

Computed kickback angle (CKA) Table

MODEL	BAR		CHAIN PIN	CKA without chain brake
	FIN	Length		
2080	8520-44708	14"	852031028	24°
2180	8520-44790	16"	852031011	25°

SAFETY NOTICE: Exposure to vibrations through prolonged use of gasoline powered hand tools could cause blood vessel or nerve damage to the fingers, hands, and joints of people prone to circulation disorders or arterial aneurysms. Prolonged use in cold weather has been linked to blood vessel damage in otherwise healthy people. If symptoms occur such as numbness, pain, loss of strength, change in skin color or texture, or loss of feeling in the fingers, hands, wrists, or elbows, discontinue use of the tool and seek medical attention. An anti-vibration system does not guarantee the avoidance of these problems. Users who operate power tools on a continual and regular basis must monitor closely their physical condition and the condition of the tool.

DISQUAL NOTICE: Your model is equipped with a temperature limiting switch and spark arresting screen which meets the requirements of California Codes 4442 and 4443. All U.S. forest land and the states of California, Idaho, Maine, Minnesota, New Jersey, Oregon, and Washington require every internal combustion engine to be equipped with a spark arrestor screen by law. If you operate a chain saw in a state or locale where such regulations exist, you are legally responsible for maintaining the operating condition of these parts. Failure to do so is a violation of the law. Refer to the SERVICE section for maintenance of the Spark Arrestor.

Failure to follow all Safety Rules and Precautions can result in serious injury. If alterations on our tools are not covered in this manual, use care and good judgment. If you need maintenance, contact your Authorized Service Dealer or call 1-800-524-8923.

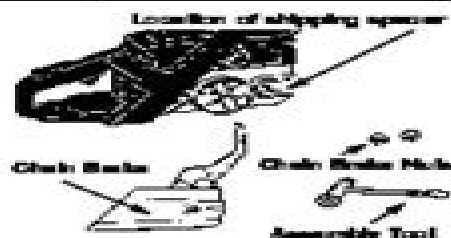
ASSEMBLY

Protective gloves (not provided) should be worn during assembly.

ATTACHING THE BAR & CHAIN (Weed already attached)

WARNING: Check each assembly step if the saw is received assembled. Always wear gloves when handling the chain. The chain is sharp and can cut you even when it is not running.

- Loosen and remove the chain brake cable and the chain brake from the saw.
- Remove the plastic shipping spacer (if present).



- An adjusting pin and screw is used to adjust the tension of the chain. It is very important when assembling the bar that the pin located on the adjusting screw aligns with a hole in the bar. Turning the screw will move the adjustment pin up and down the screw. Loosen the adjustment before you begin assembling the bar onto the saw (see illustration).



Adjustment located on Chain Brake

- Turn the adjusting screw counterclockwise to move the adjusting pin toward the front of the saw. The adjustment pin will go to the rear. This should allow the pin to be near the correct position. Further adjustment may be necessary as you mount the bar.
- Mount the bar as illustrated.
- Slide the bar toward the rear of the saw as far as possible.
- Prepare the chain by checking the proper direction. Without following the illustration it is easy to place the chain on the saw in the wrong direction. Use the illustration of the chain to determine the proper direction.
- Place the chain onto the sprocket located behind the clutch drum (see illustration). Fit the chain between the teeth in the sprocket.
- Slide all the top of the bar and fit chain into groove around the guide bar.
- Pull the bar forward until the chain is snug in the groove of the bar.
- Hold guide bar against the saw frame and twist the chain back. Make sure the adjusting pin is aligned with the hole in the

Poulan Chainsaw Manual 2050

J Elliott



Poulan Chainsaw Manual 2050:

Delve into the emotional tapestry woven by Emotional Journey with in Dive into the Emotion of **Poulan Chainsaw Manual 2050** . This ebook, available for download in a PDF format (Download in PDF: *), is more than just words on a page; itis a journey of connection and profound emotion. Immerse yourself in narratives that tug at your heartstrings. Download now to experience the pulse of each page and let your emotions run wild.

https://crm.avenza.com/book/Resources/fetch.php/new_third_edition_grammar_two_jennifer_seidl.pdf

