

## Automotive Technology 4th Edition Chapters Answered

Instrument Engineers' Handbook – Volume 3: Process Software and Digital Networks, Fourth Edition is the latest addition to an enduring collection that industrial automation (AT) professionals often refer to as the "bible." First published in 1970, the entire handbook is approximately 5,000 pages, designed as standalone volumes that cover the measurement (Volume 1), control (Volume 2), and software (Volume 3) aspects of automation. This fourth edition of the third volume provides an in-depth, state-of-the-art review of control software packages used in plant optimization, control, maintenance, and safety. Each updated volume of this renowned reference requires about ten years to prepare, so revised installments have been issued every decade, taking into account the numerous developments that occur from one publication to the next. Assessing the rapid evolution of automation and optimization in control systems used in all types of industrial plants, this book details the wired/wireless communications and software used. This includes the ever-increasing number of applications for intelligent instruments, enhanced networks, Internet use, virtual private networks, and integration of control systems with the main networks used by management, all of which operate in a linked global environment. Topics covered include: Advances in new displays, which help operators to more quickly assess and respond to plant conditions Software and networks that help monitor, control, and optimize industrial processes, to determine the efficiency, energy consumption, and profitability of operations Strategies to counteract changes in market conditions and energy and raw material costs Techniques to fortify the safety of plant operations and the security of digital communications systems This volume explores why the holistic approach to integrating process and enterprise networks is convenient and efficient, despite associated problems involving cyber and local network security, energy conservation, and other issues. It shows how firewalls must separate the business (IT) and the operation (automation technology, or AT) domains to guarantee the safe function of all industrial plants. This book illustrates how these concerns must be addressed using effective technical solutions and proper management policies and practices.

Reinforcing the fact that all industrial control systems are, in general, critically interdependent, this handbook provides a wide range of software application examples from industries including: automotive, mining, renewable energy, steel, dairy, pharmaceutical, mineral processing, oil, gas, electric power, utility, and nuclear power.

Automotive Engine Performance, 4th Edition, provides complete coverage of the parts, operation, design, and troubleshooting of automotive engines. Real examples and full color images throughout the text offer readers a practical approach to the diagnosis and repair of the NATEF tasks for the Automotive Engine Performance Systems (A8) content area. Thoroughly revised and updated, the fourth edition has been peer reviewed by automotive instructors and experts in the field to ensure technical accuracy. Coming SUMMER 2014! This text is fully integrated with MyAutomotiveLab—an online resource for instructors and students that provides time-saving help for homework, quizzing, testing, multimedia activities, and videos. For more information: <http://www.myautomotivelab.com>.

For courses in Automotive Engines, Engine Rebuilding, Engine Machining and Engine Repair. This comprehensive textbook covers all aspects of engine repair including engine machining and sub systems such as ignition and fuel injection. The text is written to correlate to the content needed for the ASE Technician Certification test and the NATEF task list, and provides a major emphasis on diagnosis and why operations are performed. Tech Tips and Real World Fixes provide real world applications.

With an emphasis on diagnosing and troubleshooting—and featuring numerous tech tips and diagnostic examples throughout—this comprehensive, full-color book covers all aspects of automotive fuel and emissions. Designed specifically to correlate with the NATEF program, and updated throughout to correlate to the latest NATEF and ASE tasks, Automotive Fuel and Emissions Control Systems, 4/e combines topics in engine performance (ASE A8 content area) with topics covered in the advanced engine performance (L1) ASE test content area. The result is cost-efficient, easy-to-learn-from resource for students and beginning technicians alike. This book is part of the Pearson Automotive Professional Technician Series, which features full-color, media-integrated solutions for today's students and instructors covering all eight areas of ASE certification, plus additional titles covering common courses. Peer reviewed for technical accuracy, the series and the books in it represent the future of automotive textbooks.

This is the eBook of the printed book and may not include any media, website access codes, or print supplements that may come packaged with the bound book. With an emphasis on diagnosing and troubleshooting—and featuring numerous tech tips and diagnostic examples throughout—this comprehensive, full-color book covers all aspects of automotive fuel and emissions. Designed specifically to correlate with the NATEF program, and updated throughout to correlate to the latest NATEF and ASE tasks, Automotive Fuel and Emissions Control Systems, 4/e combines topics in engine performance (ASE A8 content area) with topics covered in the advanced engine performance (L1) ASE test content area. The result is cost-efficient, easy-to-learn-from resource for students and beginning technicians alike. This book is part of the Pearson Automotive Professional Technician Series, which features full-color, media-integrated solutions for today's students and instructors covering all eight areas of ASE certification, plus additional titles covering common courses. Peer reviewed for technical accuracy, the series and the books in it represent the future of automotive textbooks.

