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Performance of a Single Cylinder Diesel Engine Using Biodiesel Single-cylinder Diesel Engine Tests with Unstabilized Water-in-fuel Emulsions Diesel Engine Reference Book Handbook of Diesel Engines Multi-cylinder Diesel Engine Tests with Unstabilized Water-in-fuel Emulsions Diesel Engine System Design Practical Diesel-Engine Combustion Analysis Troubleshooting and Repair of Diesel Engines Diesel Engine Diesel Engines Diesel Engine Engineering Yanmar Marine Diesel Engine 2tm, 3tm, 4tm In-Cylinder Pressure Noise Analysis in Diesel Engines Design and Development of Heavy Duty Diesel Engines Pounder's Marine Diesel Engines Diesel Engine Reference Book The Adlard Coles Book of Diesel Engines Yanmar Marine Diesel Engine 1SM/2SM/3SM Automotive Diesel Engines Pounder's Marine Diesel Engines and Gas Turbines Diesel Engine Management Handbook of Diesel Engines Practical Diesel-Engine Combustion Analysis Diesel Engine Operation and Maintenance BMC (Levland) 1,5 + 1,8 LITRE DIESEL ENGINE Yanmar Diesel Engine Model 2 S Know Your Boat's Diesel Engine An Integrated Methodology for Fatigue Design of Diesel Engine Cylinder Heads Reeds Diesel Engine Troubleshooting Handbook Medium and High Speed Diesel Engines for Marine Use Potential of Diesel Engine, Emission Technology Advanced Direct Injection Combustion Engine Technologies and Development Medium/Heavy Duty Truck Engines, Fuel & Computerized Management Systems Fundamentals of Medium/Heavy Duty Diesel Engines Relation of Fuel and Lubricants to Operating Efficiency in the Diesel Engine Diesel Engines Concepts in Turbocharging for Improved Efficiency and Emissions Reduction Troubleshooting Marine Diesel Engines, 4th Ed. Modern Marine Internal Combustion Engines Pounder's Marine Diesel Engines and Gas Turbines

Practical Diesel-Engine Combustion Analysis Dec 07 2020 The diesel engine is one of the most efficient types of heat engines and is widely used as a prime mover for many applications. In recent years, with the aid of modern computers, engine combustion modeling has made great progress. However, due to the complexities of the processes involved in the practical diesel engine, there are still too many unknowns preventing computational prediction to have the accuracy level required by industry. This book examines some basic characteristics of diesel engine combustion process, and describes the commonly used tool to analyze combustion - heat release analysis. It addition, Practical Diesel-Engine Combustion Analysis describes the performance changes that might be encountered in the engine user environment, with a goal of helping the reader analyze his own practical combustion problems. Chapters include: Combustion and Fuel-Injection Processes in the Diesel Engine Heat Release and its Effect on Engine Performance Alternate Fuels Combustion Analysis and more

Practical Diesel-Engine Combustion Analysis Apr 23 2022 The diesel engine is one of the most efficient types of heat engines and is widely used as a prime mover for many applications. In recent years, with the aid of modern computers, engine combustion modeling has made great progress. However, due to the complexities of the processes involved in the practical diesel engine, there are still too many unknowns preventing computational prediction to have the accuracy level required by industry. This book examines some basic characteristics of diesel engine combustion process, and describes the commonly used tool to analyze combustion - heat release analysis. It addition, Practical Diesel-Engine Combustion Analysis describes the performance changes that might be encountered in the engine user environment, with a goal of helping the reader analyze his own practical combustion problems. Chapters include: Combustion and Fuel-Injection Processes in the Diesel Engine Heat Release and its Effect on Engine Performance Alternate Fuels Combustion Analysis and more

The Adlard Coles Book of Diesel Engines Jun 13 2021 The Adlard Coles Book of Diesel Engines, previously published as The RYA Book of Diesel Engines, is aimed at boatowners rather than experienced mechanics. In clear jargon-free English it explains how a diesel engine works, and how to look after it, and takes into account new developments in engine technology. Based on the RYA's one-day Diesel Engine course, Tim Bartlett explains how the engine uses simple processes to convert fuel to power, and then looks at the various sub-systems that allow those processes to take place. He also takes a look at tools, winterizing and provides hints, tips and fault-finding tables. 'The next best thing to taking the course itself' Motor Boats Monthly

