

# LANIER R/C'S

# PREDATOR II ARF



**WARNING! THIS IS NOT A TOY!**

**THIS IS NOT A BEGINNERS AIRPLANE**

**This R/C kit and the model you will build from it is not a toy! It is capable of serious bodily harm and property damage. It is your responsibility, and yours alone** - to build this kit correctly, properly install all R/C components and flying gear (engine, tank, radio, pushrods, etc. and to test the model and fly it only with experienced, competent help, using commonsense and in accordance with all safety standards as set forth in the Academy of Model Aeronautics Safety Code. It is suggested that you join the AMA and become properly insured before attempting to fly this model. If you are just starting R/C modeling, consult your local hobby dealer or write to the Academy of Model Aeronautics to find an experienced instructor in your area.

Write to: Academy of Model Aeronautics, 5151 Memorial Dr. Muncie, IN 47302

#### LIMITED WARRANTY

Lanier R/C is proud of the care and attention that goes into the manufacture of parts for its model kits. The company warrants that for a period of 90 days, it will replace, at the buyers request, any part or material shown to the company's satisfaction to have been defective in workmanship or material at the time of purchase.

No other warranty of any kind, expressed or implied, is made with respect to the merchandise sold by the company. The buyer acknowledges and understands that he is purchasing only a component kit from which the buyer will himself construct a finished flying model airplane. The company is neither the manufacturer of such a flying model airplane, nor a seller of it. The buyer hereby assumes the risk and all liability for personal or property damage or injury arising out of the buyers use of the components or the finished flying model airplane, whenever any such damage or injury shall occur.

Any action brought forth against the company, based on the breach of the contract of sale to the buyer, or on any alleged warranty there under, must be brought within one year of the date of such sale, or there after be barred. This one-year limitation is imposed by agreement of the parties as permitted by the laws of the state of Georgia.

# LANIER – Predator II

## ARF - INSTRUCTIONS

### BUILDING INSTRUCTIONS

Before starting to build this kit, we urge you to read through these instructions while reviewing the plans. They contain some important building sequences as well as instructions and warnings concerning the assembly and use of the model.

We expect that you have some building experience to take on a built-up model. However, every minute detail is not covered. This is not a basic trainer. The plans and instructions together with the laser cut parts, and the simplicity of this kit will allow you to produce a first class PREDATOR 500.

### BUILDING SUPPLIES NEEDED

X-acto knife w/ #11 blade

Thin Zap CA

30 Minute Z-poxy

Wire cutters

Pliers

Drill with bits: 1/16", LONG 1/8"

Phillips and standard screwdriver

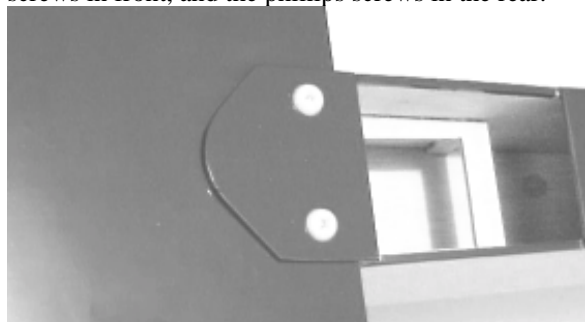
Small clamps

Tape

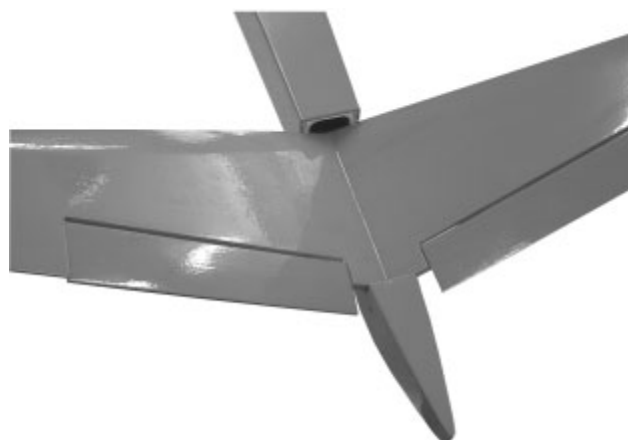
See the list at the end of the instruction book for a list of additional R/C equipment you will need to complete the PREDATOR 500.



