

CDX Learning Systems™

2018 CATALOG



www.cdlearning.com

THE CDX LEARNING SYSTEMS DIFFERENCE

CDX Learning Systems, a division of Jones & Bartlett Learning, is the world's leading provider of interactive and experiential curriculum for transportation technician training. Since 1994, we have set the standard for media-rich, online flexible training programs that enhance instructional effectiveness, student engagement, and learning outcomes.

CUSTOMER SUPPORT

Have a question? Need some help? Service is our top priority and the #1 reason our customers recommend our learning solutions to colleagues.



Call our Customer Support Team: **1-844-723-7537**



Email us: **cdxsupport@partnerinpublishing.com**



Looking for an Account Manager? Find yours at: **cdxlearning.com/ContactUs**



Follow us at: **www.facebook.com/CDXLearning**



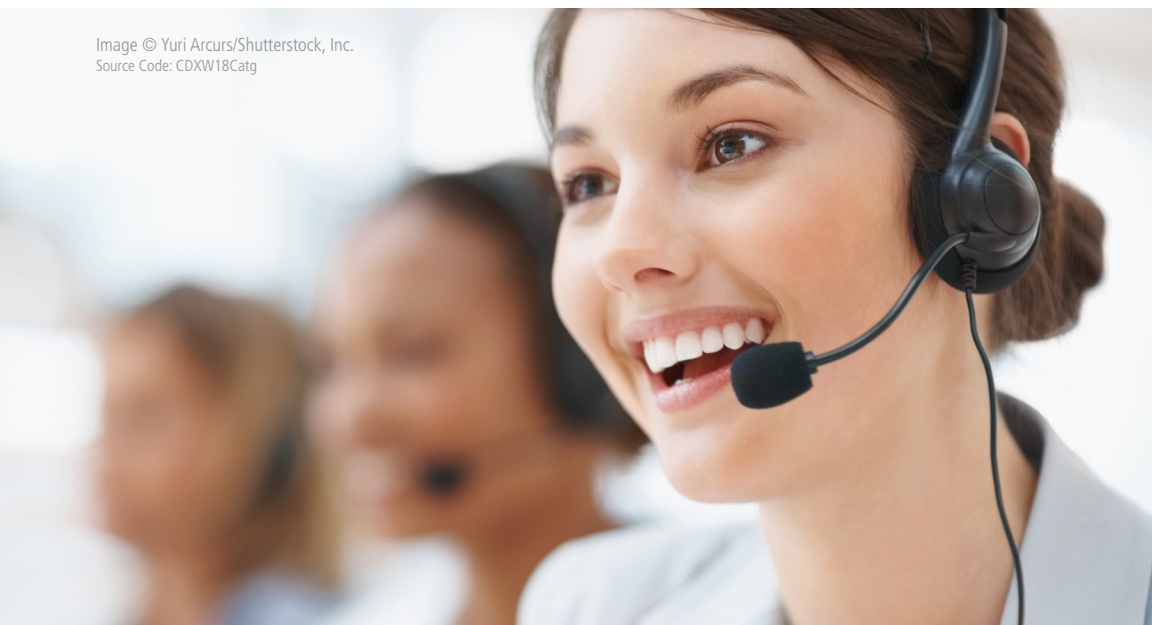
Connect with us at **linkedin.com/company/cdx-learning-systems**

TRAINING AND SUPPORT

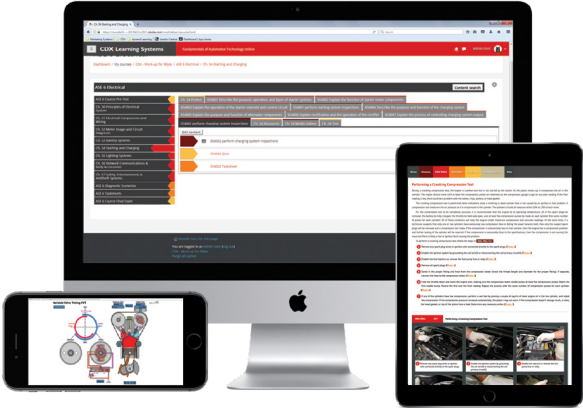
Check out these online and in-person resources for getting started:

