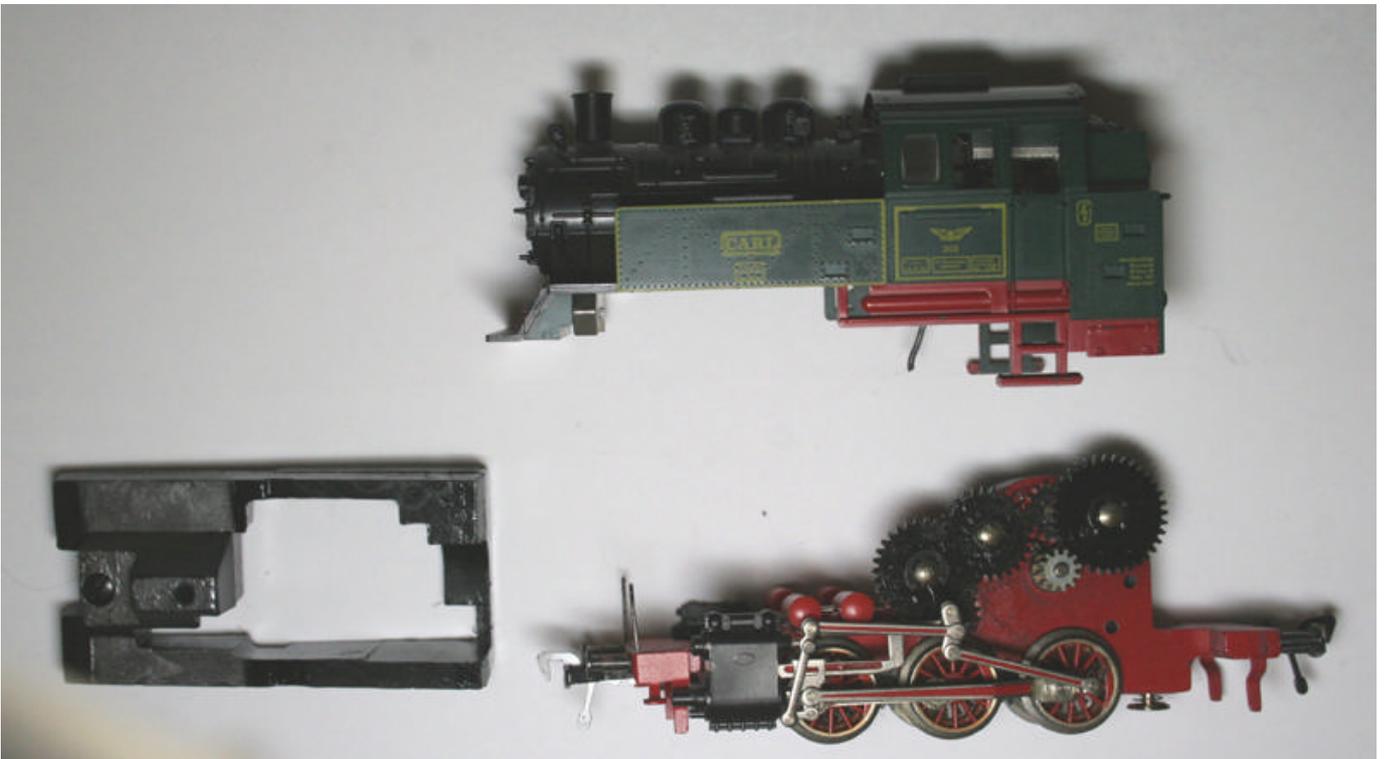


## Fleischmann HO 4028 BR 80 Installation of a M1 Decoder



This popular Rack Tank locomotive has power pickups on 6 wheels.



There is 1 screw holding the body to the chassis, the screw is located in the rearmost dome  
Remove the screw and pull the body up and off the chassis, also cut the wires leading to the lights.  
Remove the screw holding the weight and lift the weight up and off the chassis.



Remove the brushes from the motor and the two screws which hold the Side cover ( or Backplate) in place.

