



Repairing the Instrument Cluster on a 1991-1996 Toyota Camry

This guide could be used for many early Camrys...

Written By: mducrest



INTRODUCTION

This guide could be used for many early Camrys and other Toyotas as many of the instrument cluster electronics are similar. The method used in this guide is replacing the capacitors, which often fail in older Toyotas. If you feel uncomfortable soldering, this guide can be used to simply replace the gauge or the whole cluster. The speedometer may not be the culprit for your issue, but this guide has a simple diagnostic procedure to determine if it is. This guide also includes steps to repair the tach and other gauges. Includes a step to adjust the odometer to an accurate mileage if replacing the speedometer. This is still in progress, so It does not include all the necessary pictures. Comment with questions, and good luck repairing.

TOOLS:

Soldering Iron 60w Hakko 503F (1)

short handled phillips head screwdriver (1)

flat Screwdriver (1)

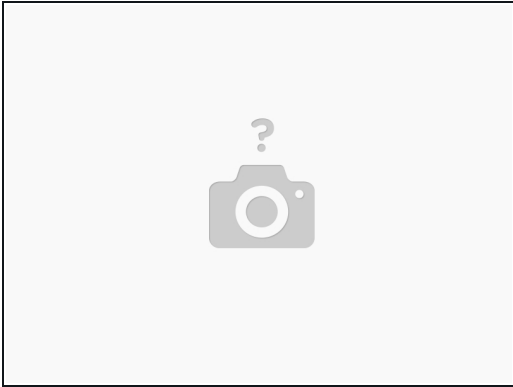
ratcheting screw driver(optional) (1)

Step 1 — Test the car to isolate the issue



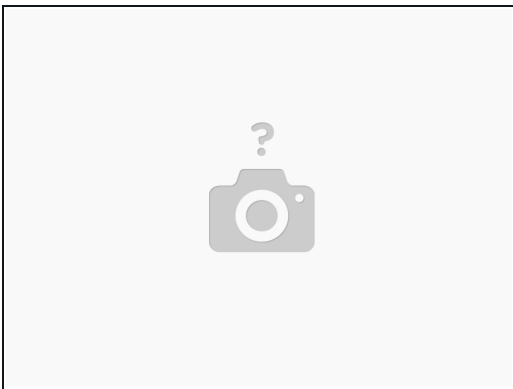
- A faulty speedometer could be the result of a bad speed sensor or faulty wiring. Test the car by driving it. The odometer should roll over and cruise control should work. These run off of the speed sensor. if both of these run, proceed with this repair. otherwise, consider replacing the speed sensor and/or check the wiring.

Step 2 — Remove the radio cover



- There is a cover around the radio. remove it, as you will need to access the screws behind it. To do this, you will place a flat screwdriver behind it and pop it up from the bottom, and then pull out and then down.

Step 3 — Remove the screws holding the bevel in place



- Start by using your short handled screwdriver. There are 2 screws located on the bevel(the part of the dash covering the speedometer). To remove these you will unscrew these at an angle, and be careful to not drop them as they are recessed and you will need to catch them. Place them in secure location.
- There are 2 phillips screws located on the top right and left corner of the area to the side of the radio. Remove these and then place in a secure location.

Step 4 — Begin to remove the bevel



- Wedge a flat screwdriver between the dash and the bevel on the left side below the brake release lever. Gently free this part, then pull towards you, until it is partially free.
- Repeat on the other side of the bevel, near the AC controls, starting from the top and freeing towards the bottom. Again, manually pull forward.
- After prying the bevel forward, proceed to gently pull down. you will need to lower the steering wheel for this. Eventually it should slide forward, but do not pull too much-you will need to remove wires.