- Download helpful step-by-step guides at: **cdxlearning.com/support/library**
- Watch a video walkthrough at: **cdxlearning.com/support/library**
- Call our Customer Support Team to schedule a one-on-one training
- Attend a live training session at one of our events. Ask your CDX Account Manager when we'll be in your area

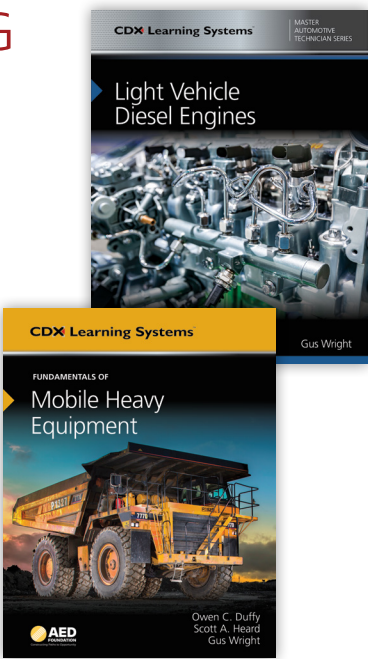
Image © Yuri Arcurs/Shutterstock, Inc.
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NEW AND FORTHCOMING



Fundamentals of Automotive Technology ONLINE

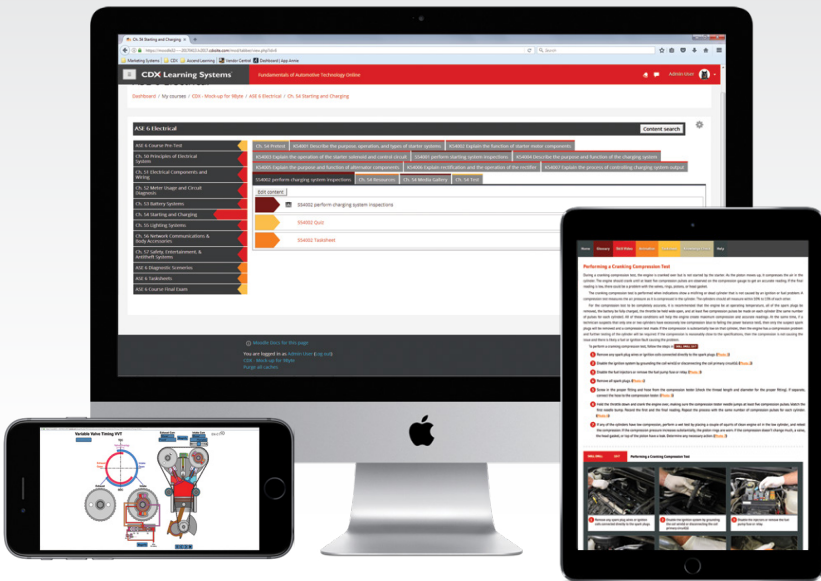


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Fundamentals of Automotive Technology ONLINE

Designed to help instructors run courses efficiently, our online courseware platform is the first of its kind to offer a completely integrated solution with textbook and online program perfectly aligned.



Clear Alignment to 2017 NATEF

Aligned to 2017 NATEF Standards, tasksheets are submitted online and automatically load into the gradebook for seamless assessment

Built for Visual Learners

Featuring thousands of images and digital media assets like animation and video, that keep students engaged

Easily Track Student Progress

See at a glance how students are progressing with NATEF Task completion and through the course assignments

Organized by Learning Outcomes

Objective-based design with defined learning objectives clearly stated, allows students and instructors immediately identify what job relevant skill is being learned

