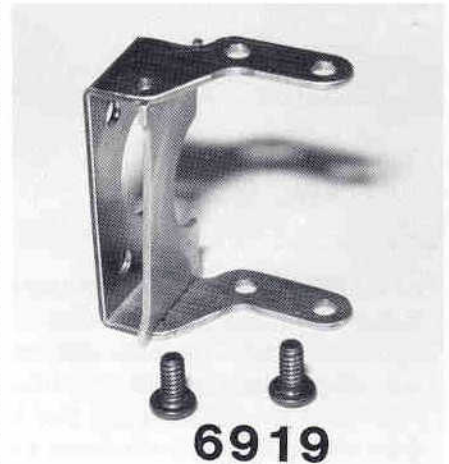


Fig. 92

- #6919 4-40 x 5/16

- **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. The bottom of the brake bracket will be secured when we bolt the tranny to the chassis.

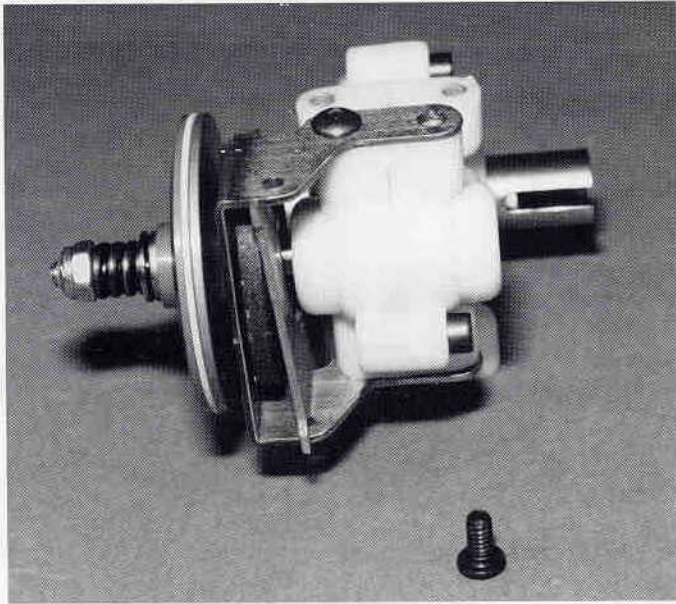


Fig. 93

#6919
4-40 x 5/16

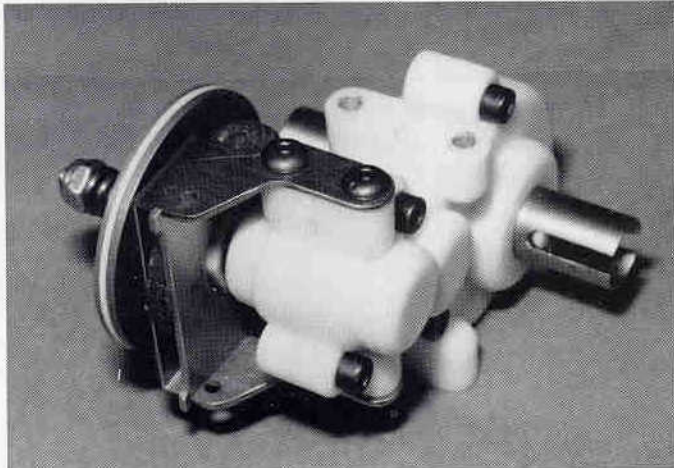


Fig. 94

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.

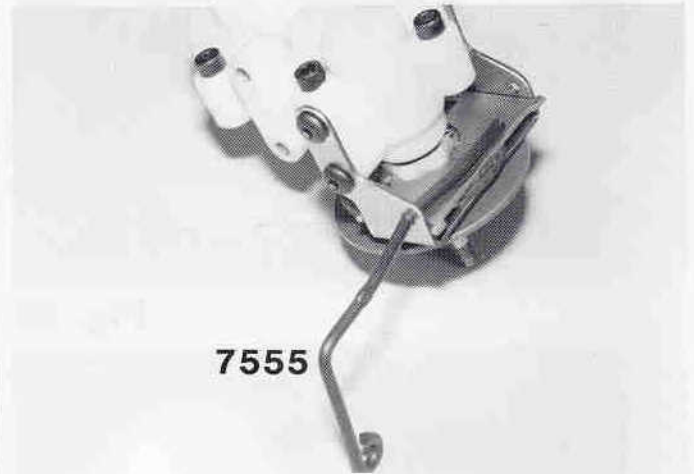


Fig. 95

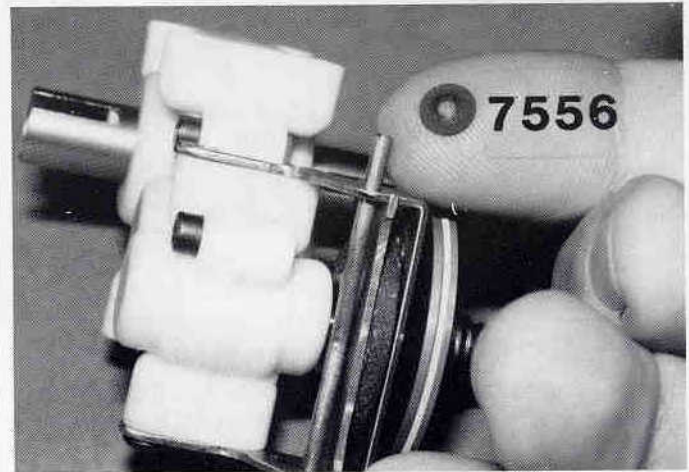


Fig. 96

□ **Figs. 95, 96 & 97** From bag 7-13 remove the #7555 disk brake cam and the #7556 brake cam clip. **WARNING!** There is another brake cam clip in bag 7-15. **DO NOT** get the two mixed up. Check the end of the disk brake cam for burrs and remove if found. This will prevent breakage of the brake cam clip during installation. Push the disk brake cam through the hole on the top side of the bracket and then through the hole in the lower end of the bracket. Round the bottom edge of the brake cam.

#7556
brake cam clip



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, flat side out. Your installed spur gear should look like fig. 99 when properly installed and secured.

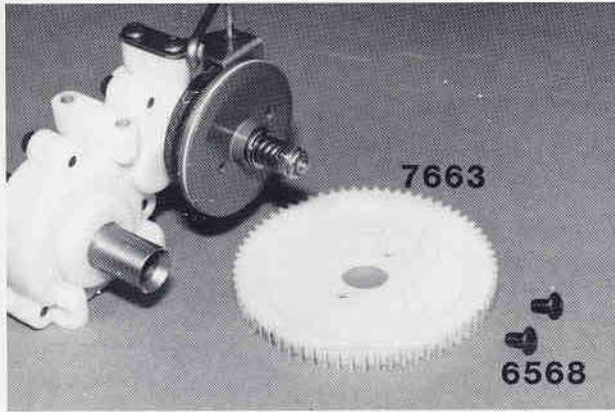


Fig. 98

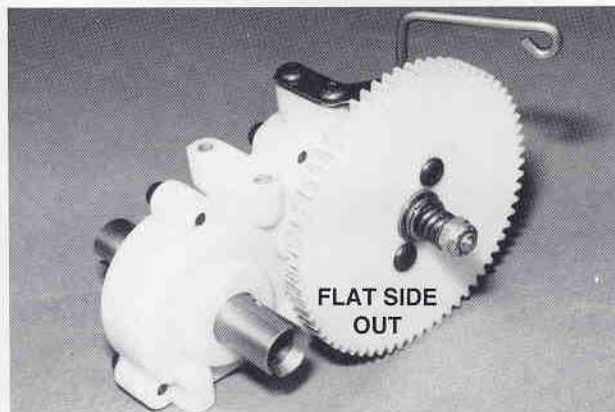


Fig. 99

□ **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.

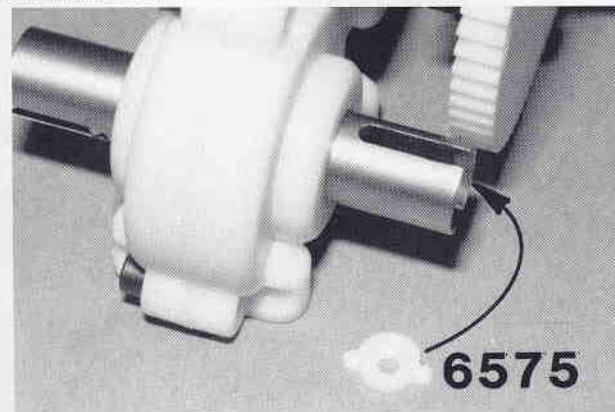


Fig. 100

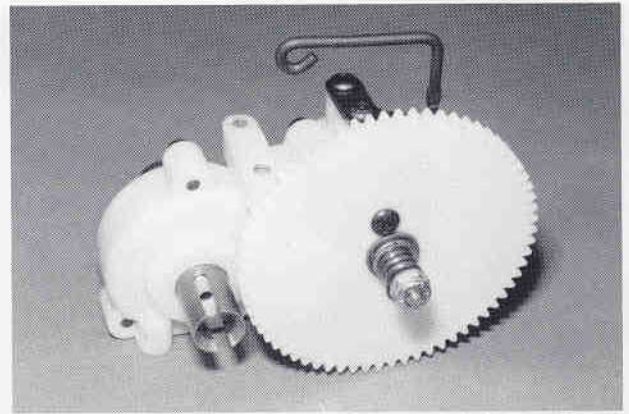


Fig. 101

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.

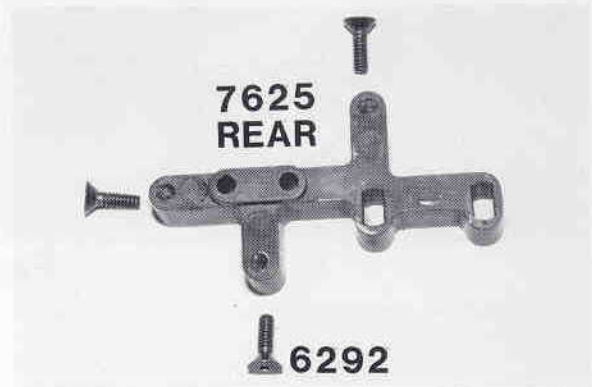


Fig. 102

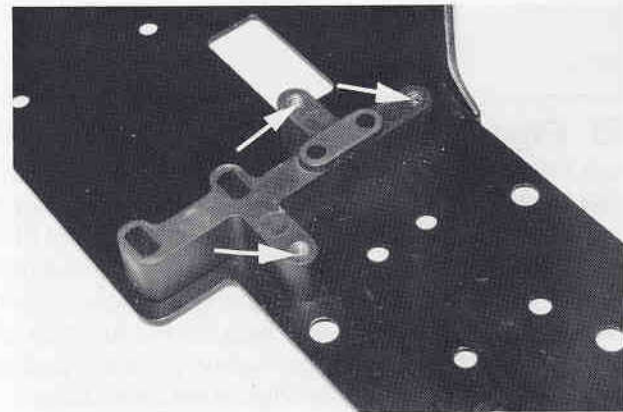
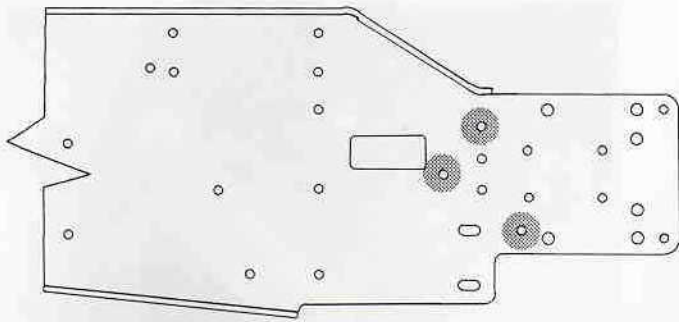
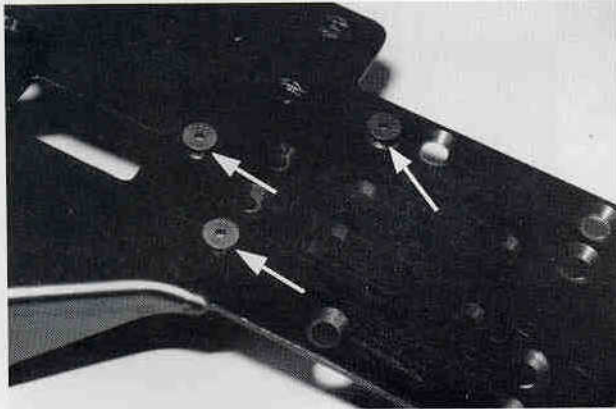


Fig. 103




Mounting hole locations
(TOP VIEW SHOWN)

Fig. 104



(BOTTOM VIEW SHOWN)

Fig. 104A

 #6292
4-40 x 3/8

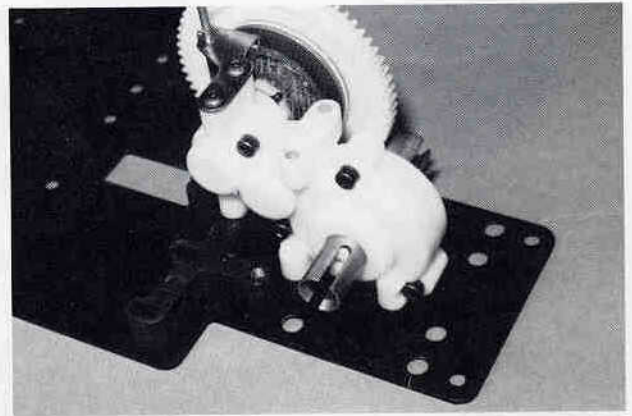
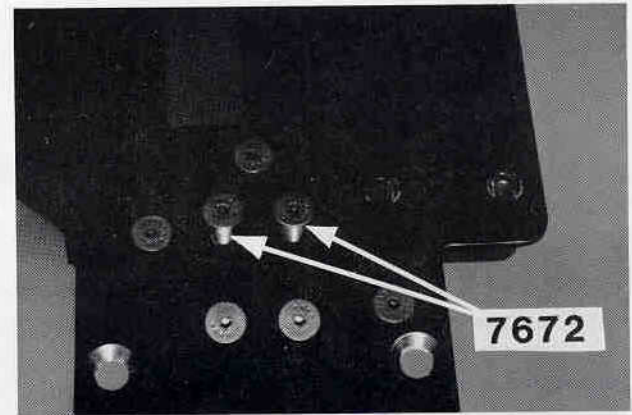


Fig. 106





 #7672
4-40 x 7/8  #7673
4-40 x 5/16

Fig. 107

□ **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

□ **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

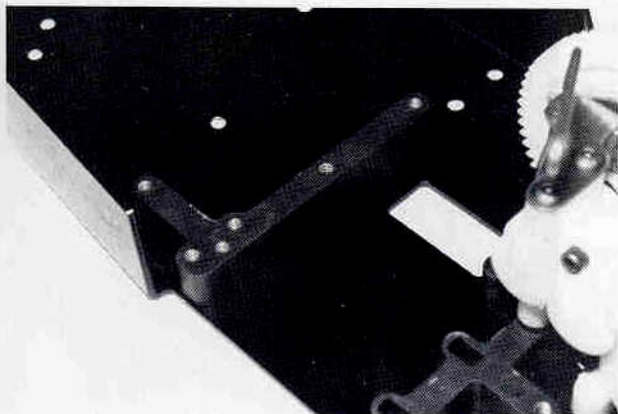


Fig. 109

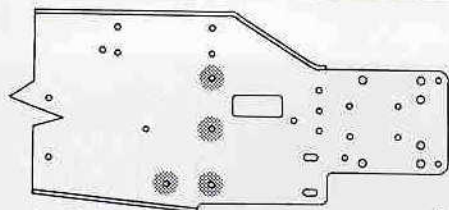


Fig. 109A

Mounting hole locations
(TOP VIEW SHOWN)

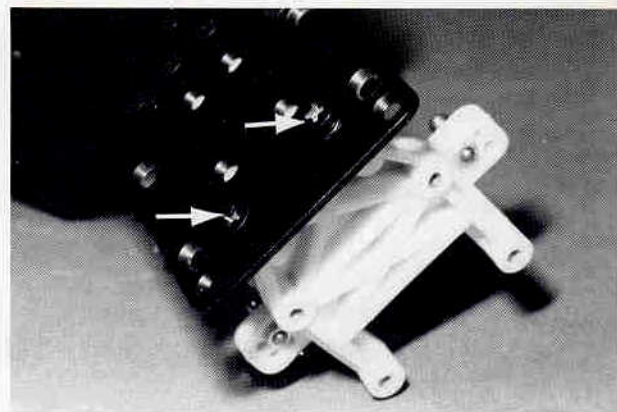


Fig. 111

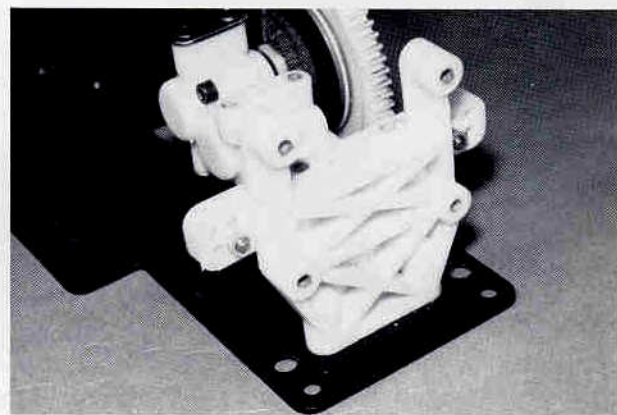


Fig. 112

❑ **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.

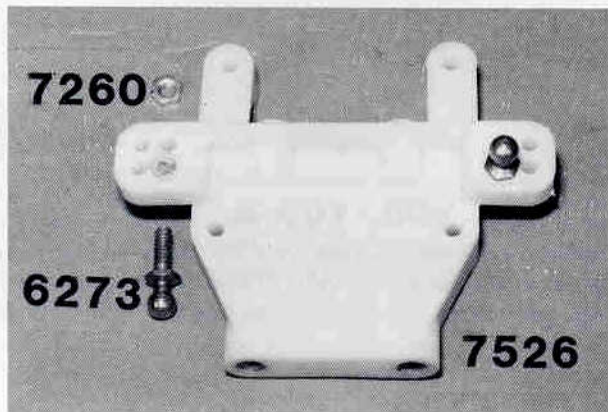


Fig. 110

#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

❑ **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.

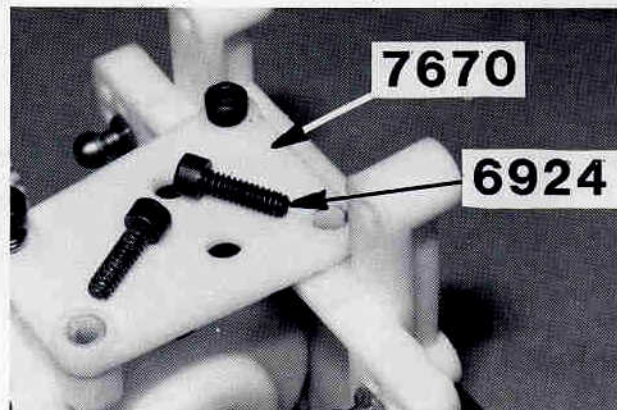


Fig. 113

#6924
4-40 x 3/8

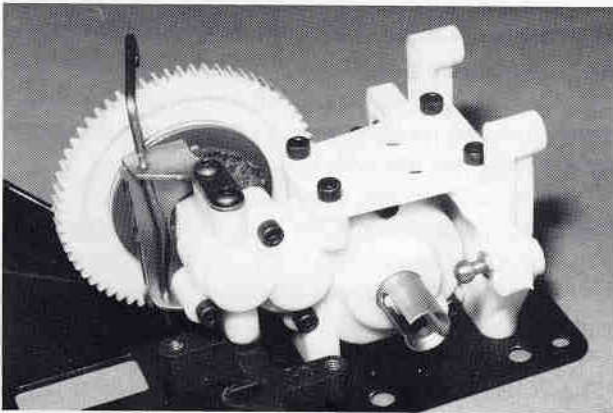


Fig. 114

□ **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.

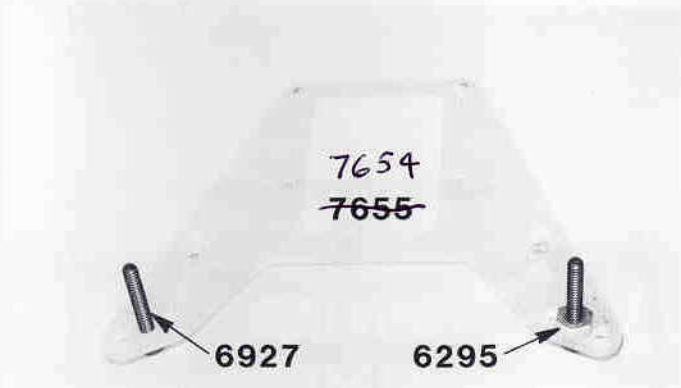


Fig. 115

#6927 4-40 x 3/4" SHCScrew
#6295 4-40 nut plain

□ **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" BCSScrews 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. **(NOTE: Fig. 119 shows socket head screws; they have been replaced by button head screws.)**

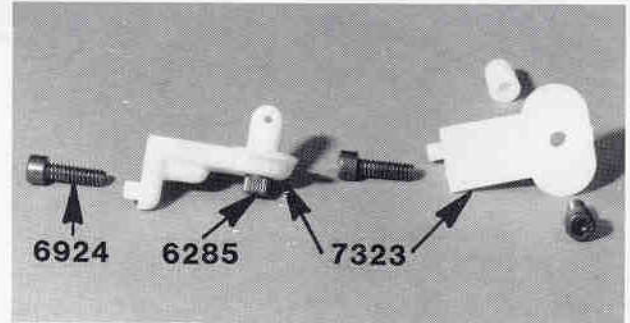


Fig. 116

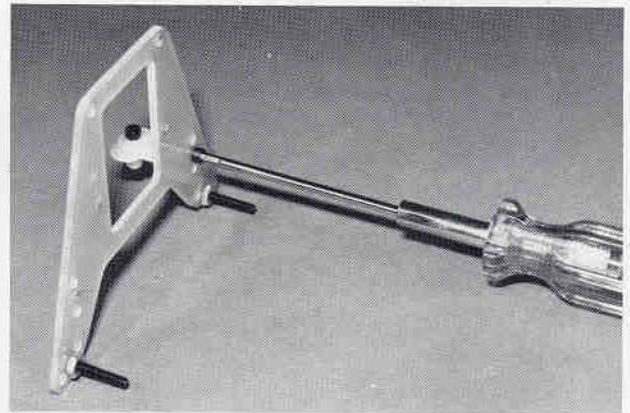


Fig. 117

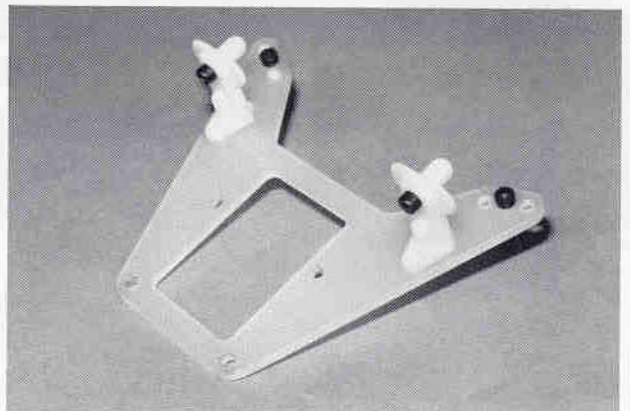
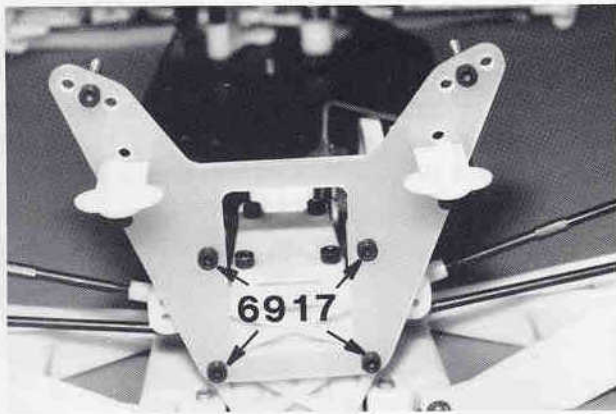


Fig. 118

#6285 4-40 x 1/4" SHCScrew
#6924 4-40 x 3/8" SHCScrew



#6917
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.

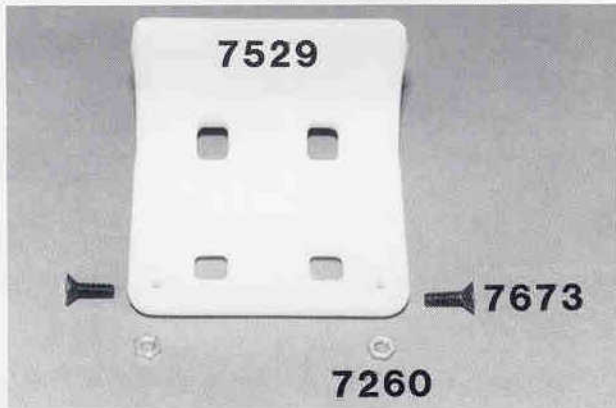
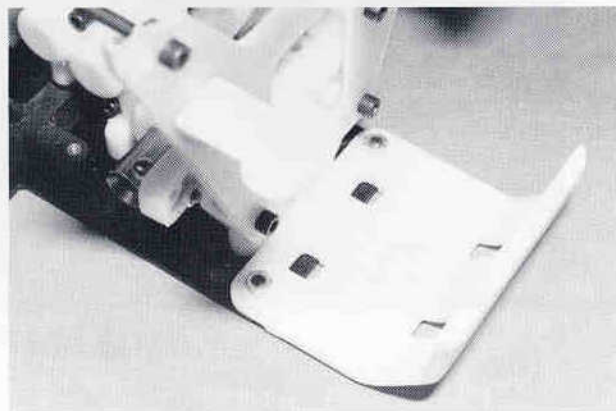


Fig. 120



#7673 4-40 x 5/16 #7260 4-40 thin plain nut

Fig. 121

□ **Figs. 122, 123 & 124** (1) Take the #7206 rear suspension arms from the suspension arm bag. Fig. 122 shows you which arm is left and where to separate the arms from the molding tree. Pull the arms off with pliers, then any runner bits with your hobby knife.

