

Ask Ronny

by Ronny Shaver @ Ronny's Garage

Answering Your Questions About Classic Car Care Service And Restoration

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Where Should My Oil Pressure Gauge Indicate?

by Ronny Shaver

Recently, I received an e-mail from a club member who had just purchased a 1989 Rolls-Royce Silver Spur with 32,000 miles with a question regarding oil pressure readings. He stated that he had serviced the car and installed Mobil 1 5W-50 oil and that after 30 minutes of driving, the oil pressure gauge reads about 10% into the large white band at 60mph, then drops to the start of the stripe at 30mph and finally, at idle runs at the thin line below the large white band. He then asked if it could be the oil pressure gauge transducer or possibly an oil pump fault.

Good question! In my experience, the oil pressure transducer is almost always the cause of this condition. The transducer is a combination electrical/mechanical unit that takes pressure from the engine oil system and converts it to a variable resistance to ground for the gauge unit. The gauge is also an electrical/mechanical unit that uses electrical system voltage and variable ground to operate a mechanical needle so the driver can be aware of engine oil pressure. This may seem complicated but it really isn't.

So why not just have a purely mechanical gauge and bypass the electrical interface? Mechanical gauges were used for years but had two major drawbacks: 1. Running a pressurized fluid line from the engine to the dashboard became increasingly difficult as compared to running wiring and 2. Hot pressurized oil inside the passenger compartment (especially directly over the driver's feet) can potentially cause injury.

To determine for sure that the transducer is the problem one must remove the unit and install a mechanical test gauge to monitor the oil pressure with actual numbered values. The most scientific way to do this is to install a tee so that the transducer can still be connected and one can compare the test gauge readings to the car gauge readings. Once the transducer has faulted, replace it and recheck readings. Remember that the oil pressure gauge is just an approximation of oil pressure for the driver to monitor while on the other hand, the low oil pressure warning light is a "do not pass go" indicator. If at any time while driving this light comes on, stop the car safely and immediately and check oil level. This has its own transducer that is either off or on and set to illuminate the warning light when oil pressure drops below 15psi. These fail also and the usual symptom is a flashing or glowing warning lamp at idle.

The auto manufacturers (including RR/Bentley) purposefully don't provide oil pressure gauges with actual numbered readings so that (in my opinion!) vehicle owners will not focus on the numbers too much causing potential warranty headaches.

Thank you for the questions and keep them coming. Please send your questions to Ronny at ronnyshaver@ronnysgarage.com.

Happy Motoring!
Ronny