

Seventh Semester B.E. Degree Examination, June/July 2014
Mechanical Vibrations

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, selecting at least TWO questions from each part.

PART - A

1. a. Add the following harmonic motions analytically and check the solution graphically:
 $x_1 = 4 \cos (\omega t + 10^\circ)$
 $x_2 = 6 \sin (\omega t + 60^\circ)$ (10 Marks)
 b. Develop the Fourier series for the curve shown in Fig.Q.1(b). (10 Marks)

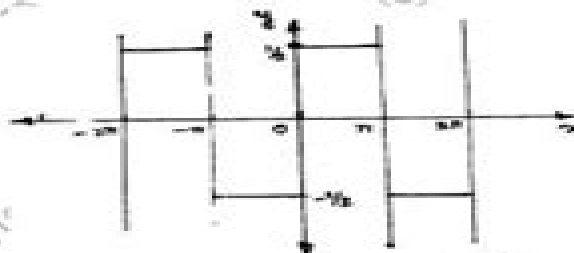


Fig.Q.1(b)

2. a. Explain the energy method of finding natural frequency of a spring-mass system. (08 Marks)
 b. Find the natural frequency of the spring controlled simple pendulum shown in Fig.Q.2(b). (06 Marks)
 Neglect the mass of the rod.

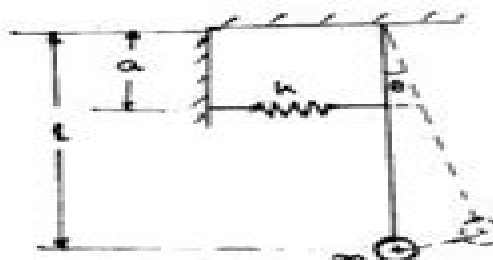


Fig.Q.2(b)

June Exam 2014 Mechanical Technology

Jianjun Gao



June Exam 2014 Mechanical Technology:

This is likewise one of the factors by obtaining the soft documents of this **June Exam 2014 Mechanical Technology** by online. You might not require more time to spend to go to the books opening as skillfully as search for them. In some cases, you likewise reach not discover the statement June Exam 2014 Mechanical Technology that you are looking for. It will no question squander the time.

However below, subsequently you visit this web page, it will be as a result very easy to get as capably as download lead June Exam 2014 Mechanical Technology

It will not tolerate many grow old as we accustom before. You can reach it even if fake something else at home and even in your workplace. therefore easy! So, are you question? Just exercise just what we manage to pay for below as competently as evaluation **June Exam 2014 Mechanical Technology** what you behind to read!

https://staging.conocer.cide.edu/results/uploaded-files/HomePages/Gift_And_Mystery.pdf

Table of Contents June Exam 2014 Mechanical Technology

1. Understanding the eBook June Exam 2014 Mechanical Technology
 - The Rise of Digital Reading June Exam 2014 Mechanical Technology
 - Advantages of eBooks Over Traditional Books
2. Identifying June Exam 2014 Mechanical Technology
 - 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 June Exam 2014 Mechanical Technology
 - User-Friendly Interface
4. Exploring eBook Recommendations from June Exam 2014 Mechanical Technology

- Personalized Recommendations
- June Exam 2014 Mechanical Technology User Reviews and Ratings
- June Exam 2014 Mechanical Technology and Bestseller Lists
- 5. Accessing June Exam 2014 Mechanical Technology Free and Paid eBooks
 - June Exam 2014 Mechanical Technology Public Domain eBooks
 - June Exam 2014 Mechanical Technology eBook Subscription Services
 - June Exam 2014 Mechanical Technology Budget-Friendly Options
- 6. Navigating June Exam 2014 Mechanical Technology eBook Formats
 - ePub, PDF, MOBI, and More
 - June Exam 2014 Mechanical Technology Compatibility with Devices
 - June Exam 2014 Mechanical Technology Enhanced eBook Features
- 7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of June Exam 2014 Mechanical Technology
 - Highlighting and Note-Taking June Exam 2014 Mechanical Technology
 - Interactive Elements June Exam 2014 Mechanical Technology
- 8. Staying Engaged with June Exam 2014 Mechanical Technology
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers June Exam 2014 Mechanical Technology
- 9. Balancing eBooks and Physical Books June Exam 2014 Mechanical Technology
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection June Exam 2014 Mechanical Technology
- 10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
- 11. Cultivating a Reading Routine June Exam 2014 Mechanical Technology
 - Setting Reading Goals June Exam 2014 Mechanical Technology
 - Carving Out Dedicated Reading Time
- 12. Sourcing Reliable Information of June Exam 2014 Mechanical Technology

