

STARTER - GENERATOR

My starter-generator went out, and the battery that starts the engine was not being charged. I could start the engine by cranking. After searching around, I found it had blown the fuse wire from the voltage regulator. I found there was a short in the starter-generator, and I bought a new one for \$300 (1978). I also bought a new regulator.

I tried to have the old starter-generator rewound, and ended up opening it myself. I found one end of the wire had completely grounded. That was all that was wrong with it, but it did blow the fuse wire. In the newer boats, the starter motor and the generator are not combined.

- Jim Hartzler

We did have more than our share of engine problems. The impeller went out (even tho I had replaced it in October), and we made our first anchorage under sail....A couple of days later the starter-generator started smoking, which turned out to be bad bearings. I considered running without it since the engine is so easy to start by hand, but finally felt that in an emergency Mary Lou might not be able to turn it over, and so had it repaired....The dyna-start has been nothing but a problem and this would be another \$300 plus repair bill, so I have decided that as long as it will start, to disconnect the charging side and charge both batteries with the alternator through a slitting device.

- Nat Natto

The only problem I have had with my engine is that it is equipped with a DYNASTART. First, I found the system was not charging very much. It is only supposed to deliver 6-1/4 amps which is not much; however, I was not even getting that much. Concluding that nothing major was wrong, I decided to adjust the voltage regulator by bending the spring of the bottom relay. This has worked well and I now have a fully charged battery. The next problem was failure of the starter function. I hand-started the engine, and that evening I dismantled the Dynastart. I found the main power input lead crystalized fractured just inside the case. I spliced it and the unit now functions. I will, however, replace the brushes and rework the job this winter. Please note that the present replacement cost is now \$700 for the Dynastart and voltage regulator from Volvo. This is inexcusable for such a compromise system.

- Bill Edelstein

On the last day of a cruise, the "idiot" light started glowing, indicating a generator failure. After reaching the dock, I discovered that the starter was inoperative. Arlington Armature found both the field coils and the armature were burned out, due to a bad bearing that let the armature short out on the field. Parts to repair it came to \$426 plus labor; a new one was \$562 plus tax. Remembering a Newsletter item that Ron Weiss had an MD6A for parts, I called and he sent me his starter - with the caution that it didn't always work. I had Arlington Armature give it a good cleaning, new bearings and brushes, and recoating of the field coils. Cost of repairs - \$60.95! The lesson to be learned is to have "preventative maintenance" performed on the dynastart before it dies. I highly recommend Arlington Armature, 8482 Terminal Road, Newington, VA, (703) 550-7373.

- Don Angell

The stock Bosch starter-generator failed twice and, after one complete rebuild, was replaced with a stock DELCO unit which is a perfect fit. Only slight mounting modifications were needed. The unit is primarily used on International Cub Cadet tractors. It is DELCO part #1101996, with a compatible 2-stage DELCO regulator. A much, much better and more reliable unit that puts out three times as much amperage.

- Irv Furman

I found a new Delco-Remy starter-generator with regulator attached available for about \$200 (1984). The part number is 1101863. It is easily adapted to the Volvo engine.

- Pete Richards

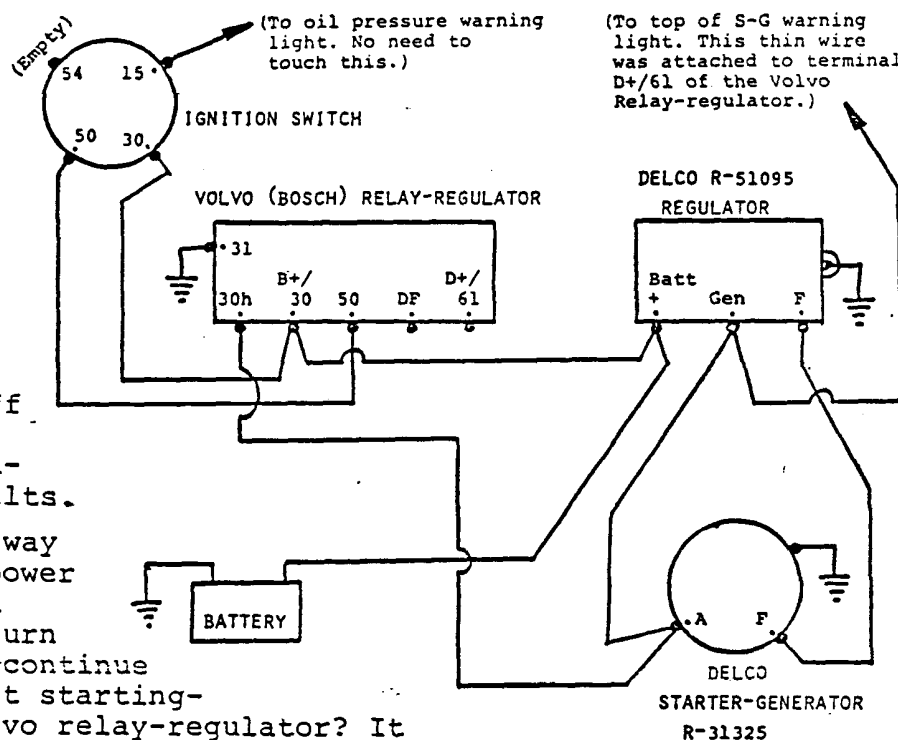
The starter gave up and we cranked for the end of the 1983 season. An exchange Bosch Dynastart was \$900 Can. (\$720 U.S.) so I followed Irving Furman's advice and tried Delco. After an hour with the catalogue, the Delco travelling representative decided that Irving's part no. 1101996 should be ordered as rebuilt no. R.31325 with regulator no. R.51095, total cost = \$151 U.S. Installation took some floundering around so I'll pass on the result for other amateurs. This was a 1971 Vega (1492) so details of wiring could be different for later boats.

Mounting. The 2 mounting-lugs of the starter-generator (S-G) have to go on top so wiring terminals are underneath. It is best to make a new mounting-bracket to fit the lugs exactly. Figure out the holes for mounting the new bracket on the engine so that the pulley will line up with the flywheel. Also it is best if the bracket holds the top of the S-G further out from the engine to get a better angle on the arm which adjusts belt tension

(9.8 cm from engine to centre of holes for the lugs). The old tension-adjusting arm will not fit, so get a new one with 2-way curves. My advice is to get help with these 2 new parts from a country auto repair shop where they are used to rigging unusual stuff like this. Use the pulley from the Dynastart and the old belts.

Wiring. The logical way puts full starting-power through the ignition switch which might burn it out (?). Why not continue to use the well-built starting-relay in the old Volvo relay-regulator? It will mount beside the Delco regulator under the companionway. Terminal F is marked on the Delco S-G so terminal A is the other one. For a ground, add a nut to one of the little bolts coming through the S-G casing. New wire lengths will be needed in places, some of them heavy stuff. Grounds for S-G and Volvo relay can be taken to the mounting-ear of the Delco regulator, with a wire to the ground-bar. Diagram shows the rest, viewed from inside boat.

Problems? An oil-cup on the Delco S-G is now upside down and access to the engine oil filter is even worse than before. Maybe unfasten the S-G every spring, oil it and change the filter.



-John Sprague