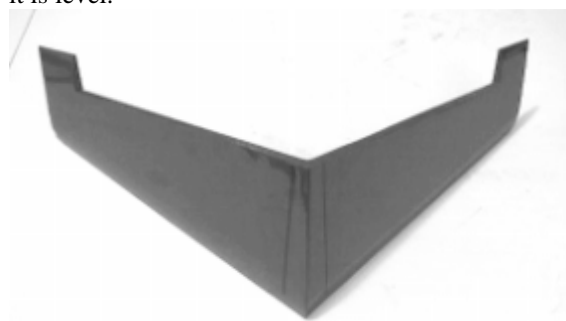
1. Test fit the wing on the fuse using the countersunk screws in front, and the phillips screws in the rear.



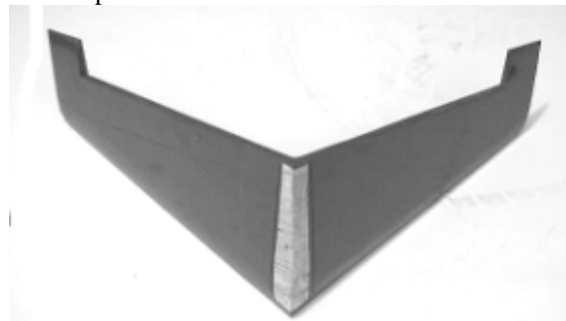
The rear screws go through the fly reinforcing plate.



2. Test fit the v tail on the rear of the fuse. Sight down across the top of the v tail and the wing to make sure it is level.



3. Clamp in place, and then mark the joint with a pencil or felt tip.



4. Trim the covering away from the inside of the marked area using a sharp hobby blade, being careful to not cut in to the balsa wood.

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5. Turn the fuselage over and check that the elevator torque rods are centered in the fuselage. The nylon pushrod connectors must be installed before gluing stab in place.



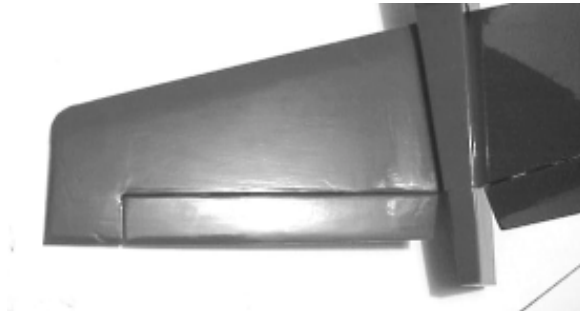
With your alignment figured, mark the position with a marker or tape, then glue in place with 30-minute epoxy. Remove the covering from the ends of the filler block on top of the stab, and make sure it is securely glued to the fuselage at the front and rear. Clamp in place until cured



6. Install your tail servos in the rear of the fuse. You may need to adjust the opening depending on the

servos you use. Drill 1/32" pilot holes for the servo screws, then install.

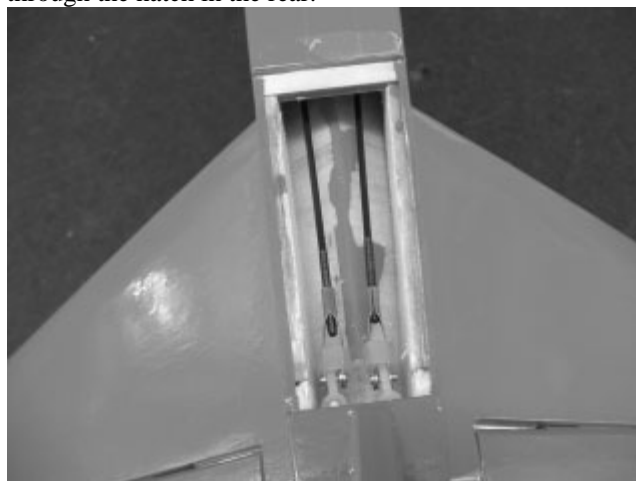
7. Put a small amount of epoxy on the torque rods of each elevator .



8. Install (3) ca hinges in each side of the elevator, and then install each elevator on the v tail. Secure each hinge with a drop of thin CA on each side of the hinge.



