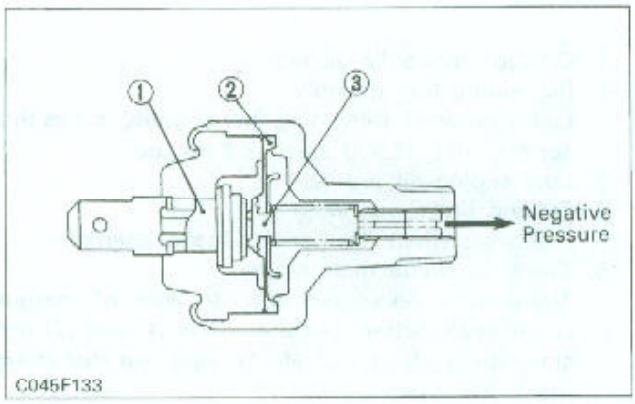
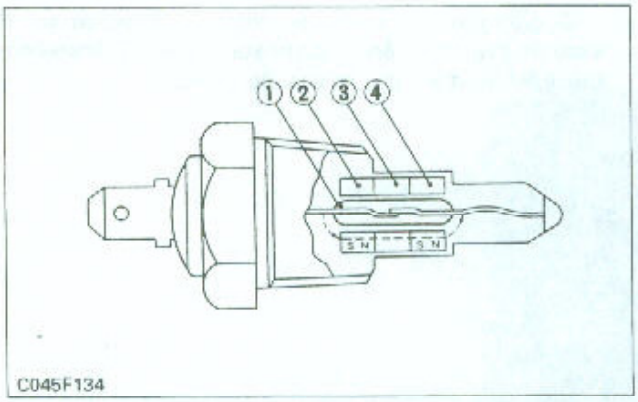
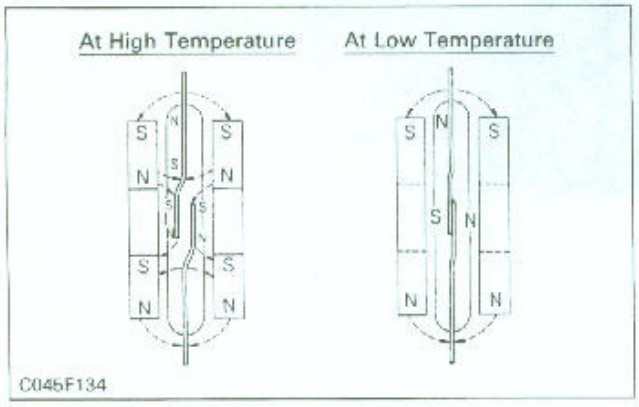


(1) Terminal
(2) Diaphragm
(3) Contact



(1) Lead Switch
(2) Magnet
(3) Thermoferrite
(4) Magnet



■ Vacuum Switch

The vacuum switch lights the warning lamp when the oil filter is clogged and the negative pressure of the suction oil exceeds the predetermined level.

When the oil filter is not clogged, the contact (3) is in touch with the terminal (1) to allow the current to flow from the terminal to the body.

As the oil filter is clogged more seriously, the suction pressure of the pump increases. When the negative pressure thus created exceeds approx. 500mmHg, the diaphragm (2) and the contact (3) are separated from the terminal (1) so that the current stops flowing.

The signal generated by the opening of the contact is sent to the electronic control section installed in the checker panel, which in turn lights the lamp on the panel board.

■ Thermostat Switch

It may occur that the vacuum switch opens its contact due to the negative pressure caused by the high viscosity of the suction oil even through the filter is not clogged. As the oil temperature lowers, the oil viscosity increases. To prevent this improper phenomenon, the thermostat switch is used to complement the vacuum switch.

The thermostat switch is connected to the vacuum switch electrically in parallel, and maintains the "close" state of the contact when the oil temperature is below approx. 60℃ (140℉). Even if the vacuum switch contact opens due to the negative pressure caused by the high viscosity of the suction oil, the warning lamp does not light.

The thermostat switch consists of a lead switch (1) and a pair of magnets (2), (4) in which the thermoferrites (3) are incorporated. The thermoferrite loses its magnetism when the temperature is above 60℃ (140℉) and causes the lead switch to open.