On-Demand Access

Mobile compatible with all platforms including Apple iOS & Android devices

2017 NATEF Tasksheets



- Aligned to 2017 NATEF Standards
- Students may complete tasksheets digitally with the option to print
- Instructors receive notifications and can grade online

Improved Assessments



- Aligned to learning objectives—if it has nothing to do with the objective being taught, it will not be on the test
- Every question has been reviewed by a subject matter expert before submission to the new test bank
- Over 8,000 questions all aligned to objectives and providing wide selection for improved randomization
- Employability skills can now be tracked in the Gradebook

Instructor Dashboard



Tell at a glance how individual students and the whole class are progressing and spot trouble while you still have time to respond

- **Course Statistics Report** – Displays student activity with the ability to focus on individual students
- **Completion Progress Report** – Displays competency based progress through the unit
- **2017 NATEF task tracking** – Reports completed NATEF tasks for accreditation

Fundamentals of Automotive Technology

Principles and Practice

SECOND EDITION

Kirk VanGelder

WHAT'S NEW

- Aligned to 2017 NATEF Automotive Standards
- Comprehensive coverage of every task from MLR to MAST
- Outcome focused with stated learning objectives clearly aligned to tasks and assessments
- Introduces "strategy-based diagnostics," a method used to solve technical problems correctly on the first attempt
- Twice as many end-of-chapter questions
- Streamlined and accessible, with 67 chapters that make it easier for students to understand and master the material
- Thousands of new pictures and illustrations, many printed larger in this new edition

ISBN: 978-1-284-10995-5

Hardcover | 1900 pages | © 2018

ALSO AVAILABLE

Online Instructor Resource Toolkit

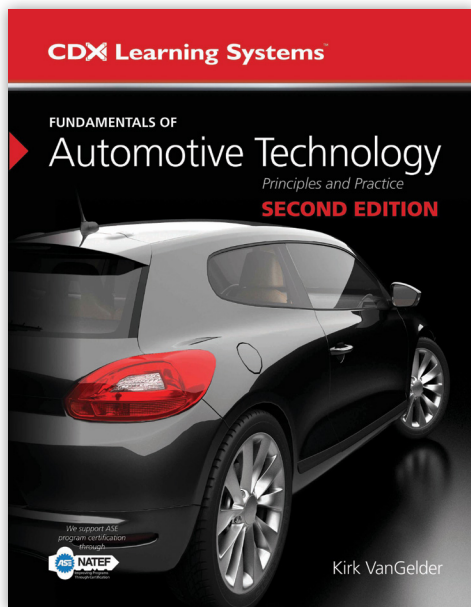
Downloadable Instructor Toolkit available for all instructors includes presentations in PowerPoint format, Ready for Review files, Lecture Outlines, and Answer Key for Student Workbook. Contact your CDX Account Manager for access

Fundamentals of Automotive Technology Student Workbook, Second Edition

Filled with activities for your students to practice. Answer key can be downloaded from the Instructor Resource Toolkit. **ISBN: 978-1-284-11950-3**

Fundamentals of Automotive Technology 2017 NATEF Tasksheet Manual, Second Edition

Aligned to 2017 NATEF Automotive Standards and includes every required task for MLR through MAST. **ISBN: 978-1-284-11952-7**



Seamlessly integrated with the all-new **Fundamentals of Automotive Technology ONLINE**

Learn more at:

www.cdxlearning.com/fatonline



Objective Based Design



- Every chapter outlines the individual learning objectives that will be covered
- Objectives clearly state what is being taught and tested for every topic
- Every chapter concludes with Ready for Review, Key Terms, Review Questions, and ASE Style Questions
- All content aligns perfectly to Fundamentals of Automotive Technology ONLINE

Strategy Based Diagnostics



Our entire program is built around teaching students efficient diagnostic skills. By reinforcing the principles of using a “strategy-based diagnostics” approach, students are guided towards following a consistent plan of action for each diagnostic situation

