Diagnostic Help
1978-1982 Tachometer wire testing.

To view our tach installation video please click here

Tachometer removal from your car can be done in a few easy simple steps in approximately 5 minutes if you follow the easy instructions below.

Before you begin the removal process please make a mental note of what the tach was doing and what caused the desire to remove the tach. Also make a note of the needle movement if any when the ignition key is turned to the on position.

Before removing the tachometer from the car, always unplug the tach filter from the tachometer feed wire at point A and plug the tachometer feed wire connector A in to the distributor direct at point B. Shown in Figure 1 Below.

Problems such as erratic tachometer needle bounce, working one day and not the next and just not working at all can be caused by the tach filter being defective.

By plugging your tach wire directly in to the distributor, you can save yourself some time and trouble in needless repairs. If you plug the tachometer in direct and still have problems please proceed.

Figure 1.
REMOVAL
While sitting in the driver seat of your car, remove the eight screws from the speedometer and tachometer housing as shown with red arrows in Figure 2 below.

Figure 2.

Figure 3 below is a closer picture of the lens before the screws are removed. Make sure you remove both sets of screws including the three indicated by the yellow arrows. The three screws indicated by the yellow arrows are the screws that hold the housing to the dash pad on the top.

Figure 3.
Remove Lens by pulling toward the rear of the car from the top!

With the lens is removed the dash should look like Figure 4 below.

Figure 4
Remove the six Allen head screws that retainer the outer trim over the speedometer and tachometer assemblies as indicated by the red arrows in Figure 5.

Figure 5
With the outer trim removed from the housing, you should see the tachometer retaining screws. Remove the three screws as indicated by the three arrows below in Figure 6.

Figure 6

With the tachometer retaining screws loose, the tachometer will pull out of the housing. Gently pull the tachometer toward the rear of the car. Only the three screws indicated by the arrows in Figure 6 hold the tach in place and it will pull forward and out of the dash at this point. You should now have the tachometer out of the car.

Testing

It would now be a great time to do some testing of your tachometer connections at the dash. To give you a little background on what makes your tachometer function, there are only three things required. 12 volts, ground and a square signal generated by the distributor. If any of the above is missing, the tachometer will not function.

Do you have the tools?

To diagnosis your gauge problem, you are going to need what is called a Multi-Meter as shown below. Note: If while testing continuity of a wire you see the reading below you have an open circuit.
Testing the Fuse

Always check the gauge fuse before you ever move forward. If your multi meter is equipped with an audio setting as the one above is, you won’t have to look at the meter to test for continuity. If you place the setting in the audio mode (the red area just to the right of the 200 above), it will allow you to hear a tone when you test if continuity is present.

Go to the fuse and with your meter in the audio mode and touch both sides of the fuse. If the fuse is good you will hear tone. If it is defective replace the fuse and test your gauge again.

Before moving forward, move your multi-meter to test for voltage. Test both sides of the fuse holder for current! Fuse holders can corrode and not make a good connection to the fuse even when the fuse is good. If you find the fuse holder clips are corroded on the gauge fuse it is also a great idea to check each and every one in the fuse panel.

Test Fuse Here!

Testing The Tach Power and Ground Clips.

With the tachometer removed you should see three clips as indicated in the picture below in Figure 7.

The clips in Figure 7 above are number 1 thru 3 assist you. Number 1 is 12 volts, Number 2 is your tach signal input from the distributor and Number 3 is your ground.
Turn the ignition key to the on position and with your multi-meter test clip number 1 for 12 volts. At this time it is a great idea to use clip number 3 as your ground.

If you have 12 volts on clip 1, you have just verified both the power connection and ground connection of clip number 1 and 3.

If you do not show power on clip number 1, remove your ground electrode from clip number 3 and use an alternate grounding source. A good area to pick up a ground would be the door hinge spring. Test again.

If you now have 12 volts on clip number 1, you have a ground issue with clip number 3 and the dash housing will need to be removed as detailed on our web site at this link. Click Here.

If you do not have power on clip number 1, the dash housing will need to be removed as described on our web site at this link. Click Here.

If 12 volts is present on clip 1, with clip number 3 as a ground the needle should move to zero if the tachometer is working properly. If your tach is not doing this, then you have a defective tachometer and the board is probably the cause. If either clip 1 or clip 3 is not showing power and/or ground, the tach needle will not show any movement when the ignition is turned on.

Testing The Signal Clip and The Tach Filter.
Testing of the signal clip can be difficult. The signal to your tachometer is generated and starts at your distributor. This signal termed a Square Signal due to the wave pattern it creates and can only be read with an oscilloscope.

Most people will not have an oscilloscope laying around for testing, but you will have the ability with your multi-meter to test continuity of the wire from the distributor to the tach clip. Distributor signal generation failure is possible, but highly unlikely. As is the case in most tach issues, the problem is in the board, or in the wires running to the tachometer clips show above in Figure 7.

In the picture below, Figure 8 you will notice the "Tach Filter". This filter in most cases is bolted to the intake manifold. On some cars the filter is located on the passenger side of the distributor. Finding the filter is easy, follow the wire from the Tach Connection on the distributor.

![Figure 8](image-url)
This filter has only one purpose which is to keep ignition interference out of the tachometer. Common belief is that the tach filter will keep spikes from hitting your tach board. This is not the case and most tach circuit boards have a voltage filter incorporated in to them to prevent this from happening. The tach filter should have a ohms reading from end to end in the 100 ohms range or higher, so you can test it and see if the filter is good by testing "FOR" ohms in the hundreds setting. If you test the filter and its bad replace it. If the wire is broken from the end of the tach filter, you can in some instances strip off the end of the wire and drip a tiny bit of solder in the hole to attempt re-attachment of the wire. If this fails, replace the filter.

The only way you can do any testing on your signal clip number 2, is to verify continuity between the clip and the tach wire connector at the distributor. Test continuity by making a jumper wire and running it from clip number 2 to the engine compartment. Then test for continuity between the end of the jumper and the plug indicated by the red arrow below in Figure 9. If continuity is present between the connector and number 2 clip you have eliminated this as a possible problem.
We currently have a tach board installation video on U-Tube which will assist you in detail on how to install your new Tach Board on the car.

You can view this video at this link.

Click Here