

# 94/95 Mustang Cluster V6 to V8 PCB Conversion

Rev. 1.1

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Some of the instrument cluster flexible PCBs (Printed Circuit Boards) in 1994 and 1995 Mustangs are starting to show their age and are failing. The most common failure is when the copper traces at the PCB edges delaminate where they make contact with the wiring harness connectors. This can cause all sorts of strange behaviors in your instrument cluster. Also, it is starting to get a little hard to find donor clusters from 94/95 cars. It would be helpful if the PCB from a V6 cluster could be used in a V8 car, but there are two functional differences between the PCBs from the two types of cars.

This application note describes how to convert the instrument cluster PCB from a V6 car for use in a V8 car (GT or Cobra).

## 94/95 Mustang V6 vs V8 Cluster PCB differences

There are 3 differences between the cluster PCBs from the two different types of cars.

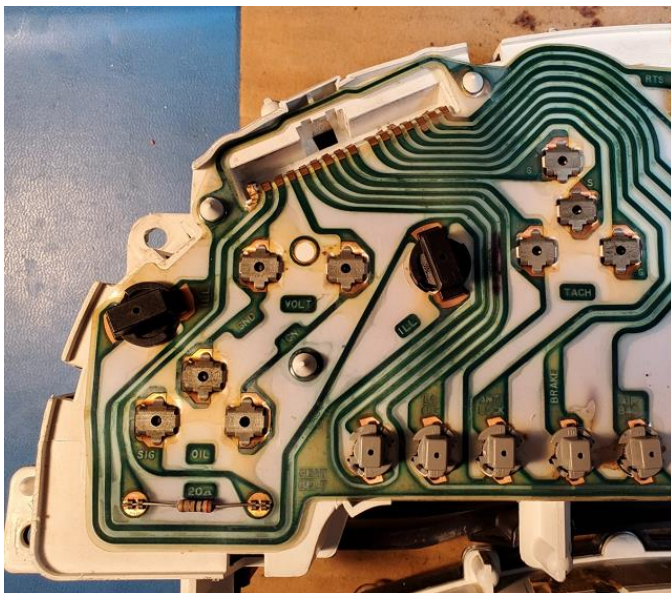
The first difference is simply the color. The V6 PCB is pink in color while the V8 PCB is green in color.

The second difference is that the v6 cluster does not have a hole for a bulb where the Lo Oil indicator bulb goes.

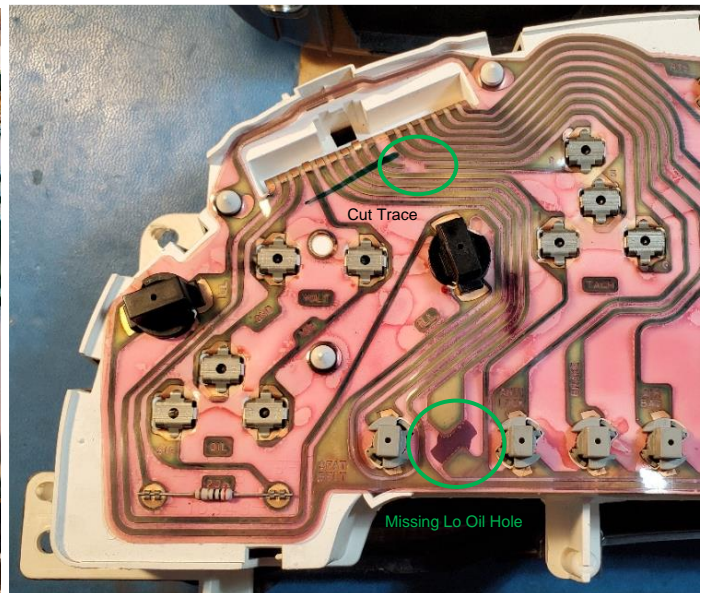
The third difference is that the tachometer cylinder select trace is intact in the V8 cluster but it is cut in the V8 cluster. The cylinder select signal selects 6 or 8 cylinder operation for the tachometer. If that signal is grounded, as it is in a V8 car, then the tachometer will act as an 8 cylinder tachometer. If that signal is left disconnected, the tachometer will act as a 6 cylinder tachometer.

Fortunately, if you are having difficulty sourcing a V8 PCB and you can find a V6 PCB, it is very easy to convert the PCB for use in a V8 car.

Here are photos that show the differences between the two PCBs:

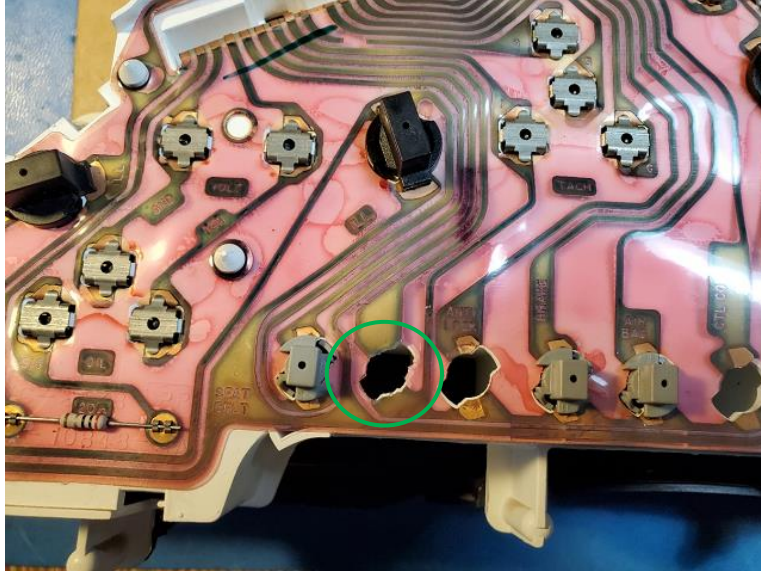


V8 Cluster

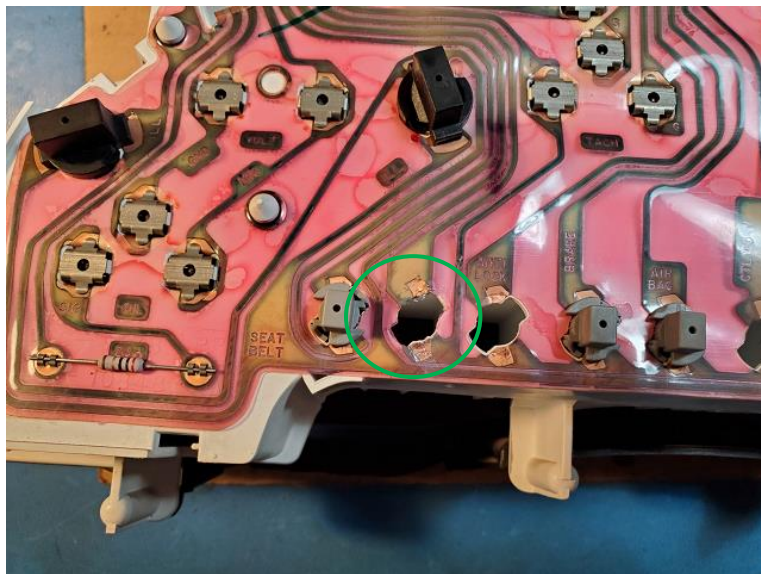


V6 Cluster

To convert the V6 PCB for use in a V8 car, start by cutting the flexible PCB to make a hole for the Lo Oil indicator lamp using an Exacto knife. Cut it to the shape of the hole in the plastic case:

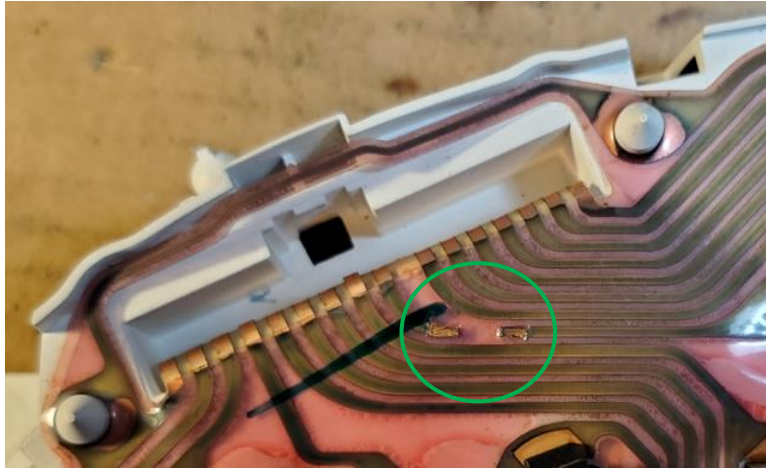


You will need to remove the plastic coating from the Lo Oil PCB traces so the indicator bulb contacts can contact the copper PCB traces. Remove an adjacent bulb to see where you need to cut the plastic coating away for the bulb contacts. Carefully cut the top plastic coating but don't cut so deep that you cut the conductor. Scrape away the plastic coating exposing the copper. Clean the copper until it is shiny by scaping it with the Exacto knife:

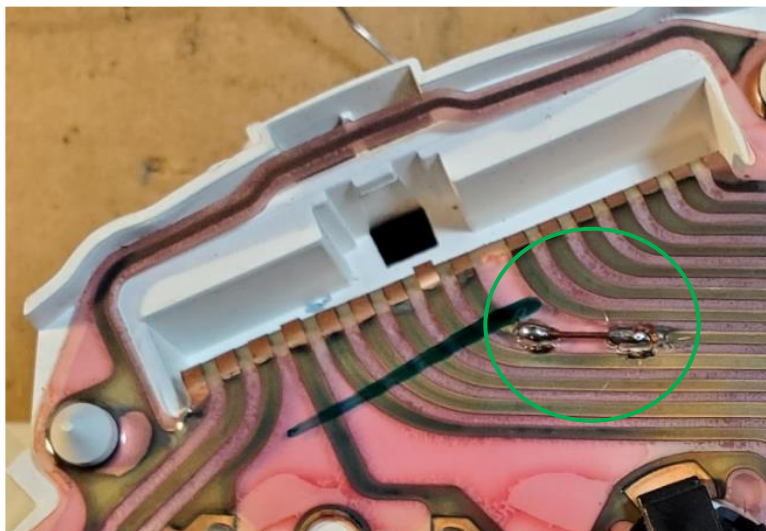


All that remains to make the Lo Oil indicator functional is to install a bulb.

The last step is to install a jumper across the cut Cylinder Select trace. Using the same technique you used to expose the copper PCB trace for the Lo Oil indicator, expose and clean about 1/8" of the two ends of the Cylinder Select traces next to the cut:



Carefully solder a short jumper wire across the gap in the trace using a pair of tweezers to hold the wire. I tin the trace ends quickly and then quickly solder the wire in place. If you hold the soldering iron to the trace too long, you will melt the plastic case below and the plastic of the PCB too much. Here is the jumper installed:



At this point, you are ready to install the PCB in your V8 car. Good luck with your project.