Built for Visual Learners

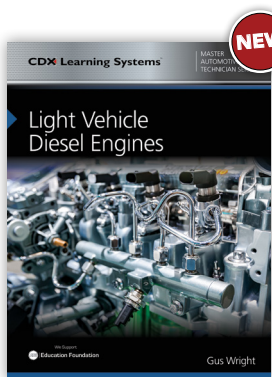


- Thousands of images and illustrations, many larger than ever, to help students follow along
- Page layouts have been redone to allow for bigger image sizes
- Illustrations have been redrawn and help instructors clearly communicate some of the most difficult and technical concepts
- Download image files from the online media gallery available in the Instructor Resource Toolkit and integrated into **Fundamentals of Automotive Technology ONLINE**

CDX Master Automotive Technician Series

Designed for advanced-level instruction, the CDX Master Automotive Technician Series covers the latest technological advances with expert guidance from an extremely experienced, diverse group of authors. With new titles and more on the way, the series will eventually cover all areas of ASE certification.

Accompanying Lecture outlines, Powerpoint slides, Ready for Review, Chapter Tests, and Answer Key are available for instructors to download. For an access code, contact your CDX Account Manager.



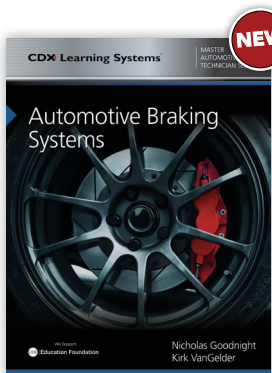
Publishes Spring 2018

Light Vehicle Diesel Engines

Gus Wright

- Fully explains contemporary clean diesel technology, from basic combustion principles to advanced topics like electronic engine controls and sensors
- Showcases new engine models, along with recent technological changes, such as exhaust aftertreatment systems and on-board diagnostic systems
- Emphasizes the importance of reducing emissions and adhering to current standards during the service and repair

ISBN: 978-1-284-14509-0 | Paperback | 640 pages | © 2019



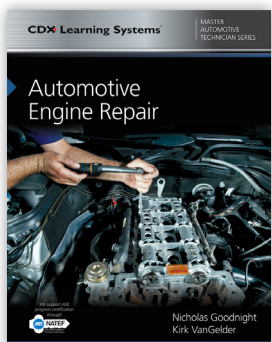
Publishes January 2018

Automotive Braking Systems

**Nicholas Goodnight
Kirk VanGelder**

- Introduces foundational topics before advancing to more complex diagnostic concepts
- Covers all types of braking systems—from disc and drum brakes to hybrid vehicle brakes and electronic brake control—in logical, understandable modules
- Includes the latest braking technology and innovations, from collision avoidance to regenerative braking and lane assist

ISBN: 978-1-284-10212-3 | Paperback | 328 pages | © 2019

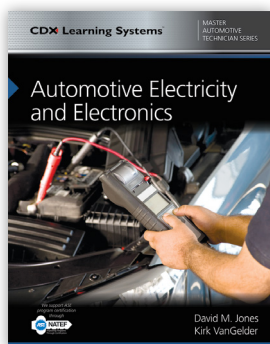


Automotive Engine Repair

**Nicholas Goodnight
Kirk VanGelder**

- Covers the concepts a technician needs for success, from proper diagnosis, teardown, and inspection, to reassembly and first start up
- Combines the latest engine technology, with more traditional skills, such as measuring bearing clearances

ISBN: 978-1-284-10198-0 | Paperback | 694 pages | © 2018

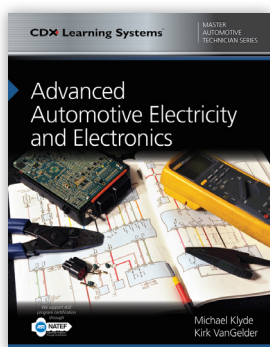


Automotive Electricity and Electronics

David M. Jones
Kirk VanGelder

- Progresses from basic electrical principals, simple circuitry, and electrical components to more complex concepts, such as starting, charging, and lighting

