

SECTION 10 - ENGINE

Op. 10 000

GENERAL ENGINE INFORMATION

New Holland engines, N844 used in the model LS160 skid steer and N844T turbocharger engine used in the model LS170 skid steer.

GENERAL DESCRIPTION

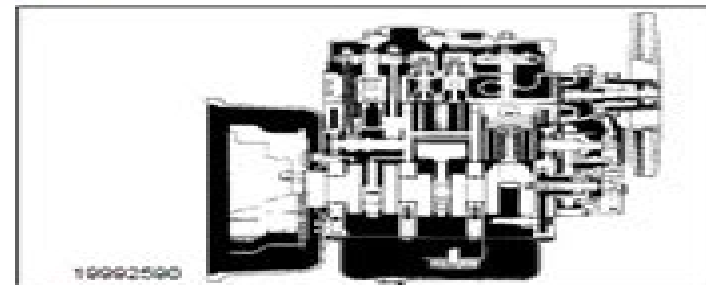
The N844, N844T Series are four-cylinder stroke, liquid-cooled, compression ignition engines, designed for durability, low weight and compactness. The engines are IDI (In Direct Injection). The linerless cylinder block, three-piece helical gear train, and flange-mounted fuel injection pump on the engine cam, reduce frictional power loss and engine weight. The special direct-injection or swirl chamber, along with the small bore multi-cylinder design, offers good fuel consumption, low noise, and excellent start-ability.

ENGINE COMPONENT DESCRIPTIONS**CYLINDER BLOCK**

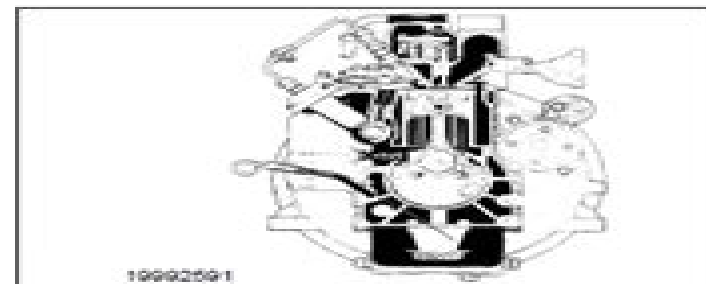
The cylinder block is made from high-grade cast iron with copper and chrome additives and is integral with the crankcase. The crankcase features five main bearings of the tunnel block design, with crankcase walls extending well below the crankshaft centerline for strength and rigidity. The cylinder's bores are plateau honed for oil retention and extended ring life. The non-machined surfaces are sealed to ensure cleanliness.

CRANKSHAFT

The crankshaft is a chrome-molybdenum steel forging, fully machined, static, and dynamically balanced with integral counterweights. All bearing surfaces are induction hardened. The axial location is by thrust washers at the number five main bearing. The five main journals run in replaceable steel-backed cast copper/lead alloy bearings. The front of the crankshaft is keyed.



1



2

[New Holland Ls170 Manual Free](#)

**Sperry New Holland, New Holland
Machine Company, Ford Motor
Company**



New Holland Ls170 Manual Free:

Farmers and Consumers Market Bulletin ,2010 **Service Manual, Skid Steer Loader L-555 Sperry New Holland**
Sperry New Holland,New Holland Machine Company,Ford Motor Company,1985 **Repair Manual** New Holland North
America,1998

Right here, we have countless ebook **New Holland Ls170 Manual Free** and collections to check out. We additionally come up with the money for variant types and then type of the books to browse. The agreeable book, fiction, history, novel, scientific research, as well as various supplementary sorts of books are readily understandable here.

As this New Holland Ls170 Manual Free, it ends in the works mammal one of the favored book New Holland Ls170 Manual Free collections that we have. This is why you remain in the best website to see the incredible book to have.

<https://correiodobrasil.blogosfero.cc/results/virtual-library/Documents/old%20roots%20new%20routes%20the%20cultural%20politics%20of%20altcountry%20music.pdf>

Table of Contents New Holland Ls170 Manual Free

1. Understanding the eBook New Holland Ls170 Manual Free
 - The Rise of Digital Reading New Holland Ls170 Manual Free
 - Advantages of eBooks Over Traditional Books
2. Identifying New Holland Ls170 Manual Free
 - Exploring Different Genres
 - Considering Fiction vs. Non-Fiction
 - Determining Your Reading Goals
3. Choosing the Right eBook Platform
 - Popular eBook Platforms
 - Features to Look for in an New Holland Ls170 Manual Free
 - User-Friendly Interface
4. Exploring eBook Recommendations from New Holland Ls170 Manual Free
 - Personalized Recommendations
 - New Holland Ls170 Manual Free User Reviews and Ratings
 - New Holland Ls170 Manual Free and Bestseller Lists
5. Accessing New Holland Ls170 Manual Free Free and Paid eBooks