(2) Now open bag #7-8 and remove the #7651 3 deg. rear suspension mounts, 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.

(4) We will assemble the right side mount and arm first. Take the #7206 right rear suspension arm and slide one of the #7356 inner rear hinge pins through the arm; make sure that the arm can swing freely. (5) Now remove the pin and reinstall it with the mount in between the mounting points on the rear arm. The pin should be tight in the rear mount. *Make sure that you connect the right hand arm to the right hand mount.* (6) Install a #6299 1/8" E-clip on each end of the #7356 hinge pin. Your complete arm and mount assembly will have the beveled edge of the mount pointing forward and the three shock mounting holes towards the rear. The beveled edge gives the spur gear clearance, as shown. (7) Now repeat the same steps for the left arm and mount parts.

remove where lines show

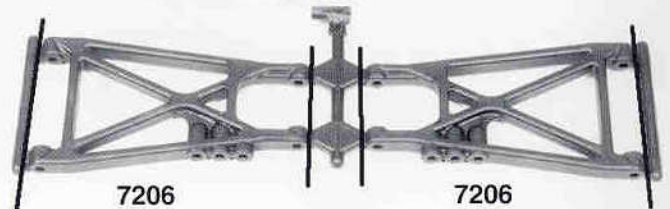


Fig. 122

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

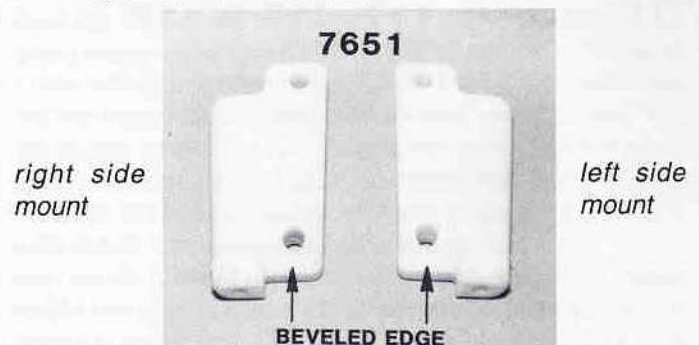


Fig. 123

#6299 e-clip 1/8 shaft #7356 2.084
E-clips are found in bags #7-1, #7-8, #7-9 and #7-10.

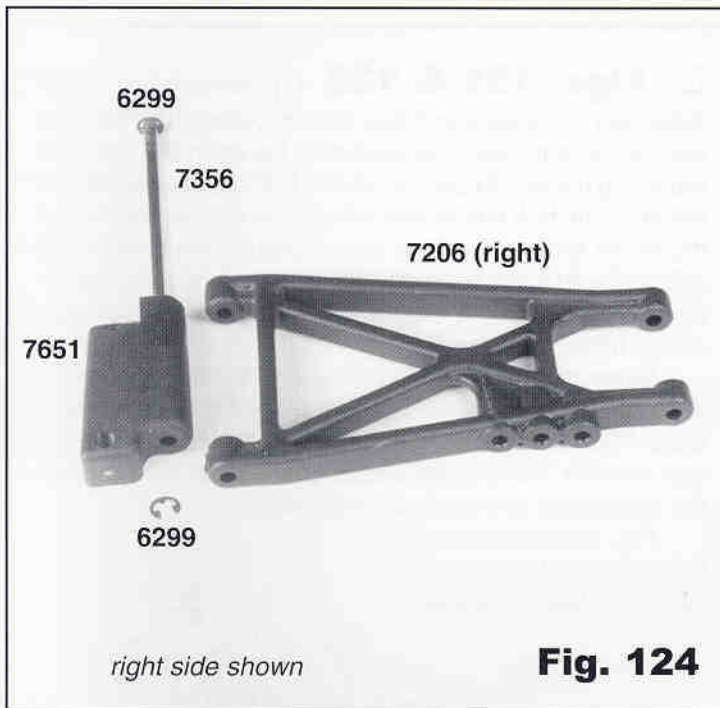


Fig. 124

□ **Figs. 125 & 126** Remove two #7658 3/8" screws and two #6280 1/2" screws from bag #7-8. Turn the beveled edge of the mount towards the front as shown. Mount your right suspension arm assembly to the chassis using two different screws in the locations shown in fig. 125. Fig. 126 shows the right arm assembly mounted to the chassis. Go ahead and mount the left suspension arm parts.

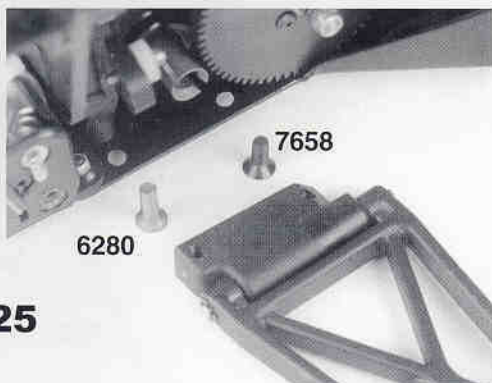


Fig. 125

[Photos include parts to be added later.]

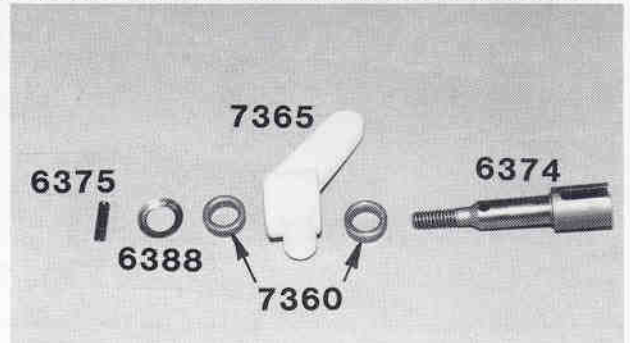


Fig. 126



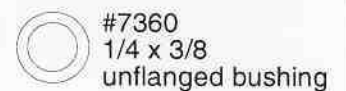
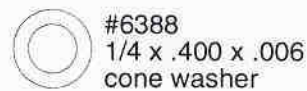
Figs. 127-135 are the rear suspension instructions for the bushing kits.
For the bearing kits, skip ahead to fig. 136.

□ **Figs. 127, 128 & 129** (1) In bag #7-8 you will find the two #7365 0° 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 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.



(bushing kits)

Fig. 127



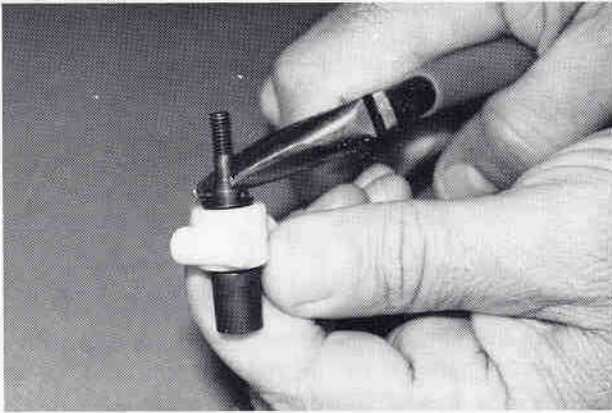


Fig. 128

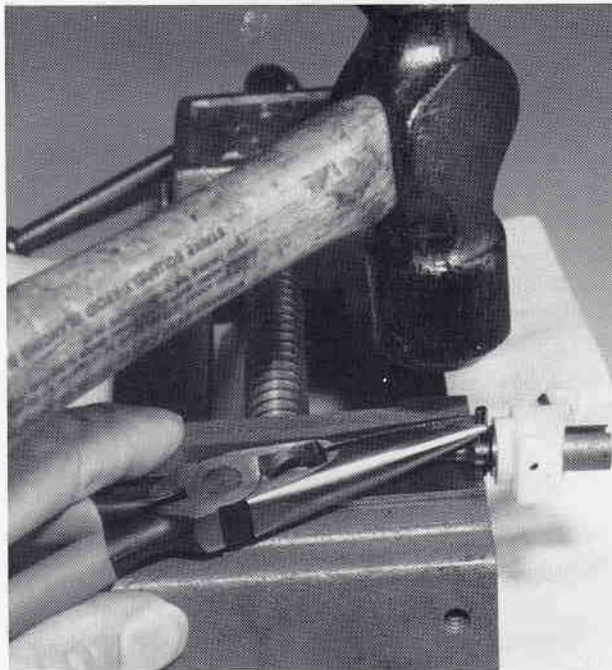


Fig. 129

□ **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) Remove two #7357 outer rear hinge pins and four #6299 E-clips. (2) Place the hub carrier and rear axle assembly between the rear arm mounting points. (3) Get the #6466 1/8" spacer and place it between the hub carrier and the arm, to the rear of the hub carrier as shown. The hub carrier should swing freely. (4) Add an E-clip to the hinge pin and slide the hinge pin through all. (5) Add another E-clip to the end of the hinge pin and do the other side.

By placing the spacer to the rear of the hub carrier you are moving the hub carrier forward, shortening the wheelbase. This bears the brunt of the weight and gives you more rear traction. Putting the spacer to the front will lengthen the wheelbase and give you more steering.

Fig. 132 shows the left hub carrier/stub axle assembly installed on the arm.

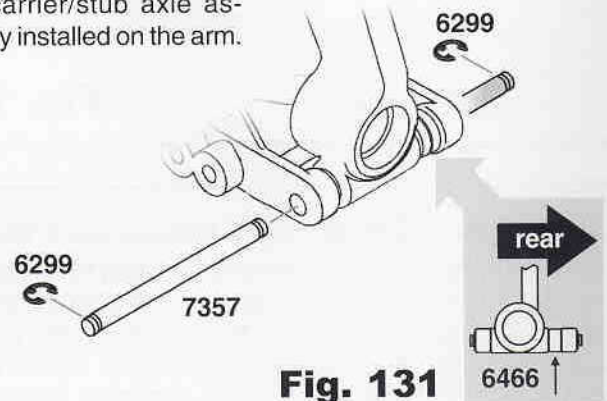


Fig. 131

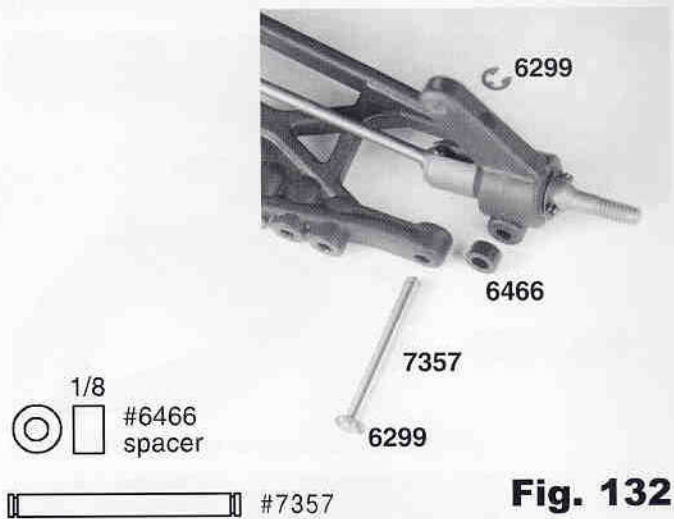


Fig. 132

□ **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.

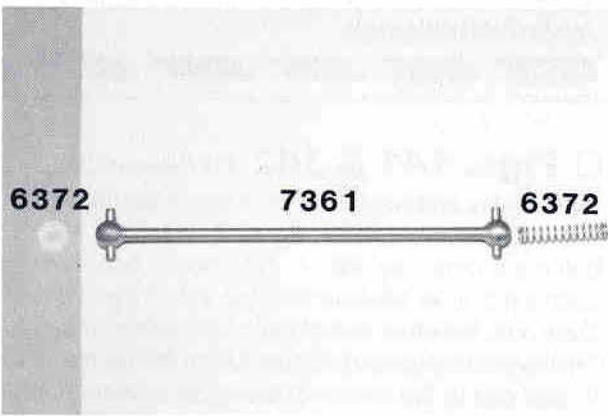


Fig. 133

 #6372 spacer

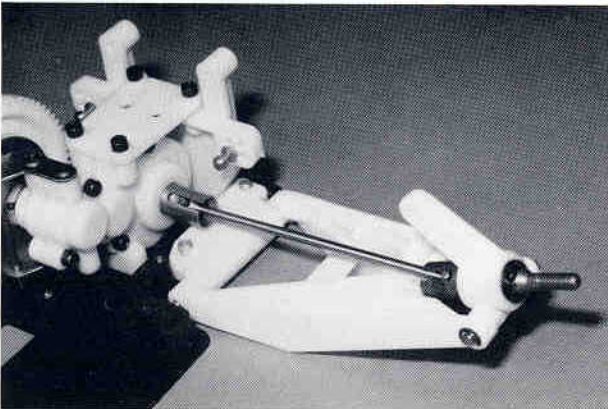


Fig. 134

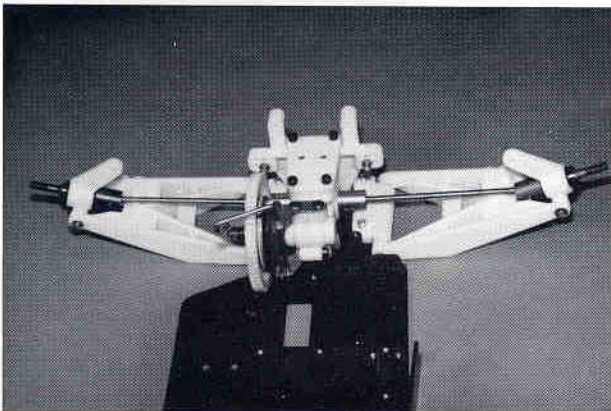


Fig. 135

- Fig. 136** (1) Spread some Associated #6588 black grease inside the axle hole where shown, then on the coupling, and insert the coupling into the axle. (2) Slide the axle into the bone, aligning the cross holes. (3) Insert the cross pin, making sure it is evenly spaced on both sides of the bone. (4) Add the MIP thread lock to the set screw. Angle and turn the MIP CVD™ (Constant Velocity Drive™) so the set screw can be screwed in with the supplied Allen wrench. (5) Assemble the other axle.

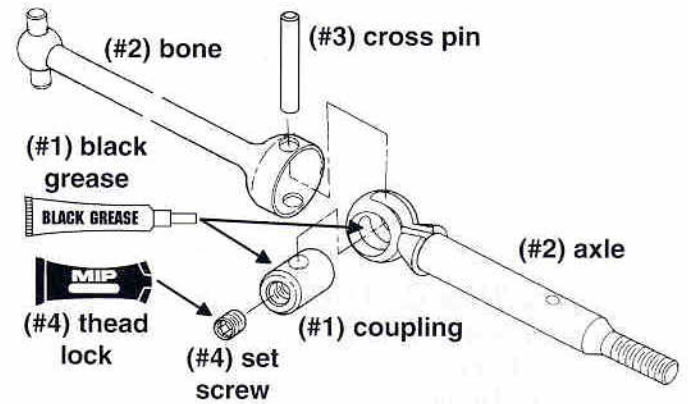


Fig. 136

- Fig. 137** (1) Slide two #7368 shims onto the axle. (2) Slide one #6906 unflanged bearing onto the axle. (3) Slide the #7377 spacer into the #7365 hub carrier. (4) Slide the #7365 hub carrier onto the axle and bearing.

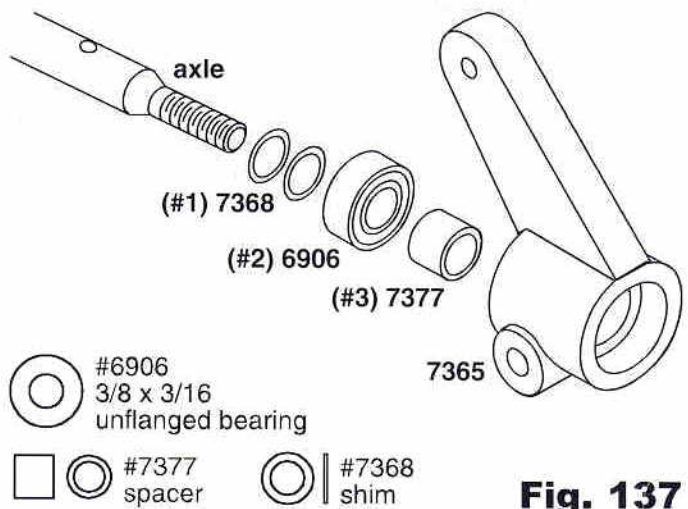


Fig. 137

- Fig. 138** (1) Slide one #6906 unflanged bearing onto the axle, then three #7368 shims. (2) Install the #7369 spring pin with your needlenose pliers, which will hold all the shims against the bearing.

Figs. 136-140 are the rear suspension instructions for the bearing kits.

For the bushing kits, skip ahead to fig. 141.

All kits continue with the instructions below until otherwise indicated.

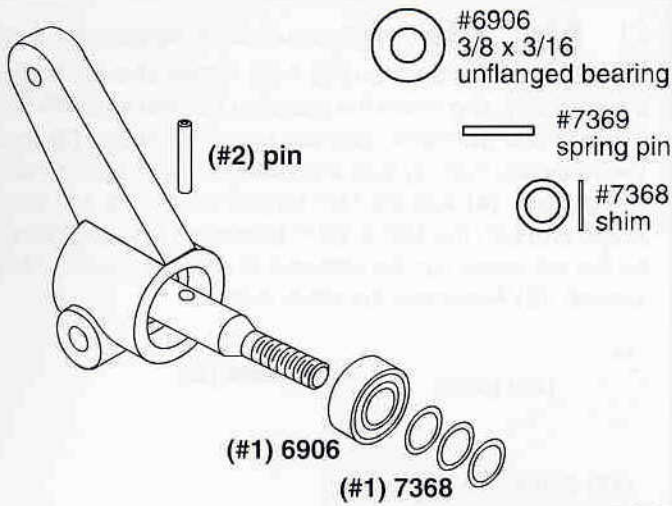


Fig. 138

□ **Figs. 139 & 140** (1) Remove from bag #7-8 two #6381 rear outer hinge pins, two #6466 1/8" nylon spacers and four #6299 1/8" E-clips. (2) Place the left rear hub carrier and nylon spacer between the rear arm mounting points, spacer toward the front. (This spacer location lengthens your wheelbase; placing it on the other side shortens it.) (3) Install the #7357 hinge pin. The pin should be tight in the rear hub carrier but free in the arm. (4) Install a #6288 E-clip on each end of the #7357 hinge pin. (5) Install the other hub carrier assembly. (6) Line up the ball and pin end of the axle so that the ends of the pin line up with the slots in the outdrive hubs on the transmission. Insert the pin end into the outdrive hub. Fig. 140 shows the finished hub carrier assembly.



Fig. 139



Fig. 140

○ #6466 spacer

⊂ #6299 e-clip

▬ #6381

□ **Figs. 141 & 142** (1) Remove the two #7253 turnbuckles and two #7660 rear shock/turnbuckle ball ends with nylon eyelets from bag #7-8, then two #6274 plastic ball cups from bag #6-14. (2) Thread one ball cup onto each turnbuckle. (3) Now take the #7660 eyelets and thread them onto the other end of each turnbuckle evenly to 3.05". This overall length is measured from the center of the plastic ball cup to the center of the nylon eyelet as shown. (4) Place the 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 complete turnbuckle assembly will look like fig. 142 except for the color.

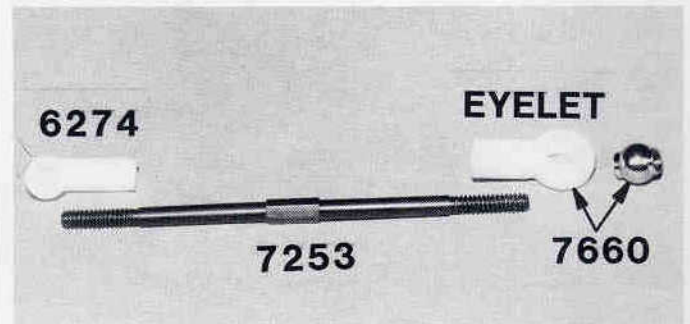


Fig. 141

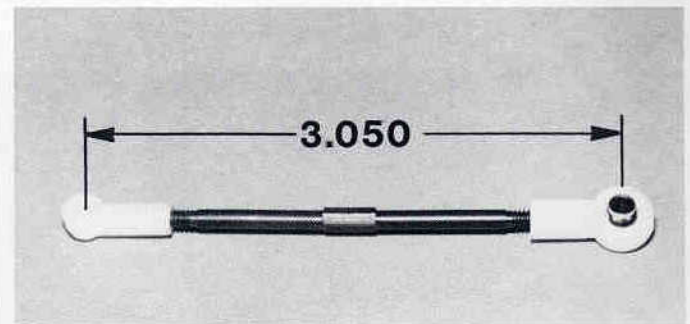
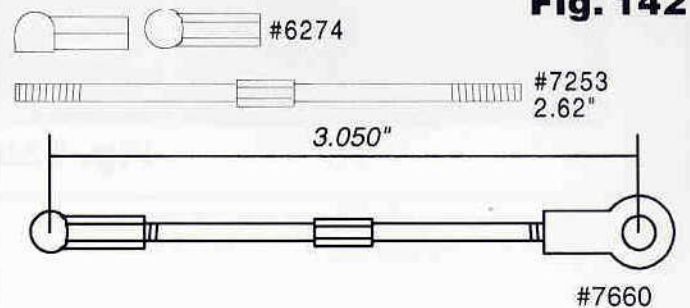


Fig. 142



□ **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.

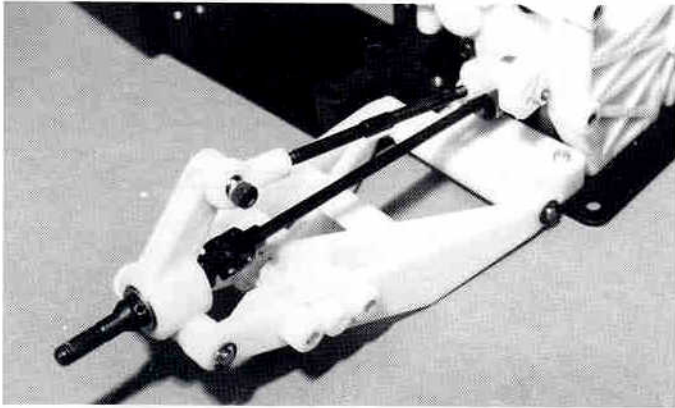
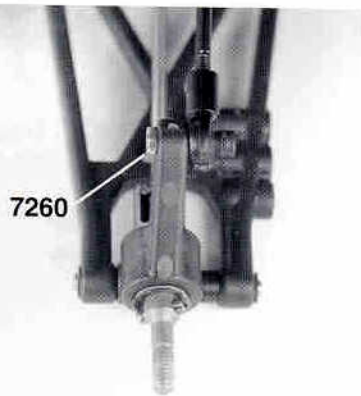


Fig. 143

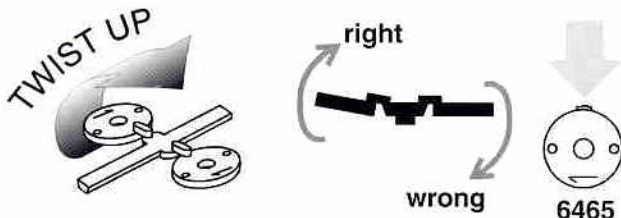


#6925 4-40 x 1/2
#7260 4-40 thin plain nut

Fig. 144

SHOCK ASSEMBLY

Fig. 145 Inside a separate bag inside the large shock bag you will find the #6465 Teflon shock piston set. Remove two #2 pistons and two #3 pistons by twisting them as shown in the drawing. If there are any remaining burrs, carefully remove them with your hobby knife.



#6465 shock piston

Fig. 145

Fig. 146 In another plastic bag is the #6440 shock assembly parts and red and black O-rings. Trim them from the parts tree carefully so no part of the two molding runner remain. It is safer to remove a tiny amount of the part than to risk the chance of a burr remaining. Short blade scissors or a hobby knife will work fine, as shown in fig. 146. Run your finger over the edges to feel for burrs you cannot see. Remove the one you find. Burrs can keep the parts from snapping into the shock correctly, and can cause the shock to leak or the shaft to jam.



Fig. 146

Figs. 147 & 148 (1) Install the #5407 and #6440 parts onto the #6429 tool tip as shown in fig. 147, found in the large shock bag. (2) Remove the #5422 30 wt. oil from bag #7-11. Add 3-4 drops to the inside of the shock body and to the shock seal parts. (3) Insert the tool tip into the shock body all the way. Push **easily** until the parts snap into place. (4) Check the tool height in fig. 148. The right shock shows just before snapping parts in place, the left shows after. (5) If your shocks do not snap together easily, check the parts for burrs again. (6) Assemble the other shock bodies the same way.