Relation of Fuel and Lubricants to Operating Efficiency in the Diesel Engine Nov 25 2019
Design and Development of Heavy Duty Diesel Engines Sep 16 2021 This book is intended to serve as a comprehensive reference on the design and development of diesel engines. It talks about combustion and gas exchange processes with important references to emissions and fuel consumption and descriptions of the design of various parts of an engine, its coolants and lubricants, and emission control and optimization techniques. Some of the topics covered are turbocharging and supercharging, noise and vibrational control, emission and combustion control, and the future of heavy duty diesel engines. This volume will be of interest to researchers and professionals working in this area.

Diesel Engine Reference Book Aug 27 2022 The Diesel Engine Reference Book, Second Edition, is a comprehensive work covering the design and application of diesel engines of all sizes. The first edition was published in 1984 and since that time the diesel engine has made significant advances in application areas from passenger cars and light trucks through to large marine vessels. The Diesel Engine Reference Book systematically covers all aspects of diesel engineering, from thermodynamics theory and modelling to condition monitoring of engines in service. It ranges through subjects of long-term use and application to engine designers, developers and users of the most ubiquitous mechanical power source in the world. The latest edition leaves few of the original chapters untouched. The technical changes of the past 20 years have been enormous and this is reflected in the book. The essentials however, remain the same and the clarity of the original remains. Contributors to this well-respected work include some of the most prominent and experienced engineers from the UK, Europe and the USA. Most types of diesel engines from most applications are represented, from the smallest air-cooled engines, through passenger car and trucks, to marine engines. The approach to the subject is essentially practical, and even in the most complex technological language remains straightforward, with mathematics used only where necessary and then in a clear fashion. The approach to the topics varies to suit the needs of different readers. Some areas are covered in both an overview and also in some detail. Many drawings, graphs and photographs illustrate the 30 chapters and a large easy to use index provides convenient access to any information the readers requires.

Diesel Engine Operation and Maintenance Nov 06 2020
BMC (Levland) 1,5 + 1,8 LITRE DIESEL ENGINE Oct 05 2020 Reprint of the entire official factory publications for the four-cylinder BMC Diesel-Engines, which even today are still very common in boating.

Handbook of Diesel Engines Jan 08 2021 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.

Troubleshooting Marine Diesel Engines, 4th Ed. Aug 23 2019 This densely illustrated, hands-on guide to diesel engine maintenance, troubleshooting, and repair renders its subject more user-friendly than ever before. Finally, boatowners who grew up with gas engines can set aside their fears about tinkering with diesels, which are safer and increasingly more prevalent. As in other volumes in the International Marine Sailboat Library, every step of every procedure is illustrated, so that users can work from the illustrations alone. The troubleshooting charts in the second chapter-probably the most comprehensive ever published-are followed by system-specific chapters, allowing readers to quickly diagnose problems, then turn to the chapter with solutions. Diesel engine systems covered include: mechanical; oil; fresh- and raw-water cooling; low- and high-pressure fuel; exhaust; starting; charging; transmission and stern gear.

Pounder's Marine Diesel Engines and Gas Turbines Jun 20 2019 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

Multi-cylinder Diesel Engine Tests with Unstabilized Water-in-fuel Emulsions Jun 25 2022
Yanmar Marine Diesel Engine 2tm, 3tm, 4tm Nov 18 2021 Reprint of the official service manual for Yanmar marine diesel engines 2TM, 3TM and 4TM.
Diesel Engine System Design May 24 2022 Diesel Engine System Design links everything diesel engineers need to know about engine performance and system design in order for them to master all the essential topics quickly and to solve practical design problems. Based on the author's unique experience in the field, it enables engineers to come up with an appropriate specification at an early stage in the product development cycle. Links everything diesel engineers need to know about engine performance and system design featuring essential topics and techniques to solve practical design problems Focuses on engine performance and system integration including important approaches for modelling and analysis Explores fundamental concepts and generic techniques in diesel engine system design incorporating durability, reliability and optimization theories

Advanced Direct Injection Combustion Engine Technologies and Development Feb 27 2020 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

Medium/Heavy Duty Truck Engines, Fuel & Computerized Management Systems Jan 28 2020 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.

