

BIBLIOGRAPHY ON INTERNAL COMBUSTION ENGINES

1. F. Obert, Internal Combustion Engines and Air Pollution, Intext Educational Publishers, 1973 edition.
(A good basic text on engines from the 1950s with modest updating in 1968; much excellent descriptive material.)
2. C. Fayette Taylor and Edward S. Taylor, The Internal Combustion Engine, International Textbook Company, 1961.
(A basic text now out of print and somewhat dated.)
3. C.F. Taylor, The Internal Combustion Engine in Theory and Practice. Volumes I and II, M.I.T. Press, 1966 and 1968. Reissued in paperback in 1977, and in 1985 as Second Edition with minor modifications.
(A much expanded version of reference 2; an advanced text with extensive material on engine design practice of the 1950s and 60s.)
4. A.R. Rogowski, Elements of Internal Combustion Engines, McGraw-Hill, 1953.
(An elementary text used primarily for undergraduate teaching.)
5. L.C. Lichty, Combustion Engine Processes, McGraw-Hill Book Company, 6th edition, 1967.
(A good basic text on all types of combustion engines, now somewhat dated.)
6. M. Khovakh (general editor) Motor Vehicle Engines. English translation from Russian. MIR Publishers, Moscow, 1976.
(A Russian text with an excellent ordering of subject material.)
7. D.J. Patterson and N.A. Henein, Emission from Combustion Engines and their Control, Ann Arbor Science Publishers, Inc., 1972.
(A comprehensive text on engine emissions; now somewhat dated.)
8. Robert U. Ayres and Richard P. McKenna, Alternatives to the Internal Combustion Engines, Johns Hopkins University Press, 1972.
(A fundamental text on the alternative engines to the internal combustion engine.)
9. M.J. Nunney, The Automotive Engine, Newnes-Butterworths, London, 1974.
(A book which reviews modern automotive engine practice; contains descriptions of design and operation of engines and engine components.)
10. Kenichi Yamamoto, Rotary Engine, Toyo Kogyo Co., Ltd., 1969.
(Excellent text on the design and operation of Wankel engines.)
11. R.F. Ansdale, The Wankel RC Engine: Design and Performance, Iliffe Books, Ltd., London, 1968.
(Contains much technical and historical information on the Wankel engine.)
12. G.S. Springer and D.J. Patterson, editors, Engine Emissions: Pollutant Formation and Measurement. Plenum Press, New York, London, 1973.
(A set of contributed chapters on different emissions topics; some chapters are still useful.)

13. G. Sitkei, Heat Transfer and Thermal Loading in Internal Combustion Engines, Akademiai Kiado: Budapest, 1974.
(A monograph on heat transfer in spark-ignition and diesel engines and temperature distributions in engine components.)
14. W.J. Annand and G.E. Roe, Gas Flow in the Internal Combustion Engine, Haessner Publishing, Inc., 1974.
(A review of selected topics related to gas flow in IC engine intake and exhaust systems.)
15. Should We Have a New Engine? An Automobile Power Systems Evaluation, Volume I. Summary, Jet Propulsion Laboratory, California Institute of Technology, JPL SP 43-17, August 1975.
(Popular summary of study which evaluates the internal combustion engine and its alternatives.)

