

If I could only find some time to get out in the shop.
Clas Lundgren.

John Loofborrow reports that he has slowly finished closing his left fuel strake and the right one is done. Next is turning over the fuselage to do the bottom.

FROM EAA TECHNICAL COUNSELOR NEWS-

Save your electronics by Claude Preston.

Your solid state equipment in your new vehicle is expensive. You don't need to ruin it by hitting the starter with your radio on. There is a cure, cheap and simple, which will take care of the problem.

Go get your self IN4007 (or equivalent) diodes. These look like a resistor, with a lead coming out each end, and a colored band painted near one end. That is the cathode end. Remember it. They are rated about 1000V and one to three amps. You put these across your master and starter solenoids. The master takes one and the starter takes one. If your master solenoid has only three leads coming out of it (one to the battery, one to the switch (small wire) and one to the rest of the airplane. Put it from the battery terminal to the small terminal. The cathode end of the diode goes on the battery terminal.

If your starter solenoid has four posts on it (two big ones and two small ones,) one of the small ones is normally wired to the battery side of the solenoid, the other goes to the starter switch. Just put your diode across between these two small terminals with the cathode end on the battery side. Not the starter side.

What happens is this. When you release the starter switch or the master switch, the energizing coil of the solenoid creates a huge reverse current spike due to collapsing field of magnetism. This spike can be very high voltage, and is opposite of the normal polarity of the system. If your solid state radio or other gear is in the on position, this spike can blow your solid state gear apart. The diodes shown above short this spike out saving your valuable gear. Just put some sort of lug on each end to accomplish the purpose. Good luck, and buy the way, they don't cost much, and are cheap insurance. The reason you only have three posts on a Master solenoid is that one side of energizing coil is connected internally to the battery post. You are accomplishing the same thing on your starter solenoid wiring it as above. When you hit the starter all you are doing is grounding the other side of the solenoid making it work. Some people like to have it hooked up so you are supplying current to the solenoid when you throw the switch. I prefer my method because if you get a short in your switch wire it doesn't short anything out and get hot. All it does is activate the solenoid. If you hook up the diodes up backwards, all that happens is that they will get hot and burn up almost instantly. Just go out and buy new ones and put them in the right way and no problem will be left over.

Editor. This is why you have avionics masters, however, it is easy to forget your masters on, especially on the Defiant because I frequently taxi with

one engine and then turn on the radios and then start the second engine later just before take off. And yes the diodes just burn up if you put them on backwards. I can attest to that.

DAVID QUANDT

Time to send you guys the progress on my Defiant. We completed the fuselage (Long-EZ style) and installed Cessna 182 main gear and 172 nose gear. As you can see from the pictures we will be putting in baggage compartments in the fuel strakes (Long EZ) and we made 2 fuel sumps below the wing rather than sumps in the rear. We plan to put child jump seats in the aft part. We had a nice day in November, so we had the chance to mount the wings. Now we can start the fuel strakes and canopy. We were at Oshkosh the first part of its opening, but did not get to see many Defiants. Since I received your letter about aft prop clearance, we've been trying to get some dimensions on ground clearance. I met a gentleman who flew one of Charlie Gray's Defiants and he said that his aft prop had hit the runway on several occasions. There was only 17 inches of clearance to ground. Maybe you could mention in one of your articles, what the ground clearance is on the props of most Defiants. Thanks again. - Dave

Ted Rogers - (short note - Ted flies a Defiant with constant speed on front and fixed at the rear.) I have just been flying (the Defiant) on a regular basis with no real news or problems. I have been working on a Mone (powered sail plane) so I haven't done much work on the Defiant; just flying. Hope to see some of you at Sun 'n Fun or Oshkosh. Ted

ENGINE OVERHAULS & other mysteries of life

Over the last three years I have lived through 3 major overhauls. (2 Defiant 0-360's and 1 Cessna 0-320) We did each engine differently. The shortest length of time it took was 4 months. Several years ago I opted to do the rear engine on the Defiant more or less by myself with all the help I could scrounge at the local airport. The expertise that I could call on for help was considerable, however, it was not always available when I needed it. I did the entire disassembly shipped the case and crank out through a local shop and waited. I sent the cylinders to Engine Components of San Antonio Texas. This company has written the book on the Cermichrome process. You can't buy better service or expertise. (This is not a paid advertisement). When you get the big parts back, you are at the stage where you need to order all the new parts, this is where it gets complicated. You either need to do a lot of research at this point or you get hold of someone that has all the service bulletins, and knows how to research parts compatibilities. Over the years, parts numbers have superseded other parts