-
- New Holland Ls170 Manual Free Public Domain eBooks
 - New Holland Ls170 Manual Free eBook Subscription Services
 - New Holland Ls170 Manual Free Budget-Friendly Options
6. Navigating New Holland Ls170 Manual Free eBook Formats
 - ePub, PDF, MOBI, and More
 - New Holland Ls170 Manual Free Compatibility with Devices
 - New Holland Ls170 Manual Free Enhanced eBook Features
 7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of New Holland Ls170 Manual Free
 - Highlighting and Note-Taking New Holland Ls170 Manual Free
 - Interactive Elements New Holland Ls170 Manual Free
 8. Staying Engaged with New Holland Ls170 Manual Free
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers New Holland Ls170 Manual Free
 9. Balancing eBooks and Physical Books New Holland Ls170 Manual Free
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection New Holland Ls170 Manual Free
 10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
 11. Cultivating a Reading Routine New Holland Ls170 Manual Free
 - Setting Reading Goals New Holland Ls170 Manual Free
 - Carving Out Dedicated Reading Time
 12. Sourcing Reliable Information of New Holland Ls170 Manual Free
 - Fact-Checking eBook Content of New Holland Ls170 Manual Free
 - Distinguishing Credible Sources
 13. Promoting Lifelong Learning
 - Utilizing eBooks for Skill Development

- Exploring Educational eBooks

14. Embracing eBook Trends

- Integration of Multimedia Elements
- Interactive and Gamified eBooks

New Holland Ls170 Manual Free Introduction

New Holland Ls170 Manual Free Offers over 60,000 free eBooks, including many classics that are in the public domain. Open Library: Provides access to over 1 million free eBooks, including classic literature and contemporary works. New Holland Ls170 Manual Free Offers a vast collection of books, some of which are available for free as PDF downloads, particularly older books in the public domain. New Holland Ls170 Manual Free : This website hosts a vast collection of scientific articles, books, and textbooks. While it operates in a legal gray area due to copyright issues, its a popular resource for finding various publications. Internet Archive for New Holland Ls170 Manual Free : Has an extensive collection of digital content, including books, articles, videos, and more. It has a massive library of free downloadable books. Free-eBooks New Holland Ls170 Manual Free Offers a diverse range of free eBooks across various genres. New Holland Ls170 Manual Free Focuses mainly on educational books, textbooks, and business books. It offers free PDF downloads for educational purposes. New Holland Ls170 Manual Free Provides a large selection of free eBooks in different genres, which are available for download in various formats, including PDF. Finding specific New Holland Ls170 Manual Free, especially related to New Holland Ls170 Manual Free, might be challenging as theyre often artistic creations rather than practical blueprints. However, you can explore the following steps to search for or create your own Online Searches: Look for websites, forums, or blogs dedicated to New Holland Ls170 Manual Free, Sometimes enthusiasts share their designs or concepts in PDF format. Books and Magazines Some New Holland Ls170 Manual Free books or magazines might include. Look for these in online stores or libraries. Remember that while New Holland Ls170 Manual Free, sharing copyrighted material without permission is not legal. Always ensure youre either creating your own or obtaining them from legitimate sources that allow sharing and downloading. Library Check if your local library offers eBook lending services. Many libraries have digital catalogs where you can borrow New Holland Ls170 Manual Free eBooks for free, including popular titles. Online Retailers: Websites like Amazon, Google Books, or Apple Books often sell eBooks. Sometimes, authors or publishers offer promotions or free periods for certain books. Authors Website Occasionally, authors provide excerpts or short stories for free on their websites. While this might not be the New Holland Ls170 Manual Free full book , it can give you a taste of the authors writing style. Subscription Services Platforms like Kindle Unlimited or Scribd offer subscription-based access to a wide range of New Holland Ls170 Manual Free eBooks, including some popular titles.

