1. Record Nr. UNINA9910438319403321 Autore Obidi T. Yomi Titolo Thermal management in automotive applications / / [edited] by T. Yomi Obidi Pubbl/distr/stampa Warrendale, Pa. (400 Commonwealth Dr., Wallendale PA USA):,: Society of Automotive Engineers, , 2015 [Piscatagay, New Jersey]:,: IEEE Xplore,, [2015] **ISBN** 0-7680-8717-1 0-7680-8184-X Descrizione fisica 1 online resource (110 pages) Collana Society of Automotive Engineers. Electronic publications Progress in technology series Disciplina 629.256 Soggetti Automobiles - Motors - Cooling systems Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references. Nota di contenuto Introduction -- Papers. Thermal management concepts for higherefficiency heavy vehicles (1999-01-2240); Engine thermal management with electric cooling pump (2000-01-0965); Coolant flow control strategies for automotive thermal management systems (2002-01-0713); Smart thermostat and coolant pump control for engine thermal management systems (2003-01-0272); Thermal management on small gasoline engines (2011-01-0314); Cold start thermal management with electrically heated catalyst: a way to lower fuel consumption (2013-24-0158); Heat management by means of thermal barriers of ceramic fibers in automotive components and systems (931657); Underhood thermal management by controlling air flow (951013); CFD approach on underhood thermal management of passenger cars and trucks (2003-01-3577); Nanofluids for vehicle thermal management (2001-01-1706). Sommario/riassunto With new and more stringent standards addressing emission reduction and fuel economy, the importance of a well-developed engine thermal management system becomes even greater. With about 30% of the fuel

intake energy dissipated through the cooling system and another 30% through the exhaust system, it is to be expected that serious research has been dedicated to this field. It offers insights into how thermal

management impacts the efficiency of engines in heavy vehicles, the effects of better coolant flow control, and the use of smart thermostat and next-generation cooling pumps. It also provides an in-depth analysis of the possible gains in optimum warm-up sequence and thermal management on a small gasoline engine.