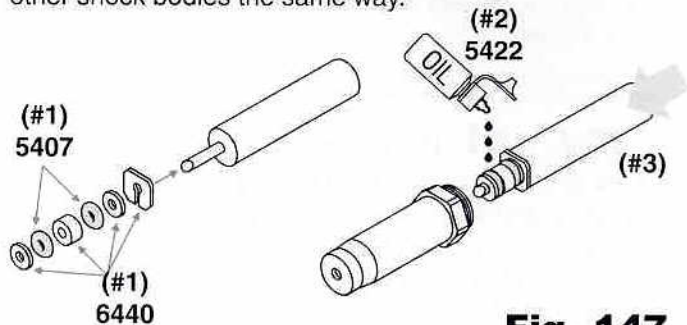


Fig. 147

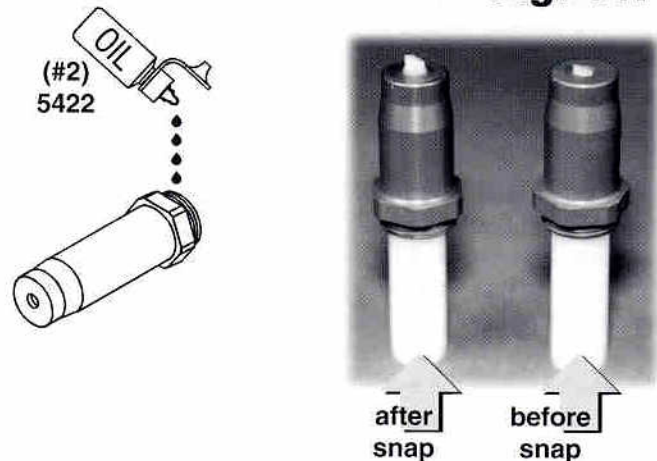


Fig. 148

Fig. 149

Here is how to dismantle the shocks when it's rebuild time. Put the shock assembly tooltip into the bottom of the shock until it rests against the small washer, as shown, then push.

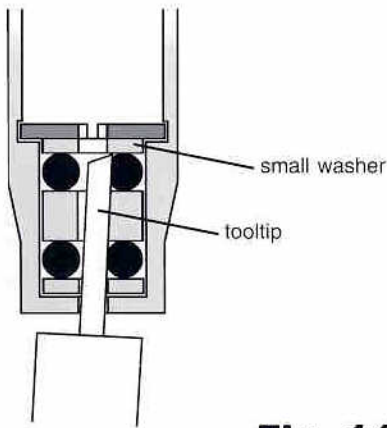


Fig. 149

Fig. 150 (1) Locate the four #6469 black

O-rings in the large shock bag. Install one on each shock over the threads on the shock body.
 (2) For the #6458 rear shock shaft, install a #6299 E-clip on either side of a #6465 (#2) shock piston.
 (3) For the #6459 front shock shaft, install a #6299 E-clip on either side of a #6465 (#3) shock piston.
 (4) From bag #7-9 remove two #6466 1/8" and two #6466 1/32" downstops. Install one of each onto the two rear shafts.
 (5) Place a couple drops of oil on threaded part of shaft an insert into shock body.
 (6) Push the #7217 pivot ball and eyelet together, then screw the eyelets onto the end of the shock shaft. Hold shaft with rag and needlenose pliers next to threads.

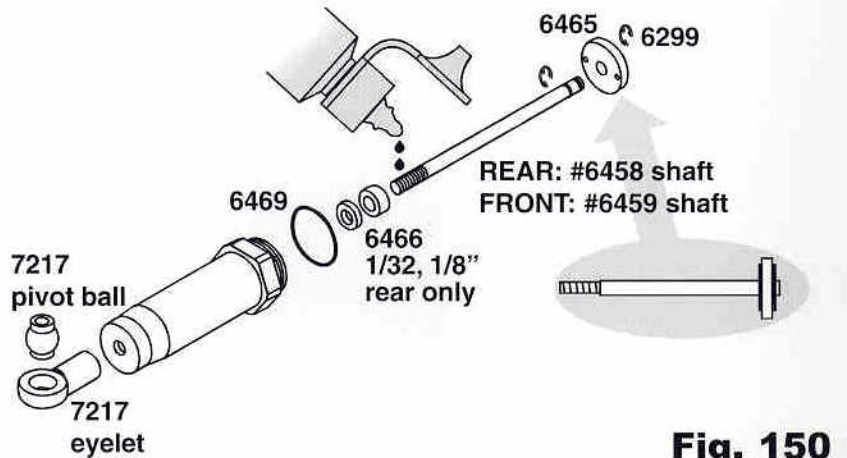


Fig. 150

Fig. 151 (1) Holding the shocks upright fill

with oil to the top of the shock body. (2) Slowly move the shaft up and down several times to allow air bubbles to escape to the top. (3) Refill with oil to the top of the shock body. (4) Push the shaft in until the piston is level with top of shock body. The oil will slightly bulge up above the shock body. (5) Install the #6428 shock cap and tighten. There should be no gap between the cap and the hex portion of the shock body when tight.
 (6) Move the shock shaft in and out a few times and then push it all the way in. It should be easy to push the shaft in until the eyelet hits the body. (7) Then the shaft should push itself out approximately 1/4" to 3/8" (6.3mm-9.5mm). (8) If the shocks do not push out this far, there is not enough oil in them. Add just a little oil and try steps 6-7 again. (9) If the shocks push out farther than the distance in step 7, or you cannot push the shaft in until the eyelet hits the body, there is too much oil. Loosen the cap a half turn (with the shaft extended) and pump out a small amount of oil by pushing the shaft in. Retighten the cap and try steps 6-7 again.

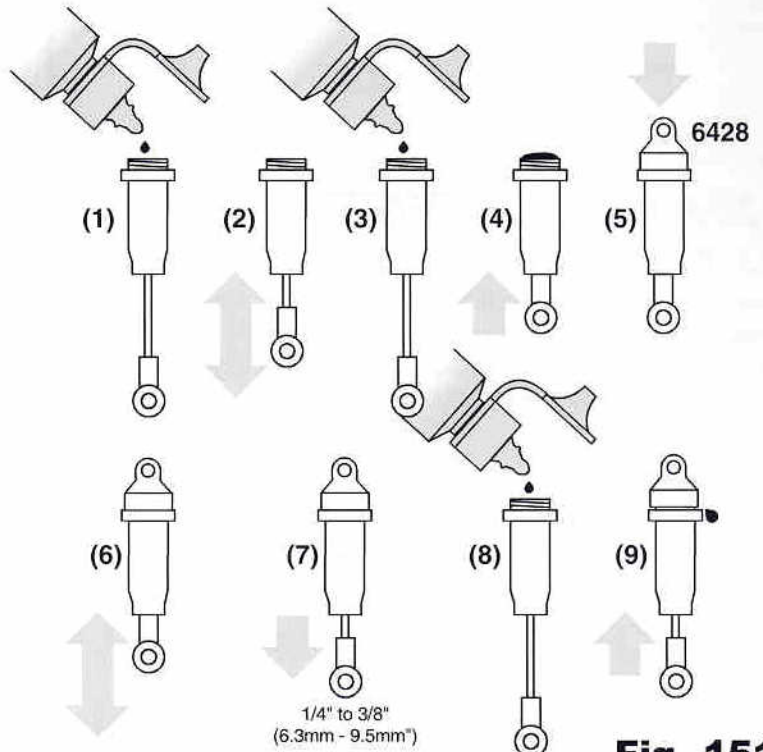


Fig. 151

□ **Figs. 152 & 153** (1) Assemble all four shocks at the same time. Install on the front shock bodies one each #8846 shock preload spacers of sizes 1/16" and 1/8". (2) Install on the rear shock bodies one each preload spacers of sizes 1/32", 1/8" and 1/4". (3) Slide one #6474 spring collar onto each shock body. (4) Remove the #7434 2.75" rear blue springs from bag #7-11. Install one spring onto each of the long rear shocks. (5) Remove the #7425 2.0" front gold springs from bag #7-11. Install one spring onto each of the front shocks. (6) Pull the shock shaft out as far as it will go, compress the spring, and install the #6474 spring cup in the orientation shown.



Fig. 153

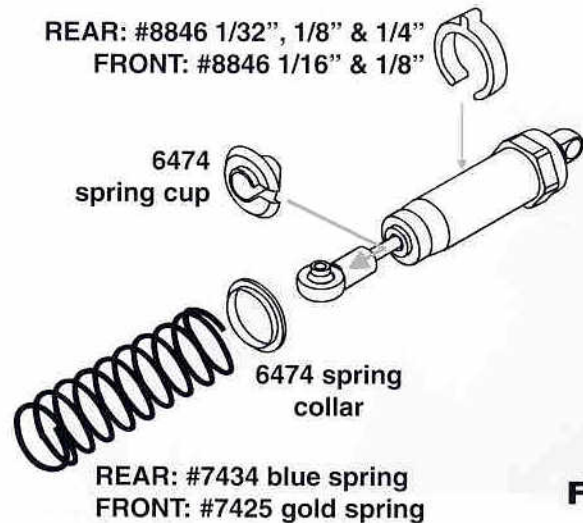
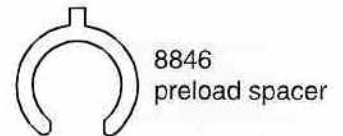


Fig. 152



Your manual has been updated, and the shock section simplified. In the process, many steps were no longer needed, so they were deleted. Skip ahead to fig. 172 to continue assembling your kit.

HOW HAS THE GT KIT BEEN UPDATED?

We have been asked repeatedly when we will come out with a new RC10GT. Actually, ever since it first burst on the scene in 1993 the RC10GT has had many upgrades. Consider some of the many ways we have enhanced the GT to make it one of the most sought-after gas trucks ever:

All GT kits:

Rear suspension arms were redesigned, new part #7206. This new arm allows you to change the wheelbase of your truck. The new, longer #6381 hinge pin accommodates a #6466 spacer that you can place in front of or to the rear of the hub carrier, shifting it to change the wheelbase. This means you will have more tuning options for steering and rear traction.

Dogbones have been replaced with high-performance #7383 MIP CVD's.

Color of parts has been changed from white to black.

A single molded #6265 drag link replaces the #6274 ball cup and #7251 turnbuckle assembly for your servo linkage. This makes for fewer parts and speeds assembly.

#6272 ball end dust covers have been added. These

prevent wear and tear of your ball cups, preventing dirt from entering and grinding away between your ball cups and ball end.

#7206 front suspension arms and other relevant parts have been improved for new shock angles.

Front axle assembly has been redesigned. It is lighter and cheaper, two design pluses. The newer #6221 steering block accommodates the lighter aluminum #6220 axle with larger threads and plastic #6222 locknut. They replace the original #6218 steel axle and #6242 steel locknut and #6217 steering block.

New #6474 spring clamps and cups replace the earlier style.

#7602 clutch shoe springs are no longer needed.

Front and rear shock towers have been changed from fiberglass to black composite material.

#6134 RC10GT II body replaced the original #6131 GT body to accommodate the new shock changes.

#8846 shock preload spacers come standard in the latest GT kits. Set your ride height evenly, quickly and easily without tools.

RC10GT Sport Kit only:

#7659 unflanged ball bearings replace the two center #6599 unflanged bushings in the Stealth transmission.

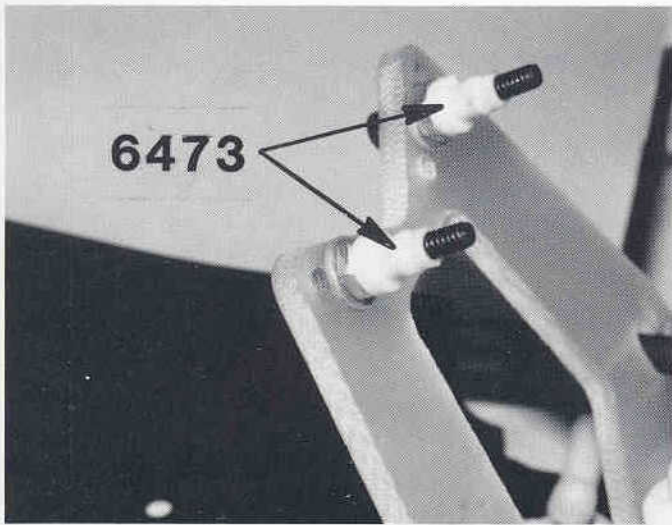


Fig. 172

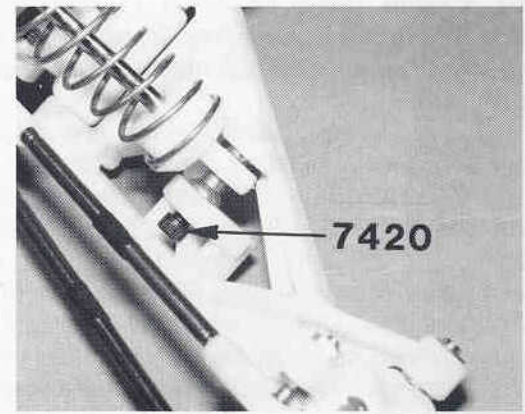


Fig. 174

□ **Figs. 173, 174 & 175** (1) Slide the shock cap eyelet onto the #6473 shock bushing, fig. 173. (2) In bag #7-10 remove two #6222 4-40 black self threading nylon nuts. Thread one of the nuts onto the upper shock mounting screw, fig. 173. (3) Screw the #7420 4-40 x 5/8" screws from bag #7-1 into the front A-arms, fig. 174. Slide the shock pivot ball, on the bottom of the shock, into the front suspension arm mounting slot, fig. 174. The suspension arms have two mounting locations; use the one closest to the chassis. The flat side of the pivot ball is to be towards the rear of the A-arm. (4) Now install one of the #7874 screws from the back side of the A-arm through the pivot ball, and then thread it into the front of the suspension arm. (5) Now do the other front shock. Fig. 175 shows both front shocks installed.

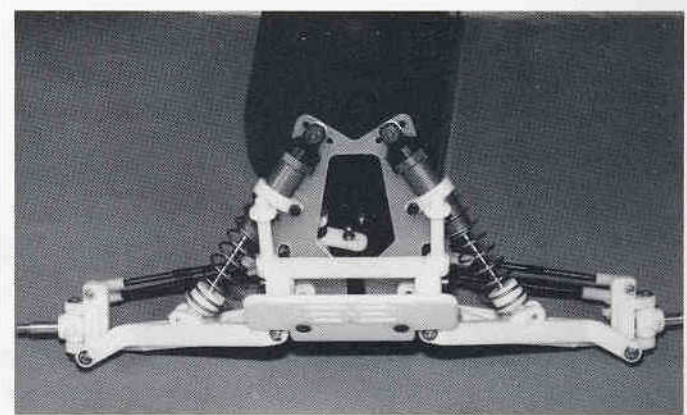


Fig. 175

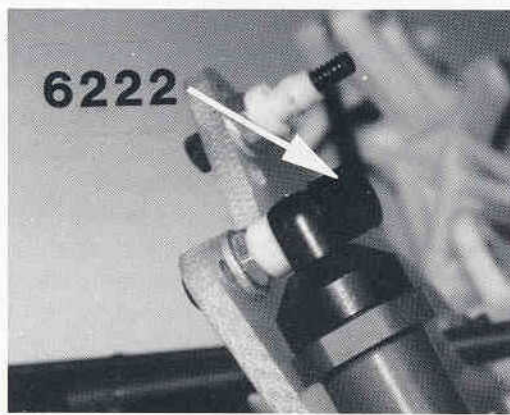




Fig. 173

-  #7420
4-40 x 5/8
special
-  #6222
4-40/5-40
nylon locknut

□ **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.

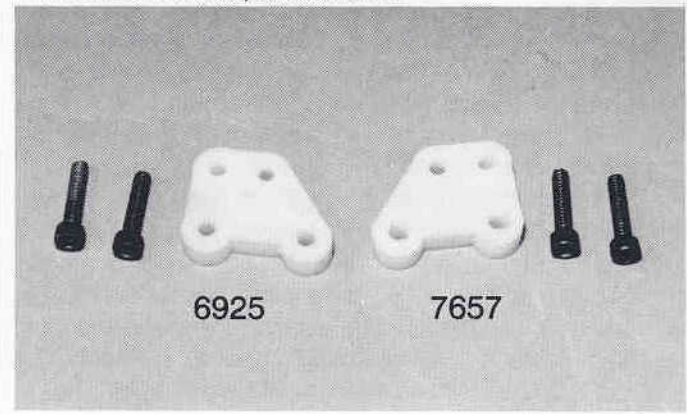
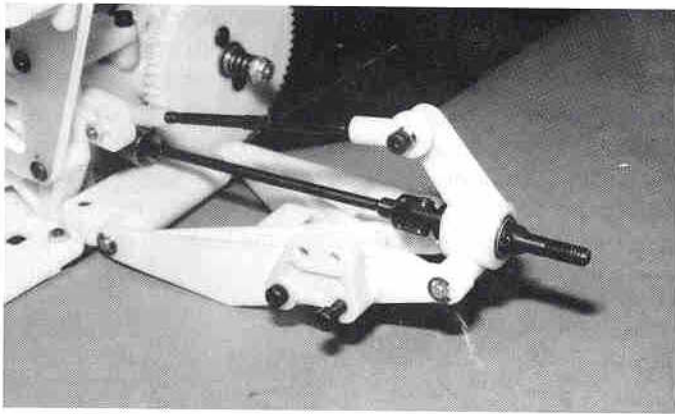


Fig. 176



 #6925
4-40 x 1/2

Fig. 177

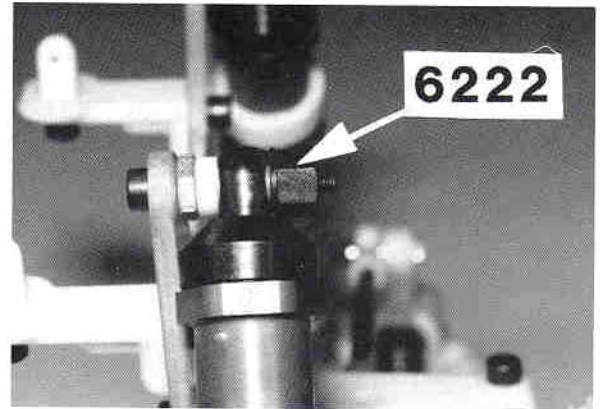


Fig. 179

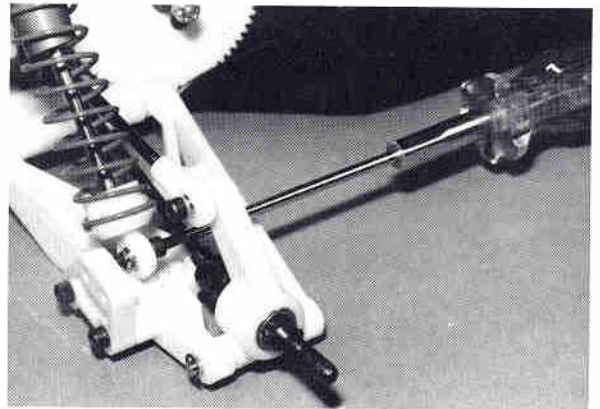


Fig. 180

□ **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.

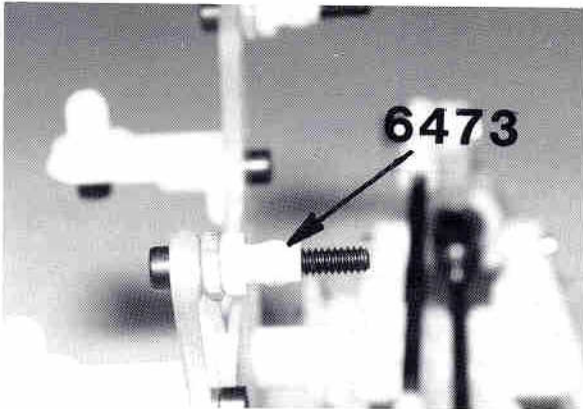


Fig. 178

 #6925
4-40 x 1/2

 #6222
4-40/5-40
nylon locknut

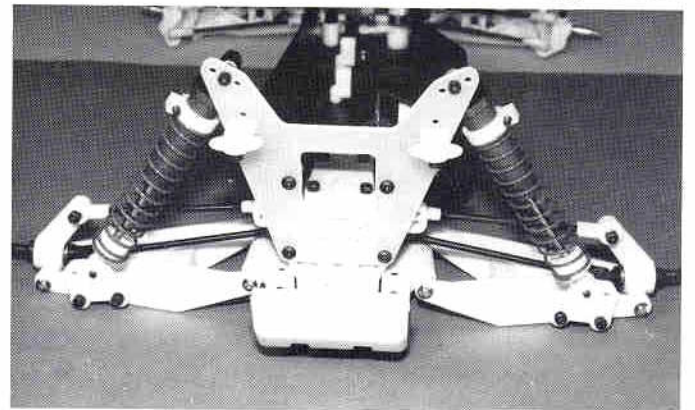


Fig. 181

Figs. 182-189 are the wheel and tire instructions for the bushing kits.

For the bearing kits, skip ahead to fig. 190.

WHEELS & 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.

- **Fig. 182** (1) Remove the #7802 rear wheels from the kit box. Make a 1/8" hole in each wheel.
- (2) Make sure the #7880 foam insert is centered in the rear tires.
- (3) Push the #7802 wheels into the tires.

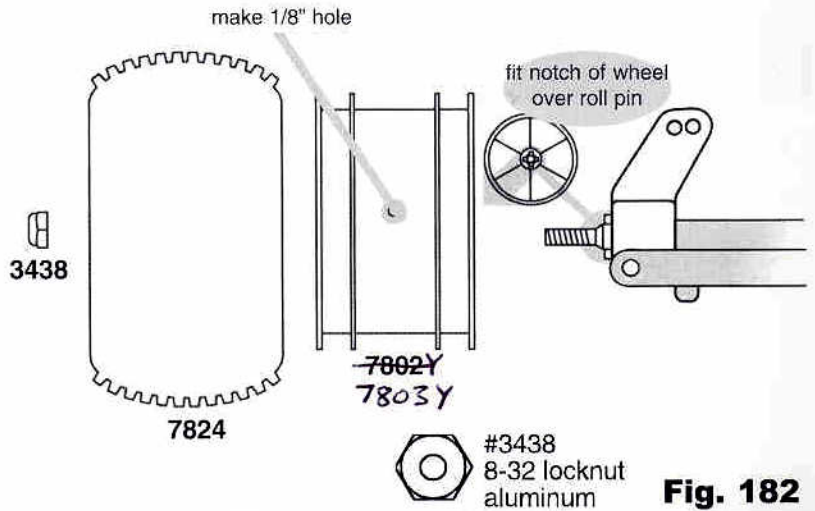
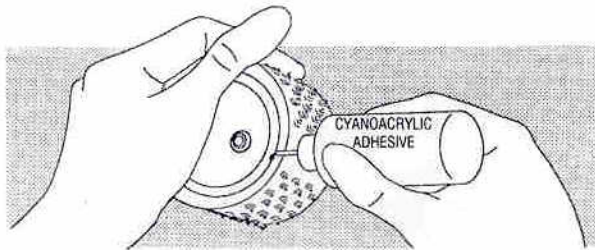


Fig. 182

- **Fig. 183** (1) Remove the #7842 front wheels from the kit box. Make a 1/8" hole in each wheel.
- (2) Make sure the #7880 foam insert is centered in the front tires.
- (3) Push the #7842 wheels into the tires.
- (4) Glue the tire to the wheel with super glue (cyanoacrylic glue) in four spots around the tire on both ends. **WARNING!** Follow the adhesive manufacturer's instructions for proper use and safety. Wear eye and hand protection.

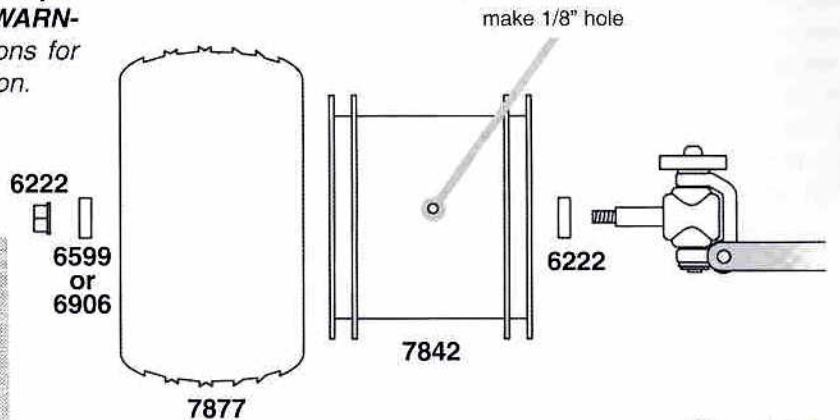
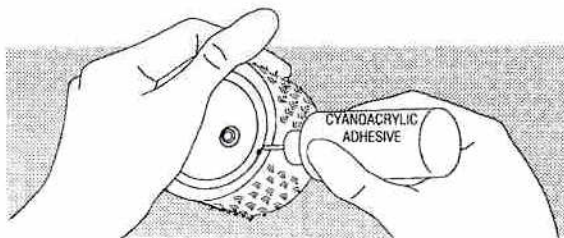


Fig. 183

Your manual has been updated, and the wheel/tire section simplified. In the process, many steps were no longer needed, so they were deleted. Figures 184 to 199 have been deleted.

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 truck. FM radios are more reliable than AM radios.

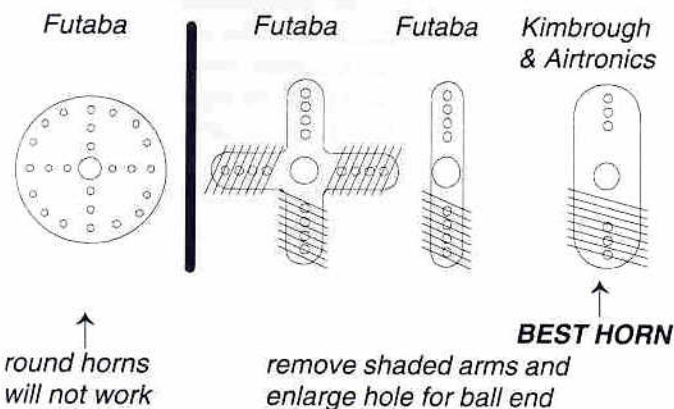
Because of the additional load of wider and heavier tires on the steering system, the servo mounting system was designed only for medium sized servos. 42 oz. in. of torque is the minimum requirement for both steering and throttle/brake servos. Check your radio system's specifications to make sure your 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.

