



www.OdometerGears.com

French to English Translation: <http://translate.google.com/>

<http://alpinerenault.free.fr/outils/forum/viewtopic.php?f=9&t=23716>

How to repair Renault Alpine A310

V6 Phase 2 (called "4 holes" from 1981 to 1984 with electronic speedometer)

Please read the first few steps carefully as these are our most common questions we receive after a client has performed a repair and the odometer still does not work.

The reason the original gear or gears have failed is that they are made of urethane and lubricated with petroleum grease. This combination breaks down the urethane into a waxy substance which flakes and breaks away. This will also leave a waxy film and deposits on the shafts, gears, housing and peg on the pods.

** Work smart, meaning have a clean area to work and the proper tools to perform the repair. General tools that will be needed depending on the vehicle are small standard screwdriver, small Phillips screwdriver, assortment of torx drivers, diagonal cutters (dikes), 1/4" socket set are just a few of the items that may be needed.*

** No grease is needed with the new gears. Our gears are made using Celcon® which has graphite mixed into the material and does not require any additional lubricant.*

**** Make sure that you have blown the speedometer and odometer assembly clean with high pressure compressed air. Even if you think that you have found all of the broken pieces you still need to perform this step.***

**** Wipe the area around the gears, any shaft or shafts that the gears may ride on, the motor shaft and the peg on the pod that the small gear spins on clean, using a clean cloth and rubbing alcohol. Any residue left over from the old gears can allow the new gears to stick and not allow the odometer to work.***

You'll need to remove the needle in order to remove the face plate. The Speedo needle is press fitted on a small spindle with fine gear teeth on the end. 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 torque on the shaft. Grip the speedometer needle at the center and rotate counter-clockwise, you may have to gently lift the needle above the needle stop, until it hits an internal stop. Gently continue to rotate the needle while also gently applying a small amount of upwards tension at the same time. The friction is all that is holding the needle to the shaft. Keep turning and applying a small amount of upwards tension until the needle comes off. Do not force it.)

Hello everyone.

Having had my Alpine since it was brand new in 1982, and having done 129,000 km and I knew almost all problems related to counter this model - counter that can be described as its heel Achilles ... This is the "experience" ...

This guide will mainly deal with the problem of the gear between the small motor inside the meter and other gears that result in part odometer (distance traveled). This gear is made of a very bad urethane, it weakens with age, and then it breaks. The counter continues to display the speed but the odometer is not moving part. This break often comes in time to push the button to reset the odometer while the car is running, but not this reset is the cause. It's just that this gear was lousy anyway about to let go and the little extra pressure on its small teeth by this reset the car wheels just break it.

But before going further, a brief summary of the other problems I have known.

Starting with the sensor (sensor) mounted beside the left front wheel. If the meter does not work for all (or velocity or distance traveled), or works only sporadically, even if the meter is running the car stopped, engine running, it is likely that the problem lies with the probe or wiring. Either it is simply dirty, or poorly placed (standard non-compliant), problems that I have ever known, or there is a failure at its cable, which complies with each turning of the wheels (a problem that I experienced - cable cut and rewelded), or it no longer works and must be replaced (problem I had too - the replacement can be done without removing the meter if you want - just cut the original cable just before it leaves the front chest (towards interior) and to connect the new sensor.)

For information, the part number of this sensor is 6001011711 but it seems to be difficult or impossible to find. It may be that the Porsche 911 in the same period use of a probe similar (because the counter is the same mechanically inside) but it seems that the probe is mounted on the gearbox on the Porsche, so cannot be any compatible ... Someone tried??

If the meter displays or speed or distance correctly is that the probe works...

If the meter displays the distance correctly, but displays the wrong speed (typically the needle still stuck at a given speed while you drive slower or faster), it is likely that the problem is the same needle. It is made of a very bad plastic (also - it makes manufacturing defects!) And with age and heat it bends and touches the inner side against the glass counter. If this is your problem there may be even slight traces on the glass (plastic, of course) where the needle touched. You can (I did) performed a "repair" by removing the needle, by heating (hair dryer) and the folding to make it right again, but it only lasts a few months ...

The solution that worked for me was totally change the needle for a needle taking on another car. In my case I set the needle of a Lotus Elise S1, which is very close to that of the Alpine (except for the quality of the plastic ...). However, this solution would be difficult to repeat, because to have a needle Lotus Elise S1 I am totally went to the factory in England who made their counters at the time (Stack) and I was lucky enough to find someone one who had the willingness to go search for me in their store, for free, because they do not sell spare parts for their counters. In fact he spent two me, but I already gave the other to another member of the FAR ... So to you to find another model of car with a needle like. (And to report on the FAR if it works, of course).

Now, if your counter shows the rate correctly, but the distance does not move, you fall most likely in the case of the small gear to replace lousy as the other gears are made of a different plastic and seem to resist. This brings us to the main purpose of my guide. Here's what to do. (I'll try to post photos later ...)

Start by checking that all the light bulbs, controls and gauges etc... Walk - this will be an opportunity for change if not. Then disconnect your battery!

Then you take off completely, drawing up the "hidden hood", held by Velcro.

Think to take many pictures at each step, to help install.

You unscrewed the three screws holding the plastic cover of the stalks, from the bottom. This access to two small screws hidden behind dashboard. You can, just, get them out by pulling the cover toward you and down without removing the wheel. If you can not remove the wheel (the big central screw) taking care to note its position ...

You unscrewed the two small screws plus four others to release the panel.

You can largely remove the dashboard without unplugging.

Take a photo of the back of the counter before the fall – will also think to note the position of cables on a piece of paper...

To access the broken gear, start by removing the glass from the counter (clear the ring gradually sliding a small screwdriver all around for the release). If the needle was stuck against the glass of the meter should return to its "zero" position when you remove the glass. Take a photo of the front counter before you go away - or at least note the position of the needle stopped.

Remove the needle by pulling straight up.

Remove all screws on the back of the counter to retrieve the entire mechanism and the small block for electrical connections - can be left attached to the cable (black) mass- just remove the mechanism without desolder that cable.

In the photos (to be continued ... I hope) you'll see my little broken gear ... It is the yellowish-orange gear linking the electric motor all the other gears. The teeth are very brittle - it fell almost without touching them ... It's everywhere in my photos!

Remove two small screws to remove the front panel, and then remove the four screws hidden behind the block to separate with all the gables of the gauge with the motor and electronics. This in order to remove the other gears to gain access to that which is broken.

It cleans everything - especially ensure that it remains small orange broken teeth in the gears ... We bring the new gear. And it all goes back ... Note that it may be useful to a narrow strip of tape all around the side of the ring to move slightly towards the glass front, and thus increase space for the passage of the needle. In any case, once the needle and the ring (with glass) put together make a sudden movement with a try by hand to verify that the needle turns easily. Then reconnected with the meter but before any reinstall do a test drive to see that everything works. Finish up, and voila!

Finally, just a few words about the sources for the news maller rear sprocket. Faced with the prices charged in France to buy mine I did a Google search in English and I came across the site of a U.S. company, Odometer Gears faced with asking prices in the U.S., they have engaged in remanufacturing of gears for meters, including the Porsche 911 of the eighties I mentioned above. They later discovered that it was the same gear on our Alpine - and it was I who taught them that they were the same as the R5 Turbo ...

I could buy my gear from them for \$ 25 including postage paid by PayPal. I'll let you do the comparison with prices elsewhere....

See here:

<http://www.odometergears.com/>

Obviously I have no connection with this company.

My photos will follow ...

Friendships

Tony



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