www.OdometerGears.com

# Porsche 924 Speedometer Service/Odometer Repair

http://www.924.org/techsection/odo_speedo_repair.htm

This page will describe how to fix the typical odometer failure, as well as how to open up the speedometer for service. For now, it's just a series of pictures - instructions to follow.

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| The black bezel is pried off with a very small screwdriver. Start with a small screwdriver and work your way all the way around the bezel. |  |
| Then use a larger screwdriver to work around again. Eventually the bezel will slide off easily. |  |
| The back of the bezel paint will be scratched but will not be visible once the gauge is reinstalled in the dash. If you are concerned you can touch up the bezel before reinstalling with a small amount of black model paint. |  |

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|---|---|
| Now it has been lifted off (carefully), and the plastic lens comes loose as well. |  |
| The speedometer without lens. |  |
| The two screws in the back of the speedometer are removed. |  |
| Then the speedometer guts come right out |  |

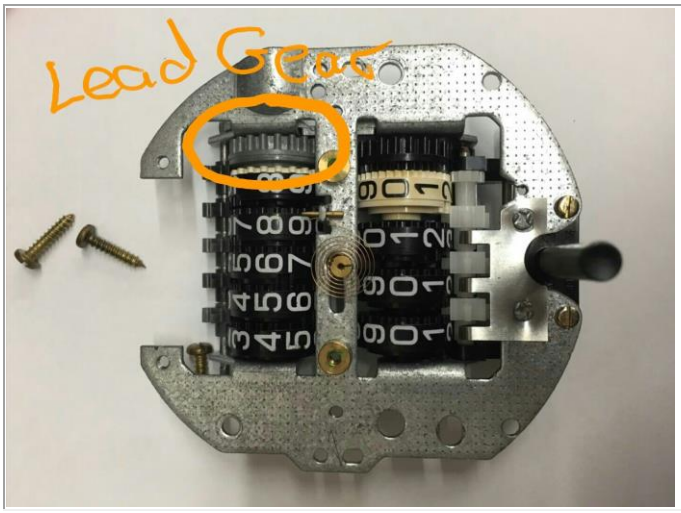
Most of the inner workings, such as we need, can be gotten to at this point, at least to fix the odometer.

The small black gear is the one that either cracks or does not hold tightly to the odometer shaft any longer. Need to count the teeth in order to order the correct replacement gear. It is always best to remove your speedometer and count the teeth of your old gear first. Most US Spec vehicles are 17 and most European Spec is 11.

If this gear is bad, use a flat tip screwdriver under to gear to pry off. Press on the new gear with a large pair of channel lock pliers. If your lead gear is also bad do not install this gear until after the lead gear has been replaced, see below.

Just inside the speedometer housing is located the lead gear that must fit tightly on the shaft in order for the odometer to work correctly. If this spins on the shaft it must be replaced as well.

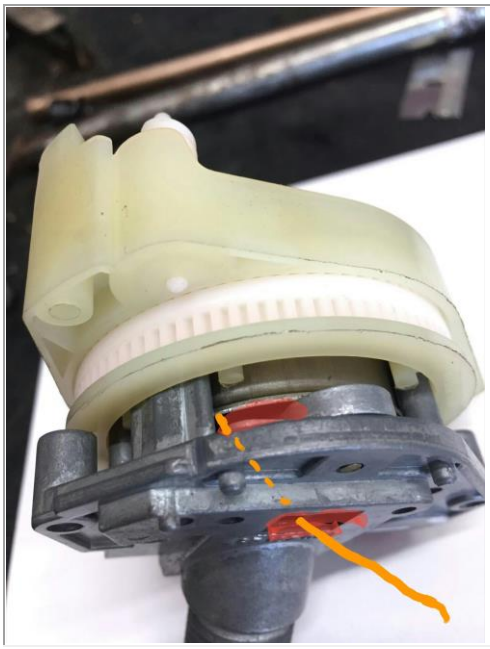
<u>If you need to replace the lead gear the speedometer face must be removed.</u>



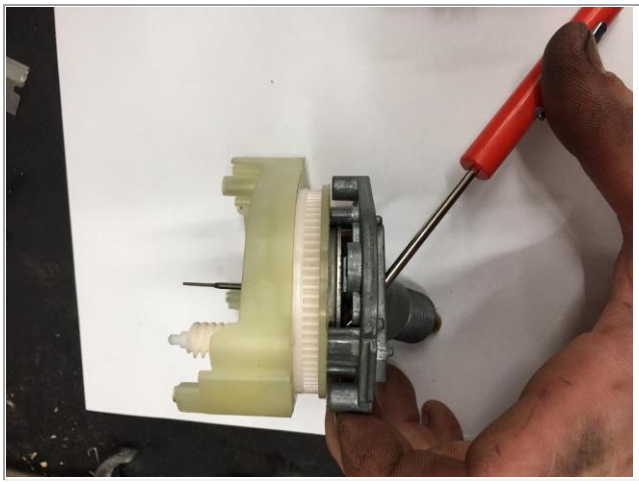
First make a mark on the edge of the speedometer face where the needle rests. Use a piece of painters tape on the edge of the face and then a pen to draw a line to realign the needle to on reassembly.

DO NOT PRY UP ON THE NEEDLE TO REMOVE! This is the trickiest part of the job. The needle is pressed onto a shaft that is extremely thin. It feels like a pretty tough metal, but you need to be careful here. *Do not* pull straight up. *Do not* put any sideways torque on the shaft.

From the backside of the speedometer there is an opening that you are going to put a small mechanics standard screwdriver through. Place the tip of the screwdriver between the metal canister and the internal speed cup. Then lightly twist the screwdriver to lock the speed cup into place. *Do NOT* put a lot of torque on the screwdriver as it is not needed and could damage the speed cup.



This is a picture with the screwdriver placed correctly.
Once the speed cup is locked, grip the center of the speedometer needle. Rotate the needle left and right on the axis while keeping the speed cup locked into place. This keeps from damaging the spring that is under the speedometer needle.



Once the needle has been removed remove the two screws that secure the face plate.

The internal workings of the speedometer with the face removed. Before installing the outer gear use a center punch to gentle tap the odometer shaft out. You only want to remove this shaft just far enough to remove the lead gear. Install the new lead gear in place and use a large pair of channel lock pliers to gently press the odometer shaft through the new lead gear. You do not want to squeeze this together to tightly as the assembly must still be able to spin freely. Now install the outer gear using the channel lock pliers.

Reinstall the odometer face and just tighten the screws until the screws just touch the face plate. Excessive tightening will damage the face of the screw.
When reinstalling the Speedo needle, make sure you gently push down evenly on the center hub of the needle. Once it is on firm enough, lock the speed cup and gently rotate the speedometer needle until you have the needle lined up with the mark you made earlier.
Once everything is back together, also gently recompress the trim ring around the back of the Speedo housing. You could use a black permanent marker to cover any scratches. Plug the unit back into the dash and reinsert into your gauge opening. Hopefully all is now re-recording miles.