

Redefine your training program with the

Automotive Heavy Vehicle Series

from Technica Learning Resources

TEXTBOOK

INTERNATIONAL EDITION



- Relaxed, readable style
- Chapter objectives
- Procedure drills
- Technician tips
- Tables, Figures & Illustrations
- Chapter review questions
- Safety tips

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CDX Automotive

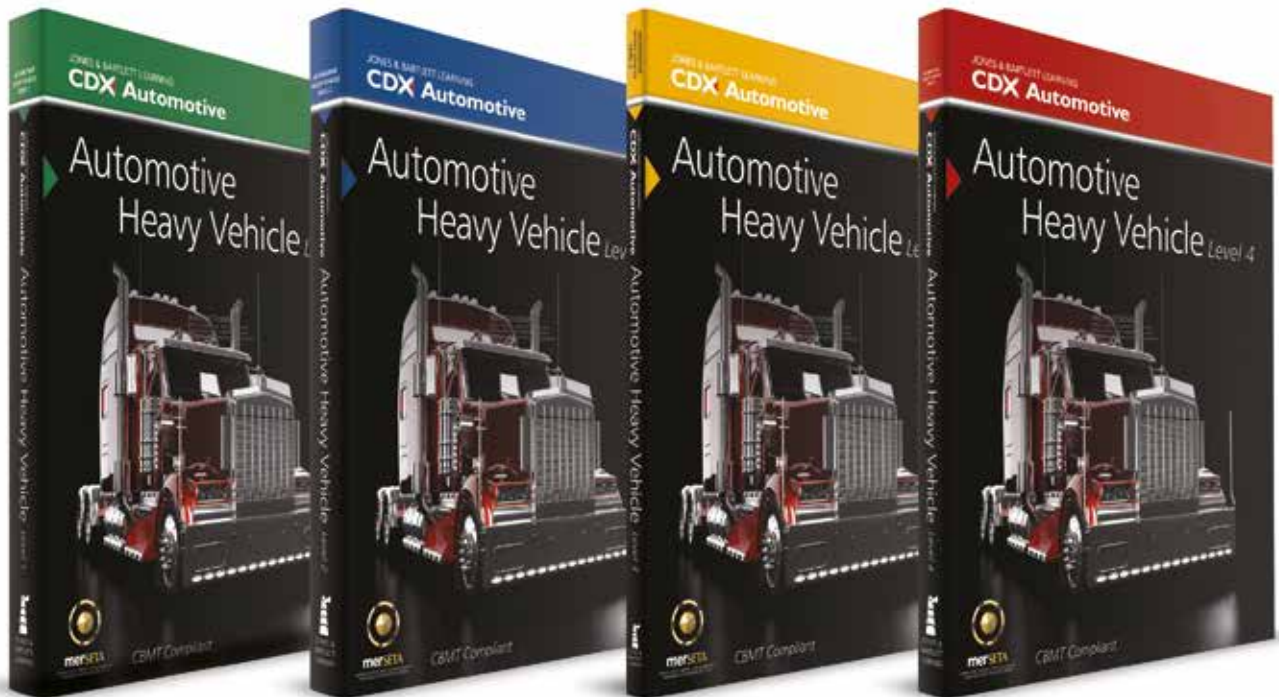


merSETA

MANUFACTURING, ENGINEERING
AND RELATED SERVICES SETA

CBMT Compliant

INTRODUCING THE ALL-NEW *Automotive Heavy Vehicle Series!*



Technica Learning Resources as a worldwide content developer, distributor and solutions provider of training material has since its inception believed in making a difference in people's lives by creating skilled, qualified and employable individuals. We do this through world class learning material which leverage the best global technologies and expertise available. This is done in key, selected skills to ensure we are focused in our area and that we provide an outstanding learning experience to you, our customer.

