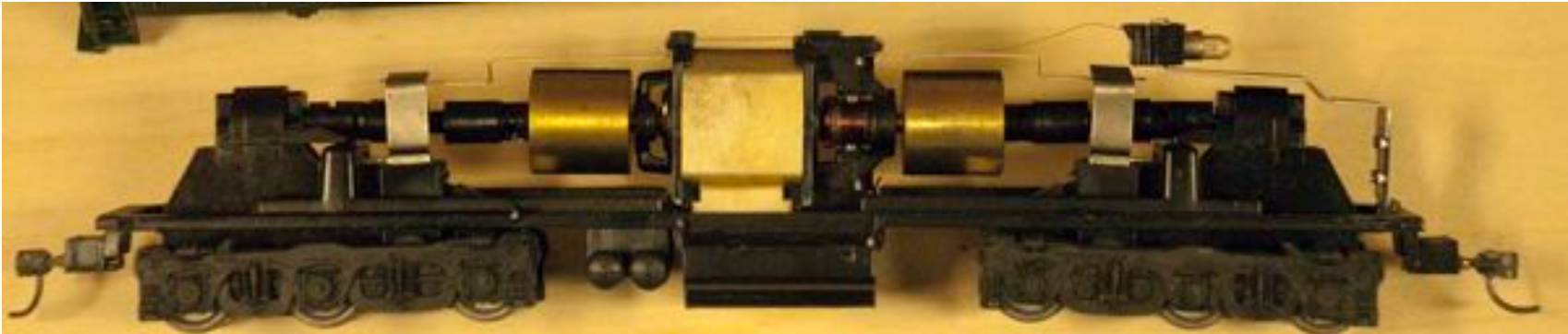


Introduction to DCC
Part 3
Installing DCC Decoders
with
Paul A. Wussow



Installing a decoder in a DC Locomotive (Athearn Blue Box)

This is a typical Athearn Blue Box locomotive with the body removed.



Installing a decoder in a DC Locomotive (Athearn Blue Box)

During installation of a Digital Command Control (DCC) decoder, in a blue box Athearn locomotive that is not a plug and play, it is necessary to define two locations to pick-up the track power. The red wire connects to the rail on the Engineer's side of locomotive. The black wire connects to the rail on the fireman's side. On these Athearn locomotives the right (red) wheels connect to the tabs that connect to the top of the motor by way of a metal strip that connects to the tabs on the trucks. I removed the metal strip and soldered red wires to the truck's tabs.



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For the left side pickup, which is connected via the trucks to the frame, I install a brass bolt. The bolt should be installed into frame in an area that is accessible but does not interfere with the operation of the locomotive. I drilled and taped a hole for a 0-80 bolt and install the black wire to the bolt and tighten it down.



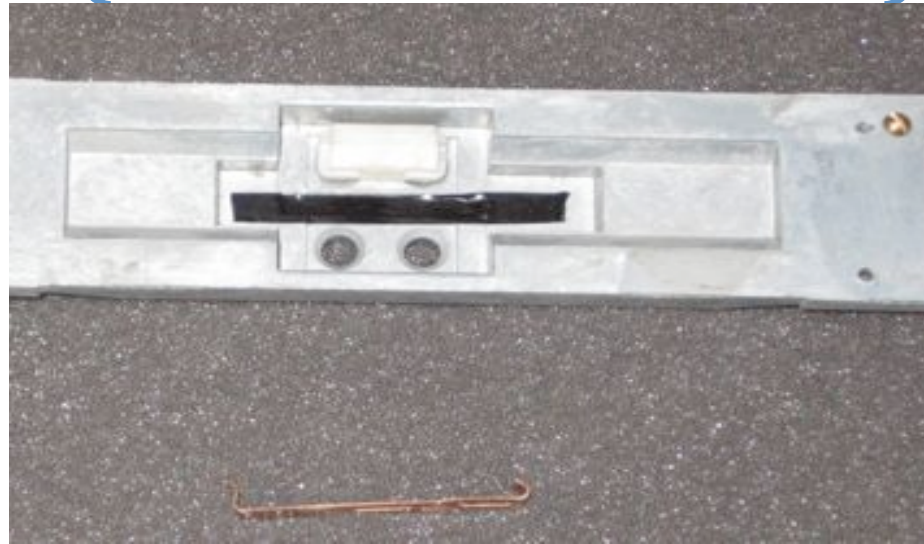
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I next removed the motor and the brass clip, that holds the spring and brush which transfers the current to the commutator, on the bottom of the can motor, being careful not to lose the spring and brush.



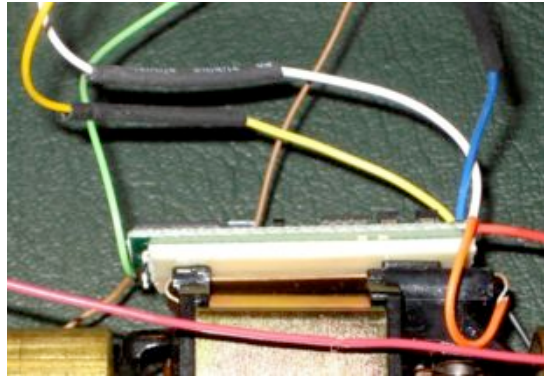
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Next I removed the two tabs that are punched out of the brass that make contact with the frame. Connect a gray wire to this clip at the top front. To insure there is no possible short to the frame I installed a small piece of insulation before reinstalling the motor.



Installing a decoder in a DC Locomotive (Athearn Blue Box)



I attach the decoder to the top of the motor with two sided foam tape. In most of my early conversions I installed 14.5 volt grain of wheat lamps in a brass tube behind the plastic lenses. The white wire is connected to the front headlight and the yellow to the rear headlight. The blue wire is common to all functions. Note the heat shrink tubing over the soldering joints to prevent shorts.



Installing a decoder in a DC Locomotive (Athearn Blue Box)