Step 5 — Unplug wires, remove bevel



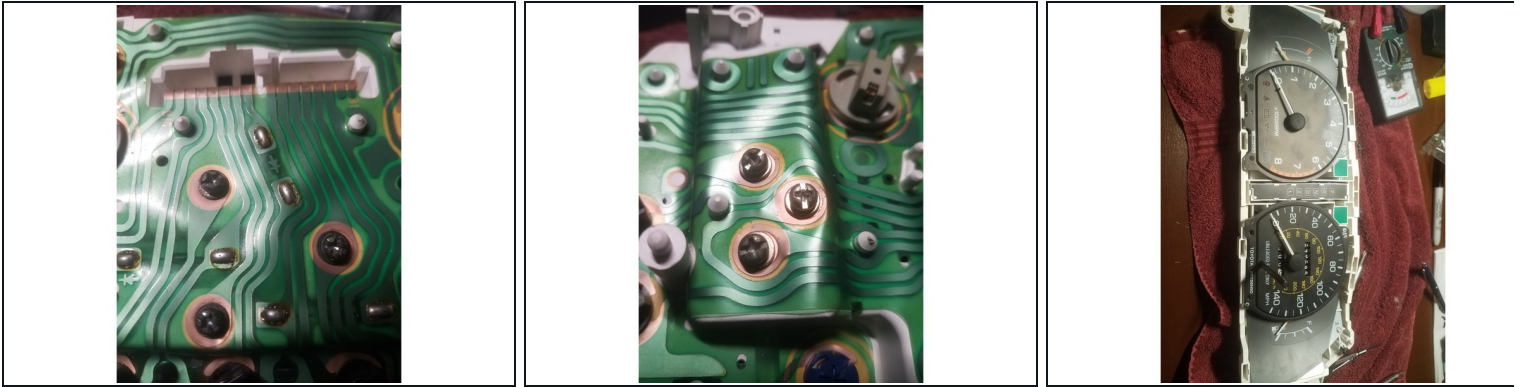
- After carefully wiggling the bevel off of the rest of the dash, there are 4 wires you will need to detach.
- Start on the right side. Unplug the wire to the hazard lights by depressing the tab on the top with a flat screwdriver or finger. You will now pull it out by the plug and not the cord. The tab is prone to breaking, but it will still plug back in if broken.
 - Note that unplugging the hazard lights will break the circuit to the turn signals, so you will not have turn signals until the dash is reassembled.
- Repeat for the cord going to the clock.
- Pull bevel further out on the right, and lift over the steering wheel. you may need to adjust your rearview mirror. You could proceed to the next step now by placing the bevel to the left of the drivers seat, or unplug the next 2 wires and place bevel in another location if desired.
- Unplug the wires, depressing the tabs. these are harder to remove than the other 2, but if the tab is fully depressed, they will remove. place the bevel elsewhere.

Step 6 — Remove the instrument cluster



- Start by unscrewing the 4 screws, 2 on right and 2 on left. then grab the sides and pull forward enough to be able to access the back.
- Unplug the center vertical cord by depressing the tab. This cord is the shortest. Pull the instrument cluster closer, and tilt the bottom in, allowing you to see the top. You may need to push the top piece up to give more room to remove the cluster.
- Remove the 3 plugs by depressing the tab with a flat screwdriver, and then pushing out slightly. After you push out slightly, angle the screwdriver to be able to easily push them out and then remove them. There is also a snap that the cable snaps into, this needs to be removed.
- If a light replacement is desired, do so now. LED light replacement kits exist, which will last longer. To remove lights, turn counterclockwise 1/8 of a turn and pull out. Transmission indicator light replacement is in the next step.
- Remove instrument cluster, bring to place that it is being repaired at.

Step 7 — Disassemble the instrument cluster



- Start by removing the 2 screws on the top corners of the front. Then depress all the tabs in with a flat screwdriver. Pull the plastic pieces outward. If you are cleaning the plastic, separate the black and clear plastic pieces by the same method.
- Flip the instrument cluster. Unscrew any three of the four screws holding in the speedometer. Support the gauge with your hand, and remove the final screw. do not lose these screws or their washers, as these are part of the circuit.
- If removing any of the other gauges, repeat the same process.
- To remove the transmission indicator to replace lights, depress the 3 tabs on the side while applying pressure from the front of the assembly. remove, and the lights will be on the side. turn counterclockwise and remove
- If simply replacing the speedometer, proceed to step 9

Step 8 — soldering the speedometer



- Locate the capacitors on the top of the speedometer, visually inspect it. Look out for any deformities, bulging, or leakage out of the bottom. These indicate a blown capacitor.
- If your capacitor is blown, unsolder it, and replace the capacitors. Be sure to order the right capacitors. All the capacitors are 25v, and polar. From the left to the right viewed from the top, the capacitors are 100 microfarad, 22 microfarad, and 6.8 microfarad.
- Solder the capacitors in place, noting the negatives are facing the left side from the top.
- Test for continuity. Do this by putting a multimeter to test for continuity and touch the end of your capacitor and following the circuit until you find another solder joint and touch there. If there is a discontinuity, redo your solder joint.
- If soldering the tachometer or other joints, repeat the process, noting which way the positive and negative sides face.
- Note that the capacitors in the pictures are not original, they have already been replaced. Additionally, on the tachometer the capacitors have been removed but not replaced. The leads on the capacitors do not need to be cut, but they CANNOT touch each other when the cluster is reassembled.

Step 9 — Reassamble the instrument cluster



- If the speedometer has been replaced, to adjust the odometer use a pair of needle nose pliers and lift on the bar on top of the odometer, and use a small screwdriver or toothpick to run the odometer to a mileage that reflects that of the car
- Repeat the process to reassemble, noting that the dashboard may have to be pushed up to place the cluster back into position.

after placing the speedometer back in its place, follow the directions in reverse order to reassemble. additionally, test the speedometer with an app like Waze to confirm its accuracy.