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Autore	Garrett, T. K. (Thomas Kenneth)
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Nota di contenuto	PART ONE - THE ENGINE: General principles of heat engines; Engine balance; Constructional details of the engine; Six-, eight-, and twelve-cylinder engines; Sleeve valve and special engines; Diesel injection equipment and systems; Distributor type injection pumps; Some representative diesel engines; The two-stroke engine; Fundamentals of carburation; Some representative carburetors; Petrol injection systems; Induction manifold design; Emission control; Fuel pumps and engine intake air conditioning; Turbocharging and supercharging; Fuels and their combustion; Friction, lubricants and lubrication; Engine cooling; Electric propulsion; Alternative power units; Bearings, gearing, chains and belt drives. -- PART TWO - TRANSMISSION: Transmission requirements; Clutches; Why is a gearbox necessary; Constructional arrangements of gearboxes, Epicyclic and pre-selector gearboxes; Torque converters and automatic gearboxes; Semi-automatic gearboxes and continuously variable transmissions; Universal joints and driving steered wheels; The differential; The back axle; Axle constructions; The double reduction axle. -- PART THREE - THE CARRIAGE UNIT - The basic structure; Vehicle safety; Brakes; Servo, power operated and regenerative braking systems; Anti-lock brakes and traction control; Front axle and steering mechanism; Suspension principles; Suspension systems; Six-wheel vehicles

"As a reference book it has to be classed as one of the best! There should be a copy of it in every college library." Association of Motor Vehicle Teachers' Newsletter The Motor Vehicle has been an essential reference work for both the student and practising engineer ever since the first edition appeared in 1929. Today it is as indispensable to anyone with a serious interest in vehicle design techniques, systems and construction as it was then. The current edition has undergone a major revision to include seven new chapters. These include Electric Propulsion; covering all aspects from lead acid and alternative batteries to fuel cells and hybrid vehicles, Static and Dynamic Safety, and Wheels and Tyres. The chapter on the compression ignition engine has been expanded to form three chapters, concentrating on aspects such as common rail injection, recently developed distributor type pumps and electronic control of injection. Automatic, semi-automatic and continuously variable ratio transmissions are covered in two new chapters. A third contains information on the latest developments in computer-aided control over both braking and traction, for improving vehicle stability, while another contains entirely new information on the practice and principles of electrically-actuated power-assisted steering. Also included is coverage of material detailing the latest knowledge and practice relating to safety systems, vehicle integrity, braking systems and much more. The established layout of the book is retained, with topics relating to the Engine, Transmission and Carriage Unit dealt with in turn. Each chapter is well-provided with diagrams, sections, schematics and photographs, all of which contribute to a clear and concise exposition of the material under discussion. Latest extensive revisions to a well-established title New chapters on electric propulsion and vehicle safety