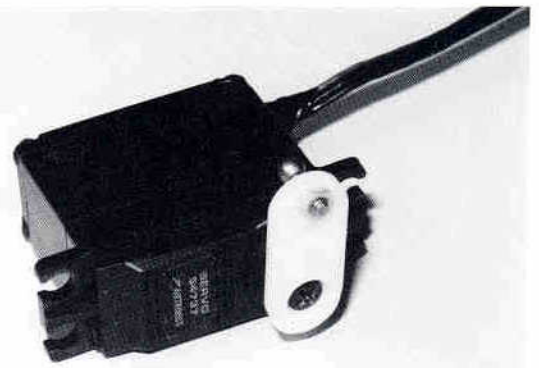


Fig. 201

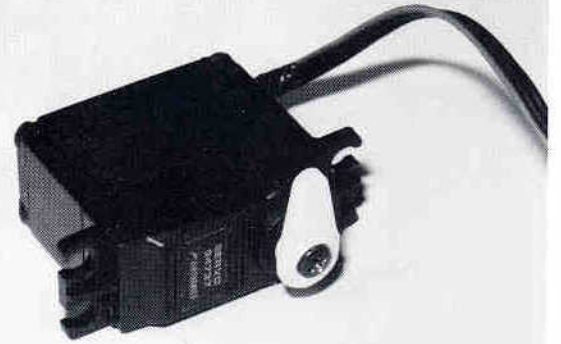
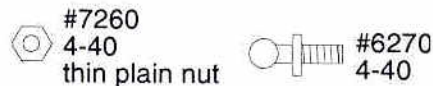


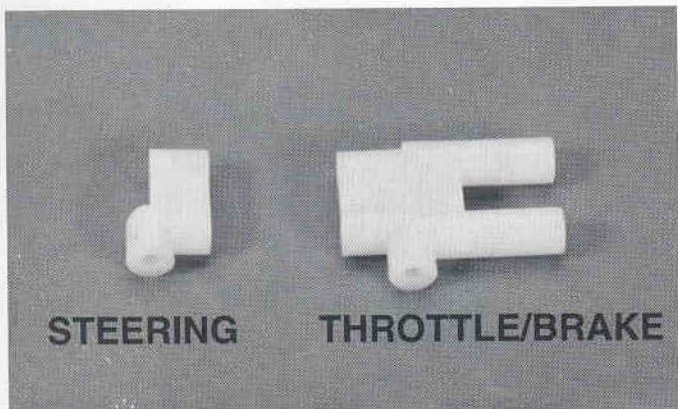
Fig. 202

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.



❑ **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.*



STEERING THROTTLE/BRAKE

↑ #7527 servo mounting blocks both have the same part number. **Fig. 203**

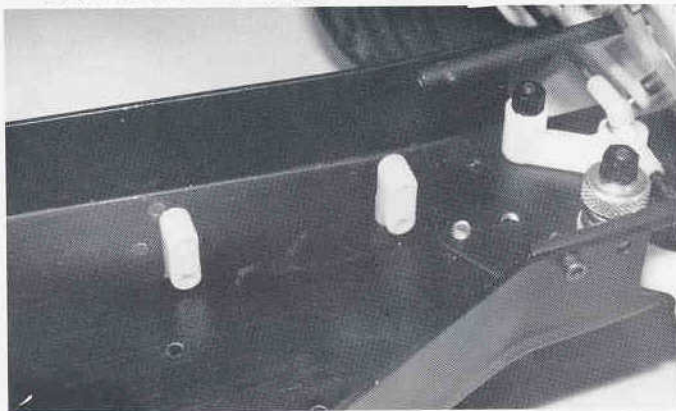


Fig. 204

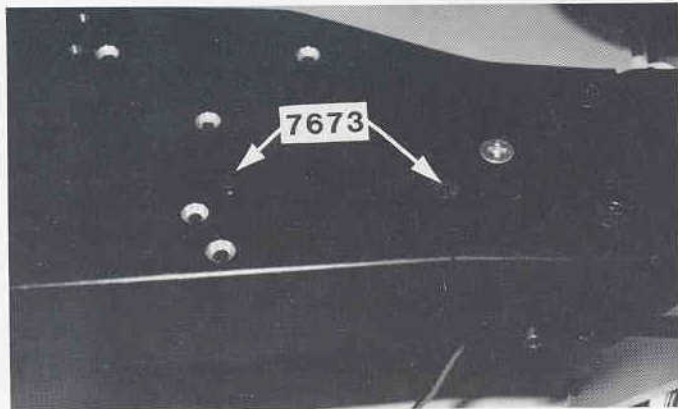


Fig. 205

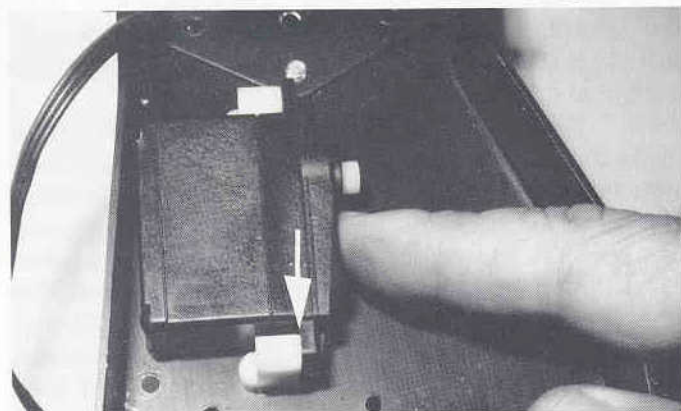
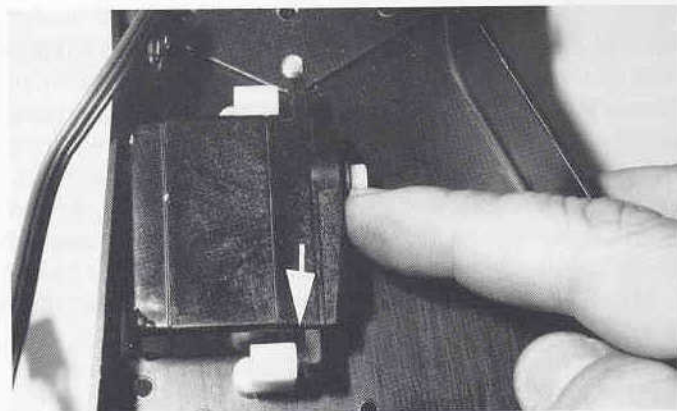


Fig. 206



#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 4-40x5/16" 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.

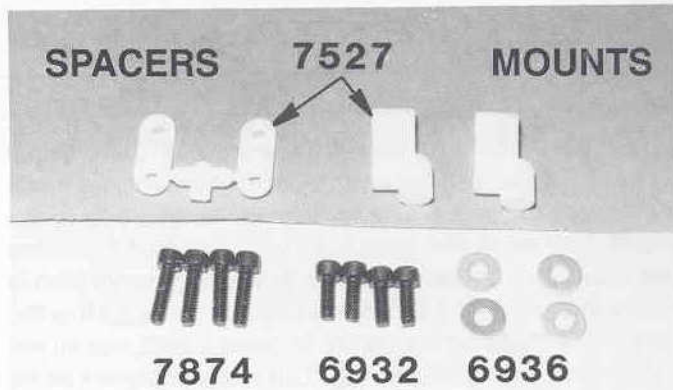


Fig. 208

#6932
4-40 x 5/16

#7874
4-40 x 7/16

#6936
#4 flat washer
aluminum

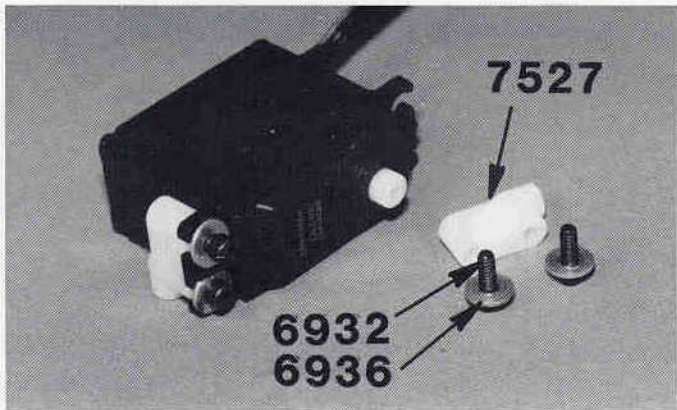


Fig. 209

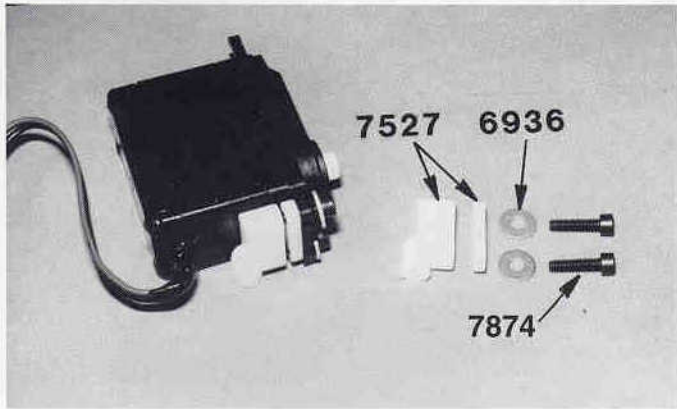


Fig. 210

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.

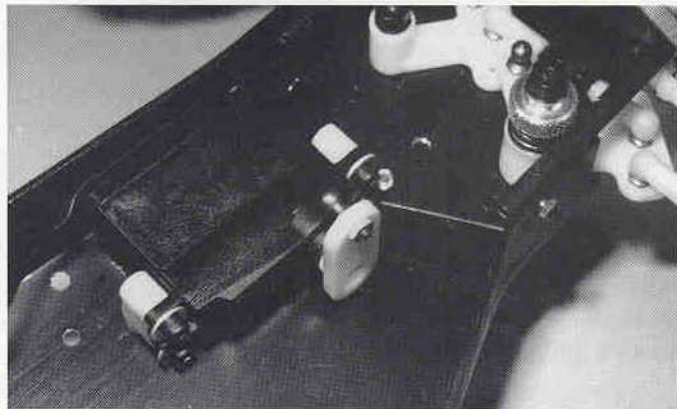


Fig. 211


 #7673
4-40 x 5/16

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.

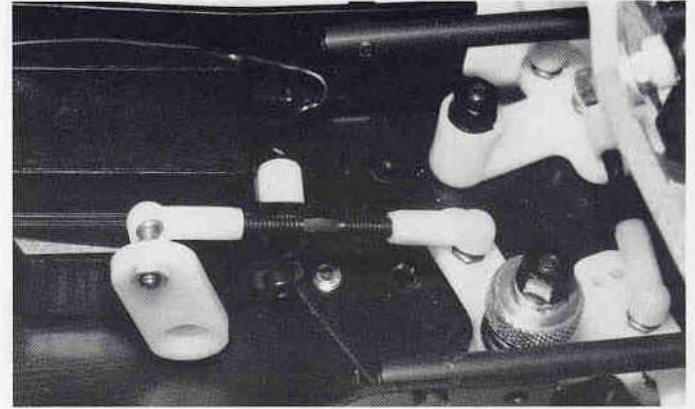


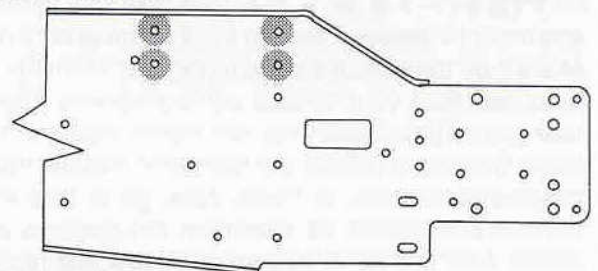
Fig. 212

 #6261
1.25"  #6274

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)

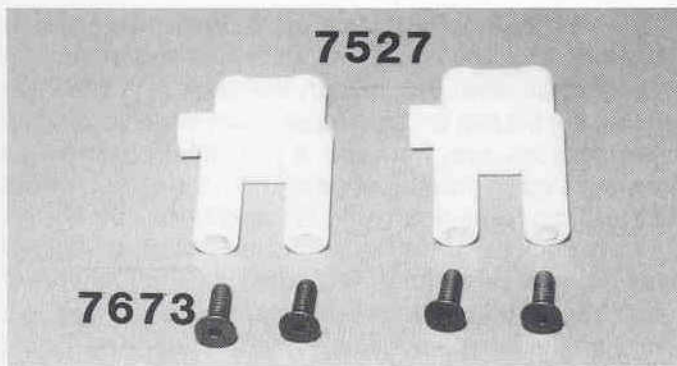


Fig. 213

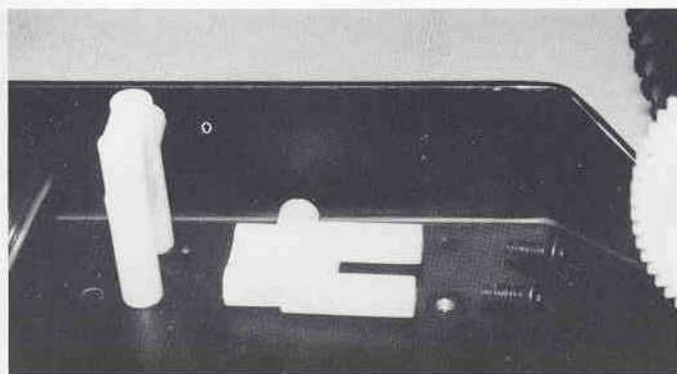


Fig. 214

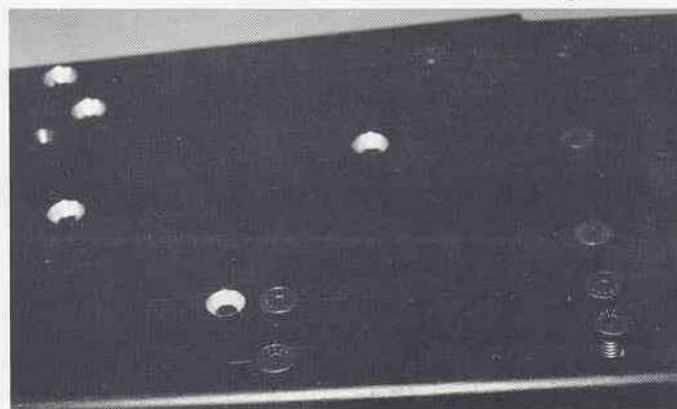


Fig. 215

#7673
4-40 x 5/16

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.

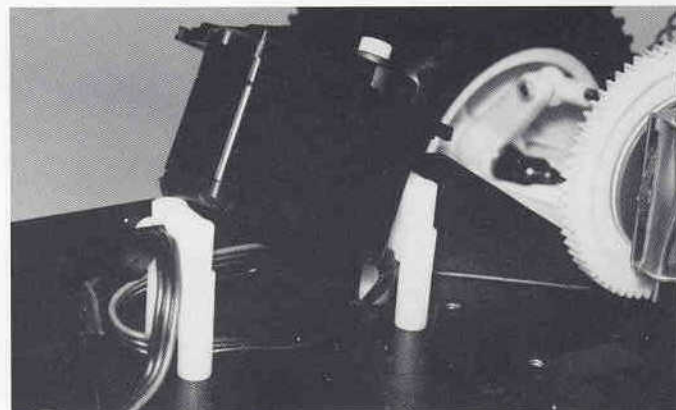


Fig. 216

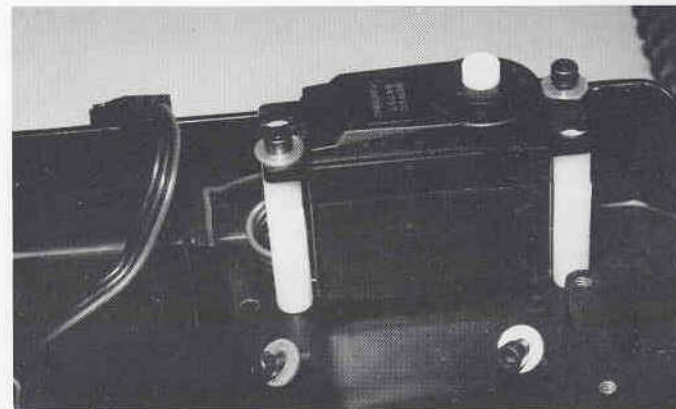


Fig. 217

#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-sided 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.

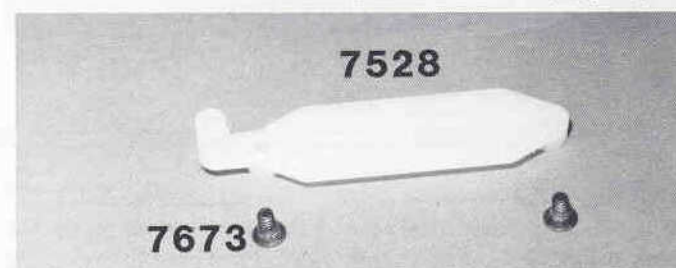


Fig. 218

#7673
4-40 x 5/16

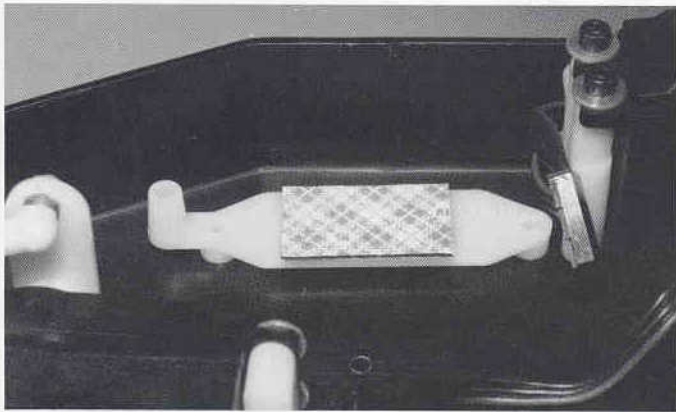


Fig. 219

□ **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 receiver to the mount.

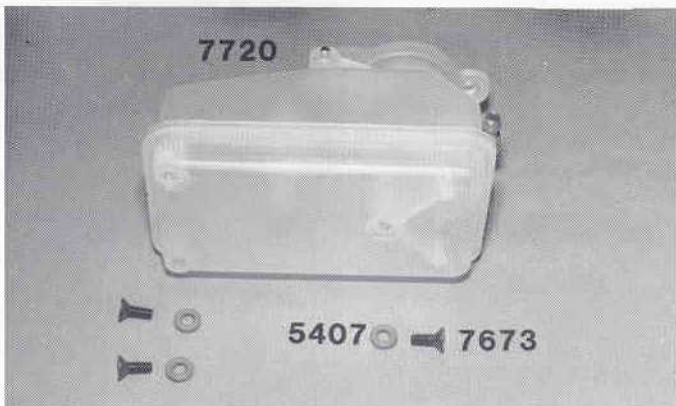


Fig. 220

○ #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.

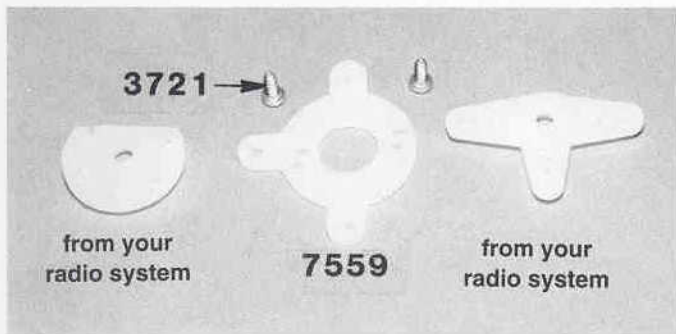


Fig. 224

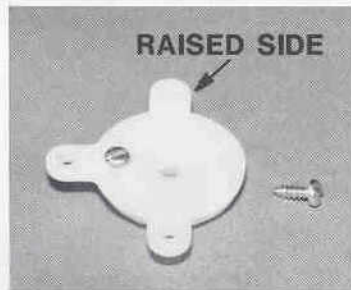


Fig. 225

□ **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.



Fig. 226



Fig. 227

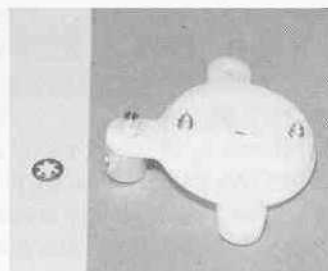


Fig. 228

□ **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.

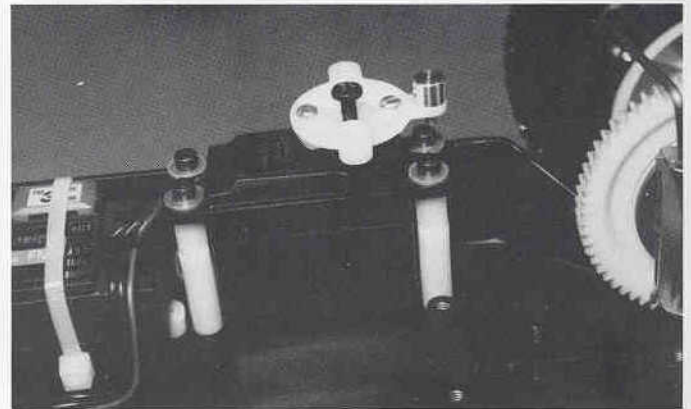


Fig. 229

□ **Figs. 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

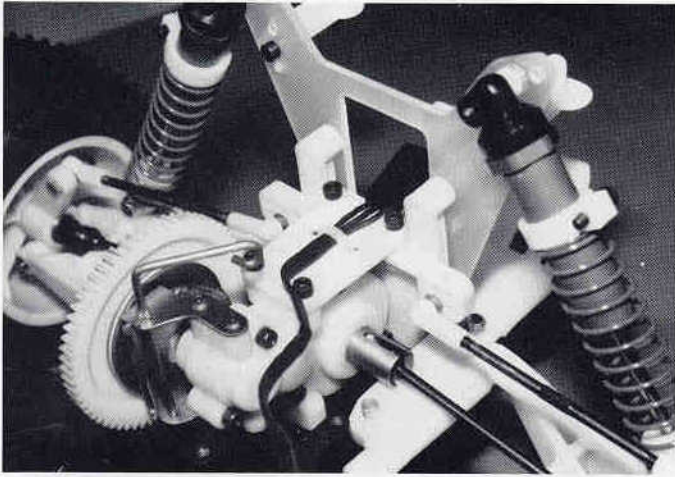


Fig. 231

□ **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.

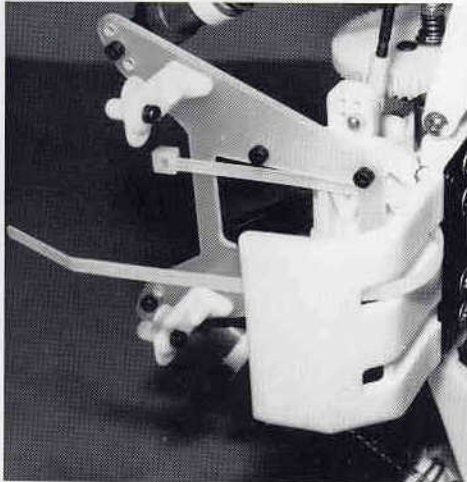


Fig. 232

□ **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.

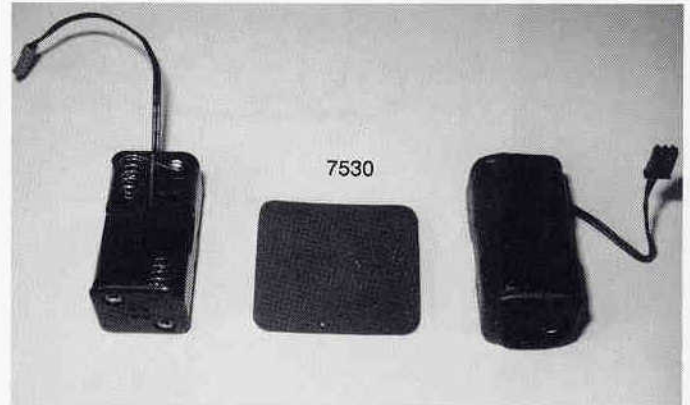


Fig. 233

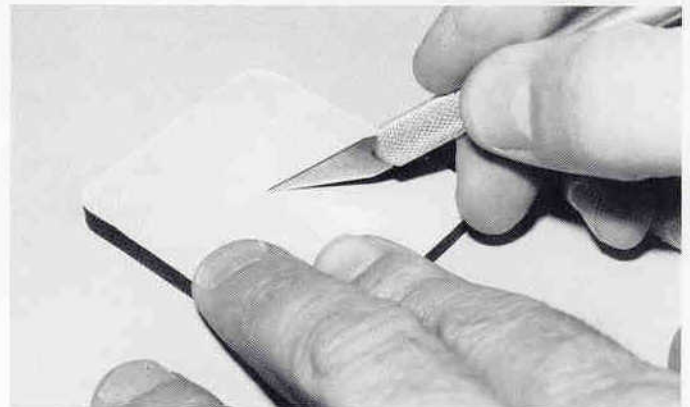


Fig. 234

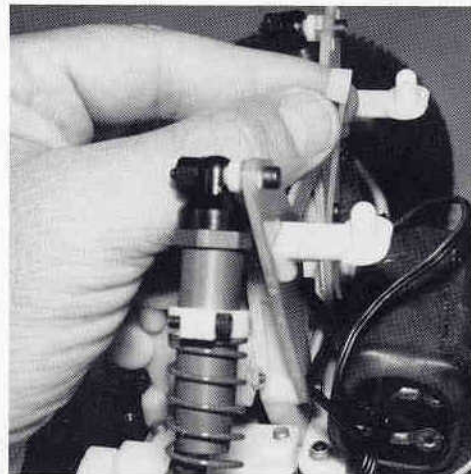
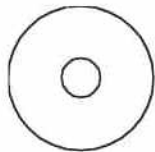


Fig. 235

□ **Figs. 240 & 241** (1) Mark and cut your body. Mark the body mounts and antenna holes accurately by mounting the body before you paint it. Use a marking pen. Use the short-bladed hobby scissors to cut out the wheel wells and other areas. (2) Clean the body with liquid dish soap. (3) Mask and paint your body.

