Common Rail Diesel Engine Management Part 1 Ebooks Demo

Written by an experienced truck technician in easy-to-understand

language, this book provides a comprehensive introduction to highway diesel engines and their management systems. Coverage of the full range of truck diesels from light duty to heavy duty is provided, as well as the most current diesel engine

management electronics used today. New topics include rotary distributor pumps, alternate fuel technologies, multiplexing, Bosch electronic common rail systems, and Cummins CAPS and HPI-TP. Recent innovations in engine technology and

greatly expanded coverage of SAE J1667 emissions testing round out the enhancements, making this edition a superior learner's guide and an invaluable reference to the practicing technician.

With gas prices rising (always),

alternative fuels look like an answer. Hybrids sound good, but what about the batteries? And fuel cells still seem to be pie-in-the-sky. Which leaves us with good old diesel. This book shows how to get the most out of the diesel engine, at a time when its fuel

efficiency is almost as important as its massive torque. Although most diesel truck owners probably aren't planning to break any land speed records, advances in diesel technology, such as ultra-low-sulfur fuel, high-pressure common-rail fuel

injection, electronic fuel management and variable geometry turbocharging, are bringing diesel engines into the performance arena. And this book is the ideal guide for making your diesel engine perform--adapting intake and exhaust, torque converters, engine

electronics, turbochargers, and much more.

The most comprehensive guide to highway diesel engines and their management systems available today, MEDIUM/HEAVY DUTY TRUCK ENGINES, FUEL &

COMPUTERIZED MANAGEMENT SYSTEMS, Fourth Edition, is a user-friendly resource ideal for aspiring, entry-level, and experienced technicians alike. Coverage includes the full range of diesel engines, from light duty to

heavy duty, as well as the most current diesel engine management electronics used in the industry. The extensively updated fourth edition features nine new chapters to reflect industry trends and technology, including a decreased focus on outdated

hydromechanical fuel systems, additional material on diesel electric/hydraulic hybrid technologies, and information on the principles and practices underlying current and proposed ASE and NATEF tasks. With an emphasis on

today ' s computer technology that sets it apart from any other book on the market, this practical, wide-ranging guide helps prepare you for career success in the dynamic field of diesel engine service. Important Notice: Media content referenced

within the product description or the product text may not be available in the ebook version.

Diesel-Engine ManagementWiley

Hillier's Fundamentals of Motor Vehicle Technology

Fuel Cell Technology Handbook

Combustion, Emissions and Condition Monitoring
Design of an Engine Control Equipment for Common Rail Diesel Injection System
Part 1: Engines - Fundamentals
Progressive reductions in

vehicle emission requirements have forced the automotive industry to invest in research and development of alternative control strategies. Continual control action exerted by a dedicated electronic control

unit ensures that best performance in terms of pollutant emissions and power density is married with driveability and diagnostics. Gasoline direct injection (GDI) engine technology is a way to

attain these goals. This brief describes the functioning of a GDI engine equipped with a common rail (CR) system, and the devices necessary to run test-bench experiments in detail. The text should prove

instructive to researchers in engine control and students are recommended to this brief as their first approach to this technology. Later chapters of the brief relate an innovative strategy designed to assist

with the engine management system; injection pressure regulation for fuel pressure stabilization in the CR fuel line is proposed and validated by experiment. The resulting control scheme is composed of

a feedback integral action and a static model-based feed-forward action, the gains of which are scheduled as a function of fundamental plant parameters. The tuning of closed-loop performance is

supported by an analysis of the phase-margin and the sensitivity function. Experimental results confirm the effectiveness of the control algorithm in regulating the mean-value rail pressure

independently from engine working conditions (engine speed and time of injection) with limited design effort. With the growing awareness and popularity of environmental preservation,

research on green computing has gained recognition around the world. Information technology must adopt initiatives in making computers as energy-efficient as possible, as well as design

algorithms and systems for efficiency-related computer technologies. International and Interdisciplinary Studies in Green Computing provides coverage on strategic green issues and practices for

competitive advantages and cost-cutting in modern organizations and business sectors in order to reach environmental goals.
Learn all the skills you need to pass Level 3 and 4 Vehicle