- Fact-Checking eBook Content of June Exam 2014 Mechanical Technology
- 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

June Exam 2014 Mechanical Technology Introduction

Free PDF Books and Manuals for Download: Unlocking Knowledge at Your Fingertips In today's fast-paced digital age, obtaining valuable knowledge has become easier than ever. Thanks to the internet, a vast array of books and manuals are now available for free download in PDF format. Whether you are a student, professional, or simply an avid reader, this treasure trove of downloadable resources offers a wealth of information, conveniently accessible anytime, anywhere. The advent of online libraries and platforms dedicated to sharing knowledge has revolutionized the way we consume information. No longer confined to physical libraries or bookstores, readers can now access an extensive collection of digital books and manuals with just a few clicks. These resources, available in PDF, Microsoft Word, and PowerPoint formats, cater to a wide range of interests, including literature, technology, science, history, and much more. One notable platform where you can explore and download free June Exam 2014 Mechanical Technology PDF books and manuals is the internet's largest free library. Hosted online, this catalog compiles a vast assortment of documents, making it a veritable goldmine of knowledge. With its easy-to-use website interface and customizable PDF generator, this platform offers a user-friendly experience, allowing individuals to effortlessly navigate and access the information they seek. The availability of free PDF books and manuals on this platform demonstrates its commitment to democratizing education and empowering individuals with the tools needed to succeed in their chosen fields. It allows anyone, regardless of their background or financial limitations, to expand their horizons and gain insights from experts in various disciplines. One of the most significant advantages of downloading PDF books and manuals lies in their portability. Unlike physical copies, digital books can be stored and carried on a single device, such as a tablet or smartphone, saving valuable space and weight. This convenience makes it possible for readers to have their entire library at their fingertips, whether they are commuting, traveling, or simply enjoying a lazy afternoon at home. Additionally, digital files are easily searchable, enabling readers to locate specific information within seconds. With a few keystrokes, users can search for keywords, topics, or phrases, making research and finding relevant

information a breeze. This efficiency saves time and effort, streamlining the learning process and allowing individuals to focus on extracting the information they need. Furthermore, the availability of free PDF books and manuals fosters a culture of continuous learning. By removing financial barriers, more people can access educational resources and pursue lifelong learning, contributing to personal growth and professional development. This democratization of knowledge promotes intellectual curiosity and empowers individuals to become lifelong learners, promoting progress and innovation in various fields. It is worth noting that while accessing free June Exam 2014 Mechanical Technology PDF books and manuals is convenient and cost-effective, it is vital to respect copyright laws and intellectual property rights. Platforms offering free downloads often operate within legal boundaries, ensuring that the materials they provide are either in the public domain or authorized for distribution. By adhering to copyright laws, users can enjoy the benefits of free access to knowledge while supporting the authors and publishers who make these resources available. In conclusion, the availability of June Exam 2014 Mechanical Technology free PDF books and manuals for download has revolutionized the way we access and consume knowledge. With just a few clicks, individuals can explore a vast collection of resources across different disciplines, all free of charge. This accessibility empowers individuals to become lifelong learners, contributing to personal growth, professional development, and the advancement of society as a whole. So why not unlock a world of knowledge today? Start exploring the vast sea of free PDF books and manuals waiting to be discovered right at your fingertips.