This four-part series is based on competency based modular training with a clear pathway to success in as short a time as possible. The *Automotive Heavy Vehicle Series* offers:

- **RELAXED, READABLE STYLE** – Each text is written in a clear, accessible language creating a learning environment in which apprentices are comfortable with the material presented.
- **REINFORCEMENT OF CONCEPTS** – Each text is written on the premise that students require a solid foundation in the basics followed by appropriate reinforcement of the concepts learned. Reinforcement is provided with written step-by-step explanations and visual summaries of skills and workshop procedures.
- **HIGHLY DESCRIPTIVE AND DETAILED ART PROGRAM** – Each text includes an incredible wealth of photos and illustrations to help students visualize vehicle systems and mechanical concepts. Hundreds of hands-on procedures are also depicted throughout the series to provide clear, step-by-step instructions helping apprentices master critical workshop skills.



Each textbook within the **Automotive Heavy Vehicle Series** features:

Chapter-Opening Learning Objectives

At the beginning of each chapter, the Competency Based Training (CBT) Learning Objectives, Knowledge Objectives, and Skills Objectives are clearly identified with specific page references. This helps readers know exactly what is going to be covered in the chapter and what they will be expected to learn.



Procedure Drills

Written step-by-step instructions and visual summaries of important skills help students to master procedures in less time.

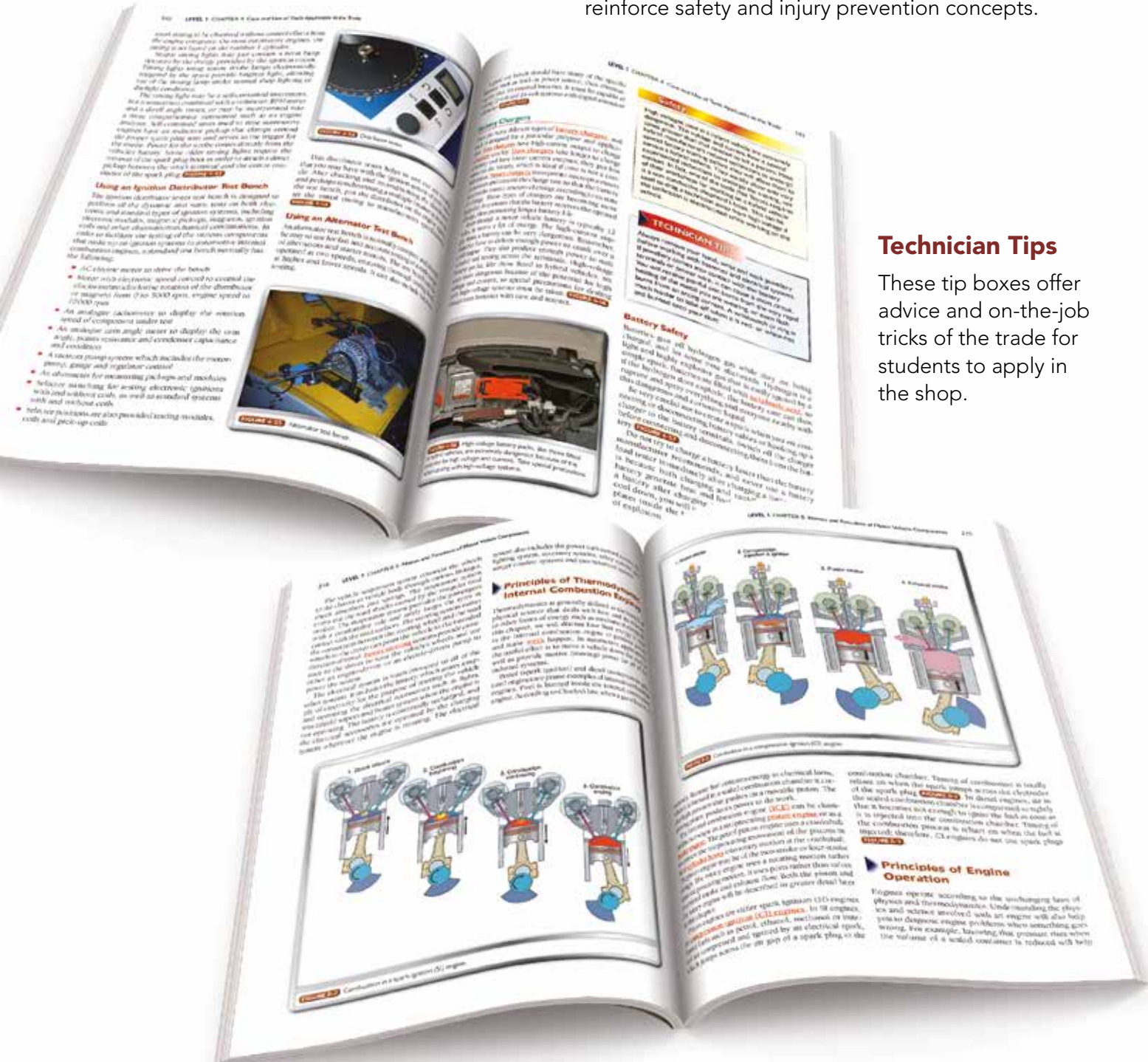
Each textbook within the **Automotive Heavy Vehicle Series** features:

Safety Tips

These tips alert readers to potential hazards and reinforce safety and injury prevention concepts.

Technician Tips

These tip boxes offer advice and on-the-job tricks of the trade for students to apply in the shop.



Tables, Figures, & Illustrations

A sophisticated art program presents essential data in a condensed and easy-to-read format. These tables, figures, and illustrations are perfectly suited to address the needs of visual learners.

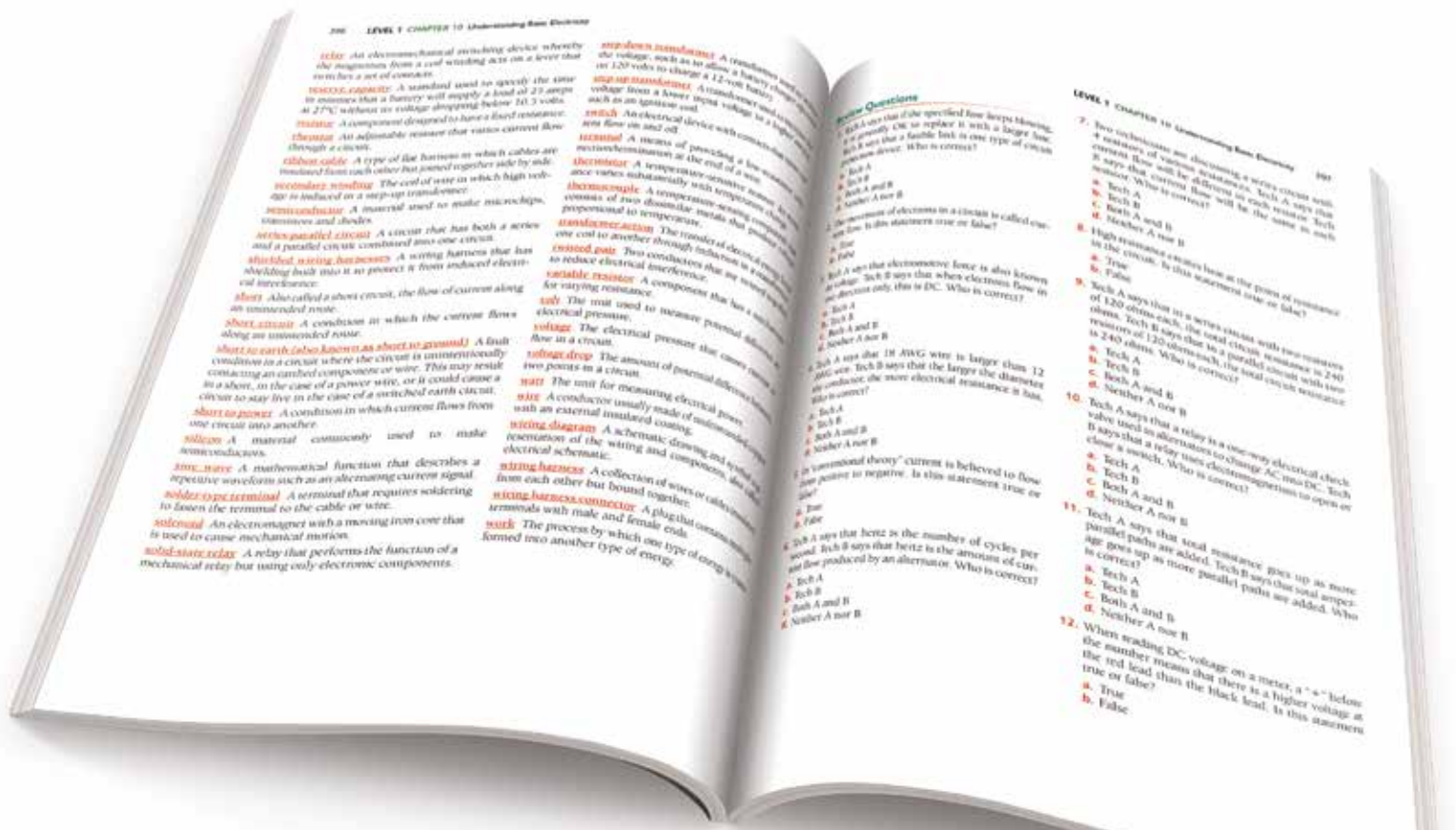
Each textbook within the **Automotive Heavy Vehicle Series** features:

Key Terms

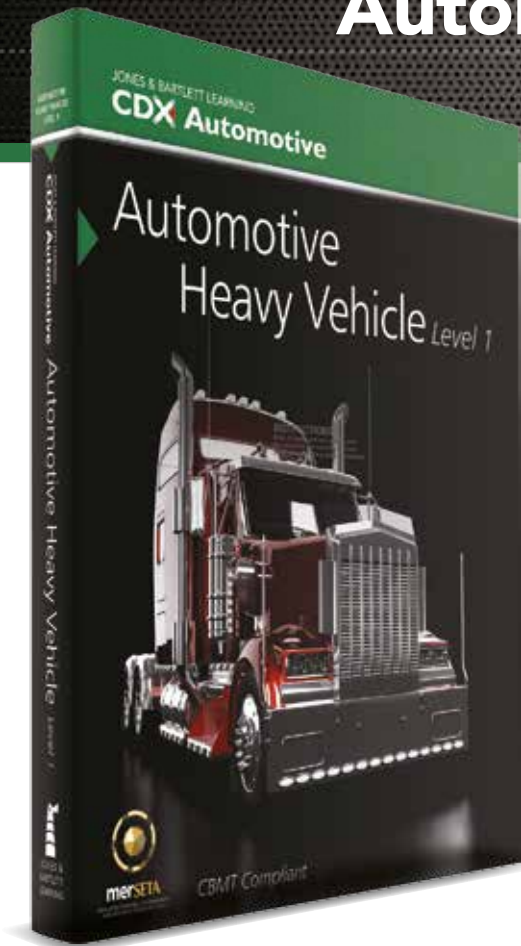
Important terminology is easily identified and defined within the text. A list of key vocabulary terms is included at the end of the chapter.

Review Questions

Examination-type questions are included at the conclusion of each chapter to help students prepare for exams.



Automotive Heavy Vehicle Level 1



Automotive Heavy Vehicle Level 1

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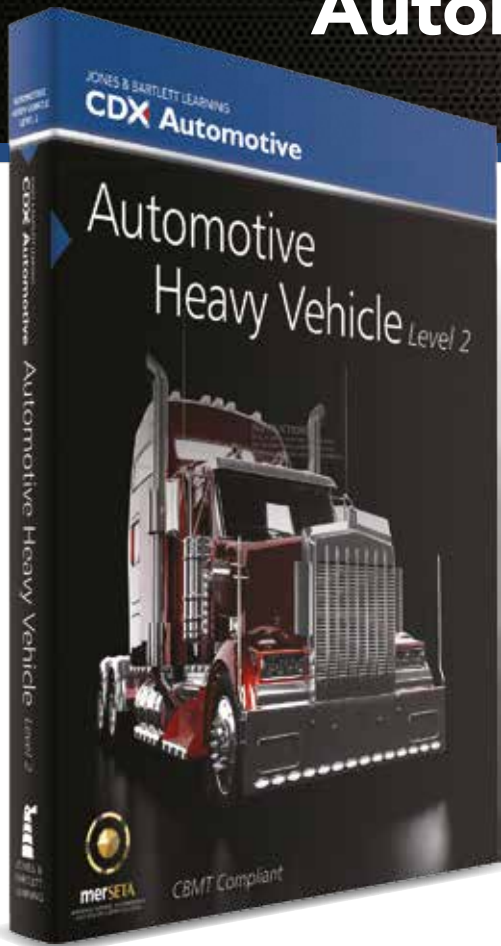
ISBN-13: 978-1-284-02858-4

