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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Piston functions, requirements, and types -- Design guidelines -- Simulation of the operational strength using FEM -- Materials -- Cooling -- Component testing -- Engine testing. .
Sommario/riassunto	The ever-increasing demands placed on combustion engines are just as great when it comes to this centerpiece—the piston. Achieving less weight or friction, or even greater wear resistance, requires in-depth knowledge of the processes taking place inside the engine, suitable materials, and appropriate design and manufacturing processes for pistons, including the necessary testing measures. It is no longer possible for professionals in automotive engineering to manage without specific expertise of this kind, whether they work in the field of design, development, testing, or maintenance. This technical book answers these questions in detail and in a very clear and comprehensible way. In this second, revised edition, every chapter has been revised and expanded. The chapter on “Engine testing”, for example, now include extensive results in the area of friction power loss measurement and lube oil consumption measurement. Contents Piston function, requirements, and types Design guidelines Simulation of the operational strength using FEA Materials Cooling Component

testing Engine testing The target groups Engineers in the field of engine development and maintenance Lecturers and students in the areas of mechanical engineering, engine technology, and vehicle construction Anyone interested in technology Publisher MAHLE is a leading international development partner for the automotive industry. With its products for combustion engines and their peripherals as well as for electric vehicles, the group addresses all the crucial issues connected to the powertrain and air conditioning technology: from engine systems and components to filtration to thermal management.