(4) From bag #7-5 remove the #6332 body clips and #7320 nylon body washers. Put the body washers on the four body mounts. (They help prevent the body clips from pulling through the Lexan in a collision.) Now place the body on the truck so that all four body mounts are coming through the body holes. Now install the body clips to hold down the body. Fig. 240 shows the rear mounting. Fig. 241 shows the front mounting.



#7320
washer



#6332
body clip

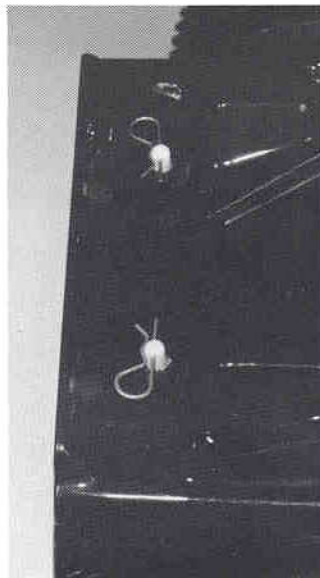


Fig. 240



Fig. 241



SETUP SHEET for Team Associated's RC10GT

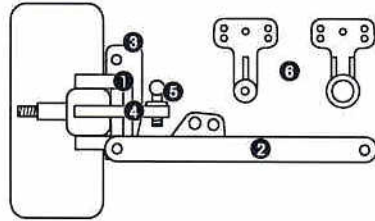
driver _____

track / city _____

event _____ date _____

FRONT SUSPENSION

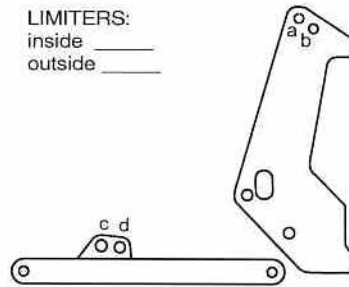
- 1 CASTER 5° 10° 15° 20° 25° 30°
- 2 FRONT RIDE HEIGHT ARMS LEVEL other _____
- 3 CAMBER _____°
- 4 TOE-IN _____°
- 5 BUMP STEER SPACERS _____
- 6 STEERING ACKERMAN
 STD OPTIONAL



FRONT SHOCKS

- BODY STD GRAY other _____
- BODY 1.02 other _____
- SHAFT 1.02 other _____
- SHAFT STD Unobtainium

LIMITERS:
inside _____
outside _____



PISTON # _____

SPRING _____

OIL _____ wt

SHOCK MOUNTING
tower: a / b arm: c / d

CLUTCH

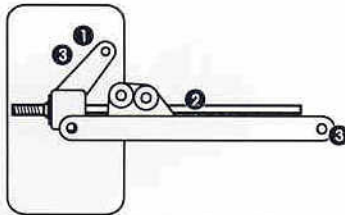
INDICATE HOW CUT:

- CLUTCH BELL TEETH/PITCH ____ T / ____ P
- SPUR: _____ T
- SHOES 2 4 other _____

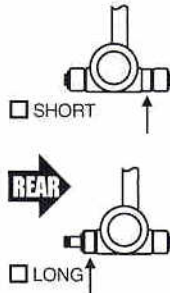


REAR SUSPENSION

- 1 CAMBER _____°
- 2 REAR RIDE HEIGHT:
 BONES LEVEL other _____
- MIP CVD's DOGBONES UNIVERSALS
- 3 TOE-IN total, per side:
 3°
 4.5°
 6°



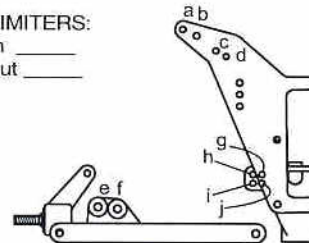
WHEELBASE
ADJUSTMENT



REAR SHOCKS

- BODY STD GRAY other _____
- BODY 1.32 other _____
- SHAFT 1.32 other _____
- SHAFT STD Unobtainium

LIMITERS:
in _____
out _____



PISTON # _____

SPRING _____

OIL _____ wt

SHOCK MOUNTING
tower: a / b / c / d
arm: e / f

CAMBER LINK ADJ:
tower: g / h / i / j

OTHER

- WEIGHTS _____ (oz/gm) TIRE ADDITIVE yes no
- BODY _____ SPOILER
- FRONT TIRES _____ FOAM _____
- REAR TIRES _____ FOAM _____
- FRONT WHEELS 1 PC. 3 PC. other _____
- REAR WHEELS 1 PC. 3 PC. other _____
- CHASSIS: STD other: _____
- RADIO _____ SERVO _____

- ENGINE NAME _____
- .12 .15 PULL START NON PULL START
- ENGINE TEMP: _____°

TUNED PIPE: ASSOC. other: _____

FUEL: _____ NITRO: 20% other _____ %

CARB TYPE: _____ rotation slide valve
CARB RESTRICTOR: .190 .180 .170 NONE

GLOW PLUG TYPE: _____

SLIPPER SETTING: STD LOOSER TIGHTER

TRACK CONDITIONS

- SURFACE: smooth bumpy BUMPS: _____
- TRACTION: low med. high
- COMPOSITION:
 sandy soft dirt grass clay other _____
- wet dry dusty other _____

NOTES: _____

RACE COMMENTS

MAIN _____ PLACE _____ TQ

NOTES _____

TRUCK COMMENTS

NOTES _____

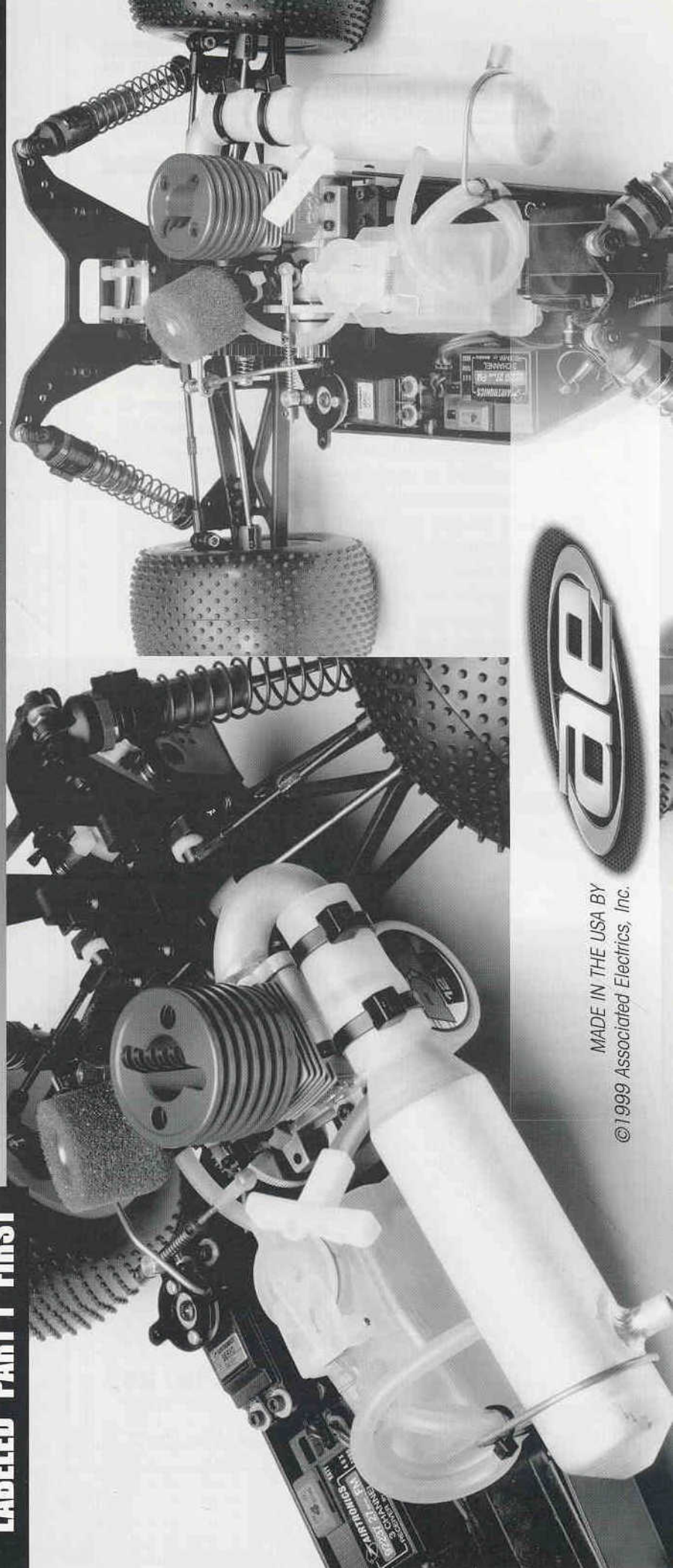
ENGINE INSTALLATION MANUAL FOR THE

RC10GT

**PART
2**



**READ THE MANUAL
LABELED "PART 1" FIRST**



MADE IN THE USA BY
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THIS BOOKLET CONTINUES THE STEPS BEGUN IN THE KIT INSTRUCTION MANUAL. FOLLOW THE OTHER MANUAL INCLUDED IN YOUR KIT BEFORE BEGINNING THESE STEPS.

GAS ENGINE INSTALLATION

We can now install your standard format .12ci engine. There are engines with displacements of .12ci. to .17 ci. which fit into the GT. If your engine is a standard .12 crank and side exhaust design it should fit into the GT. **Warning! It is the responsibility of the buyer to verify that the engine chosen will work in the GT!!**

Figs. 243 to 249 show the modifications needed to your crankshaft & carburetor so the engine fits correctly. Special versions of the GT kit include an engine (indicated on end cap label). These kits already have modified crankshafts, so no cutting is required. For these kits start with fig. 250.

Kit mounts will fit all standard format engines. Pull start kits come only with pull start parts and non pull start kits come only with non pull start parts.

□ Figs. 243 & 244 We will now need to get out the Dremel tool, the fiber reinforced cutoff wheel and especially your safety glasses. **Warning: We recommend using only the fiber reinforced wheels, not the cutoff stones, for your own safety. The cutoff stones can shatter and cause injury. Fig. 243 shows the correct fiber reinforced cutoff wheel next to our Dremel tool.**

Go ahead and get out your gas engine and your plastic sandwich bag. In the engine installation pack you will find the clutch bag. Remove the #7610 or #7612 flywheel, #7618 flywheel collet, and the #7620 special cutoff nut.

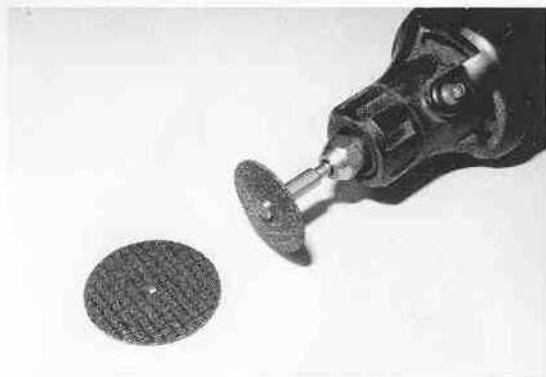


Fig. 243

Super Duty Fiberglass Cut-off Wheel, Moto-tool© part #426.

Dremel Moto-Tool©

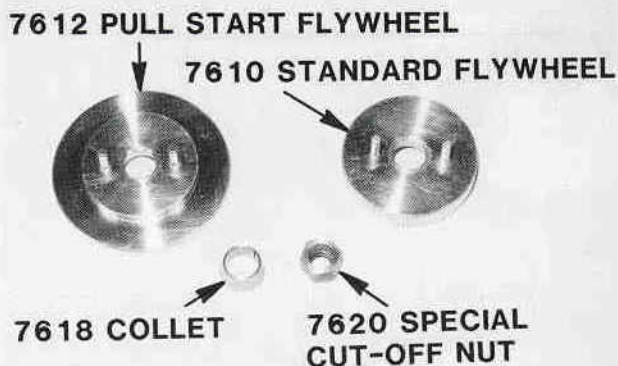
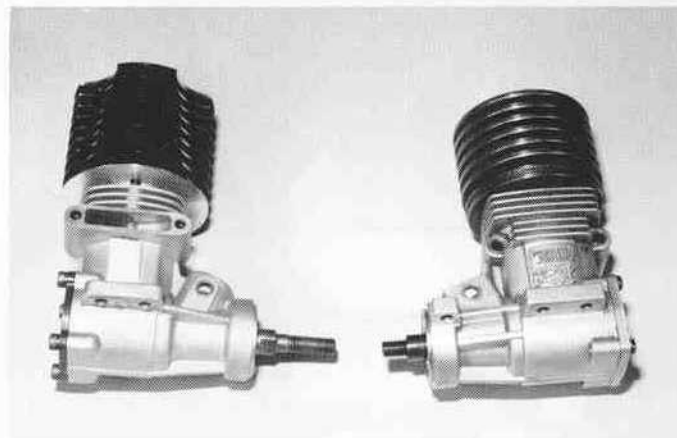


Fig. 244

□ Figs. 245 & 246 Fig. 245 shows an old style O.S. Max standard length crank on the left and a Yokomo crank already cut on the right. **NOTE: The Dynamite engine comes with the crankshaft already cut. If you have a standard length crankshaft, the following steps show you how to modify it.**

WARNING! OS MAX CZR MOTORS AND CRANKSHAFTS MANUFACTURED BEFORE OCTOBER 1993 WILL REQUIRE THE USE OF A #7604 SPECIAL CLUTCH NUT NOT STANDARD IN THE KIT. The drawings in fig. 246 show the difference in the old style crankshaft compared with the newer crankshaft (made after Oct. 1993). The old style crank will require a different clutch nut, Associated part number #7604. **NOTE: Many of these engines come with a prop spacer installed. It needs to be removed before you start cutting.**



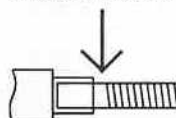
↑ O.S. or Dynamite

Yokomo ↑

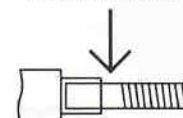
Fig. 245

more threads

fewer threads



new style
(after Oct. 1993)



old style
(needs clutch nut #7604, not in kit)

Fig. 246

□ **Figs. 247, 248 & 249** To set up the crankshaft for modification, first install the collet on the crankshaft, followed by the flywheel. The flywheel will fit over the collet (they are a tapered wedge fit). Now we need to install the special cutoff nut. If you look closely at the nut you will see only one side of the nut is threaded. Install the nut so the threaded end is away from the flywheel. Hold the flywheel in one hand and using your 5/16" nut driver or glow plug wrench, hand tighten the special nut onto the crankshaft.

Place the engine inside the plastic sandwich bag and close the bag around the engine. Push the end of the crankshaft through the plastic bag until the end of the shaft and the special cutoff nut are exposed through the bag.

Warning: Take your time; the hole must be tight around these parts so we can prevent metal shavings from getting inside the engine. Cut the crankshaft flush with the end of the special cutoff nut using the Dremel tool. THESE STEPS ARE ALSO SHOWN IN THE VIDEO SO YOU CAN SEE HOW IT WAS DONE BEFORE YOU CUT YOUR OWN CRANKSHAFT. **WARNING!! NEVER WORK WITH A POWER TOOL WITHOUT WEARING SAFETY GLASSES OR GOGGLES! MAKE SURE ALL PARTS OF YOUR BODY AND ANY CLOTHING ARE AWAY FROM THE DREMEL TOOL AND THE CUTTING AREA TO PREVENT INJURY.** Take your time cutting the crankshaft. Always make sure you have a firm hold on the parts and the Dremel tool. You need to make sure that you do not slip and damage the flywheel clutch pins while cutting.

After you have cut the crankshaft, clean off any metal shavings from the parts, then remove the engine from the plastic bag. Unthread the special cutoff nut, remove the flywheel and the collet. Remove the #7603 clutch nut from the clutch parts bag. See if the clutch nut will thread onto the crankshaft easily. If not, then you may want to file or grind a little from the top of the first thread on the crankshaft. Remember to put the motor back in the plastic bag and be very careful so you do not damage the actual threads.

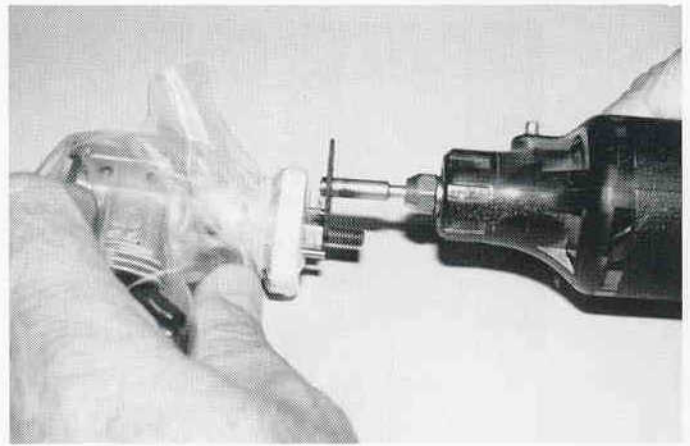


Fig. 248

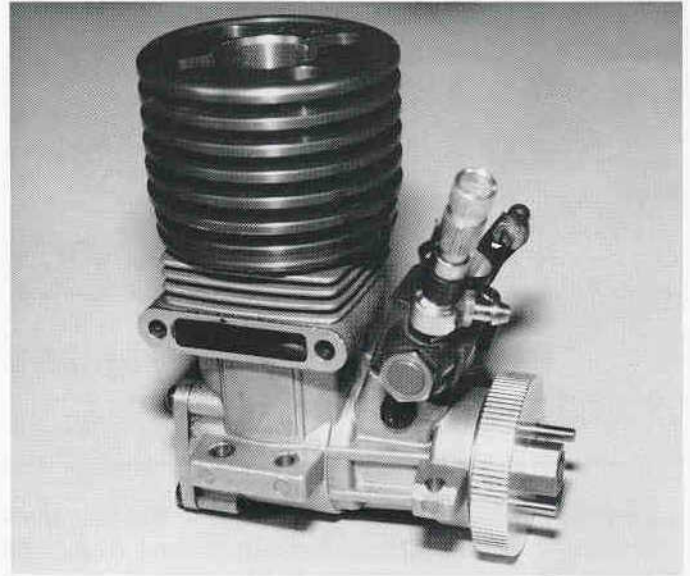


Fig. 249



Fig. 247

□ **Figs. 250 & 251** We now need to remove the carburetor from the engine so we can turn the needle valve assembly in the correct direction and install the throttle pivot arm ball end. On the OS Max and the Yokomo engines the carburetors are fastened to the case with two screws; remove both screws. On the Dynamite engine there is a clamp bolt and nut behind the carburetor (on the exhaust side), loosen this nut. Now you can slide the carburetor out of the engine case.

We are now going to have to loosen the needle valve locknut at the base of the needle valve assembly (see arrow, fig. 250). The locknut at the base of the needle valve on the OS Max and Yokomo carburetors is very difficult to get to. Your Associated shock/turnbuckle wrench will work for this nut; it's thin enough to fit under the needle valve. Now we will need to turn the valve assembly until the fuel line fitting is facing the direction shown in fig. 251. Fig. 250 shows the carburetor as it would be mounted on the engine when installed. You will be threading the valve assembly in or out to get the fitting to face the correct way. After you have the fitting pointing correctly, go ahead and retighten the valve assembly locking nut.



Fig. 250

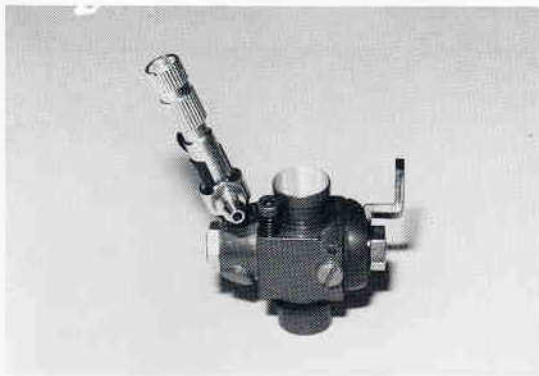


Fig. 251

□ **Figs. 252 & 253** In bag #7-15 of your truck kit you will find one 2-56 thread steel ball end and one 2-56 plain nut. The hole in the throttle pivot arm may be too small for the 2-56 threaded ball end so we will need to drill it out. Use a #43 (.0890") drill bit, or you can use a 3/32" drill bit if you are extremely careful. **Warning: the throttle pivot arms are very small and can be easily damaged. Use extreme care when drilling the hole.**

Now mount the ball end on the pivot arm with the ball facing away from the carburetor. Thread the 2-56 nut onto the other end and tighten. We recommend using Loctite on the threads to keep the nut from coming loose due to engine vibrations. Reinstall the carburetor to the engine and tighten the clamp nut or the mounting screws. We want the throttle pivot arm to be parallel with the crankshaft on the Dynamite engine; the other engines have fixed carb locations. See fig. 256.

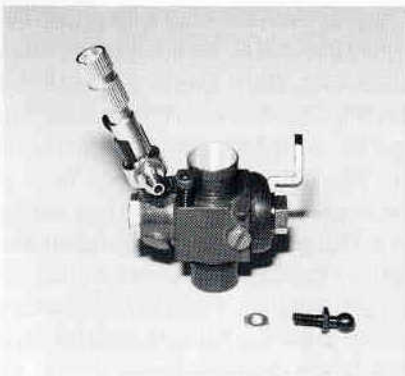


Fig. 252



Fig. 253

□ **Figs. 254 & 255** We are now ready to start final assembly of the flywheel and clutch parts. In the clutch bag you will find the #7618 flywheel collet spacer. Install it on the crankshaft (if you have a Yokomo engine). Now you can reinstall the #7618 collet and the #7610 or #7612 flywheel. Thread on the #7603 clutch nut. Tighten the clutch nut securely to lock the flywheel to the collet. Take a pair of slip joint pliers and grab the outer edge of the flywheel. Now use your 5/16" nutdriver to tighten the clutch nut against the flywheel. Get it as tight as you can using these tools.

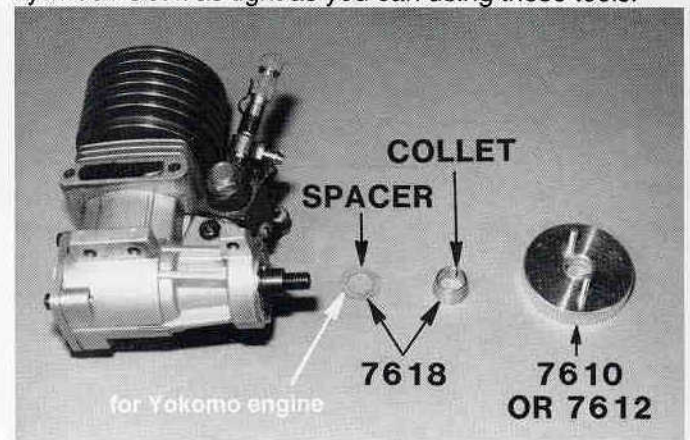


Fig. 254

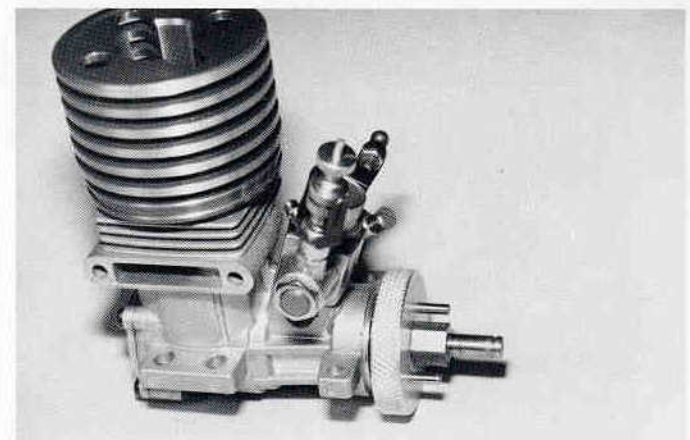


Fig. 255

□ **Figs. 256, 257** Now remove your #7601 clutch shoes, fig. 256, and place them on the clutch pins of the flywheel as shown in fig. 257.

After several months of competition with the RC10GT, our Team drivers have worked out a simple modification to improve the performance of the clutch. The modification involves trimming down the clutch shoes to the size needed for your application. Carefully follow the instructions in the tuning section at the end of this manual. After you have finished the truck assembly, you will need to test the clutch performance.

