

Regulator/rectifiers/capacitors.

The 'new boy' on the block is the Reg/Rect. So we must sort out some rumours that have occurred.

Zeners are old hat, they waste energy through heat! They aren't as good as the new Reg/Rect. Not quite so. The actual Zener voltage we get can be variable, as low as 13.8V (which hardly does the job) well over 15.3V (which starts to boil the battery) The higher voltages are fine provided you do not lose electrolyte or suffer blown/blackened bulbs.

Waste of energy/heat. Having done the sums recently we find that in worst case (lights off, at speed) might be wasting some 70Watts ie 0.1HP (I don't think we are going to save much planet worrying about this)

Reg/Rects. These still waste some energy in heat (perhaps 20W). They do have good Voltage regulation though, the modern ones often holding a steady 14.2 Volts. They will give a usable voltage without a battery as well. But you must use a capacitor to have decent lights.

Now we have introduced the Capacitor i.e. the Lucas 2MC. (as was) It has been done to death in the Roadholder magazine to some extent in the past. It was introduced with coil ignition and 12V to give some form of emergency starting,

My advice is, they are not essential but are 'nice to have' they will help any 12V coil ignition system by reducing the chance of a kick back when starting with a flat or non-existent battery. If you have electronic ignition the chance of a kickback is greater so the reason to fit is increased. If you want to run with a Reg/Rect. without a battery then a capacitor does become essential, for above reason (with coil ignition), also for decent lights with a magneto. If you are in the other situation that you have a magneto and a battery then you won't need a capacitor. For those feeling technical than you need to know that the 2MC was originally 47000 microfarads and was rated at 25V. If you want to find your own capacitor do look closely at ripple current and working temperature as well.