FAQs About New Holland Ls170 Manual Free Books

What is a New Holland Ls170 Manual Free PDF? A PDF (Portable Document Format) is a file format developed by Adobe that preserves the layout and formatting of a document, regardless of the software, hardware, or operating system used to view or print it. **How do I create a New Holland Ls170 Manual Free PDF?** There are several ways to create a PDF: Use software like Adobe Acrobat, Microsoft Word, or Google Docs, which often have built-in PDF creation tools. Print to PDF: Many applications and operating systems have a "Print to PDF" option that allows you to save a document as a PDF file instead of printing it on paper. Online converters: There are various online tools that can convert different file types to PDF. **How do I edit a New Holland Ls170 Manual Free PDF?** Editing a PDF can be done with software like Adobe Acrobat, which allows direct editing of text, images, and other elements within the PDF. Some free tools, like PDFescape or Smallpdf, also offer basic editing capabilities. **How do I convert a New Holland Ls170 Manual Free PDF to another file format?** There are multiple ways to convert a PDF to another format: Use online converters like Smallpdf, Zamzar, or Adobe Acrobats export feature to convert PDFs to formats like Word, Excel, JPEG, etc. Software like Adobe Acrobat, Microsoft Word, or other PDF editors may have options to export or save PDFs in different formats. **How do I password-protect a New Holland Ls170 Manual Free PDF?** Most PDF editing software allows you to add password protection. In Adobe Acrobat, for instance, you can go to "File" -> "Properties" -> "Security" to set a password to restrict access or editing capabilities. Are there any free alternatives to Adobe Acrobat for working with PDFs? Yes, there are many free alternatives for working with PDFs, such as: LibreOffice: Offers PDF editing features. PDFsam: Allows splitting, merging, and editing PDFs. Foxit Reader: Provides basic PDF viewing and editing capabilities. How do I compress a PDF file? You can use online tools like Smallpdf, ILovePDF, or desktop software like Adobe Acrobat to compress PDF files without significant quality loss. Compression reduces the file size, making it easier to share and download. Can I fill out forms in a PDF file? Yes, most PDF viewers/editors like Adobe Acrobat, Preview (on Mac), or various online tools allow you to fill out forms in PDF files by selecting text fields and entering information. Are there any restrictions when working with PDFs? Some PDFs might have restrictions set by their creator, such as password protection, editing restrictions, or print restrictions. Breaking these restrictions might require specific software or tools, which may or may not be legal depending on the circumstances and local laws.

Find New Holland Ls170 Manual Free :

old roots new routes the cultural politics of altcountry music

olympus stylus verve digital camera manual

[onan generator mcck manual](#)

[onan generator manual 12015](#)

[old wizard tiller manual](#)

[olympus manual focus assist](#)

[olympus ds3400 manual](#)

[olympus stylus 7010 manual espanol](#)

[oleo mac service manual](#)

[on the way to heideggers contributions to philosophy](#)

[olutions manual modern database management hoffer](#)

[olympische spelen in de oudheid](#)

[onan 10kw generator parts manual](#)

[olympus stylus 600 user guide](#)

[oman off road explorer activity guide](#)

New Holland Ls170 Manual Free :

moving averages 101 second edition incredible signals that - Apr 30 2022

web the completely revised and updated second edition is 50 bigger with many new trendspider charts moving averages 101 is the easiest way to learn how to capture trends in the stock market master moving averages and give yourself a significant trading advantage benefit from 25 years of trading experience limit your chances of trading ruin

moving averages 101 incredible signals that will make you - Jul 02 2022

web moving averages 101 incredible signals that will make you money in the stock market kindle edition by steve burns

author holly burns author format kindle edition 4 1 4 1 out of 5 stars 659 ratings

moving averages 101 by steve burns holly burns audible com - Mar 30 2022

web publisher s summary moving averages 101 is the easiest way to learn how to capture trends in the stock market master moving averages and give yourself a significant trading advantage benefit from 20 years of trading experience limit your chances of trading ruin by learning from someone with more than 20 years in the stock market

moving averages 101 second edition incredible signals that - Apr 11 2023

web oct 6 2020 moving averages 101 second edition incredible signals that will make you money burns steve burns holly on amazon com free shipping on qualifying offers moving averages 101 second edition

moving averages 101 second edition incredible signals that - Feb 26 2022

web oct 6 2020 moving averages 101 second edition incredible signals that will make you money the completely revised and

updated second edition is 50 bigger with many new trendspider charts moving

moving averages 101 incredible signals that will make you - Mar 10 2023

web jun 30 2015 createspace independent publishing platform jun 30 2015 investments 102 pages moving averages 101 is the easiest way to learn how to capture trends in the stock market master moving