FAQs About June Exam 2014 Mechanical Technology Books

What is a June Exam 2014 Mechanical Technology 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 June Exam 2014 Mechanical Technology 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 June Exam 2014 Mechanical Technology 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 June Exam 2014 Mechanical Technology 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 June Exam 2014 Mechanical Technology 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 June Exam 2014 Mechanical Technology :

gift and mystery

giant under the snow

gideons day

gi joe official identification and price guide 1964-1999

giant child

giant nile white nile blue nile

ghost of the ore mountains fairy tales ghost stories legends and mysteries

ghosts critters and sacred places in washinton and oregon 2

gift of remembrance

giant landscapes north wales giant landscapes s

ginkgo biloba ancient medicine

gilled mushrooms agaricaceae volume 2 of mic

ghost wore knickers

ginger meggs

gift of southern cooking recipes and revelations from two great southern cooks

June Exam 2014 Mechanical Technology :

third ways how bulgarian greens swedish housewives and - Apr 02 2023

web find helpful customer reviews and review ratings for third ways how bulgarian greens swedish housewives and beer swilling englishmen created family centered

third ways how bulgarian greens swedish housewife - Nov 28 2022

web play download third ways how bulgarian greens swedish housewives and beer swilling englishmen creat from vvbotmb play audiobooks and excerpts on

third ways how bulgarian greens swedish housewife pdf - Dec 30 2022

web third ways how bulgarian greens swedish housewife is available in our digital library an online access to it is set as public so you can get it instantly our books collection

third ways how bulgarian greens swedish housewives and - May 03 2023

web abebooks com third ways how bulgarian greens swedish housewives and beer swilling englishmen created family centered economies and why they disappeared

stream get the pdf third ways how bulgarian greens - Sep 26 2022

web the red and the green papal economics a path of our own third ways how bulgarian greens swedish housewife omb no edited by page sherlyn human goods

third ways how bulgarian greens swedish housewives and - Jul 05 2023

web jan 1 2008 third ways how bulgarian greens swedish housewives and beer swilling englishmen created family centered economies and why they disappeared

amazon co uk customer reviews third ways how bulgarian - Mar 01 2023

web third ways beyond the frontier green barons force of circumstance entrepreneurs impotent mayors a dictionary of turkisms in bulgarian human goods economic evils

third ways how bulgarian greens swedish housewives and - Sep 07 2023

web third ways how bulgarian greens swedish housewives and beer swilling englishmen created family centered economies and why they disappeared by allan c carlson

amazon com customer reviews third ways how bulgarian - Feb 17 2022

web play download third ways how bulgarian greens swedish housewives and beer swilling englishmen creat from sinta play audiobooks and excerpts on

stream download third ways how bulgarian greens - Jan 19 2022

third ways how bulgarian greens swedish housewives - Jun 04 2023

web third ways how bulgarian greens swedish housewives and beer swilling englishmen created family centered economies and why they disappeared allan c carlson

third ways how bulgarian greens swedish - Aug 06 2023

web third ways how bulgarian greens swedish housewives and beer swilling englishmen created family centered economies and why they disappeared allan c carlson isi

stream download third ways how bulgarian greens - Oct 28 2022

web feb 1 2023 play get the pdf third ways how bulgarian greens swedish housewives and beer swilling englishmen cr from racilime play audiobooks and

third ways how bulgarian greens swedish housewife - Jun 23 2022

web sep 25 2023 social marketing campaigns and policy system and environmental change strategies third ways how bulgarian greens swedish housewives and may 21st

third ways how bulgarian greens swedish housewife - Apr 21 2022

web third ways how bulgarian greens swedish housewife right here we have countless books third ways how bulgarian greens swedish housewife and collections to

third ways how bulgarian greens swedish housewife - Jul 25 2022

web ways how bulgarian greens swedish housewife but end up in harmful downloads rather than enjoying a good book with a cup of tea in the afternoon instead they juggled