Diagnostic courses from IMI, City and Guilds and BTEC, as well as higher levels, ASE, AUR and other qualifications. Advanced Automotive Fault Diagnosis explains the fundamentals of vehicle

systems and components and examines diagnostic principles as well as the latest techniques employed in effective vehicle maintenance and repair. Diagnostics, or fault finding, is an essential part of an

automotive technician's work, and as automotive systems become increasingly complex there is a greater need for good diagnostics skills. For students new to the subject, this book will help to develop

these skills, but it will also assist experienced technicians to further improve their performance and keep up with recent industry developments. Checked and endorsed by the Institute of to him to ensure

that it is ideal for both independent and tutor-based study Diagnostics case studies to help you put the principles covered into real-life context Useful margin features throughout, including

definitions, key facts and 'safety first' considerations For more than 75 years Bosch has set the pace in innovative diesel fuel-injection technology. These innovations are documented here. The

modern high-pressure diesel injection systems such as Common Rail, Unit Injector and Unit Pump are at the forefront of this book. Development of a Generic Dual Fuel ECU for Common Rail

Diesel Engine Control
Fuel Injection Systems
Encyclopedia of Automotive Engineering
Modern Diesel Technology
Diesel Engine Management
Innovations by Bosch in the field of diesel-

injection technology have made a significant contribution to the diesel boom in Europe in the last few years. These systems make the diesel engine at once quieter, more economical, more powerful, and lower in emissions. This reference book provides a comprehensive insight into the extended diesel fuel-injection

systems and into the electronic system used to control the diesel engine. This book also focuses on minimizing emissions inside of the engine and exhaust-gas treatment (e.g., by particulate filters). The texts are complemented by numerous detailed drawings and illustrations. This 4th Edition includes new, updated and

extended information on several subjects including: History of the diesel engine Common-rail system Minimizing emissions inside the engine Exhaust-gas treatment systems Electronic Diesel Control (EDC) Start-assist systems Diagnostics (On-Board Diagnosis) With these extensions and revisions, the 4th

Edition of Diesel-Engine Management gives the reader a comprehensive insight into today's diesel fuel-injection technology.

The book presents a complete new methodology for the on-board measurements and modeling of gas concentrations in turbocharged diesel

engines. It provides the readers with a comprehensive review of the state-of-art in NOx and lambda estimation and describes new important achievements accomplished by the author. These include: the online characterization of lambda and NOx sensors; the development of control-oriented models of

lambda and NOx emissions; the design of computationally efficient updating algorithms; and, finally, the application and evaluation of the methods on-board. Because of its technically oriented approach and innovative findings on both control-oriented algorithms and virtual sensing and observation, this book offers a

practice-oriented guide for students, researchers and professionals working in the field of control and information engineering.

Direct injection enables precise control of the fuel/air mixture so that engines can be tuned for improved power and fuel economy, but ongoing research challenges

remain in improving the technology for commercial applications. As fuel prices escalate DI engines are expected to gain in popularity for automotive applications. This important book, in two volumes, reviews the science and technology of different types of DI combustion engines and their fuels. Volume 1 deals with direct

injection gasoline and CNG engines, including history and essential principles, approaches to improved fuel economy, design, optimisation, optical techniques and their applications. Reviews key technologies for enhancing direct injection (DI) gasoline engines Examines approaches to improved fuel economy and

lower emissions Discusses DI compressed natural gas (CNG) engines and biofuels Gain a sound understanding of electronically controlled diesel engines as well as maintenance and diagnostic procedures. This book uses the ASE L2 "composite" diesel engine as a platform for fostering a detailed understanding of

current truck engine management systems including electronic unit injector (EUI), hydraulically actuated electronic unit injector (HEUI), electronic unit pump (EUP), time-pressure injection (HPI-TP), computer-controlled pump-line-nozzle (PLN), and diesel common rail (CR) fuel management systems. Coverage is

comprehensive in scope, addressing vehicle management computers, electronic service tools (ESTs), connector and wiring repair, and the principles of multiplexing, as well as each major system of the various fuel management systems used on today's diesel powered trucks.