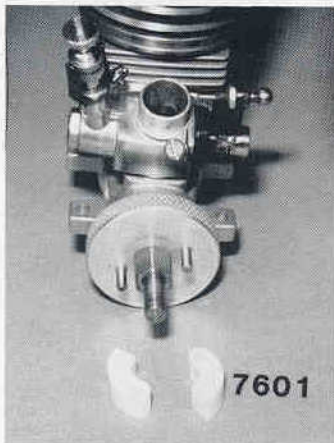


Fig. 256

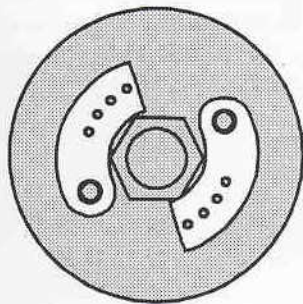


Fig. 257

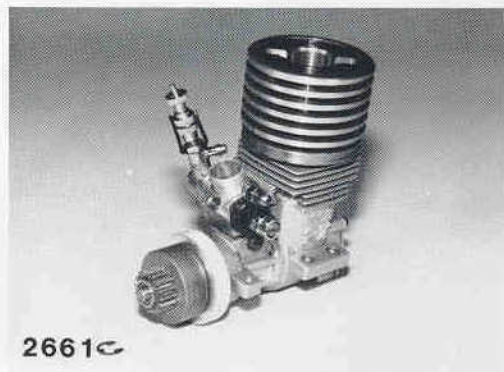
Figs. 259 & 260 Take out the #7606 16 tooth 32 pitch clutch bell and the two #6902 3/16" x 5/16" flanged ball bearings or the two #6863 3/16" x 5/16" flanged bushings from the clutch bag. Install one bearing or bushing into each side of the pinion gear hole. The bearings or bushings should install with only finger pressure; if not, sand the inside of the edge of the hole to remove any possible burrs until you can push them in. Now slide the clutch bell assembly onto the clutch nut as shown. In the clutch bag you will find the #2661 clutch nut E-clip. This will slide into the groove in the end of the clutch nut to hold the clutch assembly in place. We will now set the engine aside for a few steps. **Note:** the following figures will show the installation of a Yokomo non-pull start engine for photo clarity; a pull start engine will install the same way.



Fig. 259

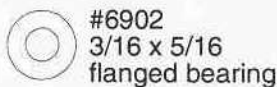


#2661
E-clip

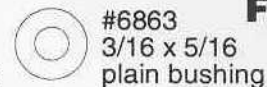


2661c

Fig. 260



#6902
3/16 x 5/16
flanged bearing



#6863
3/16 x 5/16
plain bushing

□ **Figs. 261, 262 & 263** Open the engine mount bag, in the engine installation pack, and remove the #7627 or #7629 engine mount adapters (your mounts should be black), two #7633 4-40 x 5/8" BHSScrews, two #6925 4-40 x 1/2" SHCScrews, and two #3216 #4 steel washers (gold colored). We will start with the #7627 rear engine mount adapter and the two #7633 BHSScrews as shown in fig. 261. The two button head screws will install from the bottom of the chassis. They will go through the slots in the rear engine mount and then thread into the rear engine mount adapter as shown in fig. 263. We want to be able to slide the adapters forward or backwards, so only lightly secure the mounting screws.

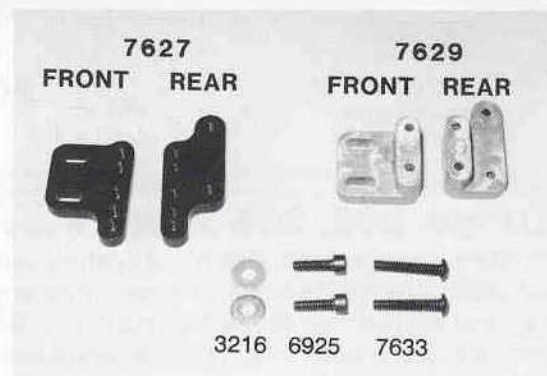




Fig. 261

 #3216
#4-40 steel
flat washer

 #6925
4-40 x 1/2

 #7633
4-40 x 5/8

7627 REAR

Fig. 262

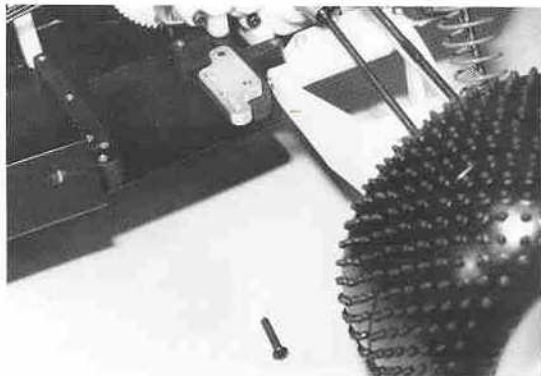
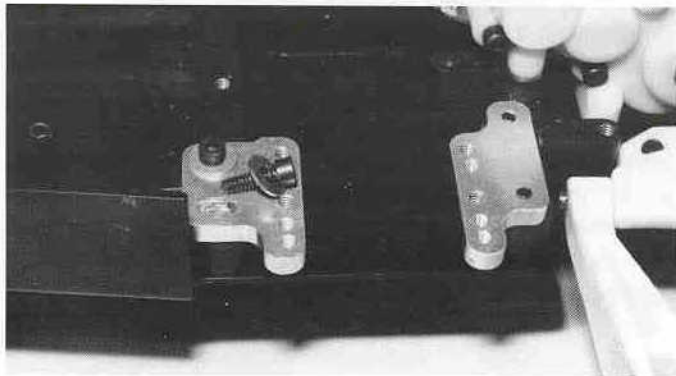



Fig. 263

Fig. 264 Now we will install the #7627 front engine mount adapter using the two #6925 4-40 x 1/2" SHCScrews and the two #3216 #4 gold colored steel washers. Install the front adapter with the two screws and washers as shown in fig. 264. Again, we need to be able to slide the adapters, so only lightly secure the screws.



 #3216
#4-40 steel
flat washer

 #6925
4-40 x 1/2

Fig. 264

Figs. 265, 266 & 267 We are now ready to take your engine with clutch and flywheel assembly and secure it to the engine mount adapters. In the engine mount bag you will find four #6924 4-40 x 3/8" SHCScrews. The non-pull start adapters have several sets of holes on them, but only one set will line up with your motor and let you mesh the gears correctly. The pull start adapters for the OS Max,

Dynamite, and Yokomo engines has only one set of holes for mounting the engine. Center your engine on the adapters and line up your clutch bell gear with the spur gear. Your engine mounts should match up with one of the sets of holes in the adapters. Now fasten the motor to the adapters with the four #6924 SHCScrews. You may have to slide the adapters to be able to install the four screws. Once they're installed, tighten them.

We are now ready to set the spur gear-to-pinion gear spacing. Make sure you can still slide your engine and adapters, then mesh the clutch bell pinion with the spur gear. The correct gear spacing is when the pinion is as close to the spur gear as possible, fig. 267, but if you hold the pinion gear, you should still be able to rock the spur gear back and forth slightly with light finger pressure. Spin the gears and check the mesh in several different locations just in case the spur gear is slightly out of round or worn.

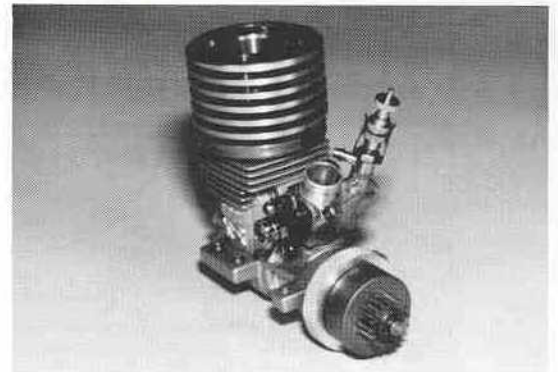
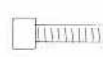


Fig. 265

 #6924
4-40 x 3/8

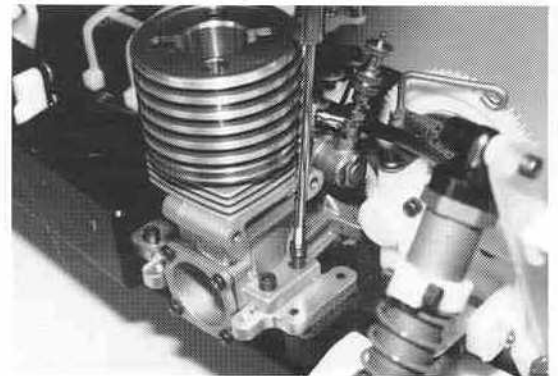


Fig. 266

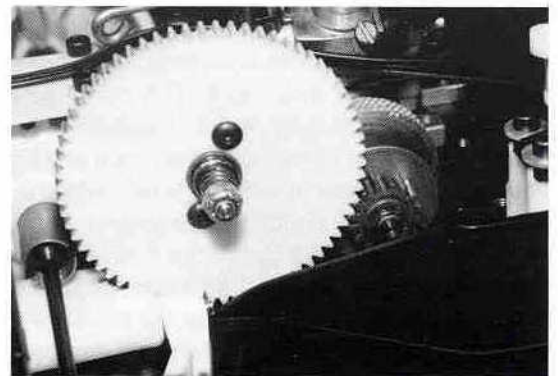


Fig. 267

❑ **Figs. 268, 269 & 270** Go back to the truck kit and remove the #7720 fuel tank (the #7723 90° fuel tank fitting will already be installed). From the fuel tank bag remove the three #5407 red O-rings and the three #7673 4-40 x 5/16" FHSScrews. Mount the fuel tank the same way we did earlier in the truck instructions in fig. 220. Tighten the screws down just enough to slightly compress the O-rings so the fuel tank cannot move around.

In the Engine Installation Pack you will find the #7724 fuel line tubing. Slide one end of the fuel tubing onto the fuel outlet fitting, which is facing to the right (fig. 268). Bring the other end of the tubing as in fig. 270. When you have the correct length as shown in fig. 270, without kinks in the tubing or chafing against any truck parts, go ahead and mark the fuel tubing and the cut it at that location. Now connect the fuel tubing as shown in fig. 270. Again, make sure the fuel line clears the spur gear or any other parts on the truck that could cause chafing against the fuel tubing.

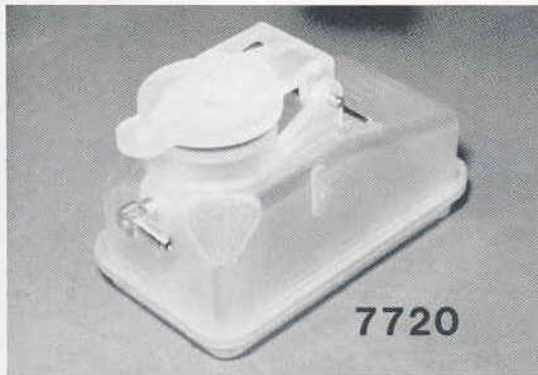


Fig. 268

⊙ #5407
red O-ring

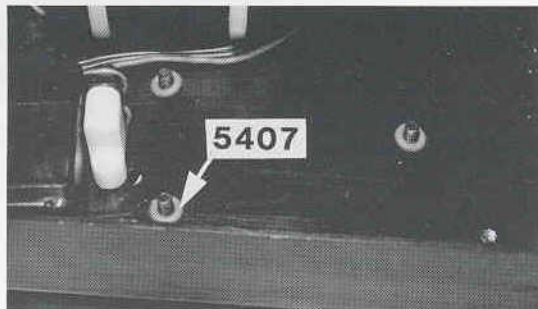


Fig. 269

⌘ #7673
4-40 x 5/16

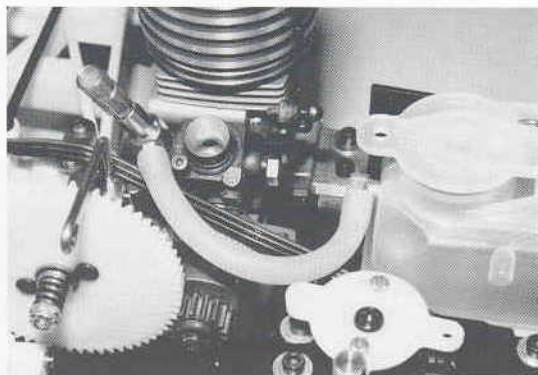


Fig. 270

❑ **Figs. 271, 272 & 273** Now go to the throttle/brake linkage bag #7-15 (in the truck kit) and remove the throttle linkage parts shown in fig. 271. These parts consist of the 2-56 threaded rod, the plastic ball end cap, two .075 collars with 4-40 set screws and the #6372 spring (all of these parts are in the replacement #7560 throttle/brake linkage kit). We are going to assemble the parts in the order shown in fig. 272. Thread the plastic ball end cap onto the throttle rod as shown and set the collar spacing as shown. (The collar set screws use your .050 Allen wrench.) Slide the throttle rod through the #7557 throttle pivot and fasten the second collar onto the rod as shown in fig. 273. Now snap the plastic ball end cap onto the throttle pivot arm ball end, fig. 273. We will make adjustments to the throttle linkage and rod length later in the instructions.

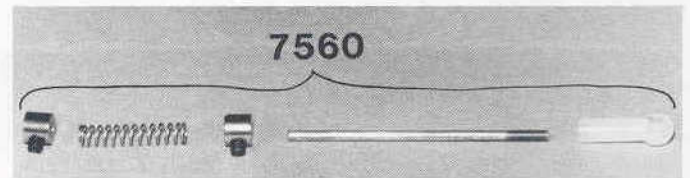


Fig. 271



Fig. 272

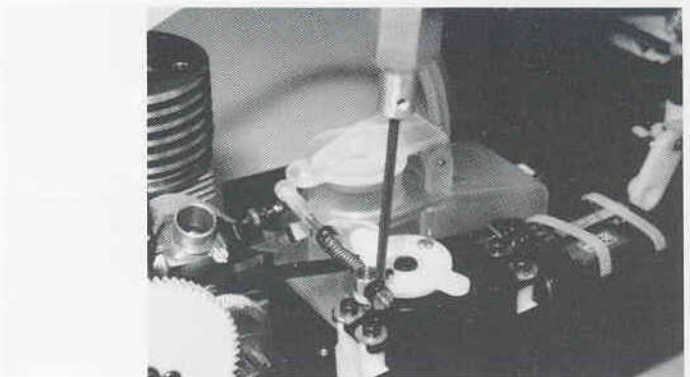


Fig. 273

❑ **Figs. 274-277** Remove the brake linkage parts from bag #7-15 (fig. 274). Install the first collar onto the threaded end and secure it about 3/8" from the end of the threads. Bend the 2-56 threaded rod according to the actual size drawing in fig. 275. Cut off any excess rod below the point indicated. (The angled bend near the end of the brake rod is necessary so the brake rod can clear the throttle linkage without dropping through the #7559 servo horn adapter.) **Warning:** In order to prevent binding or lockup, and to help prevent possible radio interference problems, it is extremely important that the throttle and brake linkage

parts do not touch. Assemble the brake linkage parts in the order shown in figs. 274 & 275. Next drop the bent end of the threaded rod through the hole on the raised end of the #7559 servo horn adapter; install the other .075 collar onto this end of the rod. Be sure to leave a tiny gap so the brake rod cannot bind. Now slide the threaded end through the eyelet on the end of the #7555 brake cam. Now install the #2 steel washer, the #4118 spring and the 2-56 locknut on the other side of the brake cam as shown in fig. 277. We will adjust everything a little later.

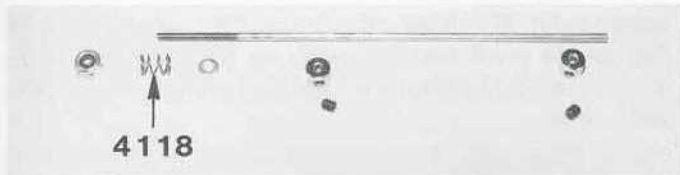
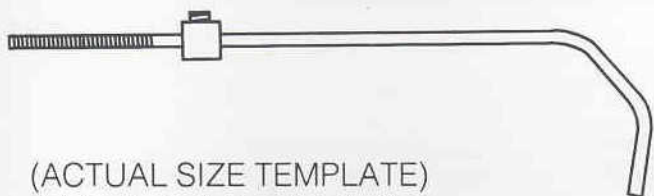


Fig. 274



(ACTUAL SIZE TEMPLATE)
Add collar first, then bend rod to shape and length shown.

Fig. 275

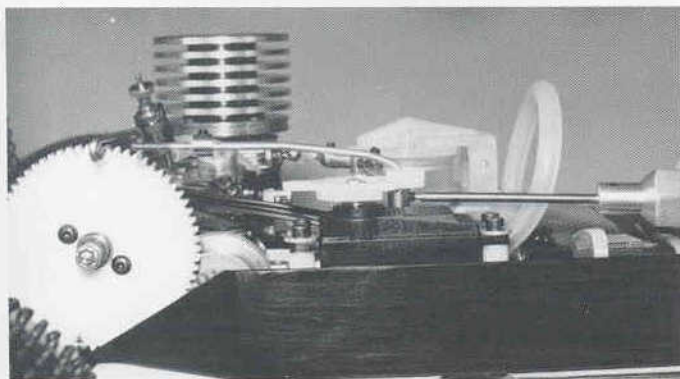


Fig. 276

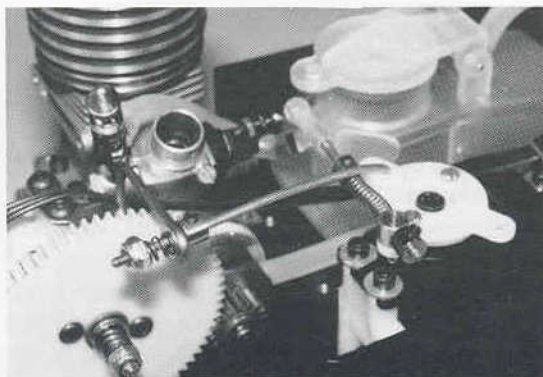


Fig. 277

Fig. 278 & 279 Now we need to remove the #7735 or #7736 exhaust manifold and the two #7738 4-40 x 7/8" SHCScrews (for OS Max & Dynamite) or the two #6928 4-40 x 1" SHCScrews (for Yokomo). You will also need to remove the #7734 exhaust manifold gasket. All of these parts are in the manifold bag. Now bolt your manifold to the engine with the #7734 gasket in between. Use the appropriate #6928 or #7738 screws for your engine. Go ahead and tighten them.

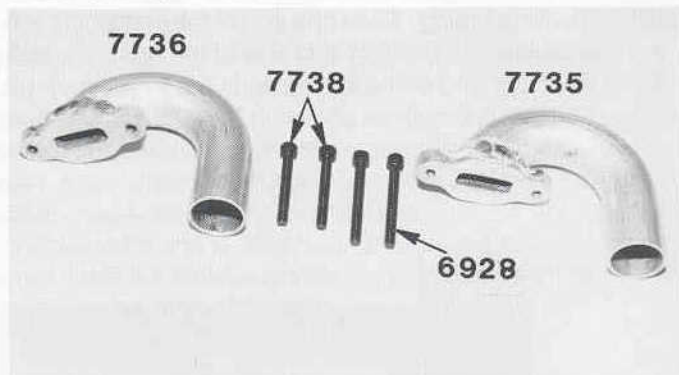


Fig. 278

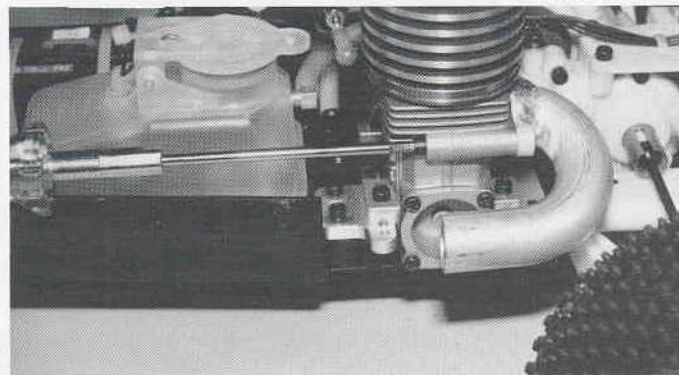


Fig. 279



Fig. 280 & 281 Remove the #7733 silicone exhaust tubing and one of the wire ties from the engine accessory pack. Slide the silicone tubing about half way onto the exhaust manifold and then secure it with the wire tie as shown.

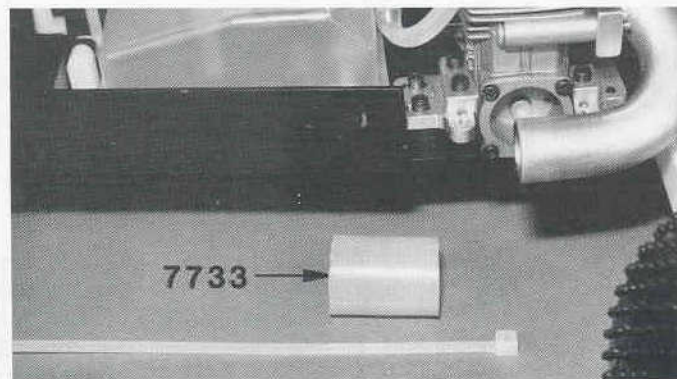


Fig. 280

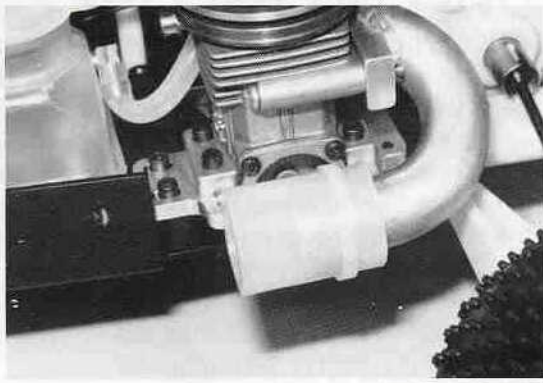


Fig. 281

□ **Figs. 282 & 283** Now we can take out the #7730 tuned pipe muffler and the #7729 muffler bracket and one wire tie from the engine accessory pack. Slip the #7729 bracket onto the muffler so the eyelet is away from the exhaust nozzle (see fig. 283). Now slide the muffler into the exhaust tubing and secure it with the wire tie.

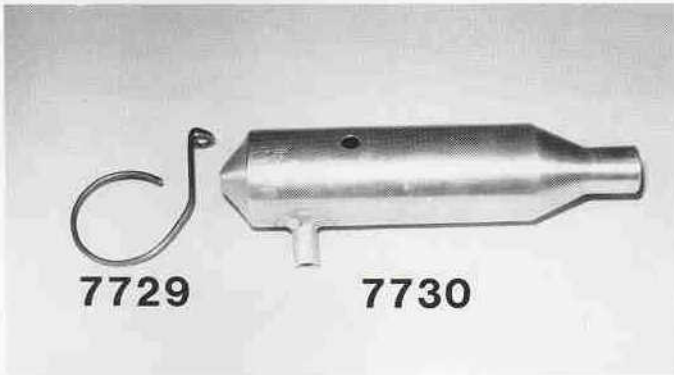


Fig. 282

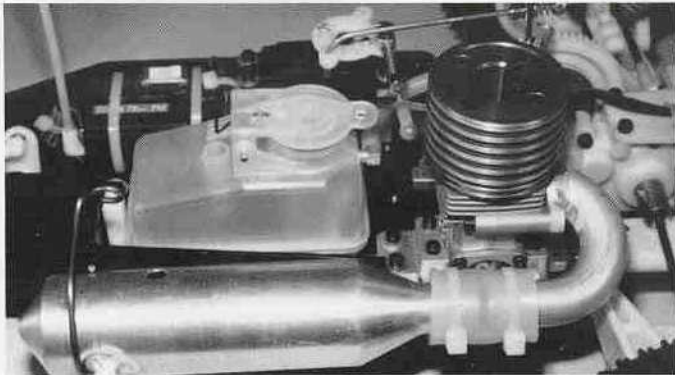


Fig. 283

□ **Figs. 284 & 285** Now remove the #6292 4-40 x 3/8" FHSScrew, one #3216 4-40 steel washer, and one #6242 4-40 locknut from the muffler bag of the engine accessory pack. Next rotate the muffler bracket over the edge of the chassis and move it until it lines up with the hole next to the edge of the chassis. Push the #6292 screws up through the chassis then install the bracket over the threads. Now you can install the #3216 washer and the #6242 locknut, then tighten the screw and nut.

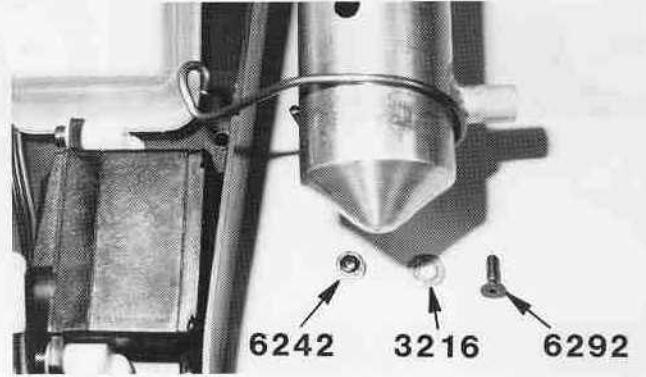


Fig. 284

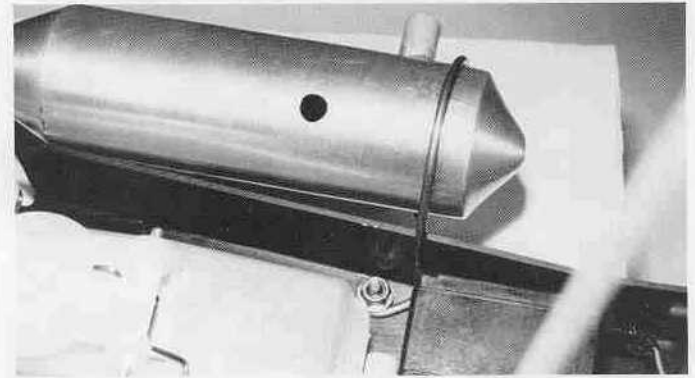
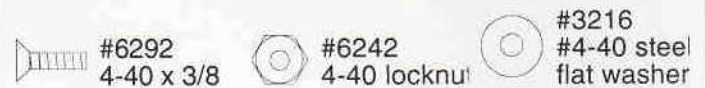


Fig. 285



□ **Figs. 286, 287 & 288** Now we need to get out the remainder of the #7724 fuel tubing for a fuel pressure line. Install the tubing into the fitting on the top of the fuel tank, fig. 286. Take one of the small wire ties from bag #7-7 of the truck kit and loop it around the muffler bracket, leaving as large a loop in it as possible. Take your fuel tubing and run it through the wire tie, then loop it around and bring it back through the same side of the wire tie again, fig. 287. Now take the end of the tubing and squeeze it into the hole in the #7730 tuned pipe muffler about 3/8" where shown in fig. 288. Now tighten up the wire tie so the tie is around the tubing, but not so tight that it will begin to compress the tubing. Cut off the end of the wire tie.

