

the covering where it ends on bare wood, apply cyanoacrylate glue (CA) along the edges to ensure that it stays that way.

**2. Fuel proof the firewall:** After a few flights, the firewall or engine compartment of airplanes powered by nitro and gas engines can incur damage if left unprotected. Check these areas, and if needed, paint, epoxy, and CA can provide the necessary protection. (Heat-shrink covering material will not sufficiently protect these areas from repeated exposures to fuel and gas residue.) The paint can be sprayed or brushed on, and the epoxy should be thinned with a little rubbing alcohol and applied with a brush. Thin CA can be dripped on the surface and allowed to soak in, but thick CA should be rubbed in with your finger; of course, it's a good idea to wrap your finger in plastic.

**3. Check high-stress glue joints:** All visible glue joints should be checked for cracks or stress breaks when you unpack a new kit. Damage can easily occur during shipping; changes in humidity levels from one part of the country to another can warp parts and cause cracks or other damage to joints. When checking the joints, pay particular attention to high-stress areas such as the wings, stabilizer, rudder, firewall, landing gear attachments, and servo trays. Repair the damage with CA or epoxy, and reinforce that area with balsa triangle stock, plywood, or fiberglass cloth.

**4. Rubber tubing around the clevis:** When the control surfaces deflect, pressure builds on the control horn and the clevis. The weakest link is the clevis—specifically, on its tiny pin. The pressure can generate enough force to pop that clevis pin loose but rubber tubing will help prevent this.

**5. Reinforce the screw holes with CA:** All screw holes in wood (balsa, plywood, and hardwood) should be reinforced with CA, especially those for the control horns, servos, canopy, and cowl. Drill the hole, insert the screw and remove it, and then drop thin CA into the hole. This will strengthen the wood and prevent it from being stripped.

**6. Seal fuel-tank tubing at the firewall:** Tubing that exits through holes in the firewall will eventually wear out from vibration, but you can prevent this by sealing the fuel tubing at the firewall with silicone sealant. Tanks that extend through the firewall should also have sealant around the hole; this will stop any fuel from seeping into the tank compartment.

**7. Properly installing the hinges:** The CA hinges that are included in many ARF kits do a fine job of supporting the control surfaces. They are usually chemically treated to encourage the CA to wick to all parts of the hinge and provide good adhesion, but this process can be helped along by drilling a small hole (3/32 inch) in the center of each hinge slot. This gap above and below the hinge will allow the CA to penetrate all the way to the back of the hinge.

**8. Foam tape on the wing saddle:** Exhaust residue that enters through the wing saddle can damage unprotected wood in the airplane's interior and will eventually ruin it. You can protect this area by applying foam tape around the

wing saddle. It will form a fuel proof seal and is soft, so it won't hinder wing alignment.

**9. Thread-lock all bolts:** With the exception of engine screws, all of the bolts that screw into nuts, blind nuts, and threaded metal pieces benefit from thread-lock. It reinforces the grip and provides a measure of insurance that the screws won't vibrate loose. This simple step can save you quite a bit of grief later.

**10. Keep those wheels rolling:** To ensure that the wheels remain in place, use a small file or a rotary tool to grind a small flat spot on the axle beneath the wheel-collar setscrew. This flat spot will prevent the wheel collar from sliding off. Don't forget to apply thread-lock to the setscrew.

*Received the following from one of our old club members who moved to sunny southern California Vince Cimino. Thanks Vince. CB*

Subject: The Boss Knows best!!!!

This is what happens when your superiors don't understand the rules or what to do when your landing gear won't come down.....

Basically, the nose landing gear wouldn't come down. Fortunately the Harrier has a 'backup' system that uses a nitrogen bottle to blow the gear down in this event. Unfortunately the pilots boss ordered him not to blow the gear down (which is the specified emergency procedure) because (by the bosses reasoning)...If the nose landing gear still didn't come down, there was a risk that the aircraft would break its back by having all that weight on the long nose of the aircraft.

The boss arranged for a pile of bed mattresses to be collected and strapped down to support the extended nose of the aircraft, and the pilot then landed on the mattresses.



'Normally' a Harrier that can not get it's gear to come down will select U/C up and do a vertical landing on the strakes/gun pack, they'll jack the aircraft up, fix the landing gear, and it's back to flying rather quickly.