

Accessory Instruments – Oil Pressure and Temperature Gauges

It is suggested that you make a decision on what you want to monitor, starting with the most important to you: find the gauge that you like the look of best and ensure that you can find a way to install it in your vehicle. Work down through the list of gauges that you would like and make sure that you can find a way to mount those too. Most people prefer to have matching gauges so if you have chosen monitor a number of things getting a matched set could be difficult. We always stock as much as we can from each range we offer.

Accessory Instruments – Oil Gauges

The oil circuit of any A Series engine is extremely important as the oil provides much of cooling for the engine. All A Series engines run at very high oil pressures, particularly the later (post 72) cars that typically run at around 90psi and can reach double that on a cold start up.

There is a lot of choice of available products and these vary enormously in terms of fitting and price. You will need to choose whether you want capillary or electrical operation and an analogue or digital display. Apart from budget one of the most important considerations is where you are going to take the readings from and where you are going to mount the gauges you choose.

Oil pressure gauge

Capillary gauges use a small tube to pass a quantity of oil to the gauge and deflect the needle directly. Electrical gauges have a reservoir with a membrane that deflects with the change in pressure; this is measured and converted to a voltage, which is sent to the gauge to display the equivalent pressure. An analogue display has a needle that sweeps over a background printed with the relevant values and a digital gauge presents the reading in a numeric form: digital gauges are always electrical but analogue gauges can be either capillary or electrical.

Oil pressure gauges generally have either a 1/8 NPTF or 1/8 BSP male connector (electrical types) or a 1/8 BSP female connector (capillary types). A common size for gauges sourced in Europe is M10 – whatever gauge you choose you should check to make sure that you can provide the required connections. There are two basic points where the feeds for oil pressure can be taken: the oil pressure switch gallery or at the oil filter housing.

Another consideration is the high pressures you will be recording. Many aftermarket gauges have a maximum reading of 100psi and that means that your gauge will read (at or near) maximum a lot of the time and will quite often be off the scale. Some electric gauges read from 7 up to 10 bar (112-140psi) and capillary gauges go up to 160psi. The higher quality digital gauges can go to 200psi but do not assume anything, if something is not specifically stated then you should ask your supplier.

Mounting recommendations

One of the Citroen recommended measurement points for oil pressure is at the oil pressure switch and this is relatively easy. Electrical gauges typically have either a 1/8 NPTF or 1/8BSP male connector on the sender and this will work well with our TP6 adapter. Capillary gauges typically have a 1/8 BSP female connection, again, use the TP6 adapter but this time with a MMS5 adapter for the end and an EWS/1C oil pressure switch. The oil pressure switch mounts in the hole in the side and the MMS5 goes on the end of the TP6 to mount the capillary tube.

If you are using both pressure and temperature gauges (or a dual gauge) then is also possible to take the readings from a sandwich plate adapter OFSP mounted between the oil filter and its housing.

Oil temperature gauge

Again, because the oil circuit is vital to the cooling of the A-Series engine, monitoring the temperature of your oil is important. Changes to the composition of modern fuels combined with modern driving conditions can lead to elevated temperatures even in the UK, traveling fast or laden will only raise this to even higher levels. Measuring the oil temperature is therefore highly worthwhile in understanding what is going on inside your engine and for maintaining long engine life.

As with oil temperature your choices are capillary or electrical operation with either an analogue or digital display. Like oil pressure there is a problem with the normal oil temperature display scales which generally read too high and most of the time your gauge will be languishing at the lower end of their scales.

Where to mount the temperature sender can be tricky depending on what type of gauge you choose and it is important that you check on the type of connection prior to purchasing the gauge. Some capillary gauges come with a 3/8BSP connector and the physical size of the sender probe makes mounting choices limited.

Mounting recommendations

Our electrical gauges typically come with a 1/8 NPTF sensor for temperature. Fitting is straightforward with the temperature sender reading being taken at either the sump plug or via a modified rocker cover using our M16 x 1/8 NPTF adapter. Our capillary gauges have a 3/8BSP sender and the only solution here is to use the OFSP filter to housing adapter.

Dual Oil pressure/temperature gauges

Everything said about pressure and temperature gauges as separate items applies equally to dual gauges (typically housed in one round 52mm enclosure) i.e. a choice of electrical or capillary operation and digital or analogue displays. Again the key considerations are the mounting of the sensors and your budget.