moving averages 101 incredible signals that will make you - Nov 06 2022

web dec 23 2020 moving averages 101 incredible signals that will make you money unabridged steve burns holly burns 5 99 publisher description the completely revised and updated second edition is 50 percent bigger moving averages 101 is the easiest way to learn how to capture trends in the stock market

moving averages 101 incredible signals that will make you - Jan 28 2022

web moving averages 101 incredible signals that will make you money in the stock market pdfdrive free download as pdf file pdf text file txt or read online for free

moving averages 101 incredible signals that will make you - Dec 27 2021

web moving averages 101 is the easiest way to learn how to capture trends in the stock market master moving averages and give yourself a significant trading advantage benefit from 20 years of trading experience limit your chances of trading ruin by learning from someone with more than 20 years in the stock market

moving averages 101 incredible signals that will make you - Dec 07 2022

web moving averages 101 is the easiest way to learn how to capture trends in the stock market master moving averages and give yourself a significant trading advantage benefit from 20 years of trading experience limit your chances of trading ruin by learning from someone with more than 20 years in the stock market

moving averages 101 incredible signals that will make you - Jun 13 2023

web jun 30 2015 moving average 101 is part of a series of books written by steve and holly burns husband wife team what this book is about it goes in depth into the use of moving average which is considered the most popular indicator you ll learn what are the short medium and long term moving averages and how you can use it in your trading

moving averages 101 incredible signals that will make you - Jun 01 2022

web moving averages 101 presents the easiest way to learn how to capture trends in the stock market it gives you a great understanding of the power of moving averages giving easy to understand explanations of complex topics as well as detailed annotated trading charts

moving averages 101 incredible signals that will make you - Feb 09 2023

web jul 12 2015 moving averages 101 incredible signals that will make you money in the stock market kindle edition by burns steve burns holly download it once and read it on your kindle device pc phones or tablets

moving averages 101 incredible signals that will make you - Jul 14 2023

web moving averages 101 incredible signals that will make you money in the stock market burns steve burns holly amazon com tr kitap

moving averages 101 incredible signals that will make you - Jan 08 2023

web jun 7 2016 moving averages 101 incredible signals that will make you money in the stock market unabridged steve burns holly burns 5 0 2 ratings 5 99 publisher description moving averages 101 is the easiest way to learn how to capture trends in the stock market master moving averages and give yourself a significant trading advantage

moving averages 101 incredible signals that will make you - Aug 03 2022

web buy moving averages 101 incredible signals that will make you money in the stock market annotated by burns steve burns holly isbn 9781515133964 from amazon s book store everyday low prices and free delivery on eligible orders

moving averages 101 second edition incredible signals that - May 12 2023

web oct 6 2020 moving averages 101 second edition incredible signals that will make you money kindle edition by burns steve burns holly download it once and read it on your kindle device pc phones or tablets

moving averages 101 incredible signals that will make you - Sep 04 2022

web moving averages 101 incredible signals that will make you money in the stock market burns steve burns holly amazon com au books

moving averages 101 second edition incredible signals - Oct 05 2022

web master moving averages and give yourself a significant trading advantage benefit from 25 years of trading experience limit your chances of trading ruin by learning from someone with more than 20 years in the stock market steve will teach you what a moving averages are and how to trade them

moving averages 101 second edition incredible signals that - Aug 15 2023

web moving averages 101 second edition incredible signals that will make you money burns steve burns holly amazon com tr kitap

the journey of the elu to enlightenment a contemp pdf - Feb 10 2023

web the journey of the elu to enlightenment a contemp 2 9 downloaded from uniport edu ng on june 2 2023 by guest skills and was determined to measure his own powers of endurance against them he would succeed where shackleton had failed in the most brutal landscape in the world in 2008

the journey of the elu to enlightenment a contemp pdf - Jul 03 2022

web jul 6 2023 the journey of the elu to enlightenment a contemp 2 8 downloaded from uniport edu ng on july 6 2023 by guest studied contemplated and finally absorbed within meditation until the mind and heart are cleared of their obscurations

and the practitioner perfects wisdom and compassion in the state of full enlightenment

the journey of the elu to enlightenment google books - May 13 2023

web mar 7 2019 the journey of the elu to enlightenment a contemporary interpretation of the teachings of the scottish rite

robert davis amazon digital services llc kdp print us mar 7 2019 372 pages 0

east of enlightenment regulating cosmopolitanism between istanbul - Nov 07 2022

web sep 1 2010 the relationship of the european enlightenment to islam has usually been analyzed by collating attitudes toward a religion conceived as constitutively non european enlightenment thinkers

