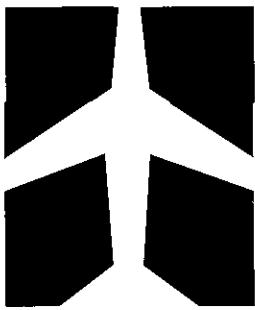




# A&P TECHNICIAN POWERPLANT TEXTBOOK



 **JEPPESSEN®**



# TABLE OF CONTENTS

---

JEPPESEN INTEGRATED A&P TRAINING SYSTEM .....	iii
<b>CHAPTER 1 Reciprocating Engines .....</b>	<b>1-1</b>
Section A Design and Construction .....	1-2
Section B Operating Principles .....	1-33
Section C Diesel Engine Technology.....	1-51
<b>CHAPTER 2 Reciprocating Engine Operation, Instruments, Maintenance, and Overhaul.....</b>	<b>2-1</b>
Section A Engine Operation, Instruments and Maintenance .....	2-2
Section B Engine Removal and Overhaul.....	2-23
<b>CHAPTER 3 Turbine Engines .....</b>	<b>3-1</b>
Section A Design and Construction .....	3-2
Section B Operating Principles .....	3-38
<b>CHAPTER 4 Turbine Engine Operation, Instruments, Maintenance, and Overhaul.....</b>	<b>4-1</b>
Section A Operation, Instruments, and Maintenance.....	4-2
Section B Engine Removal and Overhaul.....	4-16
<b>CHAPTER 5 Induction Systems .....</b>	<b>5-1</b>
Section A Reciprocating Engines.....	5-2
Section B Turbine Engines.....	5-16
<b>CHAPTER 6 Exhaust Systems .....</b>	<b>6-1</b>
Section A Reciprocating Engine.....	6-2
Section B Turbine Engine.....	6-8
<b>CHAPTER 7 Engine Fuel and Fuel Metering .....</b>	<b>7-1</b>
Section A Fuel Systems .....	7-2
Section B Reciprocating Engine Fuel Metering.....	7-19
Section C Turbine Engine Fuel Metering.....	7-61
<b>CHAPTER 8 Electrical, Starting, and Ignition Systems.....</b>	<b>8-1</b>
Section A Generators.....	8-2
Section B Alternators .....	8-20
Section C Motors and Starting Systems.....	8-28
Section D Electrical System Components.....	8-53
Section E Reciprocating Engine Ignition Systems .....	8-67
Section F Turbine Engine Ignition Systems .....	8-104

<b>CHAPTER 9</b>	<b>Engine Lubrication.....</b>	<b>9-1</b>
Section A	Engine Lubricating Oils .....	9-2
Section B	Reciprocating Engines.....	9-8
Section C	Turbine Engines.....	9-25
<b>CHAPTER 10</b>	<b>Cooling Systems .....</b>	<b>10-1</b>
Section A	Reciprocating Engines.....	10-2
Section B	Turbine Engines.....	10-9
<b>CHAPTER 11</b>	<b>Engine Fire Protection .....</b>	<b>11-1</b>
Section A	Fire Detection Systems.....	11-2
Section B	Fire Extinguishing Systems.....	11-12
<b>CHAPTER 12</b>	<b>Propellers.....</b>	<b>12-1</b>
Section A	Propeller Principles .....	12-2
Section B	Fixed-Pitch Propellers.....	12-10
Section C	Adjustable-Pitch Propellers.....	12-14
Section D	Turboprop Propellers .....	12-32
Section E	Auxillary Propeller Systems .....	12-47
Section F	Propeller Inspection, Maintenance, and Installation .....	12-52
<b>CHAPTER 13</b>	<b>Powerplant and Propeller Airworthiness Inspections .</b>	<b>13-1</b>
Section A	Airworthiness Inspection Criteria .....	13-2
Section B	Reciprocating Engine and Propeller Inspections .....	13-15
Section C	Turbine Engine Inspections .....	13-31
<b>CHAPTER 14</b>	<b>Powerplant Troubleshooting .....</b>	<b>14-1</b>
Section A	Troubleshooting Principles.....	14-2
Section B	Reciprocating Engine Troubleshooting .....	14-8
Section C	Turbine Engine Troubleshooting .....	14-32
<b>INDEX .....</b>		<b>I-1</b>