Diagnostics, or fault finding, is a fundamental part of an automotive technician's work, and as automotive systems become increasingly complex there is a greater need for good diagnostic skills. Advanced Automotive Fault Diagnosis is the only book to treat automotive diagnostics as a science rather than a check-list procedure. Each chapter includes basic principles and examples of a vehicle system followed by the appropriate diagnostic techniques, complete with useful diagrams, flow charts, case studies and self-assessment questions. The book will help new students develop diagnostic skills and help experienced technicians improve even further. This new edition is fully updated to the latest technological developments. Two new chapters have been added – On-board diagnostics and Oscilloscope diagnostics –

and the coverage has been matched to the latest curricula of motor vehicle qualifications, including: IMI and C&G Technical Certificates and NVQs; Level 4 diagnostic units; BTEC National and Higher National qualifications from Edexcel; International Motor Vehicle qualifications such as C&G 3905; and ASE certification in the USA.

This textbook will help you learn all the skills you need to pass all Vehicle Electrical and Electronic Systems courses and qualifications. As electrical and electronic systems become increasingly more complex and fundamental to the workings of modern vehicles, understanding these systems is essential for automotive technicians. For students new to the subject, this book will help to develop this knowledge, but will also assist experienced technicians in keeping up with recent technological advances. This new edition includes information on developments in pass-through technology, multiplexing, and engine control systems. In full colour and covering the latest course specifications, this is the guide that no student enrolled on an automotive maintenance and repair course should be without. Designed to make learning easier, this book contains: Photographs, flow charts, quick reference tables, overview descriptions and step-by-step instructions. Case studies to help you put the principles covered into a real-life context. Useful margin features throughout, including definitions, key facts and 'safety first' considerations.

This text presents the principles and practices of engine rebuilding, engine theory and in-the-vehicle service in a clear, concise format. Each chapter makes clear connections between theory and servicing, opening coverage with technical material, then moving into diagnosis, troubleshooting and service procedures. The Fourth Edition has been both updated and streamlined to reflect the latest engine developments, techniques and terminology in the field and make learning even more accessible. Features tools, engine operating systems, diagnosis, complete coverage of engine parts and functions, engine assembly and installation and in-vehicle service.

AUTOMOTIVE TECHNOLOGY: A SYSTEMS APPROACH - the leading authority on automotive theory, service, and repair - has been thoroughly updated to provide accurate, current information on the latest technology, industry trends, and state-of-the-art tools and techniques. This comprehensive text covers the full range of basic topics outlined by ASE, including engine repair, automatic transmissions, manual transmissions and transaxles, suspension and steering, brakes, electricity and electronics, heating and air conditioning, and engine performance. Now updated to reflect the latest ASE Education Foundation MAST standards, as well as cutting-edge hybrid and electric engines, this trusted text is an essential resource for aspiring and active technicians who want to succeed in the dynamic, rapidly evolving field of automotive service and repair. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Taken as a whole, this series covers all major fields of application for commercial sensors, as well as their manufacturing techniques and major types. As such the series does not treat bulk sensors, but rather places strong emphasis on microsensors, microsystems and integrated electronic sensor packages. Each of the individual volumes is tailored to the needs and queries of readers from the relevant branch of industry. An international team of experts from the leading companies in this field gives a detailed picture of existing as well as future applications. They discuss in detail current technologies, design and construction concepts, market considerations and commercial developments. Topics covered include vehicle safety, fuel consumption, air conditioning, emergency control, traffic control systems, and electronic guidance using radar and video.

Automotive Technology: Principles, Diagnosis, and Service, Fourth Edition, meets the needs for a comprehensive book that covers all eight areas of automotive service, plus the soft skills and tool knowledge that must also be taught. Because many automotive systems are intertwined, presenting all systems together in one text makes it easier for the student to see how they are all connected. Topics are divided into 133 short chapters, which makes it easier for instructors and students to learn and master the content.