Should We Have a New Engine? An Automobile Power Systems Evaluation, Volume II, Technical Reports, Jet Propulsion Laboratory, California Institute of Technology, JPL SP 43-17, August 1975.
(Extensive study of design and operating characteristics of internal combustion engines and alternative engines for automobile use.)
16. E.M. Goodger, Hydrocarbon Fuels; Production, Properties and Performance of Liquids and Gases, Macmillan, London, 1975.
(Useful review of fuels, automotive and non-automotive.)
17. Lyle Cummins, Internal Fire: The Internal Combustion Engine 1673 - 1900 Revised Edition, 2nd Edition, Society of Automotive Engineers, 1976.
(Excellent and readable history of the internal combustion engine by the son of the founder of the Cummins Engine Company.)
18. A History of the Automotive Internal Combustion Engine, Society of Automotive Engineers special publication, SP-409, 1976.
(A set of four SAE papers reviewing the history of IC engine developments.)
19. D.R. Blackmore and A. Thomas, Fuel Economy of the Gasoline Engine, John Wiley & Sons, 1977.
(A useful introduction to how fuel properties affect spark-ignition engine operation.)
20. W. Thomson, Fundamentals of Automotive Engine Balance, Mechanical Engineering Publications, Ltd., London, 1978.
(A short straightforward monograph on the balancing of various arrangement reciprocating engines.)
21. R.S. Benson and N.D. Whitehouse, Internal Combustion Engines, Volumes 1 and 2, Pergamon Press, Inc. 1979.
(A modern text, limited in scope, with special emphasis on computer simulations of engine flow and combustion processes.)
22. N. Watson and M.S. Janota, Turbocharging the Internal Combustion Engine, John Wiley & Sons, New York, 1982.
(An extensive and excellent professional reference text on turbochargers, and turbocharged engine performance.)
23. R.S. Benson, The Thermodynamics and Gas Dynamics of Internal Combustion Engines, Volume I, edited by J.H. Horlock and D.E. Winterbone, Clarendon Press, Oxford, 1982.
(Extensive and detailed monograph on unsteady engine intake and exhaust flow processes.)

24. J.H. Horlock and D.E. Winterbone, editors, The Thermodynamics and Gas Dynamics of Internal Combustion Engines, Volume II, Clarendon Press, Oxford, 1986.
(Extensive and detailed monograph on in-cylinder engine processes and methods of analysis.)
25. J.C. Hilliard and G.S. Springer, editors, Fuel Economy in Road Vehicles Powered by Spark Ignition Engines. Plenum Press, New York, London, 1984.
(A set of contributed chapters on engine and vehicle factors which affect fuel economy; some are excellent.)
26. R. Stone, Introduction to Internal Combustion Engines, MacMillian Publishers, Ltd., 1985. Second edition, 1992.
(An introductory text appropriate to a survey undergraduate course on engines.)
27. C.R. Ferguson, Internal Combustion Engines--Applied Thermosciences, John Wiley & Sons, 1986.
(A new text focusing primarily on Thermal/Fluids Science aspects of engine operation.)
28. Bosch Automotive Handbook, 5th edition, published by Robert Bosch GmbH and distributed by SAE, 2000.
(A concise and useful summary of technical data on engine and vehicle components and systems.)
29. J.B. Heywood, Internal Combustion Engine Fundamentals, McGraw-Hill, 1988.
(An extensive text and professional reference on the fundamentals behind engine operation and design.)
30. Bosch Automotive Electric/Electronic Systems, published by Robert Bosch GmbH and distributed by SAE, 1988.
(A practical guide to and description of automotive electrical systems.)
31. C. Arcoumanis, editor, Internal Combustion Engines, Academic Press, 1988.
(A collection of contributed chapters on gasoline and diesel engines, turbocharged engines and automotive fuels; some are good.)
32. G. Blair, The Basic Design of Two-Stroke Engines, Society of Automotive Engineers, 1990.
(A monograph with simple programs focused on two-stroke gasoline engine design issues and their underlying principles.)
33. K. Owen and T. Coley, Automotive Fuels Handbook, Society of Automotive Engineers, 1990.
(An extensive compilation of information on gasolines and diesel fuels and their effects on engine operation.)
34. K. Newton, W. Steeds and T.K. Garrett, The Motor Vehicle, Butterworth, Eleventh edition, 1989.
(A useful source of practical information on engines, transmissions and vehicles.)
35. H.P. Lenz, Mixture Formation in Spark-Ignition Engines, Springer-Verlag, 1990.
(A resource for detailed information on gasolines, carburetors, fuel injection systems, and the mixture formation process.)
36. J.I. Ramos, Internal Combustion Engine Modeling, Hemisphere Publishing Co., 1989.
(A review and useful introduction to the various models now available for engine processes.)
37. R.M. Heck and R.J. Farranto, Catalytic Air Pollution Control, Van Nostrand, Reinhold, 1995.

(A readily understandable review of catalyst fundamentals and application to vehicles.)