ISBN: 978-1-284-10146-1 | Paperback | 434 pages | © 2018



Advanced Automotive Electricity and Electronics

Michael Klyde
Kirk VanGelder

- Demonstrates how to properly diagnose advanced accessory, multiplex, and network communication circuits
- Provides additional training for the use of advanced tools, such as the graphing multimeter and oscilloscope

ISBN: 978-1-284-10169-0 | Paperback | 416 pages | © 2018

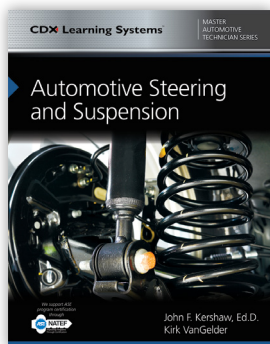


Automotive Automatic Transmission and Transaxles

Keith Santini
Kirk VanGelder

- Introduces transmission design and operation, electronic controls, torque converters, gears and shafts, reaction and friction units, and manufacturer types
- Combines the latest technology for computer-controlled transmissions with traditional skills for hydraulic transmissions

ISBN: 978-1-284-12203-9 | Paperback | 838 pages | © 2018

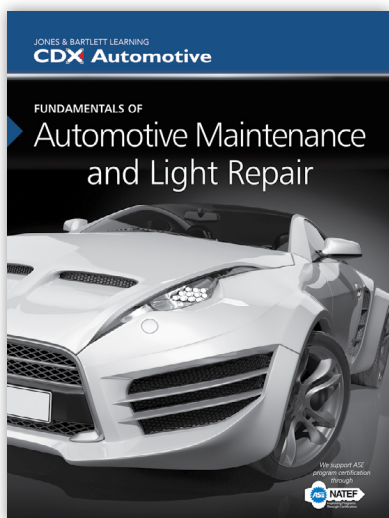


Automotive Steering and Suspension

John F. Kershaw, Ed.D.
Kirk VanGelder

- Addresses the latest technology, such as TPMS (tire pressure monitor sensors), road force variation, and electronic suspension control diagnostics, while also explaining traditional systems

ISBN: 978-1-284-10209-3 • Paperback • 544 pages • © 2018



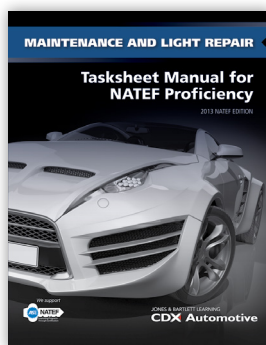
Fundamentals of Automotive Maintenance and Light Repair

FEATURES

- Specifically designed for secondary school MLR curriculum
- Almost 200 Skill Drills that provide written, step-by-step instructions and visual summaries of important skills and procedures
- 'You are the Technician' case studies open each chapter. These cases encourage active learning, promote critical-thinking skills, and help students connect real-life situations
- 'Applied Math, Science, and Communication' boxes simplify critical academic concepts and help students apply these concepts in the shop
- 'Technician Tips' supplement chapters with advice from expert technicians and key tricks of the trade
- A bulleted wrap-up of the chapter, key terms, and ASE-Type Questions conclude each chapter
- NATEF Tasks, Knowledge Objectives, and Skills Objectives open each chapter to help students and instructors know exactly what is being covered

ISBN: 978-1-284-05673-0

Hardcover | 1258 pages | © 2015

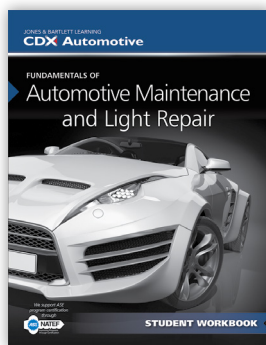


Tasksheet Manual for NATEF Proficiency

Organized by ASE topic area, companion tasks are grouped together for more efficient completion. They are also clearly labeled with CDX and NATEF task numbers and the NATEF priority level, to help students easily manage responsibilities.