AUTOMOTIVE TECHNOLOGY: A SYSTEMS APPROACH, International Edition remains the leading authority on automotive theory, service and repair procedures. The new edition has been updated to include coverage of hybrid vehicles throughout the text, new content on electronic automatic transmissions, preventive maintenance, and many other topics that reflect the most recent changes in the industry. Chapters cover the theory, diagnosis and service of all system areas for automobiles and light trucks, and the content closely adheres to the 2008 NATEF Automobile Program Standards.

Offers students opportunities to strengthen their comprehension of key concepts and to develop their hands-on, practical shop experience. Each chapter includes Concept Activities and Job Sheets, many of which are directly correlated to specific NATEF tasks. Service manual report sheets, case studies, review questions are also included to offer a rounded approach to each lesson. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Auto Upkeep is an introductory automotive book that provides the fundamental knowledge and experience in owning and maintaining an automobile. From choosing an insurance policy to performing basic maintenance and repair, Auto Upkeep is the do-it-yourself automotive guide for the driver in you. Auto Upkeep helps keep you safe and your vehicle reliable by providing easy-to-follow information with detailed pictures and drawings. Discover how to choose a quality repair facility, buy a car, handle roadside emergencies, diagnose common problems, and communicate effectively with technicians – all while saving money. Workbook Activities: Chapter 1 – Car Identification Activity; Chapter 2 – Buying a New Automobile Activity and Buying a Used Automobile Activity; Chapter 3 – Automotive Expenses Activity; Chapter 4 – Repair Facilities Activity; Chapter 5 – Automotive Safety Activity; Chapter 6 – Basic Tools Activity; Chapter 7 – Interior Cleaning Activity, Exterior Cleaning Activity, and Waxing Activity; Chapter 8 – Fluid Level Check Activity; Chapter 9 – Battery Activity, Charging Activity, and Starting Activity; Chapter 10 – Oil & Filter Change Activity; Chapter 11 – Fuel System Activity; Chapter 12 – Air Conditioning Activity, Cabin Air Filter Activity, and Cooling System Activity; Chapter 13 – Ignition System Activity; Chapter 14 – Suspension & Steering Activity and Tire Inspection & Rotation Activity; Chapter 15 – Brake Inspection Activity; Chapter 16 – Drivetrain Activity; Chapter 17 – Exhaust & Emissions Activity; Chapter 18 – Payback Period Activity; Chapter 19 – Auto Accessories Activity; Chapter 20 – Changing a Flat Tire Activity, Jump-Starting Activity, Lighting Activity, Replacing Wipers Activity, and On-Board Diagnostics Activity. 152 Full Color Pages - Over 200 Photos and Illustrations - 32 Hands-on and Internet-based Activities.

For courses in Automotive Principles, Service and/or Mechanics. Automotive Technology: Principles, Diagnosis, and Service, Fourth Edition, meets the needs for a comprehensive book that covers all eight areas of automotive service, plus the soft skills and tool knowledge that must also be taught. Because many automotive systems are intertwined, presenting all systems together in one text makes it easier for the student to see how they are all connected. Topics are divided into 133 short chapters, which makes it easier for instructors and students to learn and master the content.

Dedicated wholly to automotive coatings, this book is the first of its kind. It provides an in-depth coverage of the subject and in keeping with the international nature of the automotive business the book has a truly multinational flavour with authors selected from Australia, Japan, Europe and the USA. An authoritative and informative treatment of all aspects of coatings formulation are presented together with their manufacture and application. Numerous chapters written by experts in the field deal with substrate pretreatment, undercoats, surfacers and

topcoats. Finishes for both metals and non-metals are described as well as speciality coatings such as sealers, antichip and underbody paints. Further valuable information on commercial support for the sale of finishes in the automotive industry and the licensing of technology is also given. Specialists involved in a wide range of disciplines in the coatings industry including chemists, chemical engineers and commercial staff will find this up-to-date source of exceptional interest.

