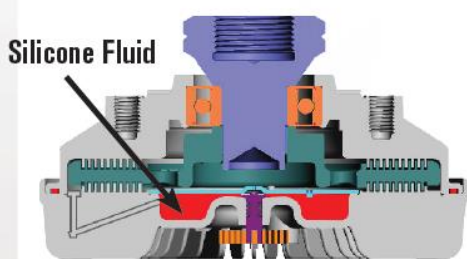
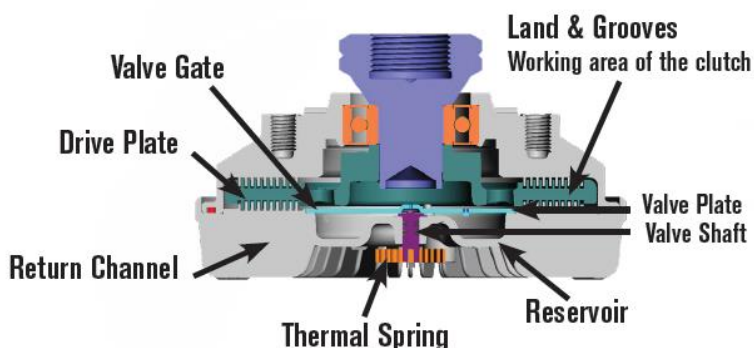
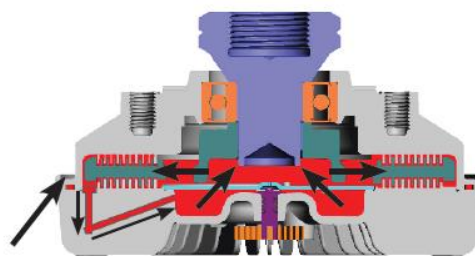


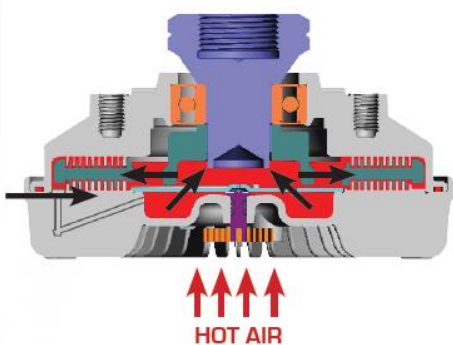
Thermal Fan Clutches: How They Work



When the system is cold, the working fluid (silicone) in the clutch remains in the reservoir. Hot air, blowing across the radiator heats the thermal spring causing it to turn the valve shaft connected to the valve gate that opens the valve ports in the valve plate.

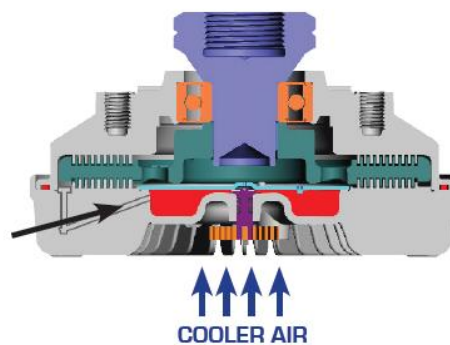


As long as the thermal spring remains heated, the valve will remain open causing the silicone to circulate from the reservoir through the working area and back through the return channel in a continuous loops. This causes the fan clutch to remain engaged.



As the ports in the valve plate open, centrifugal force pushes the silicone fluid into the working area of the clutch causing it to engage.

The thermal spring will rotate the valve gate to open the valve ports partially or fully depending on the heat load thereby causing the fan clutch to engage partially or fully.



Once the fan has removed heat, cooler air contacts the thermal spring causing it to rotate in the opposite direction thereby closing the valve ports in the valve plate.

With the valve ports closed, the silicone fluid is pumped into the reservoir where it remains until the air temperature again heats the thermal spring actuating the valve gate.

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