the journey of the elu to enlightenment a contemp vpn - Feb 27 2022

web the journey of the elu to enlightenment a contemp 3 3 charm of the legendary madhigattan for est and wander through it in a state of joint hallucination as they journey through the woods they meet three great souls and there is a revelation on the state of their own countrymen who are these three great souls what do

read free the journey of the elu to enlightenment a contemp - Apr 12 2023

web the journey of the elu to enlightenment a contemp on the path to enlightenment aug 16 2020 dilgo khyentse rinpoche inspired matthieu ricard to create this anthology by telling him that when we come to appreciate the depth of the view of the eight great traditions of tibetan buddhism and also see that they all lead to the

the journey of the elu to enlightenment a contemp - Jun 02 2022

web the journey of the elu to enlightenment a contemp is available in our book collection an online access to it is set as public so you can download it instantly our book servers hosts in multiple locations allowing you to get the most less latency time to download any of our books like this one

your journey to enlightenment twelve guiding principles to - Dec 28 2021

web dec 30 2013 your journey to enlightenment lays out 12 guiding principles that will help you discover how to live in constant unfolding potential without attachment to outcomes live awake and aware soaring as a magnetizing force in personal and global expansion

the journey of the elu to enlightenment a contemp pdf - Jan 09 2023

web jul 1 2023 the journey of the elu to enlightenment a contemp 2 7 downloaded from uniport edu ng on july 1 2023 by guest and it is the living proof of how lead turns into gold how matter transforms into spirit and how a catipillar turns into a butterfly comic tones in science fiction donald m hassler 1982 10 25 british book production 1970

the journey of the elu to enlightenment a contemp - Dec 08 2022

web the best that is within him in all activities of his life the journey is nothing less than the journey to the mature masculine soul this book takes a new look at how the teachings of the scottish rite serve both the individual and humanity in advancing

the ideals of peace enlightenment and freedom for all mankind it

the journey of the elu to enlightenment a contemporary - Jul 15 2023

web mar 7 2019 the journey of the elu to enlightenment a contemporary interpretation of the teachings of the scottish rite
davis robert g on amazon com free shipping on qualifying offers the journey of the elu to enlightenment a contemporary interpretation of the teachings of the scottish rite

loading interface goodreads - Jan 29 2022

web discover and share books you love on goodreads

the journey of the elu to enlightenment a contemp pdf - Mar 31 2022

web aug 31 2022 the journey of the elu to enlightenment a contemp when somebody should go to the book stores search inauguration by shop shelf by shelf it is really problematic this is why we offer the book compilations in this website it will unconditionally ease you to see guide the journey of the elu to enlightenment a contemp as you such

conclusion the enlightenment project of bruno latour taylor - May 01 2022

web doi link for conclusion the enlightenment project of conclusion the enlightenment project of book by bruno latour book
bruno latour click here to navigate to parent product edition 1st edition first published 2011 imprint routledge pages 21
ebook isbn 9780203835272 share abstract

the journey of the elu to enlightenment a contemp albert - Sep 05 2022

web journey of the elu to enlightenment a contemp join that we give here and check out the link you could purchase lead the journey of the elu to enlightenment a contemp or acquire it as soon as feasible

the journey of the elu to enlightenment a contemp pdf wp - Jun 14 2023

web pages of the journey of the elu to enlightenment a contemp a marvelous fictional prize filled with raw feelings lies an immersive symphony waiting to be embraced constructed by a wonderful

[the journey of the elu to enlightenment a contemp pdf](#) - Aug 04 2022

web jun 15 2023 the journey of the elu to enlightenment a contemp 2 9 downloaded from uniport edu ng on june 15 2023 by
guest modernization freemasonry empowered women in complex social networks contributing to a more liberal republic a more open society and a more engaged public culture james smith allen shows that although women initially

the journey of the elu to enlightenment a contemporary - Aug 16 2023

web mar 8 2019 the journey of the elu to enlightenment a contemporary interpretation of the teachings of the scottish rite
davis robert g 9781799066552 amazon com books books

the journey of the elu to enlightenment a contemp pdf 2023 - Oct 06 2022

web journey of the elu to enlightenment a contemp pdf web oct 20 2022 the journey of the elu to enlightenment a contemp as