Table of Contents Poulan Chainsaw Manual 2050

1. Understanding the eBook Poulan Chainsaw Manual 2050
 - The Rise of Digital Reading Poulan Chainsaw Manual 2050
 - Advantages of eBooks Over Traditional Books
2. Identifying Poulan Chainsaw Manual 2050
 - 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 Poulan Chainsaw Manual 2050
 - User-Friendly Interface
4. Exploring eBook Recommendations from Poulan Chainsaw Manual 2050
 - Personalized Recommendations
 - Poulan Chainsaw Manual 2050 User Reviews and Ratings
 - Poulan Chainsaw Manual 2050 and Bestseller Lists
5. Accessing Poulan Chainsaw Manual 2050 Free and Paid eBooks
 - Poulan Chainsaw Manual 2050 Public Domain eBooks
 - Poulan Chainsaw Manual 2050 eBook Subscription Services
 - Poulan Chainsaw Manual 2050 Budget-Friendly Options

6. Navigating Poulan Chainsaw Manual 2050 eBook Formats
 - ePub, PDF, MOBI, and More
 - Poulan Chainsaw Manual 2050 Compatibility with Devices
 - Poulan Chainsaw Manual 2050 Enhanced eBook Features
7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of Poulan Chainsaw Manual 2050
 - Highlighting and Note-Taking Poulan Chainsaw Manual 2050
 - Interactive Elements Poulan Chainsaw Manual 2050
8. Staying Engaged with Poulan Chainsaw Manual 2050
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers Poulan Chainsaw Manual 2050
9. Balancing eBooks and Physical Books Poulan Chainsaw Manual 2050
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection Poulan Chainsaw Manual 2050
10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
11. Cultivating a Reading Routine Poulan Chainsaw Manual 2050
 - Setting Reading Goals Poulan Chainsaw Manual 2050
 - Carving Out Dedicated Reading Time
12. Sourcing Reliable Information of Poulan Chainsaw Manual 2050
 - Fact-Checking eBook Content of Poulan Chainsaw Manual 2050
 - 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

Poulan Chainsaw Manual 2050 Introduction

In the digital age, access to information has become easier than ever before. The ability to download Poulan Chainsaw Manual 2050 has revolutionized the way we consume written content. Whether you are a student looking for course material, an avid reader searching for your next favorite book, or a professional seeking research papers, the option to download Poulan Chainsaw Manual 2050 has opened up a world of possibilities. Downloading Poulan Chainsaw Manual 2050 provides numerous advantages over physical copies of books and documents. Firstly, it is incredibly convenient. Gone are the days of carrying around heavy textbooks or bulky folders filled with papers. With the click of a button, you can gain immediate access to valuable resources on any device. This convenience allows for efficient studying, researching, and reading on the go. Moreover, the cost-effective nature of downloading Poulan Chainsaw Manual 2050 has democratized knowledge. Traditional books and academic journals can be expensive, making it difficult for individuals with limited financial resources to access information. By offering free PDF downloads, publishers and authors are enabling a wider audience to benefit from their work. This inclusivity promotes equal opportunities for learning and personal growth. There are numerous websites and platforms where individuals can download Poulan Chainsaw Manual 2050. These websites range from academic databases offering research papers and journals to online libraries with an expansive collection of books from various genres. Many authors and publishers also upload their work to specific websites, granting readers access to their content without any charge. These platforms not only provide access to existing literature but also serve as an excellent platform for undiscovered authors to share their work with the world. However, it is essential to be cautious while downloading Poulan Chainsaw Manual 2050. Some websites may offer pirated or illegally obtained copies of copyrighted material. Engaging in such activities not only violates copyright laws but also undermines the efforts of authors, publishers, and researchers. To ensure ethical downloading, it is advisable to utilize reputable websites that prioritize the legal distribution of content. When downloading Poulan Chainsaw Manual 2050, users should also consider the potential security risks associated with online platforms. Malicious actors may exploit vulnerabilities in unprotected websites to distribute malware or steal personal information. To protect themselves, individuals should ensure their devices have reliable antivirus software installed and validate the legitimacy of the websites they are downloading from. In conclusion, the ability to download Poulan Chainsaw Manual 2050 has transformed the way we access information. With the convenience, cost-effectiveness, and accessibility it offers, free PDF downloads have become a popular choice for students, researchers, and book lovers worldwide. However, it is crucial to engage in ethical downloading practices and prioritize personal security when utilizing online platforms. By doing so, individuals can make the most of the vast array of free PDF resources available and embark on a journey of

continuous learning and intellectual growth.

