

# A Manual Control for your Generator

by Russell E. Baetke

How many times have you been driving down the street, looked at your ammeter and wished the third brush was set differently? It's always inconvenient to have to stop and get under the hood to reset the brush when driving. So most of the time, to avoid the hassle, it stays set where it is, and we let the battery discharge or overcharge. That's not too unsatisfactory for occasional driving, but for long periods it is best to match the generator to the conditions and maintain the correct charge rate for the battery.

I felt that I needed a better solution, and was told that there had been an after market control made to move the third brush. I watched swap meets and ads for several years and never saw one. At least it would have been nice to have seen one to copy! This accessory is not original and it is not a reproduction of anything. It is a functional control that looks like an item of the era, and does not require any modification to the car or generator. It does take care to build and install it. The parts drawn are the result of several design iterations and should be followed carefully.

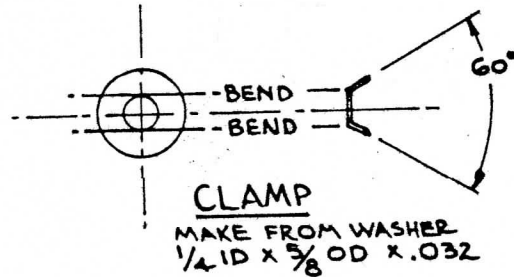
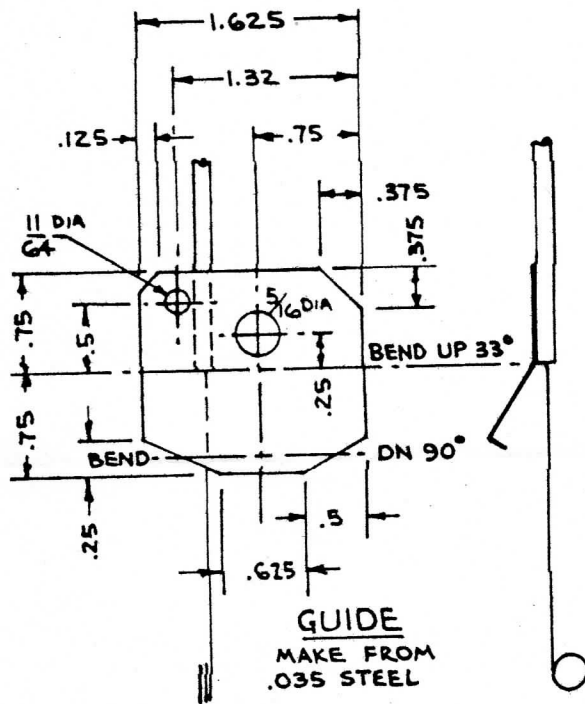
## CONSTRUCTION

### Control Cable

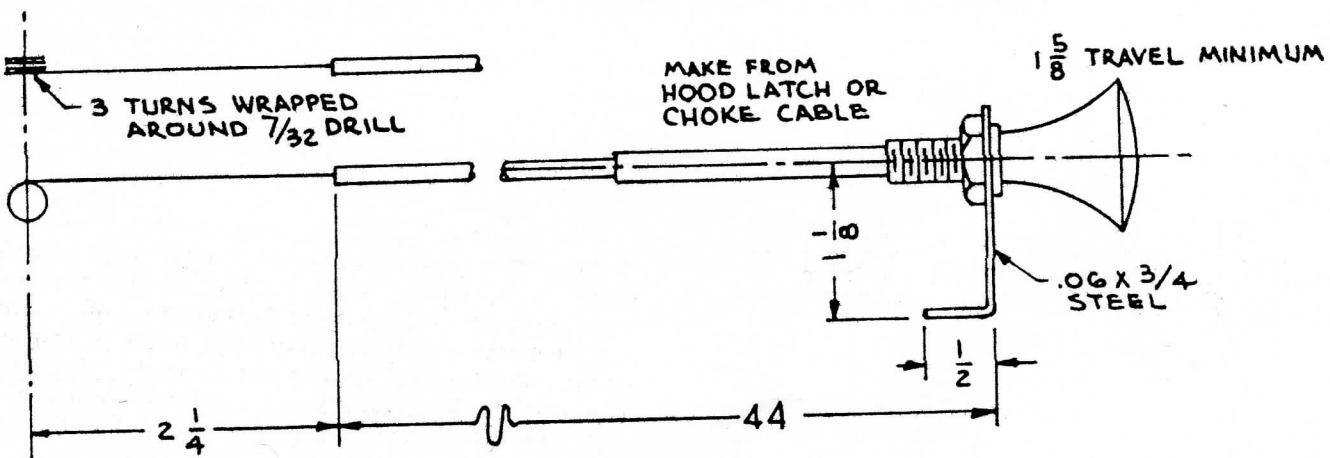
The control cable is made from any hood latch or manual choke cable. The travel of the core must be at least 1-5/8 inches, and the cable length long enough to meet the lengths shown on the drawing (about 48"). Cut the length of the flexible case without cutting the core wire. Wrap the core wire around a 7/32" diameter drill shank to get the proper diameter for the end loops. The spring back of the wire will open the hole to give a good snug fit on the generator pin. Note carefully the direction of the winding. Then trim the excess wire length. The .06 x 3/4" steel bracket for the steering column may be included in some choke conversion kits.