Medium/Heavy Duty Truck Engines,

Fuel & Computerized Management Systems

Modern Diesel Technology: Diesel Engines

Diesel-Engine Management

Proceedings of the International Symposium and Exposition on

Automotive Electronics and Alternate Energy Vehicles, November 19-21,1999

Drawing on a wealth of knowledge and experience and a background of more than 1,000 magazine articles

on the subject, engine control expert Jeff Hartman explains everything from the basics of engine management to the building of complicated

project cars. Hartman has substantially updated the material from his 1993 MBI book Fuel Injection (0-879387-43-2) to address the incredible developments in

automotive fuel injection technology from the past decade, including the multitude of import cars that are the subject of so much hot rodding today. Hartman's text is

extremely detailed and logically arranged to help readers better understand this complex topic.

This reference book provides a

comprehensive insight into todays diesel injection systems and electronic control. It focusses on minimizing emissions and exhaust-gas treatment.

Innovations by Bosch in the field of diesel-injection technology have made a significant contribution to the diesel boom. Calls for lower fuel consumption, reduced

exhaust-gas emissions and quiet engines are making greater demands on the engine and fuel-injection systems. MODERN DIESEL TECHNOLOGY: DIESEL

ENGINES, Second Edition, provides a thorough, reader-friendly introduction to diesel engine theory, construction, operation, and service. Combining a

simple, straightforward writing style, ample illustrations, and step-by-step instruction, this trusted guide helps aspiring technicians develop the knowledge

and skills they need to service modern, computer-controlled diesel engines. The book provides an overview of essential topics such as shop safety, tools and

equipment, engine construction and operation, major engine systems, and general service and repair concepts. Dedicated chapters then explore

engine, fuel, and vehicle computer control subsystems, as well as diesel emissions. Thoroughly revised to reflect the latest technology, trends, and

techniques—including current ASE Education Foundation standards—the Second Edition provides an accurate, up-to-date introduction to modern

diesel engines and a solid foundation for professional success. Important Notice: Media content referenced within the product description or the product text may

not be available in the ebook version.

This machine is destined to completely revolutionize cylinder diesel engine up through large low speed t- engine

engineering and replace everything that exists. stroke diesel engines. An appendix lists the most (From Rudolf Diesel's letter of October 2, 1892 to the important

standards and regulations for diesel engines. publisher Julius Springer.) Further development of diesel engines as economiz- Although Diesel's stated

goal has never been fully ing, clean, powerful and convenient drives for road and achievable of course, the diesel engine indeed revolu- nonroad use has proceeded quite

dynamically in the tionized drive systems. This handbook documents the last twenty years in particular. In light of limited oil current state

of diesel engine engineering and technol- reserves and the discussion of predicted climate ogy. The impetus to publish a Handbook of Diesel change,

development work continues to concentrate Engines grew out of ruminations on Rudolf Diesel's on reducing fuel consumption and utilizing alternative

transformation of his idea for a rational heat engine fuels while keeping exhaust as clean as possible as well into reality more than 100 years ago. Once the

patent as further increasing diesel engine power density and was filed in 1892 and work on his engine commenced enhancing operating performance.

Automotive Technology: Vehicle Maintenance and Repair

Diesel-engine Management

Advanced Direct Injection Combustion Engine

Technologies and Development Turbocharging Performance Handbook Advanced Automotive Fault Diagnosis, 4th ed

A wide-ranging and practical

handbook that offers comprehensive treatment of high-pressure common rail technology for students and professionals In this volume, Dr. Ouyang and his colleagues answer the need for a comprehensive examination of

high-pressure common rail systems for electronic fuel injection technology, a crucial element in the optimization of diesel engine efficiency and emissions. The text begins with an overview of common rail systems today,

including a look back at their progress since the 1970s and an examination of recent advances in the field. It then provides a thorough grounding in the design and assembly of common rail systems with an emphasis on key

aspects of their design and assembly as well as notable technological innovations. This includes discussion of advancements in dual pressure common rail systems and the increasingly influential role of

Electronic Control Unit (ECU) technology in fuel injector systems. The authors conclude with a look towards the development of a new type of common rail system. Throughout the volume, concepts are illustrated using extensive

research, experimental studies and simulations. Topics covered include: Comprehensive detailing of common rail system elements, elementary enough for newcomers and thorough enough to act as a useful reference for professionals

Basic and simulation models of common rail systems, including extensive instruction on performing simulations and analyzing key performance parameters Examination of the design and testing of next-

generation twin common rail systems, including applications for marine diesel engines Discussion of current trends in industry research as well as areas requiring further study Common Rail Fuel Injection Technology is the ideal handbook

for students and professionals working in advanced automotive engineering, particularly researchers and engineers focused on the design of internal combustion engines and advanced fuel injection technology. Wide-

ranging research and ample examples of practical applications will make this a valuable resource both in education and private industry.