Paperback | 489 Pages | © 2014

TABLE OF CONTENTS

1	Introduction to Competency-Based Modular Training
2	Safety and First Aid in the Workshop
3	Lubricants, Metals, and Materials
4	Care and Use of Tools Applicable to the Trade
5	Identifying Locking Devices
6	Identifying and Fitting Gaskets and Seals
7	Applying Basic Hand Skills
8	Names and Functions of HV Components
9	Understanding the Fundamentals of Lubrication Systems
10	Understanding Basic Electricity
11	Using Lifting Equipment
12	Perform a Service to a Heavy Vehicle
13	Fuse Metals
Appendix A	Scientific Terms
Appendix B	Standard Acronyms

Automotive Heavy Vehicle Level 2



Automotive Heavy Vehicle Level 2

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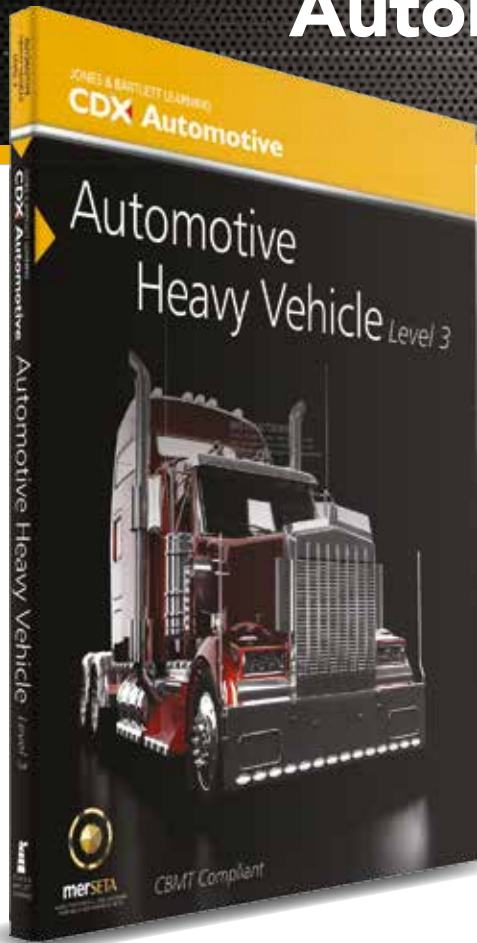
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TABLE OF CONTENTS

1	Understanding the Fundamentals of Heavy-Duty Vehicle Technology
2	Identifying Bushes and Bearings and Removing, Inspecting and Replacing Bearings
3	Removing and Replacing Heavy-Duty Vehicle Engines and Sub-Systems
4	Removing and Replacing Heavy-Duty Vehicle Transmissions and Drivetrain Components
5	Removing, Assessing and Replacing Heavy-Duty Vehicle Low-Pressure Fuel System Components
6	Removing, Assessing and Replacing Heavy-Duty Vehicle Exhaust System Components
7	Removing, Assessing and Replacing Heavy-Duty Vehicle Cooling System Components
8	Removing and Replacing Heavy-Duty Vehicle Suspension and Steering Systems
9	Understanding and Performing Wheel Balancing and Alignment on a Heavy-Duty Vehicle
10	Understanding and Testing HDV Starting System Components
11	Understanding, Testing and Repairing Heavy-Duty Electrical Components
12	Understanding the Fundamentals of Heavy-Duty Vehicle Brake Systems
13	Workplace Communications
Appendix A	Scientific Terms
Appendix B	Standard Acronyms

