Internal Combustion Engines: Applied Thermosciences

Colin R. Ferguson • Allan T. Kirkpatrick

Second Edition

Download EBook
Synopsis

This book presents a modern approach to the study of internal combustion engines! Building upon the foundation of the first edition, the book has been completely revised, with each chapter reorganized and updated. The purpose of the book is to apply the principles of thermodynamics, fluid mechanics, and heat transfer to the analysis of internal combustion engines. The text also features modern web-based computational methods.

Book Information

Paperback: 384 pages
Publisher: Wiley; 2 edition (November 30, 2000)
Language: English
ISBN-10: 0471356174
Product Dimensions: 7.3 x 0.8 x 10 inches
Shipping Weight: 1.5 pounds (View shipping rates and policies)
Average Customer Review: 3.4 out of 5 stars Â– See all reviews Â– (9 customer reviews)
Best Sellers Rank: #851,935 in Books (See Top 100 in Books) #278 in Books > Engineering & Transportation > Engineering > Mechanical > Drafting & Mechanical Drawing #1242 in Books > Textbooks > Engineering > Mechanical Engineering #1489 in Books > Engineering & Transportation > Engineering > Energy Production & Extraction

Customer Reviews

I had to buy this book for a class. First the positive aspects of this book. It’s somewhat recent (2001), which makes it at least a decade newer than Internal Combustion Engine Fundamentals (Heywood) and The Internal Combustion Engine in Theory and Practice: Vol. 1 - 2nd Edition, Revised: Thermodynamics, Fluid Flow, Performance and Internal Combustion Engine in Theory and Practice: Vol. 2 - 2nd Edition, Revised: Combustion, Fuels, Materials, Design (the Taylor books). It has more information about computer modeling, which is a reflection of the times. It also has references to the publisher’s website to use various online tools and references, which I don’t like at all, but someone probably likes. Now the negative: First; its main advantage, which is that it’s new, isn’t much of one. The only things that have changed appreciably in engines in the last 50 years are metallurgy and controls, neither of which are addressed in this book. For the price of this book, one could by either Heywood or the Taylor set, both of which are much more detailed. The page counts are a clue; this book weighs in at under 400 pages, while Heywood is 900 and the Taylor set is over a thousand.
This book frequently references Heywood and Taylor, so why not go straight to the source? This book, as other reviewers have noted, has extensive errata. If you don't like to proofread textbooks, buy Heywood or Taylor. In sum, don't buy this book, but if it's a gift, probably don't throw it out.

I am using this book for my internal combustion engines course. Very good book but could use an update for more recent engine techs. Will give a great background to gas and diesels 4 and 2 strokes. Gets into the science of these engines.

There aren't many books about internal combustion engines so this may be the best book for your money. The information in the book is good but sometimes uses conventions that are more confusing than helpful. The book mostly just needs to be updated. It's a good reference to put on your shelf.

This book lacks example problems and has an errata almost as thick as itself. Poorly explained topics complete this debacle.

This book contains a lot of detailed information on engines, turbos, and their components. Coupled with a great instructor, you will get a lot out of this book.

Download to continue reading...