Yanmar Diesel Engine Model 2 S Sep 04 2020 Reprint of the official service manual for Yanmar diesel engine model 2 S.
Diesel Engines Jan 20 2022 This book covers diesel engine theory, technology, operation and maintenance for candidates for the Department of Transport's Certificates of Competency in Marine Engineering, Class One and Class Two. The book has been updated throughout to include new engine types and operating systems that are currently in active development or recently introduced.

Diesel Engine Feb 21 2022 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.

Single-cylinder Diesel Engine Tests with Unstabilized Water-in-fuel Emulsions Sep 28 2022 A single-cylinder, four-stroke cycle diesel engine was operated on unstabilized water-in-fuel emulsions. Two prototype devices were used to produce the emulsions on-line with the engine. More than 350 test points were run with baseline diesel fuel and emulsified water-in-fuel. Water content of the emulsified fuel varied from about 2% to 23% by volume. Statistically significant decreases in fuel consumption, ranging from 1.2% to 5.1% were obtained with emulsified fuels in 20 out of 36 test conditions. An increase of 2.5% was measured at one condition only. Use of the emulsified fuels decreased oxides of nitrogen by up to about 60% and Bosch smoke numbers by up to almost 70%, whereas unburned hydrocarbons increased up to over 130%. Carbon monoxide changes with emulsified fuel varied from a decrease of 52% to an increase of over 170%, depending on engine speed and power, and water content of the fuel. No problems were encountered in engine operation at any test condition with the water-in-fuel emulsions. (Author).

In-Cylinder Pressure Noise Analysis in Diesel Engines Oct 17 2021 Diesel engine in-cylinder pressure analysis has been a subject of interest right from the inception of internal combustion engines. Engine cylinder pressure measurements provide insight into the combustion process and the accuracy of these measurements governs the quality of analyses of different combustion modes of the engine. Since the in-cylinder pressure increases abruptly after the start of combustion, non-flush mounting of the pressure transducer creates standing/resonant waves in the access passage which severely affect the recorded pressure fidelity by introducing undesired noise. The challenge is to get rid of these pressure pulsations and characterize the unaccounted noise which can lead to erroneous determination of different combustion parameters and characteristics. This work focuses on online filtering of the noisy pressure data so as to obviate the need of any post-processing for combustion and noise analysis. An online filtering algorithm is defined which is a combination of a five-point moving average filter and a forward and reverse Butterworth digital filter. It is tested for its robustness over different ranges of engine load, speed and boost.

Troubleshooting and Repair of Diesel Engines Mar 22 2022 Harness the Latest Tools and Techniques for Troubleshooting and Repairing Virtually Any Diesel Engine Problem The Fourth Edition of Troubleshooting and Repairing Diesel Engines presents the latest advances in diesel technology. Comprehensive and practical, this revised classic equips you with all of the state-of-the-art tools and techniques needed to keep diesel engines running in top condition. Written by master mechanic and bestselling author Paul Dempsey, this hands-on resource covers new engine technology, electronic engine management, biodiesel fuels, and emissions controls. The book also contains cutting-edge information on diagnostics...fuel systems...mechanical and electronic governors...cylinder heads and valves...engine mechanics...turbochargers...electrical basics...starters and generators...cooling systems...exhaust aftertreatment...and more. Packed with over 350 drawings, schematics, and photographs, the updated Troubleshooting and Repairing Diesel Engines features: New material on biodiesel and straight vegetable oil fuels Intensive reviews of troubleshooting procedures New engine repair procedures and tools State-of-the-art turbocharger techniques A comprehensive new chapter on troubleshooting and repairing electronic engine management systems A new chapter on the worldwide drive for greener, more environmentally friendly diesels Get Everything You Need to Solve Diesel Problems Quickly and Easily • Rudolf Diesel • Diesel Basics • Engine Installation • Fuel Systems • Electronic Engine Management Systems • Cylinder Heads and Valves • Engine Mechanics • Turbochargers • Electrical Fundamentals • Starting and Generating Systems • Cooling Systems • Greener Diesels

Diesel Engine Management Feb 09 2021 This reference book provides a comprehensive insight into today's 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.