38. G.P. Blair, Design and Simulation of Two-Stroke Engines, SAE, 1996.
(An update and extension of Blair's earlier book; extensive information on small high-performance two-stroke spark-ignition engines.)
39. E. Sher (editor), Handbook of Air Pollution from Internal Combustion Engines: Pollutant Formation and Control, Academic Press, 1998.
(An extensive set of chapters, by different authors, on four-stroke and two-stroke cycle spark-ignition and diesel engine operation and emissions, and fuel effects.)
40. W.W. Pulkrabek, Engineering Fundamentals of the Internal Combustion Engine, Prentice-Hall, Inc., 1997.
(An introductory text on IC engine fundamentals.)
41. G.L. Borman and K.W. Ragland, Combustion Engineering, WCB McGraw-Hill, 1998.
(A valuable reference volume on combustion processes in different practical systems, including IC engines, with extensive information on fuels.)
42. J.B. Heywood and E. Sher, The Two-Stroke Cycle Engine: Its Development, Operation and Design, SAE, Taylor & Francis, 1999.
(A comprehensive summary of the technical literature on two-stroke cycle engine processes which govern its operation and its design.)
43. R.C. Flagan and John H. Seinfeld, Fundamentals of Air Pollution Engineering, Prentice-Hall, Inc., 1988.
(A review of air pollutant formation processes and sources, and control approaches.)
44. H.P. Lenz and C. Cozzarini, Emissions and Air Quality, SAE, 1999.
(A concise handbook with data on transportation emissions, their impact, and ways to control their magnitude.)
45. B. Challen and R. Baranescu, Editors, Diesel Engine Reference Book, Second Edition, published by SAE, 1999.
(An extensive handbook on the theory, design, and applications of diesel engines.)
46. Bosch Gasoline-Engine Management, 1st Edition, published by Robert Bosch GmbH and distributed by SAE, 1999.
(A handbook with extensive practical details on gasoline spark-ignition engines and their management and control.)
47. Bosch Diesel-Engine Management, 2nd Edition, published by Robert Bosch GmbH and distributed by SAE, 1999.
(A handbook with extensive practical details on diesel engines, their emissions, and their management and control.)
48. C. Stan, Editor, Direct Injection Systems for Spark-Ignition and Compression-Ignition Engines, published by Springer-Verlag Berlin Heidelberg, distributed by SAE, 1999.
(Multi-author volume on direct injection gasoline and diesel engines, focusing on the different practical approaches to direct injection of liquid fuel into the cylinder.)

49. D.E. Winterbone and R.J. Pearson, Theory of Engine Manifold Design, SAE, 2000.
(A text on the theory and methodology for analyzing unsteady gas flows in engine manifolds.)
50. D.E. Winterbone and R.J. Pearson, Design Techniques for Engine Manifolds, SAE, 1999.
(A comparison text to #49, focusing on application of unsteady gas flow analysis tools to engine manifold design.)
51. G.P. Blair, Design and Simulation of Four-Stroke Engines, SAE, 1999.
(A description of engine simulations, largely developed in the author's laboratory, and their application to four-stroke engine performance prediction and design.)
52. C.R. Ferguson and A.T. Kirkpatrick, Internal Combustion Engines Applied Thermosciences, Second Edition, John Wiley & Sons, Inc., 2001.
(A new edition of #27: An introductory text focusing on the thermal science processes important to internal combustion engine operations.)
53. M. Nuti, Emissions from Two-Stroke Engines, SAE, 1998.
(A monograph on two-stroke cycle gasoline engines, the origins of their emissions and methods of control.)
54. P. Eastwood, Critical Topics in Exhaust Gas Aftertreatment, Research Studies Press Ltd., 2000.
(A detailed monograph on engine exhaust gas treatment—catalysts, particulate filters—as well as exhaust treatment system issues.)
55. A. Makartchouk, Diesel Engine Engineering: Thermodynamics, Dynamics, Design, and Control, Marcel Dekker, Inc., New York, Basel, 2002.
(Analysis based text, focused primarily on engine dynamics, structural design, and automated diesel engine control.)
56. F. Zhao, D.L. Harrington, and M-C. Lai, Automotive Gasoline Direct-Injection Engine, SAE, 2002.
(An extensive review of the literature on GDI engine performance, combustion, efficiency, and emissions, and the state of GDI engine development.)

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