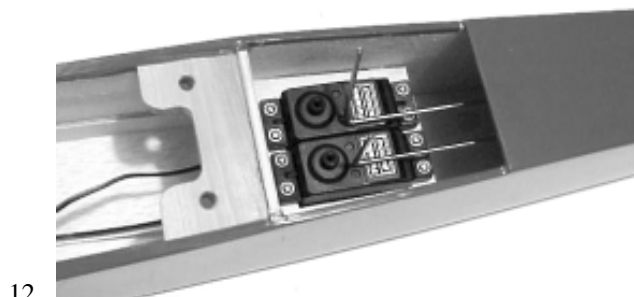
9. Use a lighter or heat gun to shrink the heat shrink tubing on the ends of the two tail push rods. Install two fuel tube pieces and two clevis on the ends of the pushrods.
10. Slide the two push rods through the fuse and access through the hatch in the rear.



11. Attach the clevis to the elevator torque rods.

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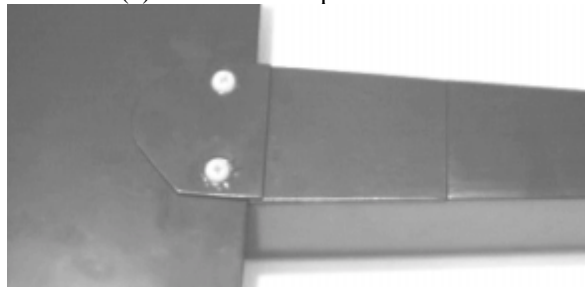
12. Mark the intersection of the control rods with the center of the servos, then make a 90° bend upward at that location.



13. Trim (2) servo wheels as shown and drill out the holes if needed to fit the control wires. Trim the control rods so they protrude out of the servo wheel about 1/8".

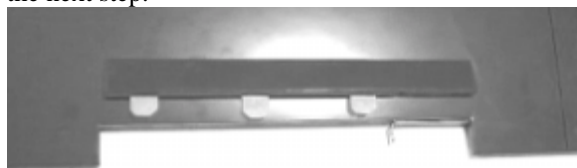


14. Install the (2) control rod keepers on the rods.



15. Test fit the servo hatch on the back of the fuse. It is held in place with the wing reinforcing plate. Mark the joint of the wing with the fuse with a marker for

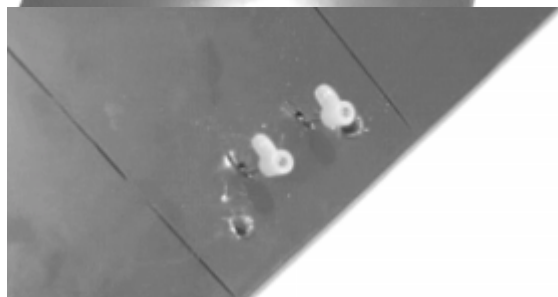
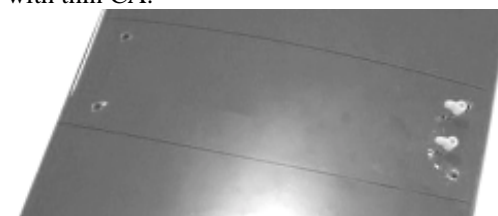
the next step.



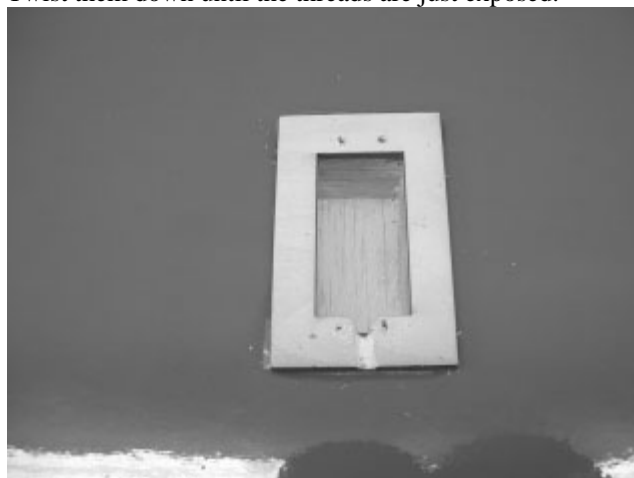
16. Install (3) hinges in each aileron, then test fit on each side of the wing.