ISBN: 978-1-284-07785-8

Paperback | 696 pages | © 2016



Student Workbook

This Student Workbook contains exercises to reinforce what you will learn in both ***Fundamentals of Maintenance and Light Repair*** and the classroom. The Student Workbook is designed to encourage critical thinking and aid comprehension through a variety of exercises in each chapter.

ISBN: 978-1-284-07783-4

Paperback | 382 pages | © 2016

Maintenance and Light Repair ONLINE

Our comprehensive MLR training system combines print and digital learning tools—all based on a single, integrated curriculum—that are specifically designed to align to 2013 NATEF Standards for MLR. Together, **CDX Maintenance and Light Repair ONLINE** and the ***Fundamentals of Maintenance and Light Repair*** student and educator resources create the most engaging, dynamic, and effective learning system available.



CDX Maintenance and Light Repair ONLINE can be used:

- As a complete curriculum solution to manage and deliver an online or hybrid program perfectly suited for today's students
- To provide easy access to reports and documentation needed for NATEF accreditation or reaccreditation
- As an engaging teaching tool in the classroom in place of PowerPoint presentations or other lecture resources
- As a self-study resource for students to make up for lost time or reinforce what they learned in the classroom

Fundamentals of Mobile Heavy Equipment

Owen C. Duffy
Scott A. Heard
Gus Wright

KEY FEATURES

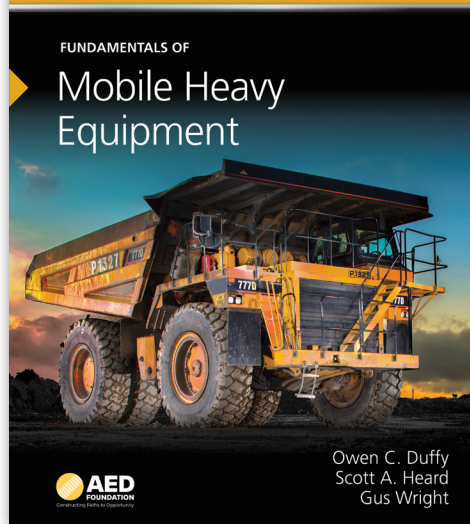
- Provides students with a thorough introduction to the diagnosis, repair, and maintenance of off-road mobile heavy equipment
- Addresses the equipment in the construction, agricultural, forestry, and mining industries
- Features helpful pedagogical tools to enhance student comprehension and critical thinking, including review sections, real-world applications, illustrations, step-by-step explanations, and visual summaries
- Covers all aspects of heavy equipment systems, including:
 - Hydraulics, spanning 14 chapters
 - Braking and suspension systems
 - Tracks drive undercarriage and wheeled machines
 - Hydraulic attachments
 - Electrical and steering systems
 - Transmission and power transfer systems
 - Electric Drives
 - Autonomous and semi-autonomous control systems
 - Telematics, on-board networks, and remote machine control
 - Alternative braking and recuperative systems
 - Foundational information, shop practices, and safety concerns

ISBN: 978-1-284-11291-7

Hardcover | 1,424 pages | © 2019

NEW

CDX Learning Systems



Fundamentals of Mobile Heavy Equipment Tasksheet Manual

Based on 2017 AED Foundation Technical Standards, this manual assists students in demonstrating hands-on performance and proficiency in the skills and tools required for the diagnosis, service, and repair of mobile heavy equipment.

It will also serve as a personal portfolio of documented experience for prospective employment.

