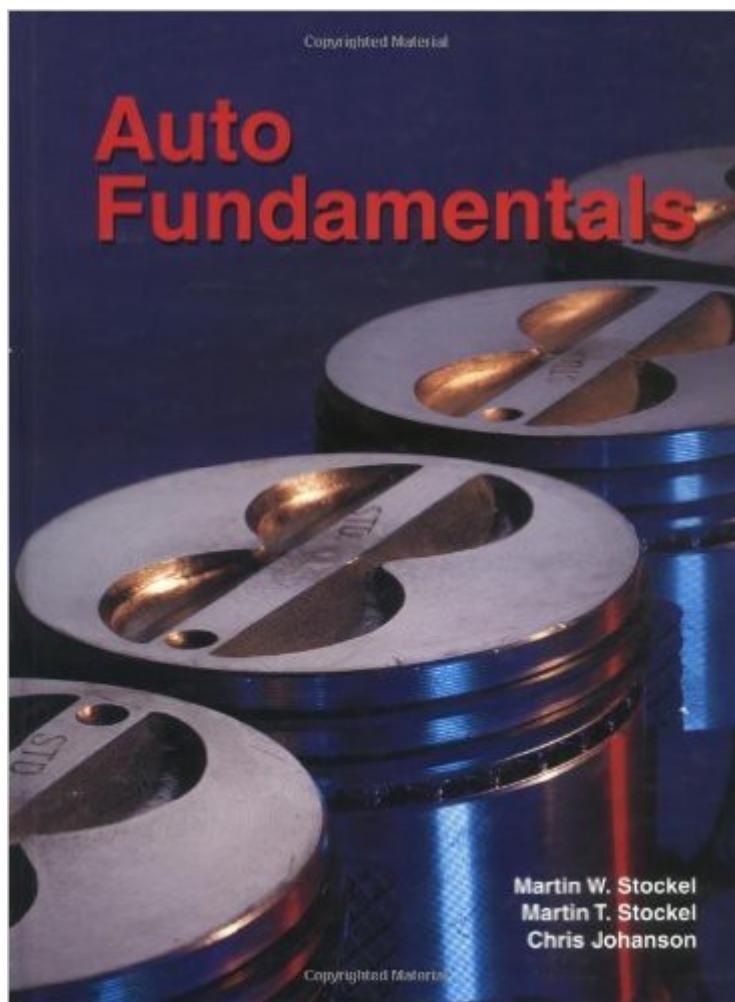


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# **Auto Fundamentals: How And Why Of The Design, Construction, And Operation Of Automobiles : Applicable To All Makes Of And Models**





## **Synopsis**

One of the most popular automotive theory texts available, Auto Fundamentals provides a study of the design, construction, and operation of all major automotive systems. Content centers around the theory of automotive operation--how and why systems interact. --This text refers to an out of print or unavailable edition of this title.

## **Book Information**

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## **Customer Reviews**

This is a fantastic book! It explains difficult concepts in easy-to-understand language, but it never patronizes the reader. The depth and breadth of the coverage are also very good - while reading it, I never found myself wanting information that I couldn't find somewhere within this book. The most surprising feature is the book's readability. For starters, the grammar and spelling are great, with no typos or conflicting information, which is (sadly) exceptional for this sort of small-press technical book. The text flows nicely from one topic to the next, complemented by the ample diagrams and photos. It's rare that I find myself not wanting to put down a industrial textbook, but this one kept me turning pages. The book deals primarily with the 'theoretical' side of auto mechanics, meaning that it answers questions like 'What is x?', 'What does y do?', and 'Why did they do z this way?' rather than 'How do I fix component x on a y model car built in year z?' But the text is plainly oriented toward working mechanics (unlike Bosch's Automotive Handbook), offering much practical info as well as many general rules and guidelines of interest to mechanics. In short, if you want to learn how

automobiles work with a view toward fixing them, you can't go wrong with this book. If you were born with a wrench in your hand, you probably won't learn a lot here, but anyone else from neophyte to advanced intermediate will get his money's worth.

This book provides excellent explanations and great diagrams. But I feel that it provides so many details that it can be very confusing for a beginner like me. For example, the book devotes 6 pages of the first 40 pages to just piston rings! I set out with the goal of understanding roughly how all of the parts of a car fit together and was overwhelmed with minutia about piston design. And it talks about the different procedures used to make different parts (whether they're cast iron or die-cast metal or pressure cast or pressed or forged or drop-forged or cam-ground, etc.) without describing what these mean (or, more importantly, the physical differences of the result, which is what presumably makes it worth knowing how each is made). I think the book would be significantly improved if it were reorganized to provide an introductory chapter of how the major parts of the car work (explain the four-stroke engine, for example, without mentioning considerations in piston shape and without distractions like discussing two-stroke engines, etc.) It seems like you have to read all 600 pages before everything starts to fit together. I would also like to see more discussion about why certain features make cars faster. Rather than just a taxonomy of the ways to design a certain part, I'd like to understand how the design choice affects the overall car. For example, when I go to the website of a car manufacturer and see the extra features in the sports-car version of a vehicle, I'd like to understand why exactly those make the car faster.

This is an excellent book that explains the purpose, function, and development of every aspect of a car from the beginning right up to the complicated vehicle systems of today. It is easy to read and features plenty of illustrations and diagrams taken right from car manufacturers. I found that many of the parts illustrated in the book appeared exactly as they did in my own engine, making it very easy to apply the book to your own car. This book is suitable for anyone, no matter how much or little they currently know, who wants to learn more about cars. I gave it a 4 out of 5 because I felt that certain explanations could have been clearer, but that is the only fault of this book. It should also be noted that this is not a "how-to" book. It explains how an engine works, but if you're looking to learn how to perform repairs etc., that is beyond the scope of this book.

This is that rare type of technical book which one might choose to read purely for pleasure. I searched local bookstores for a single volume which contained fundamental information of all

automotive systems and could find nothing. This book has it all. It is written in language which any person of average intelligence can understand and is illustrated throughout. I would recommend it to anyone who feels his or her knowledge of automobiles is weak.

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