The light-duty vehicle fleet is expected to undergo substantial

technological changes over the next several decades. New powertrain designs, alternative fuels, advanced materials and significant changes to the vehicle body are being driven by increasingly stringent fuel

economy and greenhouse gas emission standards. By the end of the next decade, cars and light-duty trucks will be more fuel efficient, weigh less, emit less air pollutants, have more safety features, and will be more expensive to purchase

relative to current vehicles. Though the gasoline-powered spark ignition engine will continue to be the dominant powertrain configuration even through 2030, such vehicles will be equipped with advanced technologies, materials,

electronics and controls, and aerodynamics. And by 2030, the deployment of alternative methods to propel and fuel vehicles and alternative modes of transportation, including autonomous vehicles, will be well

underway. What are these new technologies - how will they work, and will some technologies be more effective than others? Written to inform The United States Department of Transportation's National Highway

Traffic Safety Administration (NHTSA) and Environmental Protection Agency (EPA) Corporate Average Fuel Economy (CAFE) and greenhouse gas (GHG) emission standards, this new report from the National Research Council is a

technical evaluation of costs, benefits, and implementation issues of fuel reduction technologies for next-generation light-duty vehicles. Cost, Effectiveness, and Deployment of Fuel Economy Technologies for

Light-Duty Vehicles estimates the cost, potential efficiency improvements, and barriers to commercial deployment of technologies that might be employed from 2020 to 2030. This report describes these promising

technologies and makes recommendations for their inclusion on the list of technologies applicable for the 2017-2025 CAFE standards.

Thoroughly updated and expanded, Fundamentals of Medium/Heavy

Diesel Engines, Second Edition offers comprehensive coverage of basic concepts and fundamentals, building up to advanced instruction on the latest technology coming to market for medium- and heavy-duty diesel engine systems.

Written by an experienced truck technician in easy-to-understand language, this book provides a comprehensive introduction to highway diesel engines and their management systems. Coverage of the full range of truck diesels from

light duty to heavy duty is provided, as well as the most current diesel engine management electronics used today. New topics include rotary distributor pumps, alternate fuel technologies, multiplexing, Bosch electronic

common rail systems, and Cummins CAPS and HPI-TP. Recent innovations in engine technology and greatly expanded coverage of SAE J1667 emissions testing round out the enhancements, making this edition a superior learner ' s guide

and an invaluable reference to the practicing technician

Common Rail System for GDI Engines

Anti-Dribble Valve, Digifant Engine Management System, Electronic Control Unit, Engine Control Unit,

Envirofit International,
Diesel Performance Handbook for Pickups and SUVs
Green Diesel Engines
Iml Med/Hvy Duty Truck Eng

Significantly updated to cover the latest

technological developments and include latest techniques and practices.

Succeed in your career in the dynamic field of commercial truck engine

service with this latest edition of the most comprehensive guide to highway diesel engines and their management systems available today! Ideal for students,

entry-level technicians, and experienced professionals, MEDIUM/HEAVY DUTY TRUCK ENGINES, FUEL & COMPUTERIZED MANAGEMENT SYSTEMS, Fifth Edition,

covers the full range of commercial vehicle diesel engines, from light- to heavy-duty, as well as the most current management electronics used in the industry. In

addition, dedicated chapters deal with natural gas (NG) fuel systems (CNG and LPG), alternate fuels, and hybrid drive systems. The book addresses the

latest ASE Education Foundation tasks, provides a unique emphasis on the modern multiplexed chassis, and will serve as a valuable toolbox reference

throughout your career. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook

version.

Diesel engines, also known as CI engines, possess a wide field of applications as energy converters because of their higher efficiency.

However, diesel engines are a major source of NOX and particulate matter (PM) emissions. Because of its importance, five chapters in this book

have been devoted to the formulation and control of these pollutants. The world is currently experiencing an oil crisis. Gaseous fuels like natural gas, pure

hydrogen gas, biomass-based and coke-based syngas can be considered as alternative fuels for diesel engines. Their combustion and exhaust emissions

characteristics are described in this book. Reliable early detection of malfunction and failure of any parts in diesel engines can save the engine from failing

completely and save high repair cost. Tools are discussed in this book to detect common failure modes of diesel engine that can detect early signs of failure.