17. Spread a small amount of epoxy in the torque rod holes, then install the ailerons and glue the hinges with thin CA.



18. Install two aileron couplers on the aileron torque rods. Twist them down until the threads are just exposed.



19. Place the aileron plate over the aileron servo hole in the wing and mark around it. Cut the covering away

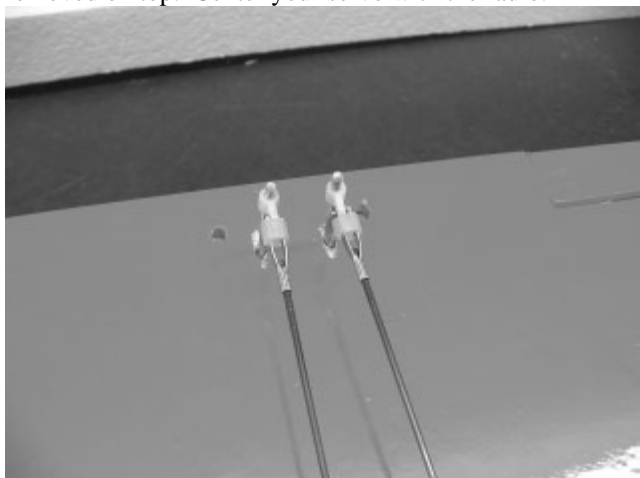
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under the plate and epoxy in place.



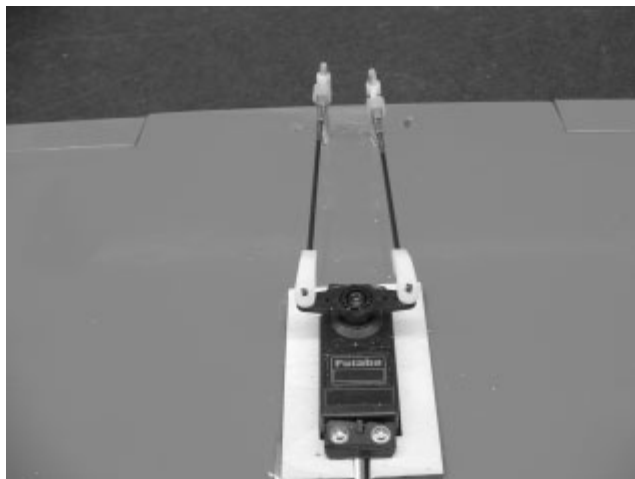
20. Install your aileron servo with the hardware included with it, then place a 4 arm servo horn with 2 arms removed on top. Center your servo with the radio.



21. Twist two clevis on the end of the 8" control rods, and then snap them on the aileron couplers. Slide a piece of fuel tubing down the rod to the clevis for securing later.



22. With your ailerons level and servo centered, lay the aileron control rods over the servo horn and mark the hole location.

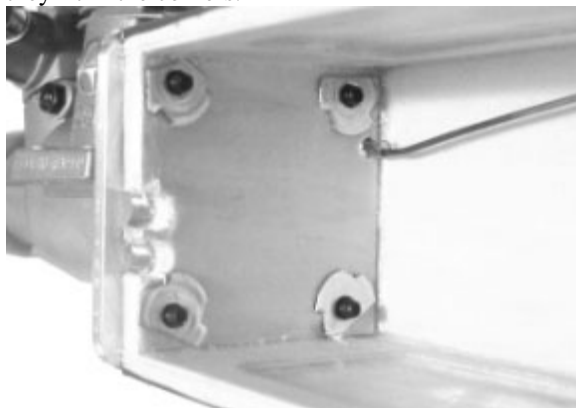


23. Make a 90-degree bend on the rods at the marks you made, then insert them in the servo horn. Trim the bends about 1/4" from the bend. Secure with the nylon swing in keepers.



24. Use your motor mount to layout and drill the holes for the motor mount screws.

25. Drill a .200" hole at the marks and seat the blind nuts using one of the mounting screws and a washer. You may have to cut part of the blind nut flange off where they fit in the corners.

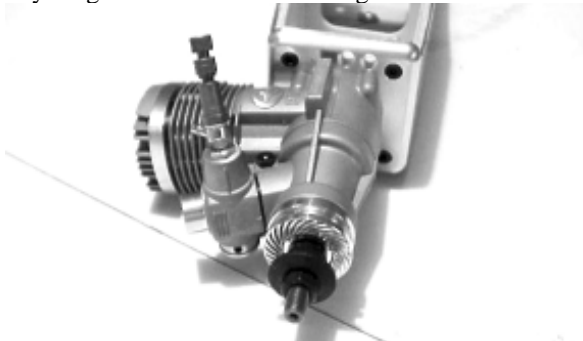


26.

