

Before installing the gauge(s) please read the instructions completely.

Make sure the car is safely parked, emergency brake is on and the ignition is OFF.

The gauge will snap into one of the few dummy switch spots - it is up to you which spot you prefer. You can also shuffle existing switches around to accommodate your new gauge. In the pictures below the gauge shown is installed in B3 Passat dash but the process is very similar for other VW and Audi cars.

Step 1
Pop the dummy switches out from and around the desired location. Taking surrounding switches out will help you snap the gauge in easier.



Step 2
Take the fuse panel off. This is all you should need to take off, if you are installing the gauge to the left of the steering wheel.

If you are installing the gauge in the switch spots to the right of the steering wheel, it is easier if you take off the whole plastic panel underneath the steering wheel.



Step 3
Push the gauge wires (#1, 2 and 3 in the photo) through the dummy switch spot and grab them underneath the dash, close to the fuse box.

IMPORTANT
Insert and snap the gauge in upper side first(A) like the yellow arrows show in the image. Then snap the bottom in(B). Inserting and snapping the bottom part of the gauge first might brake the back of the gauge!!!

Now you can choose the fuse you will use to power the gauge. Choose a fuse that is connected to the ignition switch so the power to the gauge only runs when the ignition is on (example: radio). The list of fuses is on the fuse cover.

Step 4
Once you have the wiring beside the fuse box you can proceed with connecting the gauge to power supply. There are 2 or 3 wires on the gauge.

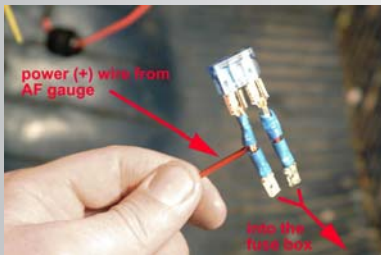
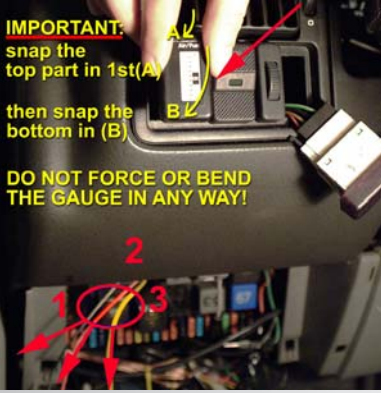
They are:

- RED - power (+)**
- BLACK - ground (-)**
- YELLOW or GREEN - O2 sensor signal**

IMPORTANT: Make sure you DO NOT mix the wires around. If you do you will damage the gauge.

POWER (RED): You can fabricate a mini harness like the one shown in the picture to wire the power (RED) gauge wire into the desired fuse circuit.

GROUND (BLACK):
You can run the ground from any existing location on the grounded chassis, the best place being the negative terminal on the battery. Good ground is crucial!



Step 5
SIGNAL (YELLOW)
This step is accomplished a lot easier if you have somebody to help. Find the whole in the firewall where you can run your signal (YELLOW) wire though. Easiest way to do this is to have a flashlight under the hood shining onto the driver's side of the firewall. That

way you can see the light coming in if you look under the dash by the fuse panel. Most of cars have extra openings (about .75" in size) in the firewall covered with rubber plugs.

Step 6
Now you need to find the signal wire from your O2 sensor (there are 3 types, 1, 3 and 4 wire O2 sensors). 3 wire systems (like the ones on Digifant and Motronic) have 2 white wires and 1 black. The wire you need (Digifant II, Motronic) is **BLACK**. That is the signal wire that runs from the sensor to the ECU.



There is one harness connector between the sensor and the ECU. In Passat/Corrado/A3 case, you can find it on the right side of the downpipe. On an A2 car with 3 wire sensor, the harness runs behind the throttle body and is easier to access then other ones.

IMPORTANT: Signal wire colour may vary on some cars - you can use multimeter to find the sensor signal wire. Signal fluctuates 0-1V at warm idle.

Step 7
Take the signal (YELLOW) gauge wire that you pushed through the firewall, and put it together with the



signal (BLACK in 3 wire O2 sensor system) wire from O2 sensor. If you have 1 wire O2 sensor, then it's easier. You can cut the yellow wire as short as you think it should be. Put both wires into the connector side by side into the grooves and use needlenose pliers or a crimper. **Step 8 at the back>**