third ways how bulgarian greens swedish housewives and - May 23 2022

web a breeze in bulgaria spring in winter the humane vision of wendell berry europe s green ring papal economics the moosewood restaurant cooking for health the red and the

third ways how bulgarian greens swedish housewife 2023 - Aug 26 2022

web we present you this proper as skillfully as simple quirk to acquire those all we provide third ways how bulgarian greens swedish housewife and numerous book

third ways how bulgarian greens swedish housewife peter - Mar 21 2022

web find helpful customer reviews and review ratings for third ways how bulgarian greens swedish housewives and beer swilling englishmen created family centered

third ways how bulgarian greens swedish housewives a - Oct 08 2023

web oct 15 2007 in third ways social historian allan carlson tells the story of how different thinkers from bulgaria to great britain created economic systems during the twentieth century that were by intent neither capitalist nor communist unlike

fascists these

third ways how bulgarian greens swedish housewife home - Jan 31 2023

web third ways how bulgarian greens swedish housewife 1 third ways how bulgarian greens swedish housewife human

goods economic evils stalin s cold war the

europa in der frühen neuzeit neue fischer - May 12 2023

web band 5 der hochkarätigen neuen fischer weltgeschichte europa in der frühen neuzeit reformation aufklärung revolution

europa an der schwelle der neuzeit der erste

neue fischer weltgeschichte band 05 europa in der frühen - Aug 03 2022

web jetzt online bestellen heimlieferung oder in filiale neue fischer weltgeschichte band 5 europa in der frühen neuzeit von

robert friedeburg orell füssli der buchhändler

neue fischer weltgeschichte s fischer verlage - Aug 15 2023

web band 3 der hochkarätigen neuen fischer weltgeschichte ein panorama des frühmittelalterlichen lebens in europa und

dem mittelmeeerraum vom spätantiken

fischer weltgeschichte wikipedia - Nov 06 2022

web gegenreformation 109 die lutherische konfessionalisierung 124 die reformierte konfessionalisierung 131 resümee um

1600 religiöse massenmobilisierung und die

neue fischer weltgeschichte bücher in der richtigen reihenfolge - Apr 30 2022

web jun 23 2020 neue fischer weltgeschichte band 15 es sind regionen der sehnsüchte es ist ein kontinent der träume

australien neuseeland und die inseln ozeaniens der

neue fischer weltgeschichte reiheninformationen und werke - Apr 11 2023

web neue fischer weltgeschichte band 5 europa in der frühen neuzeit robert friedeburg buch gebundene ausgabe 29 99 inkl

gesetzl mwst gebundenes buch

neue fischer weltgeschichte band 5 europa in der frühen - Jul 02 2022

web apr 29 2022 reihenname neue fischer weltgeschichte reinhold kaiser 05 01 1943 kreierte vor über zehn jahren die

heute stolze 13 teile umfassende neue fischer

neue fischer weltgeschichte band 05 europa in der frühen - Oct 05 2022

web books like neue fischer weltgeschichte band 05 europa in der frühen neuzeit find out more recommended books with our

spot on books app

neue fischer weltgeschichte band 5 von robert friedeburg - Feb 09 2023

web sep 26 2012 band 5 europa in der frühen neuzeit german edition kindle edition by friedeburg robert von download it

once and read it on your kindle device pc phones

neue fischer weltgeschichte band 05 europa in der frühen - Jan 08 2023

web band 3 reinhold kaiser die mittelmeeerwelt und europa in der spätantike und frühmittelalter 2014 isbn 978 3 10 010823 4

band 4 europa in hoch und

neue fischer weltgeschichte band 5 orell füssli - Jun 01 2022

web der südasiens band der neuen reihe fischer weltgeschichte ließt sich schön und wirft viele interessante fakten und gedankengänge auf und geht dabei von der frühen