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27.  
28. Remove the back plate screws from your motor and install the motor on the mount. It may be necessary to buy longer screws to reach through the mount.



29. Mount the motor and mount to the fuselage. Make sure to use locktite on the screws.  
30. `



31. Drill your fuel line holes at this time. Make sure there are no splinters to snag the fuel lines.



32.

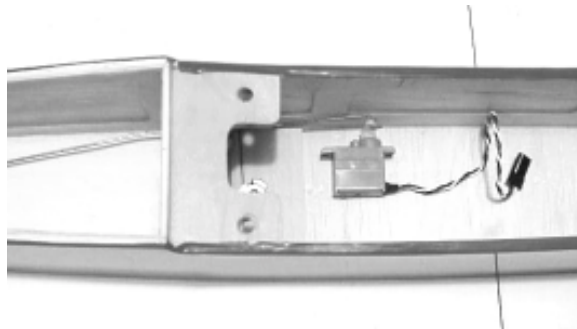
33. Drill a 3/16" hole in line with the throttle arm.



34. Install your engine control rod in the lower right corner of the fuse, getting it as far down in the corner as possible. It's very important that you install the control rod housing now, as you won't be able to install it after you install the tank. Slide the plastic outer tube in the hole from the firewall to the second bulkhead and trim to length, leaving 1/4 " from each end.



35. Locate the steel throttle rod. Slide a silicone clevis keeper on the clevis then screw the clevis on the end of the rod. Install in the nylon sleeve and attach to the throttle arm.  
36. Hook your throttle servo to your radio and set the throttle stick at full throttle. Use a micro servo (shown) for racing and lightweight, for sport flying a standard servo is fine.



37. Position the servo arm at full throttle. Check the throw of the servo to ensure full opening and closing of the carburetor. Adjust the throw with endpoint

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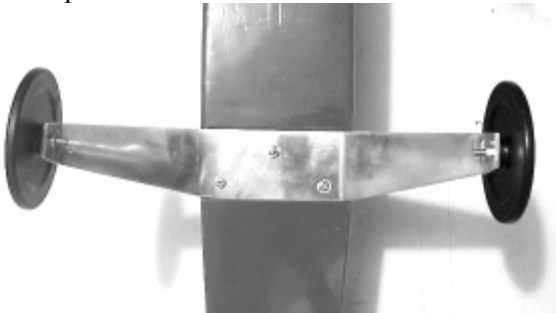
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adjustments or changing the length of the servo arm. Secure the servo arm with a screw when done. Mark the location of the throttle servo on the floor of the fuse with a pencil.

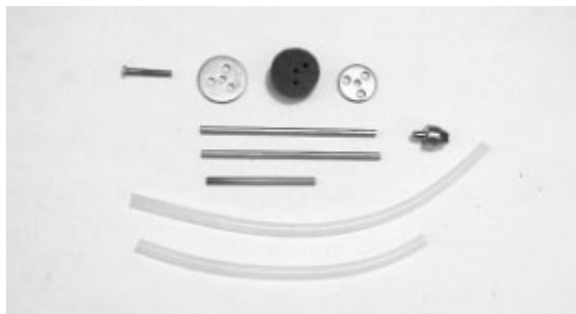
38. Install the throttle servo on the floor of the fuse using 2 sided foam tape (Dubro #634). Be sure to install it back in the area marked.



39. Install the wheels on the landing gear using the screw and nut provided. Use thread lock on the fasteners.



40. Install the gear on the bottom of the fuse using the 3 machine screws and washers. Use thread lock on the fasteners.



41. Locate the fuel tank hardware.



42. Bend two of the lines as shown, then assemble the stopper without tightening the screw all the way yet.



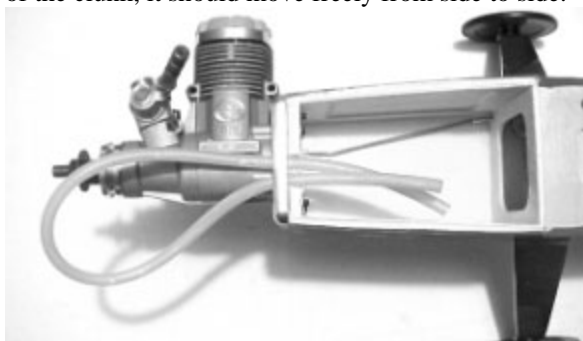
43. Use the tank as a guide to cut a length of tubing for the fuel pickup, and then install the clunk on then end of the line. Install a wire tie around the line on the clunk to help hold it in place.



