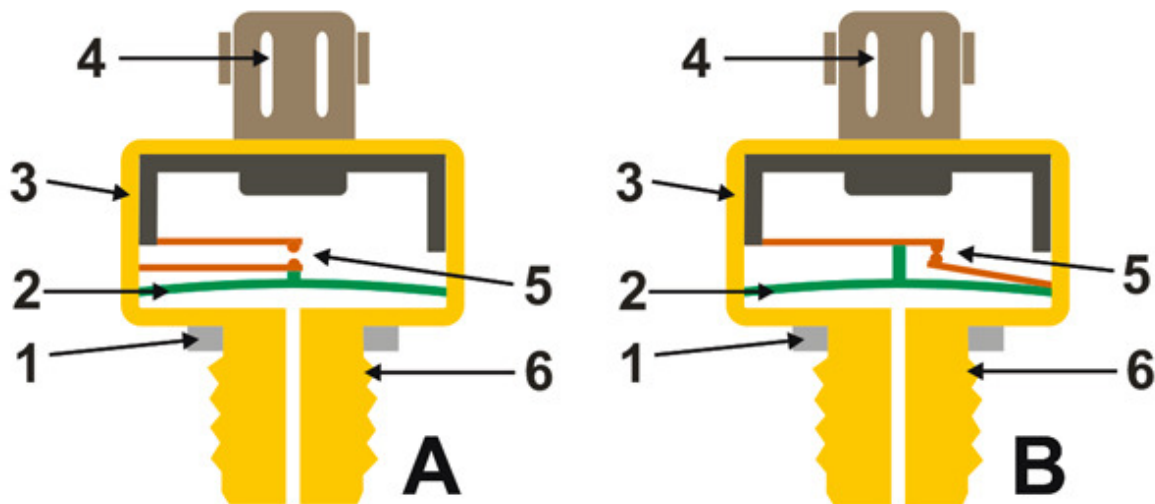


The switch is operated by a self-elastic diaphragm or movable diaphragm with fitted hairspring, whose position is determined by the pressure applied to it. The required critical pressure for moving up the diaphragm and activating (switching ON or switching OFF) the switch contacts is determined by the oil pressure of the engine. This critical value of oil pressure is individual for every engine type and can vary. Usual value is between 0.25 and 0.75 bar (3.5 – 11 psi).

If the oil pressure falls below this critical value, the switch directly activates the oil warning light in driver dashboard or in some engine management systems the switch returns a signal to the ECU, so to be warned about low pressure of engine oil and prevent damage to the engine. The switch contacts can be either normally open or normally closed.



**Figure 1. Engine oil pressure switch:**

1. Washer for sealing, 2. Diaphragm, 3. Switch housing, 4. Connector, 5. Switch contacts (A normally open, B normally closed), 6. Thread for tightness.

The figure 1, under (A) shows illustrative drawing of one type of oil pressure switch with normally open contacts, and under (B) one type of switch with normally closed contacts. The operation of these types of switches is fundamentally similar in all instances, although the type, size and construction can vary upon the manufacturer application or requirement of a used system.

At the switches with normally open contacts, when the engine oil pressure reaches the preset critical level, produces movement of the diaphragm and activates the contacts of the switch, so the contacts are connected together, i.e. the switch is closed (switched ON). The switches with normally closed contacts works opposite, when the engine oil pressure reaches the preset critical level, deactivates the already connected contacts of the switch, so now the contacts are disconnected, i.e. the switch is open (switched OFF).