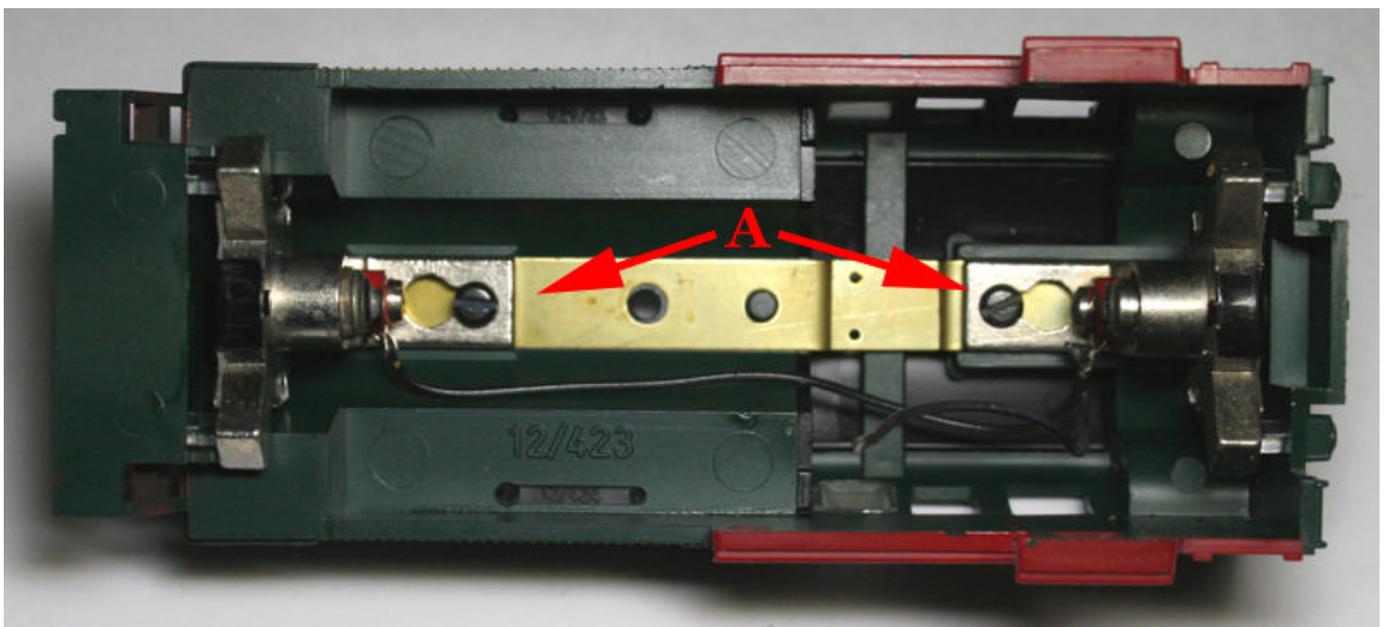
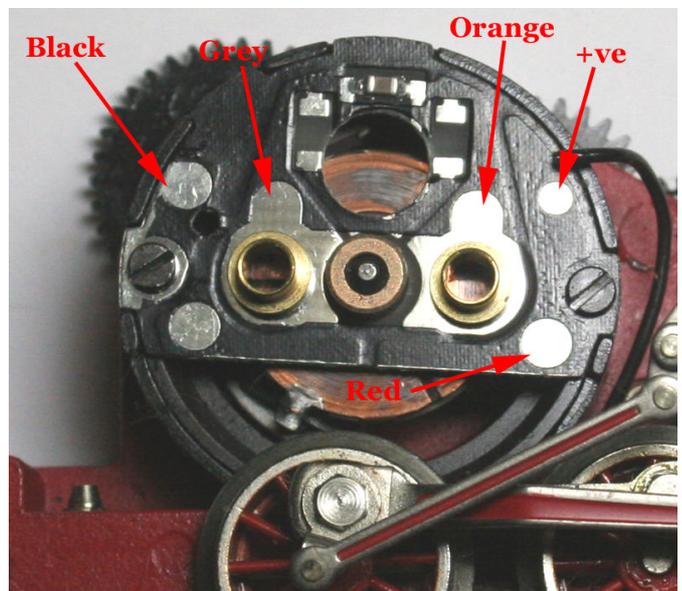
Replace the Backplate with the Fleischmann replacement part # 50 4730

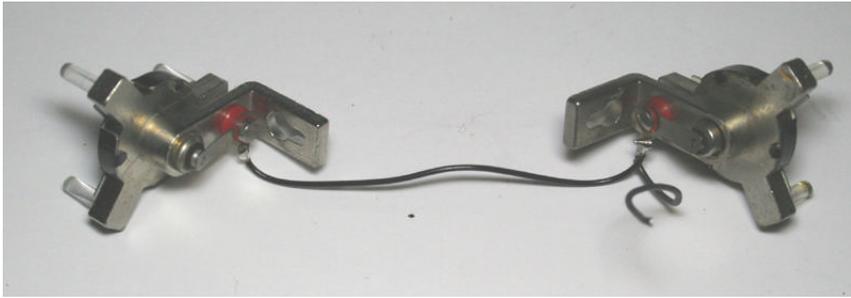
Shown to the right with the Black, Red, Grey (-ve) and Orange (+ve) connection terminals marked.

