TClinic

GENERATOR REGULATOR FAILURE
(or What To Do To Get It Home)
by Barney Jackson, TCMG

Due to the recent (Sept, '74 GOF Trip) rash of Gen/Reg failures that almost became epidemic, we should all know how to either go on with our trip or at least how to get the darn thing home in order to make permanent repairs. First of all, not all Gen/Reg failures are electrical and a failure of this system always seems to happen when we are way out in the boonies—and unless your name is Joe Douglas, all the necessary meters, tools and spare parts are back home on the workbench. At this point, "First Aid" is about the best that most of us can give it until we get to a suitable location to work on it. The symptoms are varied and can happen all together and/or in any sequence:

1. Ignition warning light stays on
2. Ammeter fails to show a charge
3. Bad smell (more than usual) from Gen/Reg
4. Loud/expensive noises from gen.

Now for the "first aid." Make a visual check of the system. Look for a broken or loose fan belt and loose connections at both the Gen and the Reg. (F & D terminals). If the Reg smells bad (burned wiring odor) the chances are good that it is burned out—nothing can be done about it. If the generator is too hot to touch or smells, there is a good possibility that it too is burned out and nothing can be done about it either. However, you could have a defective regulator and a good generator—running very long this way usually will result in burning out the generator—so disconnect the generator from the circuit at the F & D terminals on the regulator (remove and tape).

Now to get home. You can still run the car on the battery alone—avoid using lights, radio, air conditioning (?), etc. If you are far from home (or that night's motel) consider a quick charge at a service station or possibly switching batteries with a friend. If you're caught with a broken fan belt, try driving it without (to the nearest service station or parts house) —the wind rushing through the radiator will make the fan blades "windmill" which will operate the water pump. This seems to work best in the 40-50 mph range—please note that it will not work in stop and go driving, or heavy slow traffic as the minute you slow down or stop, the engine begins to immediately overheat.

Now for the expensive noises. The Gen may click, bank, growl, shriek, shake, rattle and roll. Any of these usually indicate a mechanical failure—broken pulley, bad front bearing or rear bushing, armature touching the field coils, etc. Further running will usually just compound the problem. Although repairing the front bearing can be done in the field, (the bearing is a common one available in any parts house) it's best left to the home workshop. Also look for a loose Gen pulley—they do loosen and the internal key will "eat" up the inside of the pulley—and there ain't no more. Again if conditions permit, try running without a fan belt. Who knows, maybe someone on the trip will have a spare Gen or pulley along (it's happened).

This pretty well will exhaust the "first aid." Anything else falls into the treatment category. One last thought—a little "preventative medicine" might have prevented all this. (What we really need is MediCar.)

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2002 Update

Barney did a good job here. Everything is as true now as it was back in 1974. I would like to add thought that lately on the Guilds longer tours our modern sweep car usually carries a spare generator, regulator and fan belt. But don't leave home with non maintained equipment and count on a back up spare being handy. It is more fun to travel trouble free.