

## Oil Pressure Sender Mod with Warning Light

Source: DAZ on Miata.net  
member website pages 11/12

Making the NB oil pressure gauge show real pressure and show a secondary warning in the event of pressure loss

As documented on the Miata.Net Forum, the later model Miata's do not come from the factory with an actual operating oil pressure gauge, rather the oil pressure gauge shows either pressure or no pressure, not an actual range. Luckily for those who wish to rectify this situation, the fix is rather simple - All you need to do is replace the binary oil pressure sending unit with a pressure sensing sending unit and reposition the needle on the gauge. This procedure has been written up quite nicely and is available in the [Miata.Net Garage](#) and by Sheldon Stokes on [his website](#), so I won't rehash what has been so nicely presented before. (I do have a good picture of my new sending unit in place on [page 12](#))



Light off and the gauge showing pressure (engine running)

Because I track my car (and have installed a remote filter and ducted oil cooler) I went just a little further than the typical oil pressure gauge mod by also adding a low pressure warning light to the dash for a secondary warning. I did this by installing a VDO sending unit (for the gauge mod) that includes a provision for a warning light or buzzer (egauges.com p/n #360-009).

I followed Sheldon's write-up for the oil pressure gauge mod, but before I put the dash back together, I removed the gauge cluster and drilled a 1/4" hole just above the security warning light (above the water temp gauge) and installed a 12v 5mm red L.E.D. (in a bushing). Location is very important as there's not a lot of room in there, check and then check again before drilling to make sure you have enough clearance.



Wire attached to the "IGN" screw on the back of the cluster.

I drew "+" power from the back of the gauge cluster - there's a small screw marked (IGN) on the far left side (looking at the back of the cluster) that is a perfect source for this. I ran the "-" lead out under the dash and through the firewall behind the glove box, connecting it with a soldered ring terminal to the "WK" post on the new VDO sending unit.



No oil pressure and the light is on (engine off but ignition turned on)

Now, whenever there is less than 7 PSI of oil pressure while the ignition is on (hopefully only when engine is not running), I have a bright red light shining at me. As soon as oil pressure passes 7psi, the light goes out (basically right when the engine cranks). The small L.E.D. blends in nicely inside the gauge pod, and is only noticeable if you're looking for it - until it lights up - then you can't help but see it.



Close-up view of the LED

An update:

Took the gauge pod apart again and added a dab of opaque silicon (RTV) over the back of the LED.

With the headlights on, I had noticed that the LED seemed to glow - I changed the dash lighting level and the LED glow changed with it. Hmm, apparently the gauge cluster illumination was "bleeding" through the back of the LED making it appear to glow. Easy fix - just took a couple seconds and a small dab of RTV. All is well again.

Parts required:

[Egauges.com](http://Egauges.com)

- \* #360-009 VDO 0-80 psi 1/8-27NPT – 7.0 psi Pressure Sender
- \* #BPTNPT 1/8NPT female X 1/8-28BSP male Adapter Bushing

[Radio Shack](http://Radio Shack)

- \* #2760209 Red 5mm 12VDC 20ma L.E.D. with resister
- \* #2760079 Snap in L.E.D. holders (pkg 5)
  
- \* Assorted ring and pin connectors
- \* Miscellaneous wire bits with one length to reach from OP sending unit to dash

Tools required:

- \* 24mm deep socket (for removing old sending unit)
- \* 17mm open end wrench (for adapter bushing to sending unit)
- \* 1/2" open end wrench (for adapter bushing)
- \* Phillips screwdriver
- \* Wire cutters
- \* Wire stripper
- \* Soldering iron and solder
- \* Drill with 1/4" bit
- \* Multimeter / testlamp / continuity tester
- \* Opaque sealant
- \* Chip puller (makes gauge needle removal easy with no risk of bending the shaft)

My factory Service Manual and Wiring Diagrams were helpful in determining where to draw power and how to disassemble the meter hood/gauge pod.