

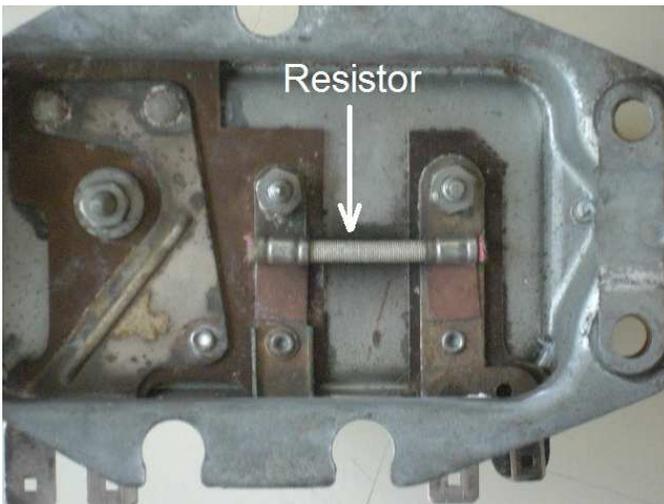


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Regulator Modification

Modifying the regulator isn't too hard, but does require some tools and hardware. Below are photos of a modified Autolite regulator, but most types are similar.

First step is to remove the mechanical relays. You will have to drill out a few rivets & cut all the wires. Also, be sure to remove the wire-wound resistors on the bottom. You can usually just cut them out with wire cutters.



Next, you need to mount the DRM. This example shows the larger DRM-HP.

The simplest way to mount it is to use the two or more of the four existing screw holes at the corners of the DRM, that hold the DRM together. The DRM case screws are 3.5mm metric. In this photo, I used 3/8" spacers and 3.5mm x 25mm screws to mount the DRM and leave space for the wires. We can supply a mounting kit consisting of screws and spacers, in case you can't find them locally.

In some cases, you may be able to attach the wires without the spacers, and use the existing DRM screws. I used the spacers to provide room to route the wires.



In this example, the wires exit from the bottom of the DRM, are fed through the base plate, and attach to the screw terminals. Use the existing holes where the relays were mounted, as they are already isolated from the (grounded) base. It's usually easier to attach the wires on the top.

Here's another example: In this case, I just drilled a hole through the base for the DRM wires to stick through, and connected the wires on the bottom. This requires drilling a hole in the DRM cover and screwing it to the base.

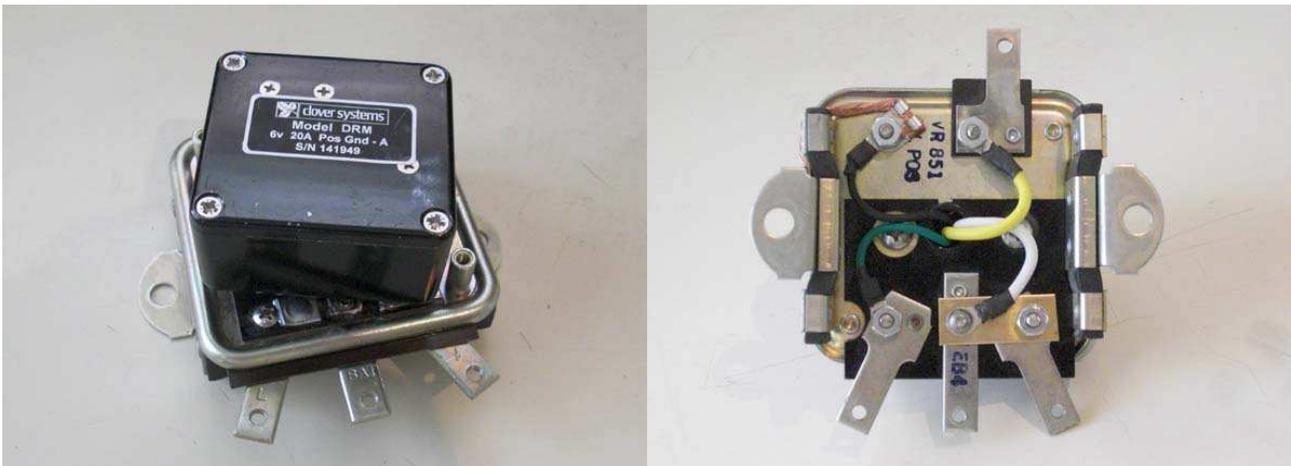


You can drill holes anywhere in the DRM cover for mounting, as long as your screws don't interfere with the circuitry.