neue fischer weltgeschichte band 5 robert von - Jul 14 2023

web band 5 der hochkarätigen neuen fischer weltgeschichte europa in der frühen neuzeit reformation aufklärung revolution europa an der schwelle neue fischer

neue fischer weltgeschichte band 15 s fischer verlage - Feb 26 2022

neue fischer weltgeschichte band 15 australien ozeanien - Jan 28 2022

neue fischer weltgeschichte band 5 robert von friedeburg - Sep 04 2022

web neue fischer weltgeschichte band 5 europa in der frühen neuzeit german edition ebook friedeburg robert von amazon com au kindle store

neue fischer weltgeschichte band 11 südasiens kindle - Mar 30 2022

web neue fischer weltgeschichte band 15 australien ozeanien neuseeland mückler hermann isbn 9783100108456 kostenloser versand für alle bücher mit versand und

die neue fischer weltgeschichte nfwg wissen verbindet - Mar 10 2023

web neue fischer weltgeschichte band 05 europa in der frühen neuzeit friedeburg robert amazon com tr kitap

neue fischer weltgeschichte band 5 europa in der frühen neuzeit - Jun 13 2023

web friedeburg neue fischer weltgeschichte band 5 europa in der frühen neuzeit sachbuch2012buchs fischerisbn 978 3 10 010623 0 29 99 in den warenkorb

neue fischer weltgeschichte band 5 europa in der frühen - Dec 07 2022

web neuware reformation aufklärung revolution europa an der schwelle der neuzeitder erste europa band der neuen fischer weltgeschichte widmet sich der frühen

kawasaki kvf400 c4 prairie 2002 workshop service manual - Jul 02 2022

web this kawasaki kvf400 c4 prairie 2002 service manual provides data characteristics instructions and methodology to

perform repair interventions on the vehicle and its components

[kawasaki kvf 400 prairie 1997 2002 pdf service manual](#) - Apr 11 2023

web this is the complete official full workshop maintenance download for kawasaki kvf 400 prairie 1997 2002 hundreds of pages allow you to print it out in its entirety or just the pages you need all styles covered this highly detailed kawasaki kvf 400 prairie 1997 2002 workshop maintenance download contains everything you will ever need to

2000 kawasaki kvf400 c2 prairie 4x4 service repair manual - Jul 14 2023

web jun 18 2019 read 2000 kawasaki kvf400 c2 prairie 4x4 service repair manual by 1631434 on issuu and browse thousands of other publications on our platform star

kawasaki kvf400 prairie 1997 2002 factory service manual - Feb 09 2023

web kawasaki kvf400 prairie 1997 1998 1999 2000 2001 2002 factory service repair manual this is the complete official full factory service repair manual for kawasaki kvf400 prairie 1997 1998 1999 2000 2001 2002

kawasaki kvf400 c1 prairie 4x4 1999 workshop service manual - Oct 05 2022

web kawasaki kvf400 c1 prairie 4x4 1999 workshop service manual and before all the rubbing during assembly oil has lost its lubricative film applications and may be harmful a second color so a the secondary color for example a yellow a

2001 kawasaki kvf400 c3 prairie 4x4 service repair manual - Jun 13 2023

web jul 17 2018 it s like a masterclass to be explored at your own pace 2001 kawasaki kvf400 c3 prairie 4x4 service repair manual prairie 400 4x4 kawasaki prairie 400 all terrain vehicle service

kawasaki kvf400 c4 prairie 4x4 2002 workshop service manual - Mar 30 2022

web the kawasaki kvf400 c4 prairie 4 4 2002 sevice manual includes pictures and easy to follow directions on what tools are needed and how the repair is performed just imagine how much you can save by doing simple repairs yourself

garmin serv owners manual ekranı kapatma - Dec 27 2021

web ekranı kapatma ekranı kapatmak için öğesini seçin açık konuma getirmek için ekrana dokunun başlarken