Because the field of plastics is one of the fastest changing areas today, the need arises to offer relevant, comprehensive material on polymers. An established source of information on modern plastics, the Plastics Technology Handbook continues to provide up-to-date coverage on the properties, processing methods, and applications of polymers. Retaining the easy-to-follow structure of the previous editions, this fourth edition includes new topics of interest that reflect recent developments and lead to better insights into the molecular behavior of polymers. New to the Fourth Edition Advances in supramolecular polymerization, flame retardancy, polymer-based nanomedicines, and drug delivery The new concept of oxo-biodegradable polymers Broadened discussion on plastic foams and foam extrusion processes More information on the processing and applications of industrial polymers, including the emerging field of nanoblends Developments in polymer synthesis and applications, such as polymeric sensors, hydrogels and smart polymers, hyperbranched polymers, shape memory polymers, polymeric optical fibers, scavenger resins, polymer nanocomposites, polymerization-filled composites, and wood-polymer composites A state-of-the-art account of the various available methods for plastics recycling Advances in the use of polymers in packaging, construction, the automotive and aerospace industries, agriculture, electronics and electrical technology, biomedical applications, corrosion prevention, and sports and marine applications Plastics Technology Handbook, Fourth Edition thoroughly covers traditional industrial polymers and their processing methods as well as contemporary polymeric materials, recent trends, and the latest applications.

Instructors edition contains a variety of instructional support in the margins of each page to supplement your instruction. Includes answers to end-of-chapter review questions and ASE-type questions.

For courses in automotive principles, service, or mechanics. Preparing today's automotive students for career success! Market-leading Automotive Technology: Principles, Diagnosis, and Service has been fully updated and expanded to address the latest technology and automotive systems. Written to current ASE tasks and standards, the text covers the 8 major areas of automotive service in 136 concise chapters. Many chapters include practical examples and step-by-step photo sequences covering terminology, best practices, and on-the-job procedures. Now in the sixth edition are case studies that include the "Three Cs" (Complaint, Cause and Correction). The 6th edition includes 6 new chapters which include that latest automotive technology as well as breaking up long chapters into two shorter and easier to read chapters. It also includes 50 new videos and over 100 new full color photos and line drawings to help bring the topics to life. Automotive Technology, 6th Edition, will be available for spring 2020 via Revel(tm), an interactive learning environment that enables students to read, practice, and study in one continuous experience.

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An updated edition of the classic reference on the dynamics of road and off-road vehicles As we enter a new millennium, the vehicle industry faces greater challenges than ever before as it strives to meet the increasing demand for safer, environmentally friendlier, more energy efficient, and lower emissions products. Theory of Ground Vehicles, Third Edition gives aspiring and practicing engineers a fundamental understanding of the critical factors affecting the performance, handling, and ride essential to the development and design of ground vehicles that meet these requirements. As in previous editions, this book focuses on applying engineering principles to the analysis of vehicle behavior. A large number of practical examples and problems are included throughout to help readers bridge the gap between theory and practice. Covering a wide range of topics concerning the dynamics of road and off-road vehicles, this Third Edition is filled with up-to-date information, including: \* The Magic Formula for characterizing pneumatic tire behavior from test data for vehicle handling simulations \* Computer-aided methods for performance and design evaluation of off-road vehicles, based on the author's own research \* Updated data on road vehicle transmissions and operating fuel economy \* Fundamentals of road vehicle stability control \* Optimization of the performance of four-wheel-drive off-road vehicles and experimental substantiation, based on the author's own investigations \* A new theory on skid-steering of tracked vehicles, developed by the author.

With the encroachment of the Internet into nearly all aspects of work and life, it seems as though information is everywhere. However, there is information and then there is correct, appropriate, and timely information. While we might love being able to turn to Wikipedia® for encyclopedia-like information or search Google® for the thousands of links on a topic, engineers need the best information, information that is evaluated, up-to-date, and complete. Accurate, vetted information is necessary when building new skyscrapers or developing new prosthetics for returning military veterans While the award-winning first edition of Using the Engineering Literature used a roadmap analogy, we now need a three-dimensional analysis reflecting the complex and dynamic nature of research in the information age. Using the Engineering Literature, Second Edition provides a guide to the wide range of resources available in all fields of engineering. This second edition has been thoroughly revised and features new sections on nanotechnology as well as green engineering. The information age has greatly impacted the way engineers find information. Engineers have an effect, directly and indirectly, on almost all aspects of our lives, and it is vital that they find the right information

at the right time to create better products and processes. Comprehensive and up to date, with expert chapter authors, this book fills a gap in the literature, providing critical information in a user-friendly format.

Updated to reflect the latest technology in the automotive industry, this book will provide the knowledge and skills needed to successfully inspect, maintain, and repair vehicles of all makes and models. Automotive Service: Inspection, Maintenance, and Repair, 3E begins by introducing readers to a number of automotive career options, shop management basics, plus necessary tools and equipment. The book then progresses to the theories of vehicle systems operations and includes step-by-step procedures for troubleshooting and repairing all major systems of the modern automobile. Updates include coverage of new vehicle technology like EVAP systems, on-board diagnostics and emissions, alternative fuels, and hybrid vehicles, making this book not only comprehensive but also current so that readers can feel confident they are learning the very latest in industry trends and techniques.