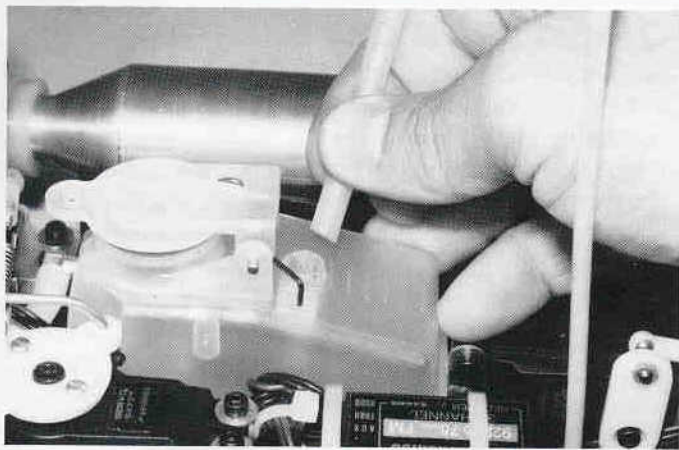


Fig. 286

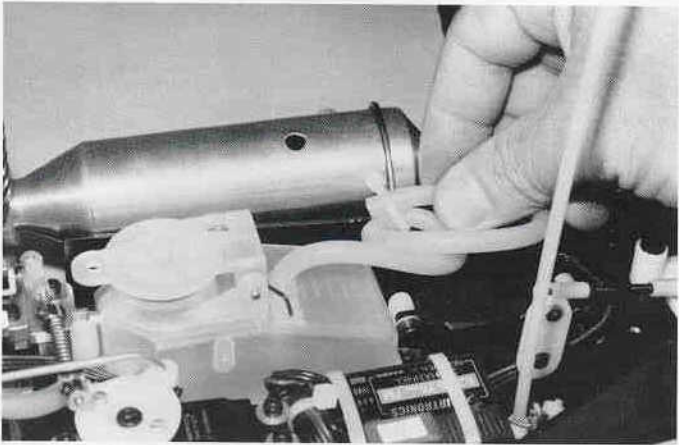


Fig. 287

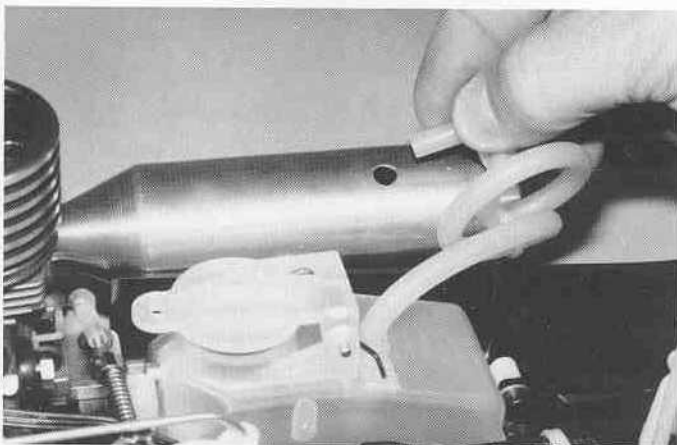


Fig. 288

□ **Figs. 289, 290 & 291** Now take out the #7706 paper air filter element, the #7707 foam prefilter, the #7708 rubber air filter boot, and two small wire ties. These parts will be in a bag in the Engine Installation Pack. The open end of the paper air filter will snap into a groove in the rubber boot. Take one of the small wire ties and secure the filter to the boot, then cut off the wire tie excess. Now slide the foam prefilter over the paper filter element as shown in fig. 290. Fig. 291 shows the air filter assembly on the engine. (After we have finished all of the engine and radio tuning adjustments we will then use the last small wire tie to secure the boot to the carburetor.)

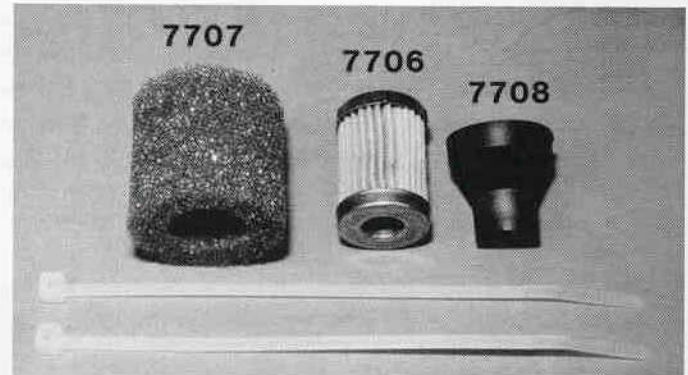


Fig. 289



Fig. 290

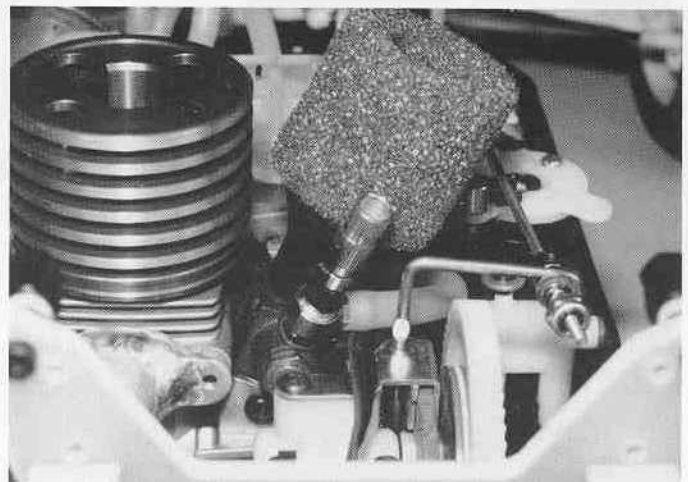


Fig. 291

□ **Fig. 292** You are almost finished!

Now turn to pages 18 and 19 and compare your truck with the photos, figs. 305-307. Is your linkage from the servo to the carb and brake correct?

Are your engine mounts firmly screwed down, to both the engine and chassis? The engine will create terrific forces that will shake these screws loose, which can strip your gear teeth. So after every two tankfuls of gas check that your engine mount screws are firmly tightened.

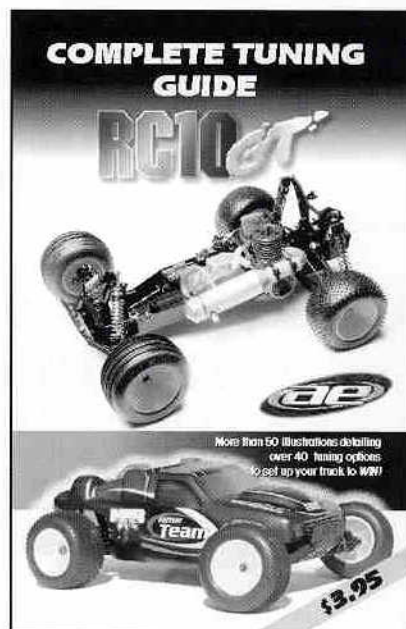
Turn to the back cover photo. Do the preload spacers (the wishbone-shaped plastic on the shocks between the spring and the hex portion of the shock body) give the correct ride height? Check for front ride height by pushing down on the front end and letting go. Look at the front edge of the suspension arms. They should be in a straight line across. If they are otherwise, then add or subtract preload spacers to both front shocks evenly so the arms are level (form a straight line across).

Check the rear ride height. Push the rear end down and look at the axles (not the suspension arms). Do they line up in a straight line? If not, then add or subtract preload spacers on the rear shocks until the axles line up. When front and rear lines up, then your ride height is "level."

Continue with the instructions on how to paint your body. Pages 12-15 will take you through the steps of actually getting your truck ready to run!

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□ **Figs. 293, 294 & 295** Now we need to do some final trimming on the Lexan truck body. Mount the body on the truck. First mark the body where the exhaust nozzle touches the body. Trim enough around the nozzle so that it does not touch the body while running. Next, trim around the engine cylinder head and the carburetor. This area needs to be cut large enough to allow easy access for the glow plug igniter and to adjust the needle valve. It also has to clear the cylinder head if needed.

We also recommend cutting out the side windows and the windshield to allow maximum air flow to the engine. **Note:** If you are going to be racing in either of the racing organizations ROAR and NORRCA, cut only half of the front windshield directly in front of the engine (leaving a place to put your race number). Be sure to round the corners in the windows where you cut them out. This will help to prevent the truck body from cracking prematurely.

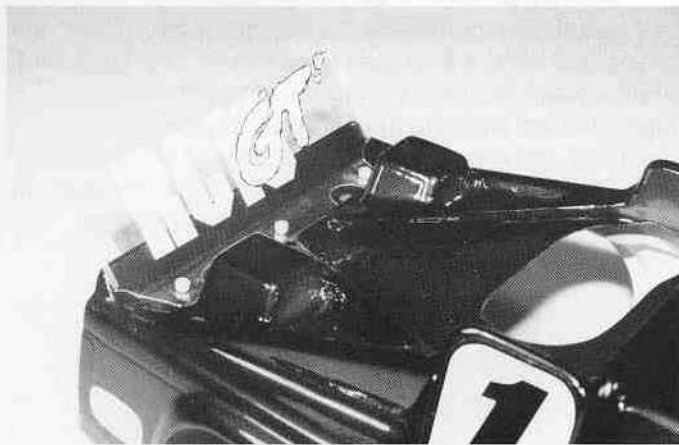
If you have not painted your truck body yet, you can go back to the painting section at the end of the truck manual and follow the painting procedures. Be sure to mask over any of the cut out areas so that you do not get overspray on the outside of the body. After you have painted the truck body and made all of your cut-outs you can also detail it.

Fig. 293



Fig. 294





Optional #7185 rear spoiler mounted; not in kit.

Fig. 295

FINAL RADIO AND GAS ENGINE ADJUSTMENTS

Now we are going to check all of our radio and engine adjustments before we start our truck. Make sure your radio transmitter batteries and receiver batteries are fully charged. Also make sure your glow plug igniter is charged or has a good battery. This can require an overnight charge on most radios or igniters, so check your equipment manufacturer's recommendations. We will check all of our adjustments in the following order: **NOTE: YOU CAN REFER TO THE VIDEO TAPE TO ASSIST YOU DURING THE FOLLOWING.**

- Step 1** Turn the transmitter switch on.
- Step 2** Turn on the truck's receiver pack on/off switch.
- Step 3** Turn your steering wheel to the right. See if the front wheels also turn to the right. If they turn to the left, move the steering servo reversing switch to the other position. Follow your radio manufacturer's instructions on how to do this. Recheck to make sure both the radio and the front wheels turn to the right.
- Step 4** After your wheels turn the correct direction, take your hands off of the transmitter steering wheel (or stick). Is the servo horn on the steering servo centered (or in the straight up position)? If it is off just a little bit, you can adjust it using the steering trim knob or wheel on the transmitter. If it is off quite a bit, you must remove the servo horn from the servo and center it so it is in the straight up position. Fine tune with your radio steering trim knob if necessary.
- Step 5** With the servo horn now centered, are your wheels still pointing straight forward? If not, you will need to adjust the length of the steering turnbuckles or servo

turnbuckle. With the servo turnbuckle adjusted correctly, the servo horn will be pointing straight up and the servo arm, on the truck servo saver, will be pointing straight across the chassis. Now check and see if the right hand and left hand servo saver arms are parallel. If not, adjust the small turnbuckle between them. If after these adjustments the wheels are still not pointing straight ahead, then adjust the steering turnbuckles going to the wheels.

Step 6 Set your transmitter throttle travel setting to 70/30. This means you will be using 70 percent of the throttle servo travel for forward and 30 percent of the throttle servo travel for brakes. Use your radio instructions to make this adjustment.

Step 7 With the transmitter still on, look at your #7559 servo horn adapter. Its neutral position should look like fig. 296. If not, remove the servo horn mounting screw and lift the servo horn assembly and rotate it until you find a spline that will line up according to the photo or as close as possible. You can use your throttle trim knob to make any fine tuning adjustments. You can now tighten the servo horn mounting screw.

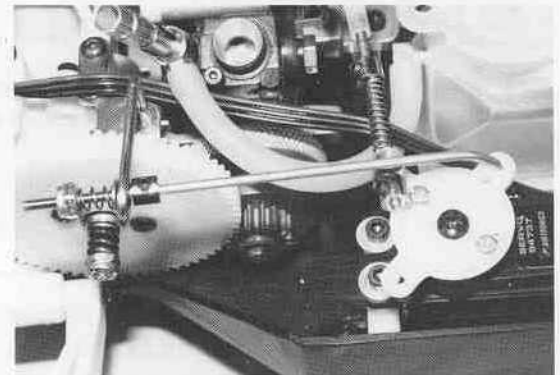


Fig. 296

Step 8 In figs. 297A and 297B we have removed a carburetor so we can show you where each adjustment point is. (You can make any needed adjustments while the carburetor is mounted on the car.) We will show you how to adjust these features a little later. On the left is the needle valve assembly. This is your high speed fuel mixture adjustment control. The screwdriver is touching the low speed/idle fuel mixture adjustment screw. These two adjustments richen and lean the air/fuel mixture when turned in the direction shown in fig. 297B.

On the front of the carb you will find a very small screw called the idle air speed adjustment screw. Turn this until the throttle opening inside the throttle valve assembly is 1/32". Slip your 1/32" piano wire (from the air filter bag) into the half-moon shaped opening to gauge the opening.

Check and make sure your needle valve setting is adjusted according to the engine manufacturer's instructions. Set your idle mixture screw according to the manufacturer's engine manual. If you find nothing in their

manual about the idle mixture adjustment, then leave the settings as it came from the factory for now. We need to make all of these adjustments before we can adjust the carburetor linkage.

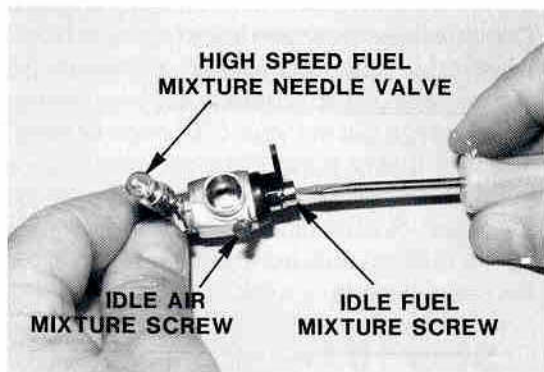


Fig. 297A

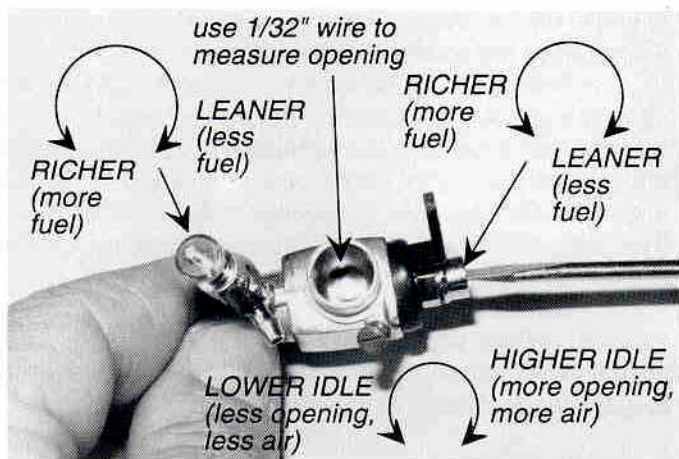


Fig. 297B

Step 9 Push closed the carburetor throttle pivot arm on the engine (by hand if necessary, fig. 284). With the throttle closed, adjust the outside collar on the throttle rod so that there is a gap of 1/16" between the #7557 aluminum throttle pivot and the collar. Now squeeze and release the throttle trigger on the transmitter. We need to adjust the inside collar (next to the spring) so that when we let off on the throttle trigger the spring is tight enough to close the carburetor. If it does not fully close the carb, move the collar next to the spring so that you compress the spring more. Get the spring set so it just closes the carburetor but you do not want it any tighter than this. If there is any excess throttle rod sticking out past the outside collar, cut it off, but leave about 1/32" past the collar.

Step 10 Now move the transmitter throttle to the full position. Does the throttle valve open fully? If not you will need to shorten the length of the throttle rod by threading the plastic ball end on further. Now recheck the full throttle opening. If you had to adjust the rod length we also recommend you go back to step 8 and double check all of the adjustments up to this point.

Step 11 To adjust the brake, fig. 288, make sure the #7555 brake cam arm resting in its forward position (but with no pressure on it). Also make sure the transmitter throttle position is at neutral. There should be a 1/16" gap between the cam arm and the collar. Now tighten the 2-56 locknut so that there is no play between the spring and the nut. After we have the engine running we will want to have the brake adjusting nut just tight enough so that when the truck is idling the brake will just barely keep the truck from moving. To increase the brake, you tighten the locknut against the spring more.

Step 12 If your motor does not come with a glow plug you will need to purchase one. Take your glow plug wrench or 5/16" nut driver and install the glow plug into the cylinder head. They normally come with a brass washer, so make sure you did not forget to install it as well. Just hand tighten the glow plug into the cylinder head. At the present time, for glow plugs, we recommend either the McCoy #MC-104-9 or the OS Max #8. These are good quality plugs and have the correct heat range for R/C cars and trucks.

Step 13 Figs. 298A-298D show what each of the needed items or accessories normally look like. They are labeled to help you identify what each item is. Their use is described in the following instructions if you are unfamiliar with them. Fig. 298A shows a long reach glow plug igniter, Ni-cad style. Fig. 298B show a hand starter motor with car type rubber donut (Associated #SP-26) and a 12 volt battery used to run it. Fig. 298C (next page) shows an



Fig. 298A



Fig. 298B

optional starter box with enclosed battery. Fig. 298D shows installing one inch piece of fuel tubing on pull start cord. You can either untie the knot and slide the tubing on, or you can slice the tubing, slip it around the cord, and tape it closed. This raises the pull start handle above the exhaust manifold.

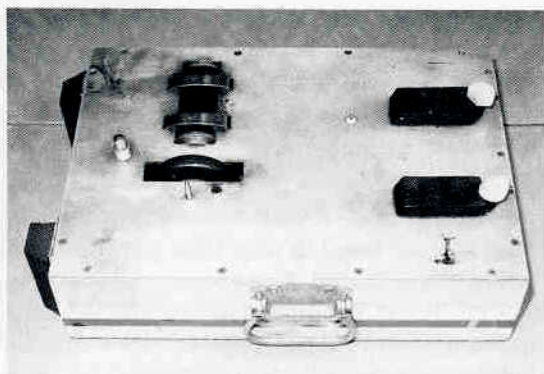


Fig. 298C

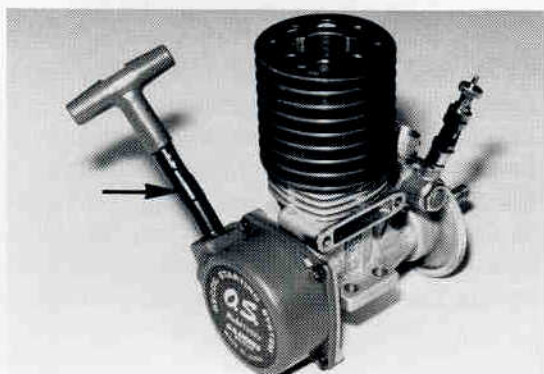


Fig. 298D

Step 14 Fig. 299 shows both the O'Donnell and Blue Thunder fuels. These are the only fuels we can say for sure work well in R/C cars or trucks. **Warning:** We recommend only the O'Donnell or Blue Thunder fuels because we have personally raced with these fuels and can verify the quality. Both of these fuels are available to dealers from major hobby distributors. If you cannot locate these fuels, it will be up to you to locate a reliable R/C car fuel in your area. Don't use airplane and helicopter fuels; they do not have the necessary oil types and ratios for R/



Fig. 299

C cars. They have a greater amount of cooling air across the engine, allowing them to use different oils in their fuel. Gas engine cars and trucks, which have a much more restricted amount of air flow over the engine, need different oils in the fuel to help handle the higher engine temperatures. Check with local car and truck racers or hobbyists and see what they have found that performs well. We also recommend only a maximum of 20 percent nitro in the fuel.

Now get out your O'Donnell or Blue Thunder fuel and your fuel fill bottle. Put a couple of ounces of fuel into your fuel fill bottle so we will have enough for the first tank full of fuel. Go ahead and open the quick fill top on the fuel tank and fill the tank from your fuel fill bottle. Fill the tank to the base of the tank neck.

Step 15 If you have a non-pull start motor you will need to get out your hand starter (with rubber starter donut or wheel) or starter box and the battery that you are going to use to run the starter. If you have a pull start motor you will not need the above items.

Before we will be able to run the engine we will need to prime the fuel system. The easiest way to do this is to put your finger over the exhaust nozzle on the muffler and pull the pull starter cord a couple of times or turn the engine over for about 5 to 10 seconds with the starter motor. If you are not familiar with using starter motors you can refer to step 17.

Watch the fuel line that goes from the fuel tank to the carb. When you see the fuel reach the carburetor needle valve, you can stop. **Note:** This is without the glow plug igniter connected to the engine.

Step 16 Now get out your glow plug igniter unit. Make sure it is one of the long reach models so that it can reach the glow plug at the bottom of the heat sink cylinder head on the motor. We personally recommend the Ni-cad type of glow plug starters so that you don't have any additional wires dangling around when you are starting the engine. If you are using one of the older wired igniters you will also need a 1.5 volt dry cell battery to run the igniter.

Step 17 If you are going to be using a starter motor, fig. 300 shows where the cutout in the bottom of the chassis is located around the flywheel. Go ahead and get the starter set up and ready to go. To use it, you will need to bump the starter motor rubber donut against the flywheel, through this opening, and then hold it there after the motor starts to turn over. **WARNING!** the flywheel on the engine must rotate counter clockwise (when looked at from the clutch end) in order to work correctly. Check the direction of rotation of the starter motor rubber donut when placed under the chassis. If it was brought in from the clutch side it should rotate clockwise. If the rotation is backwards you will need to bring the starter motor in from the other side of the chassis or reverse the starter motor connections to the battery.

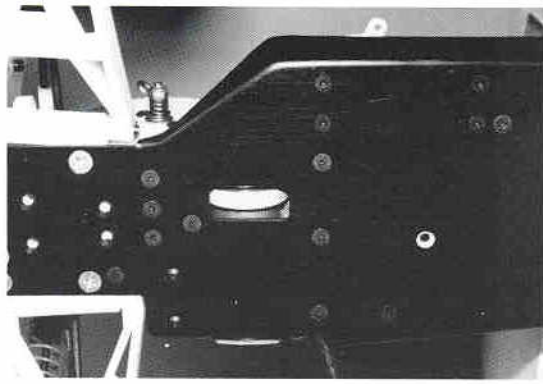


Fig. 300

Step 18 We are now ready to start the engine for the first time. Make sure the radio transmitter and receiver battery are still on. Connect your glow plug igniter to the glow plug. Now try and start your engine. If your adjustments are set according to the manuals for your engine and/or carburetor, the engine should start after a few attempts. When you have the engine running, give it a little more throttle to help clear the carburetor. Let the engine warm up for at least 20 to 30 seconds before you remove the glow plug igniter. The engine should idle easily. If the rpms increase and then the engine shuts off, the idle mixture is a little lean. Open the idle mixture fuel screw about 1/8 of a turn counter clockwise and then try again. Keep making these adjustments until the engine idles and doesn't rev up and shut off. If the engine does not idle or idles then sounds like it is blubbering before it shuts off, you will need to decrease the idle fuel mixture a small amount. Tighten the idle mixture screw about 1/8 of a turn clockwise and then try again. Keep making these adjustments until the engine idles and does not bog down and shut off.

Step 19 Now we need to check the truck for possible radio interference. Go ahead and rev the engine several times but look closely at the truck for any signs of radio interference. If everything looks okay, have someone hold your truck in the air, then pull up your antenna and then slowly walk away from the truck. If everything is still okay, you will not see any erratic movements from the truck as you turn the steering wheel or move the throttle. Work your way away from the truck to a distance that equals the distance you know the truck will be away from you when you are using it. Once you have verified that you are not having radio problems you are now ready to put the truck on the ground and see how it runs.

Step 20 With the truck on the ground we need to check the brake at idle. If the truck is moving or attempting to move, tighten the brake locknut a tiny amount. Now give the truck some throttle, then apply the brakes. Does the truck seem to stop correctly? Do this at several throttle speeds just to be sure.

Step 21 The engine has been running long enough to be completely warm. Now we need to check the high

speed fuel adjustment. We want to break in a new engine correctly to give us the longest engine life possible. For the first two or three tanks of fuel, run the engine a little on the rich side (as explained in step 8). This will help to break in the engine without doing damage to the internal parts. The engine during break in should be close to blubbering and there should be a fair amount of smoke coming out of the muffler. During the break in period your run time will be very short because you are not burning all of the fuel.

