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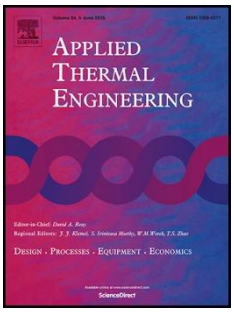

Title: Development and analysis of a variable position thermostat for smart cooling system of a light duty diesel vehicles and engine emissions assessment during NEDC

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Development and Analysis of a Variable Position Thermostat for Smart Cooling System of a Light Duty Diesel Vehicles and Engine Emissions Assessment during NEDC

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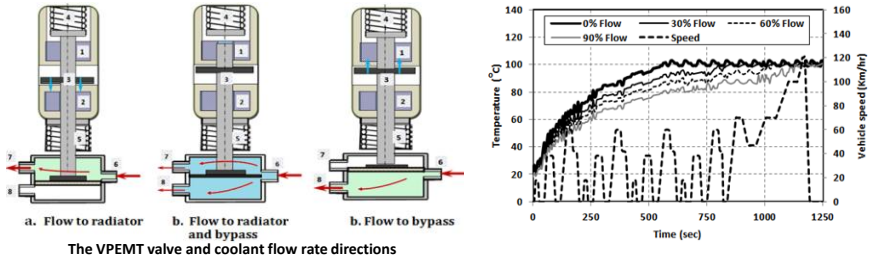
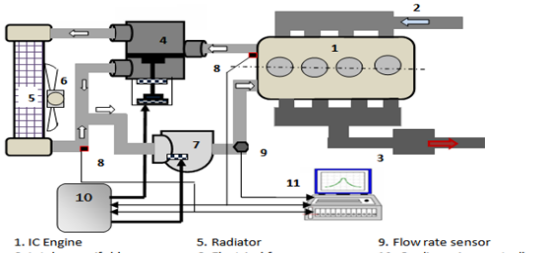
HIGHLIGHTS:

- A new concept of the variable position electromagnetic thermostat in MCS is proposed.
- Series of experiments were conducted on a light duty diesel vehicle operated over the NEDC test.
- Comparative study was done on emission characteristics of the MCS and the conventional cooling system.
- Engine cold start and steady-state coolant flow rate and emissions are presented.
- Assessment of the MCS effect on accumulated DFC and emissions during NEDC.

Graphical Abstract



The VPEMT valve and coolant flow rate directions



A diesel engine thermal management