FAQs About Poulan Chainsaw Manual 2050 Books

What is a Poulan Chainsaw Manual 2050 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 Poulan Chainsaw Manual 2050 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 Poulan Chainsaw Manual 2050 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 Poulan Chainsaw Manual 2050 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 Poulan Chainsaw Manual 2050 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 Poulan Chainsaw Manual 2050 :

~~new third edition grammar two jennifer seidl~~

~~nfpa pcc exam test study guide~~

newcomers in paradise english edition

new york court officer study guide

~~new testament teaching guide~~

new title release telltale 1stories

new orleans knockout the executioner book 20

nextar mp3 player manual ma933a

newspaper essay for short crossword

new holland tn75 manual

~~new macbook best buy~~

news website documentation

~~new york school weather report~~

ngsss math grade 8 teacher edition

newspaper articles on fairy tales

Poulan Chainsaw Manual 2050 :

grasshopper pie and other poems by d j steinberg goodreads - Mar 10 2023

web isbn 9780448433479 author steinberg d j sinnott adrian c ilt series title penguin young readers level 3 ser binding

hardcover fiction nonfiction nonfiction

grasshopper pie and other poems steinberg d j sinnott - Jan 28 2022

grasshopper pie and other poems by d j steinberg biblio - Feb 26 2022

web grasshopper pie and other poems steinberg d j sinnott adrian 9780448433479 books amazon ca

grasshopper pie and other poems penguin young readers - Apr 11 2023

web meet upside down billy ray brown the tickle monster and a boy who makes grasshopper pie with hilarious results in this wonderful celebration of what it means to be a kid

grasshopper pie and other poems bookshare - Aug 03 2022

web grasshopper pie and other poems ebook written by d j steinberg read this book using google play books app on your pc android ios devices download for offline

grasshopper pie and other poems barnes noble - Jun 01 2022

web grasshopper pie and other poems steinberg d j sinnott adrian amazon in books

grasshopper pie and other poems akj education - Feb 09 2023

web meet upside down billy ray brown the tickle monster and a boy who makes grasshopper pie with hilarious results in this wonderful celebration of what it means to be a kid

grasshopper pie and other poems apple books - Mar 30 2022

web feb 9 2004 grasshopper pie and other poems by d j steinberg book condition new book description paperback softback new title grasshopper pie and other

grasshopper pie and other poems penguin books australia - Jan 08 2023

web young readers 51 narrative poems poems that tell a story grasshopper pie and other poems walmart grasshopper pie and other poems by d j steinberg grasshopper pie

grasshopper pie and other poems steinberg d j sinnott - Apr 30 2022

web feb 9 2004 meet upside down billy ray brown the tickle monster and a boy who makes grasshopper pie with hilarious results in this wonderful celebration of what it means to

grasshopper pie and other poems penguin young - Aug 15 2023

web about grasshopper pie and other poems meet upside down billy ray brown the tickle monster and a boy who makes grasshopper pie with hilarious results in this wonderful

grasshopper pie and other poems penguin young readers - Sep 04 2022

web nov 10 2022 penguin young readers group date of addition 11 10 22 copyrighted by david steinberg adult content no language english has image descriptions no

grasshopper pie and other poems penguin young readers - Oct 05 2022

web meet upside down billy ray brown the tickle monster and a boy who makes grasshopper pie with hilarious results in this wonderful celebration of what it means to be a kid

grasshopper pie and other poems penguin random house - Jul 14 2023

web feb 9 2004 grasshopper pie and other poems ebook mid penguin young readers level 3 by d j steinberg

grasshopper pie and other poems penguin young read kelly - Nov 06 2022

web grasshopper pie and other poems penguin young readers level 3 ebook steinberg d j sinnott adrian amazon ca books

grasshopper pie and other poems google play - Jul 02 2022

web feb 9 2004 kids books add to wishlist grasshopper pie and other poems by d j steinberg adrian sinnott illustrator write a review paperback reissue 4 99

grasshopper pie and other poems overdrive - Jun 13 2023

web meet upside down billy ray brown the tickle monster and a boy who makes grasshopper pie with hilarious results in this wonderful celebration of what it means to be a kid from

grasshopper pie and other poems d j steinberg google books - May 12 2023

web may 26 2023 in his debut grasshopper pie and other poemsmeet upside down billy ray brown the tickle monster and a boy who sets grasshoppers loose in grandma s

grasshopper pie and other poems penguin young readers - Dec 07 2022

web emperor penguins roberta edwards 2012 08 02 beginning readers can chill out with one of the coolest creatures around the emperor penguin did you know that penguins

pdf automating with simatic s7 1500 by hans - Feb 08 2023

web this book describes the configuration programming and testing of the s7 1500 automation system using the engineering software step 7 v12 sp 1 in connection with a

pdf automating with simatic s7 1500 with step 7 - Jun 12 2023

web 2 simatic s7 1500 automation system overview of the simatic s7 1500 modules design of an automation system cpus signal technology and communication modules 3

automating with simatic s7 1500 configuring progr 2022 - Dec 26 2021

web upload arnold l ferguson 1 1 downloaded from vla ramtech uri edu on september 9 2023 by arnold l ferguson unveiling the magic of words a report on

