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Soggetti	Internal combustion engines TECHNOLOGY & ENGINEERING / Automotive TECHNOLOGY & ENGINEERING / Power Resources / Fossil Fuels Automotive technology and trades Fossil fuel technologies
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1. Historical review -- 2. Definition and classification of reciprocating piston engines -- 3. Characteristics -- 4. Curves -- 5. Fundamental of thermodynamics -- 6. Crank gears -- 7. Engine components -- 8. Engines -- 9. Tribology -- 10. Charge cycle -- 11. Supercharging of internal combustion engines -- 12. Mixture format ion and related systems -- 13. Ignition -- 14. Combustion -- 15. Combustion systems -- 16. Electronics and mechanics for engine and shift control transmission management -- 17. The powertrain -- 18. Sensors -- 19. Actuators -- 20. Cooling of internal combustion engines -- 21. Exhaust emissions -- 22. Operating fluids -- 23. Filtration of operating fluids -- 24. Calculation and simulation -- 25. Combusion diagnostics-- Indication and visualization in combustion development -- 26. Fuel consumption -- 27. Noise emissions -- 28. Engine measuring technology -- 29. Hybrid drive systems -- 30. Alternative vehicle drives and APUs (auxiliary power units) -- 31. Energy management in the engine and vehicle -- 32. Forecast -- Color section

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Sommario/riassunto

Comprehensively covering the development of the internal combustion engine (ICE), the information presented captures expert knowledge and serves as an essential resource that illustrates the latest level of knowledge about engine development. Particular attention is paid toward the most up-to-date theory and practice addressing thermodynamic principles, engine components, fuels, and emissions. Details and data cover classification and characteristics of reciprocating engines, along with fundamentals about diesel and spark ignition internal combustion engines, including insightful perspectives about the history, components, and complexities of the present-day and future IC engines.