Here's an example where the DRM could be mounted using the four DRM cover screws. In this case, you want the wires coming out the bottom of the DRM.



In this next example of mounting in a Delco CV regulator case (common on tractors), it's a tight fit, so it's necessary to mount it at an angle to provide clearance for the cover mounting screws.



I think the simplest solution is to have the wires come out the "bottom" and feed through the hole in the base like in the photo. Also note that the BATT and L terminals must be connected.

It's not even necessary to have any mounting screws: You can just glue a piece of rubber to the bottom of the DRM to insulate it from the base, and leave it at that. With the cover on, I don't think it can move anyway.

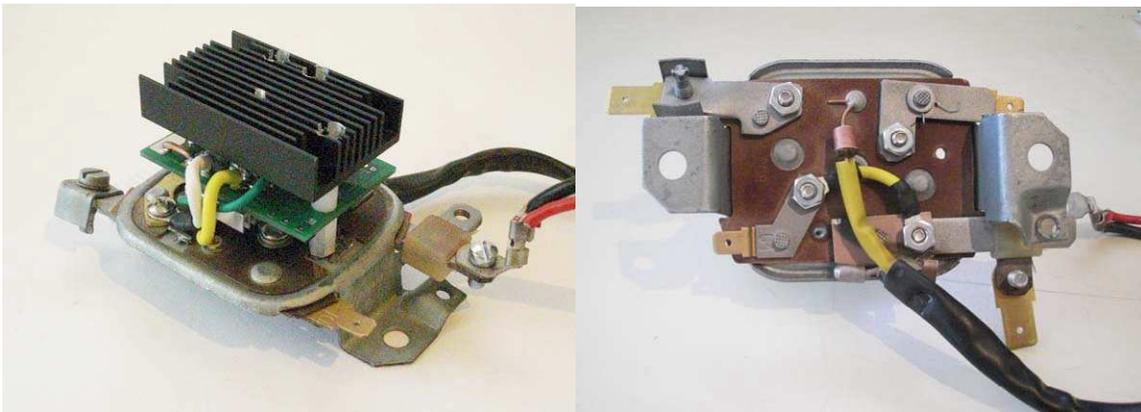
Here is an example of modification to a 6v Bosch VW regulator:



The problem with this mod is that due to the curved sides and the height of the Bosch regulator case, the DRM case will not quite fit inside. The solution is to remove the guts from the DRM and mount it to the Bosch regulator base. An additional problem is that the Bosch cover mounts with one screw in the center, which would have to go through the DRM to the base, which is not possible.

Here's what I did: First you must remove the relays and resistors from the Bosch regulator. I then removed the circuit board from the DRM and mounted it on the Bosch base using the original PCB mounting holes and 3/8" spacers. Make sure the mounting screws don't touch anything other than ground.

Since the DRM case lid is the heatsink for the power transistors, it needs to be replaced with some alternate heatsink. In this example, the DRM is a DRM-HP for output of greater than 30A. I used a Wakefield 547-95AB, but an aluminum plate 2 1/4 x 1 1/2 x 1/8 inches should work fine.



The heatsink is mounted on 3/8" spacers and the power transistors are mounted to the heatsink with insulating pads. I also made a #4-40 threaded hole in the center of the heatsink for the Bosch cover mount screw to screw into. You cannot use the original Bosch screw, as it is too long. Your screw will need to be just long enough to screw into the heatsink, but not long enough to touch any wires or circuitry.

If output greater than 30A is not needed, the DRM can be adapted: The DRM cover lid is ground down to fit inside the Bosch case, and a #4-40 x 1/2" spacer added for the Bosch cover mount screw. This is probably the easiest method if you don't need more than 30A.