The terminal marked +ve is for the right hand side rail pickup wire. Fleischmann's original wire can be soldered to that spot.

Take care not to short this wire to the motor body. The motor body is electrically connected to the chassis and the left hand rail pickup.

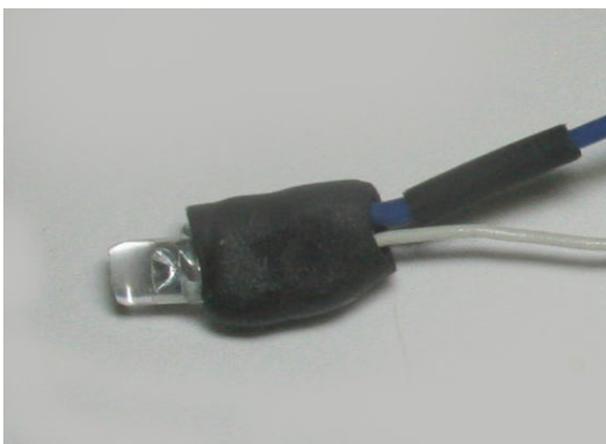
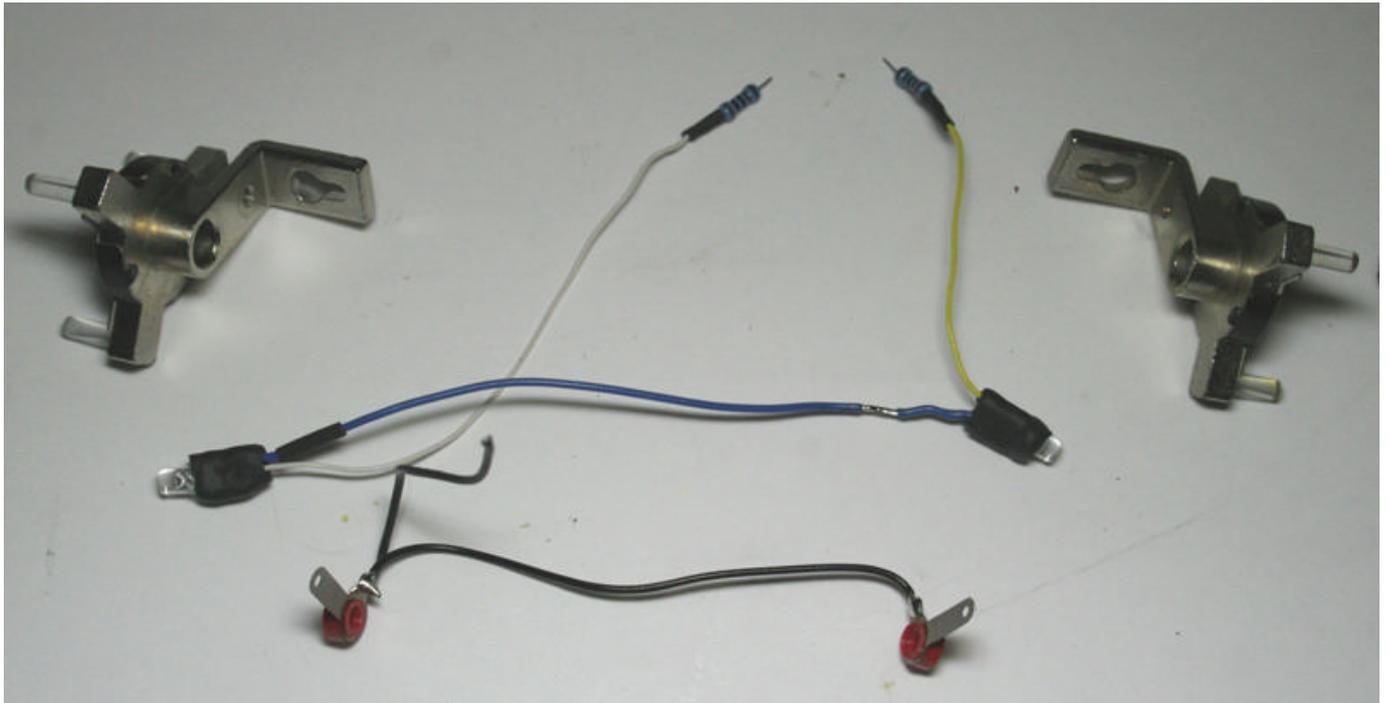
Below- loosen the screws (A) and slide the lighting assemblies back and lift them out of the body.