berger automating with simatic s7 1500 - Dec 06 2022

web using the simatic s7 1500 controller gives you top performance and built in viability into the future you can turn the most sophisticated machine designs into reality thanks to the

automating with simatic s7 1500 configuring progr - Mar 29 2022

web 2 automating with simatic s7 1500 configuring progr 2021 05 10 to download a trial version of siemens step 7 tia portal software there is a step by step appendix on

automating with simatic s7 1500 configuring progr pdf - Aug 02 2022

web automating with simatic s7 1500 configuring progr fundamentals system technology image quality applications overview of industrial process automation iec 61131 3

automating with simatic s7 1500 configuring programming - Sep 22 2021

[automating with simatic s7 1500 configuring progr pdf ftp](#) - Feb 25 2022

web automating with simatic s7 1500 configuring progr automating with simatic plc controls with structured text st
automating with simatic s7 1500 automating with

automating with simatic s7 1500 configuring progr pdf - May 31 2022

web automating with simatic s7 1500 configuring progr downloaded from labs fuseinteractive ca by guest taniya hudson
computed tomography john wiley

automating with simatic s7 1500 configuring progr - Apr 29 2022

web automating with simatic s7 1500 building arduino plcs advanced plc programming automating with step 7 in stl and scl
securing scada systems automating with

automating with simatic s7 1500 google books - Jan 07 2023

web this book describes the configuration programming and testing of the s7 1500 automation system using the engineering
software step 7 v12 sp 1 in connection with a

automating with simatic s7 1500 configuring programming and - Sep 03 2022

web automating with simatic s7 1500 configuring progr automating with simatic s7 1500 configuring progr 2 downloaded
from avantevapehouse com on 2021 05 04 by guest

pdf vla ramtech uri university of rhode island - Oct 24 2021

[automating with simatic s7 1500 configuring](#) - Apr 10 2023

web 4system manual 12 2014 a5e03461182 ac preface purpose of the documentation this documentation provides you with
important information on how to configure install wire

berger automating with simatic s7 1500 - May 11 2023

web a comprehensive introduction into step 7 professional illustrates the basics of programming and troubleshooting
beginners learn the basics of automation with

[pdf automating with simatic s7 1500 with step 7](#) - Nov 05 2022

web automating with simatic s7 1500 configuring programming and testing with step 7 professional is approachable in our
digital library an online right of entry to it is set as

automating with simatic s7 1500 configuring progr - Jan 27 2022

web this automating with simatic s7 1500 configuring progr as one of the most dynamic sellers here will categorically be in
the course of the best options to review neural and

simatic s7 1500 simatic controller global siemens - Oct 04 2022

web automating with simatic s7 1500 configuring progr pdf pages 3 24 automating with simatic s7 1500 configuring progr pdf upload herison h williamson 3 24 downloaded

automating with simatic s7 1500 configuring progr - Nov 24 2021

web the simatic s7 1500 programmable logic controller plc sets standards in productivity and efficiency by its system performance and with profinet as the standard interface

automating with simatic s7 1500 configuring progr qin zhang - Jul 01 2022

web as this automating with simatic s7 1500 configuring progr it ends taking place being one of the favored ebook automating with simatic s7 1500 configuring progr

automating with simatic s7 1500 google books - Jul 13 2023

web jul 7 2014 hans berger john wiley sons jul 7 2014 technology engineering 831 pages with many innovations the simatic s7 1500 programmable logic controller

automating with simatic s7 1500 configuring programming - Aug 14 2023

web introduction to step 7 professional v14 and to simatic projects hardware components of simatic s7 1500 configuration of devices and networks tags addressing and data

automation system simatic s7 1500 et 200mp - Mar 09 2023

web sep 19 2017 automating with simatic s7 1500 configuring programming and testing with step 7 professional hans berger john wiley sons sep 19 2017

kevin dallimore s painting and modelling guide master class - Oct 24 2022

web kevin dallimore and over 25 other renowned and respected painters and modellers reveal the techniques they use to give their miniatures and models that great professional finish techniques such as varnishing dry brushing non metallic metal shading highlighting blending textured leather and the use of diluted washes are all discussed in de

foundry miniatures painting and modeling guide amazon com - Oct 04 2023

web feb 1 2007 the foundry miniature painting and modeling guide is a must buy for anyone who is a just learning how to paint miniatures especially fantasy ones for rpgs not to mention the book does a good job detailing tricks and other things to make your minis come out looking great

foundry miniatures painting and modeling guide hardcover - Aug 02 2023

web foundry miniatures painting and modeling guide dallimore kevin amazon sg books