Diesel Engine Reference Book Jul 14 2021

Yanmar Marine Diesel Engine 15M/25M/35M May 12 2021 Complete Service Handbook and Workshop Manual for the Yanmar Marine Diesel Engines 15M / 25M and 35M.

Know Your Boat's Diesel Engine Aug 03 2020 Originally published: RYA diesel engine handbook / by the Royal Yachting Association, 2006.

Concepts in Turbocharging for Improved Efficiency and Emissions Reduction Sep 23 2019 Legislative requirements to reduce CO2 emissions by 2020 have resulted in significant efforts by car manufacturers to explore various methods of pollution abatement. One of the most effective ways found so far is by shortening the cylinder stroke and downsizing the engine. This new engine then needs to be boosted, or turbocharged, to create the full and original load torque. Turbocharging has been and will continue to be a key component to the new technologies that will make a positive difference in the next-generation engines of years to come. Concepts in Turbocharging for Improved Efficiency and Emissions Reduction explores the many ways that turbocharging will deliver concrete results in meeting the new realities of sustainable, green transportation. This collection of very focused technical papers, selected by Mehrdad Zangeneh, Ph.D., a professor of thermo-fluids at University College in London, provides an assessment of several novel designs intended to improve fuel consumption and cap emissions, while maintaining torque at all speeds. The book is divided into four sections, each addressing the most cutting-edge technologies on the market today: o Two-Stage Turbocharging o Variable Geometry Compressors o Unconventional Compressor Configurations o Electrically Assisted Turbocharging

Founder's Marine Diesel Engines and Gas Turbines Mar 10 2021 Since its first appearance in 1950, Founder's Marine Diesel Engines has served seagoing engineers, students of the Certificates of Competency examinations and the marine engineering industry throughout the world. Each new edition has noted the changes in engine design and the influence of new technology and economic needs on the marine diesel engine. Now in its ninth edition, Founder's retains the directness of approach and attention to essential detail that characterized its predecessors. There are new chapters on monitoring control and HIMSSEN engines as well as information on developments in electronic-controlled fuel injection. It is fully updated to cover new legislation including that on emissions and provides details on enhancing overall efficiency and cutting CO2 emissions. After experience as a seagoing engineer with the British India Steam Navigation Company, Doug Woodyard held editorial positions with the Institution of Mechanical Engineers and the Institute of Marine Engineers. He subsequently edited The Motor Ship journal for eight years before becoming a freelance editor specializing in shipping, shipbuilding and marine engineering. He is currently technical editor of Marine Propulsion and Auxiliary Machinery, a contributing editor to Speed at Sea, Shipping World and Shipbuilder and a technical press consultant to Rolls-Royce Commercial Marine. * Helps engineers to understand the latest changes to marine diesel engines * Careful organisation of the new edition enables readers to access the information they require * Brand new chapters focus on monitoring control systems and HIMSSEN engines. * Over 270 high quality, clearly labelled illustrations and figures to aid understanding and help engineers quickly identify what they need to know.