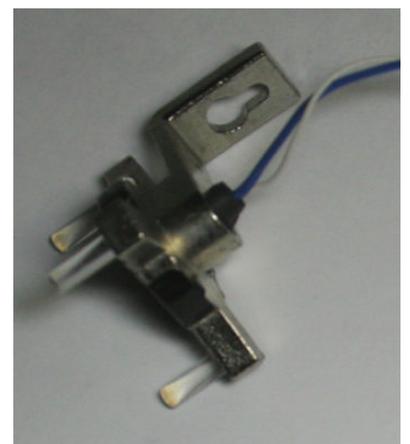
Left- Light assembly removed.

Using LEDs create some replacements using the original wiring as a guide to the length of wire needed. The original used the brass strip in the body as the power connection from the chassis/left hand rail.



Left – LED replacement lamp.

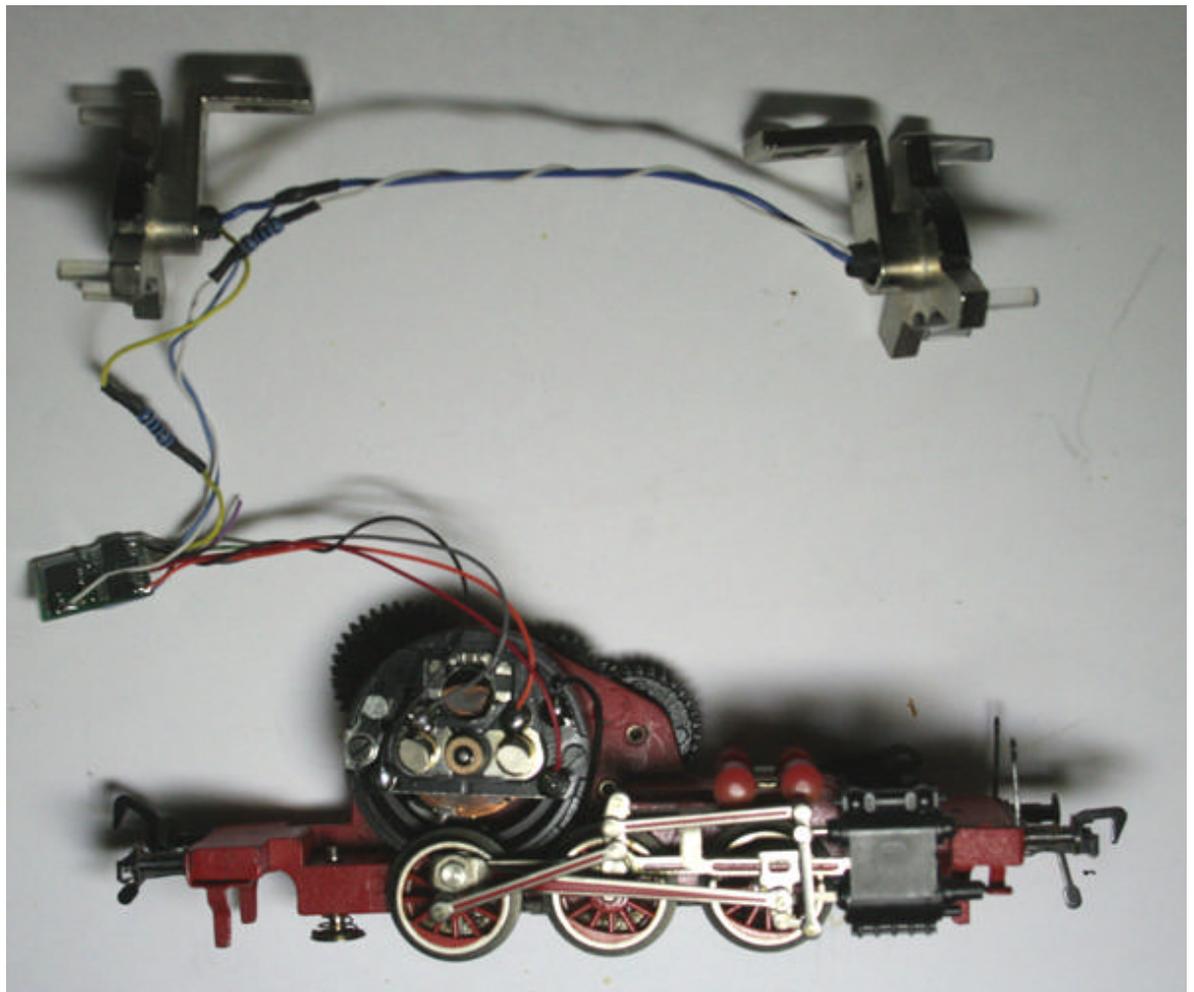
Remove the original lamps , which are a spring fit lamp, and push the replacements into place a drop of CA will keep them in place.