Automotive Heavy Vehicle Level 3



Automotive Heavy Vehicle Level 3

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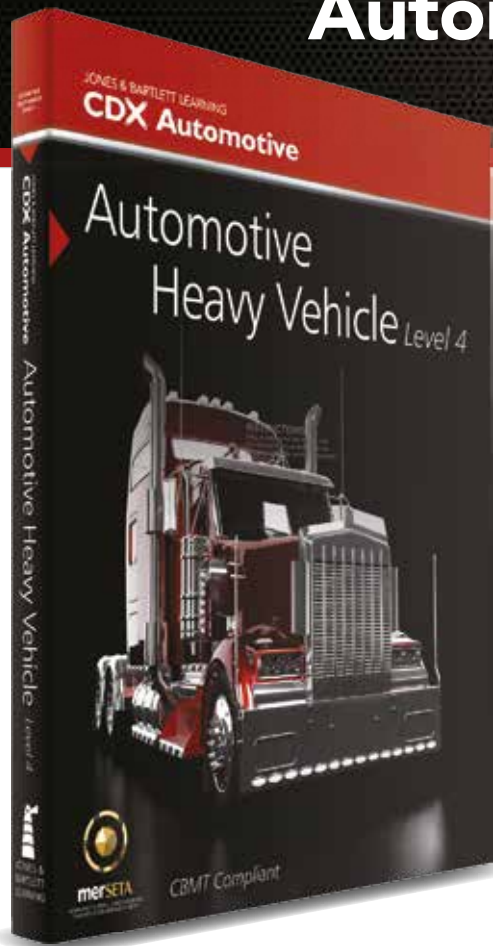
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1	Removing, Reconditioning and Replacing Cylinder Heads
2	Dismantling, Servicing, Repairing and Assembling the Engine Block and Its Main Components
3	Removing, Diagnosing and Replacing Fuel System Components
4	Understanding Basic Electricity
5	Testing Ignition System Components
6	Studying the Fundamentals of Engine Efficiency and Forced Charging
7	Removing, Testing, Repairing and Replacing Electrical Components
8	Removing and Replacing Clutch and Transmission Components
9	Diagnosing Faults and Repairing Brake Systems and Components
10	Alternative Fuel Systems
Appendix A	Scientific Terms
Appendix B	Standard Acronyms

Automotive Heavy Vehicle Level 4



Automotive Heavy Vehicle Level 4

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ISBN-13: 978-1-284-02861-4

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TABLE OF CONTENTS

1	Understanding Specialised Fuel Injection Systems, and Diagnosing and Rectifying Faults on Heavy-Duty Vehicle Engines
2	Understanding the Operation of, Diagnosing and Repairing Heavy-Duty Vehicle Transmissions
3	Diagnosing Faults on Heavy-Duty Vehicle Steering and Suspension Systems
4	Understanding, Assessing and Repairing Driveline Components
5	Identifying, Understanding and Repairing Heavy-Duty Vehicle Auxiliary Systems
Appendix A	Scientific Terms
Appendix B	Standard Acronyms

Together, **CDX Automotive** and **Technica Learning Resources** will revolutionize your technician training programs!

Built on the Competency Based Training (CBT) methodology, each textbook offers comprehensive and up-to-date coverage of the tasks required by the CBT framework and has been written under the guidance of a consortium of expert professionals in their training fields. This format ensures student comprehension and encourages critical thinking that can be applied in the field. Technicians need to know how to safely and effectively perform maintenance, diagnose, and repair systems and each textbook provides the critical knowledge and skills necessary for future technicians to perform these essential tasks.

Additionally, each textbook offers:

RELAXED, READABLE STYLE

Each textbook is written in a clear, accessible language creating a learning environment in which students feel comfortable with the material presented. That comfort level creates an effective and engaging learning experience for students, translating into better understanding and retention, ultimately leading to better pass rates.