Fundamentals of Medium/Heavy Duty Diesel Engines Dec 27 2019 "Fundamentals of Medium/Heavy Duty Diesel Engines, Second Edition offers comprehensive coverage of every ASE task with clarity and precision in a concise format that ensures student comprehension and encourages critical thinking. This edition describes safe and effective diagnostic, repair, and maintenance procedures for today's medium and heavy vehicle diesel engines"--

Performance of a Single Cylinder Diesel Engine Using Biodiesel Oct 29 2022

Potential of Diesel Engine, Emission Technology Mar 30 2020

Diesel Engine Engineering Dec 19 2021 Of the forces acting in a four-stroke diesel engine with in-line cylinders. Mean tangential force. Summary of the forces acting in a two-stroke diesel engine. Summary of the forces acting in a V-diesel engine. Diesel engine torque. Balancing of torque oscillation and selection of flywheel. Applied masses and moments of inertia of rotating components. Starting up a diesel engine. Balancing engine vibration -- Ch. 3. Design and Structural Analysis of Diesel Engine Components. Bedplate and base. Main bearing caps. Crankcase. Tension rods. Cylinder jacket and cylinder liner. Cylinder head. Piston. Piston pin. Piston rings. Connecting rod. Connecting rod bolts. Crankshaft. Flywheel bolts. Factor of safety of diesel engine components.

Handbook of Diesel Engines Jul 26 2022 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.

Reeds Diesel Engine Troubleshooting Handbook Jun 01 2020 Most diesel engines will develop a problem at some point in their lives, but armed with the right knowledge a skipper needn't worry. The Reeds Diesel Engine Troubleshooting Handbook is a compact, pocket-sized guide to finding solutions to all of the most common engine problems, and many of the less common ones too. The perfect format for quick reference on board, this book will help skippers fix troublesome engines themselves, avoiding costly engineer fees if the problem is simple to sort out, or enabling an emergency patch-up for a more serious problem until they can get back to port. Each topic addresses a particular engine problem, and gives clear step by step instructions with helpful colour photographs and diagrams showing exactly what to do. Straightforward and accessible, the Reeds Diesel Engine Troubleshooting Handbook should be an essential part of any skipper's DIY toolkit - and perfect for slipping in the pocket.

An Integrated Methodology for Fatigue Design of Diesel Engine Cylinder Heads Jul 02 2020

Pounder's Marine Diesel Engines Aug 15 2021 Pounder's Marine Diesel Engines, Sixth Edition focuses on developments in diesel engines. The book first discusses theory and general principles. Theoretical heat cycle, practical cycles, thermal and mechanical efficiency, working cycles, fuel consumption, vibration, and horsepower are considered. The text takes a look at engine selection and performance, including direct and indirect drive, maximum rating, exhaust temperatures, derating, mean effective pressures, fuel coefficient, propeller performance, and power build-up. The book also examines pressure charging. Matching of turboblowers, blower surge, turbocharger types, constant pressure method, impulse turbocharging method, and scavenging are discussed. The text describes fuel injection, Sulzer, MAN, and Burmeister and Wain engines. The selection also considers Mitsubishi, GMT, and Doxford engines. The text then focuses on fuels and fuel chemistry; operation, monitoring, and maintenance; significant operating problems; and engine installation. Engine seatings and alignment, reaction measurements, crankcase explosions, main engine crankshaft defects, bearings, fatigue, and overhauling and maintenance are discussed. The book is a good source of information for readers wanting to study diesel engines.

Medium and High Speed Diesel Engines for Marine Use Apr 30 2020

Automotive Diesel Engines Apr 11 2021 Explains how diesel engines work, examines the lubrication, cooling, fuel, and electrical systems, and demonstrates basic maintenance, troubleshooting, and repair techniques

Modern Marine Internal Combustion Engines Jul 22 2019 This book offers a comprehensive and timely overview of internal combustion engines for use in marine environments. It reviews the development of modern four-stroke marine engines, gas and gas-diesel engines and low-speed two-stroke crosshead engines, describing their application areas and providing readers with a useful snapshot of their technical features, e.g. their dimensions, weights, cylinder arrangements, cylinder capabilities, rotation speeds, and exhaust gas temperatures. For each marine engine, information is provided on the manufacturer, historical background, development and technical characteristics of the manufacturer's most popular models, and detailed drawings of the engine, depicting its main design features. This book offers a unique, self-contained reference guide for engineers and professionals involved in shipbuilding. At the same time, it is intended to support students at maritime academies and university students in naval architecture/marine engineering with their design projects at both master and graduate levels, thus filling an important gap in the literature.

Diesel Engines Oct 25 2019