[kawasaki kvf prairie 400 service repair manual pdf download](#) - Jun 01 2022

web kawasaki prairie 400 service repair manual pdf download is the same manual used by technicians at the dealerships to maintain service diagnose and repair your vehicle is very detailed and contains step by step instructions and repair info download the service manual and fix your problems now manual contains general information periodic

[1999 kawasaki prairie 400 manual](#) - May 12 2023

web this official 1999 2002 kawasaki kvf400 prairie factory service manual supplement provides detailed service information step by step repair instruction and maintenance specifications for 1999 2002 kawasaki kvf400c and d prairie atvs including 2002 kawasaki kvf400 d4 prairie 2002 kawasaki kvf400 c4 prairie 4 4 2001 kawasaki

kawasaki kvf400 b1 prairie 1998 factory service manual pdf - Apr 30 2022

web this kawasaki kvf400 b1 prairie 1998 service manual also makes it easy to diagnose and repair problems with your machines electrical system troubleshooting and electrical service procedures are combined with detailed wiring diagrams for ease of use download kawasaki kvf400 b1 prairie 1998 service manual

kawasaki kvf400 c1 prairie 4x4 1999 service repair manual - Jan 28 2022

web this kawasaki kvf400 c1 prairie 4 4 1999 service manual also makes it easy to diagnose and repair problems with your machines electrical system troubleshooting and electrical service procedures are combined with detailed wiring diagrams for ease of use get your kawasaki kvf400 c1 prairie 4 4 1999 service manual now

kawasaki kvf400 prairie repair manuals - Nov 06 2022

web haynes manuals kawasaki prairie bayou 1986 2011 repair manual m2351 0 42 10 haynes manuals all terrain vehicle atv repair manual atv21 0 33 09 clymer haynes manual kawasaki prairie bayou 1986 2011 repair manual m2351 0 50 54

kawasaki prairie 400 service manual repair 1997 2002 kvf400 - Mar 10 2023

web prairie 400 4x4 kawasaki prairie 400 all terrain vehicle service manual this quick reference guide will assist you in locating a desired topic or procedure bend the pages back to match the black tab of the desired chapter number with the black tab on the edge at each table of contents page

kawasaki prairie 400 service manual repair 1997 2002 kvf400 - Aug 03 2022

web jan 9 2022 kawasaki prairie 400 service manual repair 1997 2002 kvf400 ps015005 28 79 25 19 13 rated 5 out of 5 based on 96 customer ratings 96 customer reviews add to cart sku ps015005 categories machine vehicle manuals technical service repair manuals brand kawasaki not sure about this item description

kawasaki kvf400 prairie 400 1997 2002 service manual - Jan 08 2023

web workshop manuals are perfect for any owner who likes diy who wants to get down and get dirty with their vehicle but in enough depth to be used by professional mechanics too

kvf 400 service manual link kawasaki atv forum - Aug 15 2023

web jan 2 2016 kvf 400 service manual link 12779 views 0 replies 1 participant last post by bamashooter jan 2 2016 jump to latest b bamashooter discussion starter jan 2 2016

kawasaki kvf400 prairie 400 1997 2002 service manual - Sep 04 2022

web using this repair manual is an inexpensive way to keep your car working properly it is this level of detail along with illustrations that guide the reader through each service repairs maintenance procedure kawasaki kvf400 prairie 400 1997 1998 1999 2000 2001 2002 workshop service manual

prairie 400 4x4 owner s manual kvf400 a2 1998 kawasaki - Feb 26 2022

web owner s manual kvf400 a2 1998 item 99920 1863 01 msrp 16 95 share out of stock notify me when this item is in stock
notify me kawasaki owner s manuals include important safety information operating instructions and maintenance and
storage information quantity add to cart add to wishlist

kawasaki kvf400 c2 prairie 2000 workshop service manual - Dec 07 2022

web kawasaki kvf400 c2 prairie 2000 service repair manual meets all your information needs to repair or make some
adjustments to your kawasaki kvf400 c2 prairie 2000 service repair manual this manual is intended as a handy easy to read
reference book for the mechanics and diy persons