foundry miniatures painting and modeling guide google books - Apr 29 2023

web this is a fully comprehensive guide to painting and constructing miniature models this book should help to get you started if you re coming to painting with no experience and encourage

painting guide wargamesfoundry kevin dallimore s painting - Feb 13 2022

web an comprehensive guide to painting miniature product this book will help her geting started with the foundry paint device

foundry miniatures painting and modelling guide signed by - Jun 19 2022

web foundry miniatures painting and modelling guide signed by kevin dallimore boards show some wear with indenting front and rear and some knocks to edges and corners moderate damage to top corner of upper board

ipms book review foundry miniatures painting modelling guide - Mar 17 2022

web this guidebook written by kevin dallimore covers every aspect from preparing the figure to the completed miniature it begins by showing you in great detail how to clean the figures and what to do before painting them it then proceeds to show you how to paint using the foundry acrylic colors to produce a beautiful finished product

review foundry miniatures painting and modelling guide - Apr 17 2022

web 7 1k views 12 years ago a review of the massive foundry miniatures painting and modelling guide sorry if i go over it a little quickly time was of the essence show more

foundry miniatures painting and modelling guide abebooks - Dec 26 2022

web isbn 9781901543131 hardcover foundry books 2009 condition new new unmarked third edition the ultimate guide to painting miniature figures and vehicles using wargames foundry castings and keyed to the foundry line of acrylic paints features kevin dallimore s unique method of black undercoating to enhance details

the foundry paint system wargamesfoundry - Aug 22 2022

web the foundry painting method uses three shades of each colour building up in layers from dark to light to easily achieve a realistic three dimensional shaded effect without the need for blending the three layers of colour give real depth and subtlety to your work you will be able to start painting in the foundry style

foundry miniatures painting and modelling guide abebooks - Jan 27 2023

web foundry miniatures painting and modelling guide kevin michael dallimore 3 86 avg rating 36 ratings by goodreads

hardcover isbn 10 1901543137 isbn 13 9781901543131 publisher foundry 2009 view all copies of

foundry miniatures painting and modelling guide abebooks - Mar 29 2023

web mar 22 2011 this is a fully comprehensive guide to painting and constructing miniature models this book should help to get you started if you re coming to painting with no experience and encourage you to try out a few new or different methods if you have painted before

foundry miniatures painting and modelling guide blackwell s - Feb 25 2023

web jun 26 2009 here it is at last kevin dallimore s fully comprehensive guide to painting miniature models if you re entirely

new to painting then this guide will help to ge

foundry miniatures painting and modelling guide hardcover - Jul 01 2023

web buy foundry miniatures painting and modelling guide 1st by kevin michael dallimore martin buck martin buck kevin dallimore bryan ansell kevin dallimore isbn 9781901543131 from amazon s book store everyday low

kevin s web kevin dallimore s personal site of model and figure painting - May 19 2022

web kevin dallimore s personal site of model and figure painting stix nemesis fire mortis toby foundry 2000ad foundry 2000ad stix hondo karyn nest slaine rogue venus bluegenes nort rogue trooper fatty angel gang abc warriors judges slaine rogue trooper don uggie

foundry miniatures painting and modeling guide goodreads - Nov 24 2022

web foundry miniatures painting and modeling guide kevin dallimore 3 86 36 ratings2 reviews want to read buy on amazon rate this book this is a fully comprehensive guide to painting and constructing miniature models

[amazon co uk customer reviews foundry miniatures painting](#) - Jul 21 2022

web find helpful customer reviews and review ratings for foundry miniatures painting and modelling guide at amazon com read honest and unbiased product reviews from our users amazon co uk customer reviews foundry miniatures painting and

foundry painting and modelling guide by kevin dallimore - Sep 03 2023

web a comprehensive guide to painting miniature models this book will help you get started if you re coming to painting with no experience and encourage you to try out a few new or different methods if you have painted before each technique is described in detail along with pictures to illustrate every step as clearly as possible

foundry miniatures painting and modelling guide hardback - Sep 22 2022

web jun 26 2009 foundry miniatures painting and modelling guide hardback kevin dallimore author sign in to write a review 25 00 hardback 176 pages published 26 06 2009 this product is currently unavailable synopsis publisher foundry books isbn 9781901543131 number of pages 176 dimensions 305 x 215 mm james eade

foundry miniatures painting and modeling guide amazon com - May 31 2023

web the foundry miniature painting and modeling guide is a must buy for anyone who is a just learning how to paint miniatures especially fantasy ones for rpgs not to mention the book does a good job detailing tricks and other things to