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44. Install the stopper in the tank and check the movement of the clunk, it should move freely from side to side.



45. Insert a 12" piece of fuel tubing in the two holes in the firewall into the fuel tank compartment.



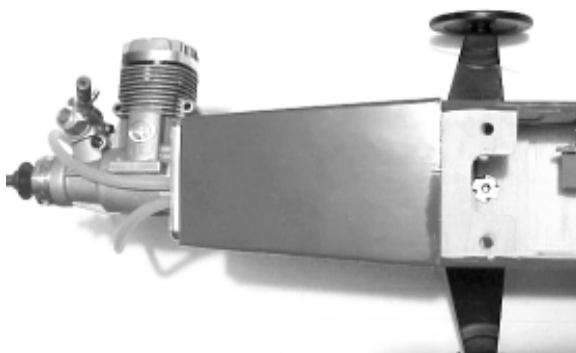
46. Secure the two lines on the tank tubing with wire ties, and then trim the ties.



47. Place a piece of 1/2" foam in the bottom of the tank compartment cut to size.



48. Carefully insert the tank in to the tank compartment, pulling the slack from the fuel tubing. Keep the lines from getting kinked or crossed. Continue until the tank is fully seated. Push some small pieces of foam down the sides of the tank to secure it side to side.



49. Now epoxy the front tank plate in place, being cautious not to glue the wing to the fuse or the block. Clamp in place with tape until cured.
50. Set the control throws initially to +/- 3/16" for all surfaces. (After flight-testing, adjust as needed.)
51. Set the cg to 2-1/4 to 2-3/4 from the leading edge. Keep the cg to the front for the initial flights, and then adjust as needed.
52. Double check that all bolts are tight and use locktite where needed, and double-check the cg, then charge your planes batteries.
53. Enjoy the plane and win some races.



# **LANIER – Predator II**

## **ARF - INSTRUCTIONS**

### **ADDITIONAL EQUIPMENT NEEDED TO COMPLETE YOUR PREDATOR 500**

#### General

.32 - .46 Size two stroke R/C engine and muffler  
Minimum of 4 channel radio set required  
(4) hi-torque servos - *100 oz servos recommended for high horsepower engines.*  
30 minute Z-poxy  
Thin Zap CA (pink)

Dubro #222 Medium fuel tubing  
Dubro #634 Foam Tape  
Dubro #514 ½” Foam rubber

### **PREDATOR 500 PARTS LIST**

Quantity	Description
1	Fuse
1	Front hatch
1	Rear hatch
1	V tail assembly
1	Tail filler block
2	Elevator half
1	Wing
2	Aileron
1	Wing plate
1	Aluminum landing gear
3	Landing gear screws and washer
1	Servo mount plate
2	Servo block
4	#2 machine screw
1	Motor mount
2	Control horn
2	Horn couplers
4	Clevis
2	L bend connector
4	Fuel tube section
2	Race wheels
2	Axle nut w/screw
1	Fuel tank
1	Fuel tank hardware
2	Push rod assembly
2	6” push rod
1	Engine control rod
2	Front flat head wing bolt
2	Rear phillips head wing bolt
12	CA hinges

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Optional Race Equipment and Hop ups

Products, 1 North Haven Street, Baltimore, MD 21224,  
(410) 732-3500, [www.sullivanproducts.com](http://www.sullivanproducts.com)



1. Tru Turn spinner nut, machined from bar stock aluminum. There is one to fit almost any engine.



2. Also available, Tru Turn racing wheels. Lightweight and cool looks! Contact Tru-Turn at PO box 836, South Houston, TX 77587. (713) 943-1867 [www.tru-turn.net](http://www.tru-turn.net).



3. The ultimate pylon racing fuel tank. The outer shell is similar to a regular fuel tank, but inside is a collapsible latex bladder to hold the fuel. Full to empty, no air is in the fuel, so foaming is not possible. These and other accessories are available from Performance Specialties, PO box 3146, Gardenville, NV 89410, (775) 265 7523, [www.pspec.com](http://www.pspec.com)
4. Sullivan metal clevis are simply the strongest clevises made. They feature an interlocking collar, welded pin and exclusive steel retaining clip. For more information on this and many other fine products, contact Sullivan