### Guide

This piece will hold the cable and is designed to be held in position in one of the holes of the generator housing when the cover band is installed. Cut the shape as shown. The drawing is as the sheet metal appears before bending. Make the two bends last.



## CONTROL CABLE



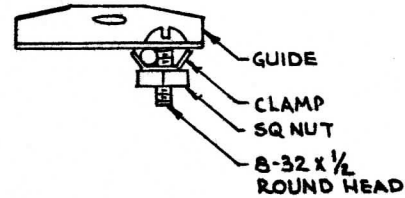
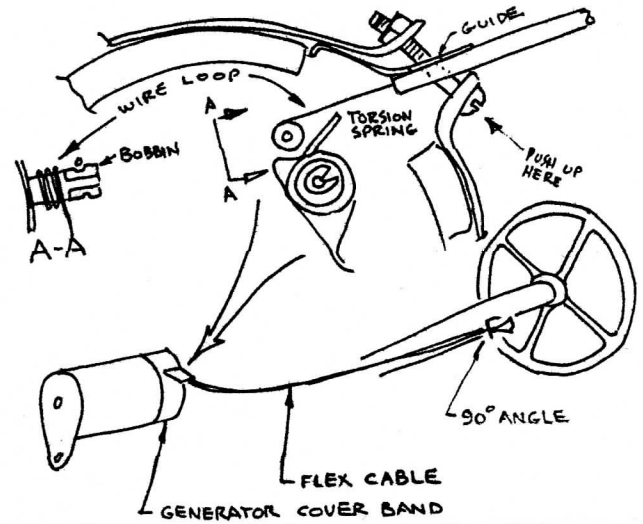
## INSTALLATION

Installation of the generator brush control is very simple and requires no modification to the generator or cover band. You will need a screwdriver, needle nose pliers, and a soft wire hook. Ordinarily you will not have to remove the generator for the installation. But if the friction lock makes the brush too hard to move, it will be necessary to loosen the set of friction lock springs. Then proceed as follows to install the control cable.

1. Install the 90 degree angle support bracket and nut on the flex cable. Leave the nut loose.
2. From inside the car, push the cable through the steering column felt seal on the left side of the column.
3. Install a hose clamp around the steering column above the support bracket.
4. Install the angle under the hose clamp and tighten.
5. Under the hood, remove the generator cover band.
6. Move the third brush to the maximum charge position. This is clockwise as viewed from the front of the car.
7. Using the soft wire hook, pull the end of the torsion spring away from the insulating bobbin. Hold downward as you pull.
8. Using long nose pliers, slide the insulating bobbin from the stud. Be careful not to drop it!
9. Continuing to hold the torsion spring end away from the stud, install the wire loop of the control cable with the loop turned below the cable.
10. Return the insulating bobbin, being sure the torsion spring fits into the groove in the bobbin.
11. Now push the brush to the "low charge" position. This is counter-clockwise as viewed from the front.
12. Place the guide over the cable and clamp loosely with the bolt, nut, and special washer.
13. Place the guide to the top of the generator hole with the 1/8 inch flange against the top of the rectangular opening.
14. Install the generator band with its screw passing through the 5/16 inch hole in the guide.
15. Tighten the band, maintaining pressure from the bottom to keep the 1/8 inch flange in position.
16. Adjust the cable in the clamp by moving in or out until the knob on the steering column has about 1/8 to 1/4 inch above its lowest position.
17. Tighten clamp bolt.
18. Push the control knob to be sure the brush is at the

## GENERATOR CONTROL

BY RYHOLL E. BAETKE ©



### INSTALLATION HOOK .048 DIA WIRE (18GA)

minimum setting while still maintaining the space at the knob. If not, repeat adjustment.

19. Tighten the cable housing nut at the angle bracket.

20. Start the car and test the generator output reading at the ammeter at various settings of the adjustment knob.