With a focus on ecology, economy and engine performance, diesel engines are explored in relation to current research and developments. The

prevalent trends in this development are outlined with particular focus on the most frequently used alternative fuels in diesel engines; the properties of various

type of biodiesel and the concurrent improvement of diesel engine characteristics using numeric optimization alongside current investigation

and research work in the field. Following of a short overview of engine control, aftertreatment and alternative fuels, Green Diesel Engine explores the effects of

biodiesel usage on injection, fuel spray, combustion, and tribology characteristics, and engine performance. Additionally,

optimization procedures of diesel engine characteristics are discussed using practical examples and each topic is corroborated and

supported by current research and detailed illustrations. This thorough discussion provides a solid foundation in the current research but

also a starting point for fresh ideas for engineers involved in developing/adjusting diesel engines for usage of alternative fuels, researchers in renewable

energy, as well as to engineers, advanced undergraduates, and postgraduates. International and Interdisciplinary Studies in Green

Computing

Cost, Effectiveness, and Deployment of Fuel Economy Technologies for Light-Duty Vehicles

I.C. Engine Management System

A Thesis Submitted to the Victoria University of Wellington in Fulfilment of the Requirements for the Degree of Master of Engineering in

Electronic and Computer Systems

Diesel Engine

A Must Read Book for all Automobile and Mechanical Students, Teacher and Trainers. Engine Management System enables precise, central

control of all functions relevant for engine operation leading to reduced emissions, higher safety, comfort, and a more enjoyable dynamic riding. Electronic control allows fuel to be burnt efficiently. Engine Management Systems can precisely control the amount of fuel injected as well as the

ignition timing. The technology also monitoring vehicle – based on the lambda value, the regulation of the injector ensures the optimum combination of air and fuel.

Pounder's Marine Diesel Engines and Gas Turbines, Tenth Edition, gives engineering cadets, marine engineers,

ship operators and managers insights into currently available engines and auxiliary equipment and trends for the future. This new edition introduces new engine models that will be most commonly installed in ships over the next decade, as well as the latest legislation and pollutant emissions

procedures. Since publication of the last edition in 2009, a number of emission control areas (ECAs) have been established by the International Maritime Organization (IMO) in which exhaust emissions are subject to even more stringent controls. In addition, there are now rules that affect new

ships and their emission of CO2 measured as a product of cargo carried. Provides the latest emission control technologies, such as SCR and water scrubbers Contains complete updates of legislation and pollutant emission procedures Includes the latest emission control technologies

and expands upon remote monitoring and control of engines
Fundamentals of Mobile Heavy Equipment provides students with a thorough introduction to the diagnosis, repair, and maintenance of off-road mobile heavy equipment. With comprehensive, up-to-date coverage

of the latest technology in the field, it addresses the equipment used in construction, agricultural, forestry, and mining industries.

"Thoroughly updated and expanded, 'Fundamentals of Medium/Heavy Duty Commercial Vehicle Systems, Second Edition' offers comprehensive

coverage of basic concepts building up to advanced instruction on the latest technology, including distributed electronic control systems, energy-saving technologies, and automated driver-assistance systems. Now organized by outcome-based objectives to improve instructional

clarity and adaptability and presented in a more readable format, all content seamlessly aligns with the latest ASE Medium-Heavy Truck Program requirements for MTST." --Back cover.

Biodiesel Usage in Diesel Engines

Diesel Common Rail and Advanced Fuel Injection Systems

Medium/heavy Duty Truck Engines, Fuel and Computerized Management Systems

Bosch Diesel Engine Management Handbook

How to Tune and Modify Engine Management Systems

There is a lot of

movement - also in a figurative sense - when it comes to the diesel engine and diesel-fuel injection, in particular. These developments are now described in the

completely revised and updated 3rd Edition of the Diesel-Engine Management reference book. The electronics that control the diesel engine are explained in easy

detail. It provides a comprehensive description of all conventional diesel fuel-injection systems. It also contains a competent and detailed introduction to

the modern common rail system, Unit Injector System (UIS) and Unit Pump System (UPS), including the radial-piston distributor injection pump.

