

Speedo / Rev LED Illumination Replacement (Instrument Cluster) - v1.1

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Skoda Octavia MK2 – Face Lift – 2010 - Ambience

These instructions explain how to replace the SMD LED's that illuminate the rev and speedo dial needles. However, the procedure is the same for replacing any LED within the instrument cluster. These instructions may be relevant to other instrument clusters within the VAG range.

WARNING: Do NOT put the key in the ignition while the Instrument cluster is disconnected, this could cause issues with your immobiliser.

Tools (Required):

10mm spanner
TX20
TX10
Small slotted screwdriver
Soldering Iron
Solder
Old CD

Tools (Optional):

De-soldering Pump (solder sucker)

Powder free latex gloves
Lint less cloth
2x forks
Superglue (if you mess up!)

Step 1:

Remove the negative terminal from the car battery (10mm spanner). Pull the steering wheel as far down and out as possible to give better access to the instrument cluster.



Step 2:

Remove the light switch. While it's in the "OFF" position push the switch in and turn clockwise. You should then be able to pull it out. Take the wiring loom off the back of the switch.



Step 3:

Take the trim off. This is the light switch surround and the small piece on the other side of the steering wheel. These are just clipped into place, so pull towards yourself and they will come off.

Once these two pieces of trim are removed, you will be able to pull forward the trim that is between the steering wheel and instrument cluster.



Step 4:

Use the TX20 to remove the two screws at the bottom of the instrument cluster.

Then slide an old CD between the top edge of the instrument cluster and the dash board. This will release two hidden clips and the Instrument Cluster will come loose. Pull it forward gently, the wiring is still attached at the back.

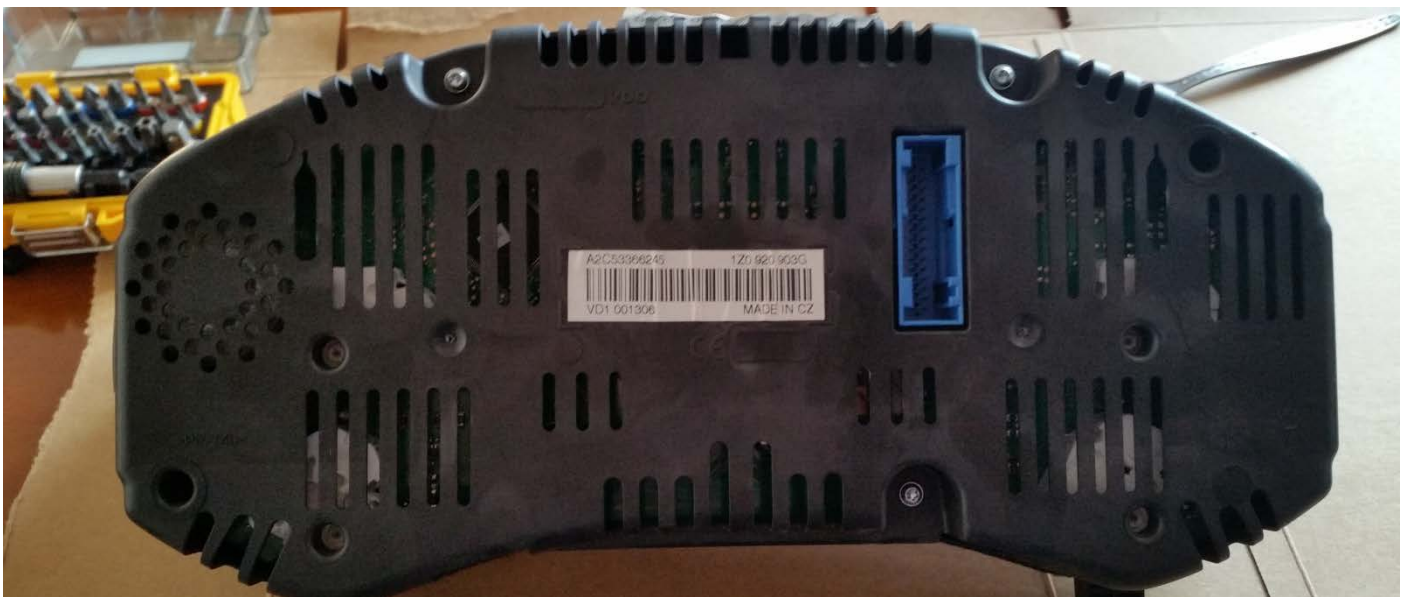




Step 5:
Remove the wiring loom by pulling the plastic clip up (as shown)