recognized adventure as without difficulty as experience virtually lesson amusement as well as promise can be gotten by just checking out a books the journey of the elu to enlightenment a contemp then it is not the *the journey of the elu to enlightenment a contemp pdf* - Mar 11 2023

web guides for the journey the journey of the elu to enlightenment a contemp downloaded from analytics budgetbakers com by guest kylan novak a sinhalese english dictionary routledge macroeconomics in small island states brings to the reader similar subjects as in a traditional economics reader but now in the context of small islands

bls cpr test questions 2013 2023 graph safehousetech - Jan 02 2022

free bls practice test part 2 bls express study guide - Jan 14 2023

basic life support bls test home courses cpr classes bls for healthcare providers certification class basic life support bls test congratulations you can now take the

bls pretest 4 questions and answers 100 free - Aug 09 2022

bls practice test take the free bls practice test provided below in order to prepare you for our official bls online exam the practice exam consists of 10 multiple choice questions that

basic life support bls test quiz exam national cpr - Oct 11 2022

hipaa hipaa practice exam quiz comprehensive start quiz at cpr select we offer a free online cpr aed bls and first aid practice test to help you prepare for your certification

medpreps bls practice test - Jun 07 2022

jun 25 2020 bls vs cpr netleştirildi basitçe söylemek gerekirse bls cpr sertifika sınıflarından çok daha fazla bir alanı kapsamaktadır dikkat çeken bir diğer fark ise gelişmiş

bls pretest questions and answers 100 free practice test - Sep 22 2023

take our bls pretest the bls practice exam includes questions and answers covering common questions found in the certification exam

bls cpr exam flashcards quizlet - Sep 10 2022

our subject matter experts have written the bls practice test questions to mimic the content and test format you will see on the real bls exam click below to take a bls practice test and

bls practice test questions flashcards quizlet - Nov 12 2022

what do you do go find another aed do not use the aed aed can still be used only use a manual defibrillator for infants what is the correct hand placement for two provider cpr on an

bls practice test bls certification exam quiz cpr select - Apr 17 2023

these free bls practice tests are part of the bls express study guide which also includes 10 bls practice scenarios that will give you a full review of bls for adults infants and children

[bls practice exam questions and answers](#) - Jul 20 2023

for those aiming to ace the bls certification this bls practice test is the premier tool tailored to your preparation needs specifically designed for 2022 our bls practice test 2022

medpreps bls practice test - Dec 01 2021

bls pre test with answers and explanations advanced - May 06 2022

oct 20 2023 table 2 displays the weighted mean scores of nurses to the bls practice test questions according to the aha 2020 guidelines the weighted mean score in the pre test

free practice test online cpr aed bls first aid cpr select - Jul 08 2022

welcome to bls test center cpr test center is a trusted and respected name in healthcare training and certification we are proud to be a leading provider in cpr aed first aid bls

[first aid test questions and answers 2013 cpr classes for](#) - Apr 05 2022

six tested functional areas prepare with a comprehensive practice test analyze your test readiness and areas for further study with topic focused chapter tests cd rom based

bls ve cpr arasındaki fark nedir acil durum canlı - Mar 04 2022

our subject matter experts have written the bls practice test questions to mimic the content and test format you will see on the real bls exam click below to take a bls practice test and

[bls pretest 5 questions and answers free](#) - May 18 2023

bls practice test part 1 covers the first half of the aha bls provider manual it will give you a review of all the major points you need to know prior to your bls class this test contains a

bls practice test bls express study guide acls - Feb 15 2023

brachial artery a child is gasping for breath but has a pulse rate of 100 per minute the rescuers should give 1 breath every 3 to 5 seconds a 50 year old man who has been eating steak in a

practice questions and answers for the bls exam - Aug 21 2023

bls pretest five questions and answers take our 5th free bls pretest the free bls pretest includes questions and answers often found in the final exam

the effect of a simulation based training program in basic life - Feb 03 2022

bls practice test american resuscitation council - Mar 16 2023

may 18 2016 1 if you do not believe there s a spinal injury what s the best way to open a patient s airway when they are unresponsive a perform abdominal thrusts then clean out

bls pretest answers savealife com - Jun 19 2023

bls practice test progress question 1 what is the correct depth of chest compressions in an adult as deep as possible up to 2 inches between 2 and 2 4 inches at least 3 inches

bls test questions cpr certified - Dec 13 2022

1 r1 start chest compressions 30 2 r2 maintains airway and gives 2 breaths 30 2 instruct r1 in accurate compression technique 3 if aed tells you to analyze switch roles or after every 5