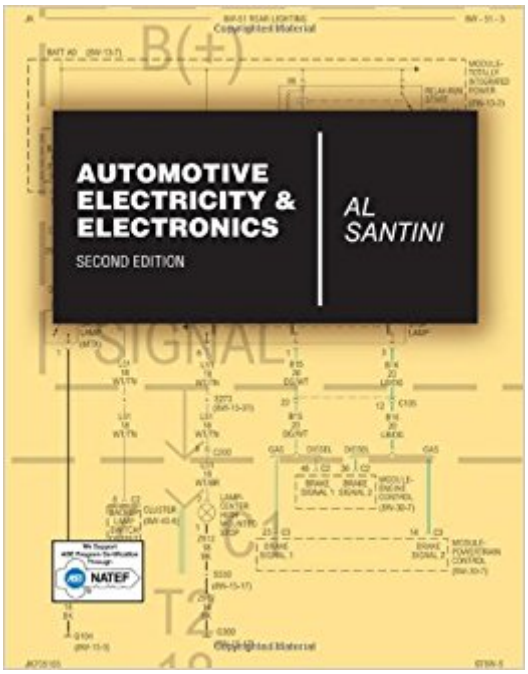
Automotive Electricity & Electronics



Synopsis

Today’s automotive technicians need a thorough understanding of electrical principles and electronic systems to service modern vehicles. With Automotive Electricity and Electronics, you can explore how automotive electronics work, the role they play in a vehicle’s normal operation, how and why technicians use test instruments, and common diagnosis and repair procedures. The text provides a solid grounding in the fundamentals of electricity and electronics, giving you the foundation you need to master advanced topics such as batteries, starting and charging systems, ignitions, and electrical accessories. Practical testing procedures are covered as well, including the use of both common shop tools and highly technical equipment. The text also includes up-to-date coverage of current systems, tools, and J1930 terminology. A new hands-on Study Guide/Lab manual is available to help you apply what they learn and prepare for career success.

Book Information

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Customer Reviews

INTRODUCTION. Safe Working Practices. Working As An Electricity/Electronics Technician. CIRCUIT FUNDAMENTALS AND BASIC TEST EQUIPMENT. Voltage, Current and Resistance.Circuits. Voltmeters. Ammeters. Ohmmeters. VEHICLE CIRCUITS. Circuits That Do Work. Analyzing Series Circuits. Analyzing Parallel Circuits. Series-Parallel Circuits. Control Circuits. Diagnosing Open Circuits. Diagnosing Short Circuits. Servicing Open and Short Circuits. DIGITAL STORAGE OSCILLOSCOPE (DSO) USE. Digital Storage Oscilloscopes. DSO Trigger and Slope. Reading and Interpreting a DSO Pattern. Using a Current Probe With a DSO. Using the

DSO’s Multiple Trace Capability. ELECTRONIC FUNDAMENTALS. Solid State Devices. Electronic Control Input Devices. Diagnosing and Servicing Electronic Control Input Devices. Integrated Circuits As Input Devices. Diagnosing and Servicing Integrated Circuits. Oxygen Sensors. Diagnosing and Servicing Oxygen Sensors. WIRING DIAGRAMS. Wiring Diagram Symbols. Using the Wiring Diagram As a Service Tool. BATTERIES. Automotive Batteries.Diagnosing Batteries. Servicing Batteries. STARTING SYSTEMS. Starting Systems. Solenoid Shift Starters. Diagnosing and Servicing Solenoid Shift Starting Systems. Positive Engagement Starters. Diagnosing and Servicing Positive Engagement Starting Systems. Gear Reduction Starters. Diagnosing Gear Reduction Starters. Starter Controls. Diagnosing Starting Controls. Starting System Servicing. CHARGING SYSTEMS. Charging System Overview. Field circuits. Diagnosing and Servicing the Charging System. IGNITION SYSTEMS. Secondary Ignition. Servicing the Secondary Ignition System. Primary Ignition System. Diagnosing and Servicing Distributed Primary Ignition Systems. Distributorless Ignition Secondary Circuits. Diagnosing and Servicing Secondary Ignition On a Distributorless System. Distributorless Ignition Primary Circuits. Diagnosing and Servicing the Primary Circuit on a Distributorless. ACCESSORIES. Lighting Circuits. Diagnosing Lighting Circuits. Defogger, Horn, and Windshield Wiper Circuits. Diagnosing Defogger, Horn and Windshield Wiper Circuits. Motor Driven Accessories. Diagnosing Motor Driven Accessories. --This text refers to an out of print or unavailable edition of this title.

Al Santini has over 35 years of experience teaching automotive electronics, including 22 years as an instructor at the College of DuPage in Glen Ellyn, Illinois. Mr. Santini currently teaches technician classes on vehicle emissions, including OBD-II. In addition to holding a master’s degree in technical education and ASE certification, he is an active member of the Society of Automotive Testers (SAT), the Illinois College Automotive Instructor’s Association (ICAIA) and the North American Council of Automotive Teachers (NACAT), where he has been a member for 28 years.

Though its slightly an older version (2010) it is very informative about auto electronics. It is meant for training professional mechanics in the field, however if you want to learn more about your vehicles electrical system and how it works than this is for you. I bought mine used though which only cost me $10 bucks or so. The new textbook runs over $100. Also the author goes into detail a lot about the DSO (digital oscilloscope). Since most of these machines are out of the cost range of a home mechanic, you may want to just ignore those chapters.

I bought this book almost 5 years ago while in Auto tech school to supplement a lousy text we had to use in our auto electronics class.This book is excellent in the way it presents the subject matter; also covers 'scope useage in a clear and understandable matter.I looked a several books before buying this one; it had all the details and material that I was needing.If you are wanting a deep understanding of automotive electronics and has to test and repair today's complex vehicles, this is the book to buy.I finished my automotive program 3 years ago and have advanced to Master ASE certified with L1. This book gave me the foundation and understanding of electronic systems that I needed to build upon.Get this book and you will not be disappointed.

This book is great for the purpose of becoming familiar with the car electricity. I'm glad to have gotten it. It will enhance and help me acquire knowledge in this area.

Everything as expected. It provides both an in-depth review of Automotive electrical diagnostic tests and information about the general concepts and tools needed.

This would be a great book if only the editor would have learned proper english. Chapters are hard to follow and the paragraphs change subject matter without breaks.Also there is know answer key in the back to check your answers with.Waist of money.

One of the most clear well written and up to date books I have studied on Auto Electricity. In depth high tech material that is written where a beginner can grasp without dumbing it down the way some writers do. Would recommend to anyone preparing to enter into Auto Tech classes in College.

I bought these books for my sons automotive technical school. Combined with his dedication and these books and instructor he is tops in his class.

my book was not in the condition they described, they didnt say anything about water damage and mildew in the pages, the book was definitely not worth what i paid for it.

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