air/fuel ratio gauge & volt gauge installation instructions

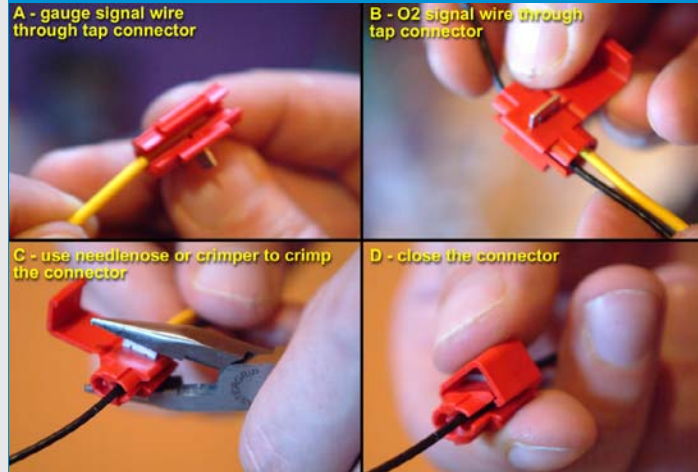
*disclaimer: duostyling/neohaus design studio claims no responsibility for any damage to your vehicle or the supplied gauge(s) caused by improper installation.



- applies to AFR gauge only



- applies to all gauges



Step 8

Double check all the steps and connections. Turn the ignition on. The gauge should light up at this point (1 LED on the scale). If everything looks alright, start the car. The gauge should start functioning.

IMPORTANT:

The O2 sensor system works properly only once the sensor is warmed up. This might take a couple of minutes in cold weather. On startup, the the gauge might have dim appearance or appear non-responsive due to **LOW SIGNAL** from the cold O2 sensor. This **DOES NOT** mean that the gauge is malfunctioning but it is rather part of the normal process.

If everything is ok, make sure the signal wire is not in the way of hot or moving parts under the hood. You can use some zipties to keep it neat in there. The same goes for the power wiring. You can pop the gauge in its place if you haven't already (**make sure you read step 3 and see the step 3 image before you do!**) as well as the previously removed switches. Put the removed plastic panel(s) back on (the fuse panel and the one under the steering wheel if taken off).

Peel the plastic protecting cover off the gauge.

**You are done!
Go for a test drive
and enjoy the results!**



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Appendix:

Connecting the signal wire to duostyling oil pressure and oil temperature gauges

The procedure for power supply and grounding for this gauge is identical to other gauges from Duostyling offer. As for the signal wire, duostyling oil pressure gauge uses standard VDO senders with resistance values **10-180 Ohm** and pressure range **0-5 Bar**. In theory any VDO sender with above given values will work with the gauge but the gauge has been tested only with VDO dual terminal sender off of Audi 80/90. Part number **035 919 561(a)**. This sender has two terminals on it where **G** is the gauge connection and **WK** is the pressure switch connector operating the oil pressure light in the dash.

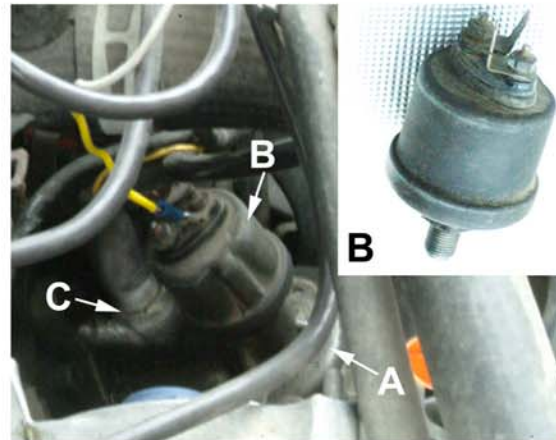
The pressure switch terminal can be used for the stock switch connection. In this case the VDO sender replaces the stock oil pressure switch. To keep things simpler, the VDO sender can also be installed in the vacant spot on top of the filter housing, next to the stock oil pressure switch. In order to install the sender in this spot, the plug covering it needs to be removed. Once the plug has been removed, the sender can be installed in its place. In this case, the **WK** terminal on the VDO sender stays vacant and only the gauge terminal(**G**) is used.

Assuming you have pulled the gauge signal cable through the firewall, you can route it, and leave it leaving enough wire to connect it to the sender terminal while cutting the rest. Cut the extra wire, **do not** fold it in a coil since this can cause interference.

After cutting the extra amount of cable, crimp the supplied female disconnect at the end of it. Double-check all the connections to the gauge and if everything is in order, connect the signal connector to the **G** terminal on the sender.

You are done! Start the car and enjoy your new duostyling oil pressure gauge

The oil pressure in cold engine will read +5 Bar and will pin your gauge at the top. As the motor warms up, the pressure will start dropping. When fully warm, the pressure should read +2 Bar at 2200rpm on 1.8L 8V



engine.

A - filter housing

B- VDO sender

C - stock pressure switch

Note: If you are keeping your stock oil pressure switch, you might have to move it into above mentioned extra spot and place the VDO sender in its place. Reason being is that VDO sender might not clear the distributor unless installed instead of the stock switch.

Oil temperature sender is shown below. Please use the same installation as described for Oil Pressure with the difference, that only one wire is needed.

Duostyling Oil Temperature gauge is designed to work with VDO 323-423 sender (shown on the photo).



Thanks for choosing duostyling products.