Provides extensive information on state-of the art diesel fuel injection technology. MODERN DIESEL TECHNOLOGY: LIGHT DUTY DIESELS provides a

thorough introduction to the light-duty diesel engine, now the power plant of choice in pickup trucks and automobiles to optimize fuel efficiency and longevity. While the

major emphasis is on highway usage, best-selling author Sean Bennett also covers small stationary and mobile off-highway diesels. Using a modularized structure,

Bennett helps the reader achieve a conceptual grounding in diesel engine technology. After exploring the tools required to achieve hands-on technical competency,

the text explores major engine subsystems and fuel management systems used over the past decade, including the common rail fuel systems that manage almost all

current light duty diesel engines. In addition, this text covers engine management systems, computer controls, multiplexing electronics, diesel emissions and the

means used to control them. All generations of CAN-bus technology are examined, including the latest automotive CAN-C multiplexing and the basics of network bus

troubleshooting. ASE A-9 certification learning objectives are addressed in detail. Important Notice: Media content referenced within the product description or

the product text may not be available in the ebook version.

Please note that the content of this book primarily consists of articles available from

Wikipedia or other free sources online. Pages: 33. Chapters: Anti-dribble valve, Digifant Engine Management system, Electronic control unit, Engine control unit,

Envirofit International, Fuel injection, Fuel rail, Gasoline direct injection, Indirect injection, Injection pump, Jacketed fuel injection pipe, Jetronic, Kugelfischer,

Lucas 14CUX, MegaSquirt, Motronic, Orbital Corporation, Powertrain control module, SDI (engine), SPICA, Turbocharged Direct Injection, VEMS.

Excerpt: Fuel rail connected to the injectors that are mounted just above the intake manifold on a four-cylinder engine.Fuel injection is a system for admitting fuel

into an internal combustion engine. It has become the primary fuel delivery system used in automotive engines, having replaced carburetors during the

1980s and 1990s. A variety of injection systems have existed since the earliest usage of the internal combustion engine. The primary difference between

carburetors and fuel injection is that fuel injection atomizes the fuel by forcibly pumping it through a small nozzle under high pressure, while a carburetor relies

on suction created by intake air accelerated through a Venturi tube to draw the fuel into the airstream. Modern fuel injection systems are designed specifically for

the type of fuel being used. Some systems are designed for multiple grades of fuel (using sensors to adapt the tuning for the fuel currently used). Most fuel

injection systems are for gasoline or diesel applications. The functional objectives for fuel injection systems can vary. All share the central task of supplying fuel to

the combustion process, but it is a design decision how a particular system is optimized. There are several competing objectives such as: The modern digital electronic

fuel injection system is more capable at optimizing these competing objectives consistently than earlier fuel delivery systems (such as...

Fundamentals of Mobile Heavy Equipment
Common Rail Fuel Injection Technology in Diesel Engines
Fundamentals of Medium/Heavy Duty

Diesel Engines
Electronic Diesel Engine Diagnosis
Pounder's Marine Diesel Engines and Gas Turbines
Volume 2 of the two-volume set Advanced

direct injection combustion engine technologies and development investigates diesel DI combustion engines, which despite their commercial success

are facing ever more stringent emission legislation worldwide. Direct injection diesel engines are generally more efficient and cleaner than indirect

injection engines and as fuel prices continue to rise DI engines are expected to gain in popularity for automotive applications. Two exclusive sections

examine light-duty and heavy-duty diesel engines. Fuel injection systems and after treatment systems for DI diesel engines are discussed. The final

section addresses exhaust emission control strategies, including combustion diagnostics and modelling, drawing on reputable diesel combustion system

research and development. Investigates how HSDI and DI engines can meet ever more stringent emission legislation Examines technologies

for both light-duty and heavy-duty diesel engines Discusses exhaust emission control strategies, combustion diagnostics and modelling

Fuel cell systems have now reached a degree of technological maturity and appear destined to form the cornerstone of future energy technologies. But the

rapid advances in fuel cell system development have left current information available only in scattered journals and Internet sites. The even faster

race toward fuel cell commercialization further
Systems and Components Proceedings of the third International Conference on Automotive and Fuel

Technology
Diesel Fuel Injection Modelling and Observation of Exhaust Gas Concentrations for Diesel Engine Control
Handbook of Diesel

Engines