

**Navy Advancement Center**

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# **Advancement Handbook for Gas Turbine Systems Technician (Electrical)**

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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 Gas Turbine Systems Technician (Electrical) 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 GSE3.....	1-1
2	Advancement Handbook for GSE2.....	2-1
3	Advancement Handbook for GSE1.....	3-1
4	Advancement Handbook for GSEC.....	4-1
Appendix 1	References Used in This Advancement Handbook	A-1

# Part 1

## Advancement Handbook for GSE3

## Advancement Handbook for GSE3

<p>General GSE <i>Skill Area</i></p>	<p><b>Gas Turbine</b></p>
<p>A <i>skill</i> you are expected to perform from the General Skill Area above:</p>	<p><b>Operate gas turbine engines (GTE) locally</b></p>
<p><i>Knowledge</i> you should have to perform this skill:</p>	<ul style="list-style-type: none"> <li>• Recall the GTE start sequence</li> <li>• Identify starting and stopping (EOSS) procedures</li> <li>• Recognize the principles of GTE theory of operation</li> <li>• Identify engine parameters</li> <li>• Recognize the engineering control and surveillance system (ECSS) on DD-963, DD-993, CG-47 class ships</li> <li>• Recognize the engineering plant control system (EPCS) on FFG-7 class ships</li> <li>• Recognize the machinery control system (MCS) on DDG-51 class ships</li> <li>• Recognize the alarm and monitoring system on landing craft, air cushion (LCAC) crafts</li> <li>• Recognize casualties during starting or stopping</li> </ul>
<p><i>References</i> you should study to gain the knowledge you need to perform this skill:</p>	<ul style="list-style-type: none"> <li>• Navy Occupational Safety and Health (NAVOSH) Program Manual, OPNAVINST 5100.19</li> <li>• EOSS procedures</li> <li>• LM2500 Propulsion GTE Module Description, Operation, and Installation; Chapters 1, 2, 3, 6, and 8 (S9234-AD-MMO-010-090/LM2500)</li> <li>• Propulsion Plant Manuals for FFG-7, DD-963, CG-47, FFG-7, DDG-51, and AOE-6 class ships; Volumes 1, 2, and 4</li> </ul>