The newly-revised 4th edition of AUTOMOTIVE SERVICE: INSPECTION, MAINTENANCE, REPAIR contains all the knowledge and skills necessary for a student to be successful in a number of automotive careers. This text covers all eight major course areas of automotive technology by progressing students through an introduction to shop management and then covering theories of vehicle systems operations with step-by-step procedures for trouble-shooting and repairing automobiles. Technically reviewed by instructors and industry experts, the 4th edition of this popular text is designed in particular for students enrolled in NATEF-certified programs. Updated and expanded content in this edition includes coverage of hybrid vehicles, HTHS viscosity ratings, latest coolants, ejector cycle systems, dynamometer, and turbochargers and superchargers. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

This textbook will help you learn all the skills you need to pass Level 3 vehicle electrical and electronic systems courses or related modules from City and Guilds, IMI and BTEC, and is also ideal for higher level ASE, AUR and other qualifications. As electrical and electronic systems become increasingly more complex and fundamental to the workings of modern vehicles, understanding these systems is essential for automotive technicians. For students new to the subject, this book will help to develop this knowledge, but will also assist experienced mechanics in keeping up with recent technological advances. This new edition includes information on developments in hybrid car technology, GPS, multiplexing, and electronic stability/vehicle dynamics control. In full colour and covering the latest course specifications, this is the guide that no student enrolled on an automotive maintenance and repair course should be without. Also by Tom Denton: Automobile Mechanical and Electrical Systems ISBN: 978-0-08-096945-9 Advanced Automotive Fault Diagnosis, Third Edition ISBN: 978-0-08-096955-8

AUTOMOTIVE TECHNOLOGY: A SYSTEMS APPROACH, 5th Edition remains the leading authority on automotive theory, service and repair procedures. The new edition has been updated to include coverage of hybrid vehicles throughout the text, new content on electronic automatic transmissions, preventive maintenance, and many other topics that reflect the most recent changes in the industry. Chapters cover the theory, diagnosis and service of all system areas for automobiles and light trucks, and the content closely adheres to the 2008 NATEF Automobile Program Standards. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

In recent years, our world has experienced a profound shift and progression in available computing and knowledge sharing innovations. These emerging advancements have developed at a rapid pace, disseminating into and affecting numerous aspects of contemporary society. This has created a pivotal need for an innovative compendium encompassing the latest trends, concepts, and issues surrounding this relevant discipline area. During the past 15 years, the Encyclopedia of Information Science and Technology has become recognized as one of the landmark sources of the latest knowledge and discoveries in this discipline. The Encyclopedia of Information Science and Technology, Fourth Edition is a 10-volume set which includes 705 original and previously unpublished research articles covering a full range of perspectives, applications, and techniques contributed by thousands of experts and researchers from around the globe. This authoritative encyclopedia is an all-encompassing, well-established reference source that is ideally designed to disseminate the most forward-thinking and diverse research findings. With critical perspectives on the impact of information science management and new technologies in modern settings, including but not limited to computer science, education, healthcare, government, engineering, business, and natural and physical sciences, it is a pivotal and relevant source of knowledge that will benefit every professional within the field of information science and technology and is an invaluable addition to every academic and corporate library.

Hybrid drives and the operation of hybrid vehicles are characteristic of contemporary automotive technology. Together with the electronic driver assistant systems, hybrid technology is of the greatest importance and both cannot be ignored by today's car drivers. This technical reference book provides the reader with a firsthand comprehensive description of significant components of automotive technology. All texts are complemented by numerous detailed illustrations.

Catalytic Air Pollution Control: Commercial Technology is the primary source for commercial catalytic air pollution control technology, offering engineers a comprehensive account of all modern catalytic technology. This Third Edition covers all the new advances in technology in automotive catalyst control technology, diesel engine catalyst control technology, small engine catalyst control technology, and alternate sustainable fuels for auto and diesel.

"This set of books represents a detailed compendium of authoritative, research-based entries that define the contemporary state of knowledge on technology"--Provided by publisher.