After we have run our break in tanks of fuel we can now begin to adjust the carburetor for the correct mixture at high speed. Go ahead and run the truck up and down the track surface at high speed. If the high speed fuel mixture is too rich you will see a lot of smoke, hear a blubbering sound or a lower engine tone. Adjust the needle valve assembly clockwise 1/8 of a turn. If the engine mixture is too lean at high speed the engine will shut off or have a very high pitch tone (almost tinny sounding). Adjust the needle valve assembly counter clockwise 1/8 of a turn. You should always see smoke coming out of your muffler.

Step 22 Now shut off the engine. You can accomplish this in several ways: you can block off the exhaust nozzle on the muffler with a rag (not just cover it but block it off). **Warning! the muffler can be extremely hot so be careful any time you touch it.** You can pinch off the fuel line from the tank. Or, with the engine at idle, you can stop the flywheel with your shoe or a rag from the bottom of the chassis. **Do not use your hand or fingers to attempt to stop the flywheel.** After you have stopped the engine, turn off the receiver pack on/off switch.

Step 23 Now turn off the transmitter on/off switch. This switch is always the **first switch turned on and the last switch turned off.**

CONGRATULATIONS!! You now have a fully operational gas powered off road truck. Give yourself a pat on the back and go out and have fun with your new truck!

RC10GT TRUCK MAINTENANCE

You will find your RC10GT truck will give you many more hours of trouble-free operation than any other gas truck now available. Even so, you should periodically check all the moving parts: front and rear A-arms, steering blocks, steering linkage, servo saver, shocks, clutch, brake parts and so on. If any of these parts should get any dirt in the moving or pivoting parts locations, it can reduce the truck's handling or performance.

The easiest way to keep your gas truck clean is with a small paint brush and or tooth brush. This will help

you to get to dirt or mud in just about any location on the truck.

DIFFERENTIAL MAINTENANCE

When the truck is ready to run (battery and motor installed and charged), apply a small amount of throttle while holding one of the rear wheels stationary. Do this for about 15 seconds. This will correctly seat all of the differential parts. Now readjust the differential by bottoming its spring and screw and backing the screw out 1/4 turn.

You should rebuild the differential when the action gets somewhat "gritty" feeling. Usually cleaning and applying new lube according to the instructions will bring it back to new condition. The tungsten carbide diff balls (which are standard parts) should rarely need changing. Normally as the parts seat, the diff will get smoother. If after carefully cleaning and relubing the diff parts, the diff still feels gritty, the parts should be replaced in the following order: #6573 thrust washers, #6574 5/64" precision diff thrust balls, #7666 diff drive rings. Only after all of these parts have been replaced and the diff smoothness has not improved should you consider replacing the #6581 3/32" carbide diff balls. Refer to the diff assembly section of your manual to correctly reassemble the diff.

WARNING! Do not oil or lube the gear inside the transmission. The gears are made of a self-lubricating material. Any oil or lube on the gears could get to the differential and cause failure of the diff due to slippage!

RADIO MAINTENANCE

A radio problem is not always caused strictly by the radio system. Often it is caused by a combination of several factors which can include: bad connections or chaffed wires, reversed or defective crystals, shortened receiver antenna wire or low receiver pack voltage. If your radio problem persists you can try the following suggestions:

Try a different radio frequency (change crystals).

Try a different radio receiver

Try mounting the receiver on its side with the crystal up.

Do you have any excess antenna wire bundled next to the chassis? If you do, try placing it on top of the receiver away from the chassis.

Make sure the servo wires are away from the antenna wire.

Make sure that no wires cross the antenna wire.

Note that you can also run into outside interference at times; the 75mhz radio band will tend to be more susceptible to this problem than the 27mhz band. An AM transmitter will tend to have more problems than an FM transmitter. Large metal objects such as chain link fences, light poles, cars, vans, trailers or even fluorescent lights can occasionally cause local interference by momentarily blocking or reflecting a signal.

TUNING TIPS

Several different adjustments on your RC10GT truck can help you adjust steering, traction, and handling for different track conditions.

ENGINE CLUTCH (Fig. 301A, 301B, 301C) Our Team drivers have worked out a simple modification to improve the performance of the clutch. It involves trimming down the clutch shoes to the size needed for your application, as in the shaded area in fig. 301B.

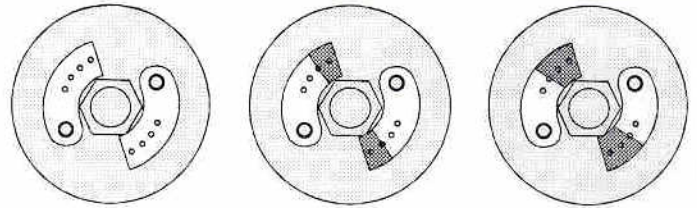


Fig. 301A

Standard

(quickest engagement)

Fig. 301B

Middle

Fig. 301C

Maximum Cut

(slowest engagement)

(1) Using an X-acto® knife, trim away the shaded portion of the clutch shoes as in fig. 301B. (2) After this, you will need to test the clutch performance. After you have warmed up your truck, bring it to an idle in front of you. **NOTE:** You will probably need to raise your idle slightly with this modification. (3) Now apply full throttle from a standing start. Your truck should accelerate quickly without hesitation or excessive rpms. If your engine tends to "bog" (be slow in initial acceleration), then you may need to trim your clutch shoes half way between figs. 301B and 301C, then test your truck again. (4) If your engine still bogs from a standing start, your maximum trim would be as shown in fig. 301C. This will allow the engine to rev-up higher into its power range before the clutch fully engages. **WARNING! DO NOT TRIM AWAY MORE CLUTCH SHOE THAN NECESSARY, OR ENGINE DAMAGE MAY OCCUR!**

If your engine tends to rev-up excessively without much acceleration, you may need to keep your clutch shoes closer to standard length. Normally, the more power you have, the more clutch shoe you will need. In most cases, trimming the clutch shoes as in fig. 301B will work best.

CASTER (fig. 302) describes the angle of the kingpin, in relation to the vertical plane, when looked at from the side of the car. As an example, 0° of caster puts the kingpin in a vertical line. Positive caster means the kingpin leans rearward at the top.

Caster has several effects; however, the easiest way to see its effects is to compare it to the casters on the bottom of a shopping cart. When the cart is pushed forward, any misalignment of the casters will cause a side load on the wheels and thus cause the wheels to realign in the direction of travel. Increasing the positive caster on your car will increase the steering turning into a corner and

slightly increase understeer coming out of the corner. Reducing the positive caster will decrease the amount of steering you have going into a corner and increase the amount of steering you have in the middle of the corner and exiting the same corner. Associated makes positive caster blocks in increments of 5° starting at 5° and going through 30°. Your RC10T Team truck comes with our new 30° caster, front carrier blocks, which is what we recommend for off road racing. The 30° of caster will give you good steering going into the corner but take away just enough steering coming out of the corner so that the truck will have less tendency to oversteer when accelerating out of the corner. The increased caster also gives you more stability on fast, bumpy track conditions.

Caster summary:

CASTER:

ADJUSTMENT:

Change front block carriers.

EFFECT:

Reducing caster: decreases steering into corners, increases steering at middle and end of corners.

Increasing caster: Increased steering at beginning of corners, more understeer out of corners.

RECOMMENDED: 30° caster.

POSITIVE CASTER OPTIONS:

- #6211 Front block carrier, 5° caster.
- #6212 Front block carrier, 10° caster.
- #6213 Front block carrier, 15° caster.
- #6214 Front block carrier, 20° caster.
- #6215 Front block carrier, 25° caster.
- #6210 Front block carrier, 30° caster, included in kit.



negative
caster (not
used)



30° positive
caster

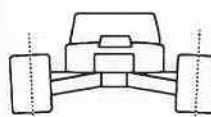
Fig. 302

CAMBER is a word describing the angle at which the tire and wheel rides relative to the ground when looked at from the front or back (fig. 303). This is one of the most important adjustments on the truck. Negative camber means that the tire leans inward at the top, putting it closer to the centerline of the car than the bottom of the tire. Positive camber means just the opposite, the top of the tire is further away from the centerline of the car than the bottom of the tire.

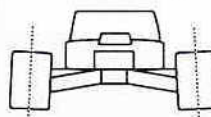
Negative camber will take away traction but increase stability. Positive camber will also take away traction but decrease stability. A tire's maximum traction is achieved when it is perpendicular to the ground (straight up and down). For the rear tires this will cause understeering in most conditions and possibly traction rolling in high traction conditions. We suggest a starting setting of 2° of negative camber for both front and rear. If you want to add a little more steering, reduce front camber to 1° negative or even 0°. Keep in mind that using little or 0° of camber will cause the truck to slide unpredictably. Try to use at least 1 to 2° negative camber at all times. This can be adjusted by turning the upper control rod turnbuckles (front or rear) in the appropriate direction.

Camber summary:

CAMBER:



positive camber



negative camber

Fig. 303

ADJUSTMENT:

Turn upper control rod turnbuckles.

EFFECT:

Negative: less traction, more stability.

Positive: less traction, less stability.

None: maximum traction.

RECOMMENDED: 2° negative camber front and rear.

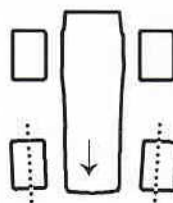
TOE-IN AND TOE OUT is a very helpful adjustment (fig. 304). It applies to both the front and the back of the vehicle and has the following effects. Adding toe-in to the front tires helps stabilize your truck under acceleration but at the same time it removes a small amount of turn-in steering. Toe-out will add turn-in steering but will reduce stability under acceleration or through the bumps. Both toe-in and toe-out will scrub speed so try to use as little as possible of either.

Front toe-in can be changed by adjusting the steering tie-rod turnbuckles. We recommend a starting setting of 0° of front toe-in.

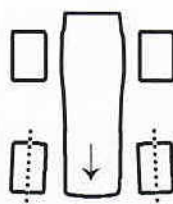
Your team truck comes with 3° toe-in rear suspension mounts and 0° toe-in rear hub carriers. You replace these mounts and hub carriers to change the rear toe-in. Maximum toe-in recommended for the rear of the truck is 4.5° per side.

Toe-in and toe-out summary:

TOE-IN AND TOE-OUT:



front toe-in



front toe-out

Fig. 304

ADJUSTMENT:

Rear toe-in: change rear suspension mounts and/or rear hub carriers.

Front toe-in/toe-out: adjust steering tie-rod turnbuckles.

EFFECT:

Rear toe-in, increased: reduces speed; less steering, more rear traction.

Rear toe-in, decreased: increases speed; more steering, less traction.

Front toe-in: improves stability during acceleration; less turn-in steering.

Front toe-out: causes instability during acceleration and through bumps; more turn-in steering.

RECOMMENDED: 0° front toe-in.

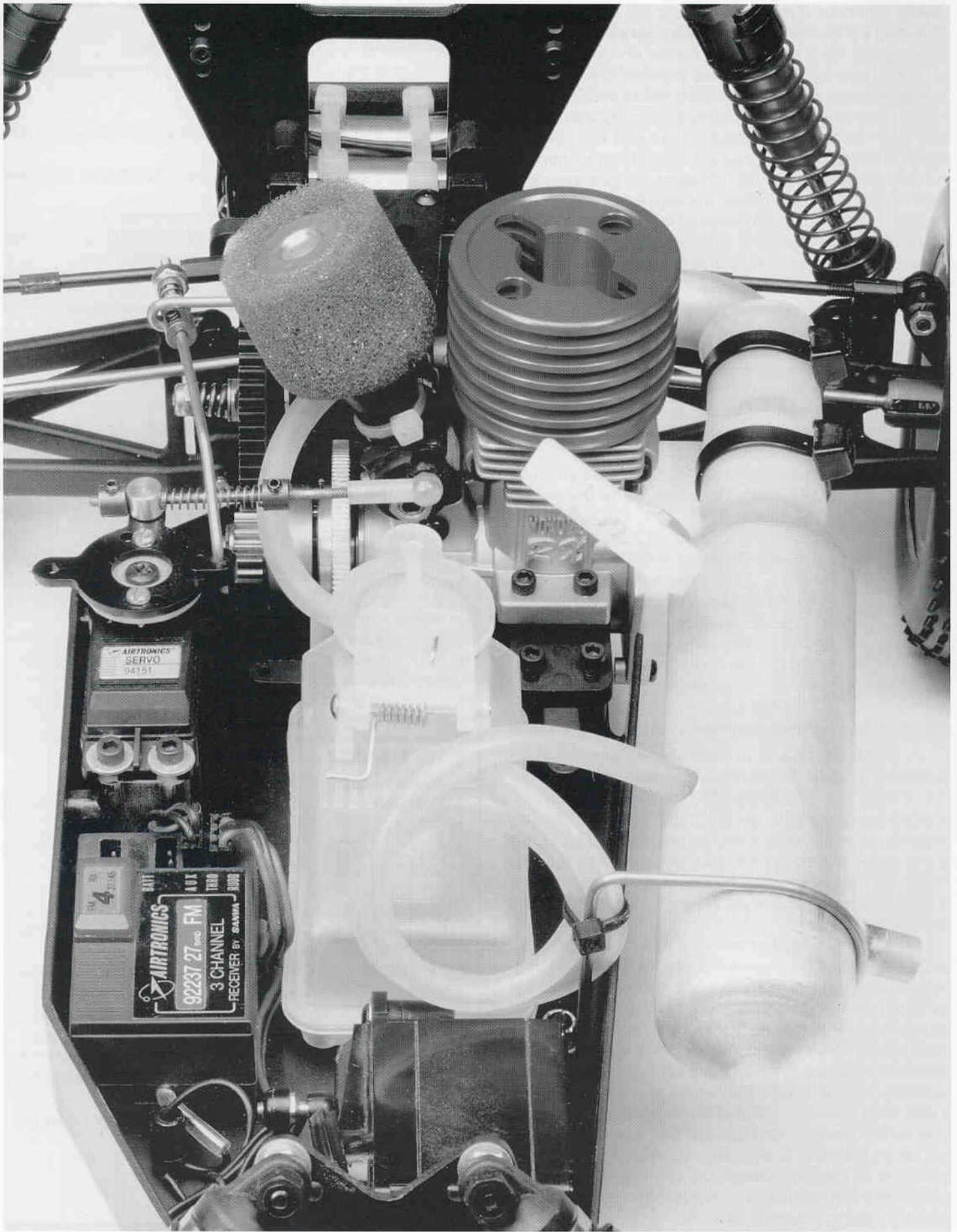


Fig. 305

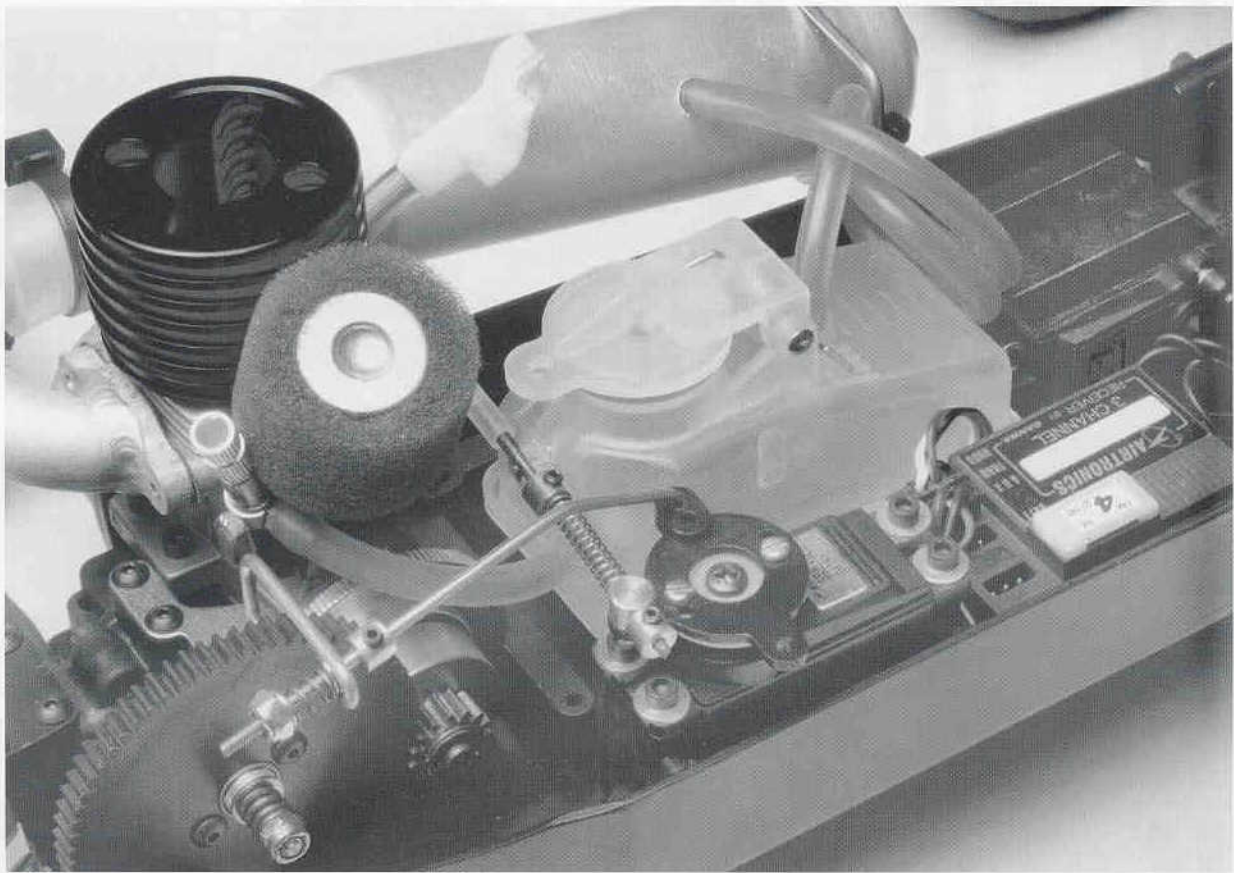


Fig. 306

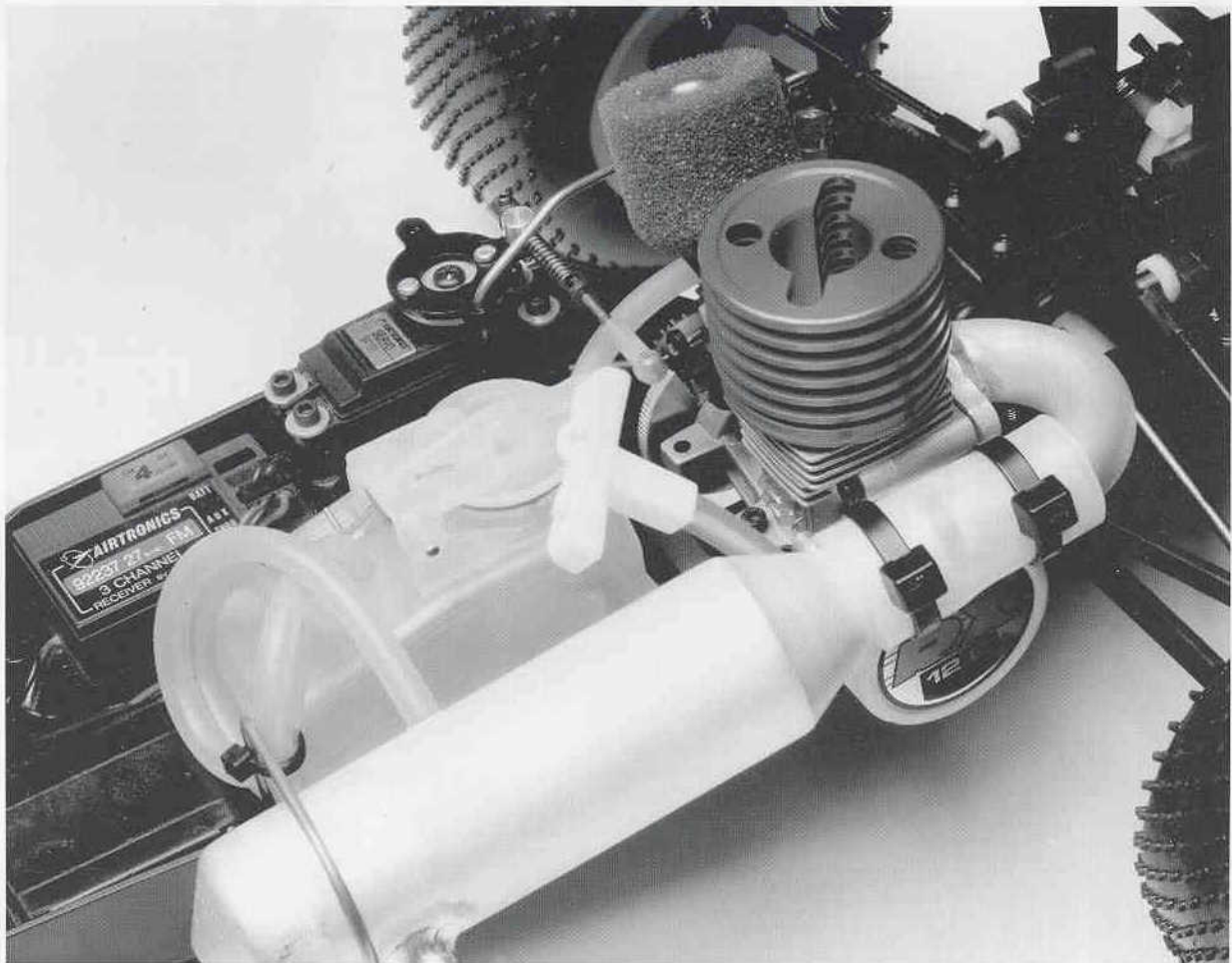


Fig. 307

REG10

Powerful rear disc brake

**Dual stage paper/
foam air filter**

**Stealth ATC
transmission
optimized for
gas truck
racing, 2.6:1
reduction**

Adjustable clutch

**2-second, quick-fill
fuel tank with filter**

**Preload spacers
for shocks**

**Heavy duty
front & rear
arms**

**Black composite
front & rear shock
towers**

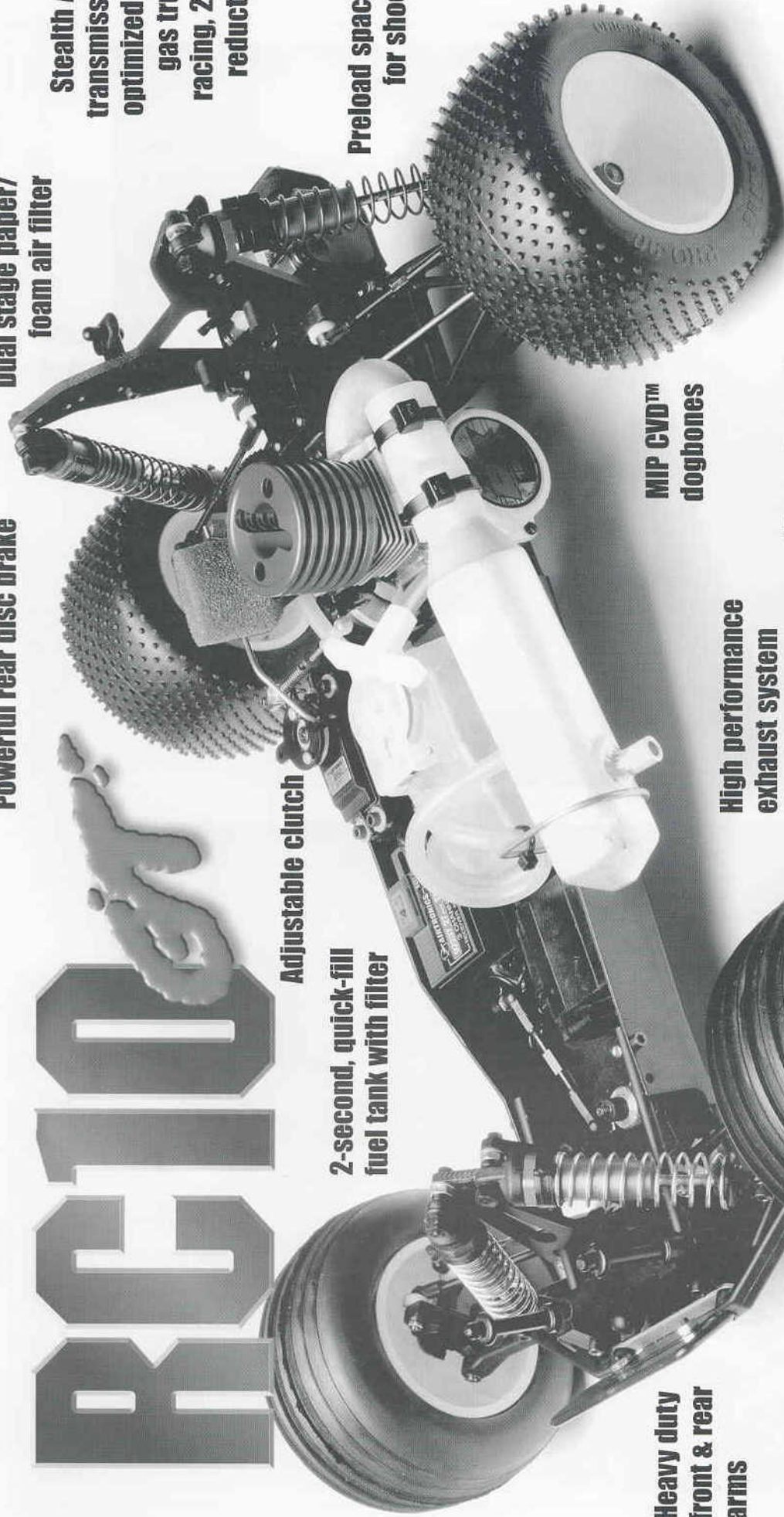
**Reversible bellcrank/
servo saver steering**

**High performance
exhaust system**

**MIP CVD™
dogbones**

**Fits most popular
.12-.15 gas engines,
pull start or non
pull start**

**High bite, multi-sur-
face wide front tires**



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