## centerline products

## **GENERATOR INSTALLATION**

When installing a new or rebuilt generator it is necessary to polarize the generator after attaching all the wires, including the battery, but before starting the car. This polarizes ("tells") the generator whether it will be in a positive or negative ground car.

From the factory all Lucas generator cars were positive ground. All Bosch and Marelli (Giulietta Veloce cars) were negative ground. We have found that many of the Lucas cars have been switched to negative ground.

With a Bosch generator, the B+ terminal on the Bosch regulator leads to the battery. The D+ leads to the armature, the DF to the field coils on the generator. To polarize the generator, disconnect the DF wire from the regulator. Momentarily touch the DF wire to the B+ terminal on the regulator. There will be a spark, so use insulated pliers and do not touch the car body when you do this. Reconnect the DF wire to the DF terminal. The generator is now polarized.

To polarize a Lucas system or switch it from a positive to a negative ground car is a very simple process. If you are changing the ground, first check to make sure you do not have a positive ground radio. If so, remove the radio; it will not work with a negative ground. Disconnect the battery, switch the coil wires, and reconnect the battery with the ground wire on the negative terminal. On the Lucas voltage regulator, disconnect the wire on the "F" terminal. **Momentarily** touch the "F" wire to the "A" terminal on the regulator. The "A" terminal is connected to the power side of the battery. There will be a spark, so use insulated pliers and do not touch the car body when you do this. This will polarize the generator. Reconnect the "F" wire to the "F" terminal on the Lucas regulator. If you are switching grounds, you are now done. The rest of the car will work fine with the new ground.

Whenever a generator is replaced, check the voltage output at the battery with a voltmeter. At a fast idle, the voltmeter should read  $14\pm0.5$  volts. If it reads less, check all your connections for continuity and make sure the engine is properly grounded to the chassis. There should be a ground strap from the starter motor to the chassis. Also clean the battery terminals and make sure the voltage regulator is working. To check the generator dash warning light, with ignition key on, ground the light wire going to the regulator and the warning light will light. On Bosch regulators, it is the wire on terminal 61, Lucas regulators use terminal D. On most Alfas this wire is light blue or purple.

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