The only introductory text on the market today that explains the underlying physics and engineering applicable to all lasers Although lasers are becoming increasingly important in our high-tech environment, many of the technicians and engineers who install, operate, and maintain them have had little, if any, formal training in the field of electro-optics. This can result in less efficient usage of these important tools. Introduction to Laser Technology, Fourth Edition provides readers with a good understanding of what a laser is and what it can and cannot do. The book explains what types of laser to use for different purposes and how a laser can be modified to improve its performance in a given application. With a unique combination of clarity and technical depth, the book explains the characteristics and important applications of commercial lasers worldwide and discusses light and optics, the fundamental elements of lasers, and laser modification. In addition to new chapter-end problems, the Fourth Edition includes new and expanded chapter material on: Material and wavelength Diode Laser Arrays Quantum-cascade lasers Fiber lasers Thin-disk and slab lasers Ultrafast fiber lasers Raman lasers Quasi-phase matching Optically pumped semiconductor lasers Introduction to Laser Technology, Fourth Edition is an excellent book for students, technicians, engineers, and other professionals seeking a fuller, more formal introduction to the field of laser technology.

The single most authoritative information resource available today, Auto Body Repair Technology, 4E explains all aspects of collision repair more clearly and in greater detail than any other collision repair book. Its 7 sections and 29 newly up-to-date chapters allow readers to gain modern professional skills as well as the technical know-how needed to tackle everything from initial collision evaluation through estimating and final paint detailing! Fully updated, all procedures incorporate the latest advances in materials and methods for doing competent repair work on late model vehicles. Valuable information on ASE certification and entrepreneurship is also included to guide readers to success in their first job and/or when starting their own auto body repair businesses.

Written by experienced and internationally renowned contributors, this is the fourth edition of what has become the standard reference for cosmetic scientists and dermatologists seeking the latest innovations and technology for the formulation, design, testing, use, and production of cosmetic products for skin, hair, and nails. New to this fourth edition are chapters on dermatocosmetic vehicles, surface film, causes and measurement of skin aging, make-up products, skin healing, cosmetics in sports, cosmetotextiles, nutricosmetics, natural ingredients, cosmeceuticals, and regulatory vigilance.

Prepare tomorrow's automotive professionals for success. Hybrid and Alternative Fuel Vehicles, 4/e is the ideal text for a modern service technician's course on hybrid electric vehicles. It combines essential background information with up-to-date, vehicle-specific information on the latest makes. Presented in a full-color format with over 60 new photos and line drawings to bring the concepts alive, plus helpful tips to guide students through the procedures they'll use on the job, the book covers the Chevrolet Volt, Tesla, and Nissan Leaf; the Buick LaCrosse mild hybrid; two-mode operation and transmission operation; high-voltage and auxiliary battery locations; the SAE J1772 electric vehicle plug; Level 1, 2 and 3 charging stations; and the latest alternative fuels. It also covers both engine performance (ASE A8 content) and advanced engine performance (ASE L1 content), enabling instructors to teach both ASE areas without requiring separate texts. To keep your course current, all of the content is correlated to the latest NATEF tasks and ASE areas; all of the chapters are updated with the latest technology; and new chapters are included on oxygenated fuels; propane, CNG, LNG, and synthetic fuels; and electric and plug-in electric vehicles. New information has been added on HV battery testing using a scan tool and procedures for HV battery reconditioning added to Auxiliary and High-Voltage Batteries, and two new appendixes include a new sample ASE-type certification test for Hybrid/Electric Vehicle Specialist (L3) and an updated NATEF correlation chart for hybrid electric vehicles tasks. This book is part of the Pearson Automotive Professional Technician Series, which features full-color, media-integrated solutions for today's students and instructors covering all eight areas of ASE certification, plus additional titles covering common courses. Peer reviewed for technical accuracy, the series and the books in it represent the future of automotive textbooks.

Advancing technology continues to improve the operation and integration of the various systems of the automobile. These changes present ongoing challenges for students aiming to become successful automotive technicians. The fourth Canadian edition of Automotive Technology: A Systems Approach was designed and written to continue to prepare students for those challenges. This book concentrates on the need-to-know essentials of the various automotive systems (and how they have changed from the vehicles of yesterday), the operation of today's vehicles, and what to expect in the near future. New technology is addressed throughout the book in addition to the standard technology that students can expect to see in most vehicles. Each topic is explained in a logical way. Many years of teaching have provided the author team of this text with a good sense of how students read and study technical material, as well as what draws their interest to a topic and keeps it there. This knowledge has been incorporated in the writing and the features of this book.

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