The Cut out Switch

Occasionally things come to mid that we may have long forgotten. Recently a member began having some electrical issues in his Packard. He was showing a massive discharge (30 Amps approximately) and consequently his battery was having a hard time keeping up. I recommended that he take a close look at his Cut Out Switch. Let's examine this part a try to take quick look at how it works.
It is actually a relay that sits between the Generator and the Battery. When the generator is producing current it closes and allows the battery to be charged. When you shut the car off and the Generator quits producing, it will allow the connection between the Battery and the Generator to be broken. This prevents the Battery from seeing the very low resistance that the Generator provides when it is no longer rotating. This very low resistance is essentially a short circuit for the battery and can easily draw enough current to actually burn the insulation off of the wire.

What are the signs that you're cut out switch has failed.

- If the wire between the Generator and Battery has burnt up.
- With the Battery disconnected (hot side) you have continuity between the Battery connection and the Generator.
- Generator is working however Battery will not charge (Switch open at all times).

If your car has a Generator then you will have a Cut Out Switch. In the early cars it was mounted on top of the generator. Later cars would find that function incorporated into the Voltage Regulator. Somewhere in the Sixties cars began using Alternators and the need for the Cut Out Switch disappeared.

Since these Switches are Mechanical in nature it is not surprising to see them fail. After all they went out of fashion some sixty years (or more) ago! One of the best fixes would be to install a hefty Diode between the Battery and Generator. Care should be taken to assure the proper polarity (depends on how the car is grounded, positive or negative) and make sure the case of the diode is insulated from ground.