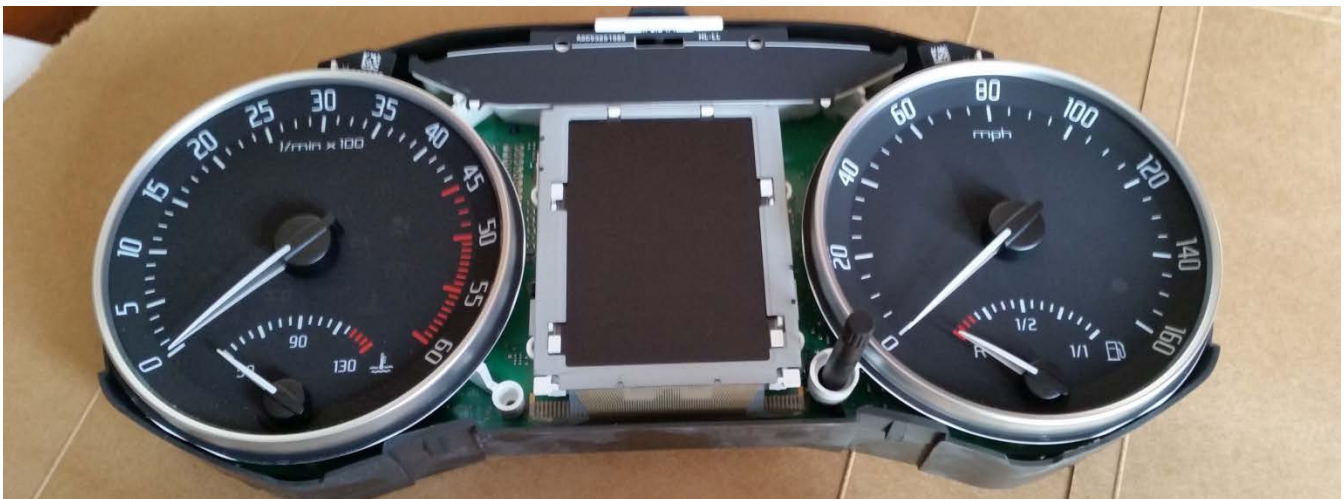


Step 6:
Use a TX10 to remove the 3 screws from the rear of the instrument cluster. Unclip the 6 clips that hold the front of the instrument cluster in place. The two parts should now come apart quite easily.





Note: When working with the dials of the instrument cluster you may want to wear gloves as any skin oils can stain the dials. The matt finish of the dials is quite delicate.



Step 7:

Remove the needles. This is the tricky bit. The first time you take the 4 needles off they will be very, very stiff. You need to use strong, controlled force to pull them off. Beware, do not pull them sideways. I used two forks as shown. (If you break off the black caps in the process, this isn't a big problem as they can be super glued later).



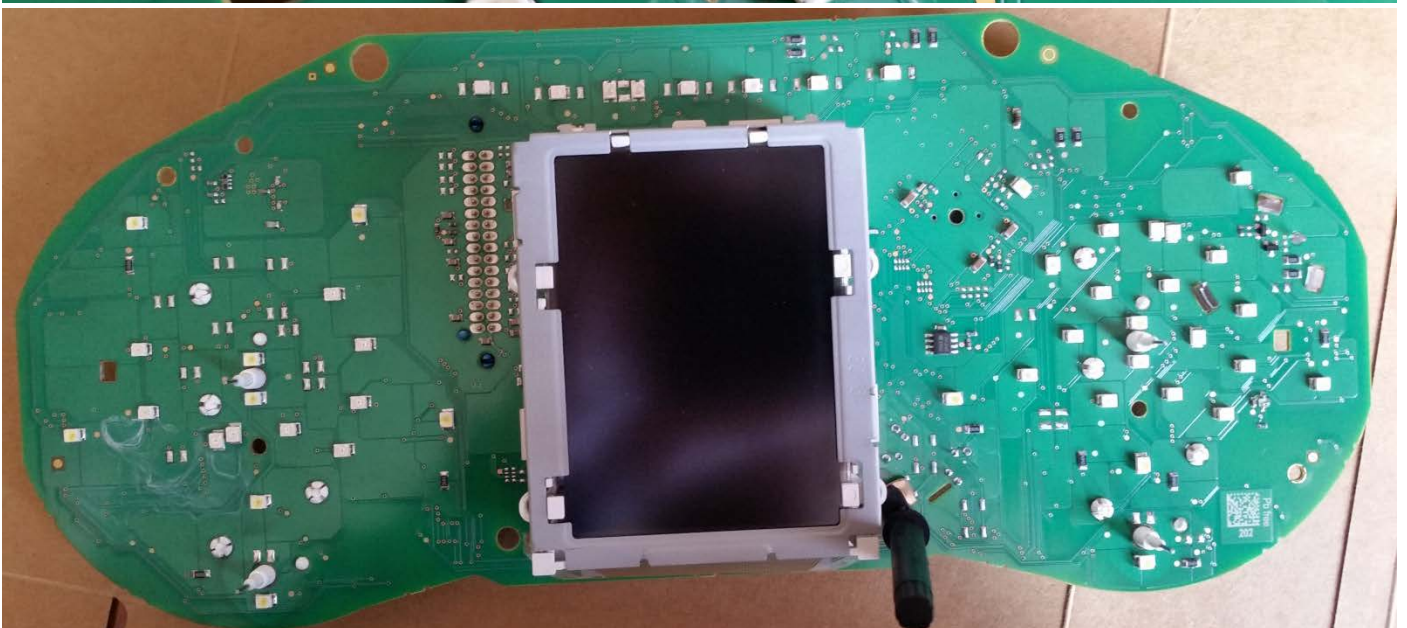
Step 8:

Unclip the white plastic LED diffuser using a small slotted screwdriver. There are 2 clips, one at the far left side and one at the far right. The surround should now lift off with ease.



Step 9:

Locate the LED's that have failed/are failing. Note their orientation, each smd LED has what looks like a chipped corner. The new LED must face the same direction. It's best to take a photo or draw a quick sketch so that you don't forget how the originals are placed.

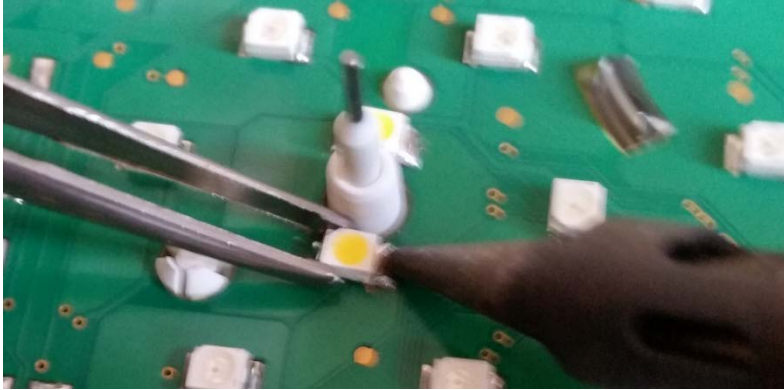


Step 10:

Using a soldering iron with a fine tip de-solder the LED's. Clean the contact pads so that they are as smooth as possible. You may want to use a de-soldering pump for this. It may also be easier to work on one terminal of the LED at a time, alternating which ones you heat up until the LED comes loose.

Step 11:

Place the new LED in place with tweezers or a precision screwdriver. Make sure to align the LED terminals with the solder pads on the PCB board. Solder the LED onto the PCB board (you may find it beneficial to pre-solder the LED terminals before placing it on the board, this helps the solder flow better).



The new LED's do not have to be super flat, or aligned exactly like the old ones, there is plenty of room, however a good solder joint is very important.

Step 12:

Repeat for any other LED's.

Step 13:

Assembly is the reverse of steps 1-8 although you will not need a CD to clip the instrument cluster back in place, it should just click into place.

Once you are ready to put the needles back on their spindles, check that the spindles are turned anticlockwise and then insert the needles so that they point to "0".

PART NUMBER:

I only needed to replace the LED's that illuminated the Rev and Speed needles. I bought these from Rapid Electronics in Colchester:

Part Number: 55-2890
Spec: 3528 smd LED
6500K
6.5lm
120deg
30mA
3.1V

LED Quantity

4 each – Speed/RPM dial
2 each – Speed/RPM needle
1 each – Temp/Fuel dial
1 each – Temp/Fuel needle

There are other Red, Orange and Green LED's in the cluster depending on your car spec.

Once everything was put back together, the new LED's are about 20% brighter than the old ones and not quite as white. However, because I replaced all the LED's for the Rev and Speed needles, this difference is not as noticeable. You may be better off getting 5.5lm and 7000K led's.