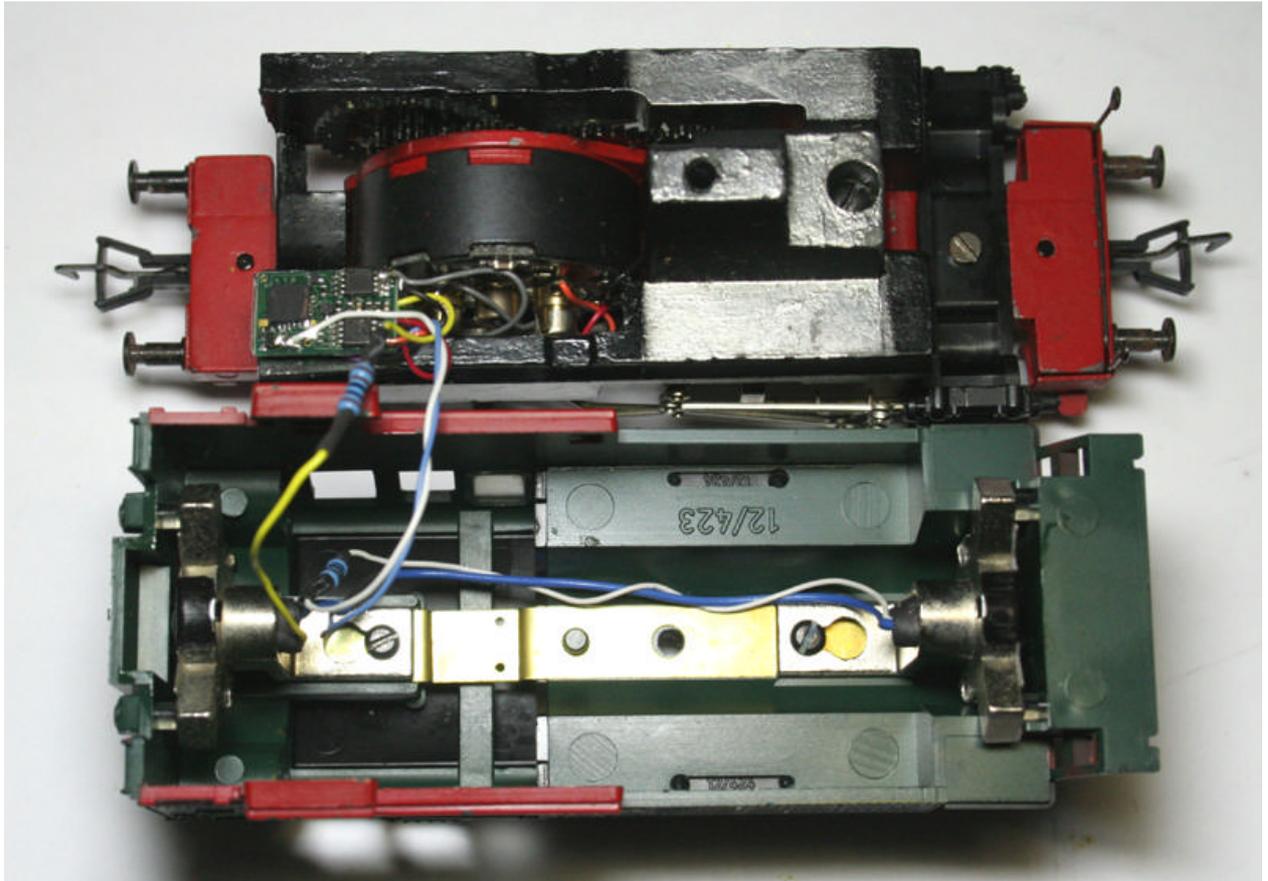
Left – The complete lighting loom and assembly wired up to the decoder harness. All the lights were powered through a 1K Ohm resistor.

Below- Decoder wired to the Motor and pickups



The lighting units do fit through the locomotives weight so the locomotive can still be pulled apart for a service without having to rewire the decoder and lighting.

This is an important consideration when installing a hard wired decoder



Above- M1 Decoder in place and body ready to go on the chassis NB the decoder had to be moved about 4mm forward of that spot!



Front lights



Rear Lights