

**Navy Advancement Center**  
Web site: <http://www.advancement.cnet.navy.mil>

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# **Advancement Handbook for Engineman**

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## **PREFACE**

The purpose of the Advancement Handbook is to help you focus your preparation for Navywide advancement-in-rating examinations. The bibliographies (BIBs) together with this handbook form a comprehensive examination study package. Since this handbook provides skill and knowledge components for each paygrade of the Engineman (EN) rating, it helps you concentrate your study on those areas that may be tested. This feature will help you get the most out of your study time.

Each page in Parts 1 through 4 of this Advancement Handbook presents general skill areas, specific skill areas, the knowledge factors associated with each skill area, the pertinent references that address each skill, and the subject areas that may be covered on the examination. The skill statements describe the skills you are expected to perform for each paygrade. The skill statements are cumulative; that is, you are responsible for the skills for the paygrade you are competing for, your present paygrade, and all paygrades below.

Although this handbook is very comprehensive, it cannot cover all the tasks performed in the rating. As a result, the advancement examinations may contain questions more detailed than described in the “*Exam Expectations*” section of the skill areas.

Remember that advancement competition is keen, so your keys to advancement include not only comprehensive advancement examination study but also sustained superior performance.

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# CONTENTS

PARTS		PAGE
1	Advancement Handbook for EN3.....	1-1
2	Advancement Handbook for EN2.....	2-1
3	Advancement Handbook for EN1.....	3-1
4	Advancement Handbook for ENC.....	4-1
Appendix 1	References Used in This Advancement Handbook	A-1

# Part 1

## Advancement Handbook for EN3

## Advancement Handbook for EN3

General EN Skill Area	<b>Mechanical Systems Operations</b>
A skill you are expected to perform from the General Skill Area above:	<b>Align, Start, Operate/Adjust, Stop/Secure Air Compressors/Systems</b>
Knowledge you should have to perform this skill:	<ul style="list-style-type: none"> <li>• Identify common types of air compressors by their classification, purpose, function, and associated equipment</li> <li>• Recall the safety procedures for working with rotating machinery and compressed air</li> <li>• Recall procedures for aligning, operating, adjusting, and securing air compressors/systems</li> <li>• Describe the components of air compressors and their associated systems</li> <li>• From a general schematic of an air system, identify the major components of the system</li> <li>• Draw a single line diagram of an air system, showing all-major components</li> </ul>
References you should study to gain the knowledge you need to perform this skill:	<ul style="list-style-type: none"> <li>• EOSS and PMS for applicable ship</li> <li>• NSTM, Chapter 505, Piping Systems</li> <li>• NSTM, Chapter 551, Compressed Air Plants and Systems</li> <li>• OPNAVINST 5100.19, Navy Occupational Safety and Health (NAVOSH) Program Manual for Forces Afloat, Volume 1, Chapter 13</li> <li>• NAVEDTRA 10539, EN3</li> </ul>

<p>Exam Expectations. These are subject areas you should know to help you answer exam questions correctly:</p>	<p>You can expect questions about air compressor (LP, MP, &amp; HP) terminology, operational safety, and inspection of components, troubleshooting, and maintaining air systems.</p>
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