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Nota di contenuto	The Last Mulled Toast -- The Fundamental Method of Operation of a Simple Four-Stroke Engine -- The Cylinder Head Geometry of Typical Spark-Ignition Engines -- The Cylinder Head Geometry of Typical Compression-Ignition Engines -- Connecting Rod and Crankshaft Geometry -- The Fundamental Geometry of the Cylinder Head -- Definitions of Thermodynamic Terms Used in Engine Design, Simulation, and Testing -- Laboratory Testing of Engines -- Potential Power Output of Four-Stroke Engines -- The Beginnings of Simulation of the Four-Stroke Engine -- The End of the Beginning of Simulation of the Four-Stroke Engine -- Fundamental Thermodynamic Theory for the Closed Cycle -- Gas Flow through Four-Stroke Engines -- Motion of Pressure Waves in a Pipe -- Motion of Oppositely Moving Pressure Waves in a Pipe -- Friction Loss and Friction Heating during Pressure Wave Propagation -- Heat Transfer during Pressure Wave Propagation -- Wave Reflections at Discontinuities in Gas Properties -- Reflection of Pressure Waves -- Reflection of a Pressure Wave at a Closed End in a Pipe -- Reflection of a Pressure Wave at an Open End in a Pipe -- An Introduction to Reflection of Pressure Waves at a Sudden Area Change -- Reflection of Pressure Waves at an Expansion in Pipe Area -- Reflection of Pressure Waves at a Contraction in Pipe Area -- Reflection of Waves at a Restriction between Differing Pipe Areas -- An Introduction to Reflections of Pressure Waves at Branches in Pipes -- The Complete Solution of Reflections of Pressure Waves at Pipe

Branches.

Sommario/riassunto

This book provides design assistance with the actual mechanical design of an engine in which the gas dynamics, fluid mechanics, thermodynamics, and combustion have been optimized so as to provide the required performance characteristics such as power, torque, fuel consumption, or noise emission.