REINFORCEMENT OF CONCEPTS

Each textbook is written with the understanding that students require a solid foundation in the basics, followed by appropriate reinforcement of the concepts learned. Reinforcement is provided through visual summaries of skills and procedures. The skills learned are then reinforced through practical tasks performed within accredited training and work environments. Each chapter concludes with CBT-type questions to help students assess critical thinking skills and measure comprehension.

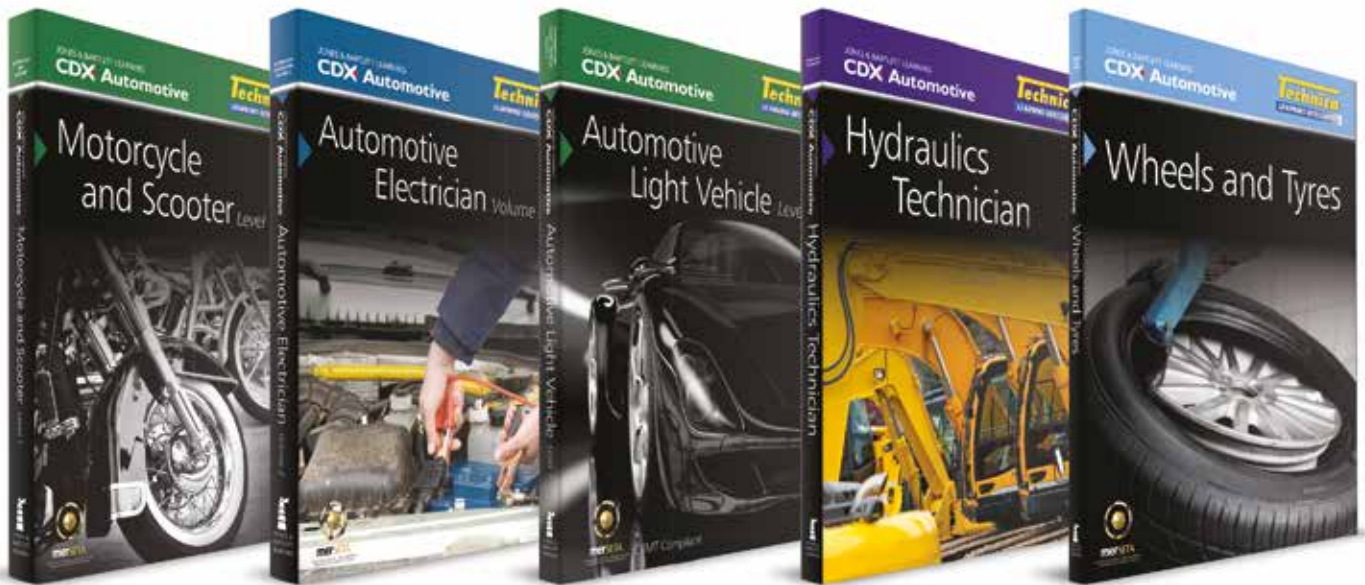
HIGHLY DESCRIPTIVE AND DETAILED ART PROGRAM

Each textbook includes a wealth of photographs and illustrations to help students visualize heavy vehicle systems and mechanical concepts.

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Together, **CDX Automotive** and **Technica Learning Resources** will revolutionize your technician training programs!



THE FOLLOWING TEXTBOOKS ARE AVAILABLE

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Automotive Heavy Vehicle: Level 3

ISBN-13: 978-1-284-02860-7

Automotive Heavy Vehicle: Level 4

ISBN-13: 978-1-284-02861-4

Automotive Light Vehicle: Level 1

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Wheels and Tyres

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For more information, please contact:

Andrew McIntosh

South Africa:

T: +27 11 879 6021

C: +27 71 175 6674

Skype:

andrewmc61

Email:

andrew.mcintosh@technica-online.com

Waldie Pienaar

South Africa:

C: +27 81 577 9912

Skype:

wallcorpint

Email:

waldie.pienaar@technica-online.com

www.technica-online.com

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