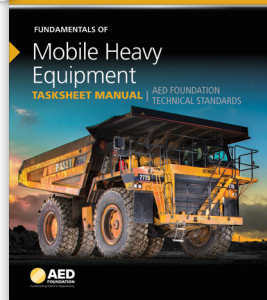
ISBN: 978-1-284-15476-4

Paperback | 600 pages | © 2019

Tasksheet Manual available March 2018

NEW

CDX Learning Systems



Fundamentals of Medium/Heavy Duty Diesel Engines

Gus Wright

Fundamentals of Medium-Heavy Duty Diesel Engines describes safe and effective diagnostic, repair, and maintenance procedures for today's medium and heavy vehicle diesel engines, including the most current, relevant, and practical coverage of:

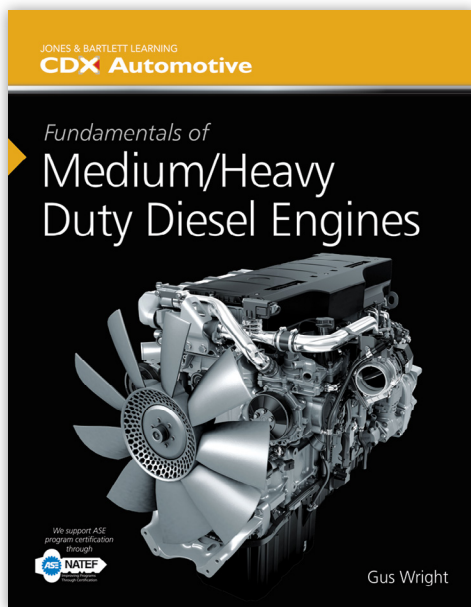
- HD-OBD emission diagnostics
- Common rail injection systems
- Exhaust after treatment systems, including diesel particulate filters, selective catalyst reduction (SCR), and lean NOx traps (LNT)
- Variable geometry and series turbocharging
- Exhaust gas recirculation
- Engine braking
- Major engine OEM-specific coverage of fuel, air induction, and diagnostic systems
- Electronic signal processing and sensor technology

ADDITIONAL FEATURES INCLUDE:

- Up-to-date NATEF coverage
- Support of ASE certification test preparation for medium-heavy truck and bus test series
- A clear, accessible writing style
- Reinforcement of concepts learned
- Application to real-world practice
- A wealth of photographs, illustrations, and step-by-step explanations with visual summaries

ISBN: 978-1-284-06705-7

Hardcover | 1394 pages | © 2017

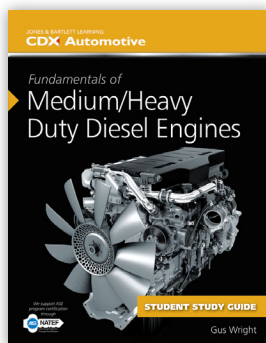


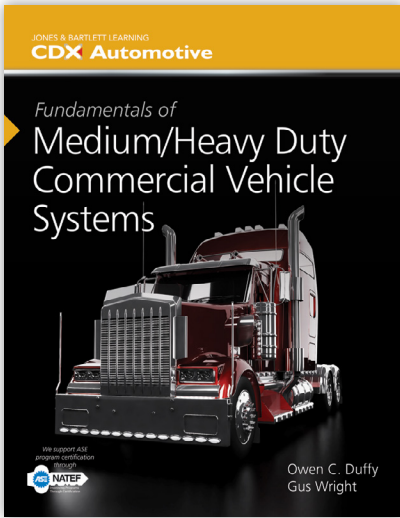
Student Workbook

This Student Workbook contains exercises to reinforce what students learn in both ***Fundamentals of Medium/Heavy Duty Diesel Engines*** and the classroom. The Student Workbook is designed to encourage critical thinking and aid comprehension through a variety of exercises in each chapter.

ISBN: 978-1-284-09167-0

Paperback | 436 pages | © 2017





Fundamentals of Medium/Heavy Duty Commercial Vehicle Systems

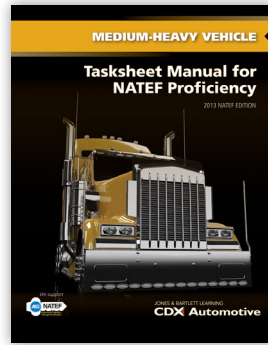
Owen C. Duffy
Gus Wright

Features the most current, relevant, and practical coverage of:

- Automated transmissions
- Braking system technology used in vehicle stability, collision avoidance, and new stopping distance standards
- Hybrid drive powertrains
- Advanced battery technologies
- On-board vehicle networks and integrated chassis electrical control system
- Automatic transmission drive shafts and drive axles
- Charging, starting, vehicle instrumentation, and chassis electrical systems
- On-board diagnostic systems, electronic signal processing, and sensor operation
- Steering, suspension, frames, hitching, and air conditioning systems
- Environmental and fuel efficiency technologies

ISBN: 978-1-284-04116-3

Hardcover | 1980 pages | © 2016

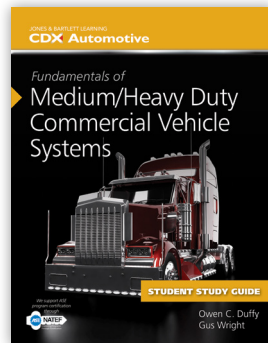


Tasksheet Manual for NATEF Proficiency

Designed to guide students through the tasks necessary to meet NATEF requirements for Medium/Heavy Truck certification. Organized by ASE topic area, companion tasks are grouped together and clearly labeled with NATEF task numbers, NATEF priority levels, and CDX tasksheet numbers.

ISBN: 978-1-284-04120-0

Looseleaf | 1216 pages | © 2017



Student Workbook

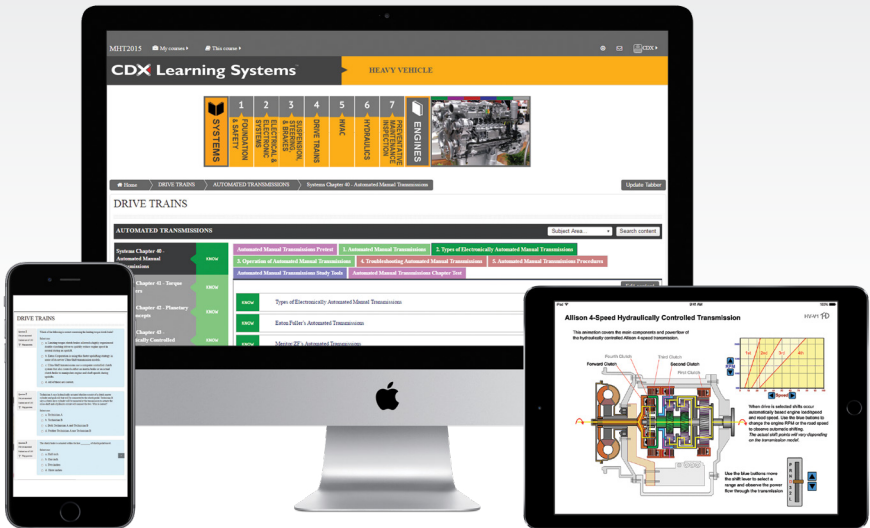
This Student Workbook contains exercises to reinforce what students learn in ***Fundamentals of Medium/Heavy Commercial Vehicle Systems*** and the classroom. The Student Workbook is designed to encourage critical thinking and comprehension through a variety of exercises in each chapter.

ISBN: 978-1-284-09148-9

Paperback | 498 pages | © 2017

CDX Medium/Heavy Vehicle ONLINE

Whether you are interested in teaching an online, hybrid, or traditional classroom-based course, **CDX Medium/Heavy Vehicle ONLINE** will deliver unbeatable results and value to you and your students and improve the way you teach, learn, and access content.



CDX Medium/Heavy Vehicle ONLINE can be used:

- As a complete curriculum solution to manage and deliver an online or hybrid program perfectly suited for today's students
- To provide easy access to reports and documentation needed for NATEF accreditation/reaccreditation
- As an engaging teaching tool in the classroom in place of PowerPoint presentations or other lecture resources
- As a self-study resource for students to make up for lost time or reinforce what they learned in the classroom

Order your instructor review